



de N1NC

May 2015 Volume 24 Number 5

This Month's Program

The meeting subject for the May meeting is 3D Printing. The presenter is Vern Nulk. He has presented the topic several times and his presentation is interesting. He also has the printing equipment and has "printed" a number of projects.. He is retired, having worked for NOAA in the fisheries division for 42 years, and his work has also included IT and IT management for NOAA. His current hobby interest is radio controlled aircraft, focusing on building precision large scale models and flying them. He also is interested in Ham radio, specifically CW and QRP although not active currently.

See QST article on page 50 " Electronic Technology " STATE-OF-THE-ART HOMEBREWING " which addresses Ham interest in 3 D printing of circuit boards.

Last Month's Meeting

Last month we had elections which results in the following slate of officers.

- President Peter N1ZRG
- Vice President Jim N8VIM
- Secretary John KK1X
- Treasurer Ralph KD1SM
- Bob Reif W1XP 2013-2016
- Wolf Seidlich KA1VOU 2014-2017
- Rod Hersh WA1TAC 2015-2018



Photo Courtesy KD1SM

The short subject for the meeting was by Jesse Shulins, KB1YNK. His presentation was on air operated antenna supports. He will be giving this presentation in the youth forum at the Dayton Hamvention.



Photo Courtesy KD1SM

Bob W1XP announced the results of the LBC with the specifics elsewhere in the newsletter.



Photo Courtesy KD1SM
LBC participants present at the meeting were Bob W1XP, Bruce K1BG, Jim AB1WQ, John K1JEB



Photo Courtesy KD1SM
And the contestants, Bill K1NS, Jesse KB1YNK, and Gary K1YTS



Photo Courtesy KD1SM
Above the LBC celebratory cake baked by Dan KW2T



Bruce K1BG assisted as the Judge in the Jeopardy round.

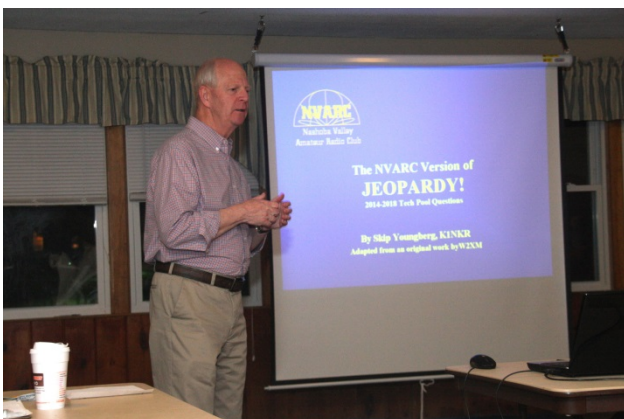


Photo Courtesy KD1SM
Skip posed questions from the Tech question pool to the contestants (below) in a Jeopardy style quiz show as part of the meeting program.



Photo Courtesy KD1SM
Bruce K1BG awarded receives his recognition plaque shown below.



Photo Courtesy K1NKR



Photo Courtesy K1NKR



Photo Courtesy K1NKR

Les N1SV, was not at the meeting but received his plaque (shown above) later.

Attendees: Jim AB1WQ, Bill AB1XB, Bruce K1BG, Doug K1DG, John K1JEB, Dennis K1LGQ, Skip K1NKR, Bill K1NS, Peter K1LPH, Ken KB1UVP, Greg KB1WAQ, Stan KD1LE, Ralph KD1SM, John KK1X, Dan KW2T, Les N1SV, Jim N8VIM, Peter N1ZRG, Paul NW1U, George W1JXR, Bob W1XP, Chuck WA1RCH, Rod WA1TAC, Gene WW4EN

My Boston Marathon

My Boston Marathon was spent at a net control site off the course. From this location was run the bus net, medical resupply net, course nets (7) and had representatives from the Red Cross and BAA.

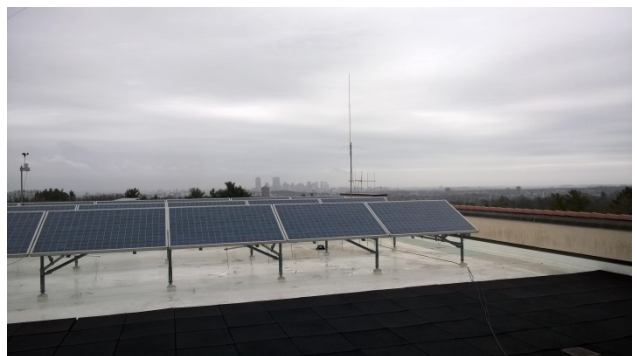


Photo Courtesy KD1LE

Looking out the windows from our location the Boston skyline was visible through the rain and fog.



