



# The QUARAE



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## Prez Says.....

I won't say much about the weather this month, I know you folks up north are fed up with the cold and snow. I just hope that the icebergs are gone from the lake when I get back.

I have put a preliminary schedule together of the public service events and a few other events that will require RAE participation. Any changes to the dates will be posted on our website.

- 4/26 March of Dimes Walk at Presque Isle
- 5/09 Great Lakes Emergency Preparedness Expo-Convention Ctr.
- 5/16 RAE Open House
- 5/25 Walnut Creek Baptist Church Run
- 5/30 Edinboro Triathlon
- 5/30 Weather SET
- 6/13-14 MS Society Escape to the Lake Bike Ride
- 6/20 Bay Swim
- 6/27-28 Field Day
- 7/19 Erie Runners Club Half Marathon
- 8/22 Presque Isle Triathlon
- 9/12 Beast on the Bay Obstacle Course
- 9/13 Erie Runners Club Marathon
- 9/19 Creekside Bike Ride- Sherman, NY

9/27 Run for Recovery Presque Isle State Park

10/10-11 PA QSO Party

Please mark you calendars and help out as much as you can.

The RAE has been invited to participate in the Great Lakes Emergency Preparedness Expo at the Erie Convention Center on May 9<sup>th</sup>. This should be a good opportunity to let the public know what Amateur Radio does and what we can do in emergencies.

Don't forget to check in to the various nets that are listed on our website.

THANKS & 73,

Doug AD4UL

WHAT IF THERE WERE NO HYPOTHETICAL QUESTIONS?

## WORKING NAVASSA by K3PLV

Recently for the first time in 22 years a group activated Navassa Island, which is off the coast of Haiti. Navassa counts as a country for DXCC



**Radio Association of Erie  
Club Meeting at the Red  
Cross  
Thursday March 5  
7 PM- General Meeting**

**Program: TBA**

purposes and since it had not been activated for many years, was needed by many for DXCC purposes. Navassa is administered by the US Fish and Wildlife service and is uninhabited except for Haitian fisherman who illegally camp on the island. Navassa is a disputed island and both Haiti and the United States lay claim to it. But because of its rich guano deposits, President Buchanan claimed it for the United States ignoring Haiti's claim.

The group activating Navassa spent a great deal of money and resources putting this DXCC entity on the air. Because of weather conditions most of the supplies and operators flew by helicopter from Jamaica to Navassa for additional costs. I observed a great deal of criticism from many amateurs. This included complaints about how long it took to get on the air, complaints about the bandwidth of the operation, complaints about the speed of CW the operators were using, and complaints about what part of the world the operators were working.

The operators were quite experienced and have operated from many other DXCC entities. They wanted to give QSOs to as many stations as possible. At first the pileups were huge. The operators had to spread out the people calling to pull a call out of the mess. That means the operation used a great deal of spectrum. But the bands were not very crowded so all the other people that were not into working Navassa had to do was move and they would receive no interference.

I was told that since there was such a large frequency spectrum that people were calling on, that they didn't know where to call. When this is the case all you need to do is listen for the station working Navassa and then listen to the next station working them, etc. After a short time you figure out the operator's habits. Most of the operators were working a station and then moving either up or down a half a kilohertz or so. For example, the operator is transmitting 21205 kHz and listening

21210 kHz and up. You hear someone working him on 21219 kHz. The next station he works is at 21219.6 kHz and the next is 21220.3 kHz. So you move your VFO to 21221 kHz and give your call. Give your FULL call phonetically. If he doesn't go back to anyone, give it again, and again, until he works someone. Don't call when the station he is working, is transmitting. If he works someone else, move up a little farther in frequency for the next try. Remember to make sure you transmit on the uplink or downlink frequency and not the frequency of the DXpedition.

