



RADIO AMATEUR News & Views

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NEXT MEETING: APRIL 10

“SHOW & TELL”

THE APRIL MEETING WILL BE A “SHOW AND TELL.” This means all you members bring in something of interest to show off, just like 2ND grade! We’d like to see something related to ham radio, but however loosely is up to you. Got a new radio? Found some new (or newly discovered) software? Maybe an accessory you built or bought? An easier way to do something? We’re not looking for a professional presentation, just a 5 minute or less talk about your item. So... scour your junk box, equipment shelf or whatever, find something you think might be interesting and bring it along on Tuesday, the 10TH.

Following the presentation will be snacks and a chance to catch up with folks.



VT QSO PARTY: 24 HOURS OF STORIES, CONTINUED

Mitch W1SJ

WHEN YOU OPERATE IN A CONTEST for 24 hours or more and make hundreds of contacts, there are dozens of stories. ...

Jim KE1AZ came in at noon and we pointed the beam west to run stateside. Meanwhile, I checked my mail and took a much needed nap! When he finished at 2:00, 15 meters was worked out, so I jumped down to 20 meters and ran some nice pileups of stateside stations all afternoon. I was pleased to hear Bob W4YFJ also on 20 meters and saw Joe K1VMT spotted on 15 meters. Vermont was in the house!

QSO Party weekend requires being quick on your feet. Concurrently, the Minnesota, Delaware and British Columbia QSO Parties are running, along with the Black Sea Contest and the 10-10 Contest. Some of these require giving your name, or your state or even your ITU Zone (08). Knowing the exchanges for all of the contests helps put more contacts in the log and keeps the natives happy!

In past QSO Parties, I lived on 20 meters. The 40 meter band is a strange place. If you live in the Midwest, the prevailing motto is, “there ain’t meters like 40 meters”. However, for most stations in the Northeast, it is a place to avoid at night—kind of like a bad neighborhood where you’re likely to get mugged. However, bolstered by the fact that I did very well on 40 meters this season, I gave it a try. I worked station after station and the pileup kept coming. I couldn’t believe it! After 10^{PM}, at a time when 40 meters is outright dangerous, I put nearly 130 QSO’s in the log in one hour! I may have to rethink my strategy from now on!

Saturday night, I ran into Tony, K1AMF. He was a young contester who grew up in Fellows Balls, Vermont (as he termed it) but I hadn’t heard him in years. He’s now in the northern suburbs of New York, and commutes to the city each day. “Sounds like a jail sentence”, I responded! And the next morning, I ran into his brother, Rick, N1IRL.

With nearly 1300 QSO’s in the log I retired for the night quite happy, thinking that 2000 QSO’s were in reach. But that was not in the playbook. Conditions Sunday morning were el stinko. I heard Europeans, but those were the big guns who were only S2. The little tweakers with the 100 watts and dipoles who feed my pileups were simply not heard. I ran with tail between legs down to 40 meters and got a reasonable run going for a while.

When I went back to 15 meters, I noticed that the SWR on the yagi was quite high. I stuck a tuner in the line, but it didn’t work. It seemed like the antenna had one impedance at low power and a different impedance at higher power. Clearly, it was working OK until high power caused something to arc over. I put the CQ tape on and went outside to see if anything was amiss, and I audibly heard “CQ Contest” coming from the antenna! Well, that’s a first! Finally, I hatched a plan to use the high dipole and tuner on 15 and 20 meters. Fortunately, it worked well.

Kathi K1WAL was on for the 10-12 hours. She had a bit of a learning curve to first learn the call sign, and what QRZ? meant, etc. But she

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RANV:

SECRETARY’S REPORT

JEFF N1YD, SECRETARY

MARCH MEETING

Business:

- We welcomed new ham Betty Kimball. She recently passed the Technician test. Club president Bob Allen KB1FRW won the Vermont QSO Party which had great participation.
- Several events are coming up that need amateur radio operators. They are the MS Walk on April 28TH, the March of Dimes Walk on May 5TH, the Key Bank Vermont City Marathon on May 27TH, the Diabetes Walk, and the MS Tour (a two-day event). Interested volunteers should contact KB1FRW for the MS Walk, John Clift N1LXI for the March of Dimes and Diabetes Walks, and Mitch Stern W1SJ for the Marathon.
- We voted to buy QSL cards for W1V and WINVT.
- HAM-CON went quite well. About 300 people came; we netted about \$1200.
- Kathi K1WAL will bring snacks to the next meeting.

Presentation: SPICE

Rich W1ELL continued his talk from January with a great piece on the SPICE circuit simulation tool. As we learned at the January meeting, Rich is building a state of the art transceiver of his own design. He showed us how he used SPICE to design an oscillator, a filter section, and a preamp. Once a schematic diagram is entered into SPICE, it simulates how the circuit will behave, showing oscilloscope style traces of voltage or current at any point.

