



SIGNAL

A club since 1992



Since 1993

de N1NC

April 2022

Volume 31 Number 4

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NVARC Monthly Meetings

NVARC general meetings are scheduled for the third Thursday of the month at 2430 UTC (7:30pm, Eastern Time). Meetings are held at the Pepperell Community center and are generally simulcast via Zoom. Non-members who are interested in attending may send an email to meetings@n1nc.org requesting the teleconference details.

NVARC thanks **Medtronic, Inc** for providing the teleconferencing services under their employee volunteer support program for non-profit organizations

This Month's Meeting

The April NVARC meeting will feature Mike Murphy, WU2D, who will speak on Shortwave Dream Receivers of the 60's.

The President's Corner

de Bruce, K1BG

As detailed in the club Constitution and Bylaws ([www.n1nc.org/Members/Constitution and Bylaws](http://www.n1nc.org/Members/Constitution_and_Bylaws)), the April meeting is a "Special Meeting" conducted within the General Meeting in order to elect officers.

The club president, vice president, secretary, and treasurer are all elected to one-year terms at this meeting. One of the three directors is also elected to a three-year term. Full descriptions of the duties that our elected officials perform can also be found in the constitution and bylaws.

John, K1JEB, Bill, K1NS, and I volunteered for this years' Nominations Committee to search for current club members who would like to run for office.

Results of this effort will be announced at the April meeting, with these individuals appearing on the ballot (and if you have an interest, please let one of us know). It is my hope that we will have several candidates who run for each position.

For a club to stay active and vibrant, new ideas and new energy are continually required. This means that new officers should be elected on a regular basis.

I decided to run for president last year with the understanding that I would serve a maximum of two terms. By that time the club should be ready for new ideas and the fresh energy a new candidate brings.

Some might say that they are ready for new ideas and fresh energy right now! If you are one of them – please step up to the plate!

Democracy only works if people participate in it. That means YOU.



Spring marks the beginning of what I call "Public Service Season".

A number of club members annually volunteer to provide communications for the Boston Marathon, which takes place this year on April 18th.

Additionally, club members have a long history of providing communications for the Groton Road Race, which will take place on May 15th.

Ralph, KD1SM, organizes communications for the road race. Please let Ralph know that YOU would like to help.

It's an easy and fun way to get out, meet with other club members, and provide a valuable public service.



Plans are in the works for another Technician License Class, probably starting around May 16th. Details will be sent via email to the club email reflector.

If we can arrange for the Pepperell Community Center, we will hold the classes there. Otherwise, we will go on-line.

Why the rush? An anonymous donation of five brand new, never opened, ARRL License Manuals was recently made to the club. The Technician question pool will change on July 1, so it's a case of "use it or lose it".

April's guest speaker will be Mike Murphy, WU2D, who will talk about "Shortwave Dream Receivers of the 60's". Since I was first licensed during this time, I will be particularly interested in the presentation. Old radios, like old cars, had *personality*. Each one was uniquely different, each had their idiosyncrasies, and most were far from perfect. I'm really looking forward to hearing what Mike has to say.



If you leave Mike's presentation saying "I must have one of those receivers", one of the best places to look for one is at "NEAR-Fest" in Deerfield, New Hampshire.

The NEAR-Fest web page states:

"The program of activities and events at NEAR-Fest is extensive; a huge outdoor electronic flea market, three buildings full of commercial vendors, forums, technical seminars and symposia, demonstrations, exhibits, displays, licensing examinations, special events radio stations, a "jam session", good food, fellowship, fun and general mishegoss¹. NEAR-Fest is the largest event of its kind in the Northeast and has once been described as the "Woodstock of Amateur Radio".

¹ <https://www.thefreedictionary.com/mishegoss>

NEAR-Fest will be held on April 29th and 30th in Deerfield, NH (<https://near-fest.com/>). Hope to see you there.



Finally, in last month's Signal, I announced that Jessica, WU3C, would take on the important role of Field Day Chairperson. Sadly, Jessica has informed us that, due to a critical work project and preparing for full time studies at MIT this fall, she will be stepping down from this role.

While disappointed, I completely understand. This leaves NVARC once again looking for a Field Day Chairperson.

In recent years, a new club member has stepped up and taken on the role, with help and support of other club members and past Field Day chairs. It's a great way to learn about the club and interact with our members. If you are interested, please let me know.

That's it for this month. See you at the April meeting!

-de Bruce, K1BG

NVARC YouTube Channel!

Jim, N8VIM, has compiled several new videos that capture some facets of NVARC and the interests of its members.

