Nashoba Valley Amateur Radio Club

NVARC Signal

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In This Issue

Next Meeting	1
2-meter Net	1
President's Corner	2
Treasurer's Report	4
Board Meeting Report	5
NE Leadership Conference	6
Repeater Shack Repainting	7
Antenna Corner	8
Half Square Antenna	9
Free Stuff	14

Next Meeting

This month's meeting will be held 7:30 PM on November 19 2026 at the Pepperell Community Center at 4 Hollis Street in Pepperell Massachusetts.

November's meeting will be our annual QSL card sort and pizza party.



A decent crowd turns out at Tiny's in Ayer on Saturday morning. We're usually at capacity, but always manage to find another seat… (photo courtesy Paula)

Weekly 2-meter Net

The NVARC Information Net is held Monday nights at 7:30PM local time on the 2m N1MNX repeater – 147.345MHz+100pL. An informal net on 28.400(+/-) may follow the VHF net.

President's Corner
Les N1SV

Hot off the press is news that our own Bruce K1BG has been appointed ARRL New England Division Vice Director by ARRL President Rick Roderick K5UR. Bruce takes over for Phil Temples K9HI who recently resigned. Bruce will finish out Phil's term through December 31, 2027. Please join me in congratulating Bruce on this new position.

I finally got VC Towers to out to come out and work and on my two towers recently. The 6m high-power VSWR issue turned out to not be the antenna at all but water in my 100-foot length of LMR600 feedline up the tower. Unfortunately, a replacement cable needed to be ordered so VC Towers will need to come back to finish the job. The issue with my 900/1296 MHz antenna system appeared to not be the feedline but possibly excessive loss in the tower switchbox. We bypassed the switch box, so we'll just have to see if there is any improvement there. This reminds me that time is ticking away on any unfinished antenna projects so don't procrastinate. Before you know it, the snow will be flying. Saturday breakfast at Tiny's continues to be a good place to discuss these things and ask for assistance. Also don't forget the NVARC reflector as well.

As I'm writing this the repairs to the NVARC repeater shack have now been completed. Thanks to John K1JEB and John KK1X for all their efforts in making the needed repairs including repainting. And again, many thanks to John K1JEB for getting Littleton Lumber to donate all the supplies except the paint saving the club well over $1,000. As a reminder don't forget about our weekly information net on Monday nights on the 147.345 repeater (+600 KHz offset and a PL of 100 Hz) at 7:30 PM. Please check in if you can.

On October 17th I attended the ARRL New England Leadership Council meeting in Springfield, MA. The event was hosted by ARRL New England Division Director Tom Frenaye K1KI.



Treasurer's Report
Ralph KD1SM

Income for October was $91.25 in membership fees. Expenses were $2.55 in PayPal fees leaving a net income of $88.70 for the month. A donation of $35 for repeater maintenance was added to the Community Fund.

Current balances:

General fund	$3,734.28
Community fund	$7,278.25

As of 5 November we have 91 members who are current with their dues. NVARC dues are still a bargain at just $15/year or $20/year for an entire family.

Welcome to new members Aron Duquette KD1ABQ of New Boston, NH and Michael Leo KC1QKM of Fitchburg.

The NVARC Members' email distribution mechanism moved to groups.io in July; specifically nvarc-members@groups.io. If you are a member and missed your invitation to join that group you may log in to groups.io and submit a request to join. Posting to the group is restricted to group members.

To pay membership dues via PayPal see the instructions in https://n1nc.org/membership/

If you are in doubt about your dues status please send me (Ralph) an email and I will be happy to answer your questions.

If you are joining ARRL or renewing your membership please note ARRL's instructions to enter your NVARC membership information. As a Special Service Club, the ARRL expects a majority of Club members to also be ARRL members and will send a portion of your new or renewal ARRL membership fee back to the Club. Contact me (Ralph) for further information if you need it.

