



Radio Amateur News & Views

The Official Journal of the Radio Amateurs of Northern Vermont

SEPTEMBER 2004

Vol. 14 No. 9

OUTDOOR OPERATING The September 2004 RANV Meeting

It's been a cool summer, but we expect a long comfortable Fall. Plenty of extra time to drag the ham equipment outside and operate! For our September meeting, Brian N1BQ will do a presentation and demonstration of *Field Operating Techniques*. His talk will focus on *Individual* operation as opposed to the mass scale club effort of setting up a Field Day. The presentation will be balanced between day trip field operating, overnight radio camping trips, car trips where weight is not an issue and backpacking and trail operating.

Brian will offer an overview of equipment, including rigs (*high power, low power, backpack*), power supplies, antennas and tuners. You'll be given everything you need to know to get out and operate. All you need to do is call CQ.

Activities get underway with *Snax-at-Zacks* at 6 PM on Williston Road. The meeting starts at 7:00 at the O'Brien Civic Center, 113 Patchen Road, South Burlington. See you there!

COMING UP!

Our Fall Ham Season is upon us and there is plenty to do! The week-end right after Labor Day, September 11-12th, is the *VHF QSO Party*. Get those 6 and 2 meter SSB radios out and get on the air. Monitor around 50.125 and 144.200 MHz for a while and you will eventually hear something. I plan to be on Mt. Equinox and will swing the beams north at the top of the hour. If you can't find anyone on SSB, then get all your friends on 146.55 FM and make contacts there!

We will have the first of several exciting RANV meetings on September 14th when we will discuss *Field Operating*. Details appear above.

In a few short weeks, Friday, October 1st is *Hosstraders*. Wow, did that sneak up on us fast! And on October 9-10th is the *Fall Weekend Ham Radio Class* for you aspiring hams out there who just happened to pick up this newsletter!

For our October or November meeting, we will have a presentation on the use of microprocessors for ham radio. The presentation will concentrate on a half dozen simple projects interfacing a ham radio to a small processor.

The final Fox Hunt of the year will be Friday, October 15th. You have a month to get your equipment and skills honed to find the Fox!

HOSSTRADERS

Hosstraders will occur early this year – so early that it will beat the October newsletter. Here are the early details. 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 1st and winds down 1 PM on Saturday. Exams will be given on Saturday at 9 AM. Admission is \$10 Friday before 3 pm, or \$5 afterwards. Sellers pay \$10 additional.

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

IN THIS ISSUE...

E-Mail Problems
AB1DD Marine
Fox Antenna Shrinks
Fox Hunt Results
Hosstraders
Prez Sez

OUR LAST RANV MEETING

by Brian N1BQ

This year's picnic, despite dire weather predictions, went off in pretty good weather, except for a 5 second sprinkle of rain a little after noon. Twenty-seven hardy souls said, "Damn the weather report, full speed ahead," and headed to Kill Kare State Park on St. Albans Bay.

Carl AB1DD arrived by boat Friday night and kayaked over from Burton Island first thing in the morning about the same time as I arrived to secure a spot. Over the course of the morning people trickled in with the bulk arriving around noon.

In a slight departure from the usual happenings, there was a lot of 2.4 GHz activity as multiple computers and palmtops were networking and snooping using WiFi. This year's fox hunt was mostly looking for Wi-Fi hot spots rather than foxes. We also set up a small HF vertical antenna and operated a 10 watt IC-703 on 40 and 20 meter phone. Paul AA1SU spent half an hour showing Jerry KB1KPO tips on operating CW as well as demonstrating ham radio to some interested onlookers.

Present was Carl AB1DD, Brian N1BQ, Bob KB1FRW, Mitch W1SJ, Debbie W1DEB, Moe N1ZBH, Paul AA1SU, Don N1QKH, Jeff KB1IWK and friends, Dave W1KR and kids, Jerry KB1KPO, Barb KB1LIF and family, John KB1LIE and family, John KB1EZC, Leela KB1EZD, Leo KB1EZE and mom.

We were all packed up and on the way home by 5. I want to thank Bob, Don and Jerry for sticking around and helping see that we got all packed up and cleaned up.

Kill Kare is a lovely, well-run park. There is a pavilion there that would be ideal, with regards to "weather proofing" the event if we decide to return there. It must be reserved well in advance and there is a rental fee. I intend to bring up a short discussion on this at the next meeting.

