The NEWSLETTER

JANUARY 2013 VOLUME 13, No. 1

Mercury Amateur Radio Association - MARA - North America - North East

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OTHER STUFF

Links that will take you to web locations referenced in this newsletter are shown in bold blue text.

E-mail your comments, ideas, or submissions to marane@mara.net or to ve1vq@eastlink.ca

Grandma Mara's RAMBLINGS

I want you to know that Walter did himself proud, regarding my Christmas present! It was actually several things, each individually wrapped and ribboned, and all of them in a larger wrapped box. He also included a tin can partly full of nails (for sound effects when I shook it) and a half a brick in one corner (for added off-balance weight) just to keep me guessing. One present was a thousand fancy QSL cards with both our names and call signs. Guess that means we can't call off the wedding! Another was a carving done in an exotic wood of our two call signs. The third was the thing I had hinted to him about - a new Yaesu VX-6R tri-band (2M, 220 and 440 MHz) hand-held to replace an older 2 meter-only Kenwood. And the last surprise was the matching VC-24 VOX headset, in case I wanted to use it while on the motorcycle.

Walter's gift, the one he was looking at in the magazines and on-line was an ELECRAFT W2 wattmeter in kit form. He will always take a kit that he can construct over a factory built unit, given the option. One sensor of your choice comes with the unit. I chose the DCHF-200 that covers 1.8-54 MHz at the 1-200 watt power level. Walter really held himself in check, even though I could see he really wanted to head for his workshop and spread the parts out on the bench. It wasn't until the day after Labor Day that he finally got to play.

On Christmas Day, the only thing we both could do was to open the manuals, and imagine what we would be able to do. My wait was easier. I only had to wait for the battery to fully charge before I could play radio. Family gatherings and meals on both sides took priority over radio. My first contact with the new toy was with Wendy, just down the street. She made me promise that she would get the first one of the new QSL cards. Talk about your DX!

TECH (AND OTHER) STUFF

by VE1VQ

FIBERGLASS POLE ANTENNA - PART 3

As I write this (in mid November), the available Saturdays are getting colder and more windy; things that are not at all conducive to the outdoor building and testing of antennas! There are a few things still left to do that can be done inside, in anticipation for the return of warmer spring temperatures, or maybe even

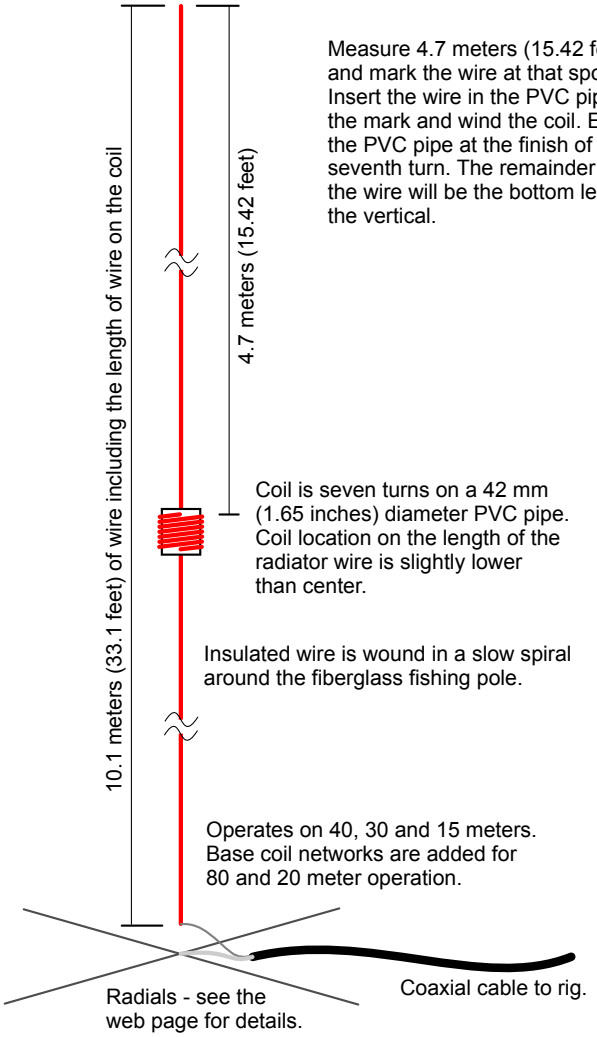

Figure 1 - COLLAPSIBLE FIBERGLASS POLE VERTICAL ANTENNA based upon the on-line construction article by VK7JJ

