



SQUELCH TALES



Newsletter from the Merry Meeting Amateur Radio Association for December 2017

Seasons Greetings



50 MHz Magnetic-Loop Antenna from Scraps

*The saga continues by Bruce Randall,
W1ZE*

In a past issue of this newsletter I showed the readers how I went about building my portable HF magnetic loop antenna from mostly flea market parts. I followed on with a show-n-tell at October MARA meeting.



I had such a good time building the loop I wanted to try a minor mod to the design. That being replacing the RG213 antenna loop(s) with 3/8 inch soft copper tubing. The 3/8-inch size will fit nicely into the rear of the standard PL259 connector and could be sweat soldered in. I decided on a length of six foot and with the value of the tuning capacitor in the tuning box it would cover 30 through 10 meters.

I headed over to my neighborhood hardware emporium and purchased a ten foot roll of 3/8 inch soft copper tubing, then went home and made the mod. I was pleased with the results and the mag-loop tuned nicely from 10 to 29MHz.

I took the loop antenna along with my old IC-706 to the Brunswick Firehouse so our MARA/ARES group could demonstrate HF Ham communications during Fire Safety Day. It worked very well even from inside the firehouse.

After the loop building project I was cleaning up my workbench and noted the four foot length of copper tubing left over from the antenna mod. As usual I said to myself, "Self, you old sot, maybe a four foot length of this stuff would make a nice six meter magnetic loop antenna."

Workshop project 263 was underway. I pulled up the online magnetic loop calculation program at <http://www.66pacific.com/calculators/small-transmitting-loop-antenna-calculator.aspx>, plugged in the known values and sizes (4' long & .375"D) for a loop

that would resonate at 50.1 MHz and see if it would have decent efficiency. The calculations said that I should expect 80% efficiency and with a capacitor of 23pF.

I needed a capacitor and an enclosure for it so into my assorted junk boxes I went. I found a receiver grade 3 to 32pF variable cap with moderately spaced plates and a 2 x 2.5 x 5 inch black plastic construction box I had purchased years ago from Radio Shack back when they sold parts. Along with some 1/2" PVC pipe, end cap and "T" junction I started in building the six meter loop.



I drilled a 3/8" hole on each side of the plastic box about 2/3 the way up on each side so the copper loop ends could just pass through and be hot-glued in place. Then I hot-glued the the capacitor to the inside bottom of the plastic box. I used copper braid taken from a short length of RG-58 coax to make the jumper connection from the copper pipe loop ends to the capacitor (see photo).



After assembly I made the primary coupling loop from a 10-inch length of No.12 solid insulated household electrical wire, and soldered and weather sealed it to a three foot length of RG-58/U with a PL-259 connector on it.

Upon connecting the feed line coax to my antenna analyzer I was able to obtain a 1.1:1 match at 50.1 MHz. Tuning was very sharp and tedious but once there I was happy. On six meters I do not need to change frequency on the loop because most of my activity is from 50 to 50.4 MHz and with resonance at 50.1 MHz, SWR in that window will be below 2:1. With my capacitor I was able to apply a full 100-watts without capacitor arcing. If you want to pump high power (+/-100w) into it you will need a capacitor capable of handling +2KV. But when the band is open, even 5, 10 or 20 watts will let you work a lot of grids.

Mounting the loop horizontally vs. Vertical will make the antenna omnidirectional and good for SSB, FT8, CW work and beacon spotting.

73 & Happy Holidays, de W1ZE



Come Join the MARAs Year End Holiday Season Dinner

You are invited to join with other members and friends of the Merrymeeting Amateur Radio Association at the Wild Duck Restaurant & Pub in Topsham for the annual year end dinner on Saturday, December 9th at 6:00pm.

Come treat yourself to a nice dinner and bring the better half or a friend and come join your fellow hams for a social even.

