



# SIGNAL

de N1NC



November 2003 Volume 12 Number 11

## This Month's Meeting

**Reminder, the Board meeting and newsletter are one week early. The regular meeting is November 20<sup>th</sup>.**

This month our meeting program will be Members Short Subjects. There will be four presentations by members on varied subjects.

Les	HF Mobile
Bruce	Buying and Selling Equipment
Wolfgang	TBD
Stan (MARS)	Military Affiliate Radio System

The meeting will be held at regular time and place. That's 7:30 at the Pepperell Community Center.

## Adopt-A-Highway

The October clean up took place on the 26<sup>th</sup>. We had a great turn out and finished our section of road, the boat launch area, and the canoe launch area in about 50 minutes. Thanks to John KB1HDO, Pat N1VAV, Greg N1VAW, Ken K1KEY, Earl WR1Y, Jim AA1PO, Ralph KD1SM, Stan KD1LE.

November will be our last cleanup of the year so mark it in your calendar. The cleanup will take place November 23<sup>rd</sup>.

## NVARC Field Day

The ARRL has published the 2003 Field Day results. In the 2A category we finished 3<sup>rd</sup> in Eastern Massachusetts and 9<sup>th</sup> in the New England Division. In the 2A category overall we finished

81<sup>st</sup> out of 460 entries. In all categories we finished 7<sup>th</sup> overall in Eastern Massachusetts. We logged 1424 QSO's and a total score of 4396 points.

## Other Area Club Results

Category	Club	QSO's	Points
2A	N1OP Norwood ARC	821	3612
2A	AG1I PART	777	3172
3A	W1ON MITRE/BARS	2448	9238
4AB	W1GZ Fitchburg	476	4765

## Last Month's Meeting

The meeting was called to order at approximately 7:30 PM.

John KB1HDO announced that Ron W1PLW had been presented with a letter commending him for his arrangement of the booth for GrotonFest.

Stan KD1LE mentioned the Pepperell Fall Classic soccer tournament and tasked the Secretary to write himself a letter for a job well done. We had more individuals support the event than ever before and had good coverage at all times.

Stan brought up the new position of NVARC Emergency Coordinator to which Den KD2S was appointed at the last Board Meeting. He felt the position should be defined, the same way as the Librarian and Property Master, by adding a description to the Bylaws. So that members could comment it was agreed to put the description in the November Signal in preparation for discussion and the necessary vote at the meeting.

Dennis K1LGQ brought up the subject of the Club purchasing a gin pole for the use of the Club's membership. After some discussion Den-

nis said he would bring it to the membership at the next meeting for discussion.

Den KD2S announced an upcoming SET on November 8, 2003 at 10AM. For more information, the ARES website at <http://ares.ema.arrl.org> can be consulted. The local repeater is in Westford 146.955 MHz/PL 74.4

The meeting's agenda was a QSL card sort. Stan gave a brief presentation on the purpose and process for the pre-sort as it is called. Then we sorted 12,000 cards in about 1-1/2 hours.

The meeting gradually adjourned and was wrapped up by 10:10 PM.



Courtesy KA1RV



Above Diane K1LG sorting away with Dennis K1LGQ in the background. Dennis must have

headed right from the picture to get a head start on the pizza (below).



The Club supplied soda and pizza. After the sorting was finished we enjoyed some food and chatted.

## November Board Meeting

The November Board meeting was held on the 6th. It was scheduled a week early due to staff availability.

Items discussed included checking on the locations and status of club equipment and reviewing the process for administering loaner equipment. The Treasurer gave his report (which is later in the newsletter). There was discussion on pursuing 'thank you' letters for support of recent events. The Board thanked John KB1HDO for organizing the soccer tournament support. The Board approved sending \$5.00 to the W1QL Bureau to retrieve QSL cards sent to N1NC. The Board discussed some things we might organize to promote on the air operating activities. There was a status report of the ongoing license class and the desire for guest speakers or instructors to take a class. We discussed whether there would be interest and support for distribution for the Powerpole distribution box kit outside of the club. There was discussion about a field trip to the Marconi Museum in Bedford, NH. which will be discussed at the regular meeting.