President's Corner
Les N1SV

Area club presidents were in attendance with Tom providing updates on ARRL happenings and a lively roundtable discussion on various topics. I really enjoyed the event, and I was able to get a real feel for what other clubs were doing. For more details on this see my report on this elsewhere in this month's newsletter.

The topic of mesh networks has become popular at our Saturday breakfasts and recent meetings. This unlicensed technology that uses LOng-RAnge (LORA) radio technology and open-source software to send text messages seems to be gaining a lot of traction. Several members are either using companion nodes and/or have installed repeaters. Meshcore nodes operate in the 900 MHz band and use a Bluetooth interface to your smartphone. I'm intrigued by the idea and with companion nodes under $100, I may have to give this a try. For more information see https://meshcore.io/ .

Bruce K1BG & John KK1X are planning another POTA activation for November 14. Stay tuned for a location to be named. Coming up in December is the ARRL 10m contest from December 11 through 13. Bruce would like to put together a local club entry (10 entries or fewer) as was done last year where members submit their scores and NVARC competes against other clubs in the same category. If you're interested in participating, please contact Bruce K1BG at his QRZ email address. More information on the 10m contest see https://www.arrl.org/10-meter .

This month's meeting will be our annual QSL card sort and pizza party. We will be sorting all the QSL cards that have arrived at the incoming W1 QSL bureau. Eric Williams KV1J, who manages the bureau, will be here with boxes of cards and will explain how the bureau system works. This is always one of my favorite meetings of the year. And of course after we've sorted cards there will be pizza and beverages served so don't miss it. And last but not least Don N1NWE our Vice President, reminds us that it's not too early to be thinking about homebrew projects to bring to the December meeting or ideas for a short subject for the January meeting.

Board Meeting Report
John K1JEB

Board approved reimbursement of $205.47 to John K1JEB for materials used in the repeater shack repair.

PICO Balloon video was submitted to YouTube by Jim N8VIM.

Jim N8VIM reported repairs to repeater. Repairs had to be made to the 2m coax. Discussion on possible microprocessor chip replacement to get the 2M/440 repeater connection.

Discussion concerning placement of 900MHZ Meshcore repeaters on high structures near Pepperell.

Bruce K1BG is working on sending recruiting notices to a number of non-member hams in the area.

Club Guest speaker and events at the:

November meeting is QSL Card Sort/Pizza party.
December meeting is Home-brew night (Show and tell).
January is Short Subjects.

The board discussed the possible purchase of a projector for the club meetings.

Les N1SV attended the ARRL Leadership Council meeting. He said it was interesting and informative.

Bruce K1BG will be working on a list of club members and outside hams within 35 mile radius to participate in the ARRL 10 meter Contest.

Brice K1BG is planing a NVARC POTA event on November 14th somewhere south of Pepperell.

Bruce K1BG is planning to conduct a License Class in January 2027. Class days TBD.

NE Leadership Council Meeting
Les N1SV

On October 17th, I attended the ARRL New England Leadership Council meeting in Springfield, MA hosted by ARRL New England Division Director Tom Frenaye K1KI. The event was held at the Sheraton Springfield Monarch Place Hotel with attendees mostly club presidents from MA & CT. I'm told the last time an event like this was held was pre-COVID.

Tom provided an update on legislation, the FCC and ARRL membership. Following this there was a roundtable discussion where a lot of interesting topics were discussed. Here are my notes from the meeting.

Legislation Update – The current legislation (H.R. 1094 in the house and S. 459 in the senate) which seeks to prevent homeowner associations (HOAs) from issuing blanket bans or unreasonable restrictions on outdoor amateur radio antennas, has languished in the final days of the current legislative session. This is in spite of a grass roots letter writing campaign by the ARRL. State and local advocacy in this area has proved helpful as some two dozen states now have enacted PRB-1 style laws or specific local antenna regulations. The ARRL continues to monitor the situation and plans to reintroduce legislation in the next legislative session.

