



Radio Amateur News & Views

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FOX HUNTING TECHNIQUES The May 9th RANV Meeting

For our May meeting, we return once again to that time-honored question, "How do 'ya find a fox?" The short answer is, "very carefully!" For the long answer, you'll just have to come down to the May RANV meeting and watch master fox hunter W1SJ go through the techniques.

Fox hunting, or its more technical name, *radiodirection finding*, is a very important skill in radio communications. It also takes much practice to get good at it! Besides the fun fox hunts we have a few times a year, direction finding is often used for more serious situations. The classic rescue scenario is a person in need of help who does not know where they are. Quick and effective direction finding is needed to get help fast. The Civil Air Patrol regularly conducts transmitter hunts on 121.5 MHz since when a plane goes down, this beacon is often the only way to locate survivors. Around the shack, transmitter hunting is used to find that dirty fax machine, printer, scanner power line, dimmer switch, etc., which is driving you crazy. Finding the problem is easy; getting it fixed is another thing!

Based on the 3-hour extravaganza we had at the last Fox Hunt, we all could stand to use some practice. So, weather permitting, after a short discussion on fox hunting, we will have a couple of short hunts out in the playground. Bring an HT and some paper clips, and small yagi, if you dare!

All this running around requires some fueling, so don't forget to join us at Zack's on Williston Road for the pre-meeting chow-down. The meeting starts at 7pm sharp at the O'Brien Civic Center, 113 Patchen Road, South Burlington.

HOSSTRADERS!

Spring is finally here and that must mean that it is time for *Hosstraders*, New England's premier radio gathering and swapfest. The fest opens at 9am Friday May 12th and runs all day and night Friday and to mid-afternoon Saturday. General admission is \$10 on Friday before 3pm and \$5 after that. Add to this \$10 if you wish to set up in the selling area. Camping is available on the grounds and a few motels are around.

The location is at the Rochester Fairgrounds. Take I-89 to it's end at I-93 and go North a few exits to Exit 15, I-393. This will go a few miles and drop you off on Routes 4/9/202. Carefully follow the signs and turns for Route 202 for some 40 miles to Rochester. After you pass under the Spaulding Turnpike, find Hoover Street, make a right and follow the fence to the main gate.

I've come up with a new repeater lineup: Take 145.15 to the Sunapee area of NH, then switch to 145.17, a new long-range repeater in Bow. Near the hamfest, use talk-in 147.00. At the fest, use 146.67, located in my van!

COMING UP IN JUNE

If you thought May was a busy ham radio month with the various hamfests and public service events, you ain't seen nothing yet. June has even more! The first weekend, June 3-5th features the Rochester (NY) Hamfest.

The very next weekend is the VHF QSO Party. The RANV mountain expedition will again travel to Mt. Equinox to push the limit on how far VHF contacts are made. We are looking for new people to help out operating and setting up. If interested, contact Mitch.

We get one weekend of rest then it is on to Field Day, June 23-25th. There will be a kick-off meeting Monday, June 19th, setup on Friday, June 23 and the event runs Saturday and Sunday. The best way to experience Field Day is to jump in all the way and try everything.

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OUR LAST RANV MEETING

by Fred N1ZUK, Sec'y

The April RANV meeting kicked off a few minutes late, due to all the setup activities that were taking place for the night's presentations.

Beginning the three part "Life Beyond 2-Meter Repeaters" presentation was Fred N1ZUK, whom discussed the Six Meter band. With the Magic Band as his primary operating location for the past year, Fred discussed why Six Meters is fun to operate. Even though it's normally considered a local VHF band, almost every mode of propagation can be found at one time or another. He discussed many of these modes: sporadic-E, aurora, F2, tropospheric ducting, scatter, and more. The Summer of 2000 should be the peak of Solar Cycle 23, and hopefully bring many more 1000-mile contacts.