A suggestion was made to remind members that the N1MNX repeaters are entirely privately funded. These repeaters (6m, 2m, 220, and 440) are used by many Club members and in our Public Service activities. Dave welcomes all to use them. If you feel able to do so, a contribution toward the monthly electric bill would be one way to express your thanks to Dave and the crew that helps keep the repeaters on the air.

### From the President

Last month I appointed Den KD2S to the position of NVARC Emergency Coordinator. This will assist the Vice President because this responsibility falls under his office.

To complete this process I have drafted a description of the responsibilities for the Emergency Coordinator in the same form as the Librarian and Property Master. I will open a Special Meeting at the beginning of the November regular meeting to propose adding this description to the end of the Bylaws after the Librarian description.

The entire text is in the next section. Read the text of the job so we can discuss and vote on it at the November meeting.

Stan KD1LE

### Proposed Text for Emergency Coordinator Position

The President may appoint an Emergency Coordinator from the full Membership. This appointment becomes effective immediately upon ratification by the Board of Directors.

The duties of the Emergency Coordinator (EC) are:

1. Work with or in support of the Vice President on matters of Emergency Communication.
2. Communicate with local ARES and RACES organizations to keep the Officers and members of NVARC up to date.
3. Promote ARES/RACES participation for NVARC members.
4. Promote emergency preparedness within NVARC.

5. Organize and chair an NVARC Emergency Communications Team (ECT).

### ARRL Web Site Has Local Article

The ARRL has published on their web site an article on Fox Hunting as a Scouting activity. Stan KD1LE wrote the article based on his experience demonstrating Fox Hunting at a Boy Scout camporee in Lunenburg. See [www.arrl.org/FandES/ead/JOTA-Articles/rdf](http://www.arrl.org/FandES/ead/JOTA-Articles/rdf) for the complete article.

### Ham Radio History 101

Beginning Amateur Radio History  
By Bob Reif P4/W1XP

Well this month is the 80th anniversary of the first amateur radio contact across the Atlantic. We have made reference to this in earlier articles. The record setting QSO took place on Nov. 27th 1923. This is the story of that contact and the individual that was the European end of the record breaking contact.

Leon Deloy (F)8AB

Leon Deloy was probably the most advanced radio amateur in France in 1923. Certainly he was the most driven. He was determined to be the first amateur to work across the Atlantic. He had built a large high powered station in his home of Nice, France and in January of 1923 was one of three European stations to be heard with good and consistent signals in the United States. But a two way contact had not been possible. In order to improve his station and operating techniques he traveled to the states in the summer of 1923 and attended the ARRL national amateur radio convention in Chicago. He was determined to learn all he could from the US amateurs. Their operating practices, their transmitting and receiving techniques, and their latest equipment both commercial and amateur built. He visited many of the better equipped amateur stations on the east coast. All with the one goal in mind. To be the first to make a two way contact between the U.S. and Europe.

He visited with John Reinartz (U)1QP, (U)1XAM and studied the design of a 100 meter high power CW transmitter using four tubes. Returning to France he built his own 100 meter transmitter using the same design. It isn't clear where the idea to switch from 200 meters to 100 meters

for the transatlantic test came from or when, but by Oct. of 1923 Leon Deloy was on 100 meter and testing with a British amateur, (G)2OD. Encouraged by the results he cabled the ARRL in late November saying that he would begin test transmissions on 100 meters at 9 PM (Hartford time) on November 25th. At 9 PM on that evening ARRL traffic manager Schnell (U)1MO and Reinartz (U)1QP and others alerted to the tests were listening. Deloy's rough CW signals were heard from the start by both (U)1MO and (U)1QP. (F)8AB was sending a test cipher of "GSJTP" and this was copied from the first. Deloy was cabled by the ARRL advising him that he was getting across. The next night, Nov. 26th. Deloy sent two messages. The first a greeting to all American amateurs from the French amateurs, and a second message setting up a schedule for a two way attempt the next evening.

