

Slingshot Launcher Or How to Get That Dipole Antenna High Enough in the Tree

AI – VE3RRD

Field Day and JOTA for 2007 taught me one thing – a lot of time can be wasted trying to get antenna support ropes up in trees if you don't have the proper tool. I think we spent over an hour twirling a weight on the end of a cord and trying to toss it up over a high tree limb to support one end of a multi-band dipole. We never did get it over the limb we wanted and had to settle for a lower one. I ran across a simple slingshot launcher on a webpage by K1DEU and decided to give it a try.

For those of you who want to build something bigger and better, take a look at the compact, high power CSV19 pneumatic launcher at <http://www.antennalaunchers.com/csv19/index.html>.



Two views of the finished launcher, ready to use. The 15lb monofilament line is heavy enough to pull a light weight cord of greater strength back over the tree. This small cord can be used to support some antennas or could be used to pull a stronger rope back over the tree.

All the parts are available from the local Canadian Tire store.

75-4772-0	Crossman "Tempest" slingshot	12.99
78-4429-4	Zebco 404LE fishing reel with 15lb line	14.99
78-4970-2	1 ounce RedWolf bell sinkers (pkg of 3)	.99
63-2139-0	7/32 inch stainless hose clamps (2 required)	2.18
78-5067-8	size 8 swivel snap (package of 10)	2.19
23-6010-6	¼ inch neoprene rubber hose (2 ft length)	4.99
	Total cost	\$38.33 or \$43.33 with tax

Other than the fishing reel (which you may already have) and the slingshot, the only other pricy item is the rubber hose. It must be ¼ inch inside diameter and about ½ inch outside diameter – only a 4 inch length of hose is required.

Assembly only takes about 15 minutes (part of which is getting the packaging open). Pull one end of the wrist support sling off the ¼“ steel rod, and slip on a 4 inch length of neoprene hose (takes a little wiggling). Next slip on the two hose clamps (screw facing down or to the right - away from your wrist). Re-install the wrist support sling, position the reel as shown in the photo and tighten up the hose clamps to hold it in place. Tie on one of the swivels to the 15 pound fishing line, attach a sinker and you're done!

The rounded sinkers are a bit difficult to keep in the leather pocket when getting ready to launch, so I dipped them a couple of times in red “Brush-On Electrical Tape” to make them easy to grip and easier to see up in a tree. You can get Brush-On Electrical Tape at Princess Auto for about \$5 for a 118ml (4 fl oz) can. If this product rubs off too easily, I may try heat-shrink tubing over the sinker.



In this picture, the line release button on the rear of the reel had not been pressed, so the line is pulled tight. In actual use, once the line is released, it tends to hang loosely and care must be taken not to snag it prior to firing.

How did it work? On the first test “firing”, the weight was released at an upward angle of about 45 degrees and landed in the snow about 150 feet away. The only problem discovered is that the fishing line easily gets tangled in bushes and takes awhile to recover if you have missed your shot at the tree limb.

Update

After several years of using this “slingshot antenna launcher” it has repeatedly proven itself to be most useful. We have been using it every year for field day where we need to set up a G5RV and a Carolina Windom. If I miss the branch I am aiming for, it is fairly easy to remove the weight and wind the fishing line back in to try again.

I picked up a reel of “chalk line” at a discount store and after firing the 1 ounce weight on the 15 pound line over the tree branch and letting the weight pull out fishing line until it drops through the tree branches to be within reach, I remove the weight and connect the chalk line cord. I am then able to wind in the fishing line while pulling this light weight cord back up over the tree. If I am only using a QRP antenna such as an end-fed, then the cord is lots strong enough to pull up the antenna; but if I am setting up a heavier antenna such as a full size G5RV or the Carolina Windom, then I use the chalk line to pull a small rope over the branch and pull up the antenna with the rope.