



Radio Amateur News & Views

The Official Journal of the Radio Amateurs of Northern Vermont

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AMATEUR RADIO ASTRONOMY

The June 8th RANV Meeting

Join with us for our June meeting when we really go out into space and explore Amateur Radio Astronomy. Jack St. Louis, K1VAS of the Vermont Astronomical Society will be our guest for the evening. He will discuss his work in receiving signals from various space bodies, including the sun, Jupiter, meteors and the Milky Way. Much of this is done with simple equipment. For example, Jupiter emanates signals at 18-20 MHz, meteors on 50-60 MHz and the Sun on 1400 MHz. The signals are fed into a computer and analyzed. Jack can determine solar activity and meteor storms and predicts propagation trends. He will give a presentation and details on exactly how all this is done. You won't want to miss it!

At the beginning of the meeting, we will briefly go over plans for Field Day. Be sure to set aside time for Field Day on June 25-27th!

Activities get underway around 6 PM with Snax at Zacks on Williston Road. The meeting starts at 7 PM sharp at the O'Brien Civic Center, 113 Patchen Road, South Burlington.

FIELD DAY

Field Day is the greatest ham radio classroom. If you have any interest in this great avocation of ours, you won't want to miss out participating in Field Day on the weekend of June 26-27th. Field Day entails all of the following: antenna design and setup, station design and setup, contest operating, public service communications, emergency communications, satellite communications, power generation, propagation, computers, camping and eating. Certainly everyone is interested in at least one of these topics! Ask any Field Day veteran and they will tell you how much they learn each year. Or they might rave about the food!

It is important to get involved with Field Day early. As you read this, we are already getting involved in the planning stages of the event. Several of us are doing the engineering on the antenna systems. Discussions are going on about what equipment will be used and how it will be set up. During Field Day, activities reach a fever pitch and newcomers showing up at the last moment often get overwhelmed. The weeks prior to Field Day are spent learning a lot about the set up and operating procedure in anticipation of the actual event. The planning and review meeting will be Monday, June 21st at the shack of W1SJ.

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FOX HUNT

The next RANV Fox Hunt will be Friday, June 18th, starting at 6 PM. The good news is that this is almost the longest day of the year and there will be some light almost up until 9:00 for sniffing out the Fox. The bad news is that W1SJ and his trusty sidekick W1DEB will return and they will likely have some diabolical location picked out to drive you crazy. Start planning your strategy!

The rules: Check -in on the 145.15 repeater, and hunt on the input, 144.55 MHz. The fox will be located in a public assessable spot in Chittenden County and put at least an S-1 signal in at I-89 exit 14. The fox will transmit at least 10 seconds out of every minute. First finder gets all the bragging rights and gets to hide in the August hunt.

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OUR LAST RANV MEETING

by Dave W1DEC, Sec'y

Vice President Bob KB1FRW opened the meeting in the absence of Brian N1BQ who was recuperating from a stomach virus. Altogether too much time in Sick Bay for Brian! Twenty-three people were in attendance.

The first order of business was munchies for the June Meeting. Your scribe Dave W1DEC will ensure that they are adequate.

A short discussion took place regarding the ongoing work involved in preparing the newsletter and required deadlines. Brian WB2JIX offered to assist Mitch in proofing future editions.

Brian WB2JIX also volunteered to do cooking duty at Field Day. Thanks Brian!

A motion funding Field Day food in the amount of \$200 was moved, seconded and passed. Additionally, \$75 was approved for the rental of a Port-o-Let for Field Day. Al K1HA kindly offered to obtain a quote for a 3-day rental of a Ryder Truck for the transport of equipment to and from the Field Day site. He thought that the fee would be appealing. Paul AA1SU volunteered to call Ron KK1L to obtain tables for Field Day.