FCC Update – The FCC continues to go thru its initiative to clean up its rules also known as "DELETE DELETE DELETE". In other news, the ARRL is also working with the FCC in an attempt to open up Technician licensee spectrum including digital and voice allocations in the 15, 40, and 80m bands.

ARRL Membership – The ARRL has taken its lumps recently over its handling of its annual membership costs related to QST mailings. While Life members still get QST mailed to them, members with multi-year memberships have had to pay extra to receive QST via mail. Tom reported that currently there are approximately 160K ARRL members with 120K voting members.

NE Leadership Council Meeting
Les N1SV

General Discussion – We had a healthy discussion about what was working for clubs and what help the ARRL could provide. Some of the topics discussed included term limits, grants, the 501c3 process, and ideas to increase club memberships.

NVARC showcased its technician license classes and how we've been able to increase the number of new hams and new members to the club. In addition, I noted that NVARC has also helped these new licensees get on the air by providing loaner equipment and assistance in installing antennas. NVARC has also geared much of our technical presentations at our monthly meetings toward these new hams. It was very interesting to hear how other clubs where doing in comparison to this. I left feeling that NVARC was doing all the right things and is a very healthy club.

Repeater Shack Renovations
John KK1X

The various incarnations of the Board have for several years tried to get the repeater shack painted. It had been a long time coming. John KK1X stepped up and started the scraping and priming process, and got through three walls. The clapboards on the east side were so far deteriorated that they needed to be replaced.

Much discussion ensued, culminating in John K1JEB arranging a grant from Littleton Lumber to provide new clapboards. When the materials were delivered, John K1JEB and John KK1X stripped off the old clapboards and replaced them with the donated clapboards. Punky clapboards on the west side of the shack were also replaced. The lower portions of all corner boards were cut off about three feet (1m) off the ground and replaced with that plastic stuff everybody's using now because wood is unobtainium.

Repeater Shack Renovations
John KK1X

While K1JEB was replacing the corner boards, KK1X finished scraping the west wall. The exterior was rough sanded to 60 grit, cracks filled, holes puttied, and the entire building was brushed down.

We applied a coat of a magic primer K1JEB has used for years (and has some surfaces 20 years old that don't need repainting…), and then applied two coats of white paint.

Prior to scraping off the old paint, I had removed the High Voltage signs and placards. The placards got scraped, sanded and repainted, and four new High Voltage signs were installed.





Of course I'm biased, but I think we did a pretty OK job. Just don't look closely for brush strokes...

Antenna Corner
John KK1X

As I wandered the grounds at the October NEAR-Fest, I found Reliance Antennas in the commercial building, cleverly out of the sun. They manufacture a number of QRP-ish antennas in the EFHW and EFRW space, so-called "bug out" antennas.

Their 53 foot "random" wire antenna piqued my interest. Advertised as a 10-160m antenna, this consisted of 53 feet (16.15m) and a 9:1 unun. Well, I've got 9:1 ununs, and I've got wire. When I went home, I measured out a 53 foot length of wire and set the antenna up in my back yard, replacing the "clone" antenna I wrote about last month.

I used a LDG 9:1 unun ($30 at HRO or DX Engineering), along with 53 feet of BNTECHGO 18 ga silicone insulated wire from Amazon, and 16 radials about 16-17 feet (4.8-5m) long. I'd driven a short length of rebar into the ground as an anchor. I don't recall whether I used zip ties or duct tape to hold the unun in place, but a light string over a tree branch supports the wire. Straight up. (The same string I used for the 71 foot experiment in the past.)

Only about three dozen contacts were made using this antenna, on October 8, 9, and 13, all FT8. Figure 1 shows a map of all contacts providing a grid square. Right now it's been displaced by leaf clearing. Ham radio in New England...



