



Radio Amateur News & Views

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SITE SAFETY

The June 11th RANV Meeting

With Field Day just around the corner, planning is going full swing for the several Field Day operations in our area. But does anyone give any serious consideration to site safety at Field Day? The answer is, at RANV, we most certainly look at everything done at Field Day to make sure that it is done safely. However, we are only amateurs!

For our June meeting, we will bring in a professional! Lee Marchessault runs a new company, *Workplace Safety Solutions*, which consults with companies on how to make their workplaces safe and provides training for employees on safety. He will give a general talk on site safety which will include fall protection and how to deal with high voltage and power lines. With towers, electrical power and high voltage lines all around, we always need to be vigilant. It is probable that there will be a good deal of questions, answers and discussion. Be sure to bring a notebook and ask a lot of questions!

The RANV meeting will be held Tuesday, June 11th at the O'Brien Civic Center, 113 Patchen Road, South Burlington. The meeting starts at 7 PM. Snacks and dinner will be at Zachery's on Williston Road, starting at 6.

FOX HUNT NEXT FRIDAY

Our June Fox Hunt will be held Friday, June 14th starting at 6PM on the 145.15 repeater. The usual rules apply: check-in on 145.15, boundaries in Chittenden County, the Fox located in a public accessible place and the Fox transmits at least 10 seconds out of every minute. Dan N1PEF will be your Fox of the evening and he always hides in an interesting spot!

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FIELD DAY!

Field Day is June 21-23. RANV will set up operations on Redmond Road in Williston. Anyone reading this article will most likely be either a **participant, visitor** or someone who **gives us a contact**.

If you cannot possibly participate at Field Day or visit, **please make every effort to give us some contacts**. We will be monitoring 145.15 MHz the entire time and will be able to let you know what bands are active and on what frequencies. On SSB, look for us on 144.20, 50.13, 28.40, 14.175, 7.225 3.80 MHz and on FM, 146.55 MHz. On CW, look 25 kHz up from the bottom of the bands. We will be signing W1NVT. The new *Get on the Air Station* will be using the RoadKill ARC Callsign, W1PU and will likely be active on 10, 15 and 40 meters.

If you plan to visit, there are 3 key visiting times: Friday 4-8 PM (setup), Saturday 2-8 PM and Sunday 10 AM-2 PM. These are the best times to visit, since we will have people to show you around. At other times, we will either be understaffed or very busy or both. To get to the Field Day site, take Route 2A to the intersection of 2A, Industrial Avenue and Mountainview Road. Go east for 1 mile and then make a left onto Redmond Road. Pass the back entrance for IBM and continue to the top of the hill, which is where we are. Signs should direct you, but they sometimes blow away.

Field Day... continued on page 5

OUR LAST RANV MEETING

by Paul AA1SU

The meeting of May 14, 2002 was held at the QTH of Brian N1BQ and Sara W1SLR, a location also known as *Wulfden*. We voted on a couple of items for Field Day 2002. Since radio room housing at the June event is a problem, we approved \$180 to purchase a 10'x20' vehicle canopy. Another \$200 was allocated for food, and for the other end of the business, \$80 for a Port-A-Potty. Kudos went out to Jo KB1EPT who obtained her Extra Class License at Hosstraders. The night before the hamfest, I found her burning the midnight oil in the RV.

It was reported that Mike KB1FUV and Mitch W1SJ were successful in setting up the new IRLP link. The first QSO was from Mike's house in Essex on very low power UHF. It is now up and running on the 145.15 MHz Bolton repeater. Please don't access the link until you are briefed on it: it is new technology. Bob KB1FRW showed off his homebrew RFD Squared Tape Measure Antenna for direction finding. He hopes to sniff out the Fox with it this summer.

For the main event, I turned the meeting over to Brian. He was the guest speaker, it was his house, and he needed the practice for future meetings. Charley W1CHG was out sick, so I took over for Secretary. Brian's house is completely off the power grid. He started in 1989 with two left over industrial batteries. In his house are a complicated series of solar panels, DC to AC converters, backup generator, meters, batteries, and switches. All of the appliances are energy efficient, and draw little power when on and no power when switched off. Brian talked about phantom loads – the energy most appliances draw even when switched off. A master switch

THE PREZ SEZ

by Paul AA1SU, President

I thoroughly enjoyed the meeting at Brian and Sara's house last month. It was a nice change of pace from the O'Brien Civic Center. The whole set up was way cool, and very impressive. The addition to the house was beautiful, and the food and hospitality were great.

