



SIGNAL



de NINC

October 2008 Volume 17 Number 10

This Month's Meeting

Next club meeting is Thursday October 16th

This month's meeting is our annual QSL card sort. We have been sorting cards for the Bureau for many years. In the early years someone from the Bureau would bring the cards and run the sort. But since 2000 we have run our own sort with the Bureau just provides the cards.



This year we will have eight boxes for sorting so there will be room for everyone. We have invited MARA, PART, and BARS to participate so we should have some additional help. We have picked up the cards from our QSL Bureau contact so we are ready to go. See you there.

After the cards are sorted we will provide pizza and drinks for everyone.

After the cards are sorted you can look through the pile that corresponds to your callsign to pick up your cards. That is of course if you have a "1" callsign.

The road cleanup is Sunday October 19th.

Meeting site info and maps on the back page and the NVARC Website.

Wear your badge to the meeting so new members can tell your name and you can introduce your self to them. It may be worth your while.

Homebrew and Short Subject Meetings

As we kick off the fall meeting schedule think about how you might contribute to one of the above meetings. These two meetings are less formal and their success depends on member participation. What homebrew projects have you finished or are working on that you can show us? We also need three or four short subjects for the January meeting.

Last Months Meeting



Above is the receiver Dennis built and talked about.

Last months meeting program was a presentation by Dennis K1LGQ on building a Direct Conversion Receiver. First he went step by step through the building of the bag-o-parts kit which is shown completed below. Then Dennis did a presentation on Camping

and QRP. This was a presentation on an annual camping event in Maine called LobsterCon which is a mix of camping, radio, flea market and socializing.



At the meeting Ralph announced that we had received a framed certificate from the Alzheimers Association for our support of the Memory Ride in July. They also sent some pictures and a donation to the club.



The Board approved the payment of the club liability insurance which was brought to the membership for approval as it exceeds the \$200 limit for a simple Board approval.

Stan brought in a number of items for the "up for grabs" table. There were a couple of two meter radios and microphones donated by N1MNX. There were headphones, laptop carrying bags, power supplies, and other miscellaneous items.



Present at the meeting were Dennis K1LGQ, Leo K1LK, Tom K1NNJ, Gary K1YTS, Wolf KA1VOU, Larry KB1ESR, Ben KB1FJ, Phil KB1JKL, Stan KD1LE, Ralph KD1SM, Dave N1MNX, Peter N1PQ, Les N1SV, Peter N1ZRG, Jim N8VIM, Joel W1JMM, Dick W1LTN, Bob W1XP, Erik W1ZBT, Darryl WA1GON, Rod WA1TAC, Earl WR1Y

K1NNJ won an ARRL Operating Manual in the book raffle

Meeting Coffee Suspended

We have suspended the meeting refreshments program. For months the refreshment fund has run in the red. The refreshments fund was set up as a self sustaining fund and receipts have not maintained sufficient funds to continue operation.

Need a Ride?

Do you need a ride to the club meetings? Do you know someone who does? If you do please contact Bob W1XP 978-448-6559 and leave a message. We'll see that you get to the meeting.

Coax Connectors, How to choose'em and use'em

By Bob Reif W1XP

Over the last several weeks there have been several questions raised about where certain type of coax connectors can be used. There was also a question about what the loss in a typical coax connector might be. So with this all in mind I thought a discussion of where it is or isn't appropriate to use a certain type of

coax connector might be in order. I've also run a few simple tests to quantify some of the comments.

So let's start with a simple review of the most common types of coax connectors used in present amateur equipment. There are three types of connectors that probably cover 99 percent of all coax connectors used by amateur radio operators. First is the old standard, the UHF connector. The main types are the PL259 male cable plug and the SO239 Female chassis connector. This is the most common type of coax connector. This type of connector is Not a constant impedance connector. I'll discuss what this means later in more detail. The second type is the BNC connector. This is a small bayonet style connector which is small in diameter and can be connected and disconnected with a quarter turn of the outer shell of the plug. This is a constant impedance connector. This connector is typically used with the smaller diameter cables such a RG58, RG59 and RG222. The third type is the type N connector. This is also a constant impedance connector and has a screw on outer shell. This connector has a diameter about the same as the UHF connector. It is suitable for the larger diameter cables such as RG8, RG213 and LM400 and 9913. Most cable types can be mated up with a connector of either the UHF or type N.

