

RADIO AMATEUR NEWS & VIEWS

The Official Journal of the Radio Amateurs of Northern Vermont

March • 2017

An ARRL Special Service Club

Vol. 27 No. 3

NEXT RANV MEETING - MARCH 14TH

Movie Night - FT5XO Kerguelen DXpedition

Located halfway between Africa and Australia, and just about as far away from North America as possible, this icy, windswept island has always held a top spot on the DX world's most wanted lists. But just what kind of DXer does it take to leave home for six weeks and travel to such a faraway place?

Sailing with the famous "Braveheart" to new extremes in the South Indian Ocean, and again using the "low power-vertical antenna" approach, join the Microlite Penguins DXpedition team as they battle through the seas and the pileups from yet another remote Antarctic destination.

HAM-CON 2017 – STILL THE BEST!

Mitch W1SJ

It was another tremendous show at HAM-CON. My goal is to try to top whatever we did last year. And as we put on a better and better show each year, it gets harder and harder to top it each year.

I'll have to admit, putting the program together this year was a struggle. Each year, we bring in a top notch speaker via Skype. I had a good list to work from. But a depressing routine was established. First, I would ask. And then 5 days would go by. And then, "No, I can't because..." It wasn't hearing "No" which bothered me so much, but that each no took 5 days, and after being turned down 3 times, I lost 2 weeks of planning. Rounding up the live speakers was not any easier. In a couple of cases, I had the speaker lined up and then some issue squashed the deal. By early February, I didn't have half a program and was already exhausted. But, I put on my

CONTACTS

Bob **KB1FRW**, President
mcamp@gmavt.net

Adam **KB1LHB**, VP/Treasurer
vtlamore@gmail.com

Kathi **K1WAL**, Secretary
k1wal@arrl.net

Dave **KC1APK**, Editor
davidblin@aol.com

Newsletter submissions to davidblin@aol.com

US Mail: PO Box 9392
South Burlington, VT 05407

Web: www.RANV.org

Reflector: groups.yahoo.com/group/RANV

Meetings: 2nd Tuesday • 7:00 PM
Wheeler House
1100 Dorset Street
South Burlington

Repeater: 145.150, PL 100; WB1QR

New Hams, Mentoring:
RANVMentor@gmail.com

thinking cap (which doesn't fit all that well) and came up with candidates and was able to fill the program.

And wow, what a program it was! The planning struggle paid dividends. We had not one, but TWO antenna forums.

VE2EQL started the show off with a packed room on his wire antennas, and we were fortunate to have **K3LR** later join us for more antenna discussion. When someone has an antenna farm which is larger than a Voice of America installation, you know he has to know his stuff. And we had two forums on portable operating, given by **KX9X** from the ARRL and myself. Sean not only did the forum, but operated two satellite passes and hosted a roving NPOTA discussion in the hallway. If you attended the forums, you should now be an expert at building a station and antenna system! And not only did we cover the technical details of antennas, but **K1VR** gave an excellent program on the legal ramifications of putting up antennas and towers. Hams cannot dine on HF alone, which is why we had **N1JEZ** do a great presentation of the building of his super VHF/UHF shack. And in the "now for something different" category, **VE2HKW** talked about APRS, a mode that has been quiet lately.

The program was excellent. Do you know how I know? Early on, I forgot about being the organizer and morphed into the wide-eyed attendee. I was a kid in the candy store – I didn't know what to attend first! I haven't had that feeling in a while! Fortunately, we were able to record some of the forums, so if you missed these, you will get a makeup session. Stay tuned to the RANV Web and Reflector for details.

Next door, the Activities Room was abuzz with - activities! **W1V** was on the air and 4 new ham operators produced 160+ contacts. **KC1CZA** ran a digital voice demo which had people watching intently. **N1FBZ** was busy testing radios at the Tech Table and **N1YD** was running a science experiment with RF waves. It was veritable 3-ring circus.

The Vendor Room was kind of quiet this year. We have no control over who shows up and sells items. Some years we are busy; some years, not so. It shouldn't come as a surprise to anyone that ham radio Flea Markets are getting rather tiny at the smaller shows. This is why we put a lot of effort in the Forums and Demos program. That being said, there were some 25 tables filled with goodies. Several long time attendees commented that they were very happy with the vendor room. If people are happy, that's a win. I was particularly pleased that we kept the RANV Vendor table going this year, after long time manager **N1VVV** retired. Thanks to Sarah and Bryan for their hard work.