You can view these videos by browsing to [youtube.com](https://www.youtube.com), and searching for "NVARC", where you can view the videos.

If anyone has old (or new) Ham Radio related videos or electronic projects, and would like to have them edited and put on the YouTube channel, please contact Jim, N8VIM.

The History of Entry-Level Licensing Part 7

de Bruce, K1BG

The 1980s were an interesting time for amateur radio. The federal government was engaged a policy known as "deregulation", which was an attempt to reduce government restrictions, controls, and regulation.

The FCC did their part.

This, combined with drastic reduction in funding, resulted in the FCC closing large numbers of field offices and a reduction in staff. Ultimately, this led

to problems with administering and processing amateur exams.

This resulted in significant changes for the Novice license².

Before 1983, a code test was first administered by a volunteer to a prospective Novice. When she or he passed, a filled-out FCC form 610 was sent by the examiner to the FCC, who then returned a test that was administered to the prospective Novice.

This completed test was then returned to the FCC for grading and issuing of a license. The FCC felt the system was very expensive and time consuming.

Over 97% of the tests returned resulted in a passing grade. The FCC's proposal was that the volunteer would administer a code test, and formulate a test based on FCC guides. When the applicant passed, the volunteer administering the exam would send a completed FCC form 610 to the FCC for issuing a license.

The ARRL objected to the idea that the volunteer would formulate the exam, stating that perspective Novices could take exams that varied significantly in difficulty.

The result became the pre-cursor to the current VE system³. I'm constantly asked how we got to the current system where we have huge question pools and where the question pools are published.

First, a pool of questions was written as a combined effort by many licensed radio amateurs, and these questions were then edited by the FCC.

The pool was determined to be 200 questions for a 20 question test, where the entire pool would be published. The 200 questions in the pool were considered sufficiently large.

To quote the FCC:

"It is not likely that anyone will memorize such a formidable array of questions. However, if that feat is attempted and mastered, we do not foresee that it would compromise the examination. We are convinced that, especially at the Novice operator level, in the memorization process a sufficient com-

petency in radio theory and amateur rules would unavoidably and automatically occur".

It's interesting that a similar program was adopted for the VE program a short time later. It should also be noted that a similar system was used by the Federal Aviation Administration (FAA) with excellent results.

Again, it should be noted, that before 1976 the ARRL License Manual had 49 questions (provided by the FCC) that needed to be mastered for the Novice license. The new "pool" was now at 200 questions, and soon it would get larger.



The second major thing that happened to the Novice license in the 1980s was called "Novice Enhancement"⁴.

The ARRL thought that there were "problems" with the Novice license: inactivity on-the-air, low upgrade rates, non-renewals, and fewer new novices⁵.

The league felt that privileges were not attractive enough, and proposed the following expanded, but limited, Novice privileges: 10 meter phone, 10 meter data, 220 MHz (all emissions), and 23 cm (all emissions, 5 watts). A Novice would not be able to be a control operator or licensee of a repeater, auxiliary, or beacon station.

The ARRL requested that the Novice examination be expanded from 20 questions to 30 questions (and the question pool expanded to 300 questions). "The ARRL does not want to make the examination more difficult. The League wants to increase the comprehensiveness of the examination in order to accommodate the operational aspects of the additional privileges available to Novice class operators". In order to maintain the integrity of the Novice examination, the ARRL also proposed two examiners instead of one.

As you might expect, going from 20 to 30 questions was significantly more difficult, but I digress.

In the last few months before the 30 question test went into effect, there was a bump in new licens-

² <https://worldradiohistory.com/Archive-DX/QST/80s/QST-1983-05.pdf>, page 77.

³ <https://worldradiohistory.com/Archive-DX/QST/80s/QST-1983-09.pdf>, pages 56 – 59.

⁴ <https://worldradiohistory.com/Archive-DX/QST/80s/QST-1985-07.pdf>, page 9

⁵ <https://worldradiohistory.com/Archive-DX/QST/80s/QST-1986-06.pdf>, pages 48 – 51.

es⁶. But Novice enhancement did not result in increased interest in the Novice license, and it did not have the desired results for which the ARRL was hoping.

Next month I'll talk about the 1990s, the "No Code Technician" license, and restructuring – which included the elimination of the Novice Class license, and the rise of the Technician Class license as the entry level license.

-de Bruce, K1BG

JS8Call: A conversational digital mode using FT8 technologies

The May issue of QST has an interesting article (page 38) on an experimental digital mode called "JS8Call", developed by Jordan Sherer, KN4CRD. JS8Call allows "long-form" conversational QSOs by combining the robustness of FT8 with a messaging and network protocol layer for weak signal communication. It was heavily inspired by WSJT-X, Fldigi, and FSQCall.

