



# SIGNAL

A club since 1992



Since 1993



Since 1996

de N1NC

August 2020

Volume 29 Number 8

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## Last Month's Meeting

At the July meeting, Jessica, WU3C, presented details of the issues, solutions, and data rate limits to modulating and demodulating information over noisy channels. These are key determinants in implementing several of the new data modes.

## This Month's Meeting

The August meeting will feature Paul, W1GHZ, renowned VHF/UHF author and QST/QEX columnist. Check out Paul's website: [http://w1ghz.org/10g/10g\\_home.htm](http://w1ghz.org/10g/10g_home.htm).

## Next Month's Meeting

The September Virtual meeting will feature Phil, W1PJE, speaking on "A History and an Inside Tour of NIST Station WWV".

## Stan, KD1LE

Long-Time President of NVARC, Stan Pozerski, KD1LE, was presented with a token of appreciation by the NVARC Board, as representatives of the en-



tire NVARC community, to signify Stan's many years of selfless contributions of his time, talents, and leadership to NVARC. Thank You Stan!!

photos by K1NKR

**From The Prez**  
*de Jessica, WU3C*

Welcome to August, Campers! I hope you all have AC! Somehow the summer is racing by here, I am thinking about classes that start in less than 3 weeks! Coming up is the Picnic at my QTH: Saturday August 22nd, 3p until whenever. There will be a fire pit and a couple of charcoal grills. Bring something to grill! For obvious reasons, sharing dishes will be not that great an idea. I'll have an assortment of beverages, and I plan to boil up a heap of salt potatoes, served on the boil to fend off viruses, and have some single serving things. I should have corn ready for U-Pick it also! Think of this as a "minimalist" picnic. Despite that, in a change of themes, this will be a BYOB event. The ground rules are radio rules, no drugs, politics or religion. Keep it clean, be respectful! We are sure to have fun! I have about 15 chairs, but do bring one if you have a favorite. I don't have too much shade in the yard, however there is AC inside space also if you so desire. Please do RSVP! I will be able to plan so much better if you do that ASAP! Everyone is welcome! I hope to see you all there! RSVP to [jessica@kedzig.com](mailto:jessica@kedzig.com).

While hiding from the heat, I hope at least some of you are working the awesome 6M band openings and VHF meteor scatter. That is unfortunately in my "not working yet" after field day items. Next year! In the department of future events, I am working on the "18650 Challenge" rules with the assistance of Peter N1ZRG and Bob W1XP. It will be an updated lantern battery challenge. It is going to be awesome, so start thinking about operating with less than a total of 80 kilo-joules. Stay tuned radio land! I hope to have it ready to present before the November meeting and hopefully sooner. There may even be a Kool Kit in the awards bin.

I see many members are building the Phaser FT8 radio kits. Awesome! I congratulate you all in advance. I hope someone takes the initiative to get a chat group going (maybe on a repeater?) so that you all can help each other out. I have a pretty full plate otherwise I would be building one as well. It looks really cool.

Last: Do come to the August meeting via Web-ex, we will have a presentation by Paul Wade, W1GHZ. No doubt it will be an excellent presentation.

*-de Jessica, WU3C*

**Also From the Prez**  
*de Jessica, WU3C*

How can you kit the parts of a kit without actually ordering and organizing the parts? Lots of people already solved this problem! I mentioned at the August Board meeting you can create a "virtual Kit" using Digi-Key carts. Here is a demonstration of that: <https://www.digikey.com/short/z51twm>.

Click on the link or cut-n-paste it into a browser and you will get my bogus kit parts list! Providing you can make your kit from Digi-Key parts, you can share a parts list without handling a single thing. This method is very common in other DIY electronics worlds and applies to other vendors as well.

When someone orders this they get each part bagged or packaged appropriately with the part number, value, origin and manufacturer information, Digi-Key info etc.

As a bonus, all the parts are handled correctly so far as ESD requirements demand. Also, the person ordering the parts can change the quantity to have spares if they desire. What could be more awesome?

*-de Jessica, WU3C*

**NVARC to offer Technician Classes**

*de Bruce, K1BG*

Beginning sometime in September, the Nashoba Valley Amateur Radio Club will offer Technician license classes the first time in over 20 years.

I will be coordinating a 4-week class schedule, with 2 hour sessions taking place twice weekly (8 sessions/16 hours total).