Fig 1



Half-Square Antenna for 17 Meters
Rod WA1TAC

After a failed effort to make a contact with the Bouvet Island expedition last winter, WA1TAC decided that some antenna improvements were in order. In particular, the low dipole on 17 meters which is broadside to the northeast was inadequate for working into the southern oceans. The Bouvet station was readable on 17 here but Bouvet could not copy this station. A new expedition to South Georgia Island is planned for early 2027 and the author wants to have a stronger signal to the southeast.

While a yagi would be an obvious solution, there appeared to be no good way to support and rotate it at this QTH. However, the QTH does have many trees that could be used for wire antennas. After some research it was decided that a half-square vertical array would be a good candidate. This antenna is often used on 80 and 40 meters for a small gain over a dipole or inverted Vee but there is no reason why it can't be used on higher bands.

The half-square (HS) is essentially a pair of top-fed verticals separated by a half wavelength phasing line. Its feed impedance is close to 50 Ω when fed at an upper corner. It has a low vertical angle of radiation and requires no radials. The radiation pattern is strongest broadside to the two vertical elements and works best when the bottom of the vertical elements is less that a quarter wavelength above level ground. Figure 1 shows the basic configuration. One obvious drawback of the antenna is the inability to easily change the preferred direction.

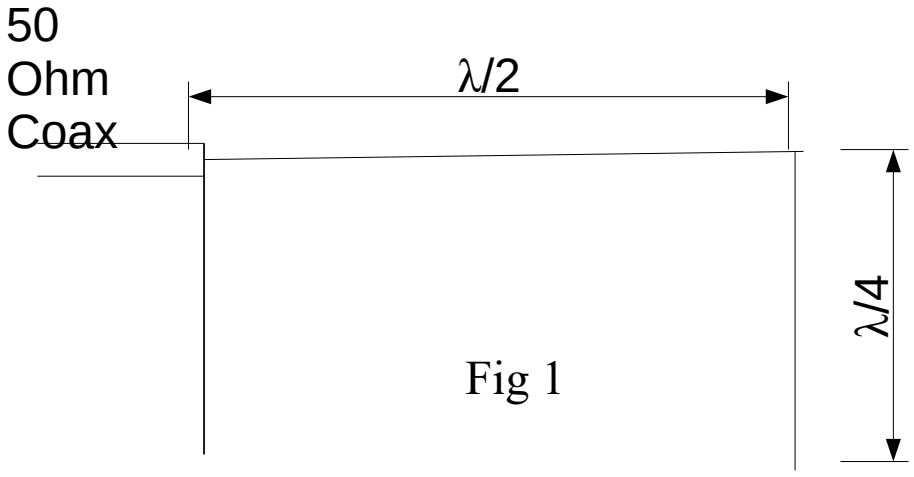

Fig 1

The HS antenna is surprisingly simple requiring only two supports and two wires. It can be feed directly at a top corner with 50 ohm coaxial cable and a common mode choke is optional. Figure 2 shows the antenna components prior to assembly. The top corner supports were made from plexiglas and hardware store eyebolts. Two holes through which the wire was to be threaded would act as strain reliefs.



Fig 2

Construction began with cutting the antenna wire; the lone vertical element was 13.75 feet (4.2m) while the combined phasing line and its vertical element was 27.5 feet (8.4m). Common 7/22 stranded copper wire was used for the elements. Some additional length was included on the vertical elements to permit tuning to the desired frequency. The author has learned that it is easier to cut wire shorter than it is to cut it longer. Assembly was conducted on the rear deck as shown in Figure 3.

The water jug held down one end of the wire for easier measurements. Figure 4 shows the two support fixtures with the completed antenna.