I have also immensely enjoyed being President of RANV. One of the things that I learned as a young man, and later in life as a new ham, was to emulate good behavior. The president before me, Eric N1SRC, was a fine example for me to follow into the position. I worked with him for two years as Secretary. This got me used to the flow of the club, and made the transition look easy. Most of it was easy, too. When you have an energetic club such as ours, the pieces just seem to fall into place. Of course, there were times when we did not know what the next meeting topic would be until we stood up from our dessert plates at the Steering Wheel Meeting. Now I look at the Web page, and see topics picked out for a few months to come. This makes dinner a lot easier to swallow.

You all have been great to me. Meeting attendance has been very strong, and new members have been making the trip to see what our club is all about. When I asked for guest speakers, I usually got them, even if

at the entertainment center assures that no electricity is being used when it does not need to be. A tour of the house with its beautiful new addition was also included in the price of admission.

It was truly a nice experience. Sara was a gracious hostess, and Brian cooked the hamburgers and hotdogs. They were excellent! Thanks for an excellent meeting!

the topic was over my head. This is how we learn what is going on in ham radio. We all like to do different things with the hobby, and learning new things to do is critical to the future success of amateur radio.

One of the best ways to learn a lot about what we do is to attend Field Day 2002 on June 21-23. This is where all the action is. From set up to operating, from food to tear down, it's all one great big classroom with your best friends as teachers. This is the place to be, and I hope to see you all there.

I want to thank you all for your support of the club, and for your support of me as President. I have had a lot of fun. I am moving on to ARRL Vermont Section Manager as of July 1, 2002. I will still be around at most club meetings, just not all of them. Please join me in welcoming and supporting Brian N1BQ as our new President, and Debbie W1DEB as our new Vice President/Treasurer. I know that they will do an outstanding job.

Contacting RANV

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WORLDWIDE REPEATER LINKING

by Mitch WISJ

Activity on the WB1GQR repeater reached a new level last week as we rolled out a new function – Internet Linking. Our repeater has joined a network of repeaters all over the world known as the *Internet Repeater Linking Project* or IRLP. It was only a six weeks ago that Mike KB1FUV gave a talk on IRLP and we dreamed about this. That dream has become reality.

IRLP utilizes the Internet to link repeaters, no matter where they are located. All that is needed is a phone or cable connection. On the surface, this is quite a simple process since folks send audio over the Internet every second. However getting the software and hardware to run seamlessly and without crashes was another story. VE7LTD and his group in the Vancouver, British Columbia area pioneered how IRLP is set up today.

The basis of the IRLP system is the node. A node is a computer running the IRLP software and the Linux operating system. Most nodes contain an interface board which connects them directly to a radio – either the repeater itself or to a link to a repeater or many repeaters. Every node has a unique address.

There are two types of connections possible. One node can connect to another, to engage in a city to city chat. Once this occurs, no one else can connect to either node. This is both an advantage and disadvantage. Another method of connection is the Reflector. A reflector is a node computer which is not connected to a radio but instead has the ability to send out whatever it hears to many other nodes simultaneously. It is possible to have nodes on the air from every continent on one Reflector!

Since we do not have access to phone or cable at the repeater site, the node has to be located elsewhere. The node location is at Mike KB1FUV's QTH in Essex Junction. It consists of a Pentium 133 MHz computer, IRLP board, UHF Link Radio and antenna. The link radio talks directly to the UHF port of the 145.15 MHz repeater. It is configured so that everything the repeater hears, it hears and everything the computer hears is sent to the repeater via the link radio. When the link radio and a 2-meter user are trying to talk to the repeater at the same time, the 2-meter user will override the link.

