



# RADIO AMATEUR NEWS & VIEWS

The Official Journal of the Radio Amateurs of Northern Vermont

JANUARY 2001

HAPPY NEW YEAR!

Vol. 11 No. 1

## COILED ANTENNAS

### The January 2001 *RANV* Meeting

For our first meeting of the millennium, we are very pleased to have David W1KR back to present at a *RANV* meeting. David's topic this month is on Coiled antennas. Very often, we find the need to have an antenna sized much smaller than  $\frac{1}{4}$  wavelength. This is done by utilizing coils and helically wound lengths of wire. The helical windings serve to multiply the length of the antenna, thus allowing a resonant antenna in a much smaller space. Of course, there are all sorts of electrical rules to follow when designing such antennas. David will go over some of the criteria for building these antennas and show off some of the antennas which he has built. There is probably a good chance he will bring parts of his famous homebrew "screwdriver" antenna, so-named for the electric screwdriver motor used to change the coil length.

The *RANV* meeting is Tuesday, January 9<sup>th</sup>, at 7pm, at the O'Brien Civic Center, 113 Patchen Road, South Burlington. Pre-meeting feasting and roasting will be at Zach's on Williston Road.

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## COMING UP

We have a whole bunch of activities coming up for the new year.

The *RANV* meetings kick off with David W1KR giving a show and tell on *Coiled Antennas* on January 9<sup>th</sup>. For our February 13<sup>th</sup> meeting, we combine some politics and international intrigue as Al N1DRO will come down to speak about *Border Patrol Communications*. Al will share his knowledge and insight as a border patrol officer with us that night. And for our March 13<sup>th</sup> meeting, Todd KA1KAQ and Mike W1RC will team up to talk about and show off *Vintage Radio Equipment*, also known as old buzzard radios. If you long for the days when radios also heated the shack on a cold winter's eve, this topic will interest you.

It's not just meetings which make

up the new year, but also operating activities and we've got 'em every month. January 20-21<sup>st</sup> is the *VHF Sweepstakes*, the first of the big VHF contests of the year. In the past years, there has been little to no activity in our area. Why don't we set up a multiop effort. There won't be that many contacts to work, leaving plenty of time to yak and eat. Two weeks later is the *Vermont QSO Party* on February 2-4<sup>th</sup>. There is no W1B effort this year, so why not form another multiop effort and let everyone operate. HF conditions are super. Two weeks after that, on February 16-18<sup>th</sup> is the *ARRL CW DX Contest*. Time to work on your DXCC. OK, so you're not a CW operator – no problem. Wait another two weeks for March 2-4<sup>th</sup> for the *ARRL SSB*

*DX Contest*. And the same comment holds – why not form a multiop station or two and let's get a lot of people on the air!

Finally, the crowning jewel of our Wintertime Ham activities is the *Milton Hamfest* on February 24<sup>th</sup>. Plans are underway to bring forums on line and to get the dealers and their junque up for the day. The most important piece of this is you. Talk it up! Tell your friends on the air, off the air, on the phone, on the Web, wherever. Have them come up and enjoy the day at the fest. We don't care what they bought on E-Bay or that they are not interested in buying anything. The key piece of this is that Milton is a social event. You've had cabin fever all winter long, now get out and party!

# OUR LAST *RANV* MEETING

by Grant K1KD, Sec'y

The December 2000 *RANV* meeting was held at the house of Mitch W1SJ and Deb W1DEB on Tuesday, December 12th. The meeting was cleverly disguised as a holiday party as attending members and friends enjoyed plenty of good food, entertainment, and holiday cheer. Mitch and Deb served up a great spread of deli sandwiches, cocktail franks, meatballs, and various other munchies and desserts.

The "meeting" was officially called to order around 5:30 when the first can of soda was cracked open. Many topics of conversation arose throughout the course of the evening. Getting a lot of air time was the topic of antenna ordinances and results of the ARRL 10-Meter Contest. Through talking to most of you, I learned that many *RANV* members participated in the contest, and put up some great scores. Mitch W1SJ put forth an excellent single op high power score with 2366 QSO's and 686,140 points. Ted K1HD, Fred N1ZUK and Paul AA1SU operating as W1PU logged 1753 QSO's for a score of 680,000. Ron KK1L and Mike N1JEZ had an excellent effort with 1853 QSO's and 519,662 points. Brian N1BQ made over 300 Q's while using QRP (10w). Our fearless leader, Paul AA1SU, had good part time single-op, low power, all CW effort with 347 QSO's, for 129,084 points. Nice work to everybody who participated! I managed to get on for just over one hour for a measly 51 QSO's and 7,488 points. Unfortunately, other commitments and a broken clothes dryer Saturday morning kept me from participating more.