The attendance was average – in the 250 range. We were down 25 from last year. Note that Vermont's ham population and total population dropped since last year as well. We did pick up a lot of membership renewals. The combo pricing at the front door helped with that (and drove Debbie crazy).

The VE Session had 9 candidates and produced 3 new licenses and 4 upgrades.

The Closing Ceremonies continues to get better and was great this year. Two things made it great. First we were able to pack 100 people in the room, instead of having them fly out the door at 11. And second, we gave away something like 20 prizes. Do the math – that's a one in five chance at winning something – probably your best odds at any show! Someone also mentioned how entertaining I am (!?). He deserves a free W1SJ QSL card!

So was HAM-CON as success? We put on a party for 250 people for 5 hours, everyone was happy and there were no drunken brawls. I heard lots of great comments and no complaints, so we'll take that to the bank.

THE FOLKS WHO MAKE HAM-CON HAPPEN

AB1DD Carl – Early show mgr, Forums mgr, Pre-sales, VE
K1CRS Roger – Front Door Ticket Sales
K1LOL Jason – VE
K1WAL Kathi – Door Prizes, VE
KB1FRW Bob – W1V Station mgr, Ant setup
KB1LHB Adam – RANV Table
KB1LOT Jim – Ant setup
KB1MDC Alan – Early show sales, Ant setup
KB1PDW Spencer – RANV Table
KB1THX Tim – Ant setup
KB1VJD Cheryl – RANV Table, Ticket check
KB1VJE Dick – Ant setup
KB1WUF Bryan – RANV Vendor Table
KB1WXM Bob – Photographer, VE, Ant setup
KC1APK David – VE
KB1CHI Louise – Ant setup
KC1CZA Chad – Digital Voice Demo
KC1DTK Sarah – RANV Vendor Table
KK1L Ron – Electronic Forums Tech Mgr
N1FBZ Mike – Tech Table
N1PEA Ed – VE
N1RCX Eric – VE
N1YD Jeff – Science Demo
W1DEB Debbie – Front Door Ticket Sales
W1SJ Mitch – General Chairman
W4YFJ Bob – RANV Table

2017 VTQP – VERMONT'S ROVER

Scott WIZU

Shortly after the 2016 Vermont QSO Party, Cesar ([KITNT](#)) and I decided it would be “fun” to put all 14 counties of Vermont on the air during the 2017 event. Since that is a rather ambitious goal, we started planning right away, considering equipment, planning routes, and thinking about propagation. Two weeks later, we were back in old routines and thinking about busy work schedules and family life. We still wanted to do it, but it was nearly one year away and we had “plenty of time” to plan.

Fall rolled around and the rapidly arriving QSO party began to edge closer to consciousness. But, wouldn't you know it, life got busy again. Cesar ended up in Spain and I spent a good amount of time in southern California. The 9 hour time difference was not terribly conducive to planning. Time continued to march along, as it always does, and we found ourselves about 2 weeks from February 3rd. That, of course, was still too much time, so we waited until the Monday before the VTQP to get serious! Luckily, Cesar, and me to a certain degree, is fairly handy, so we were able to put together a reasonable station in short order.



The Vermont Rover featuring KITNS's homebrew “drive-on” mast support

We initially thought about being out for all 48 hours of the QSO Party, but this did change, as I will note below. Because of the mobile nature of our plan, we needed to consider the ease with which we could deploy the antenna. Neither vehicle had an HF mobile rig and no HF antenna to speak of, so we set work on that. Given the portable operating we had done in the past, I had a simple End-Fed 40-6m antenna (made by [WISFR](#)) that I used on some of my first SOTA outings <https://kx3helper.com/endfed-40-6m-antenna/>. This particular