Ted Teffner, Chief Engineer of WCAX Channel 3, gave a very interesting presentation on High Definition Television (HDTV) and Digital Television (DTV) in the U.S and in Vermont. The breadth of the equipment updates required of all TV broadcasters was a little staggering. Ted first detailed the differences between the existing analog format and several of the new digital formats. Since analog and the digital TV formats are incompatible, every television station will have to put on another channel on UHF to carry the digital format. In Vermont, things are complicated by the fact all television channel assignments have to be approved by Canada. Further, the

THE PREZ SEZ

by Brian N1BQ, President

It's time to repair the damage the winter did to antennas. I suppose most of you know the antenna rules: *"if your antenna array is still up at the end of the winter, it is too small!"*

Field Day is upon us. The opening of the June meeting will deal with details for the RANV Field Day at Redmond Road in Williston. Paul AA1SU was in contact with the individual who oversees the use of the area we use and had the pleasant experience of being told that we are considered 'good tenants,' that we take good care of the site and are welcome back always. Let's see that we keep up this fine reputation.

This month's meeting will feature a presentation on Radio Astronomy by Jack K1VAS, the president of the *Vermont Astronomical Society*. Jack will show the kind of efforts that can be done by amateurs in radio astronomy. There is a wealth of information on the net about amateur radio astronomy.

Looking ahead over the summer, we have the July meeting at my house in Underhill Center and the picnic in August in North Hero.

We have already received several excellent suggestions for meeting topics from the membership, which have been or will be acted upon. We are still unsettled on topics for the September and October meetings, so speak up if you have something you would like to see.

advent of HDTV requires that all northern Vermont broadcasters work *together* in a co-location group at the Mount Mansfield site. Due to the severe mountain weather, there is a narrow 4-month window during which the group can build its new facilities. It is too late to accomplish that task this year and also may not happen in 2005.

ANTENNA BILL NEWS

This note was sent to the Section Manager from Representative Ira Trombley on the PRB-1 Antenna Bill, H.602.

The session ended on Thursday, May 20, 2004 at 10 PM. H.602 did not get out of committee. It is dead unless the Governor calls for a special session. It may be reintroduced in January. If the group still wants to pursue H.602, I would recommend the following ideas.

1. Review the Bill. Are there any changes you want? I would plan to reintroduce it in January 2005, if you want. It can be introduced as a house, senate or joint resolution.
2. Find a great example of a ham radio operator doing something good.
3. Identify your local representatives and senators. Buy them a cup of coffee and explain the bill.
4. Invite you local representatives to meetings.
- 5). Get the endorsement of emergency groups.

All the best to you!

Contacting RANV

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

PUBLIC SERVICE

by Mitch W1SJ

Last Saturday was the *Essex Memorial Day Parade*. Operators included: KB1EQG, KB1EYC, KB1FRW, KB1JOO, KM1Z, N1LXI W1DEB, W1SJ, W1WAW and W4YFJ. Ham communicators helped to line up the parade participants and passed updates to the reviewing stand. Just as the **RANV** float was being announced at the reviewing stand, yours truly appeared out of nowhere in the **RANV** Reconnaissance Car (*go-kart*), startling the announcer! Lots of folks saw the **TWO RANV** banners as they were carried down the parade route. Everything went smoothly and organizers were very happy that the ham contingent was there to help out in a year where they got fewer volunteers.

Sunday was the 16th running of the *Vermont City Marathon* in Burlington. Some 40 amateur operators provided communications for aid stations, medical facilities, information booths and race officials. Hams came from all over Northern and Central Vermont and parts of New York. **RANV** members in this group included K1CRS, K1UC, KB1LAY, N1CCL, N1YWB, W1CHG, W1DEB, W1RLR and W1SJ. Communications Organizer Carl KC1WH has been preparing this for weeks and the work for many hams began mid-week with an organizational meeting. I was involved in setting up a second repeater for the event and checking coverage throughout the course. Activity was much busier this year and there were many times both repeaters were busy. A serious problem was that there were no medical personnel in place at six different aid stations and much time was devoted to resolving this so that full services were in place for the runners. There was also a much larger number of runner drop out information passed this year than in previous years. Added to this was the usual situation of reopening the Beltline after the race had passed and the unusual situation of a broken down pickup bus.

