



Squelch Tales



Newsletter from the Merrymeeting Amateur Radio Association for March 2015



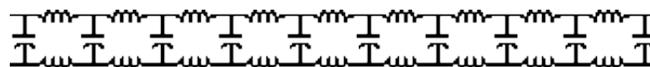
Francis "Fran" Chase, K1BBJ (SK) 1941 – 2015

Fellow Ham, member of the MARA and our friend Fran Chase, K1BBJ passed away peacefully surrounded by his family at Midcoast Hospital on Jan. 22, 2015 following a short illness.

Fran, a true Mainer was born in 1941 in Waterville. He graduated from Maine Maritime Academy in 1962 and turned his longing for adventure into a life as Merchant Marine who crisscrossed the planet many times.

Fran had many hobbies through the years but his was always first an avid HAM radio operator that started in his childhood. Fran and many varied interests in the hobby and was a DXer with over 200 countries to his credit. In addition to being a valued member of this Association's Executive Board he was an ARRL VE. Fran was always one of the first to volunteer to help the MARA and his Ham Radio friends.

*He will be missed by all of us. *
73 and Rest in Piece OM.



With Just a WSPR

By Dan Romanchik, KB6NU

It's really amazing what you can do with computers in amateur radio, and there's been an explosion in the number of digital modes. One interesting mode that I've recently been introduced to is WSPR, which is short for Weak Signal Propagation Reporting. The protocol and the original WSPR program was written by Joe Taylor, K1JT, and is designed for sending and receiving low-power transmissions on the HF bands to test propagation paths.

I won't try to cover all the technical details here. There are several sites that cover them pretty well:

* Wikipedia: WSPR

(http://en.wikipedia.org/wiki/WSPR_%28amateur_radio_software%29)

* G4ILO's Shack: WSPT - Distant Whispers

(<http://www.g4ilo.com/wspr.html>)

I was introduced to WSPR by my friend, Joe, AC8ES. He posted a message to our club mailing list asking if anyone had a toroid core that he could buy to make a QRP balun for 10 MHz. When I asked what he was going to use it for, he said that he was making a WSPR transmitter with a Raspberry Pi, and the balun was for the dipole he built for it. He said that he'd gotten roped into doing this because he'd attended a local Raspberry Pi users' group, and when he mentioned he was an amateur radio operator, they encouraged him to try this project.



How could I refuse a request like that? I have a whole kit of ferrite cores, and after some back and forth, we found a small core that he could use.

The software he chose is WsprryPi (<https://github.com/JamesP6000/WsprryPi>). It's described a "Raspberry Pi transmitter using NTP-based frequency

calibration." It uses a GPIO port to generate WSPR signals anywhere from 0 to 250 MHz. Joe said that there are several Raspberry Pi programs that run WSPR, but that he chose this one because it seemed to have more features than the others.

Figure 1 shows Joe's setup. Since the output generates a square wave, a low-pass filter is needed to filter out the high-frequency components. As you can see, the GPIO output is fed through a 0.1uF decoupling capacitor into a Mini-Circuits 10.7MHz low-pass filter, then to a 1:1 balun, which is connected directly to the dipole elements.

Joe says, "The antenna is just a dipole taped up to the walls of my living room and hallway." As you can see he made the balun and dipole from 24 ga speaker wire.

The performance of this setup has been kind of amazing. In one e-mail, Joe reported, "Your toroid seems to be working well. Got the balun and antenna finished and executed seven WSPR transmissions from the Raspberry Pi. The WSPR reporting website WSPRnet (<http://wsprnet.org>) came back with a couple dozen reception reports; typical distance is ~300+ miles, max was 593 miles." In a second e-mail, Joe writes, "Did a few more beacon transmissions and checked the WSPR signal reports again. Someone picked up my 5 mW signal from 1010 miles away in Canada."

Joe's turned into quite a WSPR fan. He's even written an Android app - WSPRnet Viewer

(<https://play.google.com/store/apps/details?id=com.glandorf1.joe.wsprnetviewer.app>) to retrieve and displays report from www.wsprnet.org. Tapping on a specific report displays more details about it, along with a world map that shows transmitter and receiver locations.

Unfortunately, I don't have a Raspberry Pi, or I'd try this as well. I do have a BeagleBone Black, but there doesn't seem to be software that I can download and install as easily as the Raspberry Pi software. That being the case, this might be a good excuse to purchase one of those new, cheaper RPis.

