



RADIO AMATEUR NEWS & VIEWS

The Official Journal of the Radio Amateurs of Northern Vermont

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LOW COST SOFTWARE DEFINED RADIOS The February 9th RANV Meeting

Software Defined Radios (SDR), are certainly in the news these days. Commercial examples like the *Flex 3000* and *Flex 5000* are becoming more and more prevalent. In a similar fashion, panadaptor accessories, such as *LP-Pan*, are adding functions from the powerful *PowrSDR* software platform to already high performance radios, like the Elecraft *K-3*.

In this session, we investigate how one can enter the SDR arena for as little as \$15 and get access to the *PowerSDR* platform. Two examples are given: a stand-alone 20 meter receiver and an SDR that attaches to the IF chain in boat anchor radios, transforming the likes of an old Hallicrafter receiver and giving it noise filtering and selectivity like a modern radio.

Festivities will get underway with Snax at Zachs on Williston Road starting around 6PM. The meeting will start at 7PM at the O'Brien Civic Center, 113 Patchen Road, South Burlington. Hope to see you there!



As you read this, it is likely only 3 weeks before **HAM-CON on February 27th 8 AM until 2 PM at the Hampton Inn Colchester**. Most of our members will be there. But there is a sizeable group of members who live locally who don't make it. And there is even a larger group of non-members who do not attend. This is directed towards those folks.

Did you know that HAM-CON is one of the best Ham Radio Shows in New England? This is a fact that we already know, but I am told this by other hams who travel considerable distances to get to the show. We have it all – Flea Market, Dealers, Forums, and Demonstrations, and we excel in each area. Yes, there are larger hamfests, but you will not see the level of forums and demonstrations that we have. In terms of shows that hams really love, we are right up there with Near-Fest and Boxboro. We have an incredible resource at our doorstep. Don't blow it off because you need to go to the dump that day!

We have a number of new things happening at HAM-CON this year. We will be conducting the first ever Antenna Construction Session. We have done these at club meetings, but I have never seen this tried at a Hamfest. The format is simple. You

NEWS & VIEWS HAS NEW EDITORS

by Mitch WISJ

Next month will be the premiere of our new newsletter editors, Robin N1WWW and Kathi K1WAL. They have been gracious to take over this detailed and often thankless job. Both have good credentials – Robin maintains a few websites, including the VT ARES site and has done newsletters before and Kathi writes our *RANV* member profiles.

For the future, I will retire to my villa without those pressing monthly deadlines and desperate pleas for more material. Actually, I will keep contributing to the newsletter, since I do enjoy writing. And rest assured, no one or no organization will be safe from one of my scathing editorials should they prove worthy of such treatment. And that means that no reader of *NEWS & VIEWS* is really safe!

I started editing *NEWS & VIEWS* in August, 1992. *RANV* was in its infancy then with Tom N1ENH the editor for the first year and a half. Before this, I was editor of the Silicon Junction Radio Club newsletter for some 12 years. I can't believe that I've been editing these silly things for half my life!

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OUR LAST *RANV* MEETING

by Jeff NIYD, Sec'y

At our very well attended January meeting, 25 people braved 10 degree cold and filled just about every available seat for a presentation by Bob W1ICW. His talk was called "Those Other Birds in the Sky", meaning the birds (*satellites*) that are not amateur radio satellites. Bob described how he receives weather maps directly from NOAA weather satellites on 137 MHz FM. He uses a PCR-1000 receiver, a preamp, and a specialized decoding program called WxtoIMB. The result is that the satellite's digital data is output as excellent weather maps.

Moving up to the next level of difficulty, Bob described how to receive FLTSAT and UFO. They are old military satellites which carry unencrypted digital messages. Bob uses an AOR 7000 scanning receiver and an SDR-IQ software defined radio which gives great flexibility in decoding received signals. FLTSAT and UFO are being misused by various radio pirates outside the U.S. A mix of normal traffic and pirate banter is found there.

Finally, Bob described how to receive INMARSAT-C, the 1.6 GHz satellite phones which are used by ships at sea. With a nifty homemade antenna and special decoder software, he is able to receive routine and emergency text messages from ocean going vessels. His presentation showed a text message from a sailboat asking for "50 gallons of diesel fuel, battery is failing, etc."