SQUIDPOLE VERTICAL ANTENNA

The article can be accessed at http://www.perite.com/vk7jj/squidpoles.html

a nice day or two before the project comes to a complete and frozen fingered halt. Things such as the modification of the tape measures for radials, building a radial plate or a connection box, and the mount to hold the fiberglass pole upright when no convenient wooden fence post is handy.

I live in an area where there are no Home Depot or similar large stores - the nearest one being a little over two hours drive. Instead we have a Canadian Tire and a Home Hardware (both Canadian chain stores) with nowhere near the selection that a HD or a Lowes would have. If I can't get it locally, I have to look on-line and plan on getting stuff whenever I make the long drive for something else - like visiting family in the city, work, or a church assignment. In the end, it means that I spend a lot more time planning to build something than time spent actually building. But then the fun lasts longer!

Having constructed the wire radiator and the center loading coil (see the December NEWSLETTER), I moved on to the radials and the means to connect the two. I looked at a metal plate (see Figure 2) as a way to accomplish the task. The problem with this method is that it is not at all water resistant. Moisture following the antenna wire will enter the bulkhead connector and will, eventually, find its way into and ruin the coaxial cable. A second way is shown in Figure 3 and stands a better chance of keeping the coax dry. I picked this method of connection up from VK2JDP's Squidpole web page. He used a PVC box to house matching coils as well as a means to connect the tape measure radials. He also used a capacitive top hat to physically shorten the antenna and do away with the center loading coil. As I get further along the path to RF enlightenment (ready to deploy!), I plan on taking a closer look at placing the matching network VK7JJ used, in the PVC housing.

I've also put some thought into keeping the pole antenna in the vertical position without having a post nearby to fasten it to. There is always the old reliable - guy lines made of small diameter cord, and plastic or metal tent pegs. The use of pegs assumes that the ground will be soft enough to drive them in. That may not always be possible! In the winter the ground is too frozen to accept tent pegs readily; in the summer I have to contend with

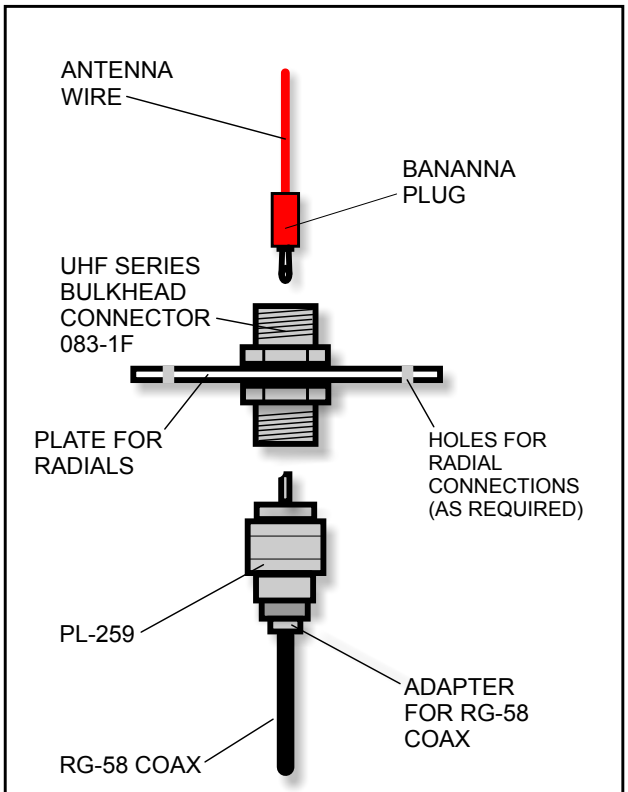

Figure 2 - One solution to the problem. A ground plate is not actually required for operation, just more for a good solid connection. The plate can be made from aluminum or stainless steel from an old cookie sheet.