Later in the evening, as we became stuffed, a few points of business were addressed by the cabinet.

# THE PREZ SEZ

by Paul AA1SU, President

Here we are at the start of the new millennium. The year 2001: A Space Odyssey. Who would have thought that this year would have come? The year brings with it many new options for our experimental hobby, also known as ham radio. Right now, three ham radio operators, armed with a 2-Meter HT, are orbiting the Earth. They have already made at least one QSO with a school, and will hopefully be available for friendly ragchews soon.

Also up in space we now have AO-40, formerly known as Phase 3D. There are some major problems with it right now, but hopefully they will be debugged, and we will be able to use it by Field Day. As we have seen at a recent *RANV* meeting, this will be an incredible ham radio satellite.

In this month's QST Magazine, there is yet another new digital mode being reviewed. The mode is called MFSK16, and it offers an alternative to RTTY and PSK31. Using digital signal processing, this new mode provides truly remarkable results. Speaking of PSK31, the latest craze is operating it while mobile. This can only be done as a passenger, but it is also reviewed in QST.

The 2001 *RANV* officers were sworn in - no lawyers were needed. The new cabinet: President: Paul AA1SU, VP/Treasurer: Brian N1BQ, and Secretary: Grant K1KD. Also, it was voted by the Steering Wheel that the club would donate \$50 to the city of South Burlington for the use of the O'Brien Civic Center. The Civic Center is where the monthly *RANV* meeting is held.

Some 25-30 people showed up for the bash! Many thanks to Mitch and Deb for their holiday hospitality. Seasons greetings and see you next year!

Our club strives to be the best that it can be, and some of our members try these new cutting edge technology modes. Most however, do not. This is okay, as we all enjoy the hobby no matter what we do. Talking is still the easiest thing to do on the air, and the most popular. Maybe because it is so easy, hams keep coming up with new ways to communicate. Of course, the fact the digital modes are so quiet, makes them more popular in a cozy QTH. They are also fun.

No matter what you do with amateur radio, try to stay active. Keep coming to the meetings, as they are very informative and fun. This month we will be learning about antennas. This is an extremely important part of the hobby. After all, no signal can get out without the antenna. In the future, maybe one of you will be able to give a talk about a part of the hobby that greatly interests you. Until then, keep experimenting, building, and communicating. It's what makes this hobby so great!

## Contacting *RANV*

In Person: Meeting, January 9, 7pm,  
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113 Patchen Rd, SBurlington  
By Mail: PO Box 9392, South  
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Please send submissions for newsletter to the editor, W1SJ.

## CONTEST CORNER

by Paul AAISU

Here we are at the start of a new year and as usual, we have plenty of contests to keep us busy and warm. To start things off, you can try a little CW in the *North American QSO Party* on Saturday, January 13<sup>th</sup>, at 1pm. It only lasts for 12 hours, and single ops are limited to 10 hours. Power is limited to 150 watts. Moving on to January 20<sup>th</sup>, you can work the same contest, but on phone. Both of these contests are excellent ways to work on your Worked All States Award.

Also on this weekend, there is the *ARRL January VHF Sweepstakes*. It runs from 2pm on Saturday to 11pm on Sunday. You can take your 2-Meter rig, tune to 146.55 MHz, and open the squelch. If you are mobile, just drive around like this, and listen for a ham calling CQ. If you have a dual band radio, also tune to 446.000 MHz. The exchange is grid square. For most of us, it is FN34, but if you are mobile, be aware of your location. Complete details can be found on page 112 of December *QST*.

For the June version of this contest, congratulations go out to the following *RANV* members. N1ZUK put out a nice effort as a single operator on 6 Meters, 2 Meters, and 440 MHz. WB1GQR operated from atop Mt. Equinox in the Limited Multi-op category with W1SJ and N2YHK finished 1<sup>st</sup> in New England and 13<sup>th</sup> overall. The N1MJD Rover team won a plaque for being 3<sup>rd</sup> in the country with their impressive set up that we saw at a meeting last year.