A detailed schedule will be made available during the August club meeting webinar, and I'll be looking for several volunteers to help with the classes.

Because we are avoiding group gatherings, classes will be held using the WebEx on-line webinar services generously offered by Jim, N8VIM and Medtronic, his employer.

Plans are to follow up the classes with a VE session to get the students licensed (and we will have to plan for dealing with social distancing at that session).

Additionally, if there is enough interest, we will offer classes leading to a General class license sometime later in the fall. Stay tuned for more details.

If you have questions, feel like volunteering for either classroom instruction or the VE session, know of someone who wants to participate, etc., please con-

tact me at [K1BG.Bruce@gmail.com](mailto:K1BG.Bruce@gmail.com), or call me at 508-341-5124.

-de Bruce, K1BG

### Meteor Scatter!

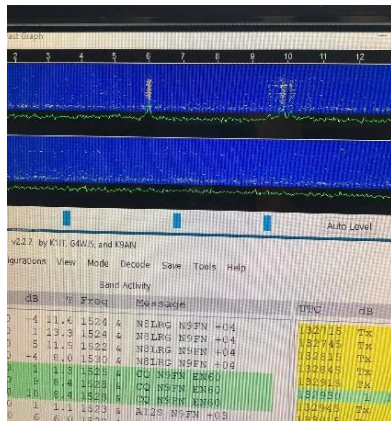
de Joe, K1YOW

This morning (11AUG2020), we had a mix of meteor scatter and some tropo. I worked Ohio and Indiana on meteor scatter and Nova Scotia on tropo. I was on 50.260 using WSJT-X MSK144 mode.

Note that we here in New England are mostly transmitting in the 2nd (15) and 4th (45) second intervals to avoid QRMIing each other. It is fine if multiple stations locally transmit in the same 15 second window.

Yesterday I started an experiment where I got folks trying 10m meteor scatter. It took off like wild fire. LOL. MSK144 is not allowed on 10m, and 10m should be a good band for meteor scatter provided that there is no E or F layer going on at the same time. We started using 28.145 and the WSJT-X JT9G FAST digital mode. I made a QSO via 10m meteor scatter with New Jersey.

This photo shows what a meteor scatter ping looks like using MSK144, in the middle of the screen. The slightly wider splotch to the right is some tropo also reflecting a signal with another possible meteor scatter burst to its right.



Time	dB	Freq	Message
134130	11	6.8	K1YOW N9FN +0.2
134130	13	14.6	K1YOW N9FN +0.2
134145	Tx	1500	N9FN K1YOW R+13
134200	12	0.7	K1YOW N9FN RRR
134200	14	1.1	K1YOW N9FN RRR
134200	15	1.3	K1YOW N9FN RRR
134200	17	1.8	K1YOW N9FN RRR
134215	Tx	1500	N9FN K1YOW 73
134245	Tx	1500	N9FN K1YOW 73
134315	Tx	1500	N9FN K1YOW RR73
134345	Tx	1500	N9FN K1YOW RR73
134415	Tx	1500	N9FN K1YOW RR73
134430	10	6.6	K1YOW N9FN 73
134445	Tx	1500	N9FN K1YOW 73
134515	Tx	1500	N9FN K1YOW 73

photos by K1YOW

Here is my meteor scatter QSO with Indiana.

-de Joe, K1YOW

### 222MHz & Up Contest

de Les, N1SV

#### Summary:

Operator(s): N1SV  
 Station: N1SV/R  
 Class: Rover LP  
 Operating Time: 2.5 hours  
 Club: North East Weak Signal Group  
 Team: Really Weak Signal Group

#### Equipment:

222: TS2000,  
 DEMI 222-28  
 100W TE Systems amp  
 10el K1FO Yagi  
 432: IC-9100 (75w)  
 15el K1FO Yagi

Both antennas were mounted on a 20-foot telescopic mast the receiver fitted on the rear of my pickup.

#### Scoring:

Band	QSOs
222	20
432	22
Total:	42
Total Score	9,854

#### Comments:

I intended on trying to make it to four grids this weekend but unfortunately Sunday's schedule was cancelled due to a family emergency. I had a lot of fun Saturday though and the weather was great.