The second part of our presentation was weak signal VHF operating, by Mitch W1SJ. Small antennas and low power FM just won't cut it if you want to cover great distances at VHF/UHF frequencies. Mitch explained how he's been able to put up those good numbers during the VHF contests: height, power, and antenna gain. He gave us a short history on how he got to the setup he currently is using at Mount Equinox. Originally operating from the back seat of his car on Mt. Mansfield, he's moved to a larger vehicle, and a mountain a little closer to where the action (*read: people*) is. As far as the antennas go, if a few elements are good, many more are much better. If you've seen the cover photo from September, 1999 QST, or the pictures on the RANV Web site, you'll know what I mean. These large antennas can boost the ERP of the 150W input power to over a kilowatt. Mitch consistently pulls contacts along the Eastern seaboard, from Canada to Virginia.

The meeting's final part featured Mike N1JEZ and Brian KA2BQE. Neither can enjoy doing a talk without bringing some of their favorite toys. Brian demonstrated one of the newest applications of APRS, which allows the tracking of satellites. No

longer do you need to fire up a separate program to find when and where the next pass of your favorite satellite will take place. Now you can do it via APRS. Brain's demonstration shows there are still innovations taking place in the terrestrial digital mode area.

For the extraterrestrial part of the program, Mike N1JEZ had brought along his portable satellite station. Utilizing a dual-band HT, small 146/440 MHz yagi, and camera tripod, Mike discussed some of the *Easy Sats*, which are FM analog satellites that can be worked without the need for large antenna arrays and expensive equipment. He had two very informative handouts, one on the *Easy Sats*; the other that he authored on information resources available to those interested in satellites in general, as well as amateur satellites in particular. They are available from the AMSAT web page or from Mike directly.

Talking about how easy it is to work these satellites is one thing, but Mike made good on his claims and worked a pass during his presentation. New ham Steve KB1EXF made several QSOs, while the rest of us watched and enjoyed. I'm sure that there will be some excitement at his house when the postman arrives with his QSL cards!

THE PREZ SEZ

by Paul AA1SU, President

It has been a busy ham radio month for me. But, this was not the usual HF operating and contesting stuff. For instance, I log my casual CW and SSB contacts in a log book from the ARRL. I keep a legal pad near the radio to log the QSO at first, and later enter it into the logbook. I used to do this at odd intervals and one day I just stopped entering them. I soon found myself 11 months behind on entering these contacts in the log book. I recently sat down and caught up on 7 months worth of these entries. It seemed like I don't turn on the radio as much as I used to, but any thoughts that I had been feeling inactive lately, were immediately dashed.

Some other ham radio projects recently taken on include getting my father's address changed with the FCC. Not an easy task, when you have an old slow computer, like mine. It also came to my attention that an 87-year old Burlington ham was in the 2-year grace period of his license, and he was having trouble reprogramming the memories on his newer 2-meter rig. After registering both hams with the ULS, I went to a friend's house to effect the updates on a bigger computer. Then, I went to reprogram the radio. The offset for his favorite repeater was backwards, which I fixed. But, I found that without a manual, I could not program other repeaters into it.

Working on the VPT Travel Auction last month certainly kept me busy. It was nice to work with another club. The coming Spring and Summer will be full of public events where ham radio operators will be needed. So, you will all have an opportunity to stay active in amateur radio. Or, you may have an idea for an article in our newsletter. If so, put those thoughts down on paper and E-mail them to Mitch.

What might be next for me? Perhaps putting 3 years of QSOs and contest logs into a general logging program. Then, I could track those badly needed QSL cards better.

Contacting RANV

In Person: Meeting, May 9, 7pm,
O'Brien Civic Center
113 Patchen Rd, SBurlington
By Mail: PO Box 9392, South
Burlington, VT 05407
By Radio: 145.15 repeater
By E-mail: w1sj@arrl.net
WW Web: <http://www.ranv.together.com>

Principals:
President Paul AA1SU 860-1134
VP/Tres: Richard WN1HJW 372-4595
Secretary: Fred N1ZUK 878-4209
Editor: Mitch W1SJ 879-6589

Please send submissions for newsletter to the editor, W1SJ.

CONTEST CORNER

by Paul AAISU

It is time to practice up for Field Day. Whether you operate from home or join us in the field, you will need to be ready for the end of June!