The evening of Nov. 27th, both Reinartz (U)1XAM (the call he used on 100 meters) and Schnell (U)1MO were ready. At 9:30 PM Hartford time, Deloy came on and was copied from the start. (F)8AB sent two messages and called for about an hour then stood by for long calls. He was called by both Schnell and Reinartz and when they stood by Deloy came back. He acknowledged both calls, asked Reinartz to stand-by and proceeded to work Schnell. He told (U)1MO that he was coping one foot from the head phones. In 1923 the S meter was still not though of, and reports of how far the signal could be copied from the headphones was the substitute for the RST report. One foot from the headphones was not a bad signal. After completing with (U)1MO, Deloy stood-by for (U)1XAM. They also completed a two way contact with out any trouble. The three stations stayed in contact for over two hours, chewing the rag like the old friends that they were after Deloy's trip. At one point Reinartz reported that Deloy's signal was solid copy 25 feet from the speaker. This has to be "S9 Plus". Truly amazing that these first contacts could be so solid. Conditions had been excellent for the last three nights as further tests would indicate, but even under poorer conditions contacts were possible. Other stations joined in on both sides of the Atlantic in the future and helped open up the Short-waves, but that is another story. The first transatlantic two way contact was history, and Loen Deloy had pulled it off. It was as much his determination as anything that had brought it all together in Nov. of 1923. It in all likelihood would have happened later that win-

ter, but this accomplishment on 100 meters was the key to opening the Short-wave door.

This year, the anniversary of this historic contact falls on Thanksgiving Day. So the idea struck me to suggest that at least those reading this that have the amateur radio capability, struggle into the ham shack after filling up on turkey, dressing, and all the other great things to eat on Thanksgiving Day and try to make at least one contact across the pond in the footsteps of Deloy, Schnell, and Reinartz. Maybe some one will even be lucky enough to have a QSO with some amateur in Nice, France. And I suggest that you mention the anniversary and see if anyone else is aware of the historic events that took place just eighty years ago on that date. I'll be interested in hearing your results. 73 and Happy Thanksgiving, Bob P4/W1XP (for the moment).

### Pepperell Fall Classic Soccer Tournament

NVARC members provided a health-and-safety net for the Pepperell Fall Classic over the Columbus Day weekend. Thanks go to the following individuals for assisting with this important (and highly visible) event: Linda N1UPR, Hank KB1JLA, Russ WR1Y, Dave N1MNX, Stan KD1LE, Ralph KD1SM, Peter N1ZRG, Larry KB1ESR, Lynda N1PBL, Ken K1KEY, Ben KB1FJ, Pat N1VAW, Greg N1VAV, Bob AB1CV, Gary K1YTS, and John KB1HDO.



Courtesy KB1HDO

Above Ralph at the net control position on the Town Field.

From the Town Field location the NCS coordinated calls for the Athletic Trainer to check on injured players. Things went smoothly and we were happy to have no emergency hospital trips.



Courtesy KB1HDO

Linda N1UPR on station at the upper Varnum fields. Sunday was rainy and a good test of your foul weather gear and ability to operate under adverse conditions.



Courtesy KD1SM

Above Greg N1VAV monitoring activity on the Town Field.



Courtesy KD1SM

Above is the tournament director Kevin Buckley at the net control station. We used Ralph's "Two Stations-in-a-Box" which houses two rigs and batteries in a tool box for the net control station.



Courtesy KD1SM

Above John KB1HDO at the net control location.



Courtesy KD1SM

Above, Stan KD1LE and Bob AB1CV with the Athletic Trainer who responded to any injury calls.

NVARC provided approximately 160 hours of communications support for the tournament.

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## From The ARRL Letter and Bulletins

### AMATEUR RADIO SUPPORT CONTINUES IN CALIFORNIA FIRE DISASTER

Ham radio volunteers continue to play a role in the ongoing fire emergency in Southern California. A dozen fires, some of them massive, now have burned some 750,000 acres and claimed 20 lives, most of them in the hard-hit San Diego area. Thousands of residents have been evacuated. ARRL San Diego Section Manager Kent Tiburski, K6FQ, says a shift in winds has moved the fire danger away from San Diego proper, but hams continue to supplement communication at two of nine shelters in the area—one at Mountain Empire and a second in Borrego Springs, where hams from Imperial County have been assisting.

"We've been busy," Tiburski said October 29. "This is by far the worst disaster we've ever experienced." He estimated that approximately 200 Amateur Radio Emergency Service (ARES) and Radio Amateur Civil Emergency Service (RACES) volunteers have participated so far in the fire emergency with about 100 in the field at any given time.