THE PREZ SEZ

by Brian N1BQ, President

The election cycle in this club had me taking office in December, but I have come think of the RANV club year beginning in September and ending after Field Day, with July sort of floating in the middle. August really is my RANV vacation month since August is the picnic; it requires little planning. I don't have to figure out a meeting topic. That is set in concrete - EAT, TALK and OPERATE! Then, since the picnic is early in the month relative to when the regular meeting would have been, I have an extra week or so to get my monthly column together and cogitate on topics for the Fall meetings.

Topics for meetings - yeah, I know, I harped on this last month. I had a chat with a member at the picnic. He said he has about 80% or better attendance rate at meetings and that in fifteen years there hasn't been a topic presented in which he didn't find something interesting. That's good to hear, but it still doesn't help us guys at the head table in coming up with new ideas. Now we have, I think, a couple of good ideas for the Fall and need one more idea to fill it out. Here is what I

would like to propose - the club member who submits an original idea that we use for the October or November meeting will receive a \$25 gift certificate to Radio Shack. The rules are simple, if duplicate ideas are received, earliest postmark, or E-mail origination date wins. If you collar me in the street and tell me your idea, make sure I know what time and day it is!

We have had two straight events, the July Cache/Foxhunt meeting and the August picnic that were threatened by poor weather predictions. We had wonderful weather and those few who showed up had a great time. Most of the no-shows at these two events had decided the night before that they weren't coming. I have the E-mails from several of them to prove it! Hey guys - this is Vermont! If the weather is not to your liking, come back in five minutes! It seems to me that much of our membership is indulging in "the glass is half empty" syndrome. Remember that a 40% chance of rain translates to a 60% chance of no rain!



RANV members were out in force at the ARRL Convention in Boxboro!

Contacting RANV

In Person: Meeting, Sept. 14, 7pm,
O'Brien Civic Center
113 Patchen Rd, So. Burlington

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

By Radio: 145.15 repeater

WW Web: <http://www.ranv.org>

President: Brian N1BQ 899-4527
n1bq@wulfden.org

VP/Tres Bob KB1FRW 434-2517
mcamp@gmavt.net

Secretary: Dave W1DEC 496-6863
vpsdcain@madriver.com

Editor: Mitch W1SJ 879-6589
w1sj@arrl.net

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

E-MAIL PROBLEMS

by Mitch WISJ

It is probably one of the most popular of computer applications and probably the one which brought computers into the forefront today. It is an application which promises to better connect us all. Sadly, it is starting to fail miserably. It is E-mail.

This article stems from the realization that the percentage of E-mail actually sent and received is below 100% – considerably below that. I found that our Field Day planning was getting torpedoed by E-mail snafus. Curious, I conducted an impromptu survey. When I sent the Field Day results, I asked each recipient to respond. In 6 cases out of 24, no reply was received after 2 weeks. I resent to the 6 recipients. Still no replies. So, the net result is that only 75% of the recipients are receiving their E-mail. This is not good. As amateurs, we rely heavily on E-mail. It is hard to remember how we got along without it.

I thought it would be prudent to discuss the do's and don'ts concerning E-mail. While we cannot do anything about mail lost in the Internet or mail servers, I find that much of the problem lies with the user.

Unfortunately, there are many unscrupulous individuals who have nothing better to do than to prey off of others. The Internet appears to be a gathering place for many of these vermin. If the endless spam isn't enough, we have daily virus and spyware attacks. It is at the point where many of us are afraid to look at our mail.

Since our government and leaders appear to be more interested in waging wars instead of protecting us from vermin, we have to be vigilant and use anti-spamming, anti-virus measures, and be smart.

To start with, E-mail isn't for everyone. If you check your mail every fortnight, don't bother giving out your E-mail address. Anything sent to you will be old news before you read it. If you don't plan to read your mail at least every couple of days, E-mail won't really work for you.

If you think that not giving out your address will foil the spammers, think again! I have never given out my Adelphia address and I get hundreds of pieces of Spam a month. Spammers try every combination of letters and numbers until they hit a live address. They will find you.

Your E-mail provider is very important. If you have a free account with Yahoo or Hotmail or others, it will not be as reliable or as supported as a paid account. In fact all of these "free" services extol you to use their fee service. Of the other providers, some are better than others. I can't say who are the best, but I have limited faith in Adelphia. I've lost enough mail through them.