When he's not digging through his junk box or teaching amateur radio classes, KB6NU writes about amateur radio at KB6NU.Com. He has just released The CW Geek's Guide to Having Fun with Morse Code. The book is available on Amazon.Com or on KB6NU.Com.



NEWS FROM NEWINGTON

"Paperless"

Amateur Radio License Policy Now in Effect

From ARRL HQ, Newington, CT 2/17/2015

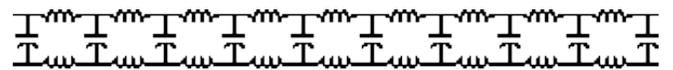
Effective February 17, the FCC will no longer routinely issues paper license documents to Amateur Radio applicants and licensees.

The Commission maintains that the official Amateur Radio license authorization is the electronic record that exists in its Universal Licensing System (ULS), although the FCC had routinely

continued to print and mail hard copy licenses until this week.

In December of last year, the FCC adopted final procedures to provide access to official electronic authorizations, as it had proposed in WT Docket 14-161 as part of its "process reform" initiatives. Under the new procedures, licensees will access their current official authorization ("Active" status only) via the ULS License Manager. The FCC will continue to provide paper license documents to all licensees who notify the Commission that they prefer to receive one. Licensees will also be able to print out an official authorization - as well as an unofficial "reference copy" - from the ULS License Manager.

"We find this electronic process will improve efficiency by simplifying access to official authorizations in ULS, shortening the time period between grant of an application and access to the official authorization, and reducing regulatory costs," the FCC Wireless Telecommunications Bureau said. According to that bureau, the new procedures will save at least \$304,000 a year, including staff expenses.



NESMC Proposed two meter band receives majority vote

The NESMC general membership has approved, by majority vote, the new bandplan for two meters. The one-month

voting period ended on 31-Jan-2015, after a one year trial period.

Details of the bandplan, the coordination procedure, and our bylaws are available in the documents area of the NESMC website, here: <http://nesmc.org/docs>

Voting totals were as follows:

YEA	171	80.3%
NAY	37	17.4%
<u>ABSTAIN</u>	<u>5</u>	<u>2.3%</u>
TOTAL	213	100.0%

Additional information:

The original trial vote in 2013 was 120/38/3 and passed with a YEA vote of 74.5%

The NESMC membership consists of:

787 active accounts

74 club accounts (not eligible)

45 non-club accounts less than six months

40 non-club accounts > six months but not in MA/ME/NH/RI

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628 eligible to vote

NESMC, the New England Spectrum Management Council, is the NFCC certified frequency coordination body for amateur operations on the 29MHz and up frequency bands in the states of Maine, New Hampshire, Massachusetts, and Rhode Island. NESMC is also the exclusive provider of data to the ARRL repeater directory for these four states.

The MARA's Call sign Trustee, Bruce Randall, W1ZE was not eligible to vote because their three repeaters are under a club account, not an individual account.

For more information about the bandplan, go to:

<http://www.arrl.org/news/new-england-spectrum-manager-wants-to-hear-from-2-meter-simplex-ops>



Tickets for the 2015 Boxboro! convention are now on sale.

As you may have noticed, we are breaking our usual "every other year" schedule having a convention this year, so help us spread the word to your friends and acquaintances that there IS a convention this year.

The committee is lining up speakers, forums and exhibitors, so many details are still to be announced. However, Gordon West WB6NOA is confirmed as the keynote speaker at our Saturday banquet.

And finally.. be the first on your block to get tickets.

<http://www.boxboro.org>

73, Bob DeMattia

Vice Chairman, Boxboro Convention Committee

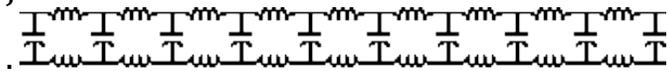


A little late but still well deserved



WD1F & N1IPA 2014 Hams of the Year presented by Association Pres. Dan , N5AGG

Normally the MARA's Ham of the Year award is presented at the December Year End Dinner. This year two MARA members received the award. They were Jim McIrvin, N1IPA and Donnie Dauphin, WD1F. However, Donnie could not make it to the dinner so at the first MARA meeting in January the award was presented to him. Well done Donnie & Jim



Files Chapter Eleven

Ninety four years ago Radio Shack opened its first store selling Ham Radio equipment and sent out its first catalog. However these days they are mainly a cellphone, battery and electronic toy store. On February 2nd, Radio Shack declared bankruptcy as a result of their decline.