We also heard from Bob KB1FRW and Carl AB1DD about the recent ARRL New England Division Cabinet meeting. The FCC is considering relaxing certain rules regarding paid employees participating in emergency drills.

HAM-CON on February 27th will have a flea market, forums, a movie, the W1V HF station, a test bench, door prizes, and closing ceremonies

THE PREZ SEZ

by Bob KB1FRW

HAM-CON is almost upon us and the H-Day is approaching rapidly with some tasks yet to be done. Step right up and volunteer as much as you can stand, as the club needs you now. The event can use ticket tenders, help at both the *RANV* Info and Flea Market tables, forum room supervisors and setup and teardown help. And we especially need teardown help! Last year I ended up putting the rocket launcher away virtually by myself. After that Carl and I helped the vendors pack up and leave, then retrieved all the signs. So do what you can and more as this is our most important activity of the year.

To everyone else, make sure you show up, visit the vendors, the forums, see some of your radio pals in an eyeball QSO and stay to the bitter end for the closing, you just might win something cool. Many thanks are due Mitch W1SJ for all his efforts in bringing this show to you. He is a pretty darn good Fest chairman and sets up a nice show, so be sure you thank him.

By the time you read this the Ham breakfast will have come and gone and hopefully you made there and came away with some useful insights and knowledge. I think that these local events help assist and promote the ham community, when we do this we better others and ourselves by our sharing of ideas and common interests.

What other stuff are we doing? We are working to help new and returning hams integrate with the

where said prizes will be awarded. Kathi K1WAL and Robin N1WWW agreed to run the flea market. Bob W4YFJ, Barb KB1LIF, and Melanie W1BZD volunteered to staff the *RANV* table.

Following the presentation, everyone became involved in snacking and talking. The meeting ended sometime after 9:00.

hobby by offering help at every chance we get. To that end the new ham brochure has been created by Jim KE1AZ with assistance by Robin N1WWW and Mitch W1SJ. This is currently being handed out at the VE sessions at the Red Cross and is available to any and all. You can download from the *RANV* Web and hand it out as well.

Carl AB1DD, is working on a business card that has a eye-catching design. These are to hand out to people you meet that may have questions about the club. They will be available to club members once they are finished.

We are working with the new newsletter editors to bring them up to speed for their premier edition in March. Be sure to send your articles and ideas in now. This is a good time to thank Mitch for his tireless efforts in editing and writing the newsletter all these years, I know it hasn't always been easy and I for one have enjoyed his efforts for years. THANK YOU Mitch W1SJ. Again I'll remind you of the *RANV* Yahoo group - it is a great way to stay connected.

Contacting *RANV*

In Person: Meeting February 9, 7 pm,
O'Brien Civic Center
113 Patchen Rd, So Burlington

By Mail: PO Box 9392,
So. Burlington, VT 05403

By Radio: 145.15 repeater

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

BREAKFAST WAS GREAT!

by Mitch WISJ

On the morning of the January 30th Vermont Ham Breakfast, I got there a little early (*by 10 minutes – early for me*). I was surprised to find the entire parking lot all parked up and a gaggle of 30+ hams already in good field position for some serious eatin'. It was at this exact moment that I realized that hams are much like cats: 1. they can't be reliably lead in any one direction, 2. they are capable of whining and CQing for long periods of time, and 3. food acquisition is a very, very serious matter and the early cat gets the freshest mouse. Fortunately, it was eggs, omelets, pancakes and waffles on the menu and not our favorite rodent, which will likely keep us in the good graces of the folks at Disney. The wait staff bravely tried to keep up with the breakfast requirements of what turned out to be 41 hungry hamsters and when the food did come out, it was consumed in short order.

The group was mostly from around our area, with a good showing from Central Vermont, St. Albans, Addison County and even Canada! A message was passed by someone from Southern Vermont saying that we should hold the breakfast down that way. Frankly, I like my commute time of 5 minutes!

By 10:00 the food was done and several hamsters quickly hightailed it out of there. What they don't know is that we managed to have the restaurant send them the bill! Cutting class will not be tolerated.

