



The SPARC

Amateur Radio - Communicating Worldwide for A Century

Newsletter of the Boston Amateur Radio Club

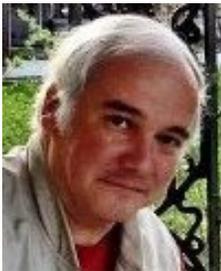
Serving Hams in the Greater Boston Area

February 2020 - VOLUME 32, NUMBER 2

www.barc.org - w1bos@arrl.net



Message from the Editor – Joe Chapman, NV1W



Many BARC members will be shocked to learn this, but I do occasionally get a haircut, after which some poor family of rats is forced to find a new home. On the occasion of the New Year I decided to clear out another rodent habitat, the forest of wires behind my operating desk. It is the nature of connectors to have something connected to them, but I often wonder if I have bred some 47 CFR part 2 authorized version of the Lernaean Hydra, which grows two unlabeled USB connectors for every one that I attach a label to.

The club is still taking its winter break from general meetings, but spring is around the corner. One final treat for the end of the winter is the VP8PJ DXpedition to South Orkney, #16 on ClubLog's most wanted list. The team is already in Punta Arenas as I write this, preparing for the long boat ride across the south Atlantic; it plans to be operating from February 21 to March 6. I'm just hoping that unlike K1N in Navassa, the "last chance" operator is on CW rather than listening on a single SSB frequency, so those of us without a kilowatt have a shot at making a contact! You can find out more about the expedition at <https://sorkney.com/>.

73, good radio, and good DX!

In this Issue of The SPARC

- Nano VNA Vector Network Analyzer
- 2020 Meeting Calendar
- Boxboro changes
- The usual typos and spelling mistakes



No BARC Meetings Until March

The next BARC General Meeting will be held on Thursday, March 19 at 7:30 p.m. at a location still to be determined. Stay tuned to *The SPARC* for details.

Repeaters: 145.230 (-) CTCSS 88.5 in/100.0 out

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BARC's Online Discussion Group – Joe Harris, N1QD



BARC has an online forum at Yahoo groups. The Yahoo group serves as a sounding board for members to post their suggestions and comments, and is intended to foster discussion. The group can also be used to share photographs from club events! Come visit us at: <http://groups.yahoo.com/bostonARC>.

Equipment Review: Nano VNA Vector Network Analyzer – Joe Chapman, NV1W

Forty years ago changing frequencies and PL tones on my UHF handheld required a bike ride down to Motorola in Roxbury and a screwdriver; whatever I may think about kitchen appliances that have smartphone apps, or the time last year when Amazon became convinced that I was a new mother, I have to admit that in the shack and on the electronics bench the March of Technology has been a benefit.

The latest thing to have been brought down in price to the reach of a hobbyist is the Vector Network Analyzer, or VNA. Traditional ones are stratospherically out of reach (the base price for a Tektronix model is \$9,900 to \$13,200). The Nano VNA costs about \$60. I was a little wary at first, because pocket oscilloscopes with that form factor and price range all seem to be toys, but this seems a useful tool with good specs and I've found it to be well worth the price.

I bought mine from Nooelec, in a combo package that included a kit of SMA adapters. Nooelec doesn't seem to be carrying them any more, and Amazon sells models from several different manufacturers, all Chinese.

It's a tiny little thing, $3\frac{1}{2} \times 2$ inches, with a touch screen and a little wheel on top you use to move a cursor back and forth on the graph display. There's also a Windows application also if you don't want to fiddle with a touch screen or squint at the very tiny screen font. It has an internal battery that you can recharge via USB, though I haven't depleted a charge yet to see how long it lasts.

The frequency range is 50 kHz to 900 MHz. I connected a VHF/UHF antenna from one of my handhelds and sure enough, saw dips in the return loss at 2 meters and 440. You can zoom in and examine, for example, 140–150 MHz, and display things like SWR and a Smith Chart. I haven't yet had a chance to try it on an HF antenna.

