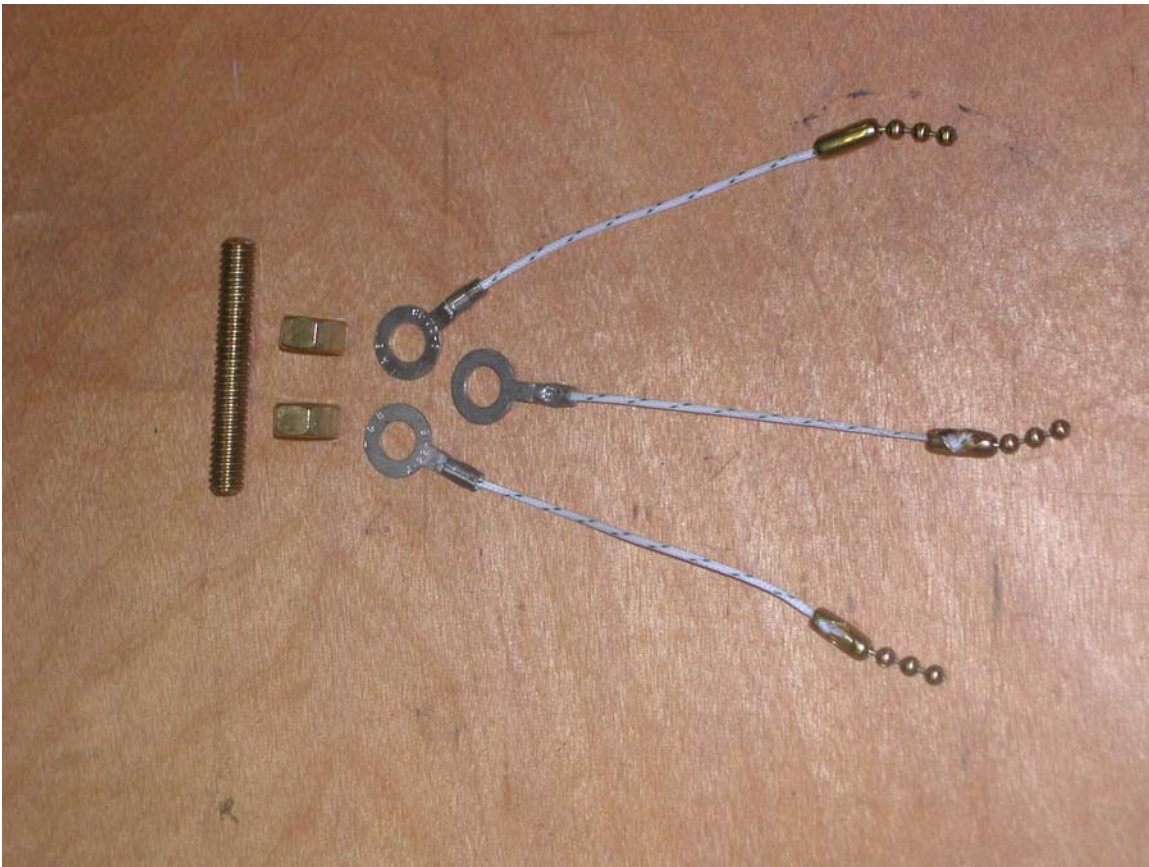


HFp Antennas

The HFp Special Guy Line IEC

With the experiments on the vertically-mounted end-fed dipole, it became obvious that the standard method of installing guy lines on the HFp antennas was not going to work. With this long antenna (up to 16 feet tall), it was necessary to attach the guys above the fifth or sixth segment, putting the top portion of the antenna too high to remove for whip adjustment. So, a new inter-element connector was necessary to allow the entire antenna to rotate and be removed from the base without twisting the guy lines.

