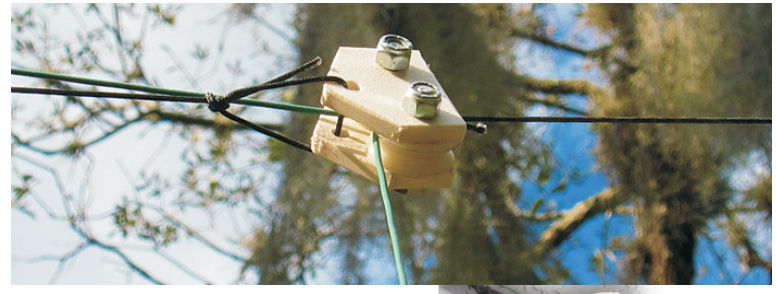
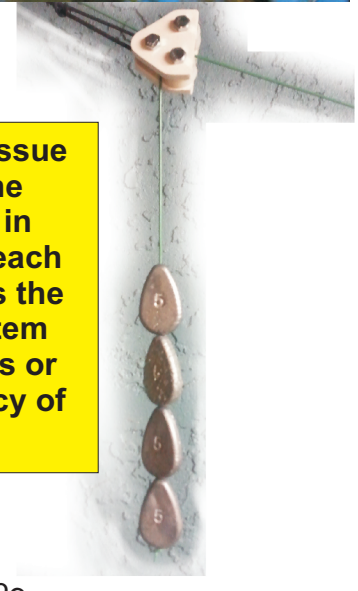
How it works:

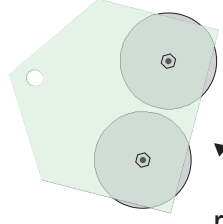
18 gauge wire (*red*) was used with the prototype antenna. The bottom "capacity" wire needs to be flexible to run smoothly through the roller blocks. The Dacron (*blue*) is tied to a point up to several feet from the end depending on the preferred frequencies you want to cover. The length of the top wire does not change after installation. When the "capacity" wire is tight against the top wire it appears to the transmitter as a single wire only as long as the top wire. In other words, it is as if the bottom wire does not exist do to capacity coupling with the top wire. The roller blocks travel up or down the top wire as allowed by the winch at the bottom of the tower. When the winch lets out, the lead weights tied to the ends of the "capacity" wires force the roller blocks down slope adding length (*capacity*) to the antenna lowering the frequency. An existing dipole or inverted V could be easily modified to use this tunning system. This antenna tunes from 4 Meg down to 3.6 at no more than 1.1 to 1. Follow the link to the video.

Why, you may ask? **I hate tuners!**



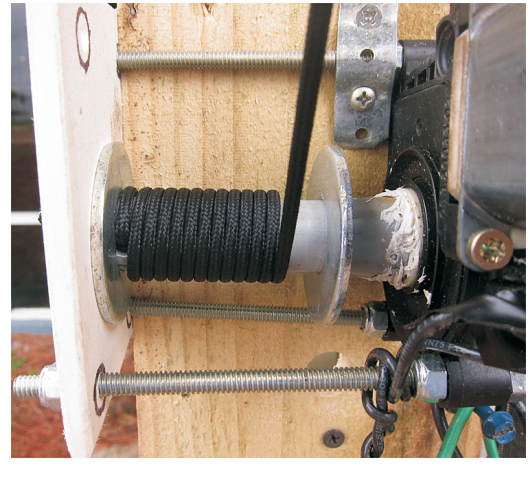


This is the critical issue with this design, The wires must be held in close proximity to each other. This changes the capacity in the system which in turn, raises or lowers the frequency of the antenna.



If you are really cheap, you can use a hand winch and mark the Dacron at preferred frequency points.

If you desire to convert an existing 80 meter antenna - V or dipole - to a full band version, here's how. Re-tune or cut the existing antenna for the top of the band - 4 Megs in the case of 80 meters. Connect about 8 feet of small flexibly wire to the outer ends running back in the direction of the feed point. Install the roller blocks (*see above*) and add the weights. Check the band spread to see if you can get down as low as needed. Tie a knot under the bottom weight and cut off any excess wire. adding more capacity wire will bring the frequency lower.



18 gauge stranded wire.

Top block

Coax feed connected direct to wires.

roller block

capacity wire

(4) 5 ounce lead weights

5 oz

5 oz

5 oz

5 oz

Dacron antenna rope - any length

The Dacron is tied about 7 feet from bottom end of the top wire making the capacity wire with weights 7 foot long.

To winch

01242011-2
C-tune 80
W4QJP
No scale