



Radio Amateur News & Views

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THE W1KR VARIETY SHOW The January 8th RANV Meeting

For our first meeting of 2002, we are pleased to have David W1KR return. Last September, he was at the *Antique Wireless Association*. At that show, he took slides of the various pieces of vintage equipment for sale at the flea market, in which not a single piece of computer gear could be found. If you like the old stuff, you will enjoy the show! David will also update us on his hobby of constructing miniature models of historic telegraph keys. He showed us some of his work in 2000. Many of us who don't operate CW, or who only use electronic keys really don't appreciate the history of the telegraph key. However, you will ooh and aah over the amazing workmanship shown by David in his models. His latest project is the *Vibroplex Upright*, in 1/2 scale!

David also tells us that he has a tray of slides from the infamous Hosstraders Fleamarket at its last hurrah at the Rainchester Fairgrounds. Plenty of Vermont hams were caught in action.

We also hope David will have some time to discuss some of the loaded portable and mobile antennas he has built over the years. With HF portable operation the rage, these types of antennas are quite popular.

So join us at 7PM on Tuesday evening, January 8th for the RANV meeting. The pre-meeting show at Zack's on Williston Road should get underway at 6 and all are welcome to join in the culinary festivities.

VT QSO PARTY

The Vermont QSO Party will be February 1-3. This is both a contest and operating event. The simple instructions are: 1. Turn on radio (*most important*) and 2. Call CQ a lot. Last year, I contacted 2000 stations in 50 states and 77 countries. But, you don't need a big station. David W1KR makes a whole bunch of contacts mobile. The key thing is to get on, or if you don't have a station, talk a bunch of buddies to get on. For rules, go to the RANV web site.

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MILTON HAMFEST FEBRUARY 23RD

Mark it on your calendar. Call up your friends. Shout it out from the rooftops! The 20th annual Milton Hamfest and ARRL Vermont State Convention will be Saturday, February 23rd at Milton High School. Details are the same as last year's event and admission is the same.

Right now, we are working on the Forum Program. Returning from last year will be the ARRL, Contest and QRP forums. Other forums planned will be on antennas, satellites and microwave. Exams will again be given in the morning and afternoon. A new service available this year will be DXCC Card Checking. We also hope to be able to offer WAS and VUCC card checking as well. We always would like to get your input.

As little as five years ago, there were 4 hamfests in Vermont (*Charlotte, Randolph, Rutland and Milton*). Milton is the sole survivor. It comes as no surprise that hamfest attendance all over the country has been dropping dramatically. We have been holding stable in attendance for a couple of years at Milton, but it still requires all of you to attend. The hamfest is nothing if you think about it but don't show. You don't get the buys at the fleamarket (*there were some great buys last year!*), you don't get the wealth of information at the forums and you don't share in the camaraderie of fellow hams and experimenters. So, when we say to shout it out from the rooftops, we mean it! Just be careful of the ice.

OUR LAST RANV MEETING

by *Charlie W1CHG, Sec'y*

On the 11th of December, many of the RANV faithful attended the annual party at Mitch & Debbie's house. There was an abundance of great food and drink, many great conversations, with a total of 33 people filling the house quite well. Most of the rooms were full to overflowing with guests and their stories and recollections of the year gone by. Folks chowed down on cold cuts, meatballs, hot dogs, chicken wings and knishes. Desserts included chocolate cake (*disappeared fast!*) and several varieties of cupcakes. Mitch's holiday decorations were 1000 watts of lighting illuminating the tower and antennas. There was a rumor that he was doing some maintenance on them but most of us knew he was worried that Santa might get caught in the guy wires. Good to see all of you at the party, Hope to see you at the January 8th meeting.

Contacting RANV

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

THE PREZ SEZ

by *Paul AA1SU, President*

During the month of January, the President of the United States gives his "State of the Union" Address. I'm sure that this year, he will have much to go over. I am here to tell you that the state of our club is good. In fact, it is great! We have accomplished much in our nearly 11 years. We have the highest membership of any club in the state. We actively participate as a club in several ARRL Contests. We have the largest, and lately, the only hamfest in Vermont. We (along with other clubs) support several charities with our 2 Meter capabilities. We have several Fox Hunts per year, and we train new hams to get their license twice a year. Plus, we put on one of the greatest Field Day shows in the country.