The *Nevada QSO Party* starts at 8pm Friday May 12th and ends at 2am Sunday. The *Oregon QSO Party* starts at 10am Saturday the 13th and ends at midnight. You send RS(T) and state, and they send RS(T) and county. Score 1 point for SSB and 2 points for CW. Work stations once per band and mode. These states border each other, so keep 2 log sheets handy. If you hear one, you will probably hear the other, as well. These are obviously great S&P tests, not for running. Personally, I could really use Nevada on 80 Meters for my 5BWAS Award.

The following weekend brings us the *Major Six Club Contest*. This is a big Six Meter contest. For those of you wanting to try out Six Meters, this would be a prime weekend to do it. It starts at 7pm on Friday the 19th and ends at 11pm on Sunday. Score 1 point for contacts in the USA and 2 points outside, including KH6 & KL7. The multipliers are grid squares. For more information, visit <http://6mt.com/contest.htm>.

On the weekend of the 27th, we have the *CQ Worldwide WPX CW Contest*. WPX stands for *work all prefixes*. This is one of my favorite worldwide contests. It is a 48-hour contest, starting at 8pm on Friday May 27th, and single ops can only work 36 hours. There are several categories to choose from, including Band Restricted (*Technician*) and Rookie (*licensed less than 3 years*). These help you to compete with other hams of similar experience. The multipliers are call sign prefixes and the scoring is complicated. The exchange is RST and serial number. See March *QST* page 100 for more information.

If you can't copy high speed CW yet, hang out higher up in the band, and listen for some slower code. Also, practice listening to your own call sign at progressively higher speeds before the event. This will help a lot because when the station comes back to you, you need to be ready. Then, you can send your number as slowly as is comfortable. But, don't throw out your call sign, until you listen to the other station a few times. This way, you can get his call sign and current number sequence with confidence. For those of you with logging programs, like NA, you should use the practice mode in the days preceding the contest. By the way, RANV members have a mandatory break from 7am until noon on Saturday, to volunteer for the Essex Memorial Day Parade.

The weekend of June 3 looks pretty quiet. However, on June 10th, is the ARRL June VHF QSO Party. It starts at 2pm Saturday and ends at 11pm Sunday. Many of us have heard of W1SJ's legendary portable operation for this event from Mt. Equinox. He will be looking for hams to operate. See Mitch's notes about this elsewhere in this newsletter and be sure to look at May *QST*, page 83 for all of the gory details.

Next month: get in touch with your ITU Zone.

THE NATIONAL TRAFFIC SYSTEM

by Karl KB1DSB, Section Traffic Mgr, VT

The National Traffic System (NTS) has a long and proud history of providing public service by means of amateur radio. Every day, hundreds of pieces of traffic move from the originator to its destination. Volunteer amateur operators throughout the journey handle each and every piece of traffic.

The NTS is dedicated to providing communications out of and into disaster areas. This is performed with close coordination with ARES and disaster relief agencies. It may be a message to family that all is well or a query of concerned family about members within the area. Or messages could be requests for supplies, equipment and other items needed to assist inside the disaster area.

As with nearly all things in life, practice does improve efficiency and operating effectiveness. With this in mind, the NTS passes "Greeting" third party traffic. It might be congratulations, a birthday or anniversary wish, a holiday greeting or a hello from a friend. They all pass through the hands of traffic handlers to keep the system alive, operational and effective.

Traffic handling uses a simple format, which is easy to use whether it be originating traffic, relaying it along its way or seeing it to its destination. It takes very little practice and very little effort to become comfortable.

Traffic handlers in the NTS are amateur radio operators like us. They may take part in a local net, a section net, regional or area net. They work within the limits of their license and use every mode be it CW, phone or digital. They use HF, VHF and UHF. They use what works to get the traffic to its destination. Traffic handlers give whatever time they can to keep the system alive and vital. It may be a couple hours spread over a week or some time each day. It is all in what they can afford to contribute.

The Vermont Section of the NTS is rebuilding. We are looking for amateur radio operators like you who can give some of their time to this great public service.

Please contact me at doczuege@together.net for more information on how you can become a part of the Vermont Traffic Section.

HUNTERS FOILED BY FOX

by Mitch W1SJ

It was a wild and woolly first RANV Fox Hunt of the year as nine carloads of hunters descended on that crafty fox W1SJ. Many miles were logged and much precious petroleum was burned in this frantic search. It was a tough hunt, as evidenced by the fact that only four of the hunters actually found the fox.

