

WA3WSJ Pedestrian Mobile Antenna: My Modified BuddieStick Antenna

I started operating pedestrian mobile a few years ago. And all through those years, I never found the “perfect” pedestrian mobile antenna for me. I found my present pedestrian mobile antenna by accident! Yes, I was walking around Capulin Volcano in new Mexico when I broke off the top thirty inches or so of my Buddie Collapsible top section.

After I returned home, I thought about how to modify the antenna to prevent this happening in the trees etc. I bought a three-quarter inch wide tape measure for around three dollars. Next I had to test how long and how many ply’s to use for each tape section. Below is what I came up with for the antenna.



The top section is made from a Buddie Collapsible pole missing the top three sections that broke off. I then drilled two holes in the bottom remaining section and bolted on my tape measure sections to make up for the missing ones I broke off in New Mexico.

The antenna has two Buddie Coils on it as the top coil is needed for better tuning on 40m. I use the antenna on 40m, 30m, 20m, 17m and 6m. Six meters I have to remove the coils and the section above it. I then adjust for a match on 6m with the collapsible top section. I also change the my 15-foot counterpoise wire to a 9.5-foot wire for 17m and 6m operation.

Using this antenna, I now can walk through trees etc without fear of breaking the top off my antenna! I did use a Workman Stick with a long stinger on top, but the stinger waved around so much in open space that I had QSB on my signal. This antenna setup also corrects that problem.

I pop-riveted the tape sections together. I then installed two layers of heat-shrink tubing over most of the tape measure sections. This really helps stiffen the tape sections.

The picture below is what the coils look like and the various taps I put on the coils. You can tap as many bands as you want, but remember that every time you add a tap, it somewhat changes the tuning of the other bands. Not shown on my setup is the 30m tap. It's on the bottom coil opposite the front side that's showing on the picture.

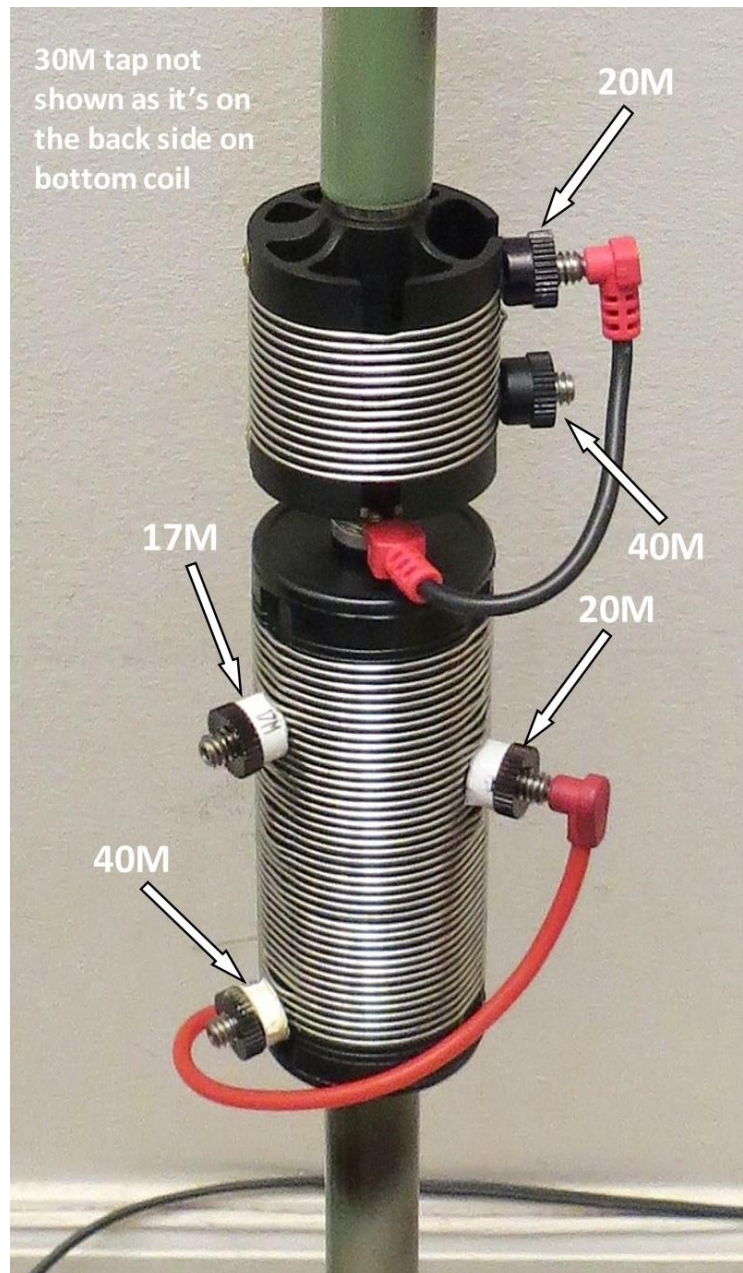
Please note that I have two jumpers, one for each coil. On 20m I jump out the top coil. On 40m, I use the 40m tap on the top coil and all the windings on the bottom coil. I install the bottom jumper on the bottom of the bottom coil to use all the inductance.

