



The SPARC

Amateur Radio - Communicating Worldwide for A Century

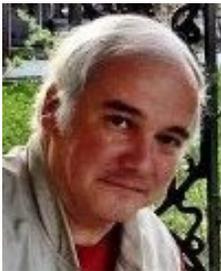
Newsletter of the Boston Amateur Radio Club
Serving Hams in the Greater Boston Area

April 2019 - VOLUME 31, NUMBER 4

www.barc.org - w1bos@arrl.net



Message from the Editor – Joe Chapman, NV1W



As I write this message I'm getting ready for Easter—an insanely busy time for a church organist—so I hope everyone will excuse brevity and whatever scattered typos have managed to creep in.

April 15 will feature the 123rd running of the Boston Marathon, and many club members will be volunteering that day. It looks like the weather may turn out to be as rotten as it was last year! Once again, both BARC repeaters will be in use for this event. I pass along the gratitude of the organizers for the use of the machines, and to our members for their continued financial support of the repeaters.

In operating news, I call your attention to the New England QSO Party the first weekend in May. That weekend also hosts the 7th Call Area, Indiana, and Delaware QSO parties, and there's nothing stopping you from entering all of them. In fact, N1MM supports doing just that, and you can submit the same log for all of them. I'll be operating QRP on 20 and 40 meters CW and SSB, handing out the rare Suffolk County, MA, to anyone able to hear my mighty five-watt squirt gun.

Good health and good radio to all!

In this Issue of The SPARC

- RIT and XIT
- Cracking the hamfest code
- A chance to work the ISS
- New England QSO Party



BARC General Meeting, Thursday, April 18, 7:30 p.m.

The next BARC General Meeting will be held on Thursday, April 18th at 7:30 p.m. at Eastern Bank in Jamaica Plain. Directions can be found at <http://barc.org/directions-to-eastern-bank-jamaica-plain>. The topic will be “Show and Tell” so bring your nifty gadgets and projects!

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

Simplex: 147.420

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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>.

RIT and XIT – Joe Chapman, NV1W

[I was recently asked about this subject by someone relatively new to HF and thought that since I'd gone to the trouble of writing it up, I'd stick it in The SPARC as well. Apologies to those for whom this is old hat.]

Among the mysterious buttons found on most modern rigs are two often marked “RIT” and “XIT”. These are two other controls that allow you to adjust your receive and transmit frequency separately. Outside of operating split or using a repeater, you might wonder why on earth you'd want to transmit and receive on different frequencies.

The control that's more commonly used is Receiver Incremental Tuning, or RIT. Some older radios call this feature the “Clarifier” and the button may be labeled ΔRX. Most rigs will have this control; even my bare-bones Elecraft KX1 has it. Note that RIT is controlled with a dial; when it's on you turn a knob—usually not the main tuning knob—up and down to move the frequency adjustment up and down.

As with any fancy feature, you need to look it up your rig's operating manual. When you do so, take note of how to turn it off. Many rigs will also give you a quick way to clear RIT but leave it active, which is also useful in certain circumstances. As with split, there will generally be a pretty obvious indicator that RIT is on.

So, why would you want to change the tuning of your receive frequency while leaving the transmit frequency alone? Consider a ragchew you started by calling CQ. W1ABC came back to you sounding a little like Donald Duck in allergy season, which you thought was no problem but as you continue with the QSO it's starting to get annoying. You can't just fiddle with your tuning knob, because W1ABC might have gone to some trouble to tune you in nicely. You risk getting into a war in which both of you are adjusting the frequency and before you know it you're in the CB band. The solution is to turn on your RIT and tune the received signal up or down until it sounds human.

Other applications might be at an event like SKYWARN Recognition Day when you want to stay on your CQ frequency yet still save your sanity if someone comes in squawking on a little off. You can also use this to change the other station's CW pitch if you don't have a separate knob for that.

Transmitter Incremental Tuning is the opposite: it allows you to adjust your transmit frequency without changing the receive frequency. This is a lot less useful than it was in the old days when transmitters might drift a little. You could use it for operating split, but in general the split frequency controls on modern radios are easier to use. I will occasionally use this in a pileup or during a contest to see whether changing the pitch of the CW signal the receiving station hears might make my QRP signal more noticeable.

Don't forget to turn these features off when you're done! Elecraft radios have programmable buttons, and I find it useful to set one up to clear all frequency fiddling (Split, RIT, XIT) at once.

20 Years Ago in *The SPARC* – Joe Chapman, NV1W

In the April, 1999, issue of *The SPARC*, the reopening of the Great Blue Hill Observatory was announced — A SkyQuest balloon with a 2 meter transmitter was to be launched at the Blue Hill opening festivities — Mike Ar dai, N1IST, announced that members with webpages could have them linked to by the BARC website — BARC had 134 members — *And elsewhere, in bad news, the Columbine shooting occurred on April 20.*

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Member News – Joe Chapman, NV1W

Congratulations and welcome to the hobby to John Lee (waiting on the FCC for his callsign), who passed his Technician exam at BARC's April VE session.