The device comes with short, open, and 50Ω loads for calibration, which is a fairly easy process. You can calibrate it for a shorter range of frequencies for more accuracy and store the settings in one of five memories.

There look to be some user-contributed extensions for the device; one promising one adds Time Domain Reflectometer functionality for troubleshooting cables. There are also a lot of instructional videos to be found on the web. Everyone and his grandmother's dentist seems to be buying one; it's an excellent tool for the price.

Nano VNA information at <http://nanovna.com/>. Versions from various manufacturers can be found on amazon.com for \$59–\$74.



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BARC Meeting Calendar for 2020

Unless otherwise noted, all meetings will take place at the Brookline Police Headquarters.

General Meetings (* Business/General Meetings)

March 19*	2020	Thu	7:30 pm [location to be determined]
April 16	2020	Thu	7:30 pm [location to be determined]
May 21	2020	Thu	7:30 pm
June 18*	2020	Thu	7:30 pm — Elections
September 17*	2020	Thu	7:30 pm
October 15	2020	Thu	7:30 pm
November 19	2020	Thu	7:30 pm

VE Sessions

April 13	2020	Mon	7:30 pm
July 13	2020	Mon	7:30 pm
October 12	2020	Mon	7:30 pm

New Business/General Meetings – Joe Chapman, NV1W

The Bylaws require that BARC hold four Business meetings per year. In an attempt to streamline our meeting schedule, BARC Business meetings will now be held concurrently with the General meetings in March, June, September, and November. We will attempt to keep the business portion of these combined Business/General meetings to a half hour. The next such combined meeting will be on **March 19, 2020** at a location to be determined. All members are urged to attend and participate in club affairs. This is where club functions are discussed and decided, and your help is needed to guide us.

To provide continuity of club business between meetings we also have a virtual business meeting via an email list. Any member interested in the affairs of the club can ask to be on this virtual meeting list—just give your name, call and your email address to Secretary Joe Chapman, NV1W.

Northeast HamXposition News – Mike Raisbeck, K1TWF

Northeast HamXposition at Boxboro, the New England ARRL Division Convention, is now four months behind us. The 2019 show went well. The gate remained steady. Attendance at the banquets, forums, and flea market was solid, and there were many smiling faces. We have a formula that works well.

So now it's time for us to raise the bar. Some big changes are coming to the Northeast HamXposition.

The biggest is a change of date and venue. Going forward, the Northeast HamXposition will be held at the Best Western Royal Plaza Hotel & Trade Center, 181 Boston Post Rd., Marlborough, MA, on the 4th full weekend of July. This year, the dates are July 24, 25, and 26. Reserve that weekend—we have it nailed down for the next 5 years at least.

Why change? There are several reasons:

1. The Royal Plaza has considerably more parking, and plenty of flea market space. It's a nice, clean, large, and up-to-date venue.

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2. The Boxboro site was having trouble making commitments to us for the adjoining parking lot. It was only a matter of time before we found ourselves, on short notice, without sufficient parking.
3. The Royal Plaza has an adjacent Trade Center complex. While we won't need to use it this year, we want to have enough expansion space that we can hold a National Convention some time in the next few years
4. The Boxboro facility is, frankly, a getting a bit timeworn.
5. The Royal Plaza has other adjacent hotels, as well as numerous restaurants and other shops—far more than the Boxboro location.
6. Unlike the current convention, the 4th weekend of July doesn't conflict with the September VHF contest.

We're scrambling to update our forms and procedures. I'll be sending out another message shortly, as soon as these are all in order.

Please reserve the date, July 24–26. We would love to see you there!

Member News – Joe Chapman, NV1W

The membership renewal discount for 2020 ended on January 31. 2019 memberships are still in a grace period until the end of March.

We have several members who are not yet licensed, who should note that the club is happy to help people study for, take, and pass the Technician exam. Contact Joe Chapman, NV1W, at nv1w@arrl.net if you're interested.