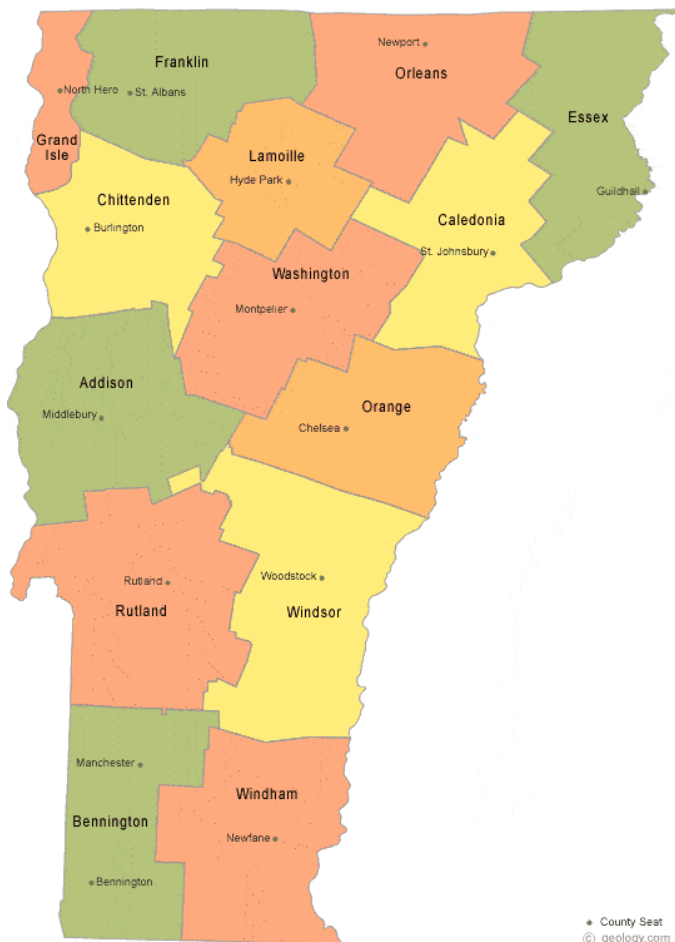
antenna benefited from a 100W rating, which was the maximum output we were planning. Another past SOTA tool was employed as well, this being a 30 foot collapsible mast. Cesar made a “drive on” mast support out of 2x6 lumber, angle brackets, and some schedule 40 PVC pipe. That, along with about 20 feet of coax was our antenna.



Inside the Shack: KX3, KXPA100, MacBook, Foot Pedal, and N1MM+ Logging software

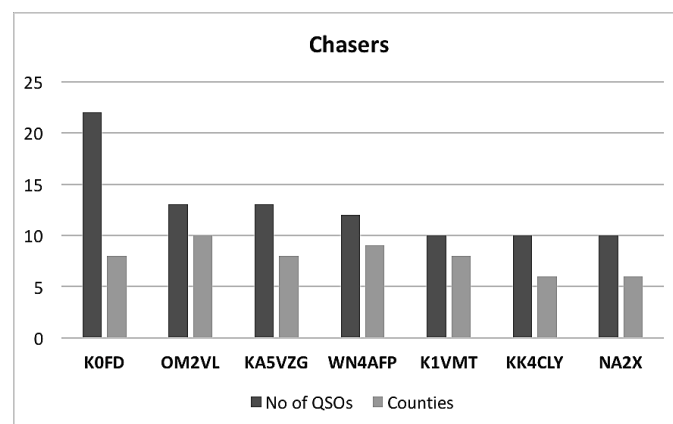
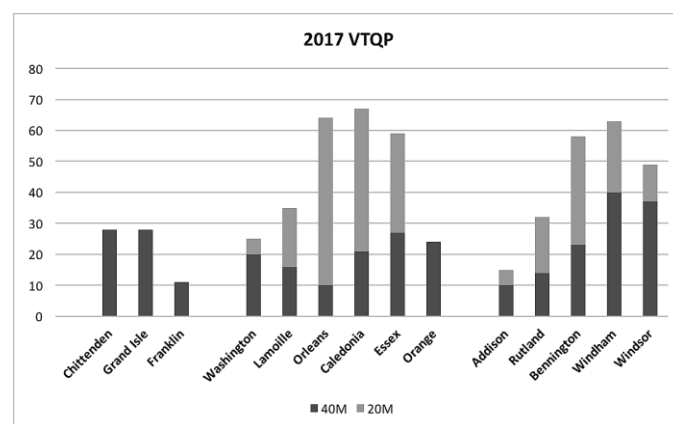
The rig was an Elecraft KX3 parred with a KXPA100 amplifier. This allowed 100 watts out and was easily run off of the car battery. We did keep the car running during the contest and operating, which did add a little to the noise. But hey, it was cold and we wanted to stay warm (and not run the battery down). The modular nature of the radio and amp was nice, as we could have the small KX3 in the front seat with the laptop and keep the amplifier in the back seat. A MacBook with Parallels, Windows 10, and N1MM+ took care of the logging duties. I'm happy to say we had no issues with logging or computer connections during the QSO Party. We set up N1MM+ with CW macros and rigged a foot pedal for SSB work. Nothing was terribly well tested, given the time we had left for planning, but it all worked perfectly during the event.

