



SIGNAL

A club since 1992



Since 1993



Since 1996

de N1NC

July 2018

Volume 27 Number 7

This Month's Meeting

It's summer. Enjoy the time off!

But remember to mark your calendars! The annual NVARC picnic will be held this year on Sunday, August 5th, from 1pm until people leave. QTH will be 7 Turnbuckle Lane, Tyngsboro (home of Skip, K1NKR). QRZ.com will show you where; GPS will get you there.

The usual NVARC "pic-a-nic hospitality rules" apply:

- The host provides the venue and sets the date.
- The host provides a hot barbeque grill.
- The host provides (within NVARC's budget allocation) condiments and soft drinks.
- GUESTS PROVIDE their own food--meat, sides, salads, dessert, etc. Maybe enough to share on chips, dips, and dessert.
- GUESTS PROVIDE their own non-soft drink libations.
- EVERYONE participates in good fun and fellowship.

News and Happenings

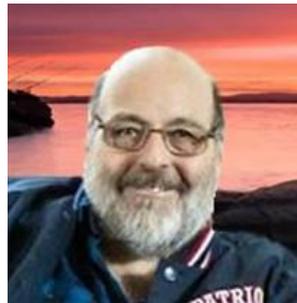
Last Month's Meeting

Didn't know that Amateur Radio contributed so much to all of radio science, did you? Phil, W1PJE, reprised his February HamSCI workshop banquet address for us last month. Good talk, Phil. Thanks.

Member Status

Dave Peabody, K1MNX, is still at Westford House in Westford. It is off route 110 (6 Park Drive), less than a mile north of the 99 Restaurant. Dave has email (dkpeabody@gmail.com). The best time to visit him is probably mid-morning to 11:30 and 1pm to 4pm to avoid meal times.

Gene Novacek, WW4EN, continues to outlive his pancreatic cancer—extraordinary guy that he is. He's (believe it or not, mostly) off world travel and currently home at "the barn" in Townsend.



Hector L. "Jesse" Creamer, W1DEA, died Saturday, June 16, 2018 at his home. For much of his career, Jesse worked as a software engineer for several companies including

American Superconductor at Devens, Lahey Hospital in Burlington, Brand Image Productions in Burlington, and the Raytheon Corporation. Jesse enjoyed camping with his family and their dogs, as well as woodworking and playing his guitars. A long-time member of NVARC he also spent the last few years helping successfully rejuvenate the Billerica Amateur Radio Society—that's the true Amateur spirit.

Field Day Passeth: On "Dependence" Day

I am reminded on this 4th of July that, just 11 days ago, June 23 was NVARC's De-

pendence Day. It's that special day each year when we embark on the event that defines us—a group of Amateur Radio operators who show what we can do, what sets us apart from, say, the Rotary Club or Kiwanis Club, or a religious congregation. The latter are all fine organizations of course, but they can't roll into a rural apple orchard and bird sanctuary at 8:00am and within three hours establish a free-standing radio communications capability and use it to reach fellow radio operators all over the continental U.S. and Canada and beyond. And do this for the next 32 hours while living at a camp that provides electrical power, shelter, and food & water to some 30 people.

Why and how do we do that?

First the why. Because "when all else fails." If all cell phone towers and telephone lines go down, and utility power goes down, and roads are blocked, and water supplies fail we know that in a matter of hours we will be able to establish communications beyond our immediate area. We know that others in our immediate community will be able to depend on us.

Next, the how. Because we prepare. We don't depend on bravado and don't peddle false hope against a potential natural disaster. We prepare and train for what we'd need to do in emergency, in order to be confident that we'd be able to respond and help, rather than be part of the problem and need help. After all, we are self-reliant New England Yankees. We depend upon ourselves and depend upon one another.

We gain confidence in our unique capabilities by walking the walk, not just talking the talk. At least once a year, in June, we get together and demonstrate the dependence that is the foundation of our independence.

Yet.