Of course, we could not do it without you, the member, supporting us the whole way. You are what makes this club tick. We are getting more and more help with meeting topics from hams right here in the club. You probably don't know this because we make it look easy, but it's hard coming up with new and exciting topics each month. We start off the year with Dave W1KR because he is off from teaching that month. From there, we rely on what interests us, and some luck. What interests you? Maybe you have recently done some research on an area of ham radio that interests you, and you would like to share it with the club. If so, we look forward to hearing from you.

I, along with the other officers Brian N1BQ and Charlie W1CHG, pledge to keep the lifeblood of the club flowing along. We look forward to seeing you at the club meetings, hearing you on the air, and meeting you at the Milton Hamfest. In addition, I would also ask you all to get on the air for the Vermont QSO Party on February 1-3. It is a perfect opportunity to get our "rare" state on the air. Hams around the world are always happy to work Vermont. It happens to me all the time, still.

Things are still changing in Amateur Radio. Threats to our bandwidth are coming in every month. Forty Meters is in the news recently. And, there is talk of creating a new amateur band. One thing is for sure; RANV members will be there experimenting at the cutting edge of the new rules and technology. So, keep up the good work, and keep on doing whatever it is that you do.

FYBO 2002

by *Brian N1BQ*

OK lads and lassies – winter madness is upon us. The annual event called FYBO (*Freezing Your Butt Off*) is fast approaching. Last year we had a blast and did very well and this year should be even better. We will once again do it from N1BQ's QTH, *Wulfdn*. This is the new vastly improved version with more than double the old cabin size. The event will be a sort of combination housewarming party and ham radio contest.

The event is Saturday, February 2nd from 9AM until 9PM. FYBO is CW only, although there is a rumor that next year SSB will be added. Kristin AA1SK has volunteered to step into Jay KK1J's shoes and cook chili. I dunno – that's a mighty tall order! Plan to come to see if she can do it! Just to be safe, Sara, will cook something a little more bland for the less courageous or plain cautious!

Get out your half gloves for your keying hand, those cute little fur trimmed covers for your earphones, bring your rigs if you want, keyers, paddles, etc, we will have plenty of power.

I would like to get a head count right away of who is interested in general and who is pretty definite on coming. Contact me at n1bq.wulfdn.org. For more information see <http://www.extremezone.com/~nk7m/fybo2002.htm>

ROAD KILL 10 METER CONTEST

by Fred NIZUK

Question: What do you get when you combine six operators, two modes, four elements on 10 Meters, 1 Kilowatt of RF output, and a weekend in December?

Answer: 2161 QSOs, 220 multipliers, six smiling operators, and bragging rights for another year.

It started two years ago, with an idea from Ted K1HD. During that year, he had purchased a new home, where he was able to erect a modest tower. Previously, he had lived in an RF black hole, tucked in the Winooski River valley in Richmond. Curious how well the new station would work on 10 Meters, he decided to invite a few friends (*Fred NIZUK, Paul AA1SU and Wey K1WEY*) over to participate in the ARRL 10 Meter Contest. It was also a chance to put the call W1PU (*Road Kill ARC*) in a few log-books.

The Road Kill ARC is a group of operators that support the idea that good operating and having fun with amateur radio do go together. Besides fast pace, low pressure contesting, they've been known to put the club station on the air from the middle of Lake Champlain, off a 26' sailboat. For this first contest, a modest goal of 1000 QSOs was set. That goal was easily met, with over 1500 stations put in the log, and W1PU winning the multi-op category in Vermont. But then, it was the only one competing in that category.

The following year, the operation went pretty much the same. We beat the level we set the previous year, placing over 1700 contacts in the log, and again winning the multi-op category in Vermont without any challengers. We had even added a small amount of CW operating. You see, the 10 Meter contest, in the multi-op category, only has multi-mode operation. Although we were piling up the contacts in SSB, we still were getting slaughtered in total points because few contacts were made on CW, causing a serious deficiency in multipliers and points. It was time to raise the bar.

We needed to go to serious multi-mode operation. Ted and I started planning months in advance. We started recruiting people to help us, both CW and phone operators. Equipment was combined from several stations, setup, and tested. Murphy would look on

from around the corner, popping in to visit every once and a while. Word on the street was that we would be getting a serious challenge from WJ1Z, who was also putting together a multi-op for the contest. We mapped out our strategy, scheduling operators to maximize our score.

Setup was not without frustrating moments. Murphy came to visit, and not for the only time that weekend. Keying circuits wouldn't work. RF was getting into things. With some borrowed equipment, and a trip or two to Radio Shack, the station was up and running, and on the air checks were good. We were ready to contest!

