



# The SPARC

Amateur Radio - Communicating Worldwide for A Century

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

November 2021 - VOLUME 33, NUMBER 11

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



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



Two of Boston's biggest Ham Radio volunteering opportunities, the Boston Marathon and the Charles River Regatta, and I got the fortunate opportunity to participate in one of them. As a newer Ham it was amazing to see how these events work and what an amazing role we amateurs take in the event. I was blown away by the training, coordination and professionalism of our fellow Hams proving that Amateur is truly a misnomer when it comes to our hobby and skills. If you have the ability to participate in similar events I highly recommend it! A happy and healthy November to everyone, hopefully we can keep this weather a little longer.

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

Slowly, oh, so slowly, we're moving back to some semblance of normality.

This last Saturday, Peter, KC1HHO, mentioned he'd been out to the monthly meeting of the Great Hill Gang. I remarked it still sounded odd hearing about people going to monthly meetings, but it would get less odd as the months went by.

BARC is not ignoring this trend, of course. Our members have been able to resume public service events in the last couple of months. While we're still working on resuming monthly meetings, as you'll see here in this month's SPARC, we are doing, and planning, in-person events.

We Amateurs have been, in a small way, lucky with this pandemic – we've been able to keep doing what we love doing. In some cases we've done even more of it.

Still, I look forward to "increased normality." We'll get there.



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

Simplex: 147.420

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## The SPARC

### BARC General Meeting, Thursday, November 18, 7:30 pm

BARC will be holding a General Meeting on Thursday, Nov 18, at 7:30 p.m. on the Zoom teleconferencing platform. We will be hearing from Fred Kemmerer, AB1OC, talking about his Dxpedition to Bora Bora.

To join the Zoom meeting above go to:

<https://zoom.us/j/99918732995?pwd=cFhSbmwySUQ2QjI90eGVUNFNhQ0N4Zz09>

Meeting ID: 999 1873 2995 Password: BARC

### In this Issue of The SPARC

- Minutes of the October Meeting
- SPARC Your Knowledge – The Questions
- Technician Class POTA Day
- SPARC Your Knowledge – The Answers

### 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 October, 2021, General Meeting - Joe Chapman, NV1W

[Correction to the minutes of the September, 2021 General Meeting: AC1LL (formerly KC1OOS) is a BARC member, not a guest. Sorry, Martin! —NV1W]

A General Meeting of the Boston Amateur Radio Club was held on Thursday, October 21, 2021, on the Zoom teleconferencing platform. Members attending: K1SU, K2ZX, KB1EKN, KB1ISG, KC1PWO, KE1ML, N1QD, NV1W, NW1S, W1JF. Guests: AC1FG, AC1JR, K1KOS, KB1CNB. The meeting was called to order by President Brendan Baldonado, NW1S, at 7:34 p.m.

There were no officer reports.

Mark, KB1EKN, reported that the repeater antenna work is on schedule and should be done in 4–6 weeks.

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The holiday party is scheduled for January 9, 2022, at 1:00 p.m. with a snow day of January 16. Joe, N1QD, will take over making the arrangements with the restaurant in place of Blake, K1BTH (SK).

A moment of silence was observed for long-time member and former President Blake Haskell, K1BTH, now a Silent Key. It was moved, seconded, and passed that the club purchase a memorial brick at the Bare Cove Fire Museum for \$100 in memory of Blake Haskell, to be inscribed "Blake K1BTH".

It was moved, seconded, and passed that the club extend the membership renewal discount again this year. Members renewing on or before January 31, 2022 (as determined by envelope postmark or date of the PayPal transaction) may take a 20% discount on the normal dues. Joe, NV1W, and Joe, N1QD, will coordinate the renewal mailing this year.

Brendan, NW1S, announced that he and Joe, NV1W, are planning a POTA outing specifically aimed at Technician licensees on November 20. The location will probably be Chickatawbut Hill in the Blue Hills in Milton.

A presentation by Skip Denault, KB1CNB, on fox hunting followed.

The meeting was adjourned at 8:54 p.m.