N8VIM photos

We depend on Jim Hein N8VIM to provide uninterrupted AC electrical power to our half-acre living area for 32 hours.

We depend on Bruce Blain K1BG, John Griswold KK1X, and Skip Youngberg K1NKR to bring the radio transceivers with microphones and code keys, along with the tables and chairs to operate from, and the tents to shelter all of that.



KD1SM photo

We depend on Stan Pozerski KD1LE, Bob Reif W1XP, Ralph Swick KD1SM, Rod Hersh WA1TAC, and others to raise the 60ft.-high beam and dipole antennas that give us enhanced radio range.



KD1SM photo

We depend on Leo Hunter K1LK and Bob Johnson AB1CV to provide shelter from the elements as well as refreshing drink and nutrition to keep our members productive.

We depend on Gary Busler K1YTS to arrange for the sanitary facility that keeps us out of the woods and saves the environment.

We depended on Forrest Filler KD2MZH, one of our newest members, to provide coffee, scrambled eggs, and grilled toast to our

team on Sunday morning as we head into the home stretch of the weekend.

Last but not least, we depend on the Pepperell Conservation Commission, including Rob Rand and Paula Terrasi, to mow the orchard and permit our weekend activity on town conservation land.

The net result of all this dependency: utter success, independence. Not only were we able to sustain our own usual Field Day operations through the weekend, but we were able to assist with the Canadian ePOP space satellite experiment, true "ham science," coordinated by member Phil Erickson W1PJE.

Everything went like clockwork. Our equipment and other temporary infrastructure setup was complete by 11:00am Saturday, in time for us to look out of our tents and stick out our tongues at the brief rain sprinkle that arrived at noon.

During 24 hours of radio operation, we made over 1,100 QSOs.



KD1SM photo

At 4:30pm on Sunday, June 24th, we rolled out of the orchard with the last of our gear: the picnic table in the back of a pickup truck.



KD1SM photo

To all those we were able to depend on this year, another big Thank You from me. To the NVARC hams who didn't make it to Field Day this year, you were able to depend on us. We will be able to depend on you next year. Right?

73 de Jim AB1WQ



KD1SM photo

Special Service Club

I got an email yesterday [28 June] from Gail Iannone from ARRL. Our SSC application (the renewal of NVARC's club designation) has been approved and doesn't expire until June 1, 2020.

de John KK1X

On the Propagation Beat



Some may know that NVARC conducted an excellent 40 meter band ground-to-space evening and morning transmission test

during the recent Field Day activities with the Canadian CASSIOPE/ePOP satellite. [We were specifically invited to participate. Last year's QRM was too heavy. Ed.]

There is now an official press release on the HamSCI website describing NVARC's participation in the experiment:

<http://hamsci.org/article/cassiope-spacecraft-monitors-2018-arri-field-day>.

Rick Lindquist WW1ME also highlighted us in the ARRL News

<http://www.arri.org/news/cassiope>

[spacecraft-listens-in-on-2018-arrl-field-day.](#)

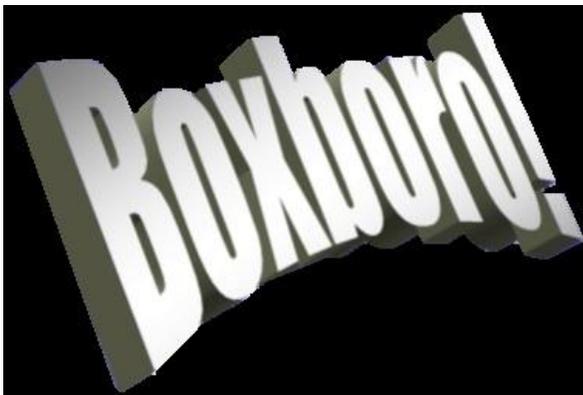
On behalf of the Calgary team and MIT Haystack, I would like to thank everyone who did an outstanding job organizing and participating in the exercise—this has been noted in particular by the international science team:

- Jim Hein N8VIM for mobile participation,
- Bob Reif W1XP for transmissions both at Heald Orchard with a KX3 and from home with an iCOM 735,
- Tony Diczno KX1G for dedicated high speed CW work from home,
- The NVARC field day team at N1NC, including Bruce Blain K1BG, Stan Pozerski KD1LE, and Jim Wilber AB1WQ, for coordination and transmissions with FD equipment and antennas

73 de Phil, W1PJE

[Editor's note: Have you noticed how little these activities like HamSCI and TDOTA actually cost us in time and energy—and how much national publicity we get from them? That's why the Section Manager refers to us as one of his best examples of a "healthy" club.]

