



RADIO AMATEUR NEWS & VIEWS

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SHOW AND TELL NIGHT The September 12th *RANV* Meeting

For our September meeting, we will bring back a favorite theme: Show and Tell Night. Bring in a piece of amateur radio related equipment, show it off and tell us about it. It is that simple! The equipment can range from something new to something old; it doesn't matter. What is important is your story about the equipment. Other types of interesting items might be antennas, homebrew circuits and software. We will have power and facilities to show off your stuff. We will allow 5-15 minutes per speaker, depending on the number of presenters. Accolades will go to most interesting and original piece of equipment.

Activities get underway with dinner at 6 PM at Zack's on Williston Road. The meeting will be Tuesday, September 12th, at 7 PM, at the O'Brien Civic Center, 113 Patchen Road, South Burlington. Plan to be there!

COMING UP!

Our Fall Ham Season is upon us and there is plenty to do! The weekend right after Labor Day, September 9-10th, is the *VHF QSO Party*. Get those 6 and 2 meter SSB radios out and get on the air. Monitor around 50.125 and 144.200 MHz and you will eventually hear something. I plan to be on Mt. Equinox and will swing the beams north at the top of the hour. If you can't find anyone on SSB, then call CQ on 146.55 FM.

We will have the first of several exciting *RANV* meetings on September 12th, when we will bring back the popular *Show and Tell Night*. Details appear above.

In a few short weeks, Friday, October 6-7th, is *Hosstraders*. And on October 14-15th is the *Fall Weekend Ham Radio Class*.

For our October meeting, we will have a presentation on what's new in packet radio and how to get on cheaply.

The final Fox Hunt of the year will be Friday, October 13th or 20th. You have a month to get your equipment and skills honed to find the Fox!

HAM CLASS

The next Ham Radio Class will be Saturday, October 14th. This is a one day Technician class, meeting 8:30 until 6:00. The growth of amateur radio has dropped to very low levels. It is up to all of us to get people interested and into classes. Don't accept the "I'll study it on my own" excuse. Of all the people who tell me that, less than 20% ever get the license! Get them into the class!

Getting a Technician license is a lot easier. The syllabus was changed, eliminating most of the technical questions. The course prepares the students for the exam, and also for what to do when they get the license.

A General course will be held on Sunday. Students can take both courses or Technicians can take the General course. There also is an on-line course for Technician, General and Extra if you can't make a class.

Contact Mitch W1SJ at 879-6589 for details on enrolling.

FOX HUNT RESULTS

by Mitch W1SJ

Kayle KB1JOO and Paul AA1SU got together to hide in a Fox hunt which drove the hunters mad. Unfortunately, only two hunters, Mitch W1SJ and Bob KB1FRW availed themselves of this craziness.

My first beam heading showed a general ESE direction; almost exactly the same heading as the repeater. OK, the fox is in the Richmond or Bolton area so I shot down Route 117 to Richmond. The signal came up a little but nosedived in Richmond. This is not what I was planning on. With the rough terrain, I didn't dare use the beam, so I decided to head up to the Jericho area. There I got a east heading and found the Foxes in the corner of West Bolton at 6:50. The Foxes looked mighty disappointed that I found them so quickly! Bob wasn't so lucky. He toured what seemed like the entire length of Route 2, all the while getting erroneous beam headings. It was fortuitous that I knew about that hidden spot in West Bolton, or I could have been on tour, too. The hunt was called at 9:00.

Next hunt will be October 13th or 20th.

OUR LAST *RANV* MEETING

by Carl ABIDD, Sec'y

The August meeting was our annual summer picnic, held at Kill Kare State Park in St. Albans. There were 20 members and guests attending. Luck was on our side as the weather was perfect for this event. We also had use of the shelter since the people who reserved it had cancelled the day before. Hungry picnickers started arriving a little after 11:00. The grill was stoked with charcoal around noon. The supplied cold drinks were carted into the shelter.

