



RADIO AMATEUR NEWS & VIEWS

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November • 2010

An ARRL Special Service Club

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NEXT MEETING:

NOVEMBER 9, 2010—DYNAPOWER

OUR NEXT RANV MEETING WILL BE AT DYNAPOWER CORPORATION in South Burlington. Dynapower designs and manufactures custom AC and DC power supplies, custom transformers, and complete power systems. They are the only facility fully dedicated to this industry in the USA.

Please note: We will be meeting earlier than our usual time! Our tour will be conducted by Dynapower's CEO, Peter Pollak. We should arrive around 6:15 using the Employees Entrance where there will be space for depositing coats and such. The tour will begin at 6:30 pm and should last about 30-45 minutes. Elections and club business will be conducted after the tour.

Directions: 85 Meadowland Drive, South Burlington, VT (off Route 116.)

1. From the O'Brian Civic Center where we have our regular meetings go south on Patchen Road where it will turn into Hinesburg Road/Route 116. Go straight through the lights at Williston Road and Kennedy Drive. Dynapower will be the 2nd right after going under I-89, just south of FairPoint Communications.
2. Turn onto Meadowland Drive, then turn left at the Lane Press sign. Make the next right at the itty-bitty Dynapower sign. Go straight past the building's loading dock and turn right into the parking lot. At the front of the building you will see two entrances. Take the left entrance labeled Employees Entrance and you will find yourself in a multipurpose meeting room where we will have our meeting after the tour.

REMEMBER THAT WE WILL BE MEETING EARLY!

SOLDERING 101 AND BEYOND...

HAVE YOU FOUND THAT YOU WANT TO KNOW MORE about soldering and crimping? Did the PL259 you put on not work out too well last time? I think I have an answer for you,

A basic class on how to solder such things and some crimping demos. The date and time have not been decided yet, the idea being to accommodate as many people as possible.

So sign up before or at the next meeting, indicate what you are interested in. I'll send you a short list of dates, you pick 1st and 2nd choice dates, send it back and I'll pick one that gets the most people in.

Send emails to rallen1955@gmail.com with "Solder Class" in the Subject.

Those of you that have already responded to the Yahoo group announcement don't have to sign up again.

RANV QSO PARTY MITCH W1SJ

1. **OBJECT:** To carry on conversation on the 145.15 repeater.
2. **DATES AND CONTEST PERIOD:** Tuesday November 9th, 9:00 PM Eastern Time (after RANV Meeting) until Sunday, December 12th, 11:59 PM.
3. **CONTEST EXCHANGE:** A valid contact (QSO) consists of at least a 5 minute QSO between two amateur stations. All amateurs count as valid contacts. Call signs must be given per FCC rules. County information must be exchanged if counting the QSO for a multiplier.
 - 3.1 **Roundtable QSO's** or QSO's between more than 2 stations do not count for contest credit. If a station breaks into your QSO, the "5- minute clock" stops running until you are back solely with the original station you started conversing with. Additional stations should be welcome to wait until the original QSO is done and then additional 5-minute QSO's can be held with them. Please use courtesy in sharing the repeater to allow for the maximum number of valid QSO's.
 - 3.2 **There must be conversation** going on for the duration of the 5 minute period. Pauses do not count.
4. **SCORING:**
 - 4.1 **1 Point** for each valid QSO.
 - 4.2 **Multipliers** consist of the 14 Vermont Counties.
 - 4.3 **Final score** is the total number of points times the number of multipliers (maximum 14).

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RANV: OCTOBER MEETING SECRETARY'S REPORT

JEFF NIYD, SECRETARY

"We choose to go to the moon. We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win, and the others, too."

John F. Kennedy, 1962

The evening's presentation was "Everything about EME" by Bob DeVarney, W1ICW. Bob must have been looking for a really inspiring challenge, because he successfully made 139 contacts by way of "Earth Moon Earth," also called moon bounce. This mode is not for everybody. The round-trip path loss between the earth and the moon is about 250-dB using the 2-meter band. Other bands can be even harder for various reasons. Making it work requires efficient directional antennas, lots of power, and a preamplifier right at the antenna tower.