Now most of us are familiar with the expression UHF meaning Ultra High Frequency. And we understand that to mean frequencies in the 300 to 3000 MHz frequency range. High Frequency (HF) being 3 MHz to 30 MHz and Very High Frequency (VHF) 30 MHz to 300 MHz. But in this case the expression UHF goes back to mean the range of frequencies above 30 MHz. (It was Megacycles back then) This was the time just before WWII when coax was just beginning to be used for radio communications. The PL259 and SO239 were developed as a connector for the new type of transmission line. Balanced lines of spaced parallel conductors were the common transmission line of the day. We would call them open wire line or ladder line. But the new coax type of cable had many advantages. RF transmissions line could be bundled in with other wires. It also had advantages at higher frequencies (low loss not being one of them). These higher frequencies that were starting to be developed for TV, Radar, and point to point communications in the (then) UHF region above 30 MHz. So hence the UHF name.

So where can a UHF connector be used and what are the problems with using then? Well as mentioned above the UHF connector is not a constant impedance connector. This means that the characteristic impedance of the coaxial transmission line, made up of the inner and outer conductors, of the

connector is not 50 ohms. (or any other standard coax transmission line impedance). A simple expression for the characteristic impedance of a transmission line is the square root of the quotient of the series inductance of the conductors divided by the shunt capacity per unit length.

$$Z_0 = (L/C)^{0.5}$$

This expression does not include losses in the cable but is a very good expression for most cables at the amateur frequencies. Note this expression says the impedance of the connector will be constant, only if the quotient of L divided by C is constant. If the series inductance goes down, then the shunt capacity must go down so the ratio remains constant. In the UHF connector this ratio is not maintained. The center pin is much larger than the conductor of the cable while the diameter of the inside of the outer conductor is only slightly larger than the inside diameter of the shield. This has the effect of lowering the inductance and raising the capacity. This results in a lower characteristic impedance for the UHF connector. In fact the impedance is closer to 25 ohms than 50 ohms.

Now the magnitude of the impedance discontinuity is not the only thing that is important. The length of the discontinuity is just as important. This length is measured in wavelengths. If the discontinuity is very short compared to the wave length than it will have very little effect on the propagation of the wave through the discontinuity. But as this discontinuity becomes longer in wavelength the effect of the mismatch between the impedance of the cable and the connector becomes greater. Just think for a minute of the connector as a short section of coax of an impedance other than that of the cable it is connecting. When the forward traveling wave strikes the discontinuity in impedance, a wave whose amplitude and phase is a function of the mismatch between the two characteristic impedances starts traveling back toward the source. As the forward traveling wave moves on it encounters a second mismatch between the connector impedance and the transmission line. Since the magnitude of the mismatch is the same but the ratios are reversed, (say 50 to 25 at the first and 25 to 50 at the second) then the phase of the two reflected waves will be 180 degrees out of phase. But the amplitudes will be the same. The effect of the two waves as seen by the source (or any other point on the line between the connector and source) is the vector addition of the two reflected waves. If the connector length is short in wave lengths the two waves are almost 180 degrees out of phase and cancel each other almost completely. The reflected wave is almost zero and the SWR is almost 1 to 1 . Now as the connector gets longer in

wavelength as the frequency increases, the travel distance in wavelengths (twice the length of the connector, IE forward and back) becomes greater and greater. This means the phase between the two re-ward traveling waves becomes larger than the 180 degrees due to the impedance ratio at the two points of reflection. So the waves no longer cancel and there is a large resultant reflected wave and the SWR is increasing. This reaches a maximum at the frequency where the connector is a quarter wave-length long. As the connector gets longer still the SWR actually decreases till it reaches a half wave length where the two waves again cancel each other and the SWR is 1 to 1 again. So based on this it can be seen that the UHF connector must be used where the length of the discontinuity is short in wave-lengths. Basically this is anywhere below UHF.