A good rule to remember: once you have things working, DON'T CHANGE THEM! Even the simple things can bite you. Come Friday evening, K1HD was the first in the operating chair, ready to start the contest. Calling a few CQs before the start, the computer went crazy! He quickly switched to the backup, his laptop computer. Turns out we switched keyboards after we had everything tested, and RF was getting into it.

Ted was helped on Friday evening by Matt KB1EXM. Matt had helped in the **RANV** Field Day effort this year by manning the VHF station. Originally, we had primed him to operate Saturday afternoon, when there are mostly W/VE stations on the air. He was a bit surprised when the first station that called him was a VK4! We had told him the exchange was 59 and state, so he was a bit confused when the Australian was giving him a serial number. He quickly recovered, and enjoyed his first taste of contesting when there are a lot of stations on the air, as well as his first DX contact.

I had the early morning shift to Europe. When I arrived, the band was still closed, giving me time to warm up the equipment, and pour a cup of coffee. The path to Europe opened up, and I worked stations at a good clip until Fran KM1Z showed up. We switched to CW, and put Fran in the chair.

I'm not sure Fran was expecting what happened next. Lately, he has been doing his contesting QRP, and the band responded to his strong signal and VT exchange with a pileup that lasted for hours. I had to chuckle when I heard him comment to no one in particular,

"I can't work 16 of you at once!" I left him in there for a few hours, with the CW keyer getting a good workout.

It was time for my favorite part of the contest — the first swing west, towards the US. Some W/VE stations do find their way in to work you from the back of the beam, but the flood gates open when you turn the antenna. Ted and I enjoyed rates of over 150 contacts/hour on SSB, until we passed the controls to Paul AA1SU and Fran. Fran wasn't scheduled to operate again, but found that operating QRO was just too much fun. They teamed up to finish the day filling the log with domestic and Oceania contacts.

The first full day had gone without a problem. On Sunday, Murphy showed up to try his hand at operating, though he wasn't on the schedule. The plan was to have the same operators as the day before, plus Grant K1KD, mixing both CW and SSB operation. What wasn't planned was an overheating amp; RF in they keying circuitry; and a logging computer clock that mysteriously decided to stop; though, the rest of the software worked. These problems were quickly resolved, and didn't slow our pace significantly. Fran, who finished of the contest working CW, remarked that after he (*and his rare VT multiplier*) were spotted on a DX cluster, felt like "he was mugged by a group of thugs."

Before the contest, Ted and I had set two goals: to retain our top spot in the Vermont multi-op category; and to make 1500 SSB contacts, while increasing our CW score. Each evening, Ted would compare notes with the folks working WJ1Z, and it was neck and neck though the whole contest. In the end, it looks like we may have squeaked it out, by working 7 more stations, and scoring a few thousand more points than WJ1Z (*a small amount, considering the 1.27 million point total score!*). Though we came 77 QSOs shy of our 1500 goal on SSB, the extra time spent on CW may well make the difference in Road Kill holding on to it's top honor for the next year.

Many thanks to the folks who operated at W1PU; the operators at WJ1Z who kept us pushing; and to everyone who got on the air and made a contact with us. We're already looking forward to next year.

THE ARRL FIELD ORGANIZATION

Local Government Liason & Public Information Officer

Have you ever wondered how you can get more involved with Ham Radio in your area? Want to try something new, fun, and different, all while making new friends? This month, we are starting a new series of articles about the ARRL Field Organization. The League is volunteer based, and the Field Organization serves as its backbone. The Section Manager (SM), elected every two years, is responsible for managing the Field Organization programs in Vermont. Our SM, Bob DeVarney WE1U, recruits League members to staff eight crucial program areas: emergency communications, message traffic, volunteer monitoring, RFI problem solving, support of affiliated clubs, government liaison, encouragement of technical activities, and dissemination of on the air bulletins.

Here's where you come in. You can sign up for an ARRL appointment, no matter what your skill level, or license. There is a place for everybody, and we will be giving a brief description of two of the 18 available appointments, for the next nine newsletter issues. For more detailed information, please visit the ARRL Field Organization on the League's web site, and click on the office that you might be interested in. You must be a Full Member of the ARRL to be considered for an office. This month we will start with Local Government Liaison and Public Information Officer.