On Super Bowl weekend, there is the *CQ WW 160-Meter DX Contest, CW*. It starts at 5 PM on Friday, January 26<sup>th</sup> and ends at 1 PM on Sunday. The exchange is RST and state. Of course, the band is only open at night, and the contest will not interfere with the game on Sunday evening.

On February 2<sup>nd</sup> at 7pm, WE are the DX in the *Vermont QSO Party*. It runs for 48 hours, and the exchange is signal report and county. Complete details can be found on the *RANV* Web Page: Vermont's Ham Radio Headquarters. This is our chance to shine. Hams will be looking for us because we are a rare state and we have rare counties. Please get on for this one. There will not be a W1B Snowflake Bentley Special Event station on this year.

On the weekend of February 10<sup>th</sup>, there are a few contests to choose from, including the *North American Sprint, CW*. This is a short contest that utilizes the QSY feature. You can read about it in the February *QST*, but it is not for the faint of heart.

Next month, ARRL DX.

## FREEZE YOUR BUTT OFF CONTEST

by Brian N1BQ

On Saturday, February 4<sup>th</sup>, from 9am until 9pm, the *Arizona ScQRPions* sponsors a winter Field Day style event. It is an HF QRP CW activity, with various home/field and single/multi operator categories plus various multipliers for special operating circumstances.

The *Northern Vermont QRP Society* is planning to field a team operating from the deck at N1BQ's QTH, taking advantage of alternate power field operation. All are welcome regardless of club affiliation or CW experience. The illustrious Bob WE1U has volunteered to cater/cook for the operators when he is not operating himself. The site works out well for operators as they will have a log cabin with a great wood stove to which they may retreat when not operating. There is also, snow permitting, excellent sledding to be had at the site. We would also like to field a Novice/Technician team. If there is sufficient interest we will coordinate bands and antennas and will supply all equipment as well as experienced operators to teach. Just bring your gloves, long johns and stocking caps. Please contact Brian N1BQ at 899-4527 or at n1bq@wulfden.org for more information.

This will be the fifth running of the FYBO event. Participation in it is nationwide by clubs and individuals. The categories are broken down into single operator and multi-operator. Each multi-operator team is limited to one transmitter. There are also categories for *home* or *field* per the ARRL Field Day definition of *field*. Stations in the *field* get a multiplier of 4. Use of alternative power sources nets a multiplier of 2. There is a QRPp multiplier of 2 for operation under 1 watt of power. The maximum power allowed is 5 watts! The thing which sets this apart from any other activity is the temperature multiplier! The lowest temperature at the operator's position is what is used. The multipliers are (in °F): 50-64°: x2, 40-49°: x3, 30-39°: x4, 20-29°: x5, and below 20°: x6. Needless to say, Northern Vermont in the first week of February will usually max out this multiplier. The final score is computed by multiplying the number of QSO's by all of the multipliers.

Individuals who, for whatever reason, do not wish to come over, are encouraged to get on the air and operate. The contest will operate in the vicinity of the standard calling QRP calling frequencies for the various bands (*no WARC bands*). If you are unsure, you can find a chart at <http://www.wulfden.org/NVQS/qrpfreq.shtml>. For more information and details on the contest exchange format, you can go directly to the *Arizona ScQRPions* website at <http://www.extremezone.com/~nk7m/fybo01.htm>.

I would at this time like to join with the *Arizona ScQRPions* in admonishing anyone interested in this activity to put safety first and to keep a proper perspective of the weather and temperature against their own limitations.

I am looking forward to a great and safe time on February the third.

# KEEP YOUR EYE ON THE BALL

*editorial by Mitch WISJ*

I don't do editorials too much, since they require time to think about and write and who gives a #S%! what I think anyway. But since I have a dire need to fill some space and to exercise the wasteland between my audio receptors, here goes.

Amateur radio is starting to rebound. Things were looking a little grim over the last couple of years. It looked like amateur radio, survivor of TVI, the FCC, wartime shutdowns and citizens band was being strangled to its knees by an abstract art form called the Internet. Cell phone and miniature talkabout handhelds certainly didn't help either. We entered into a no-growth mode, considered death in our throwaway society. While HF activity held its own, activity on VHF and FM modes dropped off dramatically. Enrollment in classes and new licenses also dropped off.