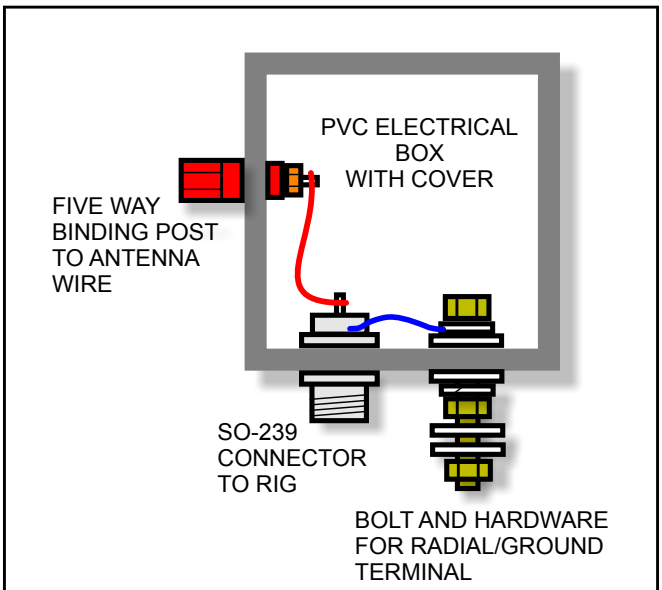

Figure 3 - Another method of connecting antenna wire, coax, and radials. This one is less likely to wick moisture through to the coax. Still, if you operate in the rain, or if this is to be longer than a temporary installation, it would be advisable to wrap the coax connectors with coax-seal tape. For more information regarding coax-seal tape, take a look at the January 2009 NEWSLETTER.

Braided polyester may be used for guy lines.

lots of rocks. Your dirt may be more amenable to pegs or stakes for guy lines than mine.

I like the idea of having a portable mount made out of PVC pipe that I can slip together wherever I need to raise the vertical. The fiberglass pole would simply drop down into the portable mount upright pipe. This wouldn't support the vertical in any kind of real serious breeze so

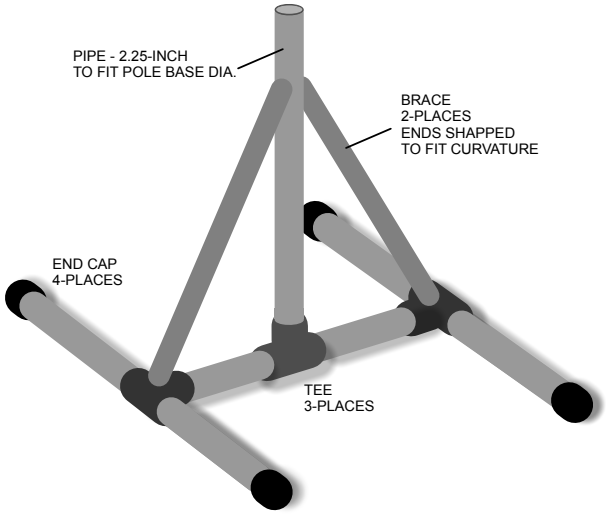

Figure 4 - Drawing of a base for the fiberglass pole vertical made from PVC pipe. The different shades of gray shown are to make it easier to see the individual pieces.

I might have to throw in some guying lines, or concrete blocks for weight, as well.

Building this type of antenna mount will also give me some place to hang the PVC connection box, rather than just letting it lay on the ground. I think I've talked myself into this one!

OTHER STUFF

RIG EXPERT - AA-230 ANALYZER

I've been eyeing the **RIG EXPERT** line of antenna analyzers for some time now, trying to think of ways I could justify the cost of buying one. I finally gave up on the justification process and squeezed the corporate credit card a bit harder - one of the advantages of having a business involved in the electronics field.

The AA-230 is a upgrade of the previously available AA-200, and covers the frequency range of from 0.3 to 230 MHz with a stated +10 dBm sine wave output. It comes with a carrying case and strap, a removable Ni-MH rechargeable battery and a wall charger.

