



# Radio Amateur News & Views

The Official Journal of the Radio Amateurs of Northern Vermont

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## ANTENNA CONSTRUCTION NIGHT Our April 8<sup>th</sup> RANV Meeting

This Tuesday night, April 8<sup>th</sup>, RANV brings back another in its exciting series on equipment construction. This month, we will construct a 2-meter yagi from PVC plumbing and steel tape measure. This yagi is invaluable in transmitter hunting and portability. The tape measure elements are excellent in that they give when bent, but fly right back into place. There is a nominal fee for materials. Please contact Bob KB1FRW if you would like to join in the build. We will have a few extra kits of parts for walk-ins. By the end of the evening, there should be numerous yagis emerging from the O'Brien Center. Just think – an army of Fox Hunters!

Festivities get underway at 6 with Snax-at-Zax, our monthly pre-meeting food fest. The meeting will start at 7 PM sharp and business items will be curtailed so that we can get underway with building. The location of the meeting is at the O'Brien Civic Center, 113 Patchen Road, South Burlington.

## HAM LINKING – The April First RANV Meeting

Our April first meeting will be on Ham Linking – that is, how hams can be linked for greater range and performance. As they say, two hams are better than one! John Kivackian K1LLA will give us the lowdown at our April first meeting. He has perfected a way in which hams can be perfectly linked. No static, intermod or barfing noises. No Internet or complicated software either. Amazing! Two hams walking, talking, and thinking like one. Just think about some of the possibilities! What if we linked, let say, Fred and Ted. Or how about Brian and Charly; or what if we went outside the club and linked Mitch and Mike. The possibilities are scary indeed. We could produce a super club.

So join us for another ham radio first – Ham Radio Linking with John K1LLA. The night's events will be taped for later playback on the Sci-Fi Channel. If you have the stomach to actually try to eat before this, please join us for Snax at Zax where the food is always guaranteed to show up 5 minutes before meeting time or your money back.

## FOX HUNT APRIL 18<sup>TH</sup>

Our first fox hunt of the year will take place Friday night, April 18<sup>th</sup>, starting at 6 PM. Dan N1PEF will be the Foxmaster for the evening. Check-ins will be taken at 6:00 with the hunt commencing shortly after that on 145.15 MHz. Tune to the input, 144.55 MHz to find the fox.

The rules are as always: 1. Hunt boundaries are Chittenden County; 2. the fox must be in a public accessible spot; 3. the fox must provide an S-1 signal at I-89, Exit 14; and 4. the fox must transmit for at least 10 seconds out of every minute. The winner receives all the accolades and bragging rights associated with this feat and gets to be the fox next time.

Many of you commented that you are still very interested in Fox Hunting and want the hunts to continue. So, let's get a good crew out there on April 18<sup>th</sup> for the hunt!

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## OUR LAST RANV MEETING

by *Howie K2MME, Sec'y*

Another large crowd pushing 30 assembled for our monthly gathering and learning fest. Brian had a *Repeater Directory* and 4 subscriptions to *World Radio* to raffle at a buck a chance. The winners were N1UR, W1DEC, W4YFJ and K2MME. The club cleared 15 bucks. Dave W1DEC is our snack buddy in April for the building of 2-meter tape measure yagis. We got 11 hands interested and are planning for 15. If still interested, contact Bob KB1FRW. The next fox hunt is on the calendar for April 18<sup>th</sup>. Hosstraders is May 2-3<sup>rd</sup>.

Jeff N1YWB set up a computer and projector loaded with the magic operating system *Linux* to demonstrate the OS for use with a computer in the ham shack. It seems that Linux crowd has developed some additional software to apply specifically in the area of APRS and packet radio. Linux will work with computers as feeble as a 386 with 4 megabytes of RAM. Just the thing for that real cheapo laptop you saw at Milton. Linux is very cheap (*free*) and stable, considerably different than the Washington glass company's Windows various offerings. It does require a different mind set since Linux is totally different. It looked to me like it was written in Mongolian. Nothing seen on the screens looked familiar. But, if you like to tinker and do nerd like stuff (*don't we all*), Linux is out there awaiting you. The Linux distributions mentioned were Debian, Mandrake, Red Hat, and Yellow Dog. Now there is a list of terms that sure to wow your neighbors. There is a "Linux for Dummies" book out there so they know we are out there. A Google search will net you all you need to get started. An interesting demonstration of APRS on the Linux based computer showed the track of several unmanned balloons launched at Hosstraders in Spring 2002. One was tracked to the waters off of Boston where it finally came to rest.