Boxboro!



New England's premier Amateur Radio convention. Join us September 7, 8, and 9 at the Boxboro Regency Hotel & Conference Center (Formerly the Boxboro Holiday Inn).

See <http://boxboro.org> for ticket and program information.

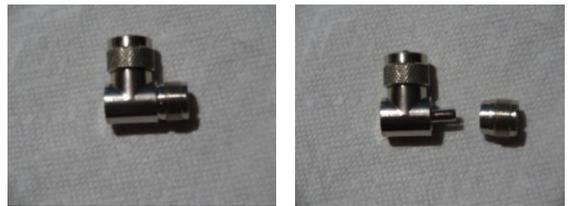
Volunteer. Consider volunteering for a few hours at the convention! Volunteers play a crucial role in making the convention not

only possible, but a huge success every year. **Convention volunteers working for a two or more hour slot receive a voucher for a free lunch with the hotel!** Just fill out [the form here](#), or contact Boxboro Volunteer Coordinator [Steve Schwarm](#). (Mention NVARC and they'll appreciate it even more.)

The President's Corner

Well another Successful Field Day (FD) is behind us and things went well. I will just mention a few things and leave the rest to the Field Day Coordinator. First, I want to thank Jim AB1WQ for taking on the challenge again this year. He took on the challenge as the time was getting short and did a great job organizing. Another notable contributor was John KK1X. He had committed to providing one of the HF stations and then life stepped in with work deadlines looming. He set up his HF station Saturday and left. He returned Sunday to take it down and left. Sorry you couldn't stay and play, John, but thanks for your support.

Still, on Field Day we did run into the required glitches and problems during setup and testing. One was a Powerpole distribution box with an intermittent connection. The problem I encountered was in the Black Box (antenna patch) wiring. I'm pointing this one out as it has happened to me several times now.



KD1LE photos

The picture, above left, is a coax right angle connector. Because of the many connections in the tight space of the Black Box I use a number of them. This type has shown itself to be unreliable. As you can see in the right picture, it is assembled by press fitting one end into the barrel. I have had these come apart without any known physical abuse! I don't recommend them.

OK. New topic. I attended the ARRL Cabinet Meeting at Boxboro June 30th. These

meetings are attended by Tom Frenaye's ARRL Division Staff and club presidents and precede the ARRL Board of Directors meetings. Many topics are discussed, but I will cover a few.

The Official Observer program redesign is still being worked out. It looks like there will be a two-level staff. There will be OO's who operate as they have in the past and there will be some OO's who are trained and vetted in such a way that the FCC can use their findings directly. In the current system the OO's may report on an issue through the ARRL but the FCC must repeat the investigating for it to be used in their enforcement actions.

The ARRL's proposal on upgrading the Technician level privileges based on the difficulty of the testing has gone to the FCC. At some point the FCC will request public comments on their proposed rulemaking. It seems unlikely the FCC will create an additional license class at this time so the most that can be done is to make the Technician license privileges commensurate with the difficulty [i.e., content and depth Ed.] of the license exam.

The League is still working on proposals for getting a frequency range for the 60 meter band versus the fixed channels.

The Amateur Radio Parity Act is still working its way through Congress, now attached to an appropriations bill.

The Boxboro Convention Committee is looking for volunteers. You can sign up on the [website](https://www.boxboro.org/volunteer) at <https://www.boxboro.org/volunteer>. They have an increased need as they want to have a volunteer for each seminar room to keep the program on schedule and make sure each presenter gets their allotted time. [Hey, this is important. I got finessed out of more than half of my time once. Ed.]