*Blake Haskell, KB1BTH*

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

ESPAK your knowledge! 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:**

#### **T4 B06**

**Which of the following controls could be used if the voice pitch of a single-sideband signal seems too high or low?**

- A. The AGC or limiter
- B. The bandwidth selection
- C. The tone squelch
- D. The receiver RIT or clarifier

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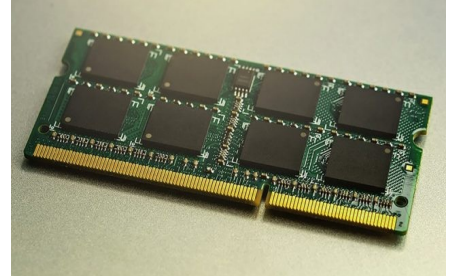
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### **General:**

#### **G6 B05**

**What is meant when memory is characterized as non-volatile?**

- A. It is resistant to radiation damage
- B. It is resistant to high temperatures
- C. The stored information is maintained even if power is removed
- D. The stored information cannot be changed once written



### **Amateur Extra:**

#### **E6 D03**

**Which of the following is an aspect of the piezoelectric effect?**

- A Mechanical deformation of material by the application of a voltage
- B. Mechanical deformation of material by the application of a magnetic field
- C. Generation of electrical energy in the presence of light
- D. Increased conductivity in the presence of light.



## **Technician Class POTA Day – *Brendan Baldonado, NW1S***

Boston Amateur Radio Club Announces a ‘Technician POTA Day,’ November 20th 10:30am.

The Boston Amateur Radio Club will host a Parks on the Air (POTA) event with a special invitation to Technician license holders and new hams on November 20th, 2021. The event will take place in the Blue Hills Reservation in Milton at the Mount Chickatawbut summit. We will attempt to “activate” the park according to POTA rules using VHF, UHF, and the Technician segments of the HF bands.

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Bring your handheld and any other radio you want to try out on the summit. The club will provide some power sources and a few different antennas for you to experiment with. You will also have an opportunity to operate on six and ten meters. Brendan, NW1S, and Joe, NV1W, will be on hand to answer questions and help introduce you to amateur radio in the great outdoors. There will even be prizes for accomplishments things like most contacts made, farthest contact, and most Technician bands used. Afterwards there will be a social event of food and drinks.



You may park at a lower parking lot and hike the short path to the summit. The Boston Amateur Radio club is attempting to organize a car to bring those who cannot or wish to not walk the distance to the summit. Further information on the Blue Hills can be found at <https://friendsofthebluehills.org>.

Please email Brendan, NW1S at [nw1s.brendan@gmail.com](mailto:nw1s.brendan@gmail.com) if you're planning to attend.

Join us at the 110 Grill in Braintree afterwards for some food and drinks! Please include in your email if you will be joining us at 110 Grill so we can make a proper reservation.

We look forward to seeing you at the summit!

Updates on the Tech POTA Day can be found at [BARC.org](http://BARC.org), and [@W1BOS](https://www.facebook.com/W1BOS) on Facebook and Twitter.

Do you want to participate without making the trek up Mount Chickatawbut? You can hunt our operators on Saturday. Look for us on the POTA.us spot page, the [@W1BOS](https://twitter.com/W1BOS) Twitter or on the National Calling Frequencies. We invite your club to get on the Air with our Technicians and test out your VHF and UHF Equipment.

## **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.

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

**Technician:** If you've ever listened as someone spins a dial in the SSB section of an amateur band, as you approach a signal it will sound like Donald Duck, then as you get closer to the right frequency it will become more human. As you spin the dial further you will be back to the duck. I (NV1W) don't hear this as a lower or higher pitch, but that is what the test author thinks.

The correct control is **RIT, which stands for Receiver Incremental Tuning**; some manufacturers call it the "clarifier". This control allows you to adjust your receiving frequency while leaving your transmit frequency fixed.