## THE PREZ SEZ

by *Brian N1BQ, President*

Contrary to the common beliefs of four weeks ago, the snow has actually mostly melted and the temperature has actually stayed above freezing for several days on end. Spring has sprung. So, we will ignore the 8-10 inches of new snow! It is actually warm enough to go up the tower to fix something and spend enough time to do it right.

March's meeting featured Jeff, N1YWB, who did a presentation on Linux computer in the hamshack and was well appreciated. I have already heard a number of people who have been plugging away at Linux since that meeting. On Saturday April 12<sup>th</sup>, The Boston area Linux user group is having one of their semi-annual Linux "Installfests" in Newton, MA. It is an all day gathering where people bring their computers and Linux distributions and their group helps you get it installed and running. There is no formal fee for this but they do accept donations, the accepted amount is \$25 and goes towards defraying some of the expenses of the event and their club in general. I am thinking of going down. Contact me if interested in going.

The April meeting will be our build session. This year, Bob KB1FRW is heading up the event. We will be building a portable two-meter beam from PVC, and carpenter's steel tape measure. This will be a very useful item for everyone, not just fox hunters.

We are on the verge of hamfest season. We kick off the season with Hosstraders on the first weekend in May. Locally, the BARC fest will be in Essex in August and the CVARC fest will be in Waterbury in late September. Hosstraders returns in early October. The only hole is the hot months of June and July. But there are a number of hamfests in adjacent regions to take care of that. As I said in last month's column, we need to support the local hamfests, they are the lifeblood of their respective clubs and the clubs are the lifeblood of ham radio in the region.

The first foxhunt of the season will be Friday the 18<sup>th</sup>. This will be a good chance for everyone to try out his or her newly made portable beams.

See you all at the meeting.... soldering iron in hand!

## FOXHUNT

We will have our first Foxhunt of the year on April first. The location of the hunt will be at Runny Brook farms, who will loan us a 2-year old red fox for the evening's festivities. He is a fast and wily fox and should provide plenty of challenge. We need a few other volunteers to supply horses for the chase. The dogs will be rag-tag, but effective bunch, led by Joe's Dalmatian and Neal's Basset Hound. The rules are simple. The fox is allowed to run. The bugle is sounded and then we all chase the fox and hope to catch up with him before the dogs have dinner. Check in on 145.15 MHz for details and coordination.

## Contacting RANV

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# DRIVING AND OPERATING

by Mitch WISJ

There is much written these days about how cell phone usage causes increasing number of traffic accidents. One by one, states are passing laws limiting the use of handheld phones. As amateurs, we appear to be viewing the proceedings from a distance, knowing that this doesn't affect us. Or does it? The day will come when some well-intentioned state or local government will pass laws banning use of all radio devices. Should they? Using a radio while driving can be every bit as dangerous as using a cell phone if you don't know what you are doing.

I obtained my driver's license at the same time I obtained my amateur license. In fact, I literally had an HT in my hand as I learned to drive. In 30+ years of operating like this, talking on a radio is quite natural and has little effect on my ability to drive, even in the worst conditions. However, for someone who has just obtained an amateur license after driving for many years, combining the two tasks can be daunting at times. For those people, I will share some of my observations on how to operate safely while driving.

