



Radio Amateur News & Views

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HOW TO BE A SUPER OPERATOR

The May 13th RANV Meeting

We all have dabbled in various forms of amateur radio operating. These might include public service, emergency operations, contesting, DXing, and even ragchewing. Some amateurs ask, "How do I become a better operator?" Specifically, the quest is to become a better public service or emergency operator, or a better contester or DXer. After all, our operating skills are what set us apart from users of other services.

For our May 13th meeting, Mitch W1SJ will give a multimedia presentation on "How to be a Super Operator." This talk is similar to the "Techniques of the Best Operators" talk given each year at Dayton. It couldn't come at a better time. In the month of May alone, we have 3 public service events. In June, we have 2 major contests.

The talk will begin with a quick look at improving casual FM operations and move right into public service and emergency operations. After that, there will be comments on acquiring and maintaining equipment, followed by a detailed discussion on how to improve one's contesting and DXing skills. The emphasis on the talk will include hands-on exercises on how to improve. There are valuable details in this talk you will not want to miss!

The RANV meeting starts at 7 PM sharp on May 13th at the O'Brien Civic Center, 113 Patchen Road, South Burlington. The talk will begin immediately, followed by snacks, so make sure to arrive on time. Pre-meeting festivities will start around 6 PM at Zach's on Williston Road.

COMING UP!

We are heading into two of the busiest ham radio months of the year. This article is being written during Hosstraders, one of the largest New England ham radio events. There was a great turnout from Vermont, even if the Friday rains were discouraging. Saturday was excellent!

This coming weekend is the Charlotte Half Marathon, a great opportunity to learn some public service skills on a Saturday morning. The next long weekend is the Dayton Hamvention, the Mecca for all ham things. Several hams from our area are planning to be there.

The long Memorial Day Weekend is next, and with it comes the Essex Memorial Day Parade (*Saturday morning*) and the Vermont City Marathon (*Sunday*). Details on these events and the Charlotte race can be found elsewhere in this newsletter. If hamfesting is more your speed, the hamfest in Tracy, Quebec, a 2-hour ride north, is on Sunday. A working knowledge of French is useful, but not necessary.

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The end of May brings the Rochester Hamfest. If you missed Hosstraders, Rochester is about the same size and has the same amount of stuff. It is a 6-hour ride, though.

Skip ahead two weeks, and we are ready for the VHF QSO Party. This is a fun contest which all amateur classes can take part. All you need is to get on some of your favorite VHF and UHF bands. Later that week is the June RANV Fox Hunt.

Finally, on the last weekend in June is Field Day. Planning is already underway for this large event. Start thinking now if you plan to be involved and what you want to do. The folks who do the various jobs at Field Day usually don't end up with them by accident. They get involved with the planning early.

Whew, what a busy two months. I hope you all take advantage of the opportunities to participate in ham radio.

OUR LAST RANV MEETING

by Dave WIDEC

On a crisp April evening, 24 RANV Members appeared at the O'Brien Civic Center in South Burlington for the monthly meeting. Brian N1BQ made opening remarks including comments aimed at drumming up support at Field Day 2003. All RANV members are encouraged to make even a small contribution; taken together, all of that effort will add up to another successful Field Day. Those of us who participate in the QRP Field Day Event in Underhill should also contribute to the Redmond Field Day Site set up, etc., as it is OUR Club Field Day Event. GOTA Station and CW operators are needed! No matter your skill level, every operator helps and spreading out the shifts makes for an efficient operation.

Mitch gave a report on the status of the 146.15 repeater. Until it is fixed, we have to keep in mind: "short transmissions." The backup unit heats up very quickly, so the shorter the transmission, the lower the heat buildup. Plans are to get a work crew up as soon as possible. The snow and weather are going to determine when the work will occur. Thanks to Mitch, Chris, Neal, Bob and all who make the truly hard treks up the mountain to keep our repeater up! (See story page 4.)

Funds were voted to cover Field Day expenses (food: \$200 moved by Dave, seconded by Moe and miscellaneous: \$200 moved by Don, seconded by Richard).

