



Radio Amateur News & Views

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SOFTWARE DEFINED RADIOS The January 13th RANV Meeting

We again go high-tech at the January RANV meeting. President Brian N1BQ will talk about and demonstrate several examples of Software Defined Radios (SDR). Brian will demonstrate a laptop driven Kachina HF Transceiver, a DSP-10 2-meter radio, an SDR-1000 unit and several older SDR units. Refer to the SDR article in last month's newsletter for a detailed description of what SDR is.

Software Defined equipment is the future. Come to the January meeting, learn the details and become part of the future. The meeting starts at 7 PM at the O'Brien Civic Center, 113 Patchen Road, South Burlington. Pre-meeting eating and activities will be at Zack's on Williston Road, starting at 6.

NEW YEAR'S REVOLUTIONS FOR RANV MEMBERS

1. Renew your RANV membership – on time! Yes, while we earn enough money from the hamfest to have fun events, dues pay for daily running of the club, including newsletters and insurance. And while the newsletter, repeater and club activities are free for all, we still need your support. Not a member – why not join? The annual dues amount to only \$1.25 a month.

2. Provide input for the newsletter. It's RANV News & Views, not W1SJ's News & Views. Over the last year, I have written a higher percentage of the newsletter than before and have resorted to writing several editorials. While my ranting might be lightly entertaining, there is a lot more valuable stuff we could be putting in here. Certainly, you have at least one ham radio story or revelation to relate.

3. Learn something new in amateur radio. Try a new mode, try a new band, try a new antenna and/or try out a different radio. If you are not learning something then you are stagnant.

4. Be active. Ham radio will be a strong entity if we embrace our hobby and stay active. A ham radio population which is 90% hams who don't ever turn a radio on is not a condition of strength. Be active by engaging in RANV activities and getting on the air. Turn on the radio and make at least one contact a week – not on a repeater.

COMING UP

We have a boatload of activities coming up in the new year!

If you don't have New Year's plans, perhaps you might want to operate in *Straight Key Night*. Yes, it's CW, but the speeds are slow and the goal is quality, not quantity.

The January 13th RANV meeting will start out with some nice high-tech demonstrations of Software Defined Radios. Be part of the future!

Next month is loaded with contests. *NA QSO Party* on January 17-18th, *VHF Sweepstakes* on January 24-25th and the *Vermont QSO Party* on February 7-9th. Get on the air! See the article on page 4.

The February 10th RANV meeting will feature the return of Dave W1KR who will show off his work in building CW keys.

On February 28th is the Vermont State Convention, a.k.a. Milton Hamfest. We hope to see you there!

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LAST RANV MEETING

by Mitch W1SJ

The last meeting was the RANV Holiday Party. From my strategic vantage point in the kitchen, I could determine that a good time was had by all. There were 19 in attendance including 6 spouses/SO's; similar in size to last year's gathering. Of the various food groups, it was evident that the roast beef, cocktail franks and meatballs were consumed quickly. A chocolate cake disappeared in record time. If we had a representative from Guinness, I'm sure he would be in the book by now. Other popular treats included a pasta salad, deviled eggs, a super salad and cheese, crackers, chips and pretzels. Since no scale was available, I cannot determine if any significant weight was gained during the festivities.

After the food frenzy, everything else seemed like a blur. No coherent meeting topic was discernible. I remember Grant and Ed talking for most of the night, no doubt swapping contest horror stories. Howie and Marla made their first appearance in a long while, after an RV trip through the subcontinent. I also remember Brian and Jeff looking at something geeky looking on my computer, but I couldn't tell what it was. All I know is that afterwards, whenever I turn on the computer, it asks me to run low power. I'm just not sure why it would do that.

The membership of our club has many talents and skills. After the Holiday Party, I can honestly say that we are also First Class when it comes to eating!

THE PREZ SEZ

by Brian N1BQ, President

I usually warm up my column each month with some passing reference to the various conditions and actions of atmospheric phenomena. However, Mitch has threatened me with bodily injury if I even mention the "W" word! What can I say?

Many of us will have new rigs and accessories as a result of the holiday season. Multiple New Years' resolutions will have been made and many already broken.

We will start off the year with a presentation by yours truly on Software Defined Radios. I have been fortunate to acquire for the demonstration a Kachina unit from Henry, KT1J. We will have a DSP-10 2 meter SDR from Mike N1JEZ, as well as my new SDR-1000 from AC5OG and a few older radios of the SDR persuasion. The future of ham radio is in SDR so here will be a chance to get an early look.

February will feature Dave W1KR who will be showing off some of his work fabricating miniature Morse code keys. With the recent developments at WARC 2003 and the phasing out of CW by many of the radio services this would seem to be an irrelevant topic. Yet the ITU, the same body that removed the Morse proficiency as a requirement for amateur HF privileges, just this month added a new character to International Morse code for the first time in 150 years. The new character is the @ symbol, prosign "AC", or in Morse, "didahdahdidahdit". I have spent some considerable time in the last two weeks looking over the Web at sites dealing with CW and Morse related items. It has become readily apparent that rather than going away, interest in CW is expanding. With the removal of the hard requirements for CW proficiency there now seem to more CW operators over the last two three years since the restructuring. These new operators are in there plugging away at CW, ragchewing because they want to, not because they have to.