The most important thing is to always remember what is the priority job when multitasking driving and anything else. There is nothing which can occur on the radio which will make it more important than driving the vehicle (*with the possible exception if it bursts into flames!*). Anything that occurs with your ham equipment will pale in comparison if you hit a hard tree or if you flatten an innocent bystander. There are times when your attention must be diverted to the radio. It takes a lot of practice, but it is essential that you return your attention to the road in less than 1 second. Why? At a highway speed of 65 miles per hour, you will travel 95 feet in that second which you are not looking. That is about the maximum distance you

want to roll without paying attention, and even some will consider it too high. If someone stops short while you are not looking, you will be in deep doo-doo. So when diverting your attention away from the road, make sure there is plenty of room in front of you and see to it that it is not likely that someone will cut in front. If these conditions are not met, don't divert your attention. What if the radio adjustment requires your attention for longer than a second? Return your attention to the road, and then look down again, if you need to. There have been times I have had to glance down 5 or 6 times to get the information I need to adjust the radio. This is OK, since the radio is the secondary priority. When you get good at this, you will use your eyes to scan up and down between the road and the radio. Just make sure you keep your eyes moving and never relax your concentration until you give you undivided attention back to the road.

There are a number of things you can do from an equipment standpoint to make operating and driving easier. Plan your mobile installation so that it is easy to use. Avoid using an HT in the car for a regular mobile installation. Handheld units are designed to be just that - hand held units! In a mobile environment, they are hard to see, hard to use, hard to control and often have a number of connections flying out of them, including antenna and power. In a collision, they become dangerous projectiles. Add to this the weak signal into the repeater, poor receiver selectivity and propensity to cause RF heating of your head (*if you use the internal antenna*) and there is little to recommend a handheld for a mobile radio. I use a handheld only on vacations and for temporary periods when the main radio is down. Otherwise, the radio of choice is a mobile radio solidly mounted un-

der the dash and easily visible from behind the wheel. And not only that, all of the functions on my transceiver are controlled from the microphone, meaning that I don't have to reach for anything. Cars are smaller now and some vehicles have little room for a proper mounting. If you mount the radio so that you cannot see the radio while driving, lock it on one channel and leave it there until you stop somewhere. Never, never mount a radio on the roof liner or above the mirror. Someone will be sure to bang his or her head on it during a short stop.

Practice going through all the adjustment steps on your radio while parked! Make sure you can change frequency, change offset and change CTCSS tone on the fly. While having frequencies stored into memory is useful, there always seems to be a time when you have to tune to a frequency not in memory. Practice the steps so that you can make these changes with little impact on your driving.

Finally, you have the equipment set up properly and on the channel you desire. Can you carry on a conversation without diverting attention from driving? It is true that some people cannot walk and chew gum at the same time. If you find yourself getting fully involved in a conversation to the point of distraction, go into listening mode. Pause in between transmissions, not only to let others in, but to reflect on what was said and to organize your thoughts BEFORE speaking. There is nothing worse than a mobile operator hemming and hawing while they think about what to say while transmitting.

Finally, know when to put the radio down. If you are on a snowy mountain road and you require 100% and more of your faculties to navigate, don't divert your attention to use the radio (*unless it is to call for help!*).

## COUNTY HUNTING

by Paul AAISU

This year, I'd thought that I'd take a break from contesting news, and enlighten you about some of the other aspects of ham radio. As you may have gathered by now, there are many avenues of this great hobby of ours to travel down. We have covered dozens of them at the monthly meetings, from Border Communications to Vintage Radios to Antenna Building to PSK-31. If you were to visit the **RANV** web site, you would see a partial list of some previous meetings that is 30 topics long. You name it; we try to cover it. But there are many things that we will probably never get to cover at a meeting. It is these items that I want to touch on over the next year or so.

For instance, many of you know that I belong to an organization called the FISTS CW Club. This is a club that encourages the continued use of CW on the ham bands. When I gave my first presentation at a **RANV** meeting, FISTS was the topic. The other organization featured that night was Ten-Ten International. Local members of the chapter came by to talk about it. This is a group of Hams dedicated to using and preserving the 10-Meter band. I plan to write about such topics in this column. Others that come to mind, include Island Chasing, Light House Chasing, Prefix Chasing and working all states on something called the Geritol Net. Some may think these are uninteresting parts of the hobby, but I've gathered that some of you think that contesting is boring too.