Photo Courtesy KD1LE

The set up included approximately 15 radio positions in a horseshoe arrangement. Starting at front center and going clockwise were 7 course net controls covering segments of the course from Hopkinton to Boston. There was a liaison NCS to link to the Boston NCS. There were also Bus and Medical nets.

Stan KD1LE

NVARC In Club Recognition Program

de Skip, K1NKR

For a couple of years NVARC has had an in-club recognition program. This year two members were awarded recognition plaques.

The program, inspired by a similar one in the Quarter Century Wireless Association, identifies outstanding contributions in each of the five fundamental purposes of the Amateur Service (*FCC Rules, Part 97.1*). Nominations must come from the membership at large and refer only to actions in the prior year. (Board members are not allowed to nominate, and are ineligible for any of the awards. Plus, there is no requirement that any or all of the awards be presented for any calendar year.) These NVARC in-house awards are not intended to name an annual "super ham" or someone who has contributed to club operations. Rather they identify members whose Amateur activities contribute to our hobby's achieving its fundamental basis and purpose and who are recognized by their peers for having done so.

Bruce Blain, K1BG, was awarded the NVARC 97.1(a) Emergency and Public Service Award for 2014. His nominator cited Bruce's leadership and attention to safety in establishing reliable communications under stressful field conditions as evidenced by his performance as Beam Team leader in WRTC-2014. Although not specifically a 2014 activi-

ty, the nominator did identify that Bruce's success this year was a result of two years of intense work conducting training and refining procedures.

Les Peters, N1SV, was awarded the NVARC 97.1(e) International Goodwill Award for 2014. His nominator cited Les' contest and DXing achievements over the year. Additionally, he identified Les' WRTC-2014 Beam Team leadership as having cemented relationships with that contest's visiting international participants. Among all others in the club, Les is the consummate DXer.

Bruce's and Les' accomplishments have greatly benefited Amateur Radio and the Nashoba Valley Amateur Radio Club. They are truly deserving of the recognition of their peers.

2014/2015 LBC Results



Photo Courtesy KD1SM

The 2014/2015 NVARC Lantern Battery Challenge is over and there was an awards ceremony at the April Meeting. Again Bob W1IS lead the way with 238 QSO's in the CW General category. Bob uses a water front location to turn in a spectacular performance using a KX3.

Next in the QSO count was Bruce, K1BG with 80 QSOs in the CW Unlimited category. I came is Second to Bruce with 68 QSO's in the same category. I might have given Bruce more of a challenge but I ran out of battery well before the activity was over. I guess I need to be more conservative in my operating.

Not far behind me was George W1JHR. He had 63 QSOs entering in the Mixed mode. This year, John, K1JEB entered the Digital Unlimited mode. John used a much modified transceiver kit that he built and got working to make 24 PSK 31 contacts. Be-

sides having fun John says he has learned a lot about the NE602 mixer.



Photo Courtesy KD1SM

Bob W1XP and Dan KW2T cutting the cake.

The last entry was from a new ham that didn't ever have a license when he turned in his entry last fall. Jim AB1WQ got on 10 meters in the ARRL SSB contest and made 8 contacts with a borrowed KX3. I hope Jim will join in the fun in the years to come

There were several others that made an effort to get on but didn't make it. One had an antenna buried under many feet of snow and another was working to get on with a home brew rig and kept getting sidetracked. But he said he had fun just the same. That is what the LBC is all about.

I would like to thank those that helped with the LBC this year. John K1JEB helped put the battery packs together and distributed them. Thank you John. And to Dan KW2T and his XYL Mary Lou N2MRX for providing the cake that we enjoyed at the April meeting. Thank you both for the great cake. If I missed anyone else thank you also. I would like to thank the NVARC board that has always supported the Lantern Battery Challenge. I am not sure just now what we will do for the next LBC but if you have any comments or suggestions please let me hear from you. Till next time. 73 Bob W1XP

May Board Meeting Notes

Stan, Bob, Peter, Jim, John in attendance.

Stan needs to update newsletter for officers.
Ralph has already fixed up the web page.
Peter has his 3-D printer guy on tap for May meeting.
Field Day is upcoming. Bob & Stan have offered to run N1NC as 1A at the orchard, which allows for a

VHF station. Should anybody care to step up and operate elsewhere or under different conditions, please do so.

