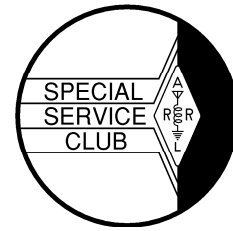




SIGMA



de NINC

January 2009 Volume 18 Number 1

This Month's Meeting

Next club meeting is Thursday January 15. The program is Members Short Subjects. Polish up those short presentations.

No road cleanups 'till April.

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 yourself to them. It may be worth your while.

Last Month's Meeting

Last month's meeting was during the recovery from the ice storm. We had a round table discussion on the storm and how it impacted members. Also we covered how members should prepare and what to do in case of an emergency. This is covered under a separate heading.

After the above discussion we proceeded with the regular program. Many of the members present had homebrew presentations.

Skip Power Conditioner for FT817, Rod installed 18 MHz Dipole, Peter had installed power transfer switch for AC power, Jim displayed his heated rain gauge and two APRS Transmitters, Stan Field Day ground fault power box, John put up an 80 meter loop and dipole.

Present at the meeting were:

John KK1X, Stan KD1LE, Jim N8VIM, Tom K1NNJ, Dick W1LTN, Leo K1LK, Peter N1ZRG, Rod WA1TAC, Joel W1JMM, Tony KX1G, Bruce K1BG, Skip K1NKR, Gary K1YTS, Larry KB1ESR, Jim W1TRC, Pete KB1LZH

December Ice Storm

The ice storm started Thursday night December 11th and continued into Friday morning. By Friday morning much of the area was without power, phone, and cable service. For many just getting out of their driveway was a chore. Even then you couldn't go far in many cases. By late Friday morning some of the main roads were becoming passable.

Friday afternoon and Saturday Lynda N1PBL worked at the Pepperell Shelter set up in the Varnum Brook Middle School. Saturday night Stan took the shelter midwatch of 11 PM to 8 AM.

Ralph KD1SM and Jeanine N1QIT were doing Red Cross shelter management with the Worcester Red Cross for the second day in Fitchburg. Larry KB1ESR and Bob AB1CV were manning a shelter at the Groton Lost Lake Fire Station on Friday.

Saturday December 13 started out as usual with the NVARC crew having breakfast at Tiny's. Attendance was a little light, which could be expected after a storm. Some people had already been involved in various SKYWARN, Red Cross and Emergency Management activities. It became obvious that though the sun was shining many areas were severely affected and many of those at breakfast had no power.

Over breakfast a number of tasks were identified. It was already known that fallen trees blocked access to the repeater site. The repeaters had been on battery power since four AM Friday morning. It was apparent that checking the repeaters, assessing the power situation in that area and charging the batteries was in order. Various other tasks to support the post storm clean up were noted.

Over breakfast plans were made to get access to the repeater site. This would require cutting trees. Then

later getting a generator up there to charge batteries, as this might be a protracted event. The repeaters had already been on battery power for more than 30 hours.

First Jim N8VIM and Stan KD1LE went to Den KD2S QTH. A tree had fallen on his tool shed and he couldn't remove it. Jim did the roof top duty to cut off most of the tree and then lifted the rest off with his tractor. The rest of the tree was then cut up into movable pieces.

With this task completed Stan was going to move his generator to the repeater to charge the batteries but he could not get it running. Jim said he could look at it so it was delivered to Jim's house. Stan then went to the repeater site to cut up the three trees blocking the entrance. By the time he was finished Jim reported the generator was running. It wasn't simply working fine. Jim had taken the carburetor apart and cleaned it, replaced the spark plug, installed a fuel line shutoff, set up the carburetor and changed the oil. Stan returned to Jim's to pick up the generator. Jim also had half a dozen trees down but that could wait. The generator was delivered to the repeater site and the two battery banks put on charge with separate chargers. Joseph N1QDZ helped clear as Stan cut up branches that had come down on one of the guy wires. Les N1SV picked up a chain and padlock to secure the generator at the site and delivered it. The generator was locked to the building.