The UHF connector presents no problem in the HF range. The old conventional wisdom was Two meter and down, but in this case it meant frequencies below the two meter band. This is all the HF bands, six and two meters. Use the type N or BNC above the two meter band. That would be the 222 MHz band and above. Now of course the N and BNC work well at the lower frequency. They have several advantages at the lower frequencies. Low cost is not one of them. But the N is more water proof than the UHF connector. You should never rely on the connector to keep water out. It is necessary to provide waterproofing of any connector. The N and BNC unlike the UHF connector do not rely on the retaining shell for the shield connection. As a result shell connectivity can be maintained when the shell is not tight. But the N and UHF connector should always be firmly tightened. I have seen a UHF connector with an only slightly loose outer shell nut that measured open circuit on the shield. So always keep the connectors tightened.

After reviewing what a Non constant impedance connector is it should not be hard to imagine what a constant impedance connector is. Your Right! A constant impedance connector has carefully maintained inner and outer conductor diameters and insulating dielectrics controlled so that the ratio of inductance, L to capacity, C is a constant, maintaining the Z_0 of the transmission line. Note there are 50 and 70 ohm impedance connectors. With no reflections at the cable connector junctions there is not a frequency limit on the use of the connectors. When carefully installed the N or BNC connector is useable to several GHz. A second limiting factor starts to take effect as the diameter of the cable gets larger in terms of wave length. Losses in the cable also start to get to be excessive due to skin effect in the conductors and dielectric losses. But N and BNC con-

nectors are quite useful through the UHF range. UHF connectors are NOT.

Now the point was raised the other day that some modern antennas and equipment for the 430 – 450 MHz band use a UHF connector. This is true. Most of the FM equipment and some of the multi mode rigs have an SO239 type connector on them. Also most of the antennas for 440 FM have what looks like an SO239 connector. It certainly mates with a PL259. What has been done with the SO239 to improve the frequency response of this connector is to remove much of the dielectric surrounding the center conductor. This reduces the capacity between the center and outer conductors and raises the impedance of the connector. This does not do anything for the PL259 part of the mated pair. I am sure it works better but I have not seen any data on the system. I did measure the SWR of a mated pair of UHF connectors and also a pair of PL259 connectors mated with a barrel at 440 MHz. I used an MFJ 269 antenna analyzer to make some quick measurements. This device is a useful antenna test instrument but is not a laboratory level of instrument. I am thinking some tests with a network analyzer at a later date may be interesting. But the results for a connection using a PL259 was a 1.7 to 1 SWR. I then added a UHF right angle adapter to the interconnection and the SWR went up to 2 to 1. A double PL259 and a barrel measured 1.7 to 1. I then repeated the same types of connections using type N fittings and the SWR was not affected to a measureable degree. I then set up a HP 608 signal generator and an HP 436 power meter. With this setup I can measure the insertion loss of the connectors to a high degree of precision. These measurements were done at 440 MHz and repeated at 50 MHz and 144 MHz. First of all two type N connections were added and the loss measured was less than 0.01dB the threshold of the measurements. So the per connection loss is less than 0.005 dB per connection. I can't add just one connection. I then added a type N right angle and still could not measure any addition loss. I then added a PL259 to SO239 connection and this measured a loss of 0.26 dB. Not a killer, but a significant amount of loss. A 2 to 1 SWR in a matched system would represent a half dB loss but because of the two reflections there is still some cancelation at 440 and the loss is not as bad as it could be. I then added a right angle adapter in series with the connection like you might have where you add a UHF right angle connector to the output on a radio before the PL259 cable connector. The additional loss was 0.48 db or about 0.75 dB total. The same measurement when done with type N connectors was less than 0.01 dB. I replaced the UHF right angle and PL259 with a UHF to BNC adapter and a BNC right angle and the insertion loss dropped to 0.25 dB. So

the message is, get into a constant impedance connector system as quickly as possible, if you have to go through multiple connections at frequencies above the two meter band.