Our topic du jour was "What new activity in ham radio will you try out this year and how will you sell it to others". Our very first commenter didn't have a new activity to propose but instead requested help in making contact on the repeater. He has tried several times, to no avail, to make contact. Some ideas were mentioned, but without a full investigation we could not know what the problem is. So I handed him my HT and instructed him to give a call whereby he was immediately answered by Bob KB1FRW and the contact was confirmed. Mission accomplished.

One by one, various ham activities were described, including Software Defined Radios, Domino (a digital mode), PSK-31 (another digital mode), antenna and tower raising and radio remote control. But then John VE2EQL launched (*literally*) into a discussion of using high pressure gas in a PVC tube to launch a potato to send antenna wires over trees. When the discussion sidetracked into areas like, "travels several hundred feet and able to break plate glass", I began to think that we might end up on a Homeland Security hit list. That finally finished up and then someone else was also interested in this type of weapon, er I mean tool. And then I noticed that the non-ham patrons of the restaurant started moving away from our area. It is probably not a good idea to get anyone in this group too mad!

We exhausted our discussion of the top 10 diabolical things we will all try out in amateur radio sometime after 11:15. At that time we broke into small groups and continued to yap the morning away. Rumor has it that some of us were there well into lunch...

RANV MEMBER PROFILE

MOE N1ZBH

by Kathi KIWAL

While in the Navy in 1973 Moe was onboard the *USS Compass Island* operating in the Bermuda Triangle when he received a message in the ship's Health & Welfare traffic carrying the news that his brother was lost in a boating accident. While saddened by the message, he was very impressed with how the message got to him – patched through by a MARS ham operator via the Red Cross.

Years later Moe decided to get his ham license. He earned his Technician license in 1997 and upgraded to General in 2008. One day his Uncle Mac visited Moe in his shop while, as always, he had his rig turned on. Uncle Mac commented on the rig and antenna and seemed to know a lot about ham radio. Moe soon discovered that Uncle Mac was N1CDD! Moe knew his father and uncle were active CBer's when he was young, but wasn't aware his uncle was a ham.

Moe's first rig was a dual band 2m/440 Yaesu FT-50 HT to which he added a power booster, upgrading the power to 35 watts. He has also acquired an Icom 220 mobile rig and a Kenwood TM-742 tri-band mobile rig which he could work as a cross band repeater. Over time various rigs were bought, sold, and favorites kept.

One of Moe's first antennas was a "Mystery" antenna covering 160 through 10 meter and built from plans he saw in an edition of QST magazine. Uncle Mac was able to supply the wire from his 'goodie' box. Moe tuned it during a RANV picnic with help from Brian N1BQ.

Moe presently uses an Icom IC-2800 mobile and a Yaesu FT-10R HT with a Bluetooth that works well on his motorcycle. He also has an old Yaesu FT-736 Satellite rig and a FT-847 base station.

While Moe enjoys a rag chew and the occasional contest, he prefers community service. He has volunteered with the Ironman Triathlon in Lake Placid many times, the *Run For Jim* 10K for the *Jim Bashaw Cancer Fund*, *Tour for the Cure* bicycle tour, and several other events as well as search and rescue operations. He is a member of VT RACES where he's been involved in Search & Rescue operations. Moe is always willing to help, whether as an Elmer to a new ham, in community events, or lending assistance in a time of need.

THE ORIGINAL W1ELL

by Richard W1ELL

My call sign of AB1KN has been traded for a vanity call of W1ELL.

I requested this call sign to honor my grandfather, Edward Lewis Leyh who shared his experience, enthusiasm and knowledge of electronics with me and generated a life-long passion in me for all things electronic.

Although he was a jeweler, his interests extended far beyond his vocation. A friend at Westinghouse Electric Company would work with him on numerous projects, both radio and otherwise. He shared the excitement of these early experiments and projects with me as a child.

I can remember one story of my grandfather collecting "soot" from chimneys of Pittsburgh's coal-heated houses so that he could extract the selenium from the soot to make his own photoconductive cells.