LOWFAT MILK • Grade A • Pasteurized
Nutrition Facts
Calories 110

Fig 3

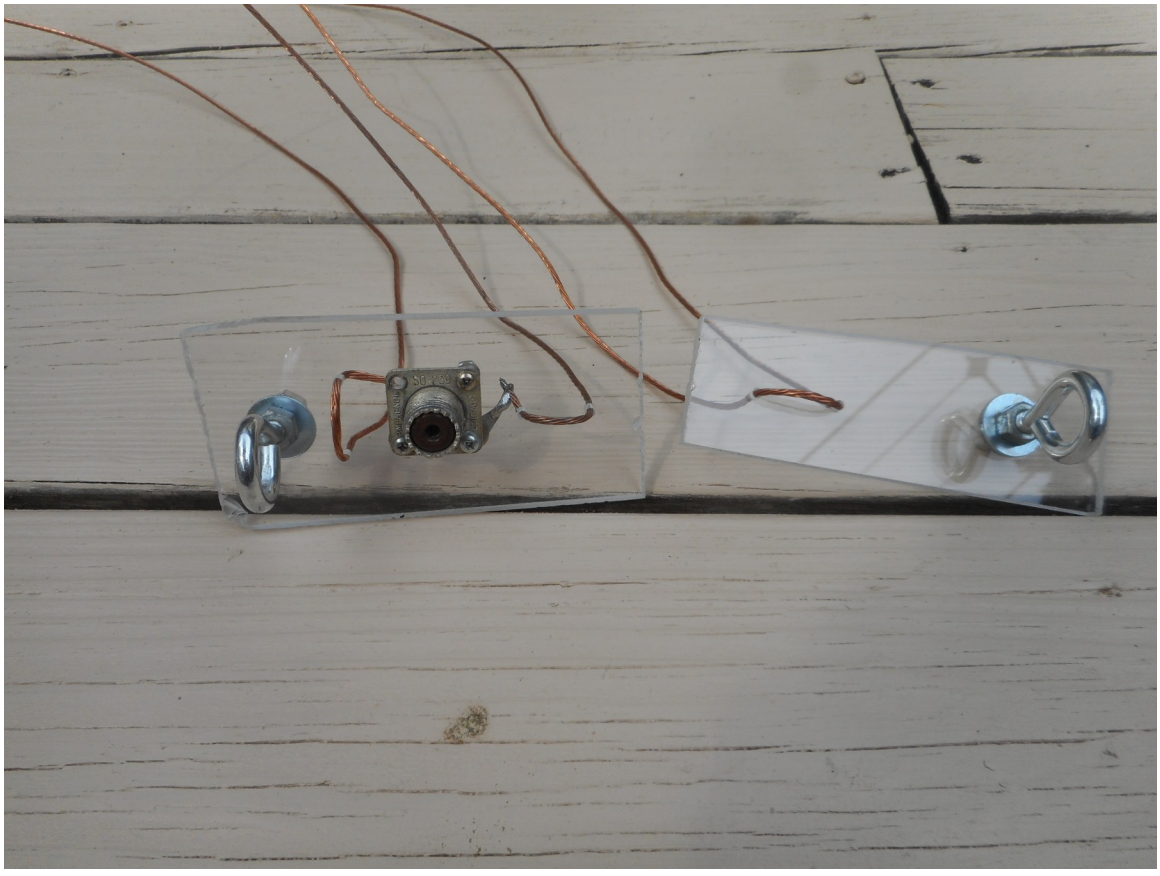

Fig 4

The antenna was hung between two trees broadside to the northwest and southeast. RG-8X coax was used for the feedline. However, the chosen tree branches were not as high as hoped and the bottom ends of the vertical elements are closer to the ground than desired. A small weight was attached to the bottom of each vertical element to keep them straight. Figure 5 shows the mid section of the antenna in place between two trees.