Leela KB1EZZD volunteered to bring sustenance to the May Meeting. Thanks Leela!

On to the Main Event. Bob KB1FRW created a fun construction evening for all. In leading us into the building of a Tape Measure Beam, Bob gave us the history of the design and development of this unique foldable, bendable yagi. It's amazing that you can home brew

THE PREZ SEZ

by Brian N1BQ, President

By the time you all read this, Hosstraders will have come and gone. Then many of you will make the annual pilgrimage to Dayton. The end of this month will be the Tracy-Sorrel hamfest up the river beyond Montreal and the Rochester Hamfest over in Western New York. The MIT swapfests have already begun. There are dozens of opportunities to trek into New England in search of ham bargains or to unload past indiscretions.

A word of congratulations is in order to Bob KB1FRW for a fine presentation and building session at the April meeting. Fifteen antennas were built by a couple of dozen people. Whenever I looked up from my own efforts I saw hands flying with tin snips, soldering irons, tape measures and cable. I played with my antenna one afternoon here up on my mountain and found it added another half dozen repeaters accessible to my talkie. Way to go Bob!

It is also time to check out winter's damages to our antenna systems. Look for cracks and slices in coax and connectors. When you go hamfesting it might be a good idea

an antenna that folds up and disappears into the bowels of your car trunk and is barely noticeable until you connect it to your HT and fire it up! Wow! Look out, this critter has ears and then some. Joe Leggio, WB2HOL designed this simple yagi using parts of a broken tape measure. We used parts of new tape measures. Under Bob's patient tutoring, we put Schedule 40 PVC, elbows and tee's together and banded lengths of tape measure to each. Then following a little rough sanding we soldered a 5" bit of U-shaped wire here, and the coax lead and foil of a piece of RG58 there, and voila, we had wonderful antennas!

Thanks Bob for a fun evening and a great piece of Fox Hunting Equipment!

to stock up on extra stainless steel hardware for your various pieces of metal in the air, not to mention spare insulators, etc.

Field Day is on June 28th and it is less than two months away. The club's effort still needs some equipment and people. Check with Mitch to find out how you can help. The NVQS QRP class 3A group has extended an offer to any RANV member to come visit and operate at the Underhill site. This group is, in essence, a RANV subgroup, since more than half the QRP group are club members, including myself. The two efforts compliment each other. The 2A effort has always been and will continue to be a top performing contest oriented operation and the 3A effort is a more relaxed get on the air and operate effort – something for everyone.

Field Day is a poor time to find out how to operate a particular rig. At the June meeting, we plan to have several rigs present so members can familiarize themselves with the rigs to be used at Field Day beforehand in a low-pressure environment.

Contacting RANV

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

2003 VERMONT CITY MARATHON

by Carl KCIWH

On May 25, the 15th annual Vermont City Marathon will be held in Burlington. This 26.2-mile race takes a winding route around the city, ending at Waterfront Park. A relay race runs simultaneously with the Marathon.

There are no course or Aid Station changes for 2003. Initiated last year, each marathoner must wear a special computer chip on his/her shoe, and a new timing system features sensor strips on the road surface, automatically tracking each runner as he/she moves through the course. Runners stacked behind the crowded starting line benefit from this technology; the official start time is recorded when each marathoner crosses the start line sensor – not when the starting gun is fired.

Runner registration for both the Marathon and relay teams filled and closed in early January. The physical limitations of the course necessitate a 5400 runner limit. VCM is a very popular race, voted among the top twenty marathons in the US.

The Vermont City Marathon has the largest Amateur Radio team supporting a public service event in Vermont. Two repeaters are used to run controlled nets. Hams provide communication support for Aid Stations, shadows for race officials, and a variety of other locations. This is a great way to build your proficiency in emergency communications.

Amateur Radio operators are needed to join the Communications team. The only radio gear required is a 2-meter HT and an extra battery. Volunteers get a T-shirt and an Amateur Radio cap. Please contact me at 878-8232, or send an E-mail to kc1wh@arrl.net. Have a great time, make some new friends, and use your radio skills!

