



Radio Amateur News & Views

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FIELD TRIP TO SB ELECTRONICS Wednesday, October 8th RANV Meeting

For the first time ever, **RANV** will meet on a Wednesday and conduct a field trip to Central Vermont. There, we will meet up with the Central Vermont Amateur Radio Club and visit SB Electronics in Barre. SB Electronics is the former Sprague Capacitor Plant. The "orange drop" capacitors we see at many hamfests come from this plant. Ed N1UR will be our host and tour guide for this very informative visit.

The pre-meeting eating fest and social meeting will take place at Jockey Hollow Pizza on South Main Street in Barre. We will then reconvene at the plant at 131 South Main Street. The field trip should take about 90 minutes. It is recommended to meet the group at the restaurant, as this is a bit easier to find.

To get to the meeting, take I-89 to Exit 6. Go down the hill on the 4-mile long access road, Route 63. When you reach the light at Route 14, make a left. Jockey Hollow is $\frac{3}{4}$ mile ahead on the left. Leave about an hour travel time to and from the Burlington area. We recommend you join us there between 6 and 6:45. The meeting will start at 7 PM at SB Electronics. The plant is about a mile further down Route 14 at 131 South Main Street.

FOX HUNTS

The next regularly scheduled Fox Hunt will be Friday, October 24th starting at 6 PM. Mitch W1SJ will be the fox of the evening joined by his able assistant, Debbie W1DEB. The hunt will take place on the input of the 145.15 repeater. Ground rules remain the same as always. The Fox will be located on public assessable property in Chittenden County, maintain an S-1 signal at I-89 Exit 14 and will transmit 10 seconds out of every minute. First finder will get to hide in the April hunt and gets all appropriate bragging rights.

The next Fox Box event will take place Tuesday, October 7th and will run from 11 AM until 7 PM. You have all day to look for it! The Fox Box runs unattended on 147.585 MHz. The boundary of this Fox Box hunt is the town limits of Essex. You won't be able to drive to it, so break out the hiking boots. Finders of the Fox Box take a slip of paper with a code number corresponding to the order of the find. These are reported to W1SJ for verification.

And for something really different, check out the Geocaching Website. I have just placed a multi-stage cache which requires you to have a Fox Hunt to find the cache! It is in Essex. That is your only clue. Good Luck!

HOSSTRADERS

It's time to head down to Hosstraders – right now! The location is the *Hopkinton State Fairgrounds* in New Hampshire. Take I-89 into New Hampshire and head for the *Exit 7 – Davisville* exit. After getting off, go left under the highway for 0.2 miles and then go right (*Warner Ave.*). The fest will be about a mile down on the left side. The trip is about 2 hours from Burlington.

The fest opens at 9 AM on Friday, October 3rd and winds down 1 PM on Saturday. Exams will be given on Saturday at 9 AM. Admission is \$10 before Friday at 3, \$5 afterwards. Sellers pay \$10 additional.

From grapevine reports, we hear that W1SJ, W1DEB, N1ZUK K1HD, N1BQ, KB1FRW, N1ZBH and others plan to be there.

For communications, use 145.15 MHz into New Hampshire, then 145.33 MHz. At the hamfest, check in on the 146.67 MHz repeater.

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OUR LAST RANV MEETING

by Dave WIDEC

The meeting started outside in the playground as Mike N1JEZ showed off his Rover mobile and gave a short presentation on microwave operation. On his vehicle are radios and antennas covering 50, 144, 222, 432, 902, 1296, 2304, 3356, 5760, 10368 and 24192 MHz! Many dishes were seen!

Once inside, Brian N1BQ made opening remarks including his thanks to fellow hams for their thoughts and assistance following his recent illness.

The next RANV Meeting will be a joint Meeting with CVARC. This will be held the day after our usual Meeting, on Wednesday, October 8th, starting at 7:00. CVARC holds it's pre-meeting at Jockey Hollow Pizza, in South Barre. The meeting will take Place at SB Electronics, less than a mile away from Jockey Hollow.

The meeting was attended by 21 RANV members including two guests: Mike K2HLW of Tucson, Arizona and Paul KC2LWD, who is a Cadet at Norwich University.

Mitch, W1SJ presented an introduction to PSK-31 which included a short history of previously used digital modes including RTTY, AMTOR, packet and others. He then showed how easy is it to make up connecting cables between the radio and computer. Fran KM1Z also has diagrams on how to build interface cables on his web site. Mitch noted that minimal power, 10-50 watts, is sufficient for PSK-31 QSOs even in marginal propagation. He also noted that using higher power would easily overdrive the rig. Using a normal SSB filter that was 2.7 KHz wide, he was able to scan for many

THE PREZ SEZ

by Brian N1BQ, President

The leaves are turning colors and many Vermonters' thoughts turn to cleaning up the garden and yard. Ham operators should add to this antenna cleanup. Climbing the tower when it is 20° with a 10 MPH wind doesn't rank high on my list of favorite things! While we have the last few weeks of pleasant weather, now is the time to see that everything is tightened up.