Brian N1BQ and Mitch W1SJ got stations on the air. Brian used his fishing pole antenna which was set up in just a few minutes. Mitch shot an arrow in the air, and this time it came back down! His dipole went up about 75 feet high without a lot of trouble. Brian made the point of getting on the air first, but the higher power of W1NVT was better at making contacts than the N1BQ QRP station. There was a short discussion about the use of QRZ, when someone on the other end challenged the use of this "Q" signal. The meaning was explained, then the call went out "Who is calling me?" This is W1NVT..." This brought a few responses. Mitch decided that we were a special event, so out went a CQ call with the tag, "special event station." Before you could say "*RANV*", there was a pileup on 20 meters. The pile up was worked for a while with various operators taking turns. Some attempts were made to get on PSK-31, but Mitch had trouble with RF getting into the computer.

There was even a little Geocaching going on. A cache 400 feet from where we were was found, first by Mitch then Paul and Jerry.

When not CQing or caching or stringing antennas, the group was seriously engaged in cooking, eating and talking. The picnic wrapped up around 5.

Every one had a great time. Make plans for next summer now!

THE PREZ SEZ

by Brian N1BQ, President

Summer is winding down and hamfesting season will be into its final six weeks or so.

Speaking of hamfests, N1ARN and the rest of the good folks at the St. Albans Amateur Radio Club should stand up and take a bow for putting on a very nice little inaugural hamfest event. We now have a summer hamfest for the region. I should also point out that all of the local clubs did a pretty good job of showing support. I saw and talked to members of CVARC (NY), CVARC (VT), BARC and *RANV*. Indeed, I saw and talked to guys I hadn't seen or heard from in years. It was great!

Summer is winding down so pencil in a day in the next 8 weeks to check out your antennas, get those guy lines and cables secured and make sure the various bolts and fittings are snug. Do it now while the weather is moderate. It's no fun fixing a mess fumbling with mittens on or trying to do it barehanded in sub-freezing howling winds!

We have three meetings remaining this year before December and the annual holiday party. In September we will be doing our "Show and Tell" meeting. The last time we did this, over a year ago, it was quite popular. Bring in a project or new piece of equipment, or anything you think other hams might find interesting. Whether you just stand up and say "here it is, take a look," or do a ten minute presentation, we would be happy to hear from you. The projector is available if you need it. Also at this meeting I will have the Powerpole crimper and an assortment of connectors and heavy red/black zip wire if anyone wishes to make use of it again.

In October, Bob KB1FRW and I will do a presentation on Packet Radio. This will include an overview of what it is, where it is at today in ham radio, an overview of APRS and other current applications. Bob has been working with some software that lets you get onto

packet for a few dollars worth of connectors and cable by turning you sound card in your computer into a packet radio interface to your radio. This saves the \$50-150 expense of a TNC. He will show it off and tell how to set it up.

In November, Tom Perera W1TP, will give a presentation on Enigma Machines, the legendary German Crypto device. Tom is most well known as a collector and dealer of antique Morse code keys but is also an expert on crypto devices. He has genuine German Enigma machines and will show them off and show how they work, as well as Enigma machines manufactured in Switzerland and used after World War II by the Swiss banking industry.

We have a great fall lineup. I hope to see you at the meetings.

KB1JOO MOVING

Kayle KB1JOO has taken a new job in Richmond, Virginia, and will be departing in September. Kayle and Diane have been fixtures at many *RANV* events and they will be missed!

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Please send submissions for the newsletter to the editor, W1SJ.

DX IS...

by NIUR

This month I will be speaking about a very different kind of DX – the heavenly body kind. Late in July, I was asked whether I would mind hosting a DXpedition at the NIUR QTH here in Vermont. Hosting a DXpedition? Who comes to Vermont and calls it a DXpedition? I mean, I know that some people need Vermont for WAS (*Worked all States*) but isn't this getting a little ridiculous?

Well, it turns out that there is a WAS which has NEVER been issued before to ANYONE in the World – 1.2 GHz WAS! And to contact all of the states on 1.2 GHz you need to use a method of propagation called EME or *Earth Moon Earth*. This involves bouncing a 1.2 GHz microwave signal off of the moon and having a person hear the resulting signal echo back here on Earth. The amount of the originally transmitted signal which is available to be heard back here on earth is a function of how tight a beam you transmit from here, but is typically 1/1000th

to 1/10,000th of the transmitted signal (-30 to -40 dB). There is also absorption at those frequencies by the atmosphere, clouds, and any trees or vegetation that might be in the way. It turns out that the NIUR unobstructed horizon to Europe was highly desirable for this reason.