On the public service side. I participated in my second triathlon in Winchendon today (from the sidelines with radio in hand) after two road races this year, Groton and the Marathon. If you've never participated in one of these events you should. They can be very enjoyable and the participants are always appreciative.

On the mega battery front, California is adding four massive utility scale battery systems: a Tesla 182 MW Powerpack™ with possible expansion to 1.1 GW, a Dynegy Marketing and Trade 300MW, a Hummingbird Energy Storage 75 MW, and a Micronoc 10 MW. The Chinese are working on large scale flow batteries using Vanadium with a 200MW/800MWH unit under construction. One of the improvements the flow batteries claim to offer is lifetimes of greater than 20 years with no reduction in performance. Major improvements to these batteries were made at the Pacific Northwest National Laboratory here in the US and a number of companies are pursuing them as an alternative to the more traditional Li-ion batteries. See <https://electrek.co/2017/12/21/worlds-largest-battery-200mw-800mwh-vanadium-flow-battery-rongke-power/>.

Another variant of the flow batteries is a Zinc Bromine flow battery which is being manufactured in residential sizes. See <https://electrek.co/2017/11/06/zinc-bromine-batteries-coming-for-lithium/>.

de Stan KD1LE

The Golden Fuddy Duddy



Photos unattributed, probably AB1WQ

It was in late April, as I recall, amid signs that the endless spring of 2018 was finally coming to an end, that Bruce K1BG noted at the Tiny's breakfast table, with a twinkle in his eye, that Field Day would soon be here. He went on to say that it had now been 50 years since he had gotten his Novice license. "Fifty Field Days, huh?", I asked.

"No," he replied, "Many more than that...been to lots in the U.K. as well."

Over the following weeks, as it was becoming clearer that I would likely be Field Day Coordinator again in 2018, I decided we should take time during the upcoming Field Day to publicly recognize Bruce's 50th anniversary and the steady contributions he makes to our big event every year. Bruce's share of the club's total contacts over the past four years? A phenomenal 45, 51, 37, and 60% of all QSOs. (His share of total points is even higher since the vast majority of his contacts are CW, which count for two points each.) Bruce regularly configures the N1MM+ logging software that keeps the entire set of operators efficiently adding to our contact total by avoiding duplicate contacts. He also provides the antenna switcher that enables point-and-click selection of up to six antennas to our two operating station transceivers. And along with the full operating station and tent he provides, he brings a wealth of information to whomever is serving as Field Day coordinator.

Okay, so 50 years is a long time. It just cries out for cheap gibes about advanced age—being an "old fuddy duddy," even. In an uncanny coincidence, there's a nice alliteration between Field Day and Fuddy Duddy. Since the material for a 50th anniversary is gold I came up with the idea of the Golden Fuddy Duddy

Bruce's recognition piece (trophy, if you will) had to be a golden sculpture that captured the essence of Field Day. It needed to somehow pull together the officialdom of ARRL Field Day and the reality of operating radio technology out in the field: operatin' and eatin' amid grass and mosquitoes and weeds. How better to exemplify those disparate elements than to wrap a bit of frayed coax in dandelion leaves and coat them lightly with gold spray paint? Add in the plastic fork of a Field Day meal, and the PL-259 connector hanging in space—a connection that wants to be made to something...somewhere...sometime. Now you have it: The Golden Fuddy Duddy. Like a thingamabob or a whatchamacallit, but with an F and a D in its name. It's not just Bruce;

it's the spirit of Field Day that resonates in K1BG.

Bruce has asked if we will give the trophy to someone else next year, or in future years. I say we retire it in its inaugural year. What say you?



de Jim Wilber AB1WQ

Strays

Reward Offered

(Found on the street by an anonymous Signal contributor)

A reward of 500 microfarads is offered for information leading to the arrest of Hopalong Capacity. This unrectified criminal escaped from a Weston Primary cell, where he had been Clamped in Ions awaiting the Gauss chamber.