ESSEX MEMORIAL PARADE

by Mitch WISJ

The Essex Memorial Parade is one of the largest events in Essex. The Parade takes place on Saturday, May 24th (*just before Memorial Day*). Hundreds of marchers parade down Route 2A through the Five Corners and back up Route 15 to the Fairgrounds. On a good day, thousands of spectators line the route.

Amateur radio operators have two roles in this event. First, our job as Parade Marshals is to conduct the orderly lineup of all of the participants and to look out for their safety and well being while marching the 1-mile route. Second, our job is to show the community who we are and what we do. We do this with high visibility along the parade route with day-glow vests and Amateur Radio Caps. We also do this with our parade “float” – my van dressed up with the RANV banner, signs, as many antennas as I can mount and CW playing in the background. People in Essex know who the Radio Amateurs of Northern Vermont are – they wave to us each year in the parade!

We need volunteers to be communications Marshals. Volunteers should have an HT with a good battery. You don't need to be an experienced operator. If you don't have an HT, we should be able to find one for you for the day. The day starts at 7:30 AM with an orientation meeting at St. James Church. Lineup is at 8-10 AM, with the Parade stepping off at 10:00. The earliest shifts will be done by 10:30, the latest by noon.

Note that this event occurs the day before the Vermont City Marathon. If you have the time, it is a good warm up exercise.

If you would like to help, contact Mitch at w1sj@arrl.net, or at 879-6589.

CHARLOTTE HALF MARATHON

by Mitch WISJ

Another event in our area in which amateur radio helps out is the Charlotte Half Marathon, sponsored by the *Shelburne Athletic Club*. This event takes place Saturday, May 10th in the morning. As its name implies, the “half marathon” is half a marathon, or 13.1 miles. It takes place on very scenic roads in Charlotte.

There are still some openings for some volunteer amateur radio communicators. However, you must move fast, since the event will be occurring in only a few days from when you read this. The day will start at 7:30 AM and end around noon. Assignments include checkpoints and shadows. Volunteers will get a commemorative T-shirt and will get lunch!

If you are interested in helping out, contact Paul AA1SU at aa1su@arrl.net or call 860-1134.

FOX HUNTS?

I've just acquired an ammo box, perfect for hiding a small transmitter in the deep woods. The thought is to turn the system on and have the hunt run all day on a Saturday. This can complement the regular mobile hunts held every other month. Your thoughts and ideas on this?

MILTON FEST IN QST – AGAIN!

If you look on page 13 of May 2003 QST, you will see a picture and a short feature about the Kid's Table at the *Northern Vermont Winter Hamfest* in Milton, Vermont on February 22nd. Hats off to Jeff, Alex and Collin for doing such a good job with the effort.

REPEATER NEWS

by Mitch WISJ

Last month, just as we were going to press, there was a failure of the repeater amplifier. A day or so later, on Friday, Neal and I got up there with a backup amplifier. We also found that the antenna had rotated 90 degrees from where it was mounted. This put nulls into Burlington and Montpelier, instead of lobes. I estimated the signal loss to be around 8 dB or 2 S-units. The antenna was still tightly mounted. The combination of high winds and ice loading the antenna created a tremendous amount of force to move the antenna against tight clamps. The antenna was remounted and the troublesome hardline connector was finally replaced. The amplifier was swapped and the repeater was cooking again.

Not for long! A mere 24 hours after the repeater was serviced, the backup amplifier also died. We were back where we started!

Fortunately, my belief in the Laws of Murphy had us prepared. Late into the night, before our trip to the mountain, I was plying the waters of Lake Champlain on the ferry to pick up the backup repeater from Tony WA2LRE. The thinking was that we didn't need it, but if we didn't bring it, we would! Now we needed it! However, we had more than equipment problems. My shoulder was hurting and Neal picked up a cold. Neither of us would be ready for another trip for a week. Fortunately, Chris KB1EMC was in town and was available for a quick hike!

This was only the beginning of the problems. Since we didn't plan for this trip, we had to get the building key, which can be a difficult task on a Sunday with no one around. Then we had get Chris in the building past that nasty lock with the sticky tumblers. Then we had to talk Chris through how to remove the old amplifier and wire in the backup repeater into the repeater power supply. Things weren't looking very optimistic, but I figured we'd take it as far as we could. What else was there to do?