Unless you plan to sort through 10-50 junk mails a day, get set up with a good spam elimination service. Don't think you can set up reliable spam filters on your E-mail. This should be left up to crack programmers. First, you cannot keep up with it and worse, you will end up filtering out E-mail you really want to receive. There are a couple of solutions. You can download some very effective spam filters – *Spam Assassin* works well. Or you can pick a mail provider who has spam filtering built in. *Power Shift* in Stowe manages to filter 95% of the Spam. They have a \$4.95 dialup service which gives you 5 hours a month. You can use your high-speed service and log on to the Power Shift server to get your Spam-free mail. And I don't get a commission from them for the recommendation.

Use an E-mail alias, such as *arrl.net*. While there have been some issues of the mail not getting forwarded, these services are still quite reliable and they allow you to keep the same address for many years without others having to do detective work to figure out where you are when you change providers.

Keep your E-mail inbox clean. All mail servers allocate each user a maximum amount of storage. If you go over that amount, all E-mail to you will bounce. Get in the habit of reading, replying and filing (or deleting) each E-mail in your box each time you are on.

Always answer E-mails promptly. Even if you don't have an answer, simply respond and say that you received the note. Otherwise, the sender is left wondering if you got it.

Don't write an E-mail which looks like spam. If you have "Hello" or "Free Offer" in the subject line, chances are very good your E-mail will go to the trash. Write a subject line which clearly describes what you are speaking about. Some of us get tons of valid E-mail and good subject lines help sort everything out. In the body of the E-mail, avoid classic spam phrases like, "this is not

spam", "click here to opt out", "incredible offer", or any sex-oriented language, including that most famous of drugs, *Viagara*.

Keep E-mails brief. Write notes as if you are paying by the word. First of all, most people's attention spans are quite short. Get right to the point. Few of us have the time to sift through long stories. Also, the longer your E-mail, the more the chance that a spam filter will object to something. In fact, the spam that does make it through my spam filter tends to be very short messages.

Don't repeat back the original E-mail. The writers of the E-mail software are the culprits in this as the default is to copy the original message in the reply. Highlight the original message and delete it – it is rarely needed. Ever see an E-mail which goes back and forth with the old E-mails included. It gets to the point where one cannot make out what is being said anymore. If you need to copy the previous message, just copy the pertinent sentence. The original sender will know what you are talking about. And again, the longer the E-mail, the more likely the spam filters will reject it.

Don't type in all capitals. It really is annoying to read. Use spelling checkers and proofread the message before you send it. We all make mistakes, but frankly, some of the messages I get challenge the Dead Sea Scrolls in trying to interpret what is being said.

Don't send attachments to your E-mail. I have a very, very short list of people who I expect E-mail attachments from. Outside of those people, I consider any mail with an attachment as carrying a virus. The virus writers have figured out how to send their payloads from people we know. If you want to send me an attachment, first send an E-mail and describe exactly what you would like to do before sending it.

It goes without saying that if you are on line, you need a virus checker. I have been very cavalier about this, but no more. I get a virus attack every couple of weeks. There is virus software available both free and not free. Some of the free stuff is better than the fee stuff!

I hope you all will work at improving your E-mail functionality so that when we try to rely on it, it will work. Or, we can always go back to monitoring 146.52 MHz 24 hours a day.

CQ FROM AB1DD MARINE MOBILE

by Carl AB1DD

CQ, CQ, CQ. This is AB1DD marine mobile calling CQ.

I never thought I would be operating marine mobile on HF. I got back into ham radio a couple of years ago after taking about 40 years off. Two meters is fun, but I really wanted to get on HF again. All I got to do those many years ago was some CW on 40 meters. I had been doing Short Wave listening, but I wanted to do more than listen. I did a lot of reading on what others had done on sailboats, and decided that it would work. Since I had an Icom 706MkIIG, I needed a way to connect to the boat's backstay and load it up properly. I also needed a ground. An Icom AH4 tuner solved the loading and connection. The only problem with this is the top end of the backstay is connected to the mast, and the mast is grounded. What I needed to do is install an insulator at the top of the backstay. That wouldn't really be too hard except that the boat was in the water, and to disconnect the backstay would mean the mast would fall over. So, a carefully rigged length of line (*we don't say rope on a boat*) took its place. Next, a ride up to the top of the mast on the end of a cable on a crane enabled the backstay to be removed. The insulator went on with no problem. Another ride up and it was back in place.