Fig 5



Initially, the VSWR was 1.71:1 at the top end of the band, necessitating a shortening of two vertical elements. After several cut-and-measure tries, a VSWR below 1.4:1 was obtained over the 17 meter phone band. WA1TAC's first contact using the new antenna was with W6A, the Route 66 commemorative station in Santa Monica, CA A few days later a second QSO was made with a JH1 who provided a 59+5 report into central Japan. A subsequent comparison of signal strengths was made on a KL7 signal. His signal was 55 on a low 17 meter dipole broadside to the northeast and 57-8 on the half-square broadside to the northwest. Signal strengths should improve when the leaves are off the trees.

The half-square antenna gives about 3 dB gain over a single vertical, requires no radials (when top-fed) and has a much lower angle of radiation than a dipole. It is a simple, low-cost alternative to a quad or yagi that works well near the ground. A pair of them at right angles and with separate feeds would give 360 degree coverage. However, they are single band antennas.

Free Stuff

1. WA1TAC has a 100 ft length of clean RG-6 coax (75 ohm) with a PL-259 on one end that is available to anyone who wants it.

2. WA1TAC saved a box of vacuum tubes from the dumpster. A sort through the box found both metal and miniature tubes. A partial list follows:

Metal - 6K7, 6A8, 6J7, 6F5, 6B8, VT-87

Miniature - 6CB6, 6BH8, 6BJ6, 6C4, 6BA6, 6BE6, plus a few more.

If anyone needs any of these tubes for a boat anchor restoration project, contact WA1TAC via email - address is on his QRZ page.

Lending Library

Don't forget – Don N1NWE has been bringing a variety of books and magazines to club meetings. Some of them are free for the taking, while others should be returned at the next meeting. You know. To be polite.



Once again, the Club wants to take this opportunity to thank Littleton Lumber for their generous grant to replace the clapboards on the repeater shack.

Please support local shopping.

ARRL 10-meter Contest
Bruce K1BG

At the October Nashoba Valley Amateur Radio Club meeting I suggested that NVARC participate in the annual ARRL 10-Meter Contest coming up in December (from Friday December 11 at 7PM Eastern time until Sunday December 13th at 7PM).
The 10-Meter contest is an operating activity that allows amateurs to test their stations by making quick contacts with stations around the world. Many operating categories are available using both phone and CW.
https://www.arrl.org/10-meter.

In 2025, over 1.7 million contacts were reported from 138 DXCC countries. 2,609 US radio amateurs participated. YOU will find other people to contact and have a lot of fun during the 10-Meter Contest!
The ARRL (the American Radio Relay League, amateur radio's national organization in the US) offers a "Club Gavel Competition" where club members can aggregate their scores allowing us to compete with other clubs. There are three levels of participation – Unlimited, Medium, and Local, depending on how many entrants a club can attract and how large an area the contestants come from.
https://contests.arrl.org/ContestRules/ClubComp-Rules.pdf. I'd like to see as much NVARC participation as possible in the gavel competition. Here are the club results from last year:
https://contests.arrl.org/clubscores.php?cn=10m

NVARC placed 5th out of 11 clubs in the local category. Not too shabby! I'd like to measure our improvement this year by how many contestants we can claim. For me, score is unimportant. Having fun is everything!

If you are interested or want to know more, please let me know (bruce.blain@charter.net). Last year's QST article can be found here https://contests.arrl.org/ContestResults/2025/10M-2025-FinalQSTResults.pdf, and scores can be found here https://contests.arrl.org/scores.php?cn=10m.

See you on 10 meters in December!

Nashoba Valley Amateur Radio Club
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Secretary: John Bielefeld K1JEB
Treasurer: Ralph Swick KD1SM

Board Members:
Jim Hein N8VIM (2024-2027)
Steve Davidson NA1T (2025-2028)
John Griswold KK1X (2024-2029)

N1NC Trustee: Bruce Blain K1BG

Join NVARC! Annual dues are
$15 individual, $20 family

Contact us on the N1MNX repeater:
442.900(+) PL100
147.345(+) PL100
53.890(-) PL100

This newsletter is published monthly. Submissions, corrections, and inquiries should be sent to

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