Want to know more about your local government? How about getting more involved helping hams with zoning issues? The Local Government Liaison (LGL) serves as a primary contact for amateurs encountering problems dealing with local government agencies. The LGL monitors local dockets, proposals, and actions of town councils and any other legislative agencies whose actions can directly or indirectly affect Amateur Radio. In addition to attending meetings, getting familiar with local policies, assisting local amateurs, and reporting to the State Government Liaison (SGL), the LGL educates elected and appointed officials, formally and informally, about the value of Amateur Radio to their community. Currently the LGL position in all areas of Vermont is vacant.

Interested in a future with public relations? How about working with the local TV station? The Public Information Officer (PIO) establishes a list of media contacts in the local area and maintains personal contacts with appropriate representatives of those media, such as editors, news directors, science reporters, etc. The PIO then becomes the main contact that the local media looks to when information about ham radio activities is needed. Working with the LGL, he/she establishes and maintains personal contacts with local government officials and explains to them in brief, non-technical terms about Amateur Radio and how it can help their communities. Some other duties include promoting local hams, minimizing any negative media publicity, generating advance publicity of Ham activities, such as Field Day, and helping individual hams and radio clubs to develop and promote good ideas for community projects to display our hobby in a positive light. The PIO reports to the Public Information Coordinator (PIC). Currently there are two PIOs in Vermont, but there is plenty of room for expansion in your town. They are Bob K1HKK in Brookfield, and Jim N2EA in Essex Junction.

Sounds like a lot of dry stuff, right? Well it's not, for the right person. You don't even need to have previous experience in one of these areas. There is a handbook that the League provides that would fill in the blanks when needed. More than one person is needed for each position, as these are local duties, and they are not terribly time consuming. So why not consider a more active role in your local ham radio community? It can be a fun and educating experience for both you and the people that you work with and help. The web site to start with is www.arrl.org/FandES/field/org. Here you will find a link that will give a more detailed job description and another link to an application for the position, if it is something that you are interested in.

241 AND 322 GHZ RECORDS

by Brian WAIZMS

I'd like to claim what I believe are a pair of North American DX records for the upper two amateur radio allocations, 241 GHz and 322 GHz.

At 01:45z on Dec 15th, 2001 a QSO was made between W2SZ/4 (WAIZMS) and WA4RTS/4 on the 322 GHz band over a whopping distance of .05Km. Both stations were located in FM07ji.

I know it's not much as far as DX is concerned (*about 50 feet*), but it's on par with DB6NT's 411 GHz DX record and is a North American first for the >300GHz band, excluding light.

About an hour later, at 02:35z, a QSO was made between W2SZ/4 and WA4RTS/4 on 241 GHz over a distance of 1.1Km. This is a North American first and record for the band.

Both of the about QSOs were made using modulated CW and wideband FM IF receivers. Power output on 322 GHz is estimated to be just a few microwatts while on 241 GHz the power is a measured 0.75 milliwatt. The stations are constructed of 80.6 GHz free running Gunn oscillators driving GaAs diode triplers (*University of Virginia design*) to give output on the 241 GHz band. The triplers have a tiny amount of 4th harmonic output which was used for the 322 GHz QSO. Both stations use homebrew 6-inch parabolic dishes with hyperbolic sub-reflectors.

It is hoped that the Gunn oscillators will be phase locked in the future allowing the use of narrow band modulation thus resulting in better DX. Photos of the station(s) and sound files can be found at www.mgef.org. I'd like to also thank Pete, W4WWQ and Geep, WA4RTS for their help with these QSOs.

CONTESTING CORNER

by Paul AAISU

The results of the 2001 ARRL June VHF QSO Party have been published. Once again Mitch, operating as WB1GQR from high atop Mt Equinox, has just about crushed the competition. Our RANV Newsletter editor led in several categories for Single-Op Low Power, including First Place in the New England Division, Third Place in the whole country, and most QSOs by band for 144 MHz, 222 MHz, and 432 MHz. Way to go Mitch! This contrasts slightly with Mitch's Soapbox statement in QST where he states that these three bands seemed quite flat. This is quite an accomplishment, as only four of six bands were utilized, and he did it without the aid of other operators.

Looking ahead in the contest schedule, we start off with the *North American CW QSO Party* on Saturday, January 12th. The phone version runs on January 19th. It starts at 1 PM and lasts for 12 hours. The power limit is 100 watts, and the exchange is name and state. Last year, the most popular name from Florida was Chad, because of the whole voting thing. It was quite humorous. I know that several of you now have the code, but can't copy these fast exchanges yet. This is your incentive to work on increasing your code speed! Many states can be worked in one of these QSO Parties, without a major time commitment.