He is charged with the induction of an 18 turn Coil named Milli Henry, who was found Choked and robbed of valuable Joules. He is armed with a Carbon Rod and is a Potential killer.

Hopalong Capacity is also charged with driving a DC motor over the Wheatstone bridge and refusing to let the Band Pass. If encountered he may offer Series Resistance.

The Electromotive Force spent the night searching for him in the Magnetic Field where he had gone to Earth. They had no success and believed Capacity returned Ohm via a Short Circuit. He was last seen, riding a Kilocycle with his friend, Eddy Current, who was playing "Ohm on the Range" on his Harmonic.



If you want to see a large (and well-written) newsletter, check out the Fairlawn (New Jersey) Amateur Radio Club's archive at <http://newsletters.fairlawnarc.org/>. NVARC swaps newsletters with FLARC. In their editor's words, "41 pages this month!!"

WOW !! Special cover section for Field Day... It's a good thing we don't have to print and mail it."

Treasurer's Report

Income for June was \$110 from membership fees and \$55 from the book'n'stuff raffle. Expenses were \$20 for newsletter postage and \$120 for a portion of Field Day, leaving a net income of \$25 for the month.

Current balances:

General fund \$3,066.34

Community fund \$5,061.52

If you have approved Field Day expenses please submit receipts for reimbursement to either Jim Wilbur AB1WQ or to me. Thanks to Jim for expertly managing the Field Day budget including gathering the street value of consumable items that are regularly donated for Field Day.

As of 5 July we have 49 members who are current with their dues and 16 renewals outstanding. Thank you to those of you who hand in your dues before I come to you. Please check your renewal status on the roster circulated at the monthly meeting or ask me.

de Ralph KD1SM

Board Meeting Notes

Board meeting 7/5/2018

Attending: Stan KD1LE, Jim N8VIM, John KK1X, Ralph KD1SM, Jim AB1WQ, Ed N1YFK. Observing: Skip K1NKR and Mike KB8ZHK.

Discussion about Field Day and how to attract more participants.

Cabinet meeting at Boxboro - lots of FD groups operated only on Saturday (only).

K1KI to check into why SSC applications take so long. Changes upcoming for Entry-level licensing.

Treasurer's Report. Current Balances: General fund, \$3,066.34; Community fund, \$5,061.52.

Picnic at Skip's on August 5 after noon at Tyngsboro QTH.

NE1AR opened a makerspace in Natick.

Future meeting programs. Rob Macedo for September. October card sort. Bob DeMattia for November on Marathon comms. Homebrew in December. Short Subjects in January.

Ralph proposed a picnic budget of \$25.

Respectfully submitted,

de John KK1X

Club Services

In-Club Recognition Program.

Fuddy Duddy? Decade anniversaries of licensing? Maybe, but consider nominating a member for one of the NVARC recognition awards. They're for outstanding contribution within the club to the founding principles of the hobby. (It's decidedly not intended to be some sort of "ham of the year" award.) See <http://www.n1nc.org/Recognition/> on the club website.

Calendar

July

15 Flea at MIT

August

5 NVARC PICNIC!

18-19 Huntsville Hamfest and Southeastern Division Convention, Huntsville AL

19 NoBARC Hamfest, Adams MA

19 Flea at MIT

Upcoming Operating Activities

2018

International Grid Chase (all year!)

Science Milestones event (all year!)

July

14-15 IARU HF World Championship

August

4-5 222 MHz and Up Distance Contest

18-19 10 GHz & Up – Round 1

19 Rookie Roundup – RTTY

September

15-16 10 GHz & Up – Round 1

29-30 EME Contest, 2.3+GHz

October

27-28 EME Contest, 50-1296MHz

Are you a "contest nut?" See <http://www.arrl.org/contest-calendar> (Contest

Corral) for month-by-month listings of both ARRL and non-ARRL contests.