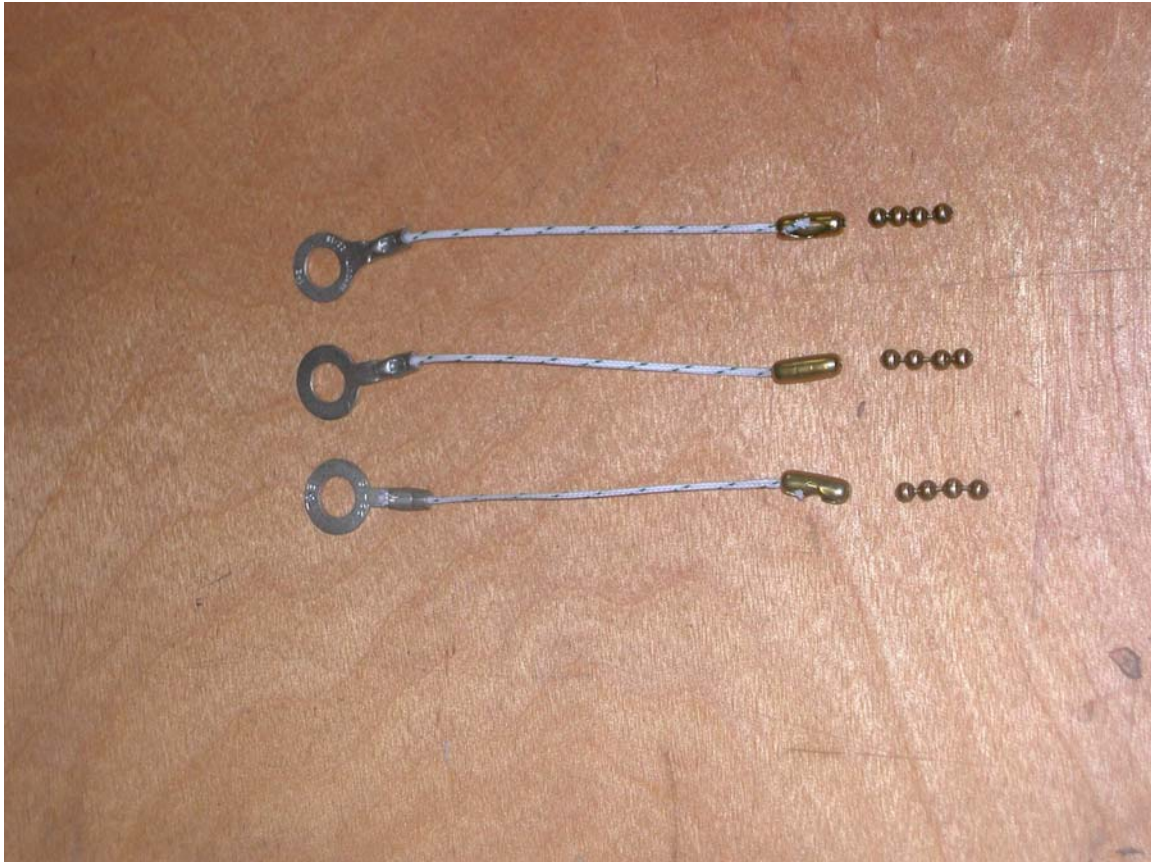
The special IEC is made from a 1-3/4" long piece of 1/4-20 threaded brass rod. This length allows the placement of two brass nuts on the rod, spaced apart for the guy rings, with enough length left on each end to attach the HFp elements. Here is a picture of the pieces of the assembly.



At the hardware store, I bought a length of the brass bead chain used for overhead light pulls, and a package of the brass coupler clips used on the chain.