This month, I will discuss County Hunting. Now these must be a dedicated group of individuals. They sit by the radio, either base station or mobile, and try to work all 3077 counties in the United States. And you thought testers were weird. CQ Magazine sponsors the "basic" awards, but more lucrative awards are sponsored by MARAC, The Mobile Amateur Radio Awards Club. For today, we will focus on CQ Magazine's rules.

The seven different award classes start at 500 counties, and work their way up to 3077 in increments of 500. How do you accomplish this great feat? Well, there are County Hunter Nets, of course. Those of you that attend the **RANV** summer picnic, know that we try to check into the Net for a while to hand out the very rare county of Grand Isle. Nets can be found on 14.336 MHz and 7.238 MHz SSB, although County Hunting can occur anywhere on any of the amateur radio frequencies. There is also a QSL Bureau to help ease the cost of postage, too. All contacts must be confirmed by a QSL card. For record keeping, CQ requires that you purchase two special record books at \$2.50 each. One is to be handed in when you apply for the basic award, and the other is to be kept by you to continue tracking your county hunting. QSL cards can be checked and verified by two licensed amateurs (*General Class or higher*) or an official of a national-level radio organization or affiliated club verifying that QSL cards for all contacts as listed have been seen. You then send the original completed record book to CQ Magazine, along with a small handling fee. Soon a nice certificate will be on the way to you, and you can try to add more and more counties on to your ever-growing list. Just like contesting, activities like these help to keep the ham bands active, and our skills up to par; plus it's fun! So, why not consider County Hunting one of these days. Who knows, you could go through those QSL cards and possibly put them to more good use. For more detailed information, visit [www.cq-amateur-radio.com](http://www.cq-amateur-radio.com) and click on *Awards*.

## WIRELESS NETWORK

by Brian NIBQ

Prior to my presentation at the July 2002 **RANV** meeting a lot of guys were asking why? "It's not ham radio," some said. (*it is however in the ham 2.4 GHz band*) Others dismissed it as being a "minor niche" thing.

Things change rapidly in the technology world. In the six weeks following, "WiFi", "war-driving" and "war-chalking" became terms known to most people with even a little technical savvy. In the Spring, wireless networking equipment from one or two manufacturers occupied a half page of the typical biweekly 100 page catalog. By the end of August it was now five to six pages of equipment from five or six manufacturers.

Two years ago some small groups of hams in Ottawa and Boston were working with surplus wavelan networking cards that, even surplus, cost \$200-500 a piece and they had to use custom written drivers to make it work. Today, we are using off-the-shelf new wireless cards that cost \$50 with drivers available for every conceivable platform and OS.

The ARRL has gotten in to the act and formed a group to look into it. They have a web page on the league site called "High Speed Digital Networking and Multimedia" which is located at <http://www.arrl.org/hmmm>. In this month's QST, there is an article on wireless networks.

AMRAD, the Amateur Radio Research and Development Group, has a very active group involved in WiFi experimentation. In their latest newsletter I came across some comments from Maitland Bottoms, AA4HS about Point-to-Point Ad-Hoc Wireless Networking to and From larger hamfests:

1. Get hams to carpool to hamfests, it is environmentally sound. Reducing traffic congestion, and lets someone other than driver safely operate the radios and computers.
2. Coordinate via 2m FM radios so that group vehicles can maneuver to relative proximity,
3. Establish 802.11 links between vehicles. Exchange eQSLs, try full duplex audio and/or video streaming communications.

Something to do on the way to and from Dayton this year!

The WiFi craze has peaked and contrary to all the nay-sayers last Fall and early Winter it has not retreated. There are a myriad of ideas and possibilities for hams in high speed wireless networking out there.

# WEEKEND CLASS: 11 NEW HAMSTERS

by Mitch WISJ

The Weekend Class in Essex was again quite large. The room was nearly filled to capacity for the Technician course on Saturday. With only 2 takers for the General class on Sunday, we had lots of room to spread out and lots of time to have QSO's on the radio.

