



# RADIO AMATEUR NEWS & VIEWS

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## **NEXT MEETING: Basic Ham Metering Instruments**

Tuesday, February 11, 2014

Carl, AB1DD, will discuss and demonstrate the voltmeter, how it works, how to connect it and useful tests that can be made.

Bob, KB1FRW, will touch on the functions and uses of the ammeter and the ohm meter.

Feel free to bring your personal equipment and questions to the meeting and we will strive to answer and advise about uses and mysteries.

An interesting kitchen experiment by Kathi K1WAL will be available for snack afterwards.

## **HAM-CON 2014**

Mitch W1SJ

HAM-CON 2014 will be upon us in a mere two weeks and it will be another great show! In fact, we've packed so much stuff into 5 hours that you will have to struggle to figure out what you want to see first. Make sure you go to the web site and plan your day carefully to take in as much as you can.

Our special guest this year is John Amodeo NN6JA, who will come to us live from Hollywood via Skype. He is the producer of the TV show "Last Man Standing", featuring Tim Allen playing a character who happens to be a ham with the fictional call sign KA0XTT. Several times, we have been treated to scenes from the ham shack on TV. Recently there was a segment on ham radio during the Thanksgiving episode – look it up and watch the video segment on the web! The shack is a real operating ham station used by the 15+ hams on crew and also visitors. If scheduling permits, John will do the talk from the shack on the set. He will give us the inside story of all the elements involved in putting Ham Radio on the air in prime time.

**HAM-CON...continued Page 2**

## **VT QSO PARTY BRINGS OUT THE BIG GUNS**

Mitch W1SJ

The 2014 QSO Party is history and was another big success. It is less than 24 hours after the end of the contest and I've already received 52 logs. I expect to pick up at least half as many more in the coming days. The phone activity was certainly there. While tuning around and watching the spots, there always seemed to be 2-3 Vermont stations churning through pileups on the popular bands. On Friday night on 40 meters, AA1SU was on 7182, KB1FRW on 7185 and W1SJ on 7188, all with huge runs. This group easily handed out over 500 QSO's inside of a couple of hours! All day Saturday, K1VMT, KB1FRW and W1SJ were spotted often on 15 and 20 meters.

When the dust had settled, we tallied just short of 2600 QSO's at host station W1SJ, served up by AA1SU, KB1IVE, KB1THX, KB1WIZ, KB1WJA, and W1SJ. Over in Richmond, KB1FRW ended up with just shy of 1200 QSO's on low power and we'll see if there are any serious challenges to this score.

There are already a lot of smaller scores from 50 to 350 QSO's submitted so far. And while I heard a bit of complaining that Vermont was hard to find on CW, I see a lot of CW contacts logged – although nowhere the number of phone contacts made.

Outside of Vermont, OM2VL racked up 25 Vermont QSO's, about double of last year's leaders. And realize he is 4000 miles away in Slovakia! But he did have a monster signal when I worked in on all FIVE bands! If his score holds up, we'll have to figure out how to ship the Maple Syrup to Europe!

**HAM-CON continued from Page 1 ...** Joel Hallas W1ZR will be back this year, coming to us live from his ham shack in sunny Connecticut (!) where he will conduct another edition of "The Doctor Is In". Have a pressing technical question? Bring it to the forum and Joel will give you an answer. We can also forward some questions to him prior to the show.

Our guest from the ARRL will be Steve Ford WB8IMY. For those who want to play on the digital side of the world, Steve will give us all the details about setting up and using PSK-31 and JT-65, two modes which make the most out of low power. Steve also happens to be the Editor of QST and he will give us all the details and insight about the monthly routine of putting the largest ham magazine together.

John Grow VE2EQL returns and will again show use how to remote our ham shack so that we can operate from anywhere. As a side note, I worked several stations during the QSO Party who were not at their transmitter, so this is becoming quite popular. His second forum is on how to get the radio you always wanted – a primer on how to select and ultimately acquire that dream radio.