After watching the generator run for another 30 minutes (like watching paint dry but noisier) the crew headed off in different directions. Joseph headed for Groton to help Larry set up a generator at Bob W1XP's. Stan and Les headed for Jim's to cut up the many trees that had fallen. With three chainsaws blazing away the trees were cut up in less than an hour.

With the cutting done Les headed off to his house where he still had no power. Stan returned to the repeater site to check the charging situation and pick up the generator and chargers. After being on charge for several hours the batteries were back in high charge state though not fully charged. The trouble with batteries is you can charge them to 70% or 80% percent rapidly. But it may take almost as long to go to 90% or 100%. In any case the charging currents had dropped off significantly so it was a case of diminishing returns.

The rest of the day spare generators were moved to various locations to get peoples heat turned on.

Saturday night Pepperell Emergency Management asked what we could do to get the word out that a

shelter was opened. The reverse 911 was down and most had no phone service anyway. I told them I could put the word out on the radio but at night it wouldn't be advisable to try knocking on doors. Any operators getting the message could pass it to their neighbors as appropriate. It then became obvious that I had not heard many people on the repeaters. This was going to make it difficult to pass the word and would make it impossible to get volunteers if a need arose.

After charging the repeater batteries again on Sunday afternoon things seemed in a reasonable state there. No tree or power work was being done on that street however so it was clear the power would be off for several more days. Monday we skipped charging the batteries as things seemed stable and the hope was that power would be on soon. Tuesday night we tried to charge the batteries but after setting up the generator it would not put out power. It was delivered to Jim for another repair. Power to the repeater site was actually restored late Tuesday so further charging was not necessary.

At the December club meeting we had a round table discussion on the storm and various emergency responses it was suggested we establish a standard operating procedure. So here I will establish a draft protocol for disaster situations and declared emergencies, which is the situation we had.

NVARC Emergency Procedures

In the event of an emergency and particularly a communications emergency the way we can help is by providing a means for emergency management to communicate. To do this we have three repeaters. The repeater frequencies, shifts, and tones are listed on the back of every newsletter. Ideally everyone should have these frequencies programmed and monitor them on a regular basis. Everyone should also know that the two-meter repeater runs on commercial power. So that is likely to be off the air in this type of situation (and it was.) The two repeaters we have that run on full time battery power are the six-meter 53.890 and 442.900 MHz repeaters. Although they may seem quiet a number of people monitor them full time. A simple scanner is one way to monitor both or all three if your transceiver is a one band at a time model. It is suggested that people come up on the repeater to get information and to make themselves available in case there is a need. We generally wouldn't be running a formal net. Many of us also monitor 146.490 MHz simplex.

We don't have a formal emergency plan other than trying to be ready as a resource if called. Since some members are connected to RACES or other

emergency groups we would try to support them if called. To do this we need to know who is available.

Of course you can't help anyone else unless you are prepared at home. For those of us who take emergency communications seriously we try to be better prepared and more self sufficient than the average person. This means all the usual stuff like charging HT batteries, having flashlights and radios and batteries for them. Longer term is to give thought and being prepared to run certain equipment from emergency generators. Equipment powered from a generator needs to be isolated from the power lines so it doesn't feed power outside the house. This is not only a safety issue for the people trying to restore power but a legal requirement. A high end solution is to install a generator load center which allows changing from commercial power to generator power safely without feeding power back into the grid. Another option is to have critical items such as water pumps set up so they can be unplugged from the normal power source and connected to a generator. Another bit of preparation is to have the breakers on your power panel correctly marked. Although the usage on my panel hasn't changed in years the markings had become faded and difficult to read. Everyone has to identify their own challenges and create their own solution but asking someone to come over with a generator if you haven't done your own homework is at best inefficient.

Stan KD1LE

Wanted

As a follow up to the ice storm several of us are rebuilding our 12 volt generator/chargers. They can be used in place of a regular generator and charger to charge the repeater batteries. I am looking for a suitable structure to rebuild mine on. Suitable structures might be any discarded gas powered device such as a portable pressure washer, water pump, or compressor. This type of frame should be easily adaptable to mounting an engine and alternator. It would be even better if it still has a working engine.