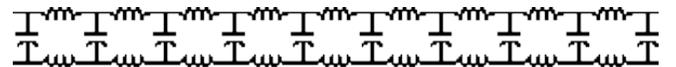
The company has struck a deal to sell up to 2,400 of its approximately 4,000 stores and wireless company Sprint will create a "store within a store" in up to 1,750 of those. **Radio Shack said that its remaining stores are expected to close.**

The Shack is not completely going away. Customers will still be able to purchase Radio Shack products, services and accessories at the approximately 1,750

stores where Sprint will open shop. In fact, Sprint will occupy part of those locations, where it will sell devices and plans. The stores will be "co-branded," according to Sprint. How this will effect the stores in Portland, Auburn, Topsham and Brunswick has not been determined but it does not look promising.

Some independent stores that are under the Radio Shack name and are supplies by the parent company may stay in business and continue to be supplied by Radio Shack and other electronic parts suppliers.

For years Maine hams have struggled to find electronic parts and supplies in the state and this turn of events will make it even worse. It appears that the electronic hobbyist in Maine will have to shop online or take a weekday run to H&R Distributes in Portland for their electronic supply needs.



A note to new DXers

By Bruce Randall, W1ZE

As many of you know I do like to chase DX and add new contacts to my DXCC total.

I have my desktop PC connected to the TELNET DX spotting website while I'm in the shack so I can see when a rare DX station or one I need is being spotted.

Hopefully if you are new to DXing you are using a DX spotting website to help you land that new one. When you see a

DX posting it may look something like this:

DX de W3XYZ 14233.5 5W7A Big Sig QSX 14237.0

What that is saying is that W3XYZ is reporting he is hearing 5W7A on 14233.5 kHz and the station is strong in 3-land and the 5W7A is working split, listening for calls on 14237.0.

When you tune up to work the DX station, DO NOT tune up on 14233.5 or 14237 so as not to QRM the DX station or the stations calling the DX station.

If you don't use a DX spotting service and just happen to hear a DX station working one station right after another and you do not hear other stations calling the DX station, you should assume the DX station is working "SPLIT." AGAIN, do not jump in quickly and call the DX station.

1. The DX station will not hear you because he is listening on another frequency and
2. you will end up QRMing the DX station.

As a rule of thumb, DX stations listen up (sometimes down) 2 to 3 kHz in CW or RTTY and 5 to 10kHz in SSB. Definitely, if you hear the DX station say UP 5 to 7 he or she is listening up frequency 5 to 7 kHz for calls.

That is the end of my soapbox tiraid for now, so go out and chase some DX.

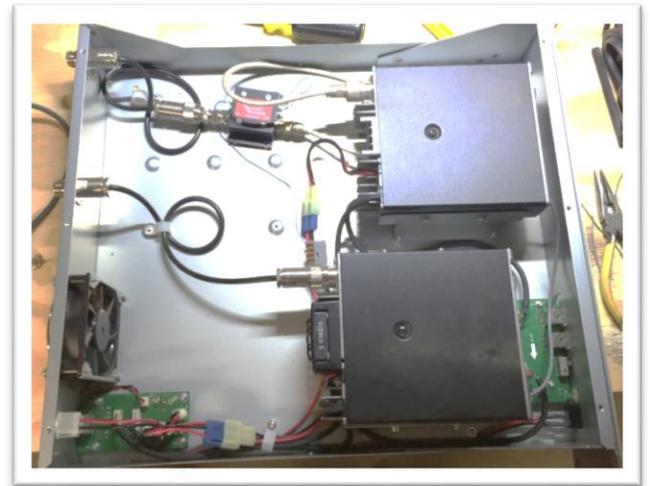
73, Bruce, W1ZE



Tech Committee Report

By Donnie Dauphin, WD1F

This past month I installed the Associations old low-noise UHF pre-amp that was on the old 444.4 repeater into our D-Star repeater. Initial tests show it made a noticeable difference, at no additional cost.



I also wired the old NHRC-10 to our new Yeasu DR-1 repeater. Most signals played nicely but required swapping PNP transistor for NPN for proper PTT function. So for a brief time we had our familiar courtesy tone and voice ID-s. However concerns were expressed about the DR1 being able to switch between analog and digital with the external controller. It seems some members of the club are purchasing Fusion equipment. So the NHRC-10 was disconnected.