Tiburski says hams have been assisting American Red Cross relief efforts, primarily in terms of logistics and working with damage assessment teams. Others have provided liaison between the California Department of Forestry and the Red

Cross, which is providing meals and shelter for firefighters. Nearly 13,000 firefighters and support personnel have been deployed in California to battle the fires.

The fires have claimed nearly 1200 homes in San Diego County alone, Tiburski reported, and burned some 450,000 acres. "Everybody I've talked with—to a person—knows someone personally or knows of someone who has lost a house," he said. Mount Palomar—home of the famous observatory—was evacuated, Tiburski said, and firefighters were making a special effort to protect telecommunications sites there as well.

Although the hot, dry Santa Ana winds have abated, Tiburski notes that a stiff onshore breeze is now driving the fires to the east.

San Diego Salvation Army Team Emergency Radio Network (SATERN) Coordinator Paul Cook, N6RPF, reports he and other SATERN members have been providing communication assistance for The Salvation Army's relief efforts. They've had help from other amateurs as well, he said.

At least a half-dozen Salvation Army emergency disaster services canteens are providing meals to evacuees and firefighters. SATERN National Director Pat McPherson, WW9E, said SATERN is keeping relief teams in contact with each other as well as supporting communication for firefighters, police and emergency responders.

Elsewhere in California, ARRL Orange Section Manager Carl Gardenias, WU6D, says that Amateur Radio operators continue working with relief agencies in that part of the state. "We actually have more Amateur Radio operators available than the Red Cross shelters can use," he said. With ARES teams and other ham radio volunteers from Riverside, San Bernardino and Orange counties available, the hams have been able to rotate shifts.

"The intensity of these fires has never been at this level before," Gardenias said, comparing the current situation with fire emergencies in the recent past.

At the Red Cross shelters—where more and more displaced people are showing up—hams have been "shadowing" shelter managers, communicating shelter supply requests, and helping with health-and-welfare inquiries for shelter clients, Gardenias said. Amateur Radio also is serving to

keep shelters in touch with the Red Cross regional headquarters.

At least 1000 evacuees are taking refuge in a former TWA hangar at the San Bernardino airport.

Amateur Radio SSTV equipment was being used to assist firefighters in San Bernardino. The radio equipment and operators go out on the fire trucks and report what they see back to the command center, Gardenias explained.

In the Los Angeles Section SM Phineas Icenbice, W6BF, reports the Stevenson Ranch fires and Arrowhead are the "very hot spots," and fire-fighting helicopters and crews are using water from nearby Magic Mountain Amusement Park and from golf courses to help douse the flames. Smoke was heavy October 29 in the San Fernando Valley where Icenbice lives.

Amateur Radio operators also are assisting at Red Cross shelters in the Los Angeles area as well as helping the relief agency to locate and establish new shelters. Icenbice said the problem areas appear to be the outer areas of Los Angeles County and in the mountains. Hams have been helping to locate people left homeless because of the fires.

California Gov Gray Davis has declared states of emergency in five counties. As this letter is prepared on October 31, cool and foggy weather have helped to stall the wildfires' progress.--Steve Ewald, WV1X, contributed information for this report

#### **VIRGINIA BPL STARTUP SPARKS ARRL RESPONSE**

The ARRL this week put officials in Manassas, Virginia, on notice that the League will act on behalf of its members to ensure full compliance with FCC regulations when the city's Broadband over Power Line (BPL) system starts up in a few months. The League was responding to media reports that Manassas--a Washington, DC, suburb--has approved plans for a citywide BPL rollout. Manassas City Council reportedly voted unanimously October 16 to grant a 10-year franchise to Prospect Street Broadband to expand a BPL field trial and offer high-speed Internet service to the entire community over municipal power lines. ARRL CEO David Sumner, K1ZZ, on October 22 faxed Manassas Mayor Marvin L.

Gillum to point out BPL's dark side--the potential for RF interference from and to any BPL system.

"Your advisors no doubt have made the Council fully aware of the great potential for radio interference from such a system," Sumner said. "In particular, you are no doubt well aware that Title 47 CFR §15.5 requires that no harmful interference is caused to any radiocommunication service, and that the operator shall be required to cease operation upon notification by a Federal Communications Commission representative that the device is causing harmful interference." Sumner noted that the same FCC Part 15 rule also provides no protection against interference from the operation of an authorized radio station.