On October 18th, there will be a Boy Scout gathering at Shelburne Farms. RANV will be doing a demonstration of ham radio all day. This was postponed from last May, and serendipitously, the new date corresponds with the nationwide Boy Scout *Jamboree On The Air* (JOTA). We will be on the air with the RANV callsign W1NVT from 10 until 5. We will operate two transceivers on HF plus VHF and an APRS station. The antennas will consist of a tribander and super loop on a rocket

launcher mast. I need one or two sets of hands who can help set up the tower, beam and loop on Friday afternoon, and four or five people to work a few hours during the day Saturday. Please contact me at n1bq@wulfden.org or 802-899-4527 if you can help.

I just got back from the 22nd ARRL/TAPR *Digital Communications Conference*. It was an exciting time but definitely geared to the propeller heads amongst us. None-the-less, there was much I saw and heard there that will have near immediate or near-future impact on the average ham. I have written an article elsewhere in the news letter on some of this.

Don't forget, the October meeting is the second WEDNESDAY, **not Tuesday** and it is in Barre at the SB Electronics Capacitor plant.

different stations in this bandwidth at the designated PSK31 frequency of 14.07015 MHz. Mitch provided great keyboard entertainment, including a QSO with K7ZOO near Jackson, Wyoming. Thanks to Sara W1SLR and Brian N1BQ who held a mini Field Day and erected a 20-meter dipole for use by Mitch in making his PSK-31 QSOs.

Thank you also to Don N1QKH who outdid himself with *Munchies Extraordinaire* which included fresh fruit, veggies, dip, potato chips, chocolate chip cookies, soda and ice. We were well cared for!

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

THE STATE OF AMATEUR RADIO

editorial by Mitch WISJ

In my efforts to present another interesting article, I pause to reflect on the state of amateur radio and from where I sit, it doesn't look good. This isn't the first time I have written an editorial about the erosion of our beloved hobby. Things have not gotten better.

Here in RANVland, things look very good. We have an active club, stable membership, a great hamfest, tremendous Field Day and meetings which are envy of much larger clubs. We need to acknowledge what we have created, but we also need to realize that just outside our realm, the picture isn't as pretty.

The most biting indictment of amateur radio is the complete lack of growth. Since last March, there have been 10 new hams licensed in all of Vermont. In that same period, 35 Vermont hams failed to renew their licenses. If they do not renew in the next two years, (*few will*) they are gone. This is not the kind of growth we want boast about!

Attendance at the ham classes has been slowly dropping over the years. The weekend class spiked in the last session and we had a full room. The current class this month will be tiny. The poor economy certainly isn't helping things, but it is more than that. Of the new hams, few are youngsters. And the few youngsters who get licensed don't get very active at all. Vermont, along with New Hampshire has been one of the fastest growing ham states. Last year, we showed a net loss of a few hams. This year, so far, we are up by 16, which, even if it holds up, is not great. Larger states like New York, Texas and even California have shown net losses of hams for years.

In my attempts to reverse these alarming trends, I'm always looking for media attention for the many good things we do as amateur operators. Amateur radio is one of the pieces of the Homeland Security plan. Just last week amateur operators were sending messages out of areas stricken by Hurricane Isabel, where all other communications were wiped out. Despite these sto-

ries, getting regular publicity for amateur radio is slightly harder than pulling teeth. While the small community papers have been generally supportive, getting timely, quality attention in our local daily is difficult at best. There always appears to be plenty of room for 3 stories a day about the Fair, an exercise whose sole purpose seems to be to get people to spend money they don't really have. Amateur radio is not a buyer of advertising and we are not the latest fad, so we get relegated to the calendar, if that.

And even when we do get publicity, one might wonder if we would be better off without it. During the hurricane coverage, CNN spent about 30 seconds thanking amateur operators for their work in providing communications. In the next sentence, they admired how we do this with "old-fashioned" technology. Old fashioned? If we are old-fashioned, then so is public service radio and so is broadcast radio. After all, they use pretty much the same modulation scheme. Some of the questionable publicity is our fault. Whenever you see amateur operators on TV, you see some old, heavysset, poorly dressed guy sitting in front of a radio. Yeah, that will get people to come running to amateur radio. Wayne Green had it right many years ago. He used to adorn 73 Magazine with attractive women wearing a minimum of clothing. When TV coverage starts showing hams looking like this, new recruits will start banging down the door. Cheap? You bet! But the alternative is likely oblivion for our hobby. Our image needs a makeover big time.

