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NVARC
Nashoba Valley
Amateur Radio Club

SIGNAL

A club since 1992
Since 1993
Since 1996

de N1NC November 2020 Volume 29 Number 11

In this Issue

Last Month's Meeting

The October meeting will feature George, K1IG, discussing Astron Power Supplies.

This Month's Meeting

The November meeting will feature Paul Topolski, W1SEX, speaking on oscilloscopes.

Next Month's Meeting

The December meeting will be, as it is traditionally, "Homebrew Night". Show your latest creations, or in-progress projects, to the members. Always fun & interesting!

NVARC general meetings are scheduled for the third Thursday of the month at 2430 UTC (7:30pm, Eastern Time).

Non-members 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.

630m Operating

de Les, N1SV

Les recently reported (on 6NOV): "I finally got the rest of my radials rolled out this afternoon and the 630m variometer adjusted so I am back on the band tonight and tomorrow night.

WSJT-X release 2.3.0-rc1 has new modes. This is a beta release so not perfect yet. When I'm in the shack I will be using the new FST4-60 mode and when I'm not the FTS4W mode.

K1JT has indicated that FST4-60 replaces JT9 and FTST4W replaces WSPR. Both have superior SNR in the same given duration. Reports welcomed!"

On 7NOV, Les reported: "conditions on 630m seemed flat. I did work one station on FST4 and a couple on CW, all stateside. I was heard on FST4W over the eastern half of the US and by ZF1EJ as well as a couple of stations in Western Europe.

There seem to be some bugs in beta release of WSJT-X 2.3.0-rc1:

- The pull-down band menu does not function when in FST4 or FST4W modes so you have to manually set the transceiver frequency yourself.
- If you are in another mode, like FT8, and you try to change modes to FST4 or FST4W, there is no indication that the mode actually changed. If you exit WSJT-X and restart it then it does come up in the correct mode and indicate the same.

This beta release is only good until 11/17 at which time I assume a general release will occur.

During this transitionary time where some stations are starting to use FST4 instead of JT9 or FST4W instead of WSPR, there seems to be some confusion. Also some stations may be using transmitters like the Ulti-

mate 3S that are tied to their own specific firmware where these new modes may not be available. That being said I do expect the popularity of these two modes to grow based on the improved SNR its just not the game changer that FT8 was on 6m.

I will be on 630m again trying to work folks on FST4 when I'm in the shack or I'll have the FST4W beacon on when I'm not. Again, reception reports are welcomed. If you have no RX antenna and still want to see what I'm hearing, go to:

https://www.pskreporter.info/pskmap.html

and configure the options for "600m", "signals", "sent/rcvd by", "the callsign", "n1sv", all modes", "24 hours" ".

73! -de Les, N1SV

PSK Reporter Time-Lapse Video
de Joe, K1YOW

I stumbled upon this really neat WSPR PSK Reporter time lapse video showing what 40M does as the sun moves through the day and night. Nice view of the grey line. It is only a few minutes long. Our fellow hams in VK land did it. By the way, they also have a nice You Tube channel.

https://www.youtube.com/watch?v=gx9HHbRlSWk&feature=youtu.be&fbclid=IwAR0Mf0kR9h4u82ZWPtW2-x4x9pIM3XRZ3bZ1sSvsGtMK6vToD0t_FWI_OC0

de Joe, K1YOW

NVARC to offer Technician License Classes
***de* Bruce, K1BG**

Bruce, K1BG, will be conducting on-line technician classes beginning on Wednesday, November 18th. Classes will run twice weekly for four weeks, on Monday and Wednesday nights. Each class will be two hours long and run on Zoom.

Six students are currently signed up for the class. If you are interested, please contact Bruce ASAP. The cost for the class is $30, which includes textbook material. For more information, please contact Bruce, K1BG, at 508-341-5124.

-*de* Bruce, K1BG

From the Shack
de George, KB1HFT

Well, I have repaired the AL-811H amplifier <YaaY!>.

I had stressed the unit to the point that one of the grid resistors opened, leaving that tube's grid floating. Not Good. All better now. Lesson Learned.

I've also finished the 20m Phaser kit, which works quite well. 5 QSOs within the first 30 minutes, at ~ 3.5w out. Cool. I'm so enamored with the thing that I just ordered the 40m version.

I'll have a spectrum analysis next month.

One thing though: The Phaser's design virtually SCREAMS out for a Graphic User Interface (GUI) to set up operating frequencies other than the "standard" carrier frequency for a band (e. g., 14,074,000Hz for the 20m band). As it is designed, one must enter these frequencies via two pushbuttons, in Morse code! One button for Dit, one for Dah. Seems pretty klunky, but in the interests of keeping the cost down, an understandable solution.