Starting March 26<sup>th</sup> and running for a full week, hams in Northern Vermont have the huge task of putting W1AW/1 on the air for 168 hours across 9 bands and 3 modes. For a small group such as ours, this is an insane undertaking! We will have a special W1AW/1 forum to discuss all the details on how this will happen, in addition to details on the ARRL Centennial QSO

Party and Logbook of the World. For all other things ARRL, be sure to attend the ARRL Forum.

Add to all of this is the Flea market where K2AUO will return with all his goodies after a year layoff, along with Webster Associates and many smaller sellers. We want to have everyone make a push to get things in the flea market. Whether you set up your own table, or use the RANV Flea Market table, bring lots of stuff so folks can buy it!

Over in the Activities Room, we'll have W1V on the air, the Tech Table, where you can get your radio checked out, a video, and mini-forums on JT-65, MARS, Crystal Radio and anything else we can dream up.

Don't forget to hang out for the Closing Ceremonies at 12:55, where we draw the door prizes. The main prize is a Phillips 5000 32" High Definition TV courtesy of WCAX, along with many smaller and fun prizes too. You have to be there, in the flesh, to win, so make plans to stay put until the very end!

You can buy tickets for HAM-CON on-line for only \$6 until February 14. After that, it's \$8.

Grab your friends, fill up the car and head down to HAM-CON 2014, Saturday, February 22 at the Holiday Inn Convention Center. In the immortal words of Ed Sullivan, "It will be another great shoooooow!"

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## W1AW/1 NEWS

Mitch W1SJ

We are 6 weeks away from the W1AW/1 operation from Vermont. If we are to do this right, it will be a massive undertaking. This isn't about getting on for 20 minutes and throwing the call sign out there – we are talking about a DXpedition type operation across all bands and modes. Through the W1AW Leaders Reflector, on-air listening and searching around on the web, I have learned that there is a lot to consider. Some numbers to get you thinking: the W1AW/2 operation in New York made 18,000 QSO's and had something like 36 people involved. The group in Texas (operating from super station NR5M) had 18,000 QSO's by Friday – halfway through!

The program has been wildly successful, but there have been issues. When there is a slow operator on, stations have to wait a long time to work W1AW and then they get restless and then downright nasty. We absolutely do not want ugly pileups for W1AW. The W1AW operator has a major effect on the smooth running of the pileup and ultimately, satisfaction of the "customers". The problem right now is that in Vermont we have a tiny group of operators, and only 10 or so people who I believe could manage the pileups of this magnitude (if that many).

The solution is two-fold. First we need to make sure everyone gets sufficient training to at least KNOW what to do and what not to do. In other words, your skills may not be tremendous, but

you will know how to mitigate certain situations as they pop up and keep things running smoothly. The second thing is to carefully pick the right operators for the right bands and modes. We want to have the best ops presiding over the madness on 20 and 40 meter phone, whereas things are a bit more relaxed on the WARC bands. And then we need people to provide their skills for the specialty modes – PSK-31, RTTY, Satellite and even EME! We will be operating W1AW across a variety of operating sites so there are enough possibilities for a good number of hams to be involved.

Very soon, we will need to know who wants to be committed to this task (and ultimately be committed to the nuthouse afterwards...). By commitment, we mean that if you sign up for a job, you make sure it is done, no matter what – kind of like Field Day! The folks who sign up for this will be directed to join the RANV Reflector as that will be our primary avenue for discussion. And then we plan and learn and plan some more. And we will meet at HAM-CON and plan even more.

The entire ham radio world will be watching US March 26-April 2. Let's get it right!

And the one thing which trumps all of the above is that you get to meet and network with over 300 like-minded crazy hams. Even if you have nothing to buy and nothing you care to learn, come to the show and engage in the HAM-CON Eyeball QSO Party!

## HAM-CON's RANV Buy/Sell/Swap/Flea-Market/Shack-Enhancement Table

Is your shack beginning to look like McGee's closet? Tired of feeling unfinished projects scream silently? Looking for some "mad money"? Unload your unwanted at the RANV Flea Table, a free service, membership benefit, for RANV members who have a few things to sell, but who don't want to be tethered to a sale-table. No junky junk, please!—just good, usable equipment (or fixable without unreasonable expense).