The first successful EME experiment was Project Diana in 1946, in which the US Army Signal Corps successfully transmitted radio pulses to the moon and received echoes. They used 3000 watts and 24dB of antenna gain. The first amateur EME was done in 1950, and the first tw-way EME in 1960. Al Parrish worked EME from Peru, Vermont in 1965. Warren Severance, K1BKK, worked EME from Charlotte in 1975 using a 32-dB antenna and about 600 watts.

How is EME done today? The key is to use the software and digital modes developed by Joseph Hooton Taylor, Jr, K1JT. These modes, which send at a very slow bit rate, make it possible to hear weak signals that are 30-dB below the noise level. WSJT is the most commonly used mode. For hardware, Bob took a relatively low-budget approach. He ended up using four 7-element yagis with 8-foot booms, and a 300 watt amplifier.

Prearranged QSOs are the normal way of doing business. Transmitting and receiving in a narrow bandwidth helps to reduce the noise. The timing of the transmission is especially important. Variations in the moon's orbit and in background cosmic radiation can cause about 15-dB of signal strength variation. Surprisingly, the phase of the moon is not particularly important. Also,

PREZ SEZ

BOB KB1FRW

HERE WE GO, NOVEMBER AND THE ELECTIONS ARE HERE AGAIN. Vote early and often and vote even if there is only one person on the ticket for each position. It makes us feel more needed.

Political stuff is over, on to ham radio stuff. Was I the only person at NEAR-fest from VT this year? Well I know there were a few of us, and admittedly the Friday weather stunk, but Saturday was pretty good and yielded some treasures like a dual band UHF/VHF mobile and that 24VDC power supply I was looking for, \$5, best price around. The rest of the experience is to get to know hams from all over New England including representatives for the ARRL, recruit for Field Day operators (we got two this year from the spring NEAR-fest), be part of putting on NEAR-fest by volunteering Thursday and Friday, punching a hole in my brand new air mattress and then being led astray by the GPS while looking for a Walmart. There was more fun but you will have to come and see it all in the spring, put it in your calendars April 29th and 30th.

I haven't been on HF as much as I would like to as I had an unexpected rebuild of my front porch including a new foundation pier, some joists, studs and decking. In the middle of this project I had to make a drawing of the replacement wall in my office and I turned on the radio on 20 meters and there was Kenya, 5Z4ES, a first, working with a South African, ZS6RF, and then right after that Mozambique, C91DL, another first who turned out to be a Brit, G4LDL, there from Oct. 15 to Nov. 1. Look for them. It just goes to show that you never know what you will run across on the radio, but you will never find out unless you turn it on!

Speaking of turning your radio on, I have noticed a bit of an increase in repeater usage as of late, so keep up the good work and let's see if we can make it better. Mitch has proposed a Repeater Contest and the rules are in this edition of the newsletter, good luck with that—I certainly will be keeping a log.

Alright, it is back to the stupid porch repair job that will never end, wish me luck that I don't find anything else wrong and see you on the air!

73

Bob

there is a ground effect which gives improved gain when the moon is close to the horizon. It is useful despite the greater exposure to terrestrial sources of interference.

Signals received from the moon are delayed by about three seconds because they have traveled about 450 thousand miles. A timing pulse encoded in the WSJT signal makes it easy to determine the amount of delay and to confirm that you are receiving an EME transmission.

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US Mail: POB 9392
South Burlington, VT 05407

Web: www.RANV.org

Reflector:
groups.yahoo.com/group/RANV

Meetings: 2ND Tuesdays • 7:00PM
113 Patchen Road
South Burlington
The O'Brien Civic Center

Repeater: 145.150, PL100; **WBIGQR**

New Hams, Mentoring:
RANVMentor@gmail.com

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WHERE HAVE ALL THE HAMS GONE? PART I

MITCH W1SJ

WHERE HAVE ALL THE HAMS GONE? I listen on the repeaters all over the country and hours can go by without any life whatsoever. Some say that everyone is on HF. While HF is quite crowded on the weekends, even there the activity has fallen off. Despite what the ARRL tells us about record numbers of new hams, the fact is that we have record numbers of licensees and not much else. Sadly, I get more phone calls from people trying to sell off their ham equipment versus calls from people interested in ham radio.