I recently was helping another ham with what was thought to be a 440 MHz antenna problem. It turned out that the antenna was working just fine. But the radio and antenna both had the SO239 type connectors like I described above. The installation was done very neatly with the rig mounted below a shelf. A right angle connector and PL259 jumper cable connected to a commercial antenna switch with PL259 connectors on it. The switch was used to disconnect the rig from the antenna when not in use. This is not a bad idea, except the switch was not suitable for use at 440 because of the UHF connectors. I do not know what the switch manufacture claims for the switch, but I do know they offer a version with Type N connectors. All the losses, due mainly to the mismatch not to ohmic loss in the connectors, is not enough to reduce the radio performance to a great degree. What can affect you is that the SWR protection circuitry in the radio, seeing the SWR caused by the UHF interconnections in the antenna system, may reduce the output power of the radio to protect the transmitter. This causes the radio to not perform as it could and on a marginal path may not appear to work at all. Not due to the antenna but to the mismatch from the type of connectors used.

So to summarize, on the bands above two meters, if you are forced to use UHF connectors to connect to either a radio and/or an antenna, let those connections be the only UHF connectors in the system. Use a constant impedance connector such as N or BNC for any other connectors. Constant impedance connectors are always a good choice, but UHF connectors are fine at six meters and below. If there are a lot of connections to be made at two meters I like to go to type N connectors but in most cases UHF connectors will work fine.

Till next time. 73 Bob W1XP

PSLIST

Every event needs communications volunteers

Date	Location	Event	Contact	Tel/Email
Oct	12 Boston	BAA Half Marathon	WA1IDA	

Board Meeting

Discussion about an awards program to be discussed at the November meeting.

Liability insurance premium paid

Card sort pizza budget approved

October meeting QLS sort Bureau set. We have the cards. Need help loading sorting boxes over the weekend

November meeting program open

December Homebrew

Road Cleanup needs better turn outs

Adopt A Highway

The September road clean up was held on the 21st.

Thanks to the following people for helping out at the cleanup. Larry KB1ESR, Leo K1LK, Earl WR1Y, Bob W1XP, Ralph KD1SM, and Stan KD1LE

The road cleanup is Sunday October 19th.

We need a minimum of six people by MassHighways rules and we need eight to cover our 2 miles in the hour I like to keep it at. Now that summer is over I hope to see higher turnouts. We only have three cleanups left this year so take an hour and help us out.
Stan

Treasurers Report

Income for September was \$50 in membership dues, \$39 from the book raffle, \$5 from PowerPole connector, and \$0.11 found at the road cleanup. Expenses were \$16.80 for newsletter postage and \$250 for the annual liability insurance premium leaving a net expense of \$172.69 for the month.

Current balances:

General fund	\$3,960.13
Community fund	\$2,449.41

As of 8 October we have 55 members who are current with their dues and 14 renewals outstanding. Please check the member roster that is circulated at the monthly meeting if you do not remember your renewal date. Your membership date also appears on your newsletter mailing label. You can always ask Ralph if you are in doubt.

Remember; the Club gets a commission on any new ARRL memberships or membership renewals that you submit through Ralph. Checks should be made payable to NVARC so that our commission can be deducted before we forward your membership to Newington.