The goal of the fox for this hunt was to go somewhere where no fox had gone before. After a little searching, I settled on West Bolton, a tiny, isolated community due east of Jericho. West Bolton has little in common with Bolton, except for the fact that both are barely within the boundaries of the same town. They are some 8 miles apart along a barely passable dirt road. While this could have been a very difficult hunt, in some respects it should not have been too hard – as long as you approached from the west. The terrain from this spot, some 1000 feet AMSL right down to Burlington is fairly flat, and signals were quite nice all over the county. However, if you approached from the north or south, you were in for some problems, as there were 2000-foot hills to deal with. Right in West Bolton, there is a “5 Corners”, and I chose a 0.6 mile long dirt road and ended up hiding right next to the cemetery, just where the road ends at a gate for the Underhill Range. As planned (by the Fox) everyone went up the more obvious and longer 2-mile dirt road and didn’t find the fox! Making good guesses are part of every fox hunt!

It was a very long night in the car, parked next to the spooks and goblins hanging out in the cemetery. Deb W1DEB provided much needed conversation during the lulls in debauchery created on the air!

There has been talk of having a series of small fox hunts, (or sprints). These would only take place in one town and have a 1-hour time limit and be held on a Saturday or Sunday. These might be a great way to pick up some much-needed experience for the newer hunters. If interested, let me know. Weekend time is getting very scarce with hamfests, contests and other activities, but we may be able to find a nice weekend date which works for everyone.

The next regular hunt will be Friday evening, June 16, with Bill N1IRO jumping into the foxhole. Be sure to get your DF stuff ready by then!

The Results!

9:10 N1IRO + N1VWC +1

9:21 N1ZUK

9:45 N1LXI

10:26 N1UWT + N1PEF

DNF N1YWB +1

DNF KB1EDU +1

DNF W1EMT +1

DNF K2MME + N2COZ

DNS AA1SU



ESSEX PARADE

By Mitch W1SJ

Grab your radio and join us for the *Essex Memorial Day Parade*, Saturday, May 27th. Amateur operators are needed as marshals to line up the participants and assure safety along the 1-mile parade route. It is an easy job – a little radio communications, a relatively short walk – a short time commitment – 8am until noon. You’ll be marching by thousands of cheering spectators. At the middle of the parade we roll our amateur radio “float” – my van decked out with as many antennas and flags as I can find! It really feels good to hear people cheer when they announce “Radio Amateurs of Northern Vermont.” Usually, the first reaction is to duck in anticipation of flying fruit!

We can use as many volunteers as possible and we are looking especially for new amateurs to try their hand at their first public service event. Contact Mitch W1SJ at w1sj@arrl.net to sign up.

VERMONT CITY MARATHON

by Carl KC1WH

On Sunday, May 28, the *Vermont City Marathon* will run through the streets of Burlington. This 26.2-mile event starts at Battery Park and takes a complicated route around the city, ending at Waterfront Park. A 5-leg relay race runs simultaneously with the Marathon. Aid Stations at regular intervals along the route offer fluids and medical kiosks offer help for distressed runners. Some streets are closed to traffic on race day, and traffic cones separate runners from vehicles where sharing is required.

With 5000 runners, the Marathon is a very popular race, voted one of the top marathons in the East. Many unhappy runners don’t get registered, because they were – slow of foot.

The Marathon has the largest Amateur Radio team of any event in Vermont. Over the years the Marathon Staff has come to rely on the Communications Net to identify and solve problems all over the course.

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. If you’re interested, call Carl KC1WH at 878-8232, or E-mail to kc1wh@hotmail.com.

Welcome to RANV

Debbie W1DEB of Colchester is a graduate of the fall Weekend Class and has been a regular at the last few meetings. She hopes to have a new mobile radio this month to clean up that weak signal we all hear!

GETTING ON THE AIR ON SIX METERS

by Fred NIZUK

Since I spoke at last month's RANV meeting about Six Meter weak signal operating, a number of people have contacted me on how they can get on the air on the Magic Band. It was something I wanted to discuss at the meeting, but there's enough information there that it could have taken another meeting just to cover it! Instead, I'll cover some of the options you have in this article.