He shared the excitement of helping with the first commercial radio station; KDKA in Pittsburgh. The call sign assigned the station was actually a maritime call sign. The antenna was erected on the roof of a Westinghouse building and my grandfather could remember standing in the rain holding an umbrella and feeling the "tickle" of RF pulsing through his arm as the broadcast went out over the airwaves. I guess that they weren't into RF exposure standards back then.

The house that he had architected and built to his specifications in 1912 had a loop antenna built into the structure of the house because my grandfather felt that radio was really going to take off and he wanted his house to be ready for it. The living room floor contained faint stains from acid in the wet-cell batteries used to power his early radio receivers.

I have one of his early receivers that he constructed. It used a single vacuum tube - one of the first mass-produced vacuum tubes in the US. It still works, although I am reluctant to power it up very often.

So, to Edward Lewis Leyh W1ELL!

RANV.ORG

by Mitch W1SJ

Do you look at the *RANV* Web regularly? You should! There is all sorts of interesting information there.

The *RANV* site is mirrored at my other web space. Make a point to put this address in your bookmarks: www.hamclass.net/ranv. Web sites are like anything else - they are physical objects and can and do fail. Many learned this the hard way when a fire next door to Sovernet's location in Bellows Falls managed to put their server computer under water. It died in short order and ranv.org along with a lot of other sites went away for several days. If you are an active geocacher, you know about the fire which knocked out geocaching.com for a long weekend. And websites become unavailable (*more than you think*) when a domain name server goes bust and doesn't provide the proper translation. *RANV*'s real address is a group of 4 numbers. Since few would remember that, the domain name servers do the thinking for us. So, if anything bad happens, simply grab your bookmark file and go to the backup site, which is located thousands of miles away from the main *RANV* site!

Other things at ranv.org which you didn't expect: 1. Download the Mentoring Brochure, 2. Look at pictures of any Field Day and most picnics and parties, 3. Look at Field Day and picnic logs for W1NVT and W1V, 4. Get a bird's eye view of Vermont from various webcams in our area. 5. Watch us on the TV news, and a whole lot of stuff you didn't think you needed to know about. Also, the full story about HAM-CON is right there on the web, so carefully research things before you try to call me!

THE MAGIC OF E-TAPE

by John VE2EQL

Wow, talk about a product that is right up there - like beer or getting a new radio. Well, I found it at Near-Fest 2009 this Fall. Suzanne VE2SZN and I were walking the indoor halls trying to warm up, and seeing what else there is that we might have missed on the 26 walks around the hamfest. Next to a guy who was selling thousands of feet of LMR-400 coax from big reels, the discovery was found. A gentleman had a small booth with some cut coax and some tools. He was showing off "Wrap & Seal" Silicon self-fusing tape. His name was Jeff Bernstein, and he stated that was the inventor (*unconfirmed*). He explained that the tape was completely waterproof and easy to remove. Plus it had the added benefit of not being gummy to work with. Having used "Coax Seal" for many years, the hassle and hard work of removing the old stuff was well known. He let me try some on pieces of coax and I was sold.

I tried to explain the benefits to Suzanne, who gave that ole time look of "buy it if you will be using it". So I bought a package of three rolls. It came in red, black and white. Of course, I had to ask if it came in pink. It was at this moment that I felt the jab in my ribs as the signal to move on. I have used the silicon tape on new antennas that I was putting up. I do not have any relationship or financial dealings with this person or company. I'm just a happy user. If you do a search on "Silicon Self Fusing Tape" you might find a few more vendors. If you want the E-Tape, his Email is: info@ournewproducts.com or info@fixingyourworld.com.

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show up and inside of 55 minutes, you build a 3 element 2 meter yagi from pieces of plumbing and tape measures. It is a hardware store delight and IT WORKS! Be sure to sign up with Bob KB1FRW, as there are only 10 slots available for this and they are going fast!

Another new activity is the Closing Ceremony. I got this idea from attending a non-ham convention. At the closing we will present an audio visual show of some of the lighter moments of ham radio, interspersed with announcements. And finally we will use the opportunity to draw and award door prizes. This saves us the hassle of trying to find everyone while they are all over the convention area. We hope it will be a nice addition and a place for folks to reconnect and say goodbye until next year.