I also needed an RF ground. The normal way to do this is to place copper strips all over the inside of the hull. Being a little lazy, and wanting to do things simply, I decided to attach the ground foil to the lead keel. It was about 20 feet from the tuner at the base of the backstay to where I could drill into the lead and lag bolt it down. The problem there was that I didn't take into account the curvature of the hull. I needed about 21 feet. Well, I found out that you can't stretch 4" wide copper foil. A piece of copper and little bit of solder fixed that. I got the power and antenna tuner connected and figured that it was time for a test. I tuned in to 14.300 MHz, the Maritime Mobile Net. I listened for a while, and then gave a call. They

heard me! I checked in, got a good 59 report, and was really pleased. In the next few days, I did a lot of listening. I heard a sail boater in Panama on the air, so I gave him a try. He was waiting to go through the Panama Canal. We had a good chat, and then a few other stations called, wanting to know where I was and what I was using. This was starting to get fun!

While on vacation in July, I had a chance to do a lot more operating during the day. There was one day when 6 meters opened up. I answered a station in Georgia, and had a big pile up. Everyone was asking for my grid square but I didn't know what ours was. So, a quick QSY to 2 meters got W1SJ on, and an answer to my question. Back to 6, and I had a ball. I made a lot of contacts all over the U.S., England and Europe on 40, 20, 15, 17, and 6 meters.

I have been making contacts with special event stations all over the country. The museum ships event was really interesting. I also made contacts with a lot of old ships, like the USS Yorktown, Constitution, City of Milwaukee and a submarine, the Cobia. This is an annual event, and I'm looking forward to next year.

The best and most surprising contact came on July 31st. I had been on 20 meters for a while, and needed a break. I set the radio into scan mode to monitor the local repeaters. I got a drink out of the cooler, sat back and closed my eyes. Within a minute, I heard a call, "this is NA1SS." This is the Space Station Radio Club. Not really believing this, I waited, then heard it again. I grabbed the mike and said, "this is AB1DD marine mobile". I waited what seemed to be eternity, then heard "AB1DD, this is NA1SS"! I had a short QSO with Mike, the science officer. Although the entire conversation was only a little over a minute, it was one of the best. It made my whole weekend.

What's next? My next steps are to add PSK31 and SSTV. I also want to get set up mobile so I can continue after the sailing season.

FOX ANTENNA SHRINKS

by Mitch W1SJ

Last year, we built ourselves a mess of Tape Measure Yagis at a RANV meeting. I've used mine a few times at Fox Hunts and found it a tremendous performer. Coupled with the active attenuator, fox hunting has become that much easier. These tools helped me make quick work of the two Fox Boxes at Boxboro.

I also do a lot of UHF hunting. Specifically, I determine the exact location of repeaters. I've found most of them in the New York area, but some have remained elusive due to terrain and density considerations. My 8-element quagi was not very effective in this job.

Sadly, I did not see any specific designs for a UHF Fox Hunt antenna. Some guy on the Internet claimed his 2-meter yagi worked well on UHF. A quick test confirmed what I had believed - that he was smoking something good! I got the idea to directly scale the 2-meter version to UHF. The third harmonic of 146.52 is right around 440 MHz - close enough to the frequencies of interest. So all that would have to be done would be to divide all of the dimensions by 3. But, you have to do all of them!

The 2-meter design used 1" wide tapes. I had a small tape measure which was broken. Its width was 1/2", which although not exact, was close enough to 1/3". I ended up with a teeny beam of around 13" element length by 6" boom length. Since I got the urge to build this in the middle of the night, there weren't any plumbing supply houses open for the PVC shell. Instead, I used a yardstick and taped the elements on with duct tape! It looks like hell and is not all that robust, but it should get the job done.

I soldered up the gamma match (*also 1/3 size*) and feedline and applied some power. For 20 watts forward, there was about 0.5 watt re-

FOX ANTENNA... continued next page

FOX ANTENNA... from previous page

flected for an SWR of around 1.2. Not bad for 15 minutes of work. But will it work as a Fox Hunt antenna?

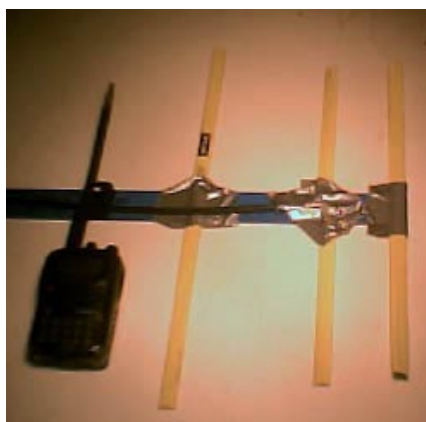
For this experiment, I put 4 watts of signal into the collinear on the tower and went outside to see where the antenna would point. Keep in mind it was around midnight and dark out. Luckily, the HT has a light! The neighbors know I'm weird, so there were no alarms set off. I set up in the street, about 150 feet away. The results were less than desirable as a few peaks were found. I then moved further down the street and obtained better results. I was able to repeat this in another direction as well. I suspect that with the antenna 65 feet in the air the steep vertical angle was affecting the yagi's performance when I was too close.

