After seeing how well antenna poles worked for Mike KC2EGL, Tom WB3FAE, and Don K3RLL, I pried open my wallet and bought myself a Jackite 28 foot pole to use this year for our portable operations. Actually to be completely correct, I gave the money to Mike and he did the actual ordering for me since I never use any type of credit cards or electronic transfer of money. Unfortunately for us conservative types, fewer and fewer companies seem to use personal checks or money orders, and that is the only way I will do business. Ok, no more side notes like that. Let's get down to the info about the pole.

I did not purchase a mount for the pole. I decided I could come up with my own design and build it myself. I first set up some criteria. Since I enjoy woodworking, I decided to see what I could come up using my wood collection without having to buy anything extra. One thing I ran into when using poles borrowed from Tom was that in raising them by locking each section with a twist as it was extended up that if you weren't totally careful, the antenna would get twisted around the pole. I wanted mine to have a mount where the pole could be extended on the ground, the antenna connected and then the whole unit just walked into an upright position. Hence I would need some sort of hinged mount. So I spent a lot of time planning and designing such a unit before I started any building. That's always a good idea for any kind of project.

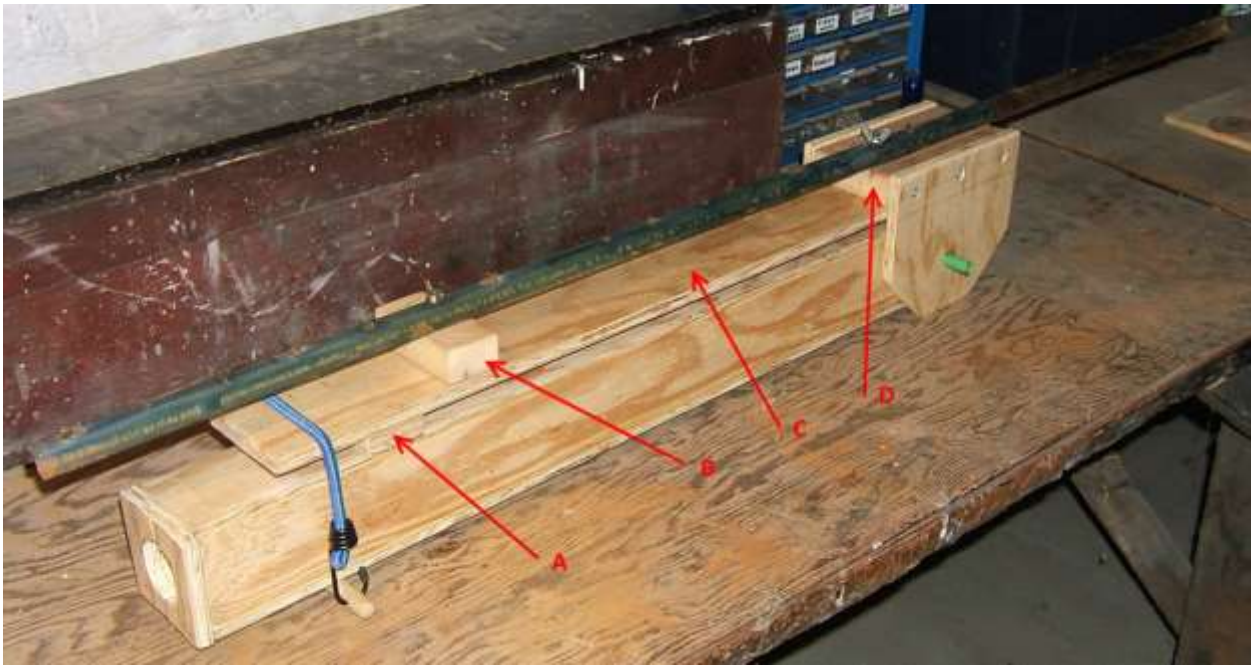
The first piece of business was building a square tube holder for the pole. I decided to make it out of some 1/2 inch plywood that was left over and given to me by my neighbor after he had his porch resurfaced. Since it was 60” long, I decided to make the tube 30” long and just wide enough for the base section of the pole which is 46” long and 2” diameter at the base cap to sit in snugly. I glued the four sides together and made a very sturdy tube. I may add screws to make it even sturdier if I find that to be necessary.

The four pieces of plywood were fastened together as shown here in this view of the end of the tube in its cradle:

Also seen here are four smaller pieces of plywood inserted into the bottom end of the tube for the pole to rest on and to give more support to the green bearing made from what I think was part of a wind chime that I found in my junk box. To keep the bearing from sliding out, I fashioned cotter pins from pieces of wire that fit into small holes in the bearing.