Ralph KD1SM

ARRL Letter

CANADIAN AND AMERICAN HAMS PROVIDE "TEXTBOOK EXAMPLE" OF AMATEUR RADIO'S EMCOMM ROLE

On Sunday, September 27, the VoIP Hurricane Net <http://www.voipwx.net/> formally activated at 5 PM EDT to provide surface reports as Hurricane Kyle affected portions of extreme Northeastern Maine, New Brunswick and Nova Scotia, Canada. The activation was in coordination with WX4NHC <<http://www.wx4nhc.org/>>, the Amateur Radio Station at the National Hurricane Center (NHC), to support their operations for Hurricane Kyle.

"The Canadian Maritimes rarely get hurricanes, but we received some of our highest quality reports that included measured wind data every 15-20 minutes, as well as damage reports from radio amateurs in the area. They did a fantastic job," said Director of Operations for the VoIP Hurricane Net Rob Macedo, KD1CY. "We reached out to many of the IRLP and EchoLink stations in this area and the response rate from those amateurs connecting to our Net was extremely high."

Assistant WX4NHC Coordinator Julio Ripoll, WD4R, agreed: "The Canadian amateurs provided critical surface reports to the National Hurricane Center that we wouldn't have received otherwise. I was very impressed with the level and detail of the reports we received." The National Hurricane Center in Miami works closely together with the Canadian Hurricane Centre <http://www.atl.ec.gc.ca/weather/hurricane/index_e.html> when tropical events impact this area of the world.

The storm downed trees and wires, prompting power outages over portions of Nova Scotia and New Brunswick, Canada. A measured wind gust to near 95 MPH was reported in Lockeport, Nova Scotia by a ham radio operator with a weather station within a couple hundred feet of the coast of the Atlantic Ocean.

ARRL Emergency Preparedness and Response Manager Dennis Dura, K2DCD, acted as Net Control for most of the Net's activation; Dura also serves as Assistant Director of the VoIP Hurricane Net Operations. "I, too, was extremely impressed with the level of support from the Canadian amateurs in providing situational awareness and disaster intelligence for Hurricane Kyle," he said. "The work these hams performed was a textbook example of the role Amateur Radio plays in events like this. Many lessons were re-learned tonight, lessons that need to be re-taught in areas impacted by tropical events."

On Saturday, prior to Kyle's arrival in the Canadian Maritimes, Dura began providing information to the Radio Amateurs of Canada (RAC) <<http://www.rac.ca>> through their ARES e-mail reflector. Sunday's information sharing was escalated with direct contact with RAC Vice President for Field Services Bob Cooke, VE3BDB. "This event provides an opportunity for cross border support, as it's certainly not every day that a tropical event is aimed at a Canadian Province without first hitting the States," Dura said. Cooke echoed this in his message to the RAC Section Emergency Coordinators, District Emergency Coordinators and local Emergency Coordinators, urging "every Radio Amateur to participate to the best of his or her ability."

Elsewhere in the tropics, Sub-Tropical Storm Laura has formed in the open Atlantic, but is currently only a threat to marine or shipping interests. Laura may briefly reach hurricane strength before weakening over the colder waters of the Northern Atlantic.

ANOTHER WORLD CHAMPIONSHIP MEDAL FOR ARDF TEAM USA

Ten years ago, only a few hams in North America knew that on-foot hidden transmitter hunting is an international sport with many names such as foxtailing, foxhunting, radio-orienteering and Amateur Radio Direction Finding (ARDF) <<http://www.homingin.com/index.html>>. Few were aware that Eastern European countries had begun playing with ARDF decades ago; the first World Championships were in 1980. In 1988, stateside ARDF active hams in Portland, Oregon and Southern California were learning the ARDF ropes by holding on-foot foxhunting events using international rules.

In the past 10 years, more hams in more places have discovered that this form of radiosport is great exercise for the body and the brain. According to ARRL ARDF Coordinator Joe Moell, K0OV, as the USA catches up with the rest of the world, the US's ARDF "big guns" continue to improve.