However, things are changing. Perhaps a lot of people are tired of getting busy signals while trying to reach AOL or whomever. Or perhaps people are starting to realize that there really is no replacement for live 2-way communication. While the large number of upgrades occurring since April has certainly helped a little, there appears to be a genuine move back to experimenting with different things. Look at the turn out at the *RANV* Construction meeting. There is something inherently satisfying about building something you can have a conversation on. There is a small, but growing following in building QRP transceivers and putting them on the air. And look at how PSK31 is starting to take off. All of this, because people are curious about new ways to communicate. We could also say that a new era in satellite communications is here, with the launch of AO-40. However, with the satellite comatose right now, we can only stand a vigil and hope for its successful return.

BUT. Don't take your eye off the ball! Don't become complacent, otherwise, this time of renewed activity could be nothing more than a blip. It requires balancing amateur radio pursuits with a whole bunch of other family and professional pursuits, but it can and is done by many hams all the time. The key word is to balance and not simply banish the ham equipment to the basement or attic. There is always time for a quick QSO, a little playing around or even some tuning around.

The other piece of this is balancing individual activities with club and group activities. For more fun, not everything you do in amateur radio should be done by yourself. Involving others increases the enjoyment. Along the same lines, some things are better done individually rather in groups. *RANV* exists to fill the void for amateurs in our area looking for group activity. We provide the informative club meetings, the operating activities like the Field Day and VHF contests and social activities like the hamfest and picnic and such. We are there to supply the support, but you have to make it clear what you would like us as a club to do. Right now, there appears to be a demand for many special interest groups in the club (*e.g. contesting, QRP, public service, etc.*). This is good and should be encouraged. How did all this activity get going? Someone like you wanted it to happen and did the initial work to get others involved. It won't happen unless people are interested enough to get active.

There are still challenges to amateur radio. Next year the first year of no-code licenses are up for renewal. Many believe that a majority of these licensees will not be renewing, thus putting amateur radio into negative growth - a very bad thing. So what do we do? Three things. Recruit new people to be amateurs. If we get two new hams for every one who doesn't renew, we would have a really good growth rate. The numbers are certainly with us. There are only 700,000 amateurs in the U.S. and about 250 million non-amateurs. It should be easy to find new hams. Secondly, find inactive hams and invite them to club meetings, activities, and heck, even to your shack. Sometimes all that is needed is a little human concern. Finally, lead by example. Be active in various amateur radio events and show your enthusiasm. Enthusiasm is the most contagious disease anywhere. Many unsuspecting normal people hung around active hams by mistake and ended up with full shacks shortly afterwards. It really works!

My fingers are tired from typing on this ergonomically incorrect crappy keyboard, so I will sign off, hoping I've inspired something, somewhere. All the best for a GREAT YEAR!

# QRP FORUM AT HAMFEST

*by Brian N1BQ*

The *Northern Vermont QRP Society* will present a one-hour QRP/Homebrew Forum at the *Northern Vermont Winter Hamfest* on Saturday, February 24<sup>th</sup>. The Forum will feature a brief overview of QRP operations in CW, SSB, PSK31, and satellite operations, followed by talks on QRP Fox Hunting, the QRP-L Internet List, and a homebrewing resources and techniques. There will be a display and hands-on session of over a dozen or so from scratch homebrew as well as commercial kits. The current list of presenters will be Brian N1BQ, Fran KM1Z, Bob WE1U, and John KB1ENS. There will be on the air demonstration of the NJQRP Club's PSK80 "Warbler," easily in contention for "kit of the year."

NVQS will have an operating table in the hamfest area where various rigs commercial, kits, and from scratch homebrew will be on display and available to try on the air. There will be some test gear available and all the recent Tuna Tin II constructors will be able to bring their rigs for testing out on the air and power measurements.

NVQS is a new club formed specifically to promote QRP operations and proficiency, technical proficiency and equipment and antenna construction. It is an informal organization with no dues. More information can be found at <http://www.wulfden.org/NVQS> or E-mail: [nvqs@wulfden.org](mailto:nvqs@wulfden.org).

**NEXT MEETING:  
“COILED ANTENNAS” with W1KR  
Tuesday, January 9<sup>th</sup> 7pm  
O’Brien Civic Center**

**MILTON HAMFEST  
Saturday, February 24<sup>th</sup> 8am-1pm  
Milton High School  
Flea Market – Equipment – Forums – Exams**

***RANV***

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