The hamfest is coming. The hamfest is coming! Mark your calendars. Saturday, the 28th of February, will be the Milton hamfest and ARRL Vermont State Convention. It's been a while since any

hamfest. It's the time to get out and eyeball with other hams. We, the members of RANV need to support it. Your labor and attendance will keep it going strong. Talk to your friends and bring them along. You don't like the way we have been running it? Don't bitch in the dark; let us know; tell us how to make it better! We will be soliciting commitments to help setup and/or takedown as well as work the club tables at the January and February meetings.

In the past, there have been some legitimate beefs by individuals who got stuck working at the club table or the front table for hours on end. The only way to keep that from happening is to have sufficient help so that the load is spread out fairly and evenly. The hamfest is the primary source of funds our yearly operations for RANV. As club members you enjoy the fruits of the hamfest - it is only logical that you should give a hand to help keep the hamfest running smoothly.

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

MILTON HAMFEST PLANNING

by Mitch WISJ

Planning for the Milton Hamfest has been coming along. In November, I sent out a mailing asking how we can improve the hamfest. I received 10 responses out of 300 E-mails sent. Three of the responses mentioned that the hamfest should seek out and provide activities for youth. This is an interesting observation. Milton is the only hamfest which offers free admission to youth. Getting more youth involved is certainly a necessity for amateur radio. But is it necessary for the hamfest? Well, if we take the attitude that what is good for ham radio is good for the Milton Hamfest, then the answer is yes, we should promote more towards youth.

Three responses mentioned that we should have more demonstrations at the hamfest. We have done a good job with this, offering demonstrations of satellite contacts in the past. We can certainly do more. This year, we will have a hands-on demonstration station of IRLP and Echolink. I would like to offer up other demonstrations as well. To present these activities, we need people who have the equipment, skills and time to set the demonstration up and staff it for the 4 hours of the hamfest. Oh, and by the way, many club members are already busy with other hamfest activities. Any volunteers?

A couple of responses mentioned increased forums. Logistics is our enemy here. The forum window is only 4 hours. At 1-hour each, we can have up to 11 forums in the available rooms. In the past we have offered 6-7 forums. Several folks have complained that there are too many forums and they can't get to all the forums they would like to see. Actually, all conventions are that way. If you offer 3 or 4 shows simultaneously, chances are that someone will always find something interesting. A short forum is difficult to present. The speaker has to be able

to present the topic, speak convincingly, master the audio/video logistics, give an appropriate demonstration and field questions all in 60 minutes or less. Long forums at a short hamfest like Milton is not a good idea since people need time to circulate throughout the show.

There were some other comments which cannot be acted on. One suggested a summer hamfest. I've done those, and they largely don't work. People are too busy in the summer months and we'd be competing with everything. In late February, there isn't much going on. Another comment suggested that we move the hamfest to a more central location in Vermont. Where would that be? Years ago, a Vermont State Convention was held in Rutland. The attendance rivaled what we get at club meetings. The Burlington area has the largest concentration of population in the state and is close to secondary ham radio markets in Plattsburgh and Montreal. It makes the most sense to have the show somewhere where most of the people are.

I am strongly considering a change of location for next year. Negotiations for the hamfest location have been difficult and we have been hit with a 140% price increase. The current hamfest location has two things going for it: low cost and tradition. With the higher price, it is perhaps time to consider a location which is close to an Interstate exit and has facilities which would work better for us, like having the meeting rooms nearby to the flea market, etc. Nothing has been decided at this time and I am open to suggestions.

The planning for the upcoming show is going on strong. I have spoken with Ed Hare W1RFI of the ARRL Laboratory. He has agreed to do two forums, one on the headline-grabbing topic of *Broadband over Powerline (BPL)* interference and another one on *Antenna Modeling*, an

always-popular topic. I will try to take some time out of my busy schedule and offer a shortened version of the *Operating Techniques* Forum, which is popular with new and old hams alike. We will also welcome the return of the popular ARRL and QRP forums. Anything else? Your suggestions are always welcome.

There are 7 weeks between the time you read this newsletter and the Hamfest. Please take the time to help all of us promote it. We especially need to reach inactive hams and get them involved once again. Nothing is more persuasive than an invitation from a pal to go to the hamfest. We need help in reaching the non-ham masses as well. I put press releases in several local papers, but I need help reaching more. Anyone with contact to a media outlet can help us get the word out. I'll send you the write-up; all you need to do is to get them to publicize it early and often.

Remember, the Milton Hamfest is February 28th. Don't be one of those who wakes up on Sunday morning after the show and says, "I forgot!"

FIRST U.S. QSO ABOVE 400 GHZ

Microwave enthusiast Brian Justin, WA1ZMS reports what he believes is the first QSO above 400 GHz in the U.S.