"Tests conducted by ARRL technical personnel have shown that the system planned to be deployed in Manassas causes harmful interference to the Amateur Radio service," Sumner said. "We also have reason to believe that the system will be susceptible to interference from normal amateur station operations."

An article in Potomac News.com touted the impending Manassas BPL rollout as the first of its type in the US. Sumner said he was writing to alert the City of Manassas "on behalf of its members who live in and use the public thoroughfares of Manassas" that the ARRL "will ensure that there is full compliance with the FCC regulations" once the city's BPL system is in operation.

Prospect Street Broadband reportedly will offer the BPL service for \$29.95 a month. One estimate predicts the city stands to gain up to \$4.5 million over the 10-year life of the contract, due to be signed this week.

The Manassas BPL field trial is one of the smallest now under way and involves fewer than a dozen homes and businesses. It was installed in an area that has underground utility wiring and no Amateur Radio licensees nearby.

BPL articles in major media have proliferated in recent weeks, many of them painting the service in rosy hues and neglecting to point out the potential for radio interference to and from BPL by other HF spectrum occupants. An October 13 article in The Wall Street Journal, "A New Outlet," by Walin Wong, quotes one trial user who calls the service "fantastic." But Wong also notes that one "Achilles' heel" of BPL is that serving rural areas would require installing costly repeaters every mile or so along the power line. The article

also deals with the reluctance on the part of some electric utilities to embrace the technology.

Sumner also reacted to the WSJ article. In a letter to the editor not yet published, he pointed out that BPL "amounts to sending a wideband radio signal over unshielded wires that were not designed for the purpose" and that do not work well for the 2 to 80 MHz signals common in BPL systems. Instead, "they function as antennas," he said, and that can lead to interference to radio services, including some involved with public safety.

Sumner said potential broadband technology and delivery investors would be far better off considering fiber in densely populated areas and adaptations of wireless LAN technology in rural areas.

Additional information on BPL and video clips from field trial sites are on the ARRL "Power Line Communications (PLC) and Amateur Radio" page <<http://www.arrl.org/tis/info/HTML/plc/>>. To support the League's efforts in the BPL fight, visit the ARRL's secure BPL Web site <<https://www.arrl.org/forms/development/donations/bpl/>>.

#### **AMSAT OSCAR ECHO TO LAUNCH IN MARCH**

AMSAT-North America <<http://www.amsat.org/>> has announced that launch of the AMSAT OSCAR-E Amateur Radio microsat--the "Echo Project"--has been moved up to March 31, 2004. Earlier plans had called for a May 2004 launch. Echo Project Team member Richard Hambly, W2GPS, reported at AMSAT-NA's Annual Meeting and Space Symposium October 18-19 in Toronto, Canada, that the Echo project has made significant progress in recent months.

"The Project Team met with our contractor, SpaceQuest <<http://www.spacequest.com/>>, and at this meeting we decided that spacecraft integration would take place this December and scheduled the launch for March," Hambly told the gathering. Integration will take place at the AMSAT Integration Lab at NASA Goddard Space Flight Center in Maryland.

A Russian Dnepr LV rocket--a converted SS-18 intercontinental ballistic missile--will carry the approximately 10-inch-square satellite into a low-Earth orbit from the Baikonur Cosmodrome in Kazakhstan.

Hambly reported that the project team powered up the Echo flight hardware in late summer in a "flat-sat" configuration at SpaceQuest. Data communications, command and control, and attitude control subsystems were tested, in addition to the radio equipment, power systems and cabling.

The satellite will incorporate two UHF transmitters, each running from 1 to 8 W and capable of simultaneous operation, four VHF receivers and a multiband, multimode receiver capable of operation on the 10 meter, 2 meter, 70 cm and 23 cm bands. Echo will feature V/U, L/S and HF/U operational configurations, with V/S, L/U and HF/S also possible. FM voice and various digital modes--including PSK31 on a 10-meter SSB up-link--also will be available.

During the Symposium, Amateur Radio on the International Space Station (ARISS) Chairman Frank Bauer, KA3HDO, outlined the delivery of the so-called Phase 2 ham equipment to the ISS. A Progress rocket already has delivered a Kenwood TM-D700E VHF/UHF transceiver to the ISS. The unit will mean a significant boost to the power output of the ARISS initial station gear--from 5 W to 25 W.