Earlier this month, the Korean Amateur Radio League <<http://www.karl.or.kr/>> hosted the ARDF World Championships <<http://www.2008ardf.org/>>, and for the sixth time, Team USA made the trip. Members of the American team ranged in age from 23 to 66, representing seven states. Team members earned their positions at the 2007 USA Championships near South Lake Tahoe, California as well as the 2008 USA Championships near Bastrop, Texas.

"Overall, this was Team USA's best performance ever," Moell said. "We had four Top 10 finishes in the two days of fox-finding competition, first with 2 meter AM signals, and then with 80 meter CW signals. ARRL's team faced more than 300 of the planet's best foxtailers that represented 24 other national Amateur Radio societies. "

George Neal, KF6YKN, of Maspeth, New York, led Team USA, capturing a bronze medal in the category for men between ages 50 and 59 in the 2 meter foxhunt. He found all four required transmitters and got to the finish line in 1:23:42, less than six minutes behind gold medalist Igor Kekin of Russia. The other Top 10 finishers -- all in the 80 meter event -- were Vadim Afonkin of Boston, who was 5th in M40 category; Bob Cooley KF6VSE, of Pleasanton, California, who was 7th in M60, and Nadia Scharlau of Cary, North Carolina, who was 9th in W35.

"This was an excellent World Championships," Neal said. "The courses were very hard, almost brutal!" Radio-orientees are used to running among trees in forested land, using an orienteering map as a guide, but this year's 2 meter event on September 4 was quite different. According to Jay Hennigan, WB6RDV, of Goleta, California, the terrain of the 2400 acre site was unlike any he had ever experienced.

"The course was long and narrow, about three times as long as it was wide," Hennigan explained. "The start was in the north and the finish was in the south. On the map, it was about three-fifths woods, but that was all marked dark green, which meant you couldn't get through it unless you could find a pathway. Fortunately, there were a few trails in there to make it doable. The rest was marked yellow, which turned out to be cultivated fields and drained rice paddies. There were roads on either side, so it became a matter of running down the road until you thought you were perpendicular to a transmitter, slogging to it through the mud, punching in and then running to one of the side roads, depending on where the next fox appeared to be. It wasn't just rice, there were other crops including some kind of cabbage. We

couldn't avoid trampling the plants, but the farmers weren't yelling or coming after us."

The 80 meter event on September 6 was mostly in more familiar forested terrain. It was a bigger site and a 10 percent longer course. Competitors said that they felt like mountain goats because it seemed as if each fox was on top of a different hill.

Excellent radio-orientees abound in Europe and Asia. Fourteen of the 25 nations at this year's World Championships took home one or more medals, but only five countries brought home gold. Three of them -- Russia, Ukraine and the Czech Republic -- dominated the medal count, capturing 71 percent of all medals and 92 percent of the golds. In these countries, ARDF is an important Amateur Radio activity in nearly every city and town. With so many hams doing radio-orienteering, these countries can fill complete team rosters with the maximum allowable three persons in each age category for males and females.

Having a large team does not provide a cooperative advantage. Each competitor must work independently on championship courses. Any collusion or collaboration among team members is strictly forbidden; team scores are based only on the sum of individual performances.

Long-time map-and-compass orienteer Bob Cooley, KF6VSE, of Pleasanton, California, explained, that "It is important to make a lot of mistakes while practicing and to learn from them so that you don't make them in the future. I got the opportunity to get fooled in a variety of ways."

For more information on ARDF, including international rules, suggestions for equipment and ideas for local events, go to Moell's Web site <<http://www.homingin.com/index.html>>. "I welcome your local event stories and photos for future ARDF Updates," he said.

IARU-ENDORSED BOOKLET PROMOTING ETHICS, OPERATING ISSUES, NOW AVAILABLE

A 67-page booklet, "Ethics and Operating Procedures for the Radio Amateur" by John Devoldere, ON4UN, and Mark Demeuleneere, ON4WW, is available for free download from the ARRL Web site <http://www.arrl.org/awards/dxcc/Eth-operating-ENarri-SITE-1jul2008.pdf>. This is an "Americanized" version of the booklet the authors wrote for an international audience. An international version is also available <<http://www.iaru.org/Eth-operating-EN-iaru-SITE-1july2008.pdf>>.