I arrived early at Mt Ascutney (FN33sk) in VT Saturday morning giving me plenty of time to test everything out. Good cell coverage up there meant I could log onto the internet and use ON4KST. I made 9 contacts on 222 and 11 on 432 with the farthest being K1DY on both bands in FN54jq at 295 Km. Total operating time was just over an hour.

I arrived at the Hogback Scenic Overview (FN32ou) in VT which was overrun with visitors wanting to know what I was doing there which was quite distracting.

Someone had made the suggestion that I should try and setup across the street at the brewery but the parking lot was full. I felt like I was the entertainment for the loud patrons on the deck.

Setting up only 10-feet off the highway wasn't as bad as I had envisioned.

Ironically cell coverage (Verizon) is non-existent there so I only found out about my family emergency driving home. During my one hour operating time I was visited by W1RGA/R which was a surprise.

I made 12 contacts on 222 & 11 on 432 with the farthest being N2NT in FN20si at 281 Km.

Looking ahead, I think it's time to consider adding 1296 to my rover station, so if anyone has any ideas: I'm all ears.

Thanks for all who worked me or tried to work me! See you in Sept!

-de Les, N1SV

### Saturday Morning NVARC Breakfast

John, K1JEB, has been hosting Saturday morning "NVARC Zoom Breakfasts" that do a good job at recreating the conversational benefits that some of us miss not having Tiny's at which to congregate

Seven of us were online Saturday, 8/8. John sends instructions on how to join via the NVARC mailing list. Keep an eye out!

Also: your Editor hears word that three to five of our more venturesome souls have been meeting at Tiny's.

### My First Solo Field Day

de Ralph, KD1SM

Field Day for me has always been about learning and practicing new things and always as part of a group, benefiting from the experience of others. Preparation for the first Field Day in which I participated, 8 months after getting my license, found me attending Sterling AK1K's wonderful "tower climbing school" and then putting the top two sections of Rohn 25 and antennas on one of the four temporary towers that were that group's traditional Field Day complement. That got me started with climbing other friends' towers over the years. Later with other groups we learned how to safely construct functional temporary antenna supports from common equipment such as extension ladders.

For me it's mostly about the equipment and technology; setting up a temporary station under simulated emergency conditions. I am satisfied when another operator sits down at the operating position and proves the setup works by making a few two-way contacts to states beyond just the neighboring states. The number of such contacts hasn't been an important factor to me; the proof that the station is useful is enough.

I got my first taste of the skill of an expert contest operator sitting beside Rex K1HI (SK) for a bit and applying my keyboard skills to log contacts while he made them in rapid-fire order. I convinced myself that I could listen to the contact and type fast enough that I wasn't really slowing him down, though I'm sure Rex did just fine without me. He was kind enough to thank me, anyway.

The point was that everyone in the group was there to have fun, socialize a bit, and mentor others in any of the activities necessary to support a full emergency communications station in the field. Including feeding the crew.

There have been different groups over the 25+ years but it was always the activities necessary to the assembly of a functional station that attracted me. And, of course, safe disassembly when the crew is exhausted after 30 hours of activity. I think I've only missed one Field Day since my first and that was due to work travel.

So, this year brought another first for me. Even though there was extensive planning by a couple of individuals for a group activity that considered how to limit health exposure risks in the midst of the current pandemic, I felt that the health risks did not warrant a group exercise this year. But I've been enjoying Field Day for so long that skipping it completely (when I was stuck at home anyway) didn't feel right.

I had intentionally assembled over the years an assortment of equipment for emergency public service operation; VHF, UHF, as well as HF. The VHF and UHF kits get frequent use. Much less so the HF kit. Was this year the year to test my ability to set up that portable HF station solo? I decided that I would do it, provided the weather was not the usual Field Day (rainy!) weather. And to make the exercise more "authentic", I would do no preparation prior to the first day of Field Day; I would act as if I'd just received the call to deploy a station early Saturday morning. (Sounds good doesn't it; actually, I was far too busy to do much ahead of time anyway!)

I didn't climb any towers, didn't try to single-handedly guy an extension ladder -- I don't have a multi-element HF beam to put on one anyway -- but I did choose that morning the two tree branches I wanted to use to support the wire antenna and successfully tossed a weighted line over each to raise the antenna. I installed and configured N1MM, spent more time than I care to admit searching for the 120v to 12v power supply that I'd stored away for such emergency use, put up the shelter tent (OK, N1QIT came out and of-

ferred to help me with that, which offer I gladly accepted, read a bit of the manual for the (new to me) radio, and swapped generators when the first one I'd intended to use returned to its old symptom of carburetor gum-up.