A lot more effort went into discussion of operating techniques. This paid great dividends, as the operators were noticeably sharper than ever before. There were no radio transmitter lockups or doubling heard during the entire day!

VHF QSO PARTY

by Mitch W1SJ

The *June QSO Party* will take place on June 12-13th, starting at 2 PM Saturday and ending 11 PM Sunday. I encourage everyone to get on and make some contacts and build skills in contesting and VHF propagation.

The best scenario is for you to have a six and two meter multi-mode radio and yagi antennas in your car and to drive to a high location. In our area, Mt. Mansfield will provide many contacts over a wide area. Just make sure you are prepared for unpredictable weather. Other good spots: Mt. Philo in Charlotte and Whiteface Mountain in New York. Do your homework and obtain any necessary permission first. You can always operate from home, but as they say, "the higher the better."

If you only have high power FM equipment and an outside antenna, you will also be able to make contacts, but they will be fewer in number due to the limited range of FM. Check 146.55 and 146.58 MHz for the action. Keep the radio on all day and you will hear activity from time to time. If all you have is a portable radio, try to get to a high spot.

I will be operating as WB1GQR from Mt. Equinox, which is 95 miles south of here. I make a habit of turning the yagis north at the top of the hour. Most base stations and many mobiles in this area can be worked on FM. Keep the radio on and you will hear me from time to time.

Remember, if everyone from the club got on at the same time, there would be lots of people to work! Let's make 4 and 8 PM on both days **RANV** activity hours. If you don't have time to spend operating, just get on at these 4 times and let's see how many of us we can get on the air.

FM FOX HUNT

by Mitch W1SJ

Free Radio Burlington is back. Originally appearing on 87.9 on the dial, they were visited by the FCC and "requested" to stop broadcasting. Recently, they reappeared on the air on a new frequency, 94.3 MHz from a residence in Burlington. In the last few weeks they moved to a new location and are continuing broadcasts. Details on their station (*not location*) can be found at www.freeradioburlington.org.

It's beyond our scope to go into the whys and wherefores of pirate broadcasting. That's left to the reflectors and chat rooms. For us, this is nothing more than an opportunity to hold a transmitter hunt! I enjoyed RF sniffing around the neighborhood. Now it's your chance to give it a try. Forget your tape measure yagi – it won't work on the FM band. You won't need much of an attenuator either. The dynamics of the 94.3 frequency make it interesting. On this frequency is blowtorch CKMF transmitting from atop Mt. Royal in Montreal. They cover up our target station pretty well anywhere beyond a few miles outside of Burlington. Even in the city, there are a lot of areas where the swishing noise (*due to two signals crashing into each other*) is pretty severe. I used my VX-5 (*poor FM receiver*) and paper clips to zero in. The actual location is quite interesting!

During the hunt, you'll be treated to some very different radio programming! Let's just say that it's very opposite from Rush Limbaugh. It is also interesting in that when they are off the air, they often leave the transmitter on, but the audio in their studio (*not much of a studio*) picks up stray RF from WVAA on 1390!

Go out and have fun DFing this one, while they last. Don't harass them – enforcement is not our job. Who will be the first find them and win the hunt?

OPERATOR TRAINING FOR EMERGENCIES

III. How To Get Training

by Mitch WISJ

Vermont Technical Coordinator

How does one become a good operator in preparation for an emergency situation? The answer is quite simple – lots of practice! You certainly don't get good at this by just reading about it in a book! However, getting quality practice is difficult. As mentioned before, emergencies don't occur at predictable intervals. A good start on your training is to volunteer to operate in public service events. Such activities will teach you to prepare for the assignment, learn to have backup equipment, learn net protocol and get some on-air experience during situations. Unfortunately, the amount of practice one can get from these events is rather limited. Some operators may get only a few transmissions in during an event because not much is going on at their station. Others may get a lot more. However, doing these types of events year after year and experiencing different assignments will eventually build valuable experience.