At its June 2008 meeting, the IARU Administrative Council endorsed and recommended the principles set out in the booklet as a means of encouraging all radio amateurs "to operate to the highest levels of proficiency, with proper consideration for others using the amateur radio bands" and as a tool "to teach newcomers and others correct operating behavior." The booklet mainly addresses HF operating issues, but the principles are also applicable to VHF and higher bands.

ARRL Chief Executive Officer and IARU Secretary David Sumner, K1ZZ, expressed appreciation for Devoldere's and Demeuleneere's efforts: "The authors are well known, experienced HF operators who are concerned about on-the-air operating standards and who decided that 'It's better to light a candle than curse the darkness.' Anyone who reads their booklet will learn something, no matter how experienced they may be."

MONTANA HAM ASSISTS IN RESCUE OF FELLOW AMATEUR 600 MILES AWAY

On Sunday, September 21, Bob Williams, N7ODM, of Bozeman, Montana, was just tuning around on 40 meters, giving his rig a test just before a scheduled QSO with his brother Rich, K7URU, in Spokane, when he heard a faint CW signal around 1 PM (MDT): Glenn Russell Ruby Jr, W7AU, of Corvallis, Oregon had broken his leg and was using a portable radio and Morse code to send out a call for help. Williams said he was able to understand the injured man's code even when his signal became very weak.

"He called me. He must have heard me testing out the radio. When I finished, I signed off with my call, and then I heard, 'N7ODM, this is W7AU/7,' so I answered," Williams told the ARRL. "I told him to go ahead, I had solid copy. He told me that he was a hiker that had fallen and broken his leg. He identified himself as Russ, provided information as to his GPS coordinates, the shelter, food and water on hand, as well as his detailed physical condition. He told me exactly who I needed to contact for assistance."

According to Williams, Ruby had slipped on a wet rock and broken his leg while out hiking in the Buck Creek Pass area of the high Cascades in Western Washington, 600 miles away from Williams. "Russ really had his act together," Williams said. "Before he even called for help, he set up his tent. It was raining when he fell, so he climbed into his tent and got into some warm clothes and had a snack of sunflower seeds and dried apricots. After that, he strung up a wire antenna, fired up his Elecraft K1 and called me."

Williams said that Ruby told him he had a "couple of weeks worth of battery power" for the radio.

Ruby asked Williams to notify the Snohomish County Search and Rescue in Washington State. "I didn't have their number, so I called my local 911 dispatcher. All they had was the info for King County in Washington, so I called them and they gave me the number for Snohomish. When I got a hold of Snohomish County Search and Rescue, they asked me to obtain additional info from Russ, such as the color of his tent and if he was in a clear or wooded area, and remain in contact with him as long as possible," Williams said.

"Russ and I were able to maintain contact until about 8 PM on Sunday, during which time I was able to pass additional traffic between Russ and Search and Rescue, but then his signal got so weak where I couldn't copy it anymore. Before he faded, we had agreed to try and make contact in the morning. I tried, starting around 6:30, but he never heard me. I finally heard him calling me around 9 on 7.051 MHz. We kept in contact until he was evacuated from the site by Search and Rescue at about 10:35 AM," Williams told the ARRL.

On Sunday, rescue crews reached Ruby, who had set up camp on Buck Creek Pass, at about 6000 feet just west of the Chelan County line. He was taken to safety Monday on horseback. Williams said that bad weather Sunday prevented a helicopter rescue: "It was snowing all night; Russ told me that when he woke up Monday morning, his tent was all covered in snow."

"I just happened to be at the same frequency," Williams said. "It's just a stroke of luck that turned out great. It was quite an experience. I'm just glad that he was a ham radio operator and that I was able to talk to him. It made the difference for him. What I did was not anything special. I'd like to think that any ham in Montana would've done the same thing."