Agenda item for February 2016 board meeting to promote New England QSO Party

Lacking Treasurer's report

Pepperell has requested a change to our meeting start from 7:00 to 7:30, which poses quite an inconvenience based on our membership.

respectfully submitted,
John KK1X

Name That Decade

- A. 1900-1910
- B. 1910-1920
- C. 1920-1930
- D. 1930-1940
- E. 1940-1950
- F. 1950-1960
- G. 1960-1970
- H. 1970-1980
- I. 1980-1990
- J. 1990-2000
- K. 2000-2010
- L. 2010-2020

- ___Amateurs gain the 902-928 spectrum
- ___First man-made satellite in orbit
- ___Marconi wireless first heard across Atlantic
- ___Owen Garriott operates 2m from space Shuttle
- ___Edwin Armstrong patents Super-Regeneration
- ___144-148 MC/s allocated to amateurs
- ___You are trying to finish this test
- ___First amateur 2-way EME on 1296 mHz
- ___Morse code exam eliminated for Tech license
- ___Ross Hull explains tropospheric ducting

Quiz by Dale Clement, AF1T, as part of the W1FZJ Memorial Trivia Contest at the 41st Annual Eastern VHF/UHF Conference (Answers: I, F, A, I, C, E, L, G, J, D)

April Treasurers Report

Income for April was \$130 from membership dues. Expenses were \$29.20 for newsletter postage (two months) leaving a net income for the month of \$90.80.

Current balances:

General fund	\$3,170.89
Community fund	\$4,636.41

As of 9 May we have 40 members who are current with their dues and 19 renewals outstanding. Thank you to those of you who hand in your dues before Ralph comes to you. Please check your renewal status on the roster circulated at the monthly meeting or ask Ralph.

If you are joining ARRL or renewing your membership please consider letting Ralph send in the paperwork for you. The Club will buy the stamp and will get a commission from ARRL. ARRL membership checks should be made payable to NVARC; Ralph deducts the Club commission before forwarding your paperwork to Newington. As an Special Service Club, the ARRL expects a majority of Club members to also be ARRL members.
Ralph KD1SM

Meeting Coffee Bar

Many thanks to Ken KB1UVP for picking up the coffee "bar" at the meetings. There's been an incremental increase in socializing, and that's what we meet for.

Don't forget to leave a donation if you partake.

Groton Road Race



Photo Courtesy KD1SM
Jim AB1WQ helping set up the NCS antennas.



Photo Courtesy KD1SM
A few of the 30+ hams pose with Groton Police Chief Palma.



Photo Courtesy KD1SM



Photo Courtesy KD1SM
Lieutenant Cullen briefing the Police Officers and hams before the race.

Townsend Lions Club Canoe Race



Photo Courtesy KD1SM

Gary K1YTS assembled local hams to support the canoe race. L-R Ken KB1UVP, Barry W1HFN, Ed N1YFK, John KK1X, Bob AB1CV, Charlie KT1I, Tom K1JHC, Stan KD1LE, KB1KEF and daughter right of Gary, Gary K1YTS, front Shirley Coit (Townsend EMA Director) and behind the camera Ralph KD1SM.



Photo Courtesy KD1SM

Boston Marathon KD1SM



Photo Courtesy KD1SM

Before the Marathon there is much to be done much of it behind the scenes. Kits have to be assembled for each person having credentials, lanyards, pins, jackets, etc.



Photo Courtesy KD1SM



Photo Courtesy KD1SM

After each persons "kit" is assembled it must be sorted by location so that it will arrive in the correct location on race day.

Two New Ham Bands, Maybe

By W1XP

On April 29th the FCC released a Notice of Proposed Rule Making. (NPRM) This document covers many diverse changes to the FCC rules. Two of these proposed rule changes could bring two new bands to the radio amateur in this country. These are the granting of operating privileges on the 2200 meter and 630 meter bands. This will bring the US amateur privileges in line with the international table of frequency regulations. Amateurs worldwide have had privileges on 2200 meters for some time but the FCC had not granted US hams access to this narrow band because of opposition by the US power indus-

try. The power industry has used this part of the spectrum to send control and monitoring signals over high voltage transmission lines for years. There is a lot of politics involved with this that I won't go into at this time. But there have been many part 5 experimental stations operating on these bands for years without any interference to the power industry. The tone of the FCC document is, I feel, very positive. The FCC states that they do not see any technical reason that the two services cannot coexist. It is this pro-amateur tone of the document that leads me to believe that we may be successful in being granted access as amateurs to these two new bands soon. The FCC stated the many hours of operation by experimental stations with our any documented interference to the power industry as support of this position. This could happen as quickly as 90 days but I expect it will drag out longer. I feel certain that the power industry will oppose this FCC action and drag it out. But I hope by the new year we will have two new bands to explore.

