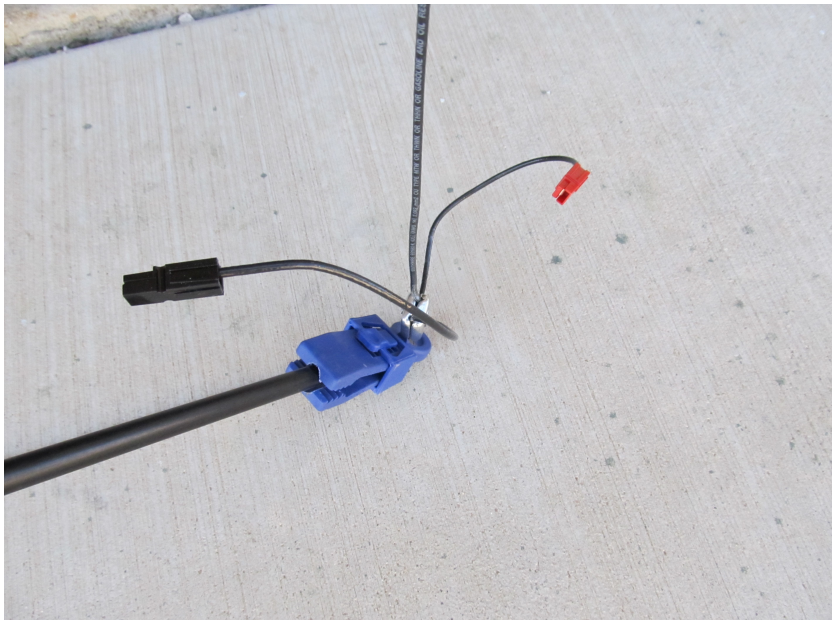
Alternate way to build a DKAZ and other loops

Lets start with general ideas. I use Anderson connectors to standardize all my antenna connections and 3/16” flush cable clamps from Home Depot, to build all my loops and arrays. I use black Anderson connectors for the ‘base’ wire and red for the ‘sky’ wire as I call it. This top picture is a view of the bottom of one of my Tent Pole loops. Both bottom ends have the same connector setup, allowing me to plug in an active or passive antenna module/matchbox on one end and either jumper the red/black leads together on the other end to make a bi-directional loop or add a resistor or variable pot on the other base end to make a flag-style antenna. The silver clamp shown better in the bottom picture, fits covered #14 wire perfectly and allows you to create loops of a specific size and not have to disassemble them again. You can paint the inside of the clamp with liquid tape, if desired, to prevent shorts when running both end of a loop next to each other within the clamp. However, I have never found it necessary in the 10 years I have been building antennas this way.



For the DKAZ array, I look at things differently. I see 2 identical delta-shaped loops brought together at a common central stake between them. Because I use the small 3/16” clamps and Anderson connectors, the 2 delta loops making up a DKAZ are modular and can be used as individual loops as well as part of a DKAZ array. When done this way each delta loop is ½ the width of the full DKAZ. So, for example, if we are building a 20’ x 88’ DKAZ, each loop is 20’ x 44’ in size. The following 3 pictures show the connections to make this work, including the very important ‘twist’ of the center connectors needed to ‘phase’ the DKAZ.

This first picture shows the central post with the 2 antenna halves of the DKAZ coming together. Note that the clamps hold the antenna ends in place at the middle of the DKAZ array. Also, you can see the simple way the phasing ‘twist’ is made using Anderson connectors. Keep in mind, the black connectors are the ‘base’ wires and the red connectors are the ‘sky’ wires of each delta loop making up the DKAZ array.

The last 2 pictures on the following two pages, show the 2 outside connections at the base of the DKAZ array, for the amp module or passive matchbox on one end and the null pot on the other lower end.

To actually build the DKAZ array this way, I start with the central post and stretch out the 2 base wires and tension the outer stakes with the central stake. I make sure the base wires form a straight line in the direction desired and that there is enough tension from both lower ends of the array to keep the base wires from sagging and that the central stake is straight up again, rather than bowed one way or the other from too much tension from one end of the array.

Next I find the 2 center points for each loop element and raise up the 2 masts with the 'sky' wires on it. I look for just a little sag on each loop section to gauge that I have enough tension. By the way, I use the plastic screw-on Y shaped piece of a paint roller (metal frame removed) screwed or pressed onto the top of the masts, to hold the center of each loop section up in the air, at the top of each mast.

The next step is to connect the loop sections together at the middle, with the 'twist' of connectors to provide the phasing component to the DKAZ, as noted in the picture above.

And the final step is to add the null resistor on one end and the amplifier module or passive matchbox on the other lower end of the array.

If the array is a bigger one, it helps to use 'ball bungees' on the masts to hold the base wires up at the proper height, even with the notch used in each electric fence post, if that is what you use as stakes.

The same construction techniques can be used on individual delta or square loops also, allowing you to make your antennas modular without the need to take them apart. It is important for both DKAZ arrays and loop arrays in general, to have matching loops sizes and this is one way to do that, with modular components. See the paint-roller 'Y' and clamp details in this next picture.

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