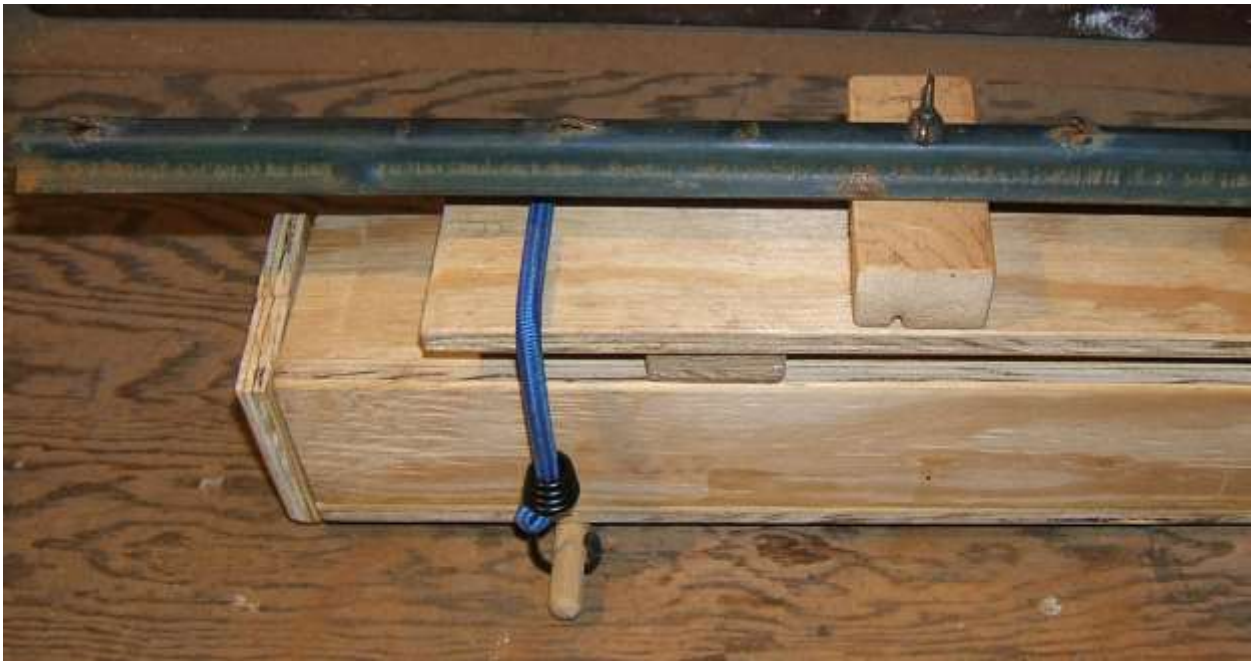
The above picture and the next one below show the construction of the cradle in which the tube pivots. It's made from the same plywood plus a thicker piece of wood to which the metal fence post that supports the whole unit is fastened. The fence post was later scraped and painted.

The next picture shows the entire unit with some notes below explaining some other features. I originally had a full two by four running from the cradle to near the top of the tube. To cut down the weight, I modified that as shown and described.