I expected that I'd operate for maybe an hour to convince myself that things worked and then dismantle it all. I wound up operating for a bit longer than that as I was enjoying learning more about the radio, practicing digging other stations out of noise and seeing how many of them I could make them hear me.

I hope that by Field Day 2021 we'll have enough proven scientific experience to truly keep the pandemic in check. Whether it is reasonable then to do the kind of Field Day that has attracted me from the start, I'll decide in 10.5 months.

Meanwhile, congratulations to the small group who operated as N1NC. You did show that the challenges of virus management within a small group during a pandemic need not be insurmountable. The rest of us who operated solo Field Day stations also learned things.

73,

de Ralph, KD1SM

### A Generous Contribution de Bob, W1XP

The N1MNX repeater has received a generous contribution to the repeater maintenance fund.

This is most welcome and the repeater committee would like to thank Ralph Hensel, KC2EQB for the contribution.

We would also like to thank club members Richard (Dick) Lions, W1LTN, and Jessica Kedziora, WU3C.

While Dick was visiting his brother in law, Ralph Hensel, who is in hospice care, in upstate New York, Ralph asked Dick to take his radio equipment and find it a good home.

Dick, recalling Jessica's plea about a broken transceiver during field day preparations, suggested to Ralph that he could offer the gear to her.

Ralph thought this was a great idea and suggested that Jessica make a contribution to the repeater fund.

Well, Dick delivered the equipment to Jessica at the field day site, and Jessica has followed with a contribution of \$100.

This will be very useful for the repeater.

Again, the repeater committee would like to thank Ralph, Dick, and Jessica for the support of the N1MNX repeaters.

-de Bob, W1XP

### HamAlert de Bruce, K1BG

Have you ever wanted to run into an old ham friend over the air, but had no way to find him or her?

Ever wanted to be notified when a particular country is on a particular band?

It's been a problem I've wanted a solution for since I first got into amateur radio, and I recently found a tool that helps me out.

The tool is called HamAlert, and it's a system that allows you to get notifications when a desired station appears on:

- the DX cluster, <https://dxwatch.com/>,
- the Reverse Beacon Network, <http://www.reversebeacon.net/>
- SOTAwatch, <http://sotawatch.org/> or
- PSK Reporter <https://pskreporter.info/> .

It's quite simple: register on [hamalert.org](http://hamalert.org), and enter the call signs of stations (or DXCC Countries) that you are interested in finding. When those stations are spotted, you have the option of HamAlert sending you an SMS text or an email message letting you know the station has been spotted.

Well, while my personal preference is to receive a text message, I wasn't particularly fond of the way HamAlert accomplished this. I did a Google search to find out how to send an email that will show up as an instant text message on my phone.

It turns out, this is pretty easy to do using an Email to SMS Gateway. Here's a list of the popular carriers, and how you address their Gateway:

#### Email to SMS Gateways

T-Mobile – number@tmomail.net.

Virgin Mobile – number@vmobl.com.

AT&T – number@txt.att.net.

Sprint – number@messaging.sprintpcs.com.

Verizon – number@vtext.com.

So, for instance, if your number is 978-555-2222 and your carrier is Verizon Wireless, simply have HamAlert

send an email to 9785552222@vtext.com. Your text message would arrive seconds later. Note: Standard message rates may apply! (I've been trying to work that into an article for a long time....)

HamAlert has kept me in touch with many old friends, and I always know when they are spotted. I hope it helps keep you connected with some old friends that you want to "run into" on the air.

As always, if you have any questions, please contact me at [K1BG.Bruce@gmail.com](mailto:K1BG.Bruce@gmail.com), or 508-341-5124.

-de Bruce, K1BG

### From the Shack de George, KB1HFT

Is this what happens to Old Hams?:

- they collect a basement full of good intentions and past glories?
- They overbook their "spare" time?

and, being "Retired", "spare time" has a flexible definition.

Anyway, as one of said Old Hams (with a Certificate to prove it!), I am participating in the Club's "Kit Initiative<sup>®</sup>" by joining several other NVARCers in lining up a progression of kits to try out.