I have been thinking about trying to bring ham data back to the area. I could use D-Rats with both D-Star radio's and FM packet in KISS mode. Folks could experiment, use

the system with or without D-Star equipment. Just a thought but think it over and let me know.

73, Donnie W1F



Make your own dipoles with these center insulators

By Dan Romanchik, KB6NU

www.kb6nu.com

One of the things that always gets my goat is the price some companies charge for dipole antennas. It's not that they're charging an outrageously large sum of money, and I certainly don't begrudge them making a profit for their efforts. It's just that if hams would just buy their own wire and parts, they would not only save money over the long run, but be encouraged to experiment with antennas. That's what I started doing about ten years ago, and I've been very happy with the results.

One of the first things that I did was to purchase ten Budwig HQ-1 center insulators and ten HQ-2 end insulators (<http://www.budwig.com/antenna-connector-insulators.html>). I've made a bunch of antennas with these insulators, including several 40m/20m inverted vees for portable use (such as Field Day and special events), a 17m dipole, and a 10m loop antenna. These insulators are very well-made, and can easily be reused, too.

* **Universal Radio sells the set** (<http://universal-radio.com/catalog/antsup/1782.html>) for \$18.50. I just placed another order for ten HQ-1s

and 20 HQ-2s (the minimum number that you can purchase to get a quantity discount). The price, including shipping, is \$143.

There are a bunch of other center insulators on the market, including:

* **The Alpha Delta Delta-C antenna hardware kit** (<http://universal-radio.com/catalog/antsup/0297.html>) consists of a Delta-C Center Insulator, antenna connecting hardware, 1 SEP Arc-Plug™ static protector (installed in Delta-C) and 2 Delta-CIN end insulators. This is a little heavier-duty than the Budwig insulators, but it costs more, too (\$30 at Universal Radio). Unless you're going to be running a kW, I don't see the need to spend nearly twice as much money on these insulators.

* **The TEN-TEC ACRO-BAT Antenna Connector & Hanger** (<http://www.tentec.com/products/ACRO-%252dBAT-Antenna-Connector-%26-Hanger.html>) is an interesting product. Unlike the Budwig and Alpha-Delta insulators, this product does not have an SO-239. Instead, this insulator clamps over the coax and antenna wire, and in doing so, provides strain relief. I haven't tried this one, but it seems like a nice design. The cost is \$10, directly from TEN-TEC or from Universal Radio.

* **The Unadilla W2AU ANsulator** (<http://universal-radio.com/catalog/antsup/0913.html>) is made from PCV tubing and include eyelets for terminating the antenna wire and for supporting the insulator in the

middle. For \$15, I think I'd rather have the Budwig insulator. Also, you should be able to make one of these insulators for less than 15 bucks.

* **The Hy-Gain C-1C Center Insulator** (<http://www.hy-gain.com/Product.php?productid=C-1C>) has a screw for tightening down the antenna wire, so you don't have to do any soldering, but overall, I don't think I like the looks of this model. And, at 30 bucks, it seems kind of pricey.

* **The W8AMZ Dipole Antenna Starter Kit** (http://www.w8amz.com/W8AMZ_ACC_Page.html) comes a center insulator made from PVC pipe, similar to the Unadilla W2AU ANsulator and two end insulators. It costs \$18.

If none of these strikes your fancy, you can always make your own. WP4AOH has some very good instructions on how to do this using PVC pipe and fasteners that you can find at your local hardware store (<http://wp4aoh.blogspot.com/2012/07/dipole-antenna-center-insulator.html>).

Whatever route you take, I encourage you to keep several on hand and enough antenna wire and coax to complete the antenna. You never know when the urge will strike you to build an antenna, and if you don't have the parts you've missed an opportunity to do some experimenting.

73, By Dan Romanchik, KB6NU



February VE test session brings success to fellow MARA member

Topsham, ME: On February 2nd a small group of folks arrived at the Red Cross building to take their ham radio license examinations. For most of them the evening was a success. One of the applicants was Robert "Bob" Oxton, N1BLX, one of the founding members of the MARA back in 1980. With a little more free time on his hands Bob started in on his Extra Class license studies. He did the drill over and over until he thought he was ready to take the test and be successful. When the evening was done, Don, KA1WAL advised Bob that he had passed the exam and now had Extra Class privileges.

Kudos goes out to all the successful test takers that evening and a special AT-A-BOY goes to Bob for a job well done.

