



# The SPARC

Amateur Radio - Communicating Worldwide for A Century

Newsletter of the Boston Amateur Radio Club  
Serving Hams in the Greater Boston Area

October 2021 - VOLUME 33, NUMBER 10

[www.barc.org](http://www.barc.org) - [w1bos@arrl.net](mailto:w1bos@arrl.net)



## The President's Pronouncements – *Brendan Baldonado, NW1S*



The month of October is upon us, time for spooky movies, candy galore and cooler weather. An excellent time to inspect any outside Ham equipment for security and weatherproofing before it's too cold. For us urban hams it means less people on roof decks and more opportunities to deploy our temp antennas and get a few more contacts.

I'd like to take this time to say thank you for your votes and belief in me to be President of this great club. I hope to bring membership up and as we crawl our way out of this pandemic, begin to host more events both Radio and Social. If there is an event you'd like to try or an aspect of Radio you want to learn, let us know! I hope to meet each of you in person and see you at one of our events soon. Be sure to join us at the club meeting this month as we learn about Fox Hunting. Have a healthy

October and a Happy Halloween

## Message from the Editor – *Doc Kinne, KE1ML / M7RCK*

We start this month on a significant back foot, but it's something that certainly needs to be acknowledged. This last month Blake Haskell, K1BTH, became a Silent Key. His XYL, Deb, followed him just several days later.

Blake was not only a longtime member of BARC, he is one of our Past Presidents. Additionally Blake was the Metro Boston District Emergency Coordinator.

This is just an acknowledgment, it's not any sort of remembrance, or obituary – I'm simply not qualified to do that. I hope it could come from one of our longtime members next month.

On the front foot, this last month has seen more indications that we're returning to some areas of normality. We had the Boston Marathon earlier this month, and they're planning on coming back to their normal time slot this April. As I write this, the Run of the Charles has just finished as well. I do believe, while it may take some time yet, normality is returning!

Finally, all ARRL members should have gotten their Division Director ballots by now. Please read the material, educate yourselves, and send the ballots back. It's not our League if we don't make it so!



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### BARC General Meeting, Thursday, October 21, 7:30 pm

BARC will be holding a General Meeting on Thursday, Oct 21, at 7:30 p.m. on the Zoom teleconferencing platform. We will be hearing from Skip Denault, KB1CNB, who will be speaking on Foxhunting!

To join the Zoom meeting above go to:

<https://zoom.us/j/99918732995?pwd=cFhSbmwySUQ2Qj90eGVUNFNhQ0N4Zz09>

Meeting ID: 999 1873 2995 Password: BARC

### In this Issue of The SPARC

- Minutes of the September Meeting
- SPARC Your Knowledge – The Questions
- Member News
- Free General License Course Starting on Zoom
- SPARC Your Knowledge – The Answers
- POTA Pictures

### BARC's Online Discussion Group – Joe Harris, N1QD



BARC has an online forum at Groups.io. The 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: <https://groups.io/g/BostonARC>. You can join, if you're not already there, by sending an email to "[BostonARC+subscribe@groups.io](mailto:BostonARC+subscribe@groups.io)."



### Minutes of the September, 2021, General Meeting – Joe Chapman, NV1W

A General Meeting of the Boston Amateur Radio Club was held on Thursday, September 16, 2021, on the Zoom teleconferencing platform. Members attending: K1SU, KB1EKN, KB1ISG, KE1ML, KM1NDY, N1ICN, N1QD, NV1W, NW1S, W1JJF, WA1IDA, Jerry Jennings [now KC1PWO], Steven Provost. Guests: AC1LL, WD4JQQ. The meeting was called to order by President Brendan Baldonado, NW1S, at 7:35 p.m.

Officer reports: Brendan, NW1S (President): the transition was successful, thanks to both old and new officers. Joe, N1QD (Vice President): nothing to report. Joe, NV1W (Secretary): the club currently has 105 members. Jim, N1ICN (Treasurer): there is \$6004.90 in the checking account and \$1852.42 in the repeater fund.