As far as the complaint about the speed of the CW operators, all you need to do is learn to recognize your call. Practice listening to your call over and over again. Try it at faster and faster speeds. Eventually you will learn to recognize your own call at any speed. You might not be able to copy anything else at that speed, but all the DXpedition operator sends is "your call 5NN" Then you send your call and the report. People complained they couldn't send their call fast enough and that the operator was already working someone before they had transmitted their call once. There are many free logging programs that will allow you to send a memory (which contains your call) with one keystroke. You may need a piece of equipment such as a WinKeyer, but these are NOT expensive.

Remember the people putting on the DXpedition are using a lot of their own money to be there. You have no idea about their working conditions. On Navassa it was 116 degrees with extremely high humidity. The guys had to put antennas up in that heat. They contended with mosquitoes, spiders, rats as large as cats, and other things, while you sit in your heated (in the winter) or air-conditioned shack (in the summer). I've been on the other side of pileups. When I first went to Jersey it was needed by many Japanese. The pileups were so intense that they covered 10 kHz and I had a hard time pulling out a single letter of a station calling. Propagation

to Japan would only last three hours so I ignored Europe and the USA and only worked that part of the world. I heard many people complain when the Navassa guys were only working Japan and not USA. But they could work USA 24 hours a day. So change bands and work them on another band and let the DXpedition work the part of the world when propagation allows.

The Navassa group made 138,409 QSOs. There probably won't be another group there for at least 10 years. Even though I only needed them on 160 meters I enjoyed working them a number of times and I know many other hams in Erie did also. 73, and good DX.

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**The roundest knight at king Arthur's round table was Sir Cumference.**

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## 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](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](http://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 [mazon.com](http://mazon.com) or on KB6NU.Com.

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**What did the grape say when it got stepped on?  
Nothing - but it let out a little whine.**

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## Orlando HAMICATION 2015

by K3PLV

The Orlando Hamication was once again a great success. There were many Erie hams and hams with Erie connections this year. The Hamication ran February 13, 14, and 15. Every day was sunny with high temperatures in the mid 60s on Friday and Saturday and mid 70s Sunday. I believe Orlando is the third largest hamfest in the world with Dayton being the largest and Friedrichshafen second.

Present at the hamfest in alphabetical order were AD4UL, K3PLV, K3USC, KA3CPO, KA3CRC, KA3FZO, KB3MI, KB3OFD, KB3QBB, N3JOC, N3LPO, KJ3L, KA4JKY, WA3PRC, WB3DOM, and WB3FJP. KB3MI won a hardback ARRL Handbook. N3JOC bought a used, but never out of the box Mosley Pro 67, which is a seven element beam that has four elements on 10, three elements on 40, 20, 17, 15, and 12, and one element on 30 meters. KB3QBB bought new coax for the antennas at the Wattsburg club. Other people may have purchased things that I didn't know about. All had a great time I believe. Hopefully we will all be at the Dayton Hamvention and back to Orlando next year. Why not join us? Maybe we should try Friedrichshafen this summer.

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**If you're riding' ahead of the herd, take a look back  
every now and then to make sure it's still there.**

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# Ham Radio Calendar

March 1 - North Carolina QSO Party. See [rars.org/ncqsoparty](http://rars.org/ncqsoparty)

March 3 – Corry Club Meeting

March 5 – RAE Club Meeting

March 7 - ARRL Int'l Phone DX Contest. See [www.arrl.org/contests](http://www.arrl.org/contests)

March 10 – Wattsburg Wireless Club Meeting

March 12 – Union City Wireless Club Meeting

March 14 - Louisiana QSO Party. See [laqp.org](http://laqp.org)

March 14 - Idaho QSO Party. See [www.idahoarrl.info/qsoparty](http://www.idahoarrl.info/qsoparty)

March 15 - North American RTTY Sprint. See [www.ncjweb.com](http://www.ncjweb.com)

March 15 - Wisconsin QSO Party. See [www.warac.org](http://www.warac.org)

March 21 - Oklahoma QSO Party. See [www.k5cm.com/okqp.htm](http://www.k5cm.com/okqp.htm)

March 21 - Virginia QSO Party. See [www.qsl.net/sterling](http://www.qsl.net/sterling)

March 21 – VE Exams