The picture in the previous column is of the AA-230 PRO version. The analyzers look identical except for the label on the front. The main difference between the two is that the PRO model has a TDR (time domain reflectometer) mode to directly locate the distance to a cable fault, without using a computer.

I'll have more on this piece of test equipment in a future NEWSLETTER. For now, I have to wait for the battery to charge so I can do some measuring!

MY ANTENNAS

DONN - VA7DH

In an earlier Mercury NE newsletter, you wanted to know what type of antenna some of us are using. Well, here goes. I have four supports in my yard consisting of pairs of 2" and 3" irrigation pipe. They are held by short trees or structures that can brace them up. Irrigation pipe is exceedingly light considering it comes in 20 foot lengths. I can easily support one cradled in my little finger. These pipes support an 80m **NVIS** loop antenna about 34 feet above the ground. This is adequate for covering about a 300 mile radius when we have our Mercury NW net in Washington and Oregon. I mention NVIS as that's basically what people need for emergency preparedness. It beats the heck out of trying to establish VHF/UHF repeater links, except that HF is a bit bouncy and can be absolutely crazy. When we get a rain storm hitting the whole coast of British Columbia and Washington, we usually get a huge amount of electrical activity in the form of QRN. Then we have to either wait it out or go to VHF/UHF repeater networks to get from A to B.

...an 80m NVIS loop antenna about 34 feet above the ground... is adequate for covering about a 300 mile radius when we have our Mercury NW net in Washington and Oregon.

The loop antenna can also work on 40m and with the height I have we are able to get some DX going all the way over to the Florida Keys. I haven't had much success with 20m with the loop. Not sure why that is.

The loop is made from a length of plastic insulated 14 gauge wire I picked up at Home Depot for an outrageous

price. I recently picked up a 1,000 foot roll of the same in stranded wire at a HAM get-together for about $30. Not bad. I can make a lot of antennas with that.

I have another antenna called a **Chameleon**. It's a whip antenna in two sections. I took it over to church with me when we had an emergency preparedness seminar and set it up outside within a guard fence around the HVAC enclosure. I had brought along an aluminum speaker tripod and had mounted a bayonet connector on top, the same style used for quick disconnect of other large whip antennas. It makes it simple to assemble on site. The grounding was equally simple. I purchased a couple of sets of so-called jumper cables from a store and fastened one from the tripod to the guard fence and another from the tripod to the HVAC piping. I cabled it inside to a Yaesu FT-847 rig via a small **LDG** tuner. I fired it up, not expecting to get much with such a small antenna. I soon picked up an English speaking voice in a thick Japanese accent. I called him back and he responded. I then tuned up the band (20m) and heard a young Russian sounding fellow who was talking very fast (sounded like a giddy teenager). Considering the strength of his signal I'm sure that I could have talked to him. Full quieting on both those contacts. Wow!

I also have used a commercial antenna, a **Buxcom Windom 7-band HF antenna**. It worked for me but not quite as well as I would have liked. I think that if I had some substantial trees to hang it from it would have worked much better. In regards to commercial antennas and dipoles I highly recommend the **Alpha Delta** line. DX-CC and DX-DD. Easy to put up. They are designed to be fed with coax but if a person has an **SGC-230** or similar auto-tuner then I'd suggest feeding with 450 ohm ladder line. It opens up the possible width of every band. That's what I use with my loop.

Alpha Delta DX-CC antenna

For VHF I use a variety of things and they all seem to work. I had a **Ringo Ranger II** up for a while and it did an exceptional job but eventually got noisy. We live in an area only a couple of kilometers from the sea and the air always contains some salt. The antenna is made of aluminum and is in telescopic sections and clamped with small hose clamps where the sections join. After my antenna started getting noisy, I took it down and pulled it apart. It was white inside from aluminum corrosion, oxides, etc. I shined it up best I could and greased it. The grease has made it seem pretty bullet proof. I also have an old 2m **Isopole** antenna that was given to me. The great thing about the Isopole is that the coax connection is made up inside the down-turned cone and is therefore protected from much of the weather. Isopoles have nice wide bandwidth. They always look space age and make the neighbors gasp at the wondrous technology you have. :-)