On Sunday afternoon, we had a visitor. A photographer from the *Burlington Free Press* picked up the story and came in to take a few shots for a picture fill. Timing is everything, of course. On Saturday, we had a full room; on Sunday, just three of us. The picture caught students Frank and Bill hard at work studying and yours truly hard at work yapping on IRLP on the repeater!

This group was amazing! The average of all of the many practice quizzes all weekend was 91. This is just shy of the record set a couple of years ago, and way above the usual mid-80's average. Having a well-prepared group makes the day go so much easier. The final result was equally amazing; the lowest score on the VE exam was 91!

One of the first to sign up for the class, Dave came down all the way from Richford, along with teenage grandson Joseph. Dave couldn't wait to get his ham license – he went ahead and passed the test at Milton! Also coming from a good distance was Norm from Highgate. Norm runs a plant and vegetable farm up there.

Pete obtained his amateur license to help in his duties on the Stowe Rescue Squad. This group is geared for rescues in the very rough terrain found in the mountains. Most of their group have gone through the class and hold amateur radio licenses and all have radios. When the steep terrain chops up commu-

nications on their commercial channels, they have the ability to switch to amateur repeaters to continue in their crucial work. Pete has already checked into the repeater!

This class had a tie-in with the very first amateur class I taught back in 1982. Back then, Jon obtained KA1JUD. Unfortunately, he let this license lapse over the years, and was back in class to rejoin the hobby. I'm sure any exam questions Jon had on "license grace period" were answered correctly!

We had two students with ham neighbors. Steve lives down the trail from Brian N1BQ in Underhill and Frank lives next door to Bob KB1FRW in Richmond. Sounds like potential for shared community antennas! Frank was joined by Bill to earn the Element 3 General credit on Sunday. Both are working on passing their code test soon. Bill is recently from Texas.

Rounding out the group is Doug, from downtown Burlington and Gene from Colchester and Karen from Colchester. Karen you may recognize as an attendee of one of the **RANV** Holiday Parties from years back. She joins spouse Dave in yet another ham radio family.

The next Weekend Class will be October 11-12<sup>th</sup> in Essex.

Here are the graduates of the Fall Weekend Class. Be sure to say hello to them on the air!

KB1JME	Dave DiPerna	Richford
KB1JRH	Pete Antos-Ketcham	Stowe
KB1JRJ	Norm Marshall	Highgate
KB1JRK	Jon Ojala	Jericho
KB1JRL	Joseph Olio	Richford
KB1JRM	Frank Phillips	Richmond
KB1JRN	Doug Ransford	Burlington
KB1JRO	Gene Soboleski	Colchester
KB1JRP	Bill Walker	St Albans
KB1JRQ	Karen Wojcik	Colchester
KB1JRR	Steve Woodward	Underhill

# HOSSTRADERS

Next month, it will be time to head down to Hosstraders. The May newsletter will appear after the event, so details are produced here. 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 Rd.*). 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, March 2<sup>nd</sup> and winds down 1 PM on Saturday. Exams will be given on Saturday at 9 AM. Last year's admission was \$10 before Friday at 3, \$5 afterwards. Sellers pay \$10 additional. Expect these to go up!

The Hopkinton Fair Grounds is a real nice place. There are plenty of areas shaded in pine trees, as well as open areas.

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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# REPEATER NEWS

by Mitch WISJ

Why is it every time I leave town something breaks down at the repeater site? Friday, as I was heading towards New Hampshire, I couldn't hear the 145.15 output. I knew I was getting in because I had a full quieting signal on the UHF downlink. On the way back, I could hear the 145.15 output, but very faint – some 50 db weaker than normal. The suspicion is that the power amplifier went down.

A trip up the mountain is being planned as this is being written. I'll have more to report then. In the meantime, the 145.15 transmitter is in Essex, about 3000 feet lower than the receiver site! The range of the transmitter is somewhat reduced.

**NEXT MEETING:**  
**“Antenna Construction Night”**  
**Tuesday, April 8<sup>th</sup>, 7 PM**  
**O’Brien Civic Center**

**FOX HUNT:**  
**Friday, April 18<sup>th</sup>, 6 PM**  
**145.15**

**RANV**

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