To build the skills to be a good operator requires more than the few public service events held each year. I've found that there is an excellent way to build operator skills in a short time – *Contesting*. All amateur radio contests require three important abilities: *listening*, *sending* and *logging*. And these are the very three things which are also important in emergency communications. After all, our job is to collect information, send it, receive information and transcribe it or pass it along to someone. All of this must be done quickly and accurately. If you seriously take part in an amateur radio contest, you will make hundreds and perhaps thousands of contacts. Every contact requires listening, sending and logging. If you mess up while performing any of these skills, the logged information will be wrong and the

contest sponsor will remove the contact. With today's electronic logging, it is a simple matter to quickly determine incorrectly copied information.

Not only will you build your listening, sending and logging skills, you will also build operating stamina. The reality of emergency operating can involve many hours of operating with little to no relief. Can you operate for hours with little sleep and remain coherent and alert? Contesters do this routinely. To seriously do a contest, you must invest many hours of sitting in the chair, operating. The one difference between contesting and emergency operating is that in an emergency, one needs to also interface with people in real time throughout the event while contesting is often done alone.

“You certainly don't get good at this by just reading about it in a book!”

Another skill a contesteer trains for is instinctively knowing what to do when things go wrong. In a 24-hour contest, the chances are very high that something will not go your way. Equipment failures, bad propagation, interference, even power failures plague all operations. It takes tremendous self-control to squelch the normal emotions and take all logical steps to stay on the air and continue to make contacts. Emergencies and disasters are fraught with the same types of problems which must be dealt with.

Nothing seems to raise the collective emotions of operators more than contesting. Contesters have a unique love of this part of the hobby, oftentimes bordering on fanaticism. Non-contesters often have an intense hatred of contests and contesters, oftentimes bordering on fanati-

cism. The feelings come from a combination of territorial fighting and lack of understanding of what contesters are trying to accomplish (*no, we are not trying to jam your frequency...*). If you are one of the contest haters, you need to put those feelings aside and embrace contesting as a *tool* to make you better as an operator. This is a golden opportunity – don't walk away from it because you had a bad experience years ago.

It is easy to operate in a contest. You don't need to preregister or send in an entry fee. You do have to do some homework ahead of time. Your homework will be to research the contest rules and specifics – what days, times, modes and frequencies. Knowing these, you then make a goal to operate a specified number of hours and/or make a specified number of contacts. Making a goal is crucial. It signifies that you intend to commit to doing the contest and to not just playing around. Not everyone can operate the 24 or 48 hours of most contests, but you can certainly make a goal to operate whatever number of hours your lifestyle allows. Just remember, the more you operate, the better you get. Making a goal of the number of QSO's gives you a standard by which you can measure yourself when the contest is done. It is important that you evaluate your efforts and detail ways to improve your efforts. Don't just cop out and say that you need a better station. Certainly, you can improve your skills and do better with the station you've got.

Attitude is very important. It is imperative that you do not get discouraged. Contesting is very difficult for the newcomer. You must be able to speak coherently and project your voice. You must be able to copy

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detailed information under less than ideal conditions with weak signals and interference. Often, you have to log this information and operate radios, tuners, amps and rotors simultaneously. All the time, you have to keep your wits about you and be sure to choose the correct frequency to be on at any given time. There is a lot of multitasking which you have to do. You are not born with this ability. You learn and practice. Keep a positive outlook and be ready at all times to learn from your mistakes. You will make many of those.

Homework: Operate in a contest! If you read this article in time, plan to operate in both the *VHF QSO Party* on June 12-13th and *Field Day* on June 26-27th. The VHF contest is a great place for Technicians to gain skills. If you can, grab a 6 and 2 meter SSB radio and yagi antennas and head for the highest mountain you can get to. If you don't have the equipment, hook up with someone who does and try a multiop. If you miss the June contest, you get another shot on September 10-11th.