Peter, N1ZRG, is modifying his Phaser to accept Dits & Dahs from his paddles. I am investigating digging deeper into the circuit – to replace the unit's PIC microprocessor with an Arduino + touchscreen GUI. I'll bet Peter has his mods working before I do!

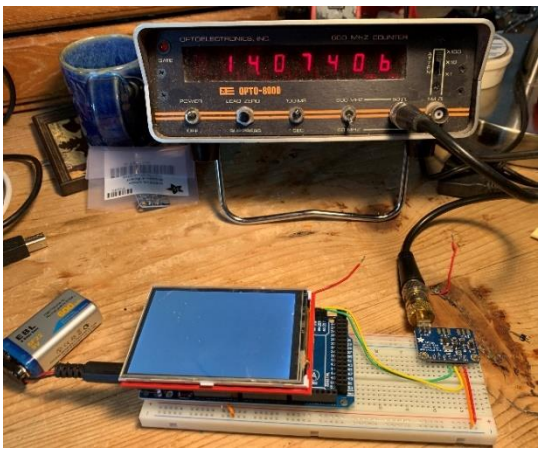
You may remember that I had built an Arduino-based, configurable GUI to be used as a front end to undefined test instruments & equipment.

I originally programmed it to demonstrate touch-screen control.

As is, it can play Magic 8-Ball, and, more importantly, control the temperature in my sourdough bread proofing box.

But now my plan is to build on that UI platform to drive the Phaser at alternate frequencies since the proofing box's temperature sensor and the Phaser's frequency generator both communicate via the I^2C bus, it should be easy peasy, right?

As a first test rig, I've succeeded in getting an Arduino Mega to control the SI5351 signal generator breakout (the little blue card to the right in the photo). Here it is generating a carrier for 20m FT8. Not quite exactly 14,074,000Hz, but with FT8, it doesn't really matter.



I'd like to learn how to FINE tune it to 14,070,000Hz on the nose, and I have yet to address the graphic touch screen interface, but that will be a group design effort.

BTW: Getting the SI5351 to generate a precise frequency is, apparently, a mysterious art known only to a few real-time EEs. The documentation runs to several hundred pages. The little thing has more than 100 internal registers that control its operation. Yikes! A very flexible device, but Very Complex to configure!

Stay Tuned, es 73!

-de George, KB1HFT

Board Meeting 1OCT2020

Attendees:

Ralph, KD1SM,	Jim, N8VIM,
John, KK1X,	Jim, AB1WQ,
Bruce, K1BG,	Jessica, WU3C,
George, KB1HFT,	Peter, N1ZRG

- License classes moving forward, generating some interest, will be opened further.
- Five challengers for the 18650 Challenge.
- Decent Field Day Score!
- Owen working on youth recruitment angle.
- The Monday night two-meter net (7:30 local time) has been running for several weeks with several check-ins.

-de John, KK1X

Treasurer's Report

Income for October was $95 in membership renewals, $30 from Signal advertising placements, $10 for a Worked All Massachusetts Counties certificate, and $2 from ARRL membership renewals. No expenses were recorded.

Current balances:

General fund	$2,515.91
Community fund	$5,948.25

As of 5 November we have 42 members who are current with their dues and 22 renewals outstanding.

Thank you to those of you who mail your renewals or use PayPal. Renewal months are in the member list on www.n1nc.org in the Member's area.

To pay membership dues via PayPal see the instructions in the same Members area.

Please remember to **UNCHECK** "Paying for goods or a service' **before submitting** your payment via PayPal. **If you neglect to do so, you are costing the club an unnecessary PayPal fee.** (Besides, you are not paying for goods or a service.)

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; Address: NVARC, PO Box 900, Pepperrell, MA. 01463-0900.

Ralph deducts the Club commission before forwarding your paperwork to Newington. As an ARRL Special Service Club, the ARRL expects a majority of Club members to also be ARRL members.

de Ralph KD1SM

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				
6:45 PM	7:45 PM	8:45 PM	9:45 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.

For a very detailed look at amateur radio happenings, and contests, check out:

https://www.contestcalendar.com/perpetualcal.php

NVARC Calendar

November

19 Paul Topolski, W1SEX, will discuss the proper use of an Oscilloscope

December

17 Homebrew Night

January

15 Member's Short Subjects Night

Sponsors

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

Editor: George Kavanagh, KB1HFT

This page is blank. Except for this notice; but then we get into cyclic arguments, so let us leave it at that..

Share your stories, successes, failures, learnings, quips, tricks, tips, and tidbits here in Signal.

They'd fit here nicely.

eMail to: editor@n1nc.org!

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