Here is a typical sequence. To access IRLP from the 145.15 repeater, there is an access code. When the code is received, tones will be passed to the link radio in Essex. Let's say we want to access the 145.13 repeater in Norwich, Vermont, whose address is 493. The user would dial 4930 to engage the link. A tone decoder on the IRLP board decodes the tones, sends this information to the computer and the computer sends out a packet request to that node to connect. If accepted, a message comes back like, "Node 493, Link on". Or else, the node may be busy or down and it will be so noted. After waiting about 10 seconds for everything to set up, all audio from users on the 145.15 repeater will be heard on the 145.13 repeater and vice versa. A signal from the squelch in the link radio signals the computer's sound card to convert the audio into digital words. The computer packages these

up into packets and sends these off to Node 493. The node computer at that end unpacks the packets, converts the digital words into audio which is sent to their link radio which is then sent to their repeater on the hill. Total delay runs about 1 second. Finally, when the QSO is finished, the user sends 4931 to drop the link. The computer sends a packet to request a disconnect and both repeaters are returned to stand-alone status. If a user from another IRLP repeater wished to contact us, our node is 723, which would require 7230 to activate and 7231 to clear.

Because of the delays on the IRLP network and because whatever we do can affect many other repeaters, there are several rules for using IRLP on the WB1GQR repeater.

1. On/off access is limited to a few active users. Once the link is active, all are invited to take part in QSOs.
2. Do not attempt to use the IRLP system unless you are full quieting. If you are not sure, then don't use it. A noisy signal, when passed through all the links and nodes, is awful.
3. There are 2 pauses which are required: 3 seconds between transmissions and 1 second AFTER pressing your microphone button. The first pause allows other stations to break in. If you let the repeater drop, that will satisfy the 3-second requirement. The 1-second pause allows for system delay. Failure to do heed this will clip off your first couple of words!
4. After a link is established, it takes 5-10 seconds to hear audio. Wait.
5. Always give your callsign phonetically and give your location.
6. Do not insert quick comments. If you wish to join a QSO already in progress, first make sure you have something to add. Then when the break occurs, press your microphone for 1 second, give your callsign phonetically and location. Then wait to be recognized.
7. In a roundtable, always pass the conversation to another station. If you just say "over" no one will know who is supposed to go. This will result in a very long pause or two stations talking at the same time.
8. When someone on the IRLP is talking, it is impossible for you to say anything back into the network. The link radio cannot hear you because it is transmitting. However, if you say something on the repeater, you will cover up the IRLP station on our repeater only. This can be used for occasional quick comments which you don't want to send down the network.
9. Never hold a local conversation on the repeater if the link is active. Drop the link; have the conversation and bring it back if you like, but don't tie up IRLP with local repeater conversation.
10. Speak a little more slowly and distinctly. The fidelity of the audio is better than SSB, but it may not be as good as local repeater audio (sometimes it is). Speaking clearly at first will avoid many requests for repeats.

The rules aren't too hard to master. With a little practice, you'll become a seasoned IRLP operator and learn to work all over the world with your handheld. To learn more about IRLP, go to their Web site at www.irlp.net. To find out what nodes can be accessed, go to status.irlp.net. Thanks to Mike KB1FUV for the tremendous job of bringing the computer and software on line and hosting the node. Have fun on IRLP!

REPEATER OPERATING GUIDELINES

by Paul AAISU & the Internet

I have wanted to put together some repeater usage guidelines that I have learned since becoming a ham five years ago. Having had the trouble finding the time, I was glad to find some of my exact thoughts elsewhere on the Internet. I have added my thoughts, as needed.

Good amateur radio operating practices are always encouraged. Whenever you access a repeater, please remember to pause a moment between transmissions to allow others to join your QSO or to pass emergency traffic. This practice is particularly important when accessing other repeater systems via the IRLP since some additional "turnaround" time is frequently required. Don't use 11 Meter lingo when talking on the system. Speak normally.