The table will be attended at all times so you can just drop off your items and return to pick up money or unsold goods when you leave. Remember, no table fees or hidden costs, you take home all your proceeds. Such a deal!

Please take a gander around your shack and see what you might have accumulated in various fits of enthusiasm, but never really used, or what has been put aside in favor of something newer. Many newly licensed hams are looking to get started on their equipment addiction as inexpensively as possible, help them out. And maybe take home some pocket-money!...or not. Maybe you'll stumble on something you've coveted and...ZAP!...another fit of enthusiasm strikes.

Of course, there *are* a few rules:

1. Sellers limited to **maximum of 10** items

2. Weight limit of **35 lbs per item and 100 lbs total all pieces**
3. **Label each item with seller's call sign and suggested price**  
(*please keep to rounded-off dollars, no coin change will be available*)
4. Seller to **supply table attendant with a Manifest List identifying each item, with description, condition, suggested and lowest prices, payment accepted: cash or check**
5. **Unsold items must go home with the seller.**

"Item" means:

- a base, mobile, or hand-held radio (*usable or fixable at reasonable cost*)
- misc. related equipment (*test equipment; lone power supplies, TNCs, tuners, GPS, antennas, etc; tools such as soldering guns/irons, meters, etc*)
- laptops and small peripherals OK.—*No monitors, printers, or "desktop" computers*
- books, manuals, magazines (ham-related)—as boxed unit(s), or per attendant's decision
- a box of usable wire/parts/etc (*no broken, unusable bits & pieces*), up to 35lbs.

Feel free to contact me with any questions:  
Robin/N1WWW, 897-2668 or by email to  
[n1www@arrl.net](mailto:n1www@arrl.net).

**A CHALLENGE TO ALL RANV MEMBERS:** Contribute one article to the *News & Views* in 2014! This is our club newsletter we the members make the club. It doesn't have to be long, just a couple of paragraphs can capture an interesting contact, DX experience, or trip up an icy tower! Or if you are so inclined you can write a larger article about a project or other Ham related topic. Interesting Ham related photos are also welcome. Step up to the challenge and contribute to the newsletter!

## Secretary's Minutes

Kathi K1WAL

The meeting began on time with introductions and announcements. All were encouraged to come to the annual Ham Breakfast which was Jan 25. We had a short discussion about the newsletter and a show of hands indicated that most members still prefer a paper copy over an electronic version. A newsletter editor is still needed but Kathi K1WAL will keep it going a little longer and will train and work with the new editor or co-editors.

Mitch W1SJ talked about HAM-CON and the forums planned. Mike N1FBZ will have a Tech Table in the Activity room so bring your problem parts (the electronic and radio related ones) for him to fix. Mitch also talked

about the many upcoming events this year including W1AW/1 as part of the ARRL Centennial Celebration.

Our feature presentation was Some (Not-So) Simple Audio Preamplifiers by Larry Heyl To be honest, our club's secretary had a hard time keeping up! With some help I can say that Larry went through the steps to design a very low noise audio pre-amp for a turntable pickup using discrete transistors instead of op-amps. He then described the stages of circuit design from pencil and paper through computer programs to set the final circuit, and the component placement. Then, he described how he decided on the company to build the circuit boards, as well as the testing procedures and equipment needed through all the stages of his build. Many thanks to Larry for coming to our meeting and giving a great presentation!

## The OCF Dipole -- 3 bands in 1 antenna

Cathy James (N5WVR)

When I moved to my new QTH last year, I finally had the space to put up full-sized HF antennas. But by the time I had closed on the property, moved in, unpacked boxes, and was able to turn my attention to ham radio, the season was well into fall. I knew that I had limited time to put up some quick antennas before winter made it difficult.