Using the equipment we had, we could set up and take down our station in about 5 minutes. This was perfect for the QSO Party. We could spend more time operating and less time dealing with set up and take down. The drive on mast let us set up in pretty much any location, without the need for tree support. The biggest downside was lack of an 80 meter antenna. I think we could have solved this by running a 52 foot wire up the mast and out to a tree, instead of the 33 feet we used. I might consider using the longer wire next year (if we do this again), especially while operating during the evening or night.



So, how did we do? Given the amount of time we had for planning, I consider it a rousing success. We ended with over 550 QSOs, activated all 14 counties, and had several individuals chasing us across the state. I had a great time and would certainly consider doing it again. It will be interesting to see if we had any impact on scores for individuals inside and outside of the state and I'm really looking forward to the results and analysis by Mitch, [W1SJ](#). Below are some interesting tidbits:

- Miles driven: 500+
- Driving time: 11 hours (or so)
- Total time operating: 18 hours, 14 minutes
- Average time operating in each county: 1 hour, 18 minutes
- 558 QSOs (217 CW and 341 SSB)
- 20 meter contacts - 249
- 40 meter contacts - 309
- Most QSOs: 22 with [K0FD](#) (8 counties)
- Most Counties: 10 with [OM2VL](#) (13 QSOs)
- Most memorable QSO: Sunday morning ADD County gray-line QSO with [VK2DX](#)



As I mentioned, our initial plan was to stay out all 48 hours of the event. It became pretty clear we would be very tired by the end and our stamina would be tested more than we probably wanted. We modified the plan to operate in 3 counties on Friday night, after which we could sleep a few hours at home before heading out again. Grand Isle, Chittenden, and Franklin counties were the obvious choice for the first three. We lucked out when we noted the county line for Grand Isle and Chittenden is on Hwy 2 after Sand Bar State Park. After giving out CHI/GRA, we headed to FRA. Conditions were less than ideal by then and we wrapped up pretty quickly. Then it was off to bed for a quick sleep before heading out early Saturday morning to cover the northern counties.

Saturday covered WAS, LAM, ORL, CAL, ESS, and ORA. By the time we finished ORA, we realized we were pretty close to home (we operated ORA about 12 miles east of Barre). The contacts were dwindling, so we decided to head home for another few hours of sleep. We woke up early on Sunday morning and headed for the southern counties, operating in ADD, RUT, BEN, WNH, and WNS. We finished up about 45 minutes before the end of the QSO Party. We had run most of the "chasers" and our endurance was about spent. Besides, we still had a 3 hour drive back to Essex Junction, and we wanted to catch the end of the Super Bowl (good thing, too!)

IT'S A SMALL WORLD

Bob W4YFJ

During 1960 or 61, I was having a QSO with a guy in Argentina on 20 meters and we were talking about elevation above sea level for his station. He indicated that he was 4500 feet above sea level according to a mapping friend of his. I asked him if it was "so-and-so" and he indicated, "Wow how did you know that?" I was working for the Army Map Service and we sent people out into the field to check accuracy of maps that we developed. I knew only one guy that was sent to the field during that time..... SMALL WORLD.

Later in the 60's we were calling CQ and who came back was JY1 and he said "Hussein at the Mike" (Just happened to be King Hussein of Jordan).

You just never know who is coming back to you!

FEATURED PLATE OF THE MONTH



Thank you Bob!