So far, I have on hand, but unbuilt, the "Phaser Digital Mode Transceiver"<sup>1</sup> kit from Midnight Design Solutions, recently reviewed in the July 2020 QST.

I have the 20m version. I understand Peter, N1ZRG, and Bob, W1XP, also have the 20m version, and they have both obtained the 17m version.

I also have in the queue the 630m transverter kit from MiniKits that Jessica, WU3C, displayed at homebrew night last year<sup>2</sup>.

As if that is not enough, Bill, AB1XB, and I are playing with a cheapie Geiger Counter kit<sup>3</sup> that we hope to hook up to an Arduino to count and classify the ionization events that are detected.

<sup>1</sup> <https://midnightdesignsolutions.com/phaser/>

<sup>2</sup> <https://www.minikits.com.au/eme223>

<sup>3</sup> <https://www.goldmine-elec-products.com/prodinfo.asp?number=C8600>

Other kit building has been going on as well. Peter, N1ZRG recently completed a digital clock that uses no ICs<sup>4</sup>. It is all resistor-transistor, and resistor-diode (I think) logic! A true "Flash from the Past"!

- 194 transistors
- 566 diodes
- 400 resistors
- 87 capacitors
- 7-segment LED displays
- **2692 solder joints**



Yikes!! Great work, Peter!

-de George, KB1HFT

### Board Meeting Notes

Attendees:

Jessica, WU3C	Jim, N8VIM
John, KK1X	Bruce, K1BG
Jim, AB1WQ	Ralph, KD1SM
George, KB1HFT	

- Padlock added to Club Property inventory.
- George to investigate Twitter [Ed: & Facebook] as a club social media outlet.
- Not much youth activity in the summer.
- Bruce planning online license classes starting in the fall. Monday/Wednesday 2 hours per session for four weeks.
- Meeting Calendar:
  - August Speaker: Paul Wade, W1GHZ
  - September Speaker: - Phil Ericson, W1PJE
  - November - Card sort
  - December - Homebrew
  - January - Short Subjects
- Skip to be reimbursed for Stan's plaque.
- Picnic August 22, 2020. Time TBD.

-de John, KK1X

### Treasurer's Report

Current balances:

General fund	\$2,433.38
Community fund	\$5,948.25

<sup>4</sup> [https://www.nutsvolts.com/magazine/article/transistor\\_clock](https://www.nutsvolts.com/magazine/article/transistor_clock)

As of 6 August we have 54 members who are current with their dues and 10 renewals outstanding.

K1QT, Robert McArthur, who had been an NVARC member in the past, has moved back into the area and rejoined NVARC. Welcome Bob!

If you have forgotten your renewal date just ask Ralph at: kd1sm@arrl.net.

Thank you to those of you who mail your renewals or use PayPal.

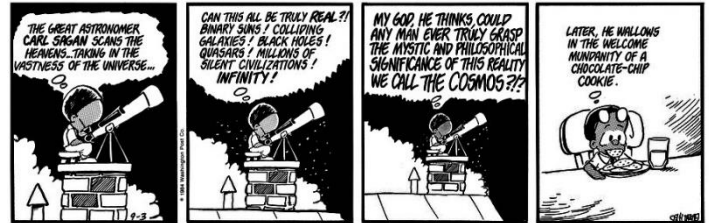
Go to <https://www.paypal.me/nvarc>

- Please **remove** the checkmark in the box "Paying for goods or a service", as PayPal deducts a fee for their "purchase protection" if you leave this checked, and it requires intervention of the Club Treasurer to reverse the charge. If your "shipping address" is still displayed, then the box is still checked, adding an expense to the Club
- (Optional) enter your callsign in the "Add a note" field.

Again, **Please remember to uncheck** the "Paying for goods or a service" checkbox before submitting your payment.

If you are joining the 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 a Special Service Club, the ARRL expects a majority of Club members to also be ARRL members.

de Ralph KD1SM



Two elderly hams had been friends for many decades. Over the years they had shared all kinds of activities and adventures on the ham bands. Lately, their activities have been limited to meeting a few times a week to play cards.

One day they were playing cards when one looked at the other and said, "Now don't get mad at me. I know we've been friends for a long time. But I just can't think of your name and your call! I've thought and thought, but I can't remember them. Please tell me what they are."

His friend glared at him. For at least three minutes he just stared and glared at the gray-haired old man. Finally, he said, "How soon do you need to know?"