I wanted to run buried RG-8 coax to a multi-band antenna. This way I could avoid getting the feedline tangled up in the lawn mower, but without needing to figure out a difficult path to get the ladder line I've generally used back to the house. (Note to new hams: ladder line should not be buried, as you'll lose too much signal. Coax can be buried without affecting the RF it carries, though not all coax is waterproof.) But coax-fed antennas are usually single-band, unless the builder wants to take the time to build and carefully tune traps. I didn't have that time and didn't want to make this any more complicated than necessary.

A Center-Fed dipole can be used on its fundamental and odd harmonics, so one antenna can do 40 meters and 15 meters. But my day job forces me to do most of my operating in the evening, after dinner. Wavelengths shorter than 20 meters don't get used much in my shack, so 40/15 was a fairly useless combination. The Off-Center-Fed (OCF) dipole was the solution I chose.

OCF dipoles work on the fundamental frequency and even harmonics, so theoretically one antenna could work on 80, 40, 20, and 10 meters. The feedpoint should be 1/3 of the antenna length from one end, 2/3 from the other, and the antenna should be about 1/2 wavelength on the lowest band to be worked. Because the feedpoint is

not at the center, the antenna impedance is typically about 150-200 ohms instead of 50. A 4:1 balun solved that problem.

I decided to use my flagpole to hold up the feedpoint, again keeping things simple. After measuring it out, I saw that there wasn't room in the planned location for a 40 meter long antenna, so I settled for one 20 meters long that would work on 40, 20, and 10 meters. I used a shovel to cut a slit in the dirt and pushed the RG-8 down with my fingertips, then pushed the soil back down. The feedpoint was simply a large ceramic electric fence insulator from the ham junkbox. The 4:1 transformer was hung from the insulator with the same type of polyester antenna rope that was used to tie the ends of the antenna to trees and the insulator to the flagpole "rope", which consisted of more polyester antenna rope. Finally, the transformer was sealed with acrylic latex silicone caulk to make it more waterproof.

The SWR of the antenna as measured in the shack varies from 1.6 to 2.2 on the 10 meter band, 1.2 to 1.5 on the 20 meter band, and 1.7 to 1.8 on 40 meters. The high SWR on 40 meters surprised me. I had thought if I simply got the total length correct, trimming exactly twice as much from the long side as from the short side, I could get below 1.5 for at least part of the band. But from 4 MHz to 10 MHz, I have been unable to find any frequency with an SWR below 1.6. Either there is something odd about my antenna, or OCF dipoles utilizing 4:1 transformers are not a perfect match on their fundamental frequency.

The other tricky issue is that the SWR on 80 meters is about 1.4 - 1.5, measured at the shack. That at first fooled me into thinking that the antenna might be usable on 80. In reality, the SWR at the feedpoint is

much higher (based on actual measurements at the base of the flagpole), and the low SWR in the shack must be a result of high losses in the feedline due to the mismatch. I've had very little success with the short OCF on 80, but it was never fair to expect much.

This OCF is now my most-used antenna, although I have put up 3 other HF antennas since then. It has worked a good range of states and a number of countries in just a few months of operating on 10, 20, and 40. (I am not a contester, so no antenna is going to let me rack up countries at the rate a serious contester would.)

### CONTACTS

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Meetings: 2<sup>nd</sup> Tuesday • 7:00 PM  
113 Patchen Road  
South Burlington  
The O'Brien Civic Center

Repeater: 145.150, PL 100; WB1QR

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New Hams, Mentoring:  
[RANVMentor@gmail.com](mailto:RANVMentor@gmail.com)

## THE DX CLUSTER COMEDY HOUR

Mitch W1SJ

Those active on HF are familiar with the DX Cluster. This is an interconnected system whereby stations can “spot” DX stations so that other hams on the Cluster can find out what frequency they are located on. It is invaluable for picking up rare DX, needed states, and even the WIAW portable operations. I use it extensively in the Vermont QSO Party to spot our stations so that everyone can find the Vermont activity.

In its simplest form, a spot consists of the station, frequency, timestamp and the reporting station. There is also a short line to render a comment, such as “VT”, or “listening up” or the name of a special event. Unfortunately, when you give someone a soapbox to stand upon (thousands watch the Cluster), they will use it in ways we may not appreciate.