No amateur operator should miss *Field Day*. It is the culmination of emergency operation from the setup of stations under emergency conditions right down to making the contacts. Get involved in as many aspects of *Field Day* as you can with your local club. *Field Day* is a 24-hour event and stations need to be on all night. Your help is needed!

If you miss the above contests, another contest you might try is the *IARU Contest* on July 10-11th. This is a DX contest held during the usually slack summer conditions and big antennas are certainly desirable. However, many contacts can still be made with a dipole and 100 watts. There will likely be a higher level of frustration trying to work the DX stations with a small station, but you will learn the valuable lessons of patience and persistence – skills all good operators must also have.

Enjoy some summer operating. I'll see you in the contest!

Field Day...

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There are many things to get involved in at *Field Day*. Some people lean towards operating, others stay more involved with setup and site details. One of the key activities is antenna setup on Friday afternoon and evening. When you get involved in antenna setup, you'll learn all there is to know about setting up high performance antennas quickly. We will start antenna setup at 2 PM on Friday (*as allowed by the rules*). People arrive all through the afternoon and early evening, depending on their work schedules. The goal is to erect all 12 antennas on 3 towers before nightfall.

On Saturday morning, we build a ham radio city in the field. Three tent structures contain the operating positions. Radios and assorted equipment get hauled out of vehicles and installed into these tents. A full food service facility with canopy, grill and tables must also be set up. Finally we fire up the generators and put the stations through their paces, making sure everything works.

The *Field Day* operating event starts at 2 PM. We have 24 hours to do whatever we need to do to make a big score. While the phone and CW stations are staffed by trained contest operators, the VHF and GOTA (*Get On The Air*) stations are open for everyone to enjoy. For many hours last year, these stations sat idle for lack of operators. This year, we will be setting up an operating schedule for both stations. Bob KB1FRW is handling this part of *Field Day*. Please contact him and volunteer! Between now and *Field Day*, we will have several opportunities to get familiar with equipment, logging software and contesting, in general. Please seek out one of these opportunities and learn. You will enjoy yourself far more during *Field Day*.

At 2 PM on Sunday, we stop operating, collect the logs and usually pause for 30 minutes for a cool drink and to reflect on all the RF we've

NEWSLETTER IN JEOPARDY

A few month ago, I reported on the state of *News & Views*. The particular problem was lack of input by the membership. Outside of the normal monthly columns and the occasional public service article, I receive little. Since that article appeared in March, the situation has not improved. It is not the job of the editor to WRITE the entire newsletter; instead the editor's job is to build a publication from membership input. This is a journal in which we all share our radio experiences. Sadly, it hasn't looked like that in a while. Perhaps we have reached the day when local club newsletters are obsolete and no longer needed. It certainly appears that the membership doesn't consider it to be terribly important.

It takes many hours to produce the newsletter. I give this time freely because I feel it is for a good purpose. With the lack of input lately, I question the time spent. Suffice it to say, if the situation doesn't improve, I will moving on to other things.

been throwing around. Then is time for the serious work of taking everything down and packing it away. This is a good opportunity for those who couldn't make *Field Day* to show up on Sunday afternoon and provide some much-needed relief. Tear down is tough, mostly because many of us are tired. A few fresh recruits do wonders for the general morale.

Full details on *Field Day* are at the **RANV** Web site, www.ranv.org.

So, take that first step and get involved. E-mail W1SJ or KB1FRW and let Mitch or Bob know what times you will be at the *Field Day* site, what jobs you would like to be involved in and what operating times you desire. Then, all you need to do is to show up!

NEXT MEETING:
“Radio Astronomy”
Tuesday, June 8^h, 7 PM
O’Brien Civic Center

FIELD DAY:
Fri June 25: 2PM- 9PM
Sat June 26: 10AM-12AM
Sun June 27: 12AM- 6PM
Redmond Road, Williston

RANV

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