JS8Call has been in development since July of 2017, with a general public release in June of 2019. At this point, over 11,000 beta testers have put it through its paces.

Your Editor has not yet tried it out, but has loaded the software and is studying the nicely written user's manual, which can be found at: <http://files.js8call.com/latest.html>.

IMHO, JS8Call deserves a look!

Some Interesting Links

[Ed: I'd like to make this section a regular feature of Signal: wherein readers submit links to articles that they have run across that might be of interest to NVARC members.

If you are reading a hardcopy of Signal, you can easily navigate to these links by opening this edition Signal on our server at <http://n1nc.org/Newsletters/2022/3104.pdf>.

If you have others, please email them to editor@n1nc.org.]

The MIT Flea is Back! Hoo-Ray!! The first session will be held on April 17th.

<https://w1mx.mit.edu/flea-at/mit/>

⁶ <https://worldradiohistory.com/Archive-DX/Ham%20Radio/80s/Ham-Radio-198806.pdf>, page 4.

Amateur Television: The Boulder Amateur Television Club's newsletter has some interesting articles:

<https://kh6htv.files.wordpress.com/2022/03/tv-rptrs-rptr-98.pdf>

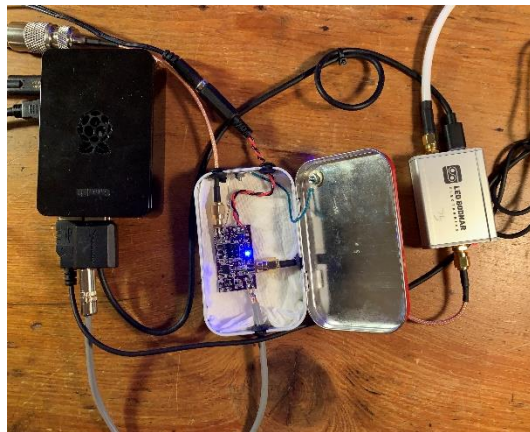
From the Shack de George, KB1HFT

As some of you may remember, I had volunteered to be part of HamSCI's "Personal Space Weather Station" project, and built the small "Grape_1" receiver that generates data on doppler shifts in WWV's signal that are caused by fluctuations in the ionosphere.

I showed my Grape_1 at "Homebrew Night" last year, when I had the Grape crudely installed in a shoebox along with its associated Raspberry Pi and GPS defined 10MHz clock. It was ugly, but it worked jus' fine!

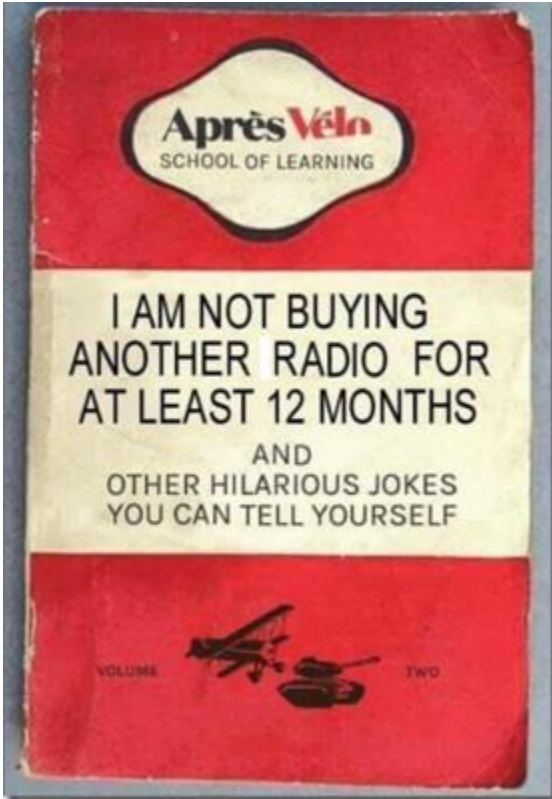
I've since packaged the little Grape board in a shielded Altoids tin, and plan to mount it, the Pi, and the clock on a beautiful walnut display mount (a la Alexander Graham Bell).