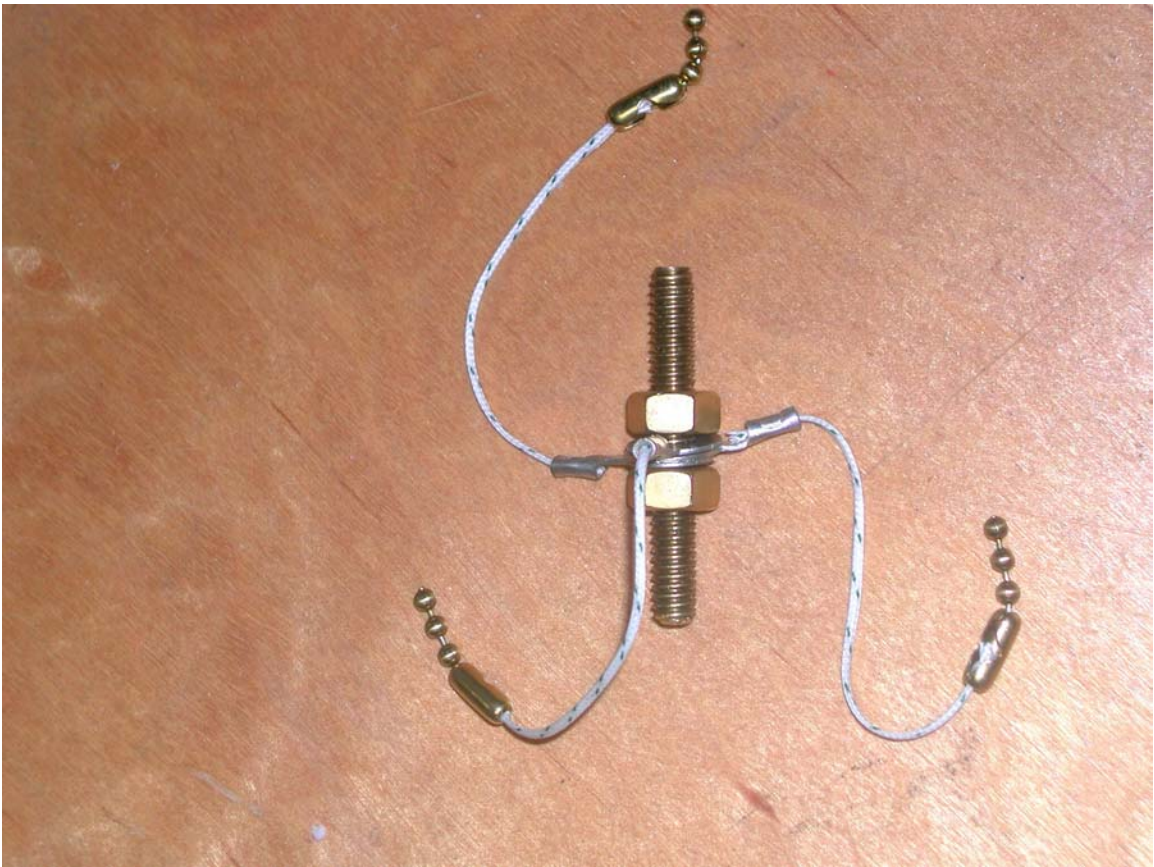
Back at the house, I cut the ring ends off the three guy lines, about three inches from the ring. In the end of each of the cut-off sections, I tied a single overhand knot with an extra loop to make the knot bigger than normal. To explain – for a normal overhand knot, you make a loop and pass the end of the string through the loop once, and pull it tight. For mine, I pass the end of the string through to loop **twice**, then pull it tight. This makes a bigger knot. Then, I installed one of the brass chain clips on the knot end on each of the short sections.

Next, I cut off short sections of the bead chain, with four beads per section. These short bead sections were then installed on the brass clips.



Then, I assembled the brass stud, brass nuts and guy ring sections into the special IEC. The nuts are threaded onto the stud, with the three rings in between them. The nuts are spaced apart so that the rings can rotate freely, but not so far that there is only a short section of stud to attach the HFp element. On mine, there was about $5/8''$ of stud on the outside of each nut, and the space between the nuts was about $3/8''$. I used Loctite 262 thread locker to hold the nuts in place.

Here is a picture of the assembled Special IEC.



Next, I attached brass chain clips to the ends of the long guy lines, using the same larger knot technique described before.

To use the Special IEC, simply place it between elements in the antenna at the desired height. I recommend that there be no more than 3 or 4 elements above the guy point. Clip the long guy sections to the short ball chain segments, and run the guys to their attachment points. (You did make the Guy Line Sliders, didn't you?)

When you take the antenna down, you can un-snap the long guy lines from the ball chain, and store the lines on the standard spool. The Special IEC can go in the plastic storage bag.

With the Special IEC, the entire antenna can be rotated and removed from the base support. This makes it easy to adjust the whip, or change elements in the antenna below the guy point.

Have Fun!

John - WB4YJT

Ventenna Co. LLC
P.O. Box 445, Rocklin, CA 95677
www.ventenna.com

1-888-624-7069



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