One by one, the pitfalls were overcome. After a few hours, the backup repeater was on the air. Chris earned his "Supertech" rating. Service was restored.

The root cause of the amplifier failure was a DC pass transistor feeding a control voltage to the amplifier. This 29-cent TO-220 style device failed, opening up the voltage and shutting down the amp. The transistor was replaced with a larger device and bench tested for hours. The other amplifier had a dead driver transistor. Joe KB1FDA helped us out by finding and mounting another amplifier board on the assembly.

Last week, Fred WA1LIE and I ran both amplifiers up to the site on his snowmobile. We had to walk the last 0.7 miles due to lack of snow on the steep part of the hill, but it wasn't a bad walk. Neal and Chris comprised the base camp crew, in case we needed manpower. Neal reports that he took a much-needed nap in the back of the truck!

The repeater is back up to snuff. We hope that things will continue to run well and this will be the last trip necessary for a couple of years!

ECHOLINK COMES TO THE WB1GQR REPEATER

by Mitch WISJ

The WB1GQR Hot 515 repeater now features Echolink access in addition to IRLP access to the Internet.

Echolink is similar to IRLP, but different in a number of respects. While IRLP only permits repeater to repeater access, Echolink allows access from users at their computer. All that is required is installing the Echolink program, easily downloaded from www.echolink.org. Details on the Echolink system can be found here as well. Users on Echolink nodes can dial WB1GQR directly on node 97406, if direct dialing is permitted on their node.

Echolink is available most of the time, but may be off, as it is being evaluated and tested on our node. To determine if Echolink is available, hit "*". The Echolink WB1GQR ID will be heard if the system is on.

To find a list of available nodes, go to: www.echolink.org/el/logins.asp. To dial a node from the repeater, first identify. Then, on your touch-tone pad type "A" followed by the 4, 5 or 6 digit node number. The "A" is important - it distinguishes between an Echolink and IRLP address. Echolink will return with an announcement, "CONNECTING TO NODE xxxxx" or "xxxxx NOT FOUND". A few seconds later, Echolink will respond with "CONNECTED" if the connection is established, or "TIMEOUT" if the connection did not go through.

During the QSO, remember to allow the local courtesy beep to sound. Always allow 1 second after pressing the PTT button before speaking. If you connect to a repeater which sends its hang tail on Echolink (*never a good idea*), you might have to wait several seconds for both their courtesy beep and our courtesy beep to clear. Failure to do this will time you out. The WB1GQR repeater has a system timeout of 60 seconds. Do not attempt to tempt fate by trying to run every transmission out to the timer. If you time out, not only will the repeater time out, but the connection will also be lost. Be sure to let all visitors to the repeater know about the timer system. The system requires quick interchanges, not long monologues.

Our Echolink Node is currently configured to handle 2 connections simultaneously. That means there could be 2 different nodes connected in at the same time. Users should never attempt to dial more than one node at a time. There are potential problems with some nodes and the system could be locked up.

Local stations should not connect into the repeater via Echolink except for brief tests. Keep the ports and the system free for distant users.

To end the connection, hit "#". Echolink will respond with "DISCONNECTED". Remember that you cannot control either Echolink or IRLP when someone is talking on the Internet link. This is why short transmissions are crucial. Echolink and IRLP are separate systems and users can connect to either system BUT NOT BOTH. If you are on one system and someone calls in from another

Echolink... continued on next page

FOX HUNT RESULTS

by Mitch W1SJ

We had a tremendous turnout for the first Fox Hunt of 2003. Ten hunters hit the roads looking for Dan N1PEF. Thank you for your support. It was an excellent hunt all around, except in the W1SJ mobile.

I offer my tales of woe to our readers so that they may learn and benefit from them in future hunts. No matter how good a hunter you are, your starting point will often play a big role in how you do. It is not unusual to have a hunter starting from 60+ miles out do better than one starting 10 miles out. Normally, my starting point is excellent and allows me to make a good determination of the fox's location before I even start rolling. Not this time! A good hunter can compensate for a bad starting location and redirect quickly toward the fox. However, this can only be done if the hunter keeps an open mind and has not taken stupid pills.