For now, though, it sits on the bench quietly collecting data:



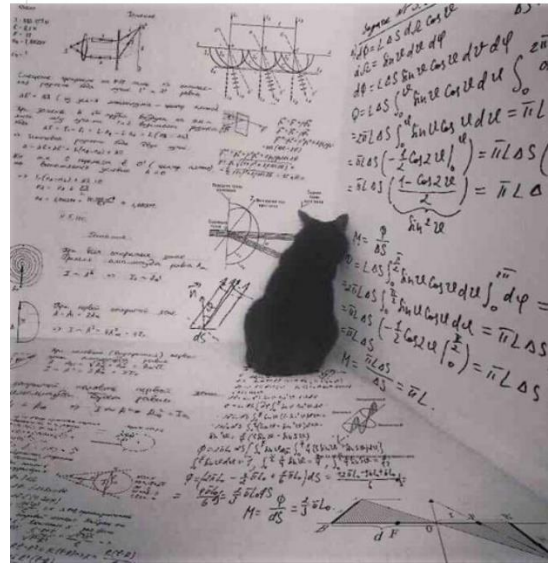
The HamSCI group has recently provided means to upload collected data to a central database, where it can be studied.

There are ~40 Grape receivers operating worldwide, and over 11,000 files have been uploaded!



Tnx to Skip, K1NKR

Meanwhile, inside the box,
 Schrödinger's cat plans its revenge.



Have YOU paid your NVARC Dues? See:
<http://n1nc.org/Members/Roster>
 for your renewal month.

Treasurer's Report

Income for March was \$200 in membership re-
 newals, some for multiple years. Expenses were
 \$1.79 in PayPal fees, leaving a net income of
 \$198.21 for the month.

Current balances:

General fund	\$2,963.62
Community fund	\$6,628.25

As of 6April we have 48 members who are current with their dues and 26 renewals outstanding.

Renewal months are in the member list on www.n1nc.org in the Member's area; check yours on <https://www.n1nc.org/Members/Roster>, or you may also email me.

Thank you to those of you who mail your renewals or use PayPal without a reminder.

To pay membership dues via PayPal see the instructions at <http://n1nc.org/Members/dues>.

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.

To be a "Special Service Club", the ARRL expects a majority of Club members to also be ARRL members. Contact Ralph for further information if you need it.

de Ralph, KD1SM

NVARC Board Meeting: April 7, 2022

Attendees:

Bruce, K1BG,	Jim, N8VIM,
John, K1JEB,	Jim, AB1WQ,
George, KB1HFT	Skip K1NKR

Meeting called to order: 7:32pm.

As of 6April we have 48 members who are current with their dues and 26 renewals outstanding.

George, KB1HFT, delivered 10 copies of Signal to each of the two distribution sites. Only 6 of last month's copies had been taken from each site. George will reduce his production run to just 6 per site.

Phil is still working on the multi-media social program.

There has been external interest in the NVARC's FoxFinder but the Board needs information from the earlier project members in order to respond.

No new Ham QSL cards have been sent out.

Jim Hein, N8VIM, has, on average, been adding one video per month to YouTube. There are likely to be more by Field Day.

The April General Meeting will include a "Special Meeting" that is for the Election of NVARC Club officers. The nominating committee is currently making phone calls to possibly recruit new candidates to run for club offices.

The April guest speaker will be a presentation by Bill, WU2D, on old receivers.

Bruce's AA1VX downsizing project is still on hold.

The weekly Monday night 2meter nets are successfully on-going. Thanks goes to Jessica, WU3C, for doing some repairs to the repeater. The repeater is performing much better.

Three of Bruce's Technician License Class students have passed the General Class exam!

Bruce will be running another License Class in May as the Question Pool will likely to change soon.

Activity at the CW Help group has scaled back somewhat.

The Visioning Program is on hold till there is an increase of NVARC members attending in-person at the general meetings.

The NEAR-fest Hamfest will be held on April 29th and 30th at the Deerfield New Hampshire fair grounds.

The May general meeting will be in competition with the Dayton, OH Convention.

"The Consortium", run by the Blackstone, RI ARC, is similar to our Tech Night but for simple topics like the basics of setting up a station. This might be a good model for our returning to doing a "Tech Night" if we choose to do so.

Meeting Closed at 8:18pm

de John, K1JEB

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President: Bruce Blain, K1BG
Vice President: Phil Erickson, W1PJE
Secretary: John Bielefeld, K1JEB
Treasurer: Ralph Swick, KD1SM

Board Members:
Jim Wilber, AB1WQ, 2019-2022
Skip Youngberg, K1NKR, 2020-2023
Jim Hein, N8VIM 2021-2024

Property Master: John Griswold, KK1X
Librarian: Peter Nordberg, N1ZRG
N1NC Trustee: Bruce Blain, K1BG

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

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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: editor@n1nc.org.

Articles and graphics in most PC-compatible formats are OK.

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