The restaurant is located at the Highlands Green at 114 Village Dr, Topsham



NEWS FROM THE ARRL IN NEWINGTON

Caribbean Telecommunications Union Head Calls for “New Generation” of Hams

In remarks made on International Disaster Reduction Day, Friday, October 13, Caribbean Telecommunications Union (CTU) Secretary-General Bernadette Lewis described Amateur Radio as a “bedrock of sustained communications” during emergencies, and strongly suggested cultivating a new and younger generation of radio amateurs to carry this role forward. She spoke as [part of a panel](#) on emergency telecommunications during the International Telecommunication Union (ITU) World Telecommunication Development Conference 2017

([WTDC-17](#)), now under way in Buenos Aires, Argentina. The CTU, she said, has been considering the role of Amateur Radio in light of this “very, very, violent hurricane season.”

“Amateur Radio has been a staple, and it is because of...the Amateur Radio operators in the region that we get a lot of the information that we need,” she told her audience. Her presentation defined Amateur Radio as one component of the coordination of preparedness, response, and recovery efforts on the part of national emergency management agencies.

Moderator Vanessa Gray later asked Lewis what “one concrete step” could be taken to make better use of information and communication technologies (ICT) for disaster management.

“We really have to cultivate a new generation of Amateur Radio operators,” Lewis replied without hesitation. “We found that they are all on the northern side of 50.”

“Amateur Radio has been the bedrock of sustained communications during such emergencies,” she continued, “and one of the things we’re looking at is actually facilitating this process of having a network of disaster-resistant centers that that, in times when you *don’t* have a disaster, could be used for training new operators and generating that interest across the region.”

Lewis, of Trinidad and Tobago, reiterated her remarks in condensed form during a subsequent [interview](#), in which she called hurricanes “a fact of life” for Caribbean countries, and suggested that hurricane- devastated countries need to think carefully about

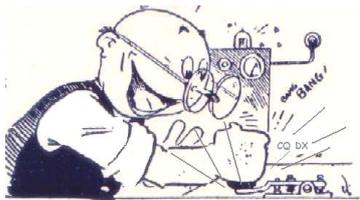
how to rebuild their infrastructure to make it less prone to storm damage.

WTDC-17, which continued through October 20, considers topics, projects and programs relevant to telecommunication development. The conference theme this year is "ICT for Sustainable Development Goals." ARRL Technical Relations Specialist Jon Siverling, WB3ERA, and International Amateur Radio Union ([IARU](http://www.iaru.org)) Emergency Communications Special Advisor Rod Stafford, W6ROD, attended.

From ARRL HQ



Straight Key Night



Every day is a good day to send CW, but January 1 is reserved for Straight Key Night. Enjoy CW as it has been sent and enjoyed since the earliest days of Amateur Radio.

This 24-hour event is not a contest; rather it is a day dedicated to celebrating our CW heritage. Participants are encouraged to get on the air and simply make enjoyable, conversational CW QSOs. The use of straight keys or bugs to send CW is preferred. There are no points scored and all who participate are winners.

For more information about this event, go to:

<http://www.arrl.org/straight-key-night>



RFI Survival Guide

By John Fallows VE6EY

Earlier this year, I published a series of articles on my web site called "Noise Cancellers - RFI Survival Guide". The purpose of this information was to help hams and shortwave listeners lower their local HF noise floor and improve reception.

RFI from neighbors is a constant challenge. Properly set up, noise cancellers are amazingly effective in cleaning up or reducing RFI. Success depends on understanding what kind of noise you can fight, how noise cancellers work, and most important, designing and installing noise probe antennas around your location. This five-article series does just that. It also includes a detailed video demonstrating effective noise cancellation.

Please take a moment to review these articles. If you find them to be useful, please pass them along to your fellow hams or contacts.

You can access them at:

<http://play.fallows.ca/wp/series/noise-cancellers-rfi-survival-guide/>

Thanks for your consideration. If you have any questions or suggestions, please contact me at ve6ey@fallows.ca.

73, John Fallows VE6EY
Calgary, Alberta