Here's some advice. First, learn what your call sign sounds like when it is sent fast. Then, for Generals, listen higher up in the CW portion of the band. Speeds are usually a little lower there. Find a strong station, and copy the ham's call sign, name, and state. When you feel ready, send your call sign only. He/she should reply with your call sign, his name, and his state. You will already have this info, so just send your name and state, as clearly as you can. Don't worry about your

sending speed. Then move around the bands, repeating these steps until the contest is over. For Technician operators, hang out in the Novice portion of the band and do the same thing. However, hams calling CQ here are rare, except for Ten Meters. Practicing with contest software beforehand is the key.

VHF action returns this month in the form of the *ARRL VHF Sweepstakes* on January 19-20th. The event starts 2PM Saturday and runs until 11 PM Sunday and all amateur bands above 50 MHz are fair game. Give your Grid Square (*FN34 for most of us*) as an exchange. Look for SSB activity around 50.125 and 144.200 MHz; FM on 146.55 MHz.

For those of you with the acreage to put up a 160 Meter antenna, the weekend of January 25 brings us the *CQ WW 160-Meter CW Contest*. This starts at 5 PM Friday, and ends at 11 AM on Sunday. The exchange is RST and State. The DX WILL be on for this one. If you think that Vermont is rare on Ten Meters, you will find that it is even more so on this band. This applies to both stateside and DX contacts. There are antennas available for this band that don't take up 260 feet. Do some research, and you will be amazed at what you will find. There are even hams who do this while mobile, and not just while contesting!

And finally, the one we have all been waiting for. The *Vermont QSO Party* starts 7 PM on Friday, February 1st, and runs 48 hours. The exchange is RS(T) and County. My recommendation is to call CQ the whole time. You will not get anywhere Searching & Pouncing, and CW is not going to cut it. Rules will be in the usual publications and on the RANV web site, so the rest of the country will be looking for us. All states, provinces, countries and VT, NH and ME counties count as multipliers! So, read those rules and put Vermont on the air!

Okay, just one more weekend to cover. The *CQ/RJ WW RTTY WPX Contest* is February 8th at 7 PM and runs for 48 hours. RTTY is another fun contest mode for you to explore. In fact there is not a whole lot of rag chewing or Nets using this mode, just a lot of contesting. The exchange is RST and serial number, starting with 001. The multiplier is the prefix of the call sign worked, such as N8, DL5, HG1, U3, etc. You would think that this would make W1 very undesirable because it is so common here. But, believe it or not, so many hams try to get unique prefixes, that W1s are hardly mentioned in the contest results. Complete rules are available on page 104 of the January 2002 CQ Magazine. They are probably also available on CQ's web site: <http://www.cq-amateur-radio.com>. So cozy up to the "Green Keys" and give this one a try. Contesting software is available on the web from a variety of sources. Next month, the ARRL DX Contests.

KK1J NEW QTH

Jay KK1J has moved to Tucson, Arizona, likely to take advantage of the better climate. He passes his wishes along:

"Have a Merry Christmas and a Happy New Year. I have been experimenting with W4MQ's Internet radio. I have made a few contacts with it. It is quite interesting. I live in an antenna-restricted neighborhood, so it gets me on the air. I am planning my attack on the association for permission to erect a dipole or loop antenna. Most of my operating so far has been done at my father-in-law's house, with a portable dipole, tuner and my Icom IC-706 MKIIG. I will keep you posted on my progress. Have a great holiday to you and your family from mine.

73 Jay KK1J"

THE NEW DXBVT DX CLUSTER

by Fred NIZUK

During the holidays, a new resource became available for the ham radio community. A DX cluster, named DXBVT, is now online and open to all amateur radio operators. This cluster, that can be reached anywhere in the world via the Internet, or by 2 Meter radio in the greater Burlington area, runs 24 hours a day, 7 days a week, to bring you information that can assist your radio operations. In the coming months, there will be a web site put up to provide support information (tutorials, manuals, software, etc.) to make the most of the DX cluster. In the meantime, we'll be running a series of articles to help you get started. If you have questions, you can email Fred NIZUK, who's the Sysop of the cluster, at n1zuk@arrl.net. This month, we'll answer a few questions —

Q: Just what exactly IS a DX cluster?