I looked at the database for Chittenden County and tried to determine how many of the 600 hams here have transmitted on a radio or have attended a club meeting or activity in the last 6 months. Based on my activity and knowledge of many in this area, less than 25% have partaken in this minimal level. If the question was how many are active, it would be less than 10%.

In RANV, one of the more active clubs, we are not immune. I know of 20 members who don't even OWN a radio. And while we have well-attended club meetings and activities like Field Day, organizers have to literally pull teeth to get folks to operate. At the picnic, ultimately it is the veterans who operate the radio. Sadly, we are a hobby of many spectators who come to watch and few participants who come to play and have fun. Some say that how things are. Perhaps true, but it is not OK.

I'm not going to waste time trying to determine how we got to this point and who is to blame. The mission instead is to determine how to create a paradigm shift so that we again become a hobby of folks who do things. This may be the mission that RANV must tackle in the future. But the question still remains, what do you think the club should do to promote ham radio, to ourselves!

The answer to the above question is complicated and is not answered in a sentence or two. We'll save that for future meetings. Instead, what I want to do here is to propose two simple things to help get everyone to be more active. They all boil down to the same thing: turn the radio on.

The first step is to mount a good mobile FM transceiver in your car. Everyone is too busy to do anything, but while driving, you are limited in what you can do. Radio is the perfect thing since it is safe to do while driving. But you need a radio in the car to play. Don't waste your time with an HT lash up! If your station is cumbersome to use, it becomes a real pain and not enjoyable. With a 25-50 watt transceiver and good roof-top antenna you should be able to

hold quality conversations without dropping out every time you turn down a street. There are plenty of people in the club who can help you set up a good mobile station.

To be continued next month.

Secretary cont.

Bob highly recommends the "EME Performance Calculator," which lets one analyze all kinds of antenna and propagation considerations on a single outrageously complicated screen.

We also had two visitors from Germany, who are in Vermont on a business trip. They are Ralf DL9DRA and Tobias D03NSA. They showed images from their amateur radio club, which does a variety of high level work, including EME.

Our club president, Bob KB1FRW, forgot that he was supposed bring the snacks. We had a great meeting anyway.

Jim KE1AZ will bring snacks to our next meeting, which will be at Dynapower on route 116 in South Burlington.

Upcoming, Notices, & Other Misc

- ♦ RANV: Next Meeting & Elections—
November 9 @ DynaPower in South Burlington
- ♦ SET—Saturday, November 20
- ♦ Holiday Party on December 14th
- ♦ Steering Wheel: 3rd Tuesdays—
6:30-8:30
- ♦ Dues due? Pay online at www.ranv.org/ranvpay.html
- ♦ VT Ham Radio Calendar
www.vthrc.net

QSO cont.

5. MISCELLANEOUS:

5.1 Stations may be worked once per calendar day. For example, W1XXX can be worked up to 33 times, during each of the 33 days of the contest.

5.2 All contacts must be made through the WB1GQR 145.15 Repeater. Stations cannot be worked for credit on simplex or on other repeaters. Stations can be moved to 145.15 and will count for a valid contest if the 5 minute QSO is held.

5.3 Stations may be worked via IRLP or Echolink

5.3.1 Only one station per calendar day may be worked via IRLP or Echolink.

5.3.2 Only 3 contact attempts via IRLP or Echolink can be attempted per calendar day.

5.4 Stations may make skeds with each other, but these must be done on-the-air. No phone, E-mail or Internet scheduling.

5.5 A repeater time-out will invalidate the QSO and the QSO must continue for 5 minutes from that point to count.

6. AWARDS: Only current RANV members are eligible for awards.

6.1 A gift card will be awarded to the highest scoring station.

6.2 The 2nd and 3rd place stations will receive certificates.

7. REPORTING

7.1 A log must consist of date, time, QSO duration, station worked, node number (if IRLP or Echolink) and county.

7.2 Logs must be submitted in electronic format (no paper logs).

7.3 Logs must be sent to ranv@sover.net.

7.4 Deadline for all logs is Sunday, December 12th, 11:59 PM.

7.5 Results will be announced at the RANV Holiday Party on December 14th.



RANV

**PO Box 9392
South Burlington, VT 05407**

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NEXT MEETING

Tuesday • November 9 • **6:15pm**

Dynapower Corp
85 Meadowland Drive • South Burlington

“A Tour of Dynapower”