The real test will come when I attempt to use this antenna in an urban environment to pinpoint signal location. It will also be a test to see if the active attenuator will work. With the mass of RF in some of those locations, I expect it to roll over!

What this exercise proved is that the easy to make tape measure beam can be scaled to other frequencies and still afford great performance.

UHF Beam Dimensions:

Reflector: 13 $\frac{13}{16}$
Driven: 11 $\frac{13}{16}$ (2 pcs. 5 $\frac{29}{32}$)
Director: 11 $\frac{3}{4}$
Gamma: 1 $\frac{1}{2}$
R-DE: 2 $\frac{11}{16}$
DE-D: 4 $\frac{3}{16}$



FOX HUNT RESULTS

By Paul AAISU

For the August 20th RANV Fox Hunt, I decided once again to hide on the west side of the county. In April, I had hidden on Water Tower Hill in Colchester. In October 2000, I parked in front of the Round Church in Richmond, which is closer to the center of Chittenden County.

I had previously picked out a great fox hole about a month ago off of Clay Point Road, which is just west of Chimney Corners in Colchester. However, the roads in that neighborhood were marked "Private", and after some discussion at the RANV Picnic, it was determined that private roads should be off limits for the Fox. Bummer too, as the location was right across from Marble Island in Mallets Bay, and I knew that this would fool several of the hunters into thinking that I was in that area.

Instead, I opted to go further out on Route 2 and park across from the entrance to Sand Bar State Park. This location would prove to give out some of the same false signal impressions, but left me out in an open parking lot; easy to spot. I called for check-ins and the hunt was under way. The rules state to transmit at least 10 seconds out of every minute, but I like to transmit a little longer, so as to not drag it out all night.

All of the hunters searched in teams this time. The first to find me were Mitch W1SJ and Debbie W1DEB. Although I was weak to them at first, Mitch was able to get a beam heading from his house pointing towards Milton, and set out in my direction. When Mitch arrived in front of the State Park, he thought that he was going to have to schmooze the park ranger to let him in. However, noticing that I was full scale into his HT with no antenna, he said to Debbie, "Okay, he's in sight of us now!" A quick glance across the street, and he could see my car out in plain sight. I was found. It was only 6:30!

An hour later, the team of Bob KB1FRW and Moe N1ZBH arrived to find out that they were the "first losers". This was a phrase offered up by Johannes KB1JDT just before the start of the hunt. Yoyo was unable to hunt this month because of a family commitment. Arriving next was Kyle KB1JOO and Diane, who would be the last of the five teams that had set out in search of the Fox. The three hams then commenced to share files via WiFi with their Palm Pilots, and also tried in vain to find a wireless computer link by standing with a portable antenna at the water's edge. Meanwhile, Diane grabbed one of my tabloids and went back to the truck to read. Mitch and Debbie went off to survey food establishments.

Hunting for the first time, this month were some new hams. Tom KB1LIC and Jon KB1LIE heard us on the air and decided to give the sport a whirl. They even had a tape measure beam. However, the duo never made it out of Mallets Bay, and had to call it quits before they ran out of gas at 8:06. Jerry KB1KPO and Barb KB1LIF were dining at KFC when they heard me on the air. After eating, they decided to go Fox Hunting. Sadly, with no directional antenna, they only got a nice tour of Burlington. After debriefing them, I found that neither team had a map, and neither was familiar with Chittenden County. These are essential tools for Fox Hunting. Even the hint, "Where does sand go for a stiff drink?" didn't help!

The next hunt will be October 15th. Here are the official results:

6:30	W1SJ & W1DEB
7:28	KB1FRW & N1ZBH
7:45	KB1JOO & Diane
DNF	KB1KPO & KB1LIF & Katie
DNF	KB1LIC & KB1LIE

**NEXT MEETING:
“OUTDOOR OPERATING”
Tuesday, September 14th, 7 PM
O’Brien Civic Center**

RANV

P.O. Box 9392

South Burlington, Vt 05407

<http://www.RANV.org>