Joe, NV1W, and Doc, KE1ML (Newsletter editor) described the contents of the mailing list used for club announcements such as meetings and the list used to announce new issues of *The SPARC*. The club announcement list is

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limited to current members, and the *SPARC* list, which is considerably longer, goes out to the club plus other active hams in New England.

New business: Joe, N1QD, as repeater trustee, gave some background on the new antenna for the 145.230 MHz W1BOS repeater. A motion to allocate up to \$2000 out of the checking account to buy the new antenna and new connectors was passed.

A presentation by Mindy, KM1NDY, on radio in the outdoors, followed. Pace, WD4JQQ, of the Artisans Asylum then described plans they have to set up a ham shack and antennas, funded by a grant from the Amateur Radio Digital Communications foundation and asked for the club's assistance in doing this.

The meeting was adjourned at 9:01 p.m.

### **SPARC Your Knowledge: The Questions – *Brendan Baldonado, NW1S***

Each Month we will include three questions from the Technician, General and Extra exams. The correct answers will be in a separate area of the Newsletter and a small explanation as to why.

#### **Technician:**

##### **T4A05**

**What is the proper location for an external SWR meter?**

- A. In series with the feed line, between the transmitter and antenna
- B. In series with the station's ground
- C. In parallel with the push-to-talk line and the antenna
- D. In series with the power supply cable, as close as possible to the radio

#### **General:**

##### **G7A05**

**What portion of the AC cycle is converted to DC by a half-wave rectifier?**

- A. 90 degrees
- B. 180 degrees
- C. 270 degrees
- D. 360 degrees

#### **Amateur Extra:**

##### **E9A08**

**What is antenna bandwidth?**

- A. Antenna length divided by the number of elements
- B. The frequency range over which an antenna satisfies a performance requirement
- C. The angle between the half-power radiation points
- D. The angle formed between two imaginary lines drawn through the element ends

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### **Member News – Joe Chapman, NV1W**

Jerry Jennings, who many of us met at the last general meeting and at the POTA outing at Hemlock Gorge in Newton, has gotten his license and is now KC1PWO. In another development, he's informed me that he passed his General, and we had a brief QSO (his first) using the 145.23 repeater on Sunday, October 10.

Other new members who have joined this fall are Steve Umans, K8ZBE, and Ray Cielencki, AC1BC. Welcome to the club!

### **Free General License Course Starting on Zoom – Joe Chapman, NV1W**

From the Daily DX - Free weekly General Class licensing course on Zoom beginning Thursday, October 28 through Thursday, January 13 (9 sessions plus 3 weeks off for the holidays in November and December.) Sessions will start at 6:30 pm eastern time, and run 3 hours. These are the classes sponsored by the National Electronics Museum who has been holding it for years. Those wishing to sign up should email Rol Anders, K3RA at [roland.anders@comcast.net](mailto:roland.anders@comcast.net).

### **BARC Meeting Calendar for 2021**

We are in the process of looking at and garnering physical meeting space hopefully for the Winter onwards, again, depending on developing conditions. Watch this space, and the BARC Website (<https://barc.org>) for up to the minute details.

#### **VE Sessions**

None scheduled at this time.

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### **SPARC Your Knowledge: The Answers – Joe Chapman, NV1W**

**Technician:** Recall that the standing wave ratio, or SWR, is a measure of how well the impedance of your antenna matches the 50 ohm impedance expected by your transceiver. If there's a mismatch, some portion of your transmit power will be reflected back into the transceiver. The SWR is a measure of how bad the mismatch is and how much of your power is reflected. An SWR of 1.0:1 is perfect, and as a rule of thumb something less than about 1.5:1 is what you want. 3.0:1 is the limit of most transceivers' internal antenna tuners, and external antenna tuners will generally handle up to 10:1 or more. Note that even if your tuner can find a match for a lousy SWR, some and possibly a lot of your transmit power will be soaked up by the tuner and dissipated as heat.

If your SWR is really bad, you can actually damage your transceiver by reflecting too much power back into it! This is the reason for warnings never to operate your rig without an antenna or a dummy load attached.