Editor's Note

I don't know whether this is an apology or a brag.

My intent for the July issue was to have had a dialog—pro-and con—regarding how the digital modes, specifically FT8, have changed the hobby. Having solicited input, I had some to print—and I apologize for not doing so.

But here we are a few weeks past Field Day and there's lots to say. Great.

We typically limit the page count to ten, five double-sided sheets to minimize postal costs in accommodating members who need or insist on hard-copy and to manage the printed document size for the copies we provide to HRO and Electronics Plus. (Yes, the pile is often empty by the end of the month!)

As long as members need *Signal* to be a "mixed-media" publication, that's the way it shall be. Service to members reigns supreme.

So we actually had a page left, but we had more input than would fit on one page. The FT8 dialog will be forthcoming. Inputs still accepted.

See you next month.

de Skip, K1NKR

Advertisers

FOR SALE

This space available for members' use.



Nashoba Valley Amateur Radio Club

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

President: Stan Pozerski, KD1LE

Vice President: Jim Hein, N8VIM

Secretary: John Griswold, KK1X

Treasurer: Ralph Swick, KD1SM

Board Members:

Jim Wilber, AB1WQ, 2016-2019

Ed Snapp, N1YFK, 2017-2020

Bruce Blain, K1BG, 2018-2021

Property Master: John Griswold, KK1X

Librarian: Peter Nordberg, N1ZRZG

Emergency Coordinator: [open]

N1NC Trustee: Bruce Blain, K1BG

Join NVARC! Annual membership dues are \$15; \$20 for a family.

Meetings are held on the 3rd Thursday of the month at 7:30 p.m. in the Pepperell Community Center.

Contact us on the N1MNX repeater.

442.900 (+), 100Hz

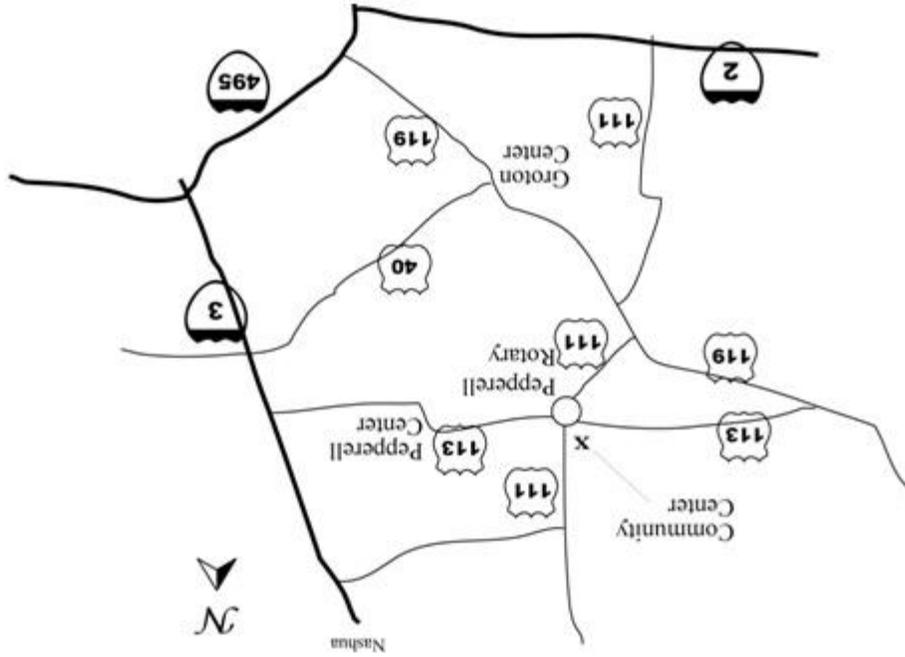
147.345 (+), 100 Hz

53.890 (-), 100Hz

This newsletter is published monthly. Submissions, corrections and inquiries should be directed to the newsletter editor. Articles and graphics in most PC-compatible formats are OK.

Editor: Skip Youngberg, K1NKR

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