SPICE also has a Fast Fourier Transform function to plot amplitude vs. frequency. This lets the designer see how much attenuation or noise can be expected.

Rich showed us the oscillator schematic, and then an FFT plot of its output. Having these detailed simulation results let him refine the design to a very high level before building any of it. But once he built the circuit, he did have to make some small modifications.

Continued

Secretary cont.

"In theory, there is no difference between theory and practice. But, in practice, there is."

—Jan L. A. van de Snepscheut

For the filter design (I think it was a form of Butterworth filter), Rich used a SPICE feature that shows how component tolerances will affect the circuit performance. The simulation showed that small tuning capacitors would be needed to get the filter's peak performance.

The FFT feature helped him perfect his 13 dB preamp design as well. Its output will be digitized by a Tayloe Detector, a device with less than a decibel of conversion loss.

I had heard of SPICE, but never knew that it is available for free download at linear.com and that it does not require a particularly powerful computer. I tried SPICE myself in the days after the meeting, and found it to be easy to install and easy to use. I drew some simple circuits and got excellent simulation results. I plan to demonstrate SPICE at Field Day this summer using a laptop, an oscilloscope, and some actual circuits.



QSO cont.

mastered the lessons well, and got a slowish run going for a few hours. There was a lot of CQing, but she was able to hear the stations and get them logged OK. Meanwhile, I did what I do best—took a nap!

I finally got back on 20 meters around 2:30 on the dipole. The rates were OK, but not spectacular. By Sunday afternoon in any contest, you start "using up" available stations. By late afternoon, things were very slow so I tried a desperation move to 10 meters. I could only hear a handful of weak stations, so I wasn't terribly optimistic. Surprise—there were enough stations lurking in the shadows to feed a rate for 30 minutes or so. With 20 meters running out of gas, I finished up on 40 meters with another great run.

One of the great things about a long contest is the opportunity to learn. While listening, I would switch between the beam and dipole. You would expect the beam to win hands down. Or at least, the dipole would win towards 4-land since the beam is usually pointed out west. Nope! The dipole both heard and was heard better out in CA and WA, whereas the beam did better in places like TN. Why? This is a great question for a program like EZNec to answer. The dipole is much higher than the yagi, so its takeoff angle may be the difference in gain. The lesson learned is to not assume things like yagis always beat dipoles!

Lots of guys pooh-pooh contests because of the short nature of the QSO's. Resist that thinking! I ran into a bunch of guys I haven't heard from in years, worked some juicy DX, had fun with pileups and learned a thing or two about antennas. In short, I had a ton of fun.



VE EXAMS: NEW

For the VE sessions every second Friday at the Red Cross, in addition to the things-to-bring, seen to the below, you can now download and bring Form 605 which can be filled out on-line and printed ahead of time. Find it here: arrl.org/files/file/nvvec605-3.pdf This is optional, but real helpful.

If you have any questions, contact Carl, ABIDD@arrl.net.

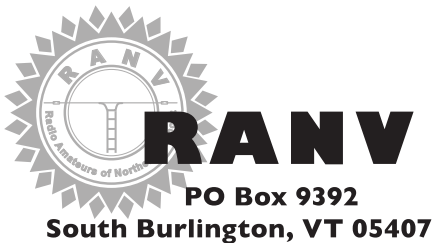
VE Exams

Every 2nd Friday
6:30–8:00^{PM}

29 Mansfield Ave. • Burlington

Tech, General, Extra class licenses.
Bring 2 forms of identification, copies of existing license and CSCE (if applicable), pens and pencils, and the exam fee (\$15—exact amount only please).

Directions:
barcvt.net/directionsarc.html
CARL.ABIDD@arrl.net



INSIDE

- Secretary: March
- QSO, Part II
- VE Exams: Something New

Upcoming, Notices, & Other Misc

- RANV: May Meeting—5/8
- NEAR-Fest 5/4 & 5, www.near-fest.com/
- Field Day: 6/23 & 24
- STARC Summer Hamfest: 8/14, St Albans; starc.org/arns-opening-flyer.html
- ARRL New Eng. Div. Convention: 8/24–26, Boxboro, MA
- Steering Wheel: 3rd Tues, 6:30-8:30; Ninety-Nine Restaurant, Taft Corners
- Dues due? Pay online at www.ranv.org/ranvpay.html
- VT Ham Radio Calendar www.vthrc.net

NEWS & VIEWS

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NEXT MEETING

TUESDAY • APRIL 10 • 7:00^{PM}

O'Brien Civic Center • Patchen Rd
South Burlington

"Show & Tell"

www.RANV.org