## Calendar

# W1AW Schedule

PAC	MTN	CENT	EAST	UTC	MON	TUE	WED	THU	FRI
6 AM	7 AM	8 AM	9 AM	1400		FAST CODE	SLOW CODE	FAST CODE	SLOW CODE
7 AM- 1 PM	8 AM- 2 PM	9 AM- 3 PM	10 AM- 4 PM	1500-1700 1800-2045	VISITING OPERATOR TIME (12 PM-1 PM CLOSED FOR LUNCH)				
1 PM	2 PM	3 PM	4 PM	2100	FAST CODE	SLOW CODE	FAST CODE	SLOW CODE	FAST CODE
2 PM	3 PM	4 PM	5 PM	2200	CODE BULLETIN				
3 PM	4 PM	5 PM	6 PM	2300	DIGITAL BULLETIN				
4 PM	5 PM	6 PM	7 PM	0000	SLOW CODE	FAST CODE	SLOW CODE	FAST CODE	SLOW CODE
5 PM	6 PM	7 PM	8 PM	0100	CODE BULLETIN				
6 PM	7 PM	8 PM	9 PM	0200	DIGITAL BULLETIN				
6 <sup>45</sup> PM	7 <sup>45</sup> PM	8 <sup>45</sup> PM	9 <sup>45</sup> PM	0245	VOICE BULLETIN				
7 PM	8 PM	9 PM	10 PM	0300	FAST CODE	SLOW CODE	FAST CODE	SLOW CODE	FAST CODE
8 PM	9 PM	10 PM	11 PM	0400	CODE BULLETIN				

W1AW's schedule is at the same local time throughout the year. From the second Sunday in March to the first Sunday in November, UTC = Eastern US time + 4 hours. For the rest of the year, UTC = Eastern US time + 5 hours.

♦ Morse code transmissions: Frequencies are 1.8025, 3.5815, 7.0475, 14.0475, 18.0975, 21.0675, 28.0675, 50.350, and 147.555 MHz.

Slow Code = practice sent at 5, 7½, 10, 13, and 15 WPM.

Fast Code = practice sent at 35, 30, 25, 20, 15, 13, and 10 WPM.

Code bulletins are sent at 18 WPM.

### August

- 20 NVARC Monthly WebEx Meeting. Paul, W1GHZ, VHF/UHF author and QST/QEX columnist will present. Check out Paul's website: <http://w1ghz.org/>

### September

- 17 NVARC Monthly WebEx Meeting: Phil, W1PJE, Radio astronomer extraordinaire, from Haystack Observatory, will speak on "A History and An Inside Tour of NIST Station WWV"

### November

- 19 NVARC Monthly WebEx Meeting: Card Sort

### December

- 17 NVARC Monthly WebEx Meeting: Homebrew Night

### January

- 15 NVARC Monthly WebEx Meeting: Member's Short Subjects Night

## Sponsors

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**Nashoba Valley  
Amateur Radio Club**

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

**President:** Jessica Kedziora, WU3C  
**Vice President:** Jim Hein, N8VIM  
**Secretary:** John Griswold, KK1X  
**Treasurer:** Ralph Swick, KD1SM  
**Board Members:**  
 Bruce Blain, K1BG, 2018-2021  
 Jim Wilber, AB1WQ, 2019-2022  
 Skip Youngberg, K1NKR, 2020-2023

**Property Master:** John Griswold, KK1X  
**Librarian:** Peter Nordberg, N1ZRG  
**Emergency Coordinator:** [open]  
**N1NC Trustee:** Bruce Blain, K1BG

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

NVARC general meetings are scheduled for the third Thursday of the month at 2330 UTC (7:30pm, Eastern Time).

Non-members interested in attending may send an email to [meetings@n1nc.org](mailto: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.

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](mailto:editor@n1nc.org).

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

Editor: George Kavanagh, KB1HFT

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Hey, Its Summertime, we all have our heads down, and there is not a lot going on. SO, here is a blank page for wont of more input from NVARC Members.

Whatcha been upto?

Send a short paragraph or two (&pix) to [editor@n1nc.org](mailto:editor@n1nc.org), and become published!

It looks great on your Resumel!



**Nashoba Valley Amateur Radio Club**

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*Pepperell, MA 01463-0900*