I am also looking for long strips of tarp material such as a used pool cover. I need 25 foot strips six feet wide to cover the tower trailer. Keep it in mind in the spring when people open their pools. The covers may be damaged during the winter but still yield several suitable strips.

Stan KD1LE

Responses to Board Query on Ice Storm Activities

Tony KX1G: I checked the club 2m repeater and saw that it was down, so I gave a few calls on the 440 repeater over the two days I was without power. Didn't get any responses, so I went about the business of dealing with the situation.

Den KD2S: I monitored the three Pepperell repeaters with a scanner for the entire event. (THANK YOU for not losing power!) I am capable on all three bands, as well as HF, but did not check into any nets, as I was having difficulty with my voice during much of that period. The outlet that the compete station is on is connectable to the 6KW generator, but the generator was never used.

John KK1X: I went to work. Insofar as I lived in downtown Ayer and lost power for just a few hours, I was largely ignorant of how badly the storm mangled the towns just west of me. I did no repeater monitoring, again, mostly out of ignorance that something might actually be going on. To me, it was just a bit of an ice storm – all of my storm damage happened in the spring winds.

Ralph KD1SM: Jeanine N1QIT and I were called at 0600 Friday by the Red Cross. We helped with in shelters in Winchendon, Worcester, and Fitchburg. We monitored repeaters Friday morning but then our attention went elsewhere.

Stan KD1LE: Went to work Friday morning after cutting trees on my driveway. It was several hours later before Groton St was passable in either direction so I waited at home. Friday night was uneventful at home as we never lost power. Lynda N1PBL worked at the Pepperell Shelter Friday and Saturday. Stan worked at the shelter Saturday night. We didn't lose power until Tuesday when they needed to shutdown to clear a tree from the power lines that has been left earlier.

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.

PSLIST

Every event needs communications volunteers

April
19 Adopt-a-Highway
Groton Race

May
Parker Road Race

July
Longsjo Classic
Alzheimer's Memory Ride

We are starting to fill in the 2009 events calendar.
Seen www.n1nc.org/Events

Board Meeting

Discussion about the awards program. There were no submissions for the 2008 year award. Skip will write something for the February newsletter.

Ralph gave the Treasurers report.

January meeting needs several short presentations.

February meeting program has one short presentation and needs another

Discussion about DTV conversion and the FCC request to the ARRL for assistance with Digital TV Conversion. Not sure how we could help.

Road Cleanup needs better turn outs. Do we want to sign up in the spring? We need someone new to run the cleanup for 2009 if we are going to continue.

Adopt A Highway

We need someone to run the road cleanups if we are to continue. Stan has managed the cleanups since they started more than ten years ago. We will need a volunteer before we commit to MassHighways in the spring.

Also we need a minimum of six people by MassHighways rules for a cleanup. We would like eight as that allows us to cover our 2 miles in an hour. The rules say we need to work in pairs. With four pairs each group walks one quarter mile out and back. With that plan we are easily done in an hour. Think about it this way. If everyone in the club did one cleanup a year we would have our eight people for the eight cleanups just doing one cleanup each. No more cleanups until April.

Stan

Treasurers Report

Income for December was \$39.94 in bank interest and \$2 from ARRL membership renewals. There were no expenses (we did not mail the December newsletter yet) leaving a net income of \$41.94 for the month.

Current balances:

General fund	\$4,035.28
Community fund	\$2,699.41

As of 8 January we have 53 members who are current with their dues and 12 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



Only 5 months before we see this again!

ARRL Letter

FCC CALLS ON AMATEUR RADIO SERVICE FOR ASSISTANCE WITH DIGITAL TV CONVERSION

Earlier this month, the ARRL received a request from the FCC asking that ARRL members provide technical educational assistance to their communities concerning the FCC-mandated digital television (DTV) conversion scheduled for February 17, 2009 <<http://www.dtv.gov/>>.