BARC Net Preamble

The control operator for the BARC Net is Joe, W1JJF. He rarely misses a net, but when he does any ham can take up the position and run the net. To assist you in opening and closing the net The BARC Net Preamble is printed below. Do not be afraid to step up and take the challenge.

Is there any further business for the repeater before we begin the Boston Amateur Radio Club Net? This is «YOUR CALL». Calling the Boston Amateur Radio Club Net. This is «YOUR CALL», my name is «YOUR NAME» and I am located in «YOUR TOWN». This net meets each Monday evening at 9 pm Eastern Time on the 145.230 Boston repeater, PL 88.5. This net is an informal round table discussion concerning matters of interest to the members of the Boston Amateur Radio Club and the Boston Amateur Radio community in general. When checking into the net, please say, "this is" and drop your carrier to check on doubling. Then give your call sign, name and location. All amateurs are welcome to join the net. Any check-in's for the Boston Amateur Radio Club Net please call now.

[Compile the list of the check-ins and proceed with the net.]

Is there any further business for the net before I close? Hearing nothing, this is «YOUR CALL» closing tonight's session of the Boston Amateur Radio Club Net. I would like to thank everyone who participated in the net and those who stood by while I ran the net. The Boston Amateur Radio Club Net will return next Monday evening at 9 pm Eastern Time. This is «YOUR CALL» returning the repeater to general amateur use. 73.

I See the Future

10–14 February	ARRL School Club Roundup
15 February	Algonquin Amateur Radio Club Flea Market, Marlborough
15–16 February	ARRL International DX Contest — CW
7 March	Deadline for articles for the March SPARC
7–8 March	ARRL International DX Contest — Phone

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15 March	North American Sprint, RTTY
19 March	BARC General Meeting, Location to be determined, 7:30 pm
28–29 March	CQ WW WPX Contest, SSB
31 March	End of the grace period for 2020 membership renewals

▲ Note change from usual date and/or location

As you might expect, there are many more events (public service, hamfests, flea markets, etc.) taking place—some only peripheral to ham radio. For information on these, covering much of the Northeast, the “Ham - Electronic Flea Market” and the “PSLIST” lists tell the story. Of course, if you know of an event that would be of interest to the readers, please let the Editor know.

For an up-to-date calendar of events, including web links, visit <http://www.barc.org/calendar>.

Businesses Can Advertise Here

The SPARC accepts commercial advertisements. BARC encourages monthly promotion of your products and services which would be of interest to hundreds of our members and others interested in the Amateur Radio Service.

The rates for display advertising are:

1 col × 2 in. (business card)	\$15 per issue
1 col × 2 in. (business card)	\$75 per 6 consecutive months
1 col × 2 in. (business card)	\$125 per 12 consecutive months
1 col × 4 in. (½ column)	\$30 per issue
1 col × 9.5 in. (full column)	\$60 per issue

Originals of ads must be presented to the Editor in MS Word or .jpg format to print 1:1. Other composition will be at extra cost. We will be glad to quote other ad sizes and durations. Members are urged to seek prospective advertisers who are appropriate to our readers. For additional information, contact Joe Chapman, NV1W, at 617.267.6349 or nv1w@arrl.net.

Two Ways to See Yourself in Print! (well, PDF) – Joe Chapman, NV1W

We are always looking for articles for the newsletter. I have reserved this space for your articles, reviews, tips, how-tos, hints, kinks, photos, schematics, or other ham related information. Photos of you operating or your shack are especially welcome. Send your submissions to the Editor, Joe, NV1W, at nv1w@arrl.net. Articles for the March issue must be received by March 7.

Are you a depressed BARC member because you have a treasure you must turn to cash? Cheer up, Bunky! The SPARC will run your (non-business) ad for free. Of course, a 10% donation if you sell it will be cheerfully accepted. Just send your ad to Joe Chapman, NV1W, nv1w@arrl.net.