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Another antenna I have is a dual bander copy of the Arrow solid element 2m/70cm antenna. Various people have worked on this type of design and everyone seems to come up with slightly different dimensions. Mine can be found on **my web site**. Another antenna I have made is a roll up antenna that provides a significant boost to hand-helds (VHF HT) owned by members. These roll ups are nice to stuff into a grab-and-go bag. With one of these attached to my hand held Icom 91A, I was able to pull up and talk on the Abbotsford repeater 92 km (57 miles) away. Not bad for a 5w hand held! That antenna is also listed on my web site in the antenna section. That roll up is not a *J*, it's a Slim Jim. I know they look the same but they are a little wider band width and seem to have a bit more gain. I have made several and sold them to my acquaintances and friends for about $35 each including a BNC to SMA adapter making the antenna fairly flexible as to what it can connect to. The twin lead I make them from, up until now, is a type sold by Radio Shack in the US. It has a nice thick stranded pair

Ringo Ranger II

of conductors and a foam core section between the wires. There are lighter and cheaper variants but I have not had good success. I recently got a spool of 300 ohm twin lead from the US through eBay and it's very similar but yet different. The velocity factor will, therefore, be different and hence the dimensions will need to be worked over.

That's enough for now. Your eyes must be tired.

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QUOTE OF THE MONTH

"Courage is being afraid but going on anyhow."

Dan Rather

DI-DAH-DI-DAH

Here we are, into another new year. Hopefully you'll soon get beyond writing "2012" on your notes and checks, and manage to remember that it is now 2013.

I also hope you got a toy of some kind for Christmas. Grandma Mara informed me she was happy with the gifts Walter got for her. She says that Walter was equally happy with her choice of presents for him.

It may have come to your attention by now that the world didn't end on the **21st of December 2012**! The doom sayers were all excited about the date, trumpeting the "fact" that a Mayan calendar ended on (or around) then. Because of that "fact", it just had to mean (in their view) that the world would end (as we know it) on that date. They all seemed to forget (conveniently) that archeologists have found other Mayan calendars that go well beyond that particular day.

It may have come to your attention that the world didn't end on the 21st of December 2012!

You remember Y2K? The doom sayers (likely the very same people) had the world ending at the stroke of midnight on December 31st, 1999 (or at midnight January 1st, 2000 - there was some disagreement among the "experts")! Planes would fall out of the sky, bank accounts would cease to exist, ships at sea would lose control and end up on the rocks, electricity and telephones would fail, nuclear power plants would go into melt-down, personal and business computers would not be able to access their files, and many other dire predictions would come to pass. People were warned to make sure they had paper print-outs of their bank, telephone, utility, and investment accounts. I even heard someone on a radio call-in show asking if their toaster would stop working!

A *lot* of money was made by individuals and corporations making sure that the bases were covered for Y2K. Some of it was undoubtably necessary to prevent problems in commercial computer systems and corporate files. A lot of it was unnecessary and was simply a way for the unscrupulous to part the gullible from their money. The same will have happened because of December 21st. Not to the same extent as Y2K, as "they" couldn't think of a way to involve every com-

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puter or electronics device in the world this time. However, I have heard that sales were booming for companies in the food storage business!

What was 21-12-12 (or 12-21-12) anyway? Nothing but an arbitrary bunch of numbers enabling humankind to keep track of the passing of time.

I wonder what the next end-of-the-world disaster prediction hype will be about?

Until next month,
VE1VQ

How About It?

How about sending a picture of you and your station? If so inclined, send me a bit of a write-up about your ham radio career. And if you have one, send a copy of your QSL card.

Did you or your group participate in this year's Field Day or LDS Field Day? Or perhaps you operated a special event station in your area?

Did you get a piece of ham equipment for Christmas? Write up a little piece describing how it worked (or didn't work!) for you.

You're thinking, "no one wants to hear about me!" That's not true because *everyone* has an interesting story to tell.

Send it to VE1VQ@eastlink.ca in whatever format you want - even scribbled in pencil on a napkin.