Some examples:

1. Don't say, "The first personal here is ____" (use name).
2. Don't say, "Thanks for the comeback" (use thanks for the call).
3. Don't say, "I've destinated" (use I've arrived).
4. Don't say, "Landline" (use telephone).
5. Don't use 10 codes.
6. Don't say, "In the group".
7. Don't say, "On the side".
7. Don't say, "73s" or "70 thirds" (use 73).
8. Don't give RST signal reports. (use full quieting).
9. Don't say, "affirmative" or "negative" (use yes or no).
10. Don't say, "HI HI" (just laugh, only if it is funny).
11. Don't say, "I hear that" or "roger that" or "QSL" in response to every comment.
12. Don't say your, or the other person's, callsign every transmission (your call required every 10 minutes).
13. Don't kerchunk the repeater without your call.
14. Don't shout into your microphone.
15. Don't hold the mike too far away (1-3 inches best).
16. Key the microphone for at least one second before talking. (Repeaters, links and even radios have delays which will cut off words).
17. Don't give one word answers or comments.
18. Don't break in on an ongoing conversation unless you know who all is in it, and you have something meaningful to contribute.
19. When in a QSO with more than two people involved, turn it over to someone by name (go ahead Jim).
20. Use a mike hanger in your vehicle to avoid sitting on the microphone and keying up the system with people all over listening to your private conversation.

VHF CONTEST THIS WEEKEND

by Mitch WISJ

Are you ready for the June VHF QSO Party? This VHF/UHF only contest starts this Saturday June 8th at 2 PM and runs until Sunday night at 11 PM. The rules are simple: work anyone on any amateur frequency above 50 MHz and exchange grid square. Our Grid Square in Northern Vermont is FN34. For most of our readers, activity will end up being in 3 centers of activity: Six Meter SSB, Two Meter SSB or Two Meter FM.

In the June contest, Sporadic-E openings are a very real possibility. If a good one occurs during the contest, there is the possibility to work hundreds of stations all over the country. To get in on this fun, you need a radio with Six Meters in it, such as the IC-706, DX-70 or other rigs. If there are great openings, a simple Six Meter vertical or dipole, or even a 40 meter dipole will work. However, you really want a nice Six Meter yagi. Why waste a good opening on a less than efficient antenna. The Six Meter SSB portion of the band extends from 50.1 to 50.2 MHz. However, keep 50.100-50.125 clear for DX QSOs.

There is always something to work on Two Meters, whether or not Six Meters is open. To work the SSB portion of the band, you will need a multimode radio and a good yagi, mounted for horizontal polarization. SSB activity is at 144.200 +/- 50 kHz.

If you don't have any fancy radios, but just have a Two Meter FM radio or duoband radio, then your focus is to tune 146.55 and 146.58 MHz looking for contacts. You will be most successful using a vertical yagi at a very high location. Many VHF enthusiasts operate in the Rover Class, and move from one hill to the next. We have a few nice driveable operating spots in our area - Mt. Philo and Mt. Mansfield in Vermont and Rand Hill and Whiteface Mountain in New York. There are many more possibilities if you are willing to drive further from home. Some Rovers drive hundreds of miles! Of course, if you don't mind backpacking your station in, any mountain will suffice. If you don't have the ambition to do any of the above, simply monitor 146.55 MHz all weekend. You never know what you might hear and be able to work!

The important thing in all of this discussion is to get on and make contacts, no matter what your category or situation. A few of us in the area will be on from home from time to time. I'll be up on Mt. Equinox in Southern Vermont signing WB1GQR. Look for me at the top of the hour, when I will turn the yagis north to work Vermont.

BUSY PUBLIC SERVICE MONTH

by Mitch W1SJ

It has been a busy month for Public Service activities. May 11th was the first running of the *Charlotte Covered Bridges Half Marathon*. This 13-mile race is one of several sponsored by the *Shelburne Athletic Club*. An impromptu communications team consisted of Paul AA1SU, Bob KB1FRW, Alex N1ALX, John N1LXI, Ute N4KDU, Debbie W1DEB, Jeff W1RL, Mitch W1SJ and Jim WB2OMZ. The event went off without a hitch. The 145.15 MHz repeater provided good coverage and was also used for part of another event – the NCAA bike race in Warren at the same time.

On May 25th, hams provided communications for the *Essex Memorial Day Parade*. Personnel included Paul AA1SU, Joe K2KBT, Bob KB1FRW, Fran KM1Z, John N1LXI, Glenn N1WCK, Debbie W1DEB and Mitch W1SJ. Once again there were two nets – one for hams on 146.85 MHz and one for non-hams on the rented radios on UHF. Hams worked hard to line everyone up in the proper order and to pass any changes to N1WCK at the reviewing stand. The W1SJ mobile was in the middle of the parade and was in full battle dress – 6 antennas covering 40 meters through 70 cm, including a repeater. There was even time to make a few contacts on 40 meters while rolling in the parade before the band died!