BARC Volunteer Exam Sessions

The Boston Amateur Radio Club offers license exams quarterly. **The next exam session will be on April 13, 2020.** Test sessions are held at Brookline Police Headquarters, 350 Washington St. in the Community Room (across from the information desk).

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We give all exams (Technician, General, and Extra). *Testing is by reservation only.* Please bring the following with you:

- Your current license and a photocopy for the ARRL, if you are upgrading
- Any CSEs you are claiming, and a photocopy of them
- Valid picture ID or two valid non-picture IDs
- A pen and a calculator (if you want to)
- **\$15.00** (good for all the tests you take at that session, except for retests)

Note: Written tests can be taken sequentially at the same session for the same \$15 fee. The needed FCC forms will be provided.

To reserve a seat or for further information, contact: Jim Clogher, N1ICN, n1icn@arrl.net, or Linda Blair, NA1I, na1i@arrl.net.



New England Sci-Tech Inc is a new 501(c)(3) STEM education center, amateur radio training center, and maker space located at 16 Tech Circle, Natick. It is home to New England Amateur Radio Inc (NE1AR) and the youth radio club Sci-Tech Amateur Radio Society (STARS). NE Sci-Tech welcomes memberships and donations via www.NESciTech.org or www.NE1AR.org.



Field Day memories...



Only four months to go...



Happy February.

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BARC Officers and Staff

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Newsletter Editor: Joe Chapman, NV1W
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The Boston Amateur Radio Club is a non-commercial association of persons interested in the Amateur Radio Service. The Club is organized for the promotion of interest in Amateur Radio communication and education, for the establishment of emergency communications in the event of disasters or other emergencies, for the advancement of the radio art and the public welfare, for the representation of the radio amateur in legislative and regulatory matters, and for the maintenance of collegiality and a high standard of conduct.

The Club is open to all persons interested in Amateur Radio without regard to race, color, religion, creed, national origin, gender, disability, or sexual preference. Our General and Business meeting locations are handicap accessible. Other meeting and activity locations may be handicap accessible by arrangement.

The Club is an ARRL-affiliated club, and is a member of the New England Spectrum Management Council (NESMC). The Club is also an associate member of the Courage HandiHams system.

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Greater Boston Net Directory

Daily 7 pm	MARI (Mass/Rhode Island CW Net) (NTS)	3.565
Daily 8 pm	Eastern Mass 2M Traffic Net (NTS)	145.230 (PL 88.5 in/100.0 out)
Daily 8 pm	Slow Speed CW Net	28.160
First Mon 8:30 pm	EMA Section ARES Net	146.610 and all MMRA links
Mon 8 pm	New England DMR Net	DMR New England Talk Group (TG 3181)
Mon 9 pm	BARC Club Net	145.230 (PL 88.5 in/100.0 out)
Sun Mon Wed Fri 10 pm	Heavy Hitters Traffic Net (NTS)	MMRA-linked repeaters: 146.610, 146.670, 146.715, 146.820, and all 222 and 440 repeaters
Tue Thu Sat 6 pm	MA RI Phone Net (NTS)	3.978
Tue 8 pm	Sci-Tech Amateur Radio Society (STARS) Net	446.325 (PL 146.2)
Tue 8 pm	MMRA Club Net	146.610 and all MMRA links
Wed 8 pm	Wellesley Amateur Radio Society Net	147.030; 444.600 (PL 88.5)
Wed 9 pm	Waltham Wranglers Swap Net	146.640 (PL 136.5)
Sat 9 am	Northeast SATERN Net	7.265
Sun 9:30 am	Yankee SSB Net	50.275
Sun 8 pm	Algonquin Amateur Radio Club Net	446.675 (PL 88.5)
Sun 8:30 pm	NSRA Net (with Newslines)	145.470 (PL 136.5)
Sun 9 pm	CAARAnet	145.130 (PL 107.2)

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