While the government tells us how useful and important we are in times of disaster, they continue down a path to make radio communications impossible. The latest proposed incursion is *Broadband Over Powerline*. The interference test reports are shocking. Yet, some companies have already been given the go ahead. We all know only too well about the mess on 145.15 MHz thanks to certain fax machine manu-

facturers who build units which radiate all over the neighborhood. Our government, in their haste to sell off frequencies and rights to the highest bidder, is causing all radio users, not just amateurs, to drown in the effluent. The bottom line is that when it becomes impossible to hear anything on the radio, we just might have to take up stamp collecting.

Even within the hobby, things are not looking good. Notice hamfests lately? Do they look rather poorly attended to you? They do to me. In the last 2 years, every hamfest I have been to has been down in attendance. Dayton Hamvention reported an attendance of 20,000 in May. That sounds like a lot. It is. Except when you consider that eight years ago, they hit almost 35,000.

Activity is dropping too. Sure, things are busy on 20 meters on Sunday afternoon, but at other times, it gets quiet. The recent VHF QSO Party continued its slide in the number of FM enthusiasts and rovers. The big stations were there, but it certainly appeared like there were less bodies involved. And IRLP and Echolink, the big bright spots in amateur radio, has fallen off. Many nodes have gone away as the "novelty" has worn off. Indeed, we get many Echolink calls because we have one of the most active repeaters around. There are other repeaters in the Northeast where you can call until you are blue in the face and not get an answer.

So what do we do? There is no simple answer. We must continue to go out and enjoy the amateur radio service. Being active and doing stuff will show others that we are serious about what we do. Others will see our enthusiasm and want to join in. However, if we are complacent, we are in trouble. By complacent, I mean that you don't support local ham activities, you don't take part in public service events, and you don't make contacts, or even turn on the radio. If you do these things, you are helping to bring an end to amateur radio. Get active. Get other hams to get active. And recruit new hams!

ARRL/TAPR DIGITAL COMMUNICATIONS CONFERENCE

So... Who Cares?

by Brian NIBQ

I just got back from the 22nd ARRL/TAPR Digital Communications Conference (DCC). It was a grand time and I got to see many old friends from the early days of ham digital communications. The talks and demonstrations were interesting and many were exciting. But when you get right down to it, unless you are a serious geek, the DCC would be overkill for 80% of the RANV membership! On the other hand there were a number of talks that will be of interest to the Average Joe Ham.

George Rothbart, KF6VSG, gave an interesting talk on PSK31. He spoke about the need for tuning up the transceiver to sound card connection, even when you have only moved from the band edge to the band center in the audio passband. The real problem is that the best measure of successful tuning is Intermodulation Distortion (IMD), which you normally have to get from the guy to whom you are in contact. George demonstrated a device he called a "PSK31 Meter" – a kit he sells with software for \$40 which taps the RF output and measures the IMD and a couple of other things and then automatically adjust your audio for the best IMD. You can find this handy device at <http://www.ssiserver.com/info/pskmeter>.

John Hansen, W2FS, gave a talk and a demonstration of a soon to be marketed TNC kit called TNC-X. TNC-X is a 3/1200-baud TNC that does KISS mode frames, which

makes it compatible with most ham software. The kit will probably be available through TAPR at <http://www.tapr.org> in a few months for under \$50. What makes it so unique is that the "X" stands for *extensible*. There will be a header on the board so that one could add a daughter card with a simple processor to enable functions like a digipeater, a mailbox or weather station. Such an add-on board could be built with wire-wrap or solder for under ten dollars. Possibilities are endless and you do not have to lay out upwards of \$150 for a TNC, 75% of whose capabilities you won't use. It also

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has a socket for a small \$25 add-on module which gives it a computer USB interface now that serial ports are getting more scarce.

Lyle Johnson demonstrated a \$100 Digital Signal Processing (DSP) module called DSPx. It was first designed to replace the obsolete DSP module that was used in Bob Larkin's (W7PUA) DSP-10 2-Meter Software Defined Radio. Lyle then adapted it to work in place of the KAF2 audio filter in the Elecraft K-2. In general, it provides a comparatively low cost platform for adding DSP to almost any project. The DSPx is also available from TAPR.

The rest of the conference dealt with Software Defined Radios (SDR). The future of radio in general and ham radio in particular is Software Defined Radios. A few years ago the then head of the FCC charged amateurs with the task of leading the exploration of SDRs. SDRs are here and now.

RTTY, PSK31 and SSTV are all example of software defined endcoder/decoders that basically permit the same piece of hardware (*computer*) to act as multiple kinds of "radios". Formerly, all this software programming required a separate piece of circuitry to implement. Now we do it with a single computer just by changing the program.