With the peak of Solar Cycle 23 upon us, activity on Six Meters has been increasing steadily. But this band has not always been so popular. It was not long ago, in the days before everyone had sixty TV channels available via cable television, that every rooftop in the country sported an antenna for receiving their television signals. With Six Meters being so close to the television band, being a good Six Meter operator also meant you needed to be an exceptional diplomat. TVI was the normal rule of the day, both with your station interfering with the poorly designed and shielded television sets of the times, as well as "birdies" spread all across your tuning band. Many times these tones were transmitted from the neighbor's TV set, up his antenna, and right to your receiver. Imagine knocking on your neighbor's door, and asking him to turn off his TV, so you can work some sporadic E-skip in Ohio! I don't believe you would get too far with your request. Combine this with the low part of the solar cycles, where propagation is minimal, and you can imagine how low the activity on Six Meters could be.

But now it's the year 2000, everyone has cable or satellite, and you're ready to give Six Meters a try. The standard setup is a 100-watt radio into a rotatable yagi. But you're not ready to drop a grand or two to get on the air. What's one to do? What I

see is you basically have three options.

First, there is the dedicated VHF transceiver. Many people go this route. A few years ago, during the bottom of the solar cycle, you could pick one of these radios up cheaply. Now, with the cycle in full swing, these radios are selling at a premium. A newer radio will cost some serious money, and an older radio can be hard to find. Unfortunately, the TVI problems I just wrote about caused the manufacturers to offer very few units ten to twenty years ago, which means fewer radios for us to buy now on the used market. There are some transceivers out

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there, just be sure the unit is functional or at least repairable before you dive in. A few other caveats before you go this route. Most of these radios only have 10 watts of RF output, meaning you'll also need an amplifier and power supply (35 amps). Also, a thirty-plus year old radio doesn't have all the refinements that a radio made today has. It has fewer features, poor frequency stability, and poorer receiver performance. I know this from experience, as my current radio is an early 1970's Yaesu. It gets the job done. But I still need to tune occasionally to compensate for frequency drift, and the front end of the receiver is so wide you can drive a truck through it. The adjacent signal splatter can be so bad, that when someone local to me is transmitting, there's just nowhere to go to get away from it. But it has great transmitted audio, and the receiver is sensitive enough to pull out signals others can't hear.

Next, you might opt for an HF

transceiver with Six Meters included. With the newly restructured FCC license rules in effect, this is the way to go. If you have any plans to upgrade and get your HF privileges, spend the extra money and get a HF radio that also has Six Meters built in. Many of these radios have 100-watt output on Six Meters, so you won't need to spend the extra money on amplifiers and power supplies. In addition, you will benefit from the features available on this newer equipment, as well as better performance. You'll also be able to monitor the VHF liaison frequency on Ten Meters, and grab a few contacts you may have missed otherwise. These

radios are even beginning to show up on the used market, so you'll be able to save a few dollars.

Another route is a Six Meter transverter with an HF transceiver. If you al-

ready own a HF transceiver, you may want to get a transverter. A transverter is a unit that attaches to your transceiver, and converts the signals from 50 MHz down to a frequency range your radio can handle. Most convert down to 10M or 20M, but some even convert up to work with your 2M all mode radio. Remember, even though your HF radio may have 100 watts output, the transverter's output is typically only 5-10 watts, so an amplifier and power supply should be considered. Also, some transverters require modification of your radio, so make sure you know what's involved before you buy in to this option. The plus side is that you'll get the features and performance of your transceiver, for less money than purchasing a separate radio.

Next month, I'll discuss antenna choices. It's been said that when the Magic Band is open, you can work 'em with a piece of wet string. Is this true? I'll tell you next month.

**Next Meeting:
“FOX HUNTING TECHNIQUES”
Tuesday, May 9th, 7pm
at O’Brien Center**

**HOSSTRADERS
Friday-Saturday May 12-13th
Rochester, NH**

RANV
P.O. Box 9392
South Burlington, Vt 05407

<http://www.RANV.together.com>