According to ARRL Media and Public Relations Manager Allen Pitts, W1AGP, Amateur Radio clubs across the country are being asked to develop and implement plans to provide information throughout January and February about the DTV conversion in their areas. The FCC is leaving it up to the clubs to decide how to do this, as local groups understand the communities in ways that the FCC does not. Each community is a little different, Pitts said, so plans carried out by the clubs will vary from community to community. Interested groups should contact their ARRL Section Manager.

Pitts stressed that hams should not make "house calls," sell any equipment or do actual installations; the request is only to distribute technical information and FCC materials. He commented: "As we all know, some folks just never get the message until too late. Materials for presentations, education and many other activities are available online <<http://www.dtv.gov/outreach.html>>. Beginning early January, FCC staff will contact Section Managers and leaders of interested clubs and, where possible, arrange to meet to share even more information, audio, visual and printed materials, as well as training aids, with the clubs involved this effort. We know the time is short, but your aid in this now will be appreciated."

In early January, Pitts said that the FCC will ask Section Managers for the names and contact information of the volunteering groups. The FCC staff will then make contact with the groups, learn their plans and provide them with the media, brochures or other materials groups may need in this effort. FCC regional staff members may even come and visit with larger groups to aid in implementation of the group's plans.

"I really appreciate the willingness of the ARRL to actively participate in helping Americans with the transition to DTV and your helpful suggestions," said George Dillon, FCC Deputy Bureau Chief for Field Operations. "The DTV transition will be an historic moment in the evolution of TV. Broadcast television stations can offer viewers improved picture and

sound quality and new programming choices. All-digital broadcasting also will allow us to significantly improve public safety communications and will usher in a new era of advanced wireless services such as the widespread deployment of wireless broadband. Our goal is to engage the amateur community on a cooperative basis to help with the DTV outreach and to educate consumers."

Dillon continued that local Amateur Radio clubs might consider offering technical advice to consumers via telephone to those consumers who may encounter difficulty with the installation and setting up of their converter box. "Any assistance...will greatly help in the efforts of the FCC to ensure a smooth transition to DTV on February 17, 2009."

Pitts advises interested groups to keep in mind that they are to provide technical educational help only: "At no time should the hams enter someone else's home or install equipment. They should not broker or sell conversion boxes in any way. Clubs can provide such things as a call-in telephone number for technical help, make presentations at meetings, do demonstrations at malls or give talks to other groups -- whatever works in their community."

ARRL MEMBERSHIP NEWSLETTERS, BULLETINS AND NOTIFICATIONS

Did you know the ARRL offers more newsletters than just The ARRL Letter? One of the many ARRL membership benefits includes other newsletters, such as the ARRL Contest Update (a bi-weekly contest newsletter), the ARES E-Letter (sent monthly, containing public service and emergency communications news), the ARRL Club News, the ARRL Instructor/Teacher E-Letter and the VE Newsletter, just to name a few.

You can also elect to receive news and information from your Division Director and Section Manager (keep in mind that not all Divisions/Sections send notices), as well as W1AW bulletins that relate to DX, propagation, satellites and Keplerian reports. The ARRL also offers a free notification service to members, letting them know when their membership and license are due to expire.

Sign up for these newsletters, bulletins and notifications on the Member Data page of the ARRL Web site <<http://www.arrl.org/members-only/memdata.html>>.

HAMS STAND BY TO HELP AS NEW ENGLAND RECOVERS FROM ICE STORM AND PREPARES FOR MORE

The major ice storm that hit New England December 11 has pretty much gone away <<http://www.arrl.org/news/stories/2008/12/15/10506/?nc=1>>, but with forecasters calling for more winter weather in the next few days, hams are still on the job. During the storm, Amateur Radio operators from all over the area responded to calls for assistance from various served agencies, and local leadership does not expect the need for the hams to lessen anytime soon.