NVARC Club Net

Topics discussed on the Club net recently; emergency communications preparedness and activities at NMAEPC. Alzheimer's Memory Ride, Road Cleanup, Field Day wrap up and suggestions, WL2K setup problems.

Recent participants include Leo K1LK, Bob W1XP, Larry KB1ESR, Skip K1NKR, Stan KD1LE, Richard W1LTN.

The net is a good place to bring information for the club and get questions answered. The net meets at 8:00 PM Monday evenings on the 442.900 N1MNX repeater.

2008 Flea Markets

October
19 MIT
November
8 Falmouth ARA Bourne MA

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Tell them you saw it in the Signal. Advertisers should contact the NVARC Treasurer for information.

Contest, DXpeditions and Special Events

The information for a DXpedition can be quite detailed and may include bands, dates, number of stations, and times of day they plan to work certain continents so I can not list it all here. But if a country or prefix is of interest you can get more information at www.425dxn.org.

Contests 2008

OCT

13

Logbook of the World Contest, CW 0000Z-2359Z



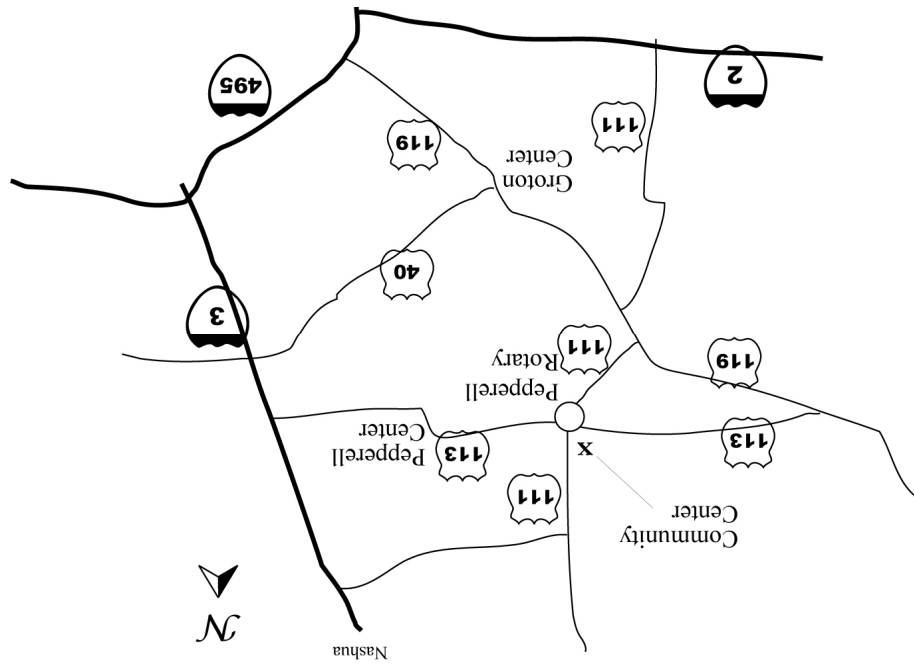
Nashoba Valley Amateur Radio Club

PO Box # 900
Pepperell Mass 01463-0900

<http://www.n1nc.org/>

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Vice President: Peter Nordberg N1ZRG
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Treasurer: Ralph Swick KD1SM
Board Members:
Joel Magid W1JMM 2006-2009
Bob Reif: W1XP 2007-2010
Skip Youngberg K1NKR 2008-2011

Editor: Stan Pozerski KD1LE
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Photographer: Ralph Swick KD1SM
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Meetings are held on the 3rd Thursday of the month
7:30 p.m. - Pepperell Community Ctr.
Talk-in 146.490 simplex
442.900 + 100Hz Repeater
147.345 + 100 Hz Repeater
53.890 - 100Hz Repeater
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Nashoba Valley Amateur Radio Club

PO Box 900

Pepperell, MA 01463-0900