Got a ham plate or Amateur related vanity? Send us a picture and we'll feature it one of the upcoming newsletters.

SECRETARY'S MINUTES – FEBRUARY 2017

Dave KC1APK filling in for Kathi K1WAL

There were 18 in attendance including **KC1APK**, **W4YFJ**, **KB1LOT**, **K1LOL**, **KB1FRW**, **N1YD**, **WL7CVD**, **K1EEX**, **AB1DD**, **KE1AZ**, **KI6ISG**, **KB1PDW**, **KB1LHB**, **W1SJ**, **N1FBZ**, **AA1SU**, **KB1WXM**, and **N1XGB**. Bob **KB1FRW** called the meeting to order.

Bob **KB1WXM** gave a short pitch for "VERMONT PARKS ON THE AIR" and suggested that RANV take the lead in helping to organize along with help from clubs around the state. He estimated that there are about 27 parks in VT and this could be run like a mini-Field Day or NPOTA. He has emailed the Director of State Parks, and if there is enough interest, it will be listed in CQ and the ARRL's QST magazines. If you are interested, please call or email Bob.

Discussion shifted to the VT QSO Party. **W1NVT** was hosted by Bob **KB1FRW** who filled in for Mitch who had a family matter to attend to. Beverly **KI6ISG**, Bryan **KB1WUF**, and Bryan's son Liam did a great job. Despite some very rough conditions, **KB1FRW** bragged about working **TL8TT** in the

Central Republic of Africa (GREAT JOB BOB!). **W1GVT** was frequently seen on the cluster (spotting network) and managed to represent all counties as the rover. Mitch **W1SJ** received over 98 out of state logs – much better than the 70 received last year. Many noted that they also worked the MN QSO Party.

Paul **AA1SU** sent condolences to Mitch's family. Paul discussed the Club Gavel. Let Paul know just prior to the qualifying contests that you are participating and include your 6 digit grid square. When submitting logs, be sure to put Radio Amateurs of Northern Vermont somewhere in the log (no abbreviations). We need a minimum of 3 hams in each contest and the radius of the club must be within 30 miles.

Mitch discussed plans for upcoming Ham-Con. This year's theme is "Radio Active Hams" i.e. getting hams to be active.

February Presentation: TEST EQUIPMENT FOR THE HAM RADIO OPERATOR - Basic and more... with useful applications demonstrated.

Bob **KB1FRW** gave an informative presentation on typical equipment you would need. Highlights include:

- Digital multimeters (DMM) are the Swiss Army knife of testing - they perform many necessary functions needed in ham radio.
- Some pointed out that the DMM's continuity tester can be used as CW Oscillator.
- Advice: Get Digital multimeter for accuracy and multi-functions, but analog can be useful for loading a circuit when checking vacuum tubes and aligning radios.
- Look for true RMS function
($0.707 \times \text{peak voltage} = \text{equivalent of straight line DC}$)
- When you use a meter, read the manual, this is very important, as sometimes you are playing with lethal voltages or will get erroneous reading because you don't know the capabilities and limits of the meter.
- Recommend Fluke meter manufacturer for their quality but a less expensive meter will work too.

Bob **KB1WXM** presented how to test RF by using dummy load and Power Meter. He also presented the AEA Rig Expert that can measure i and j.

Bob **KB1FRW** demonstrated the Bird Watt Meter which is very rugged, but you must choose the proper slug and ensure the arrow is oriented properly. HF slugs can be more expensive than the meter.

POP QUIZ – Answers below

Technician Question: T2B12

Under what circumstances should you consider communicating via simplex rather than a repeater?

- A. When the stations can communicate directly without using a repeater
- B. Only when you have an endorsement for simplex operation on your license
- C. Only when third party traffic is not being passed
- D. Only if you have simplex modulation capability

General Question: G4B05

Why is high input impedance desirable for a voltmeter?