I often get spotted with nastygrams such as: “Jammin in the DX Window – don’t work him”. The interesting

thing is that while 10 people will join the boycott, another 100 will flock to the frequency to work Vermont! Every year during the 160 meter contest, several Europeans will tack on comments like, “no receiver”, “deaf”, “get a pair of ears”, etc. While I don’t hear as well as other big stations, I do manage to find the time to put 1000 QSO’s in the log, so I must be hearing something.

Some six years ago, when the current president was running for office, NOBAMA was spotted numerous times during the November Sweepstakes, held just before election day. I wonder if anyone worked him!

This past weekend the Cluster was like having the Comedy Channel piped into the shack. The first salvo popped up Saturday morning from a DX station commenting on a particular station’s receiving ability: “HAS BANANA STUCK IN EAR”. This totally got me untracked as I had to stop operating and laugh my head off as I visualized a ham operator with an actual banana hanging out of his left (or is it right) ear.

Later on, it got nastier. This from a Russian ham spotting a DXpedition: “BSTRD ITALIANS SCREWING UP THE FREQUENCY” (*the first word modified to keep this family friendly*). But it gets better. A mere 5 minutes later I see this post from an Italian station: “HA! BSTRD ITALIAN WORKED HIM!” Again, I lost it and had to stop operating to compose myself.

With the FT5ZM and S9TF DXpeditions running full force this weekend, the comments were flying fast and furious. Folks would take to commenting on people calling on the wrong frequency. Of course, there is no guarantee that the targets of this abuse were actually watching the cluster. Finally, one guy summed it all up, “A BUNCH OF IDIOTS”. I was ready to launch an appropriate P.S., “GET A LIFE”, but I thought better of it, and returned to the pileups!

Thus, this is another example how people’s brains turns to mush when a keyboard and monitor is thrust in front them.

## ARRL New England Division Cabinet Meeting

Paul AA1SU, our ARRL Vermont Section Manager, attended the ARRL New England Division Cabinet meeting January 4, 2014 in Springfield, MA. There were 32 in attendance.

Some highlights of what was discussed are:

- The ARRL Centennial convention on the 3<sup>rd</sup> weekend in July 2014 in Hartford, CT. There will be about 70 seminars, numerous regional events, and little something for everybody.
- The Leagues Information Technology including the spam filtering problems with the arrl.net address, Android support for digital QST, and the improvements for the Logbook Of The World (LOTW).
- FCC Action topics included the symbol rate petition of which there were several articles in QST

- a petition is under review to tweak the VE rules involving reducing the VE number requirements (which is mostly opposed by the League)
- Congress will be revisiting the Communication Act
- RF exposure rules are under review
- Digital Communications – are we getting to the “tipping point” of moving from analog to digital? Should a 2.4 GHz HSM in the 2.4 GHz band plan be considered?
- The New England Spectrum Management Council if voting on a proposal to change their band plan to expand the 2 meter repeater frequencies over some simplex frequencies.
- There hasn’t been much increase in 2 meter repeater use in recent years – why now?
- There seems to be no one representing the interests of simplex users.

If you have any specific questions or concerns please contact Paul at AA1SU@arrl.net



## NEWS & VIEWS

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### Upcoming, Notices, & Misc

- HAM-CON February 22, 2014
- W1AW/1 March 26 – April 2
- Steering Wheel: 3<sup>rd</sup> Tues 6:30; Ninety-Nine Restaurant, Taft Corners, Williston
- VE Exams every 2<sup>nd</sup> Friday; Red Cross Building 29 Mansfield Ave, Burlington
- Dues due? Pay online at [www.ranv.org/ranvpay.html](http://www.ranv.org/ranvpay.html)

### NEXT MEETING

TUESDAY • FEBRUARY 11 • 7:00 PM

O'Brien Civic Center • Patchen Rd  
South Burlington, VT

**Basic Ham Metering Instruments**