Bauer said a Yaesu FT-100D and SSTV equipment, along with some new headsets, tentatively are set for transport to the ISS in January on another Progress flight. Additional ARISS gear will not go up until the space shuttle returns to flight in September 2004, however. Bauer said the equipment still on the ground will be tested in November in Moscow to validate that the Phase 1 and 2 systems are compatible. RF testing will also be conducted.

According to Bauer, plans call for the Expedition 8 crew of Mike Foale, KB5UAC, and Alex Kaleri, U8MIR, to install the Phase 1 and 2 70-cm hardware after ground tests are complete. Previous crews already installed four Amateur Radio antennas to cover HF, 2 meters, 70 cm and microwave frequencies.

In addressing the general membership meeting, AMSAT-NA President Robin Haughton, VE3FRH, asked the Board of Directors to continue its support of ARISS and that it go ahead with the OSCAR-Eagle project.

#### **NVARC Loaner Equipment**

Kenwood TS-451 transceiver  
Cushcraft R-7 antenna  
Astron RS-35M power supply  
Practice Oscillators MFJ557 Keyer

### \$November Treasurers Report\$

Income for October was \$65 in membership dues, \$10.68 in savings interest, \$4 from mug sales, and \$10 from PowerPole connector sales. Expenses were \$14.80 for newsletter postage, \$5 to the W1 QSL Bureau (for N1NC QSLs) and \$47.89 for refreshments for the October meeting leaving a net income of \$21.99 for the month.



Current balances:

General fund	\$4487.89
Community fund	\$1842.55

Reminder: if you are not an ARRL member and wish to join, as a Special Service Club, NVARC can mail your application for you and we will receive a portion of your dues back. I will miss the November meeting but you can hand your ARRL dues check made out to NVARC to Stan and we'll mail it for you.

73,  
Ralph KD1SM



### Nashoba Valley Amateur Radio Club

PO Box # 900  
Pepperell Mass 01463-0900

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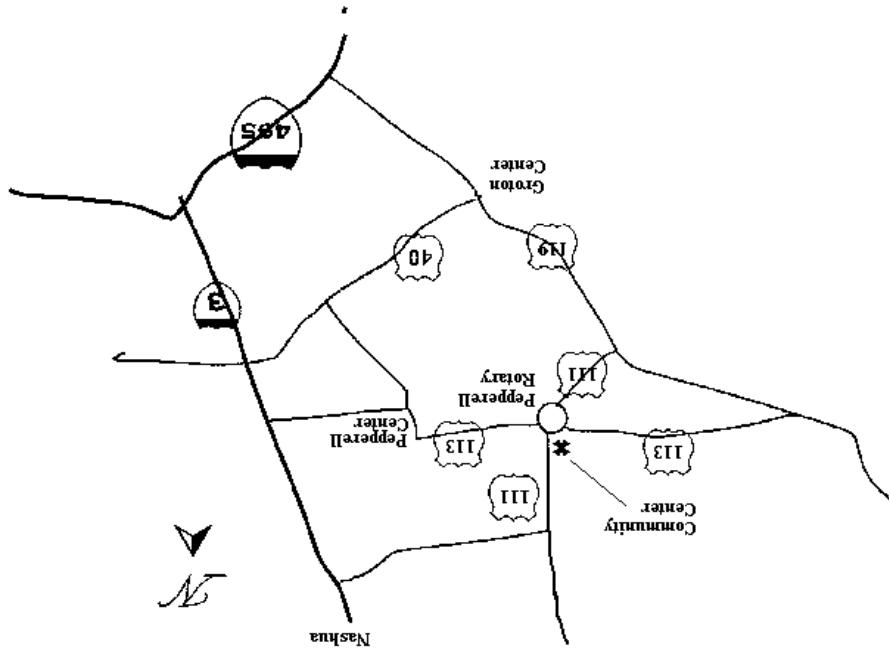
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PIO: Ron Wood W1PLW

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Meetings are held on the 3rd Thursday of the month - 7:30 p.m. - Pepperell Community Ctr.  
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Nashoba Valley Amateur Radio Club

P O Box 900

Pepperell, MA 01463-0900