So I said, "Sure, come on over."

Paul WA5WCP, is an EME enthusiast from Fort Worth, Texas. He decided to activate Delaware, Rhode Island and Vermont which are apparently 3 of the 6 remaining states that many of the EME DXing crowd needs from around the world to get WAS. Apparently, Hawaii, South Dakota and Montana are the other three. Paul showed up on August 15th with a pickup/camper pulling a trailer full of equipment. The next morning, he set up his antenna from the trailer. The antenna consisted of a 10 foot "old satellite TV dish" modified with a LNA (*Low Noise Ampli-*

fier) and a transmitting feed for 1.2 GHz. This was mounted on a computer controlled rotator system which allowed the system to track any point in the sky. Paul used the sun to establish his celestial "bearings" by peaking the noise coming from the sun and knowing the position that the sun should be in the sky for the date and time. Once he found that, his system could track anything in the sky.

He was running 400 watts at 1.2 GHz from a home brew amplifier being excited by an ICOM 2 meter transceiver and a transverter. I believe the amplifier was seeing 50 watts out from the transverter but I could be wrong about that. He brought the 1.2 GHz down from the LNA into the camper/shack to be converted to 2 meters right there at the radio. He was using 1¾ inch hardline with a total run of about 20-25 feet.

"Who comes to Vermont and calls it a DXpedition?"

EME QSOs are primarily done by schedule; however after a successful QSO is made on schedule there is often a window of 10-15 minutes before the next schedule where Paul would simply CQ. CQing to the moon? Okay, that beats my 4/4 stack on 20 meters CQing to Europe.

The moon "rose" or came above the horizon at about midnight for the 2 nights that Paul was here. Europe was workable as it rose to the east until about 3 or 4 AM and then South America and the U.S. were "in the EME window" until about noon to 2 PM. Around 3 PM, there was a shot at Australia and Japan. Based on the 10 foot dish and 400 watt output, it was "expected" that if you were not running a 14 foot dish and 400 watts or a 12 foot dish and 1000 watts, you would not be able to make the contact with Paul. There are approximately 30 such stations around the world which

chase EME (*another 100 or so of the 10 foot dish, 100W class stations*). Paul made 21 QSOs in the 2 nights that he was here. He basically "knew of" everyone he QSO'd and he said that despite the very low noise floor here in Vermont and at my QTH, no one got through from the 10 foot dish class. Stations were about 50% Europe and 50% North America. There was one station each from Brazil, Argentina and Australia. Japan was not worked to my knowledge.

Saturday morning, Paul left a very happy guy. I am sure that there were 21 happy EME hams around the world as well.

As I have said before in this column – DX is "what is challenging for the situation". Even working Vermont can be DX to the right group and challenges.

Here at NIUR, the antenna work continues. My original tower is now completely re-configured as a 20/15 meter tower with monobanders at 36 and 30 feet fixed to Europe, 50 and 56

feet fixed to South America, and rotating beams on top at 71 and 82 feet. All of these are fed through a switch and phasing box so that I can switch to, or phase them, at will. I can grab either 15 or 20 meters from either of the two radios in the shack and have both radios operating at the same time. For example, I can CQ on 20 meters with a 4 over 4 element stack while searching and pouncing on 15 meters with a monobander to Europe, South America or wherever. Next, I am completing the build of tower 2 which is currently at 40 feet and guyed off at 35 feet. It will be 70 feet tall very soon.

Until next month, enjoy your aspect of the hobby. And realize that someone drove 2500 miles round trip to be "DX" in your front yard. I bet you never realized that you were a ham in a DX location – did you?

NEXT MEETING:
“SHOW AND TELL NIGHT”
Tuesday, September 12th, 7 PM
O’Brien Civic Center

RANV

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<http://www.RANV.org>