According to Eastern Massachusetts Section Emergency Coordinator Rob Macedo, KD1CY, almost 400,000 customers in Massachusetts lost power at the height of the storm. Phone service, particularly landline service, was disrupted in some areas. Crews have been working hard to restore power to residents, Macedo said: "As of late Sunday evening, almost 140,000 were without power in Massachusetts with over double that number in New Hampshire. On Wednesday, the number of homes without power had dropped to 45,000-50,000 in both states." Southern New England received 2-4 inches of rainfall; isolated higher amounts caused river, stream and urban flooding. Strong winds in the region resulted in tree and wire damage, as well as coastal flooding along the shoreline.

In Western Massachusetts, Section Emergency Coordinator John Ruggerio, N2YHK, reported that ARES units in his Section responded to calls for assistance from local EOCs. "EOC operations in Worcester were secured on Monday evening, as the shelters were closed and power was restored to most areas at that time," Ruggerio said.

"Amateur Radio operators from the North and South Shore of Eastern Massachusetts assisted with operations in Western Massachusetts, fulfilling needs from Saturday night into Monday morning," Ruggerio recounted. "ARES units in the Western Massachusetts Section provided support during the day on Monday for the town of Gardner in Franklin County. An additional team from Eastern Massachusetts -- including one ham from the Rhode Island/Massachusetts border -- came in on Monday evening. That team helped out in Gardner until 12:30 Tuesday afternoon when the shelters and communications for the local hospital were no longer required, as power was restored to much of the area."

Ruggerio said that the local hospital in Gardner lost phone service for much of the day starting Monday

morning. "They got service back later that evening, but until then, Amateur Radio was the only means of two-way communications between the hospital and EOC." Message traffic on prescription fills and other priority, but non-emergency traffic, were fulfilled during that timeframe, he said.

"The Gardner operation was the largest Amateur Radio Emergency Services Mutual Aid Team (ARESMAT) that Eastern Massachusetts ARES has supplied since the September 11 terrorist attacks," Macedo said. "Including the one amateur provided for the Worcester EOC, a total of 16 hams assisted for all the ARESMAT needs in Western Massachusetts."

Macedo said the ARES unit in Franklin County completed its support in the town of Heath on early Monday Morning: "Many of the Franklin County ARES team also assisted with Gardner, providing an additional seven hams to the operation. More than 200 man-hours were logged just in the Gardner ARESMAT alone -- this does not include State Emergency Operations Center operations or the National Weather Service response phase operations."

Support for the Massachusetts State Emergency Operations Center also continues, Macedo said. "Massachusetts State RACES Radio Officer Tom Kinahan, N1CPE, told us that support was required at least through Wednesday evening for the aftermath of the storm. We will continue to provide support for as long as requested to support the State EOC." Eastern Massachusetts ARES supplied three Amateur Radio operators to support the state EOC during the storm.

Throughout the storm, Section leadership from across the region met in twice-daily conference calls with ARRL Emergency Preparedness and Response Manager Dennis Dura, K2DCD. In a call on Tuesday, New Hampshire Assistant Section Emergency Coordinator David Colter, WA1ZCN, told Dura he had just got his power back early that morning. "I spoke to the ECs for Hillsborough and West Rockingham Counties last night," Colter said, "and they continue to staff two shelters and EOCs. Apparently, neither site has an available landline. There is cell service in the area, but it's spotty. The Milford animal shelter folks have been using ham radio for coordination in a limited way for several days as they retrieve chilly animals. The temporary animal shelter is co-located at the Milford people shelter."

According to American Red Cross Communications Volunteer Tom Carrigan, NE1R, the Disaster Operations Center (DOC) at the Central Massachusetts Chapter of the American Red Cross is a "beehive of

activity trying to cover all the demands for services from the many towns still operating shelters and for mobile feeding operations throughout the affected area. We are still sending cots and blankets, as well as water, heater meals and snacks to New Braintree, and other towns. Nearly every Worcester County town north of Worcester and west of the Wachusett Reservoir has received services from the ARC. Mobile feeding has continued in Worcester, Paxton, Rutland, Gardner, Leominster and many other communities where utility workers and public safety workers have been working long hours outdoors. Several shelters have been supported by Red Cross volunteers during the over-nights, as well as days, and Red Cross volunteers from Massachusetts, Connecticut, Pennsylvania and New Jersey have joined the effort."