I originally only used the bottom coil, but I sometimes had trouble tuning on 40m as I need just a little more inductance or loading for my Icom 703 Plus Internal Tuner.

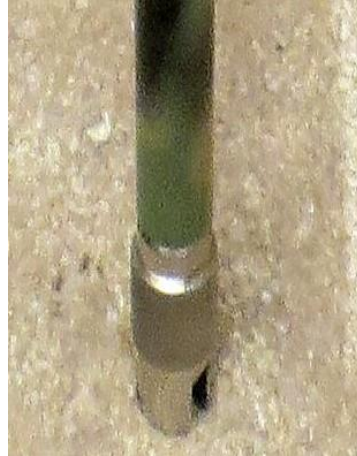
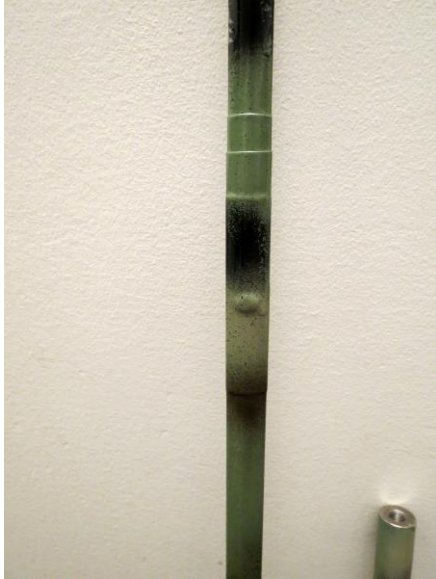
Again, if you add taps, your tuning will change somewhat. So you'll have to go back and forth between all the bands to get a good match each time.

It really helps to have an antenna analyzer to set this up. Please keep in mind that I tune my antenna system on a wooden picnic table with my counterpoise wire on the ground.

I've worked many DX stations with this setup. I use an Icom 703 Plus at five watts. I usually operate cw, but I also like to operate ssb on 17m. The bottom of the BuddieStick has a quick disconnect installed on it. All I have to do is push down and turn to install or remove the antenna.



The picture left below shows one of the pop-rivets and the multiple layers of heat-shrink tubing I used to keep this antenna together –hi! The right picture shows the quick disconnect assembly.



quick disconnect on bottom

The picture to the right is the antenna quick disconnect assembly mounted on my ALICE Frame. This works really great and is a huge time saver out in the field.

No tools needed to take off the antenna. You just push and turn to put it on and push, turn and pull to take it off!

The entire modification of my BuddieStick cost me around \$25.00. The tape measure cost me \$2.99. The paint cost me around \$20.00 or so. If you just paint it just black, the entire cost will be around \$12.00 or so excluding the quick disconnect. The entire quick disconnect assembly will cost you around \$25.00 or so.



Here's how I determined how many ply to put together for each tape measure section. I bought two tapes and experimented with one. I said the bottom tape section should be a certain length and then I started to add plys so I could bend it and the tape would spring back in place. I did this for each tape section until I had 32-inches or so. Some section are four-ply and others less. The top 9-inch section is one-ply. You'll need to experiment to get the length you want.

Once I had the final product, I sprayed a few coats of Krylon Triple-Thick Crystal Clear Glaze over the entire antenna.

My BuddieStick is now a wonderful antenna for operating pedestrian mobile in the field. Using just the collapsible top section from the BuddieStick was tenuous, as I had to be very careful not to break it off. Now I just head out and the top section just bends over as it hits the trees etc.