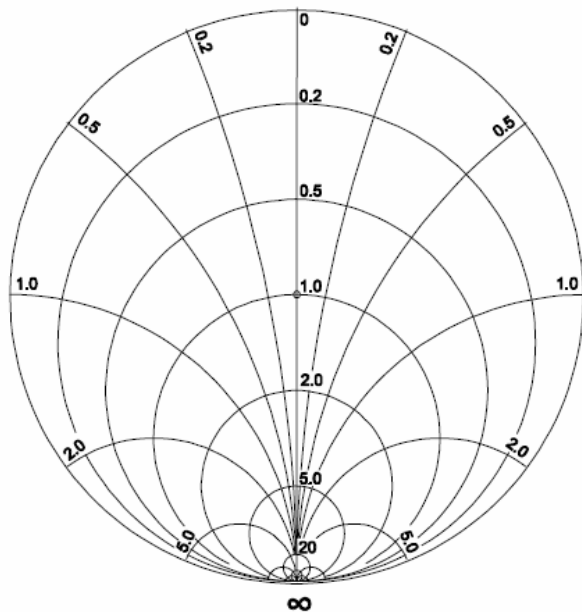
- A. It improves the frequency response
- B. It decreases battery consumption in the meter
- C. It improves the resolution of the readings
- D. It decreases the loading on circuits being measured

Extra Question: E9G06

On the Smith chart shown in Figure E9-3, what is the name for the large outer circle on which the reactance arcs terminate?

- A. Prime axis
- B. Reactance axis
- C. Impedance axis
- D. Polar axis

Figure E9-3



Answers: T2B12 – A G4B05 – D E9G06 – B Good Luck!

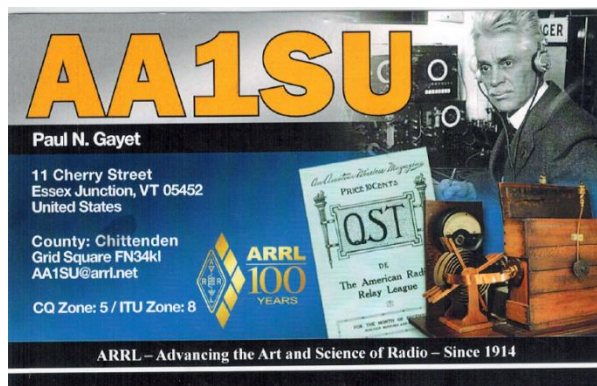
Congratulations!

Congratulations to the following on their upgrade:

- **K1EEX** – General
- **KB1WUF** – General
- **K1PJM** – Amateur Extra
- **KB1ZEB** – Amateur Extra
- **N1SZO** – Amateur Extra

There were also 3 out-of-area candidates who passed their Technician Class exam at the Ham-Con VE session!

FEATURED QSL CARD OF THE MONTH



Thank you Paul!

Have YOUR card featured... Send us a copy and we'll highlight it one of the upcoming newsletters.

EDITOR NOTES

Dave KCIAPK

WE WANT TO HEAR FROM YOU!

- I hope you are enjoying the variety of articles submitted by our members! Everyone has something interesting to say, and we want to hear from YOU! Feel free to submit articles, ideas, and opinions! Items can be short, long, technical, anecdotal, etc. Share your experiences, favorite ham radio moments, and stories!
- Did you know that each newsletter costs about \$1 to produce and over 100 newsletters are sent each month?
- If you would prefer to receive an electronic version (pdf) of the club newsletter, please contact me at davidblin@aol.com. I will need your name, call sign, and email address.



NEWS & VIEWS

INSIDE

- HAM-CON 2017 STILL THE BEST!
- THE FOLKS WHO MAKE HAM-CON HAPPEN
- 2017 VTQP / VERMONT'S ROVER
- IT'S A SMALL WORLD
- FEATURED PLATE OF THE MONTH
- SECRETARY'S MINUTES
- POP QUIZ
- CONGRATS / UPGRADES
- FEATURED QSL CARD OF THE MONTH
- EDITOR NOTES
- PICTURES FROM HAM-CON

NEXT MEETING Movie Night "FT5XO Kerguelen DXpedition"

Tuesday • March 14th • 7:00pm
Wheeler House, 1100 Dorset Street
South Burlington, VT

Upcoming, Notices, & Misc

- Steering Wheel: 3rd Tues 6:30; Ninety-Nine Restaurant, Taft Corners, Williston
- VE Exams every 2nd Friday; Red Cross Building 29 Mansfield Ave, Burlington
- Dues due? Pay online at www.ranv.org/ranvpay.html