We have Ed Hare W1RFI from the ARRL back with us again. Besides giving a talk on RFI, he will utilize a computer (*and crystal ball*) to make a determination of "Which Antenna is Best?" So bring your best antenna questions with you!

Other forums will include a primer on DSTAR, how to remotely control your station via the Internet, how to operate, how to build an emergency radio kit and what's new at the ARRL. And for our mid-day movie, it will be the K5D DXpedition to Desceheo!

For our demonstrations, not only will we have W1V on the air, but we will have KK1L from 6 miles away on the air as well, as remotely controlled from the Hamfest. We will also have a Software Defined Radio Receiver – a \$50 box which plugs into a laptop!

New this year at HAM-CON will be a packaged lunch for those who don't want to go outside. Fill out an order form we will have available and submit it by 10:30 and pick up lunch at noon!

Go the *RANV* web site for all the details on HAM-CON. When you come, be sure to bring at least 2 or 3 kicking and screaming friends with you!

NEW EDITORS... continued from Page 1

In the early years, newsletter production was quite interesting. I would first write it and paste it to an early version of Pagemaker. Then Mike N1JEZ would port the file into a MacIntosh version of Pagemaker to put in the finishing touches like a calendar and other items not on the Windows system. It was quite a cross-platform affair and we somehow managed to make it work every month!

Until very recently, *NEWS & VIEWS* never skipped an issue. It was there in your mailbox each month. There were some tough times some months, though. One month my old computer was gasping and weezing its last with memory failing rapidly (*I know this feeling*). A very plain vanilla ASCII version was produced that month. And remember the ice storm of 1998! I didn't have power, so I picked the entire computer, monitor and printer up and went down the street to Fred N1ZUK where he did have power (*and also a means to make dinner!*). Of course today we have laptops and extensive backup, so who needs power!

I checked back and it has been 17½ years and this would be issue number 209 for me. Do I have any regrets leaving all of this behind? No! I have been burnt out for some time now and it will be great to get new ideas in this position. And I'll have more time to stir up some trouble up somewhere else.

Please do support our new editors. Send all sorts of ham radio material about what you do. And remember to acknowledge their work. No one usually does volunteer work to collect accolades, but a well placed thank you always feels good!

HAM-CON FLEA MARKET TABLE

by Robin N1WWW

RANV will again run its flea market table - a free service, a membership benefit, for *RANV* members who have a few things to sell, but who don't want to be tethered to a sale table. No junky junk, please! Just bring good, usable equipment (*or fixable without unreasonable expense*).

There will also be a swap board where you can post what you have to dispose of but couldn't bring, or what you're looking for.

The table will be attended at all times so you can just drop off your items and return to pick up money or unsold goods when you leave. Remember, there are no table fees or hidden costs, you take home all your proceeds. Such a deal!

Please take a gander around your shack and see what you might have accumulated in a fit of enthusiasm, but never really used, or what has been put aside in favor of something newer.

Of course, there *are* a few rules:

1. Sellers limited to maximum of 10 items
2. Weight limit of 35 lbs per item and 100 lbs total all items
3. Label each item with call sign and suggested price
(*please round off dollars as no coin change will be available*)
4. Seller to supply table attendant with a Manifest List identifying each item, with description, condition, suggested and lowest prices, payment accepted: cash or check
5. Unsold items must go home with the seller.

"Item" means:

- a base, mobile, or hand-held radio (*usable or fixable at reasonable cost*)
- misc. related equipment (*test equipment; lone power supplies, TNCs, tuners, GPS, antennas, tools such as soldering guns/irons, meters, etc.*)
- laptops and small peripherals OK.—*No monitors, printers, or desktop computers*
 - books, manuals, magazines (ham-related)—as boxed unit(s), or per attendant's decision
 - a box of usable wire/parts/etc (*no broken, unusable pieces*), up to 35lbs.

Feel free to contact me with any questions at 897-2668 or by E-mail to n1www@arrl.net.

NEXT MEETING:
“Software Defined Radios”
Tuesday, February 9th, 7 PM
O’Brien Civic Center

HAM-CON
Saturday, February 27th 8 AM
Hampton Inn Colchester!

RANV

P.O. Box 9392

South Burlington, Vt 05407

<http://www.RANV.org>