These two very narrow bands are not like any other bands we have. If for no other reason than they are very small. The typical SSB voice signal is wider than the 2200 meter band. This Low Frequency band is 2.1 kHz wide. From 135.7 to 137.8 kHz. So only slow CW and digital modes are practical. With a wave that is 2200 meters long an effective antenna is a real challenge. There is also a very high level of noise. But on the other hand signals travel along the surface of the earth well. It is very likely that the amateur will be limited to a maximum EIRP (effective isotropically radiated power) of one watt. As low as this may seem, it is a challenge to achieve with limited space and budget. 2200 meters is about 1.4 miles. So a full sized ¼ wave whip is a lot bigger than a mag mount can handle. Hi. We have lots to learn but I expect a small but dedicated group will tackle this challenge.

The 630 meter band is one band I have had personal experience with. I have been operating with an experimental license for some time and I'm proud to say that some thousands of the 168,000 hours of operation without interference the FCC quotes in the document have been by WD2XSH/37. The band is from 472 to 479 kHz. The proposed power limit is 5 watts EIRP. This band is wide enough for several SSB stations but I expect that CW and digital modes will be the dominant modes here also. The about 3.5 times higher frequency make the antenna challenge a bit easier than 2200 but it is still there. Partly because of the experimental activity and partly because it is closer to the normal ham bands, you can buy equipment to operate on this band. Some is kit and some you can buy off the shelf. For example an Elecraft K3 will receive and generate a low level signal that can be used to operate on the band

with external amplification. The 630 meter band will probably be the entry band for new operators.

Well we don't have these new bands yet, but here is hoping that we will have two new bands to explore soon.

NVARC Club Net

The NVARC Club Net meet's every Monday evening at 8 PM on the 442.900 Pepperell repeater. Stop in and bring your input and questions. Recent nets have been run by George KB1HFT. Attendees; Stan KD1LE, Skip K1NKR, Larry W1ESR, George KB1HFT/NCS, Dan KW2T, Leo K1LK, Jim N8VIM, Bob W1XP, Peter N1ZRG.

Upcoming Contests

2015

May
ARI International DX Contest
2-3 New England QSO Party
CQ-M International DX Contest
9-10 Volta WW RTTY Contest
30-31 CQ WW WPX Contest CW

Flea Markets/Hamfests

2015
May 1, 2 Deerfield NH NEARfest
August
21-23 ARRL New England Convention Boxboro MA

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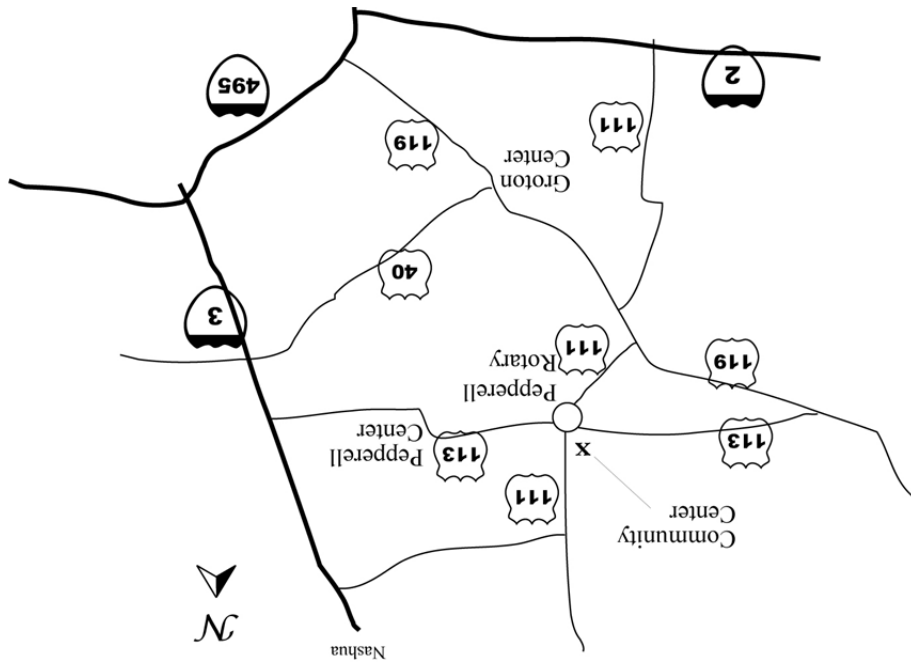
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Treasurer: Ralph Swick KD1SM
Board Members:
Bob Reif: W1XP 2013-2016
Wolf Seidlich KA1VOU 2014-2017
Rod Hersh WA1TAC 2015-2018

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Librarian: Peter Nordberg N1ZRG
Property Master: John Griswold KK1X
N1NC Trustee: Bruce Blain K1BG
Annual membership dues are \$15; \$20 for a family
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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