Here is an example. Today, hams pay good money to get a 250-Hz CW filter. Ringing in narrow filters is always a consideration. Now image being able to select a 25 Hz wide filter without a hint of ringing! Gerald Youngblood, AC5OG, demonstrated what amounts to being a contest grade transceiver, the SDR-1000, which he sells for \$500. It requires an 800-MHz Windows computer with a good sound card. It operates from 0-60 MHz on all modes and filters of any width and definition you want with panoramic displays. It has 1 watt output, and all you have to do is to add the power amp. Details on SDR can be found at <http://www.flex-radio.com>.

Over the next few months I plan to write some more articles on SDR coupled with a live demonstration at the January meeting.

SIMULATED EMERGENCY TEST

by Carl KCIWH, SEC

The Vermont ARES Simulated Emergency Test (SET) will be held on Saturday, October 25th, and will involve all seven Vermont ARES Districts. The scenario will be a major weather event. In honor of our Section Manager, simulated Tropical Storm *Paul* will cause heavy rain, heavy winds, and flooding throughout the state. All ARES members are encouraged to participate in the SET. This is also a great opportunity for Vermont amateurs who aren't ARES members, who have an interest in emergency communications, to join in the exercise.

Each District Emergency Coordinator (DEC) will organize, recruit, and manage the SET activity within his District, supported by the Emergency Coordinators (EC). I encourage other Vermont ARRL Cabinet members and Field Appointees to also participate.

The Simulated Emergency Test is the primary yearly activity for VT ARES to practice responding to an emergency within the state. Each District will have at least one VHF net, using a repeater or simplex. Amateur radio operators will go to simulated flooding locations, shelter locations, and other places important to the emergency, and will send simulated messages to the VHF net. The VHF Net Managers will note all these messages, and will direct radio amateurs to other simulated key emergency locations throughout the District. Each District will also have an HF Liaison station, which will summarize the results and critical information from the VHF net, and exchange information with the HF stations in the other Districts.

I'm hopeful that all the Vermont ARES served agencies will also participate in the simulated emergency. A radio amateur at the National Weather Service in Burlington will provide simulated messages from the NWS. I also hope that all Vermont Red Cross Chapters will participate in the event, again receiving and transmitting simulated messages.

The New Hampshire ARES organization is holding its SET on the same day. The VHF and HF frequencies will be unique to each state, to avoid interference. Each state will also have an "Interstate HF Station", sending simulated messages summarized from each state's HF net, to its counterpart in the other state. A simulated storm of this magnitude would certainly affect neighboring states, and a state-to-state net would be established.

Further SET details will be available shortly. Thanks in advance to everyone for being a part of this 2003 VT ARES exercise.

COMING UP!

There are still many activities to consider this Fall. October kicks off the start of contest season. Do you plan to be active?

This next week is loaded with stuff. As you read this, people are already at Hosstraders. Put down this newsletter, hop in the car and bop on down to Hopkinton for the largest peacetime gathering of hams in New England. Three days after that, there is a Fox Box for you to find in Essex. The next night is a meeting and trip to Barre. And on that weekend there is a radio class for you to get your friends enrolled in.

On October 18th, we will provide a demo for a Jamboree of Boy Scouts in Shelburne. This combines Field Day with a classroom experience. Don't miss getting out, operating and showing the youngsters some radio! Details in the Prez Sez.

One week later, on October 25th, is the VT/NH SET, a practice in our preparedness skills. Also on that weekend is the CQ Worldwide SSB Contest, the premier DX event of the year. So far, I haven't heard any plans of who will be operating. Will you? It doesn't take much of a station to get on and work a few DX stations. The weekend after that, November 1-2nd, is the Sweepstakes CW.

Looking ahead to November 11th, the RANV meeting will feature Johannes KB1JDT speaking about wireless LANs on the 2.4 GHZ band. Wow!

ELECTIONS

Just like all of the Election Day silliness we all must endure, our November meeting will include the annual process of choosing RANV officers for the coming year. No one has discussed any of this to date so this is the warning and reminder. It is unknown how many of our current officers plan to return next year. I'm sure they will be holding impromptu press conferences shortly. Despite the plans of the current officers, we always are looking for new officers to lead us into the future. Good leadership is crucial and it always hard to find. RANV has three officers: President, Vice President/Treasurer and Secretary. Election ballots are mailed with the November newsletter and counted at the beginning of the November meeting. And we have no plans for the Terminator to run!

FORMER MEMBERS SK

We regret to report that two former members of RANV have become silent keys September 29th. Ray Crow N1FKU, 82, passed away after a brief illness. He obtained his license in late 1987 after attending the old 12-week course. Ray was a member of RANV in the early years of the club.

Gene Richards N1TNL, 79, passed away after a long illness. He obtained his license in the Fall of 1984 at the weekend class. Gene was a member of RANV for several years up until a year ago.

**NEXT MEETING:
“FIELD TRIP”
Wednesday, October 8th, 7 PM
SB Electronics, S. Main St, Barre**

RANV

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<http://www.RANV.org>