On November 11 at 0215 UTC, WA1ZMS/4 worked W4WWQ, on a frequency of 403 GHz over a distance of approximately 1709 feet in Virginia. WA1ZMS set new North American records on 241 and 322 GHz last December, and he reports the pair used the same basic gear that had been put into service for their then-record-making 241-GHz QSO last year (*recently beaten*), but with new 30-cm parabolic dishes.

REPEATER NEWS

by Mitch WISJ

I'm happy to report that the repeater is still operating properly. Unfortunately, some of the human operating has left a little to be desired. We have one of the best repeaters anywhere. I expect that the operating also be top notch.

Echolink is a powerful system which allows conversation to take place all over the world. Unfortunately, some of the distant users are clueless in their understanding of the system, thus causing us grief. It starts with the numerous annoying connects and disconnects we hear all day long. It gets more annoying when folks connect in and proceed to call CQ (a poor Echolink habit which has caught on). It continues with operators continuously timing out the repeater and connection, even after being told not to. It gets worse when two or more distant stations use our repeater as a linking port for their QSO. The worst situation is when we get connections from systems which transmit squelch tales, intermod and other extraneous noises. Frankly, my patience is wearing thin from this. If users are not willing to understand and respect our system, I prefer not having them join us. I will keep watch for another month, with the hope that these problems will subside. Otherwise, we might have to limit who can connect to the repeater from Echolink. Repeater users who dial the Echolink or IRLP from the repeater side should be full quieting, should always ID before sending tones, should make it clear to the distant station that they are on a repeater with limited timer and should make sure that the connection is cleared when they are done.

Several of us have put a lot of effort into improving the repeater and keeping it working and reliable. I also expect that all users will put equal effort into setting up their portable, mobile or base station so that their signal will be the best it can be. Please don't delight us with your noisy signal because you don't have the time to erect an effective antenna. Don't use the repeater with low power and a portable antenna inside a vehicle unless it is for short periods of time while you are in range. During the winter months, dry conditions, icing and high winds will cause signals to be worse than normal. If you want to use the repeater extensively, make sure you are full quieting. Otherwise, make your call, pass your message and stand by. If someone you are talking to is noisy into the repeater, tell him so and finish up the conversation. Don't encourage a station with a noisy, distorted signal unless there is an emergency.

We had a lock-down last month. It happens when someone's radio manages to get locked on transmit and it makes the repeater unusable for long periods of time. In the background, I can hear road noise, the car radio, cell phone conversations and the operator's voice. Often, I have to go on a Fox Hunt to find the perpetrator and I have done this more times over the years than I have cared to. Of all the bad things you can do on a repeater, this is the worst. I have no qualms about inviting perpetrators of this activity to go elsewhere – that's how serious it is. To keep this from occurring, please do the following: 1. Make sure your microphone has a hook or safe resting spot where no objects can fall on it or lodge against it; 2. Do not use VOX or any microphone with a locking switch; 3. Always turn your radio off when exiting the vehicle. Check your installation and make sure it is foolproof enough to not get locked on.

The repeater is set up to enforce short transmit times and long wait times. The pause between transmissions is crucial as it allows others to break in. Always PAUSE before replying – it is not a race! It is not OK to keep timing out the repeater. If there are more than a couple of timeouts or doubles, it is recommended that all stations in the QSO stand by for a while and let things settle.

The repeater is a powerful tool when users monitor it. In the last month I have bailed out two members stuck on the road, mostly because I happened to be listening. Please make it a habit to monitor the repeater. With practice, you can find a volume setting which will allow you to hear calls for help while not being disturbed by routine conversation.

We have one of the best repeaters anywhere. Let's keep the operating ability at the same level.

LEARN TO OPERATE

by Mitch WISJ

A couple of opportunities are coming up to learn how to become a better HF operator. One of the comments we hear each year at Field Day is that there is not enough operator training. Well, here it is.

February 7-9th is the *Vermont QSO Party*. This is a very light contest with little QRM. For the last 15 years, I have operated as a single operator and have had a lot of fun. A big signal from Vermont attracts a lot of attention and I have had little trouble logging thousands of contacts. This year, I will open my station to all who want to operate. The open station times are 9 am until 6 pm Saturday and Sunday. For this activity to work I need several operators willing to operate a few shifts each. License class doesn't matter. Training and encouragement will be provided. You will have a ball working people and you will be able to handle an HF station. You won't be able to wait for the next contest! Please sign up.

Another operating activity is the *NA QSO Party* on January 17-18th. This is more competitive contest, but there is still opportunity for rookies. In this contest stations combine their scores in teams. Ron KK1L is striving to put together 1 or 2 Vermont teams. There might be some opportunity for multioperator stations as well. If interested, contact Ron at rrossi@btv.ibm.com.

NEXT MEETING:
“Software Defned Radios”
Tuesday, January 13th 7 PM
O’Brien Civic Center

MILTON HAMFEST
Saturday, February 28th 8 AM
Milton High School
Flea Market – Equipment – Forums – Exams

RANV

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