A: A DX cluster is a network that connects a number of hams together, to share information on the DX stations they're hearing, and what frequency they're operating on. On the surface, it looks like a large chat room, where information comes up on your computer screen as a specially formatted message. Since everyone that's connected is a ham (unlike Internet chat rooms, filled primarily with 13-year old Brittney Spears fans), the information can help you determine band conditions, locate needed or rare DX stations, obtain QSL information, etc.

Q: When I sign on, what's all those numbers and stuff? Is it part of that 'specially formatted message'?

A: The majority of the messages you'll see on your screen look something like this:

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DX de WQ5W: 14020.3 XF3IC IOTA NA045 0302Z
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The first part (DX de WQ5W) means that WQ5W sent a message that he spotted a DX station. The station is on 14020.3 Hz (20 meter CW). He also made a comment that its IOTA number is NA045. The last part (0302 Zulu) is the time in UTC the message was sent. Having the message formatted like that makes it easier for computers to handle it, plus once there is a bunch of them on your screen, allows you to scan through them quickly. These aren't the only messages you'll see. Messages with propagation reports, weather information, and standard chat style messages are also sent throughout the network.

Q: Is that all it can do?

A: The software that DXBVT is running is called DXSpider, which is an open source program developed by Dirk G1TLH. Based on the existing AR Cluster software, it's more like AR Cluster on steroids. Besides DX spotting, the software allows for sending mail messages and real time chat messages, to anyone on the local cluster, on any one of the other clusters, or to all the users on the system (usually between 150 and 300 hams). In addition, there is QRZ.com lookups (from the Internet, not just from an old callbook CD); bearing/distance information; satellite pass info; and info on sun/moon rise, MUF,

DXCC, and more. A large QSL manager, and IOTA databases are to be added in the near future.

Q: OK, you talked me into it. How do I get on?

A: There are two ways to connect to the DXBVT cluster. The majority will do it via the Internet. There are several ways to do it — using a terminal program; with the function that might be built into your logging program; or by entering this address into the address line of your web browser: <telnet://n1zuk.dyndns.org:8000>

You'll see a short greeting then a prompt (login:). Just enter your valid amateur callsign. You'll see the message of the day, and you're in! The program will nag you for some info (your name, location, grid square), but you can ignore it for now (but please do fill in the info at some point, as it allows some of the functions to work better!)

The other way to get on is using 2 Meter packet. During contests, your family may not appreciate you tying up the phone line all weekend. Dust off that TNC, hook it up, and tune it to 145.030 MHz. Connect to DXBVT. There's no need to log in, as it does it automatically, using the call that's programmed into your TNC. The antenna is in a pretty good spot, near Route 15 and Susie Wilson Rd. on the Colchester/Essex town line (near Ames Dept. Store). Give it a try, you might be surprised.

Q: Isn't using a DX cluster "cheating"? Shouldn't I find my own DX?

A: It depends on the rules you've set for yourself for operating. Some people go it totally alone. Others meet in nets. Some will pick up the telephone, and call their ham friends when that real rare DX station comes on the air. Just because you see a spot on a cluster, doesn't mean you'll work the station. You also have to hear him, and by the time you get there, you'll probably find a pile up, as many others have seen the spot as well. There are usually no 'gimme's' when it comes to radio.

Q: I'm on, but I'm lost. How do I learn more?

A: Until I get the web site going, you can look at the User's Manual at <http://www.dxcluster.org/main/usermanual.html>

If you're familiar with AR Cluster, they're basically the same. The SHOW commands are probably the most common set of commands (type '? SHOW' for a list). SHOW/DX will give you the last 10 DX spots that have been posted. You can do searches with this command. SHOW/DX ON 20M will show you the last 10 spots on 20 Meters; SHOW/DX ZL spots from New Zealand; etc.

To post a spot, you type: DX <freq> <call> <comment>. Using the example from above, you would type: DX 14020.3 XF3IC IOTA NA045.

When you ready to sign out, type BYE. This let's the system know you're leaving.

Next month, we'll go deeper in to what you can do, how to do it. Until then, good DX in 2002.

**NEXT MEETING:
“The W1KR Variety Show”
Tuesday, January 8th, 7PM
O’Brien Civic Center**

**OTHER IMPORTANT DATES:
Jan 19-20: VHF Sweepstakes
Jan 26-27: Weekend CW Class
Feb 1-3: Vermont QSO Party
Feb 15-17: ARRL DX Contest CW**

**MILTON HAMFEST
Saturday, February 23rd, 8AM-1PM
Milton High School**

RANV

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