The very next day, 41 hams joined 5000 runners and thousands of volunteers in the *Vermont City Marathon* in Burlington. Hams staffed 15 course water stations, 4 finish line stations, 4 shadows and 4 bicycles. RANV members participating included Roger K1CRS, Fran KM1Z, John N1LXI, Debbie, W1DEB, Rick W1RLR and Mitch W1SJ. Two nets ran simultaneously on 146.61 MHz and a temporary 145.32 MHz repeater downtown. A few runners required medical transport, but otherwise the cool weather kept the medical problems down (*and the volunteers cold*).

We are all done for Public Service activities for a while, allowing us to concentrate on VHF QSO Party and Field Day. The next scheduled public service activity is the MS-150 event on August 10th.

IRLP BUSY!

by Mitch W1SJ

The IRLP link on the repeater is barely a week old and it has been heavily used.

Several long haul DX contacts to Trinidad, South Africa and Australia were carried out last week.

Howie K2MME hooked up with N2BJ in Illinois, an old buddy from New York.

Paul, AA1SU drove to Washington and was in contact with Vermont for virtually the entire trip! He started by holding the 145.15 repeater down to the Lake George area. After that, he switched to the wide area WB2BQW system, which is on I-link, a network similar to IRLP (*details next month*). I-link is not on our repeater, but I can connect to it from home. Around lunch, Paul popped up on the N2ACF IRLP repeater in Nyack, NY. We then seesawed to WB2BQW, then W2ZQ in Trenton, both I-link systems and then to the wide area N3IO IRLP repeater in Philadelphia. On Sunday, Paul called in from the WA3KOK repeater in Washington!

All I can say is, it works!

GET WELL!

RANV wishes a speedy recovery to Charlie W1CHG. He will be having surgery as you read this and will spend the rest of the month resting and recuperating. It is unknown what amateur operation is planned, but Charlie tells me that he will be practicing his CW for an upgrade to General. I admit, that I did fall over when hearing this news!

Field Day... continued from page 1

If you plan to be a participant, please contact either Mitch W1SJ or Paul AA1SU. It is important that we know who you are so that we can get you the proper information and set you up for something you want to be doing. While we accept all help, suddenly showing up during the operation and wanting to help out is not the best way to do it, since we are very busy and have little time to explain things in great detail.

There are numerous activities and events going on. On Monday, June 17th, at 7PM, there will be a meeting for all Field Day participants at W1SJ's QTH in Essex. Call or E-mail for directions. We will go over the plans and make sure we all know what we will be doing. On Friday, June 21st, at 2PM, we start the antenna setup. The more people we have working early, the quicker we can get everything in place. We really, really need your help here and we promise you will learn more about antennas than you thought possible! On Saturday morning 10AM until 2PM, we set up the stations and power systems. The first CQ starts at 2PM. The last contact is completed at 2PM on Sunday. Then we rip it all down and put it all back in boxes.

The RANV food service will provide lunches both days and Saturday dinner. Last year we had barbecued chicken, hamburgers and hotdogs with all the fixins. If you have suggestions for different fare, please let us know. We need help! If CQing or climbing towers isn't your thing, perhaps you might like to pursue an amateur career in the culinary arts.

Please send an E-mail to W1SJ and let me know what times you plan to be at Field Day, what activities you plan to be involved in and when you plan to eat. Refer to the RANV Field Day Web Site www.ranv.org/fd.html for up to minute details on Field Day.

JUNE MEETING
“Site Safety”
Tuesday, June 11th, 7 PM
O’Brien Civic Center

FOX HUNT
Friday, June 14th, 6 PM
in Chittenden County
on 145.15 MHz

FIELD DAY
Friday, June 21st afternoon
Saturday, June 22nd day/night
Sunday, June 23rd all day
Redmond Rd, Williston

RANV

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<http://www.RANV.org>