Among the wrong answers, AGC is Automatic Gain Control, a processing step applied to your received audio that will even out the strength of various signals, so someone with a loud voice and a kilowatt won't blast your eardrums, and someone quiet will be boosted. Bandwidth selection is used to filter out nearby signals that are interfering with the

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signal you're interested. Finally, tone squelch is used when talking through an FM repeater, not SSB!

You might ask why you'd use RIT instead of turning the main dial, since that is how you adjusted your tuning to eliminate distortion in the first place. Because that isn't one of the possible answers! You use RIT when you want to maintain your transmit frequency for some reason. For example, if you're in the middle of a conversation, you don't want to change your transmit frequency because that's where the other person is listening. They might have even used the RIT on their radio to clean *you* up!

**Answer: D.**

**General:** *Non-volatile memory* means a memory device in which **the stored information is maintained even if the power is removed**. It generally refers to devices like disks and flash memory. Most memory chips are volatile, which you may have experienced when working on a computer during a power failure.

This is an example of a question where an educated and informed person might still get the wrong answer! *Volatile* means liable to change rapidly and unpredictably, especially for the worse. You might expect memory to be "volatile" if you were working on a computer in Chernobyl on April 26, 1986 or during a forest fire, but still, "volatile memory" refers to power. Memory that can't be changed once written is a thing, but it's called ROM (read-only memory).

**Answer: C.**

**Amateur Extra:** *Piezo* comes from a Greek word meaning "press or squeeze". I (NV1W) do not believe it is related to the word "pizza", but if that makes it easier to remember, go for it. Piezoelectricity means **mechanical deformation of material by the application of a voltage**. It happens in certain materials like quartz crystals, which is why you'll find crystal oscillators in watches and radio circuitry.

Among the wrong answers, if the deformation had been due to a magnetic field, the term would be something like *piezomagnetism*. The other two are tricky because *piezo* may sound like the Greek root *photo*, meaning "light" as in "photography". A device that generates electricity in the presence of light is a *photocell*, while one that becomes more conductive (or less resistive) is a *photoresistor*.

**Answer: A.**

## BARC Net Preamble

The control operator for the BARC Net is Joe, W1JFF. 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*

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*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 November</b>	<b>November BARC Meeting</b>
<b>20-21 November</b>	<b>ARRL EMA 50-1296MHz Contest</b>
<b>20-22 November</b>	<b>ARRL Nov. Sweepstakes – Phone</b>
<b>3-5 December</b>	<b>ARRL 160m Contest</b>
<b>11 December</b>	<b>SPARC Article Deadline</b>
<b>11-12 December</b>	<b>ARRL 10m Contest</b>
<b>16 December</b>	<b>December 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:

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

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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).



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).



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## The SPARC

### BARC Officers and Staff

President: Brendan Baldonado, NW1S  
[brendan.baldonado@gmail.com](mailto:brendan.baldonado@gmail.com)

Vice President: Joe Harris, N1QD  
[n1qd@n1qd.org](mailto:n1qd@n1qd.org)

Secretary: Joe Chapman, NV1W  
[nv1w@arrl.net](mailto:nv1w@arrl.net)

Treasurer: Jim Clogher, N1ICN,  
[n1icn@arrl.net](mailto:n1icn@arrl.net)

SPARC Newsletter Editor: Doc Kinne, KE1ML / M7RCK  
[kinnerc@gmail.com](mailto:kinnerc@gmail.com)

Volunteer Exams:  
Jim Clogher, N1ICN, [n1icn@arrl.net](mailto:n1icn@arrl.net)  
Linda Blair, NA1I, [na1i@arrl.net](mailto:na1i@arrl.net)

Public Service Coordinator: Brett Smith, AB1RL  
859.466.5915; [ab1rl@arrl.net](mailto:ab1rl@arrl.net)

Public Information Officer: Geri Duff, KB1ISG  
781.749.7664; [geriduff52@juno.com](mailto:geriduff52@juno.com)

Membership Services: Linda Blair, NA1I  
617.500.4406; [na1i@arrl.net](mailto:na1i@arrl.net)

**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

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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 Newslines)	145.470 (PL 136.5)
Sun 9 pm	CAARAnet	145.130 (PL 107.2)

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