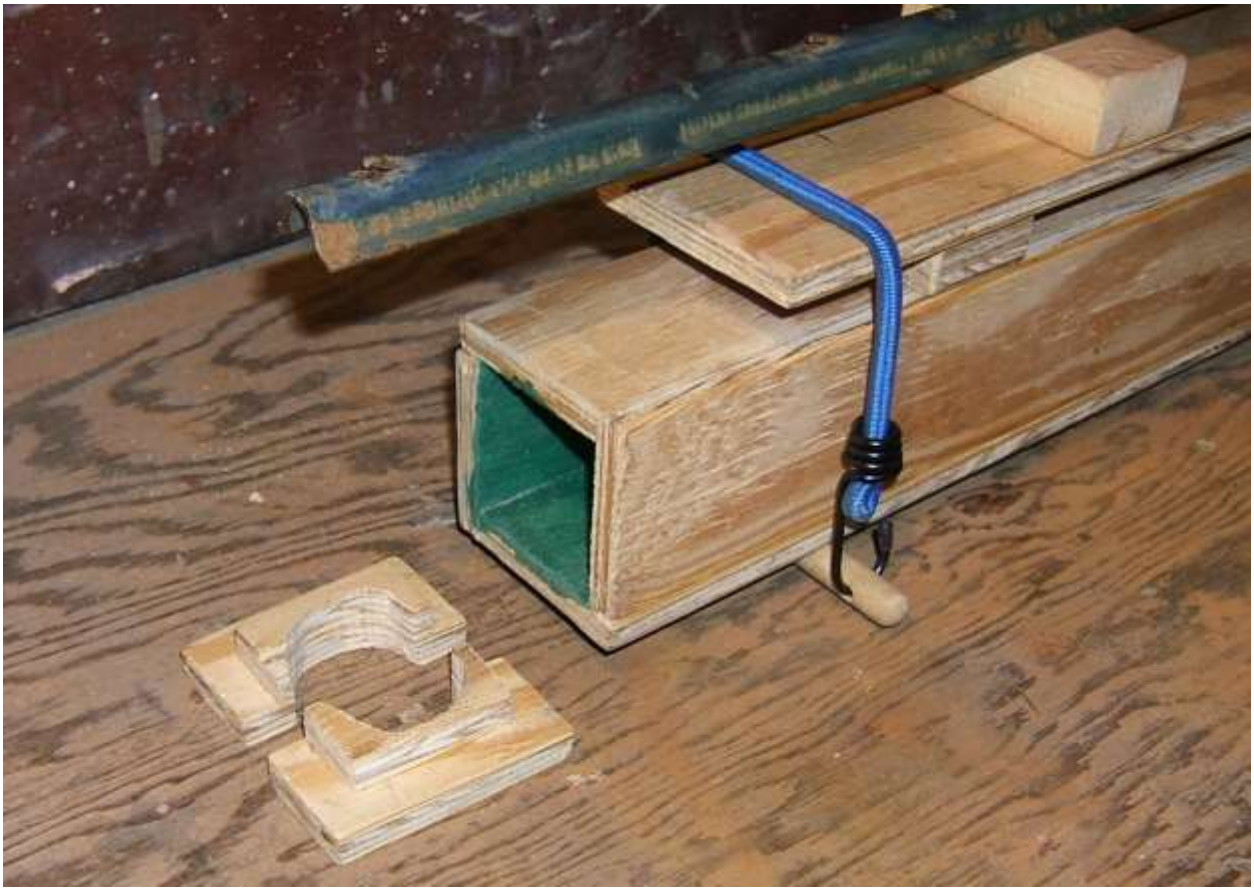
To keep everything parallel and the pole vertical, the block D was joined by block B to fasten support C to the green fence post. In order for the tube to pivot freely in the cradle, it had to be separated by a half inch from block D, hence the small block A fastened (glued) to the support. The wing nuts on the fence post are there so the post can be driven into the ground first and then the rest of the unit fastened to it. Since some force is needed to drive in the post in some soils, that would keep the whole unit from being jostled by the pounding.

This next picture shows how the tube is fastened to the support after being raised to the vertical position.



It’s simply a bungee cord fastened to the wooden dowel. The end of the dowel shown has a hole drilled in it through which the hook passes so the cord doesn’t stray off during the raising. When the tube is raised, the other end of the cord is just hooked on to the other end of the dowel. It can either be wrapped around just the support as shown or around both the support and the fence post which might prove to be a bit more secure.

Since the bottom diameter of the Jackite pole is a bit larger than the rest of the first section, I thought I should add something to keep the top of it from moving around in the tube. That is shown here in these two pictures.



Once the pole is raised the wood blocks shown are inserted in the tube. They wrap around the pole and hold it securely.

It looks somewhat crude since I don't have a wood workshop like Norm Abram or Tommy Mac, etc. The only good power tools I have are an old drill press, and a jig saw. I do most of my work with old hand tools. I wasn't going for looks, but for performance, so it doesn't really matter.

Here is an overall picture of the unit as it will be lying on the ground before being raised. Of course the Jackite pole will be extended and the antenna and feedline attached before raising it out in the field. It will also naturally be fastened to the fence post support after the post is driven into the ground.

Here is the unit in the upright position.

With the help of Tom WB3FAE, the unit underwent its first field test on May 17, 2017 at Kittanning Community Park. Let's first look at a couple pictures followed by a description and comments.