Carrigan said that as "thousands of people remain without electric power as the weather turns colder and messier, we expect that some who have been toughing it out at home may give in and come to a shelter."

Macedo noted that the bad weather is just beginning for New England, as the active storm pattern shows no signs of abating: "Another major winter storm is expected on Friday that could dump a significant amount of snowfall on the region. Another major storm is also possible Sunday night into Monday. We have been advised that the State EOC could be back in operation on Friday and we are preparing staffing for those needs. We will leave ARES on standby status through Monday, pending the impact of these storms on our region, as well as the weakened infrastructure that remains from the impact of the ice storm."

ARISS FINALIZES PLANS FOR SILVER ANNIVERSARY OF AMATEUR RADIO FROM SPACE

The Amateur Radio on the International Space Station (ARISS) <<http://www.rac.ca/ariss/oindex.htm>> team is currently celebrating the silver anniversary -- 25 years -- of Amateur Radio operations from space. According to ARISS International Chairman Frank Bauer, KA3HDO, the crew on the International Space Station (ISS) has configured the radio to support cross-band repeater operations. They have also supported some SSTV downlinks and participated in a special test of 9600 baud packet radio operations on the simplex frequency of 145.825 MHz. After December 19, Bauer said he expects the ISS ham radio system to be on the 145.825 MHz frequency supporting 1200 baud packet. If PCSAT is configured

during the week, he said double hop APRS is possible.

"During the week of December 21-26, we plan to support the cross-band repeater mode with a twist," Bauer said. "Our intent is to configure the radio for 145.99 MHz uplink -- including CTCSS tone of 67.0 and 437.80 MHz down. This will be performed in low power mode. We should also note that an extravehicular activity (EVA) is planned for that week -- Expedition 18 Commander Mike Fincke, KE5AIT, and Flight Engineer Yury Lonchakov, RA3DT, plan to perform a spacewalk on December 22. As per standard procedure, the ISS ham radio system will be turned off for the EVA."

Bauer said that from December 28-January 3, the cross-band repeater will be reconfigured for what he called "a special experiment. This will be a test of our L-Band uplink capability, which, to date, has not been proven out. Plan for an uplink of 1269.65 MHz and a downlink on the standard frequency of 145.80 MHz, using low power," he said. "Given the substantial cable losses of the L-band system, we hope some 'big guns' are able to penetrate through, keep up with Doppler and make the connection."

A special certificate is being developed for those who communicate with the ISS from November 30, 2008 to January 15, 2009. This certificate will be awarded to those who have had two-way communications with the ISS on voice, packet (APRS) or through the voice repeater. Those who hear the ISS from space in any of the ARISS operations modes -- voice, SSTV, school contact, voice repeater or digital - will also be eligible to receive a certificate.

To receive the certificate, Bauer said to note the ARISS mode of operation (such as SSTV, voice or school) on your QSL and whether the contact was one-way (receive only) or two-way. "You should send your self-addressed, stamped envelope to the normal ARISS QSL volunteer distributor in your area of the world," he explained. "On the outside of the QSL envelope, please include the words '25th Anniversary Certificate.' Make sure your envelope is big enough to accept an 8.5 x 11 inch certificate and includes the proper postage." If you do not know where to send your QSL, check the ARISS Web site <http://www.rac.ca/ariss/oindex.htm#ARISS_Update-25th_Anniversary_of_Ham_Radio_in_Space> to find the one that serves your part of the world.

"We will be sending your certificate to the volunteer distributors in bulk after the event is over," Bauer said. "This saves workload and money. So do not expect to see it until 1-2 months after the event closes on January 15."