By the way, this is a good example of how you can answer a question by eliminating obviously wrong answers! B has to do with the ground, not the antenna; C with the pushbutton on your mic or a computer program you may be running for a digital mode, and D with the power supply. None of these has anything to do with your antenna system!

**Answer: A.**

**General:** A half-wave rectifier is a diode, a device that conducts in one direction. So if you think of the AC cycle as a sine wave, half of the time it's going in one direction and half the time it's going the other way. Since a full cycle is 360 degrees, the diode is conducting for half that, or 180 degrees. **Answer: B.**

**Amateur Extra:** Bandwidth refers to a portion of the frequency spectrum. For example, if you have a band pass filter for the 40 meter band, it should block frequencies below 7 MHz and those above 7.3 MHz. Its bandwidth is the 300 kHz between those two points. Similarly, if you're talking about the bandwidth of an antenna, you're referring to the range of frequencies where the SWR will be sufficiently low for practical use. You'll see this in antenna advertisements: "SWR is 1.5:1 or less over the entire 20 meter band."

"Antenna length divided by number of elements" is obviously wrong because all antennas--not just multielement ones like yagis--have a bandwidth. "Half-power radiation points" are actually a thing--they're the points in a radiation pattern where the transmitted power is half the maximum--and they do have an angle, I guess. But that isn't what bandwidth is. Finally, D is mumbo-jumbo. You can discard C and D on units alone: bandwidth is not measured in degrees, so it can't be an angle. **Answer: B.**

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**POTA Picture – *From Geri Duff, KB1ISG***

We finish up this month with a selection of pictures from the latest BARC Parks On The Air expedition!



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### **BARC Net Preamble**

The control operator for the BARC Net is Joe, W1JF. 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**

<b>18-22 October</b>	<b>ARRL School Club Roundup</b>
<b>21 October</b>	<b>October BARC Meeting</b>
<b>23-24 October</b>	<b>ARRL EME 2.3GHz &amp; Up</b>
<b>6-8 November</b>	<b>ARRL November Sweepstakes – CW</b>
<b>12 November</b>	<b>SPARC Article Deadline</b>
<b>18 November</b>	<b>November BARC Meeting</b>

#### **▲ Note change from usual date and/or location**

*Before going to any event over the next few months, please confirm that the event will take place and what the hours are.*

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:

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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 Doc Kinne, KE1ML, at 617.297.2718 or [kinnerc@gmail.com](mailto:kinnerc@gmail.com).

### **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, Doc, KE1ML, at [kinnerc@gmail.com](mailto:kinnerc@gmail.com). Articles for the September issue must be received by September 6.

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 Doc Kinne, KE1ML, [kinnerc@gmail.com](mailto:kinnerc@gmail.com).

### **BARC Volunteer Exam Sessions**

The Boston Amateur Radio Club usually offers license exams quarterly. **Due to uncertainty caused by the COVID-19 pandemic, the next test session is yet to be announced.** Test sessions are held at Brookline Police Headquarters, 350 Washington St. in the Community Room (across from the information desk).

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 CSCEs 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](mailto:n1icn@arrl.net), or Linda Blair, NA1I, [na1i@arrl.net](mailto:na1i@arrl.net).

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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](http://www.NESciTech.org) or [www.NE1AR.org](http://www.NE1AR.org).



### BARC Officers and Staff

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Vice President: Joe Harris, N1QD

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Secretary: 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
M,T,F,S 8:30PM	Massachusetts Rhode Island Slow Net	3598
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
Mon-Sat Sat, 5 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)
Thu 8 pm	Wellesley Amateur Radio Society Net	28.3MHz
Sat 9 am	Northeast SATERN Net	7.265MHz
Sun 9:30 am	Yankee SSB Net	50.275MHz
Sun 8 pm	Algonquin Amateur Radio Club Net	446.675 (PL 88.5)
Sun 8:30 pm	NSRA Net (with Newline)	145.470 (PL 136.5)
Sun 9 pm	CAARAnet	145.130 (PL 107.2)

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