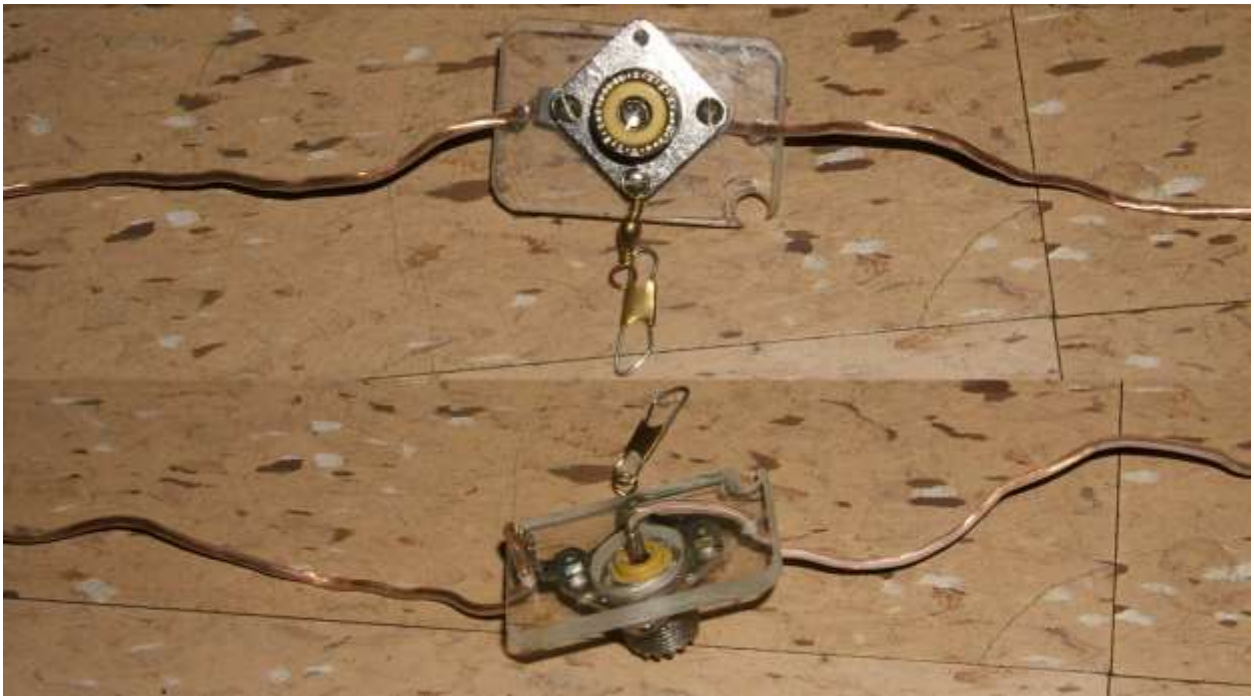
At left is the unit awaiting hookup of the antenna and feedline which is lying on the ground. The white on the fence post is a cloth to make it more comfortable to carry to the site. Next to the post is the persuader used to get the post in the ground. At right, the antenna and feedline have been attached and the pole has been raised into its working position.

The next picture below shows the antenna and mast as seen looking over my shoulder. It's hard to see the antenna against the sky, but looking closely the wire and the jumper switches can be seen sloping down to the right.

All in all, I'm very pleased with the pole and mount. It is very easy to set up. Although Tom did help, I know I can easily set it up myself. Having it hinged so it can be set up on the ground and then raised into position is a big help in keeping the antenna from wrapping around the mast as it tends to do if the mast is extended while in the upright position. It was quite windy when we were testing, but the wind didn't bother anything at all.

Construction of the antenna itself was described in a NAQCC newsletter a few years ago, but I thought I'd reprise it here quickly.

First a center insulator was fashioned from a small piece of plexiglass to hold the SO-239 connector. A snap swivel was fastened to the connector as a means of connecting it to the top of the Jackite pole. Here's a front & back picture.



The wire coming off each end of the connector is 16' 7" long and is connected to a slide switch. When the switch is open, it's a 20 meters dipole. When closed it's connected to 6' 6" of wire which is terminated similarly to another switch. When that switch is open, it's a 30 meters dipole (16' 7" + 6' 6" = 23' 1"). Closed it connects to a further 10' 3" of wire making in all a 33' 4" 40 meters dipole. Of course the measurements apply to just one half the dipole. The other half is similar. Here's a front/back picture of one of the 4 similar switches.

The end of the 40 meters section is connected through an insulator to a 15’ 1” piece of string. At the end of the string is a loop to fasten to a tent peg driven in the ground 39’ 6” from the pole. That gives an apex angle of 109.4 degrees. No magic to any of those figures. That’s just how they turned out.

For transportation, each half of the dipole is wound on one of those extension cord holders as shown here.