Bauer reminded hams that due to ISS flight requirements related to spacewalks and vehicle activity, the radio onboard the ISS may be off for some portion of this schedule. School contacts and general QSO opportunities by the crew will also preempt this schedule for short periods of time. "But remember that if you hear these," he said, "you still qualify for a commemorative certificate. Enjoy the ARISS ops on ISS!"

2008 Flea Markets

Feb
Algonquin Amateur Radio Club Flea Market at the Marlborough Middle School

March
27-28 Maine State Convention Lewiston ME.

Advertisements



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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.

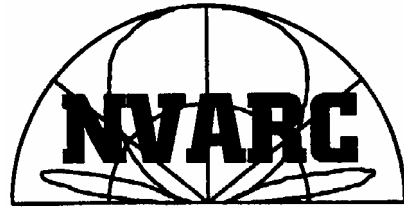
Contests 2009

January
19 CQ UT Contest
19-20 UK RTTY DX Contest

19-20 North American QSO Party SSB
CQ World-Wide 160 Meter DX Contest CW

February
2-3 Vermont QSO Party
2-3 10-10 International Winter QSO Party
2-3 Delaware QSO Party
Mexico International RTTY Contest
9-10 Louisiana QSO Party
9-10 RSGB 1.8 MHz Contest CW
16-17 ARRL International DX Contest CW
23-24 CQ WW 160 Meter Contest SSB

March
1-2 International DX Contest SSB
15 North American Sprint Contest RTTY
28-29 CQ WW WPX Contest SSB



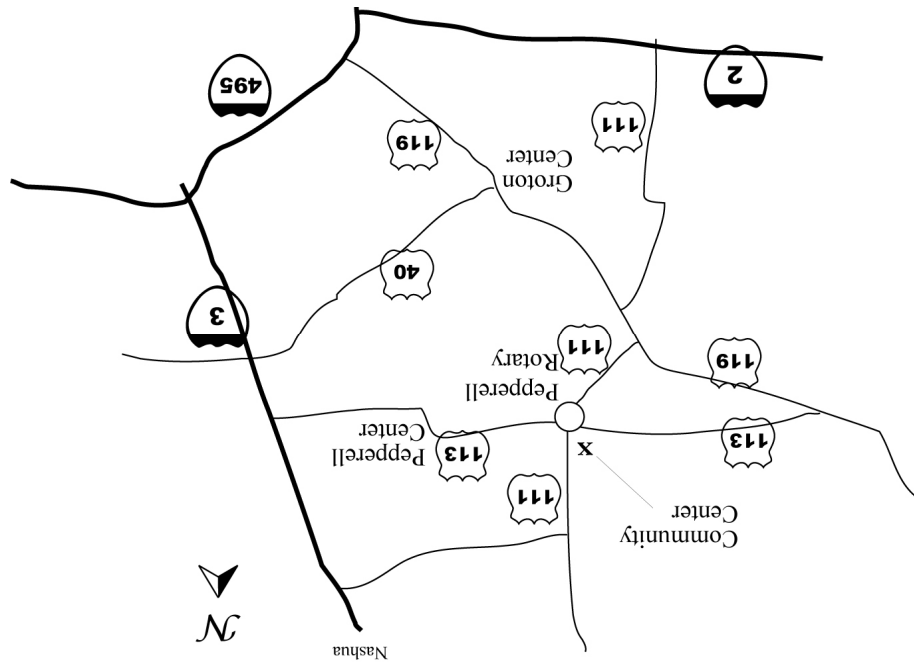
**Nashoba Valley
Amateur Radio Club**

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President: Stan Pozerski KD1LE
Vice President: Peter Nordberg N1ZRG
Secretary: John Griswold KK1X
Treasurer: Ralph Swick KD1SM
Board Members:
Joel Magid W1JMM 2006-2009
Bob Reif: W1XP 2007-2010
Skip Youngberg K1NKR 2008-2011

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Librarian: Peter Nordberg N1ZRG
Property Master: John Griswold KK1X
N1NC Trustee: Bruce Blain K1BG
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 battery power
147.345 + 100 Hz Repeater
53.890 – 100Hz Repeater battery power
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