I got a quick reading off the base station yagi which showed a weak signal towards the Southwest. The vector pointed towards I-189, South Burlington and Shelburne. I quickly headed in that direction and the fox's puny weak signal picked up. However, when I got to Route 7, the signal quickly disappeared. I backtracked through Burlington. It was apparent to me that the fox was running very, very low power, which allowed him to put a good signal on to Williston Road, but kept it weak in Essex Junction. I played hunches near University Mall, near the RANV meeting location and near the airport. All beam headings pointed Northeast, towards the area behind the airport along the Winooski River. Knowing Dan's penchant for hiding in swampy areas, my assumption was that he was camped along the river in a very low spot. I searched and searched through the area and although the signal nearly pinned the meter in some spots, I couldn't get the signal to increase to the point where I could hear it well on the HT. All beam headings pointed down Route 15 towards Essex. Although the signal was strong on Route 15 by St. Michael's College, any attempt to drive near Essex Junction resulted in the signal going away! This was very confusing. Attempts were made to check Winooski and Williston and still the signal would peak and then disappear. I ran out of things to try, so I went home to check the beam heading again.

This time, I found that there were no less than 4 "peaks", all of the same strength. In my haste, I picked the wrong peak and paid the price in lost time. Right about this time, Dan gave the first hint, "Old Stage". I correctly picked the Old Stage Road in Essex and drove up it. And drove and drove. Finally, the signal locked in on the HT and I quickly found the fox.

Why did this happen? I plotted the fox's location and my starting location on my topo program. The joke is that I had the program running in the car, but who can study a topo map on the laptop while driving? From my location (400' AMSL) the Northeast track toward the fox hits the hill on Pinecrest Drive (450') and then the hill running along Route 2A (550'). From the St. Michael's area, the terrain is quite flat for several miles toward the Northeast. I was in the null. Unfortunately, that allowed me to conclude that the fox was QRP in a hole somewhere. The

yagi, which was built at the RANV meeting (and tested during the week) acquired the correct direction each and every time. The problem was that the hunter (me) was

"the successful hunter instinctively knows when to cease backing a bad horse (location) and expands the search."

locked in to the wrong concept, thinking that the fox was nearby, when he was 12 miles away in Westford. I had the correct headings but couldn't think out of the box!

Hunches play a big part in successful direction finding. However, the successful hunter instinctively knows when to cease backing a bad horse (location) and expands the search. My failure to do this resulted in a 2 1/2-hour adventure. It won't happen next time!

Congrats, Jay! You are our next fox!

Here are the results of the Fox Hunt, April 18, 2003 as reported by Dan N1PEF. Thank you for participating!

Hope to see you all again Friday, June 20th!

Place	Time	Call	Name	No	Started
1	7:15	K1UC	Jay	1	Williston
2	7:40	N1YWB	Jeff	2	Richmond
3	7:55	KB1FRW	Bob	1	Richmond
4	7:56	N1IRO	Bill	3	Randolph
5	8:30	AA1SU	Paul	1	Williston
6	8:35	W1SJ	Mitch	2	Essex
7	DNF	KM1Z	Fran	1	Burlington
8	DNF	KB1EZE	John	3	Essex
9	DNF	KB1JOO	Kyle	1	Burlington
10	DNF	KB1IWK	Jeff	2	Burlington

Echolink... continued from previous page

system, drop one system. If you require special linking needs, please discuss it with me first.

When a node connects in via Echolink or IRLP, please pause and acknowledge the operator making the connection. There is some degree of delay between the connection announcement and the time the actual audio is transferred. There are generally many Echolink connects without actual audio. It is likely that the connecting station is having problems getting Echolink configured.

Enjoy the system!

NEXT MEETING:
“How to be a Super Operator”
Tuesday, May 13th, 7 PM
O’Brien Civic Center

RANV

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<http://www.RANV.org>