Note that the grace period for membership renewals for 2019 ended on March 31. Thank you to everyone who has renewed, and to all those who donated to the repeater fund as well.

Working the International Space Station – Joe Chapman, NV1W

BARC has received a query from the Ryan Seacrest Foundation asking whether we'd be interested in doing the radio side of a contact with the International Space Station from Children's Hospital in Boston under the ARISS (Amateur Radio on the ISS) program. The event would take place sometime in the first half of 2020.

If you're interested in participating, please contact Joe Chapman, NV1W, at nv1w@arrl.net.

New England QSO Party is May 4 and 5 – Tom Frenaye, K1KI

The NEQP is a great time to check out antenna systems and offers a moderately paced opportunity to work new states and countries. You'll find a wide variety of participants, from newcomers to experienced contesters, all interested in making contacts with New England stations.

We're working to make sure that all of the New England counties are active again this year and would appreciate your help. Get on for at least an hour or two and join in on the fun. Please let me know if you can put in any time at all so we can work on activity from the rarest counties. **Will you be QRV? Let us know which county you'll be on from with a message to info@neqp.org.**

Oh yes, the NEQP is also **lots** of fun when mobile. Every time you cross a county line the action starts over again. It's amazing what a 100w radio and mobile whip can do.

The QSO Party is 20 hours long overall, in two sections with a civilized break for sleep Saturday night. It goes from 4pm Saturday until 1am Sunday, then 9am Sunday until 8pm Sunday. Operate on CW, SSB and digital modes on 80-40-20-15-10 meters. For each QSO you'll give your callsign, a signal report and your county/state. Top scorers can earn a plaque and everyone who makes 25 QSOs and sends in a log will get a certificate.

Last year we had logs from 166 New England stations and 387 more from around the country and world.

The full NEQP rules are here: <http://www.neqp.org/rules.html>.

The 2018 results are posted (and the results since 2002 are also available) at <http://www.neqp.org/results.html>.

It's just a few weeks until the 2019 NEQP. Please make some QSOs even if you don't want to send in a log.

BARC Meeting Calendar for 2019

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

General Meetings (* Business/General Meetings)

April 18	2019	Thu	7:30 pm (at Eastern Bank, Jamaica Plain) — Show & Tell
May 15	2019	Wed	7:30 pm (note change from 3 rd Thursday)
June 20*	2019	Thu	7:30 pm — Elections

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September 19*	2019	Thu	7:30 pm
October 17	2019	Thu	7:30 pm
November 21*	2019	Thu	7:30 pm

VE Sessions

July 8	2019	Mon	7:30 pm
October 14	2019	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 **June 20, 2019** at Brookline Police Headquarters in Brookline. 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.

BARC Net Preamble

The control operator for the BARC Net is Joe, W1JJE. 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.

“It Worked Last Week When I Plugged It In” – Harry Pitnof, WA1GXC

Last Sunday I had 90 minutes of fun for five dollars at a Connecticut hamfest. The five bucks hid several hundred dollars as an add-on, but that’s not the organizers’ fault. You see, I am a sucker for radio equipment built by the R. L. Drake Company of Miamisburg, Ohio, now long dead. For those of you born after 1965, Drake designed and manufactured an extended line of HF and VHF radio equipment of clever complexity and excellent performance which was pretty expensive, even for its day. A Drake R-4C receiver in 1975 listed for \$395 “Amateur Net”—that’s what all manufacturers called their list price; never understood what the hell that meant or why. Probably two grand in

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today's dollars. It was said that Drake was the “poor-man's Collins”—others said, “Rich hams buy Collins, smart hams buy Drake”.

But I digress—this is an article about Ham Flea Markets.

Got the Drake TX and RX units home and opened-up the receiver—6EJ7 mixer tube showed dead shorts between elements on a military tube tester, four other tubes gasping on life-support or dead. The power supply circuit board (remember the above phrase ‘clever complexity’) was designed to put out five different voltages: 150V DC for the tubes' high voltage B+, -70V AGC and bias supply, 14V for solid-state audio and auxiliary circuits, 11V for VFO, 10V regulated for two oscillators.

The circuit board was missing 60% of its components. One of the genius prior owners had converted the quirky and arguably poorly-designed power module and substituted a simpler and even more stupid circuit scheme. And this guy was so much smarter than the Drake engineers that he snapped off the third-wire grounding pin on the AC line cord so it would go into his wall socket from the 1930's.

So what this article's *really* about is the code words you will hear at Hamfests by eager and ethically unencumbered fellow hobbyists in the service of cleaning out 20 years of crap from their cellars:

“It worked last week when I plugged it in.” (*Dial light came on, no smoke after ten seconds.*)

“Missing a few parts, but basically good shape” (*Cannibalized for components by young ham 30 years ago. I know. I did the same thing.*)

“It should work.” (*Yes, but it won't . No clue. Have no idea. Don't even know what it is.*)

“Needs a little chassis cleaning.” (*Rodent condominium.*)

“Not sure. From an estate sale.” (*Ham's dead, so's his radio.*)

“It's been sitting a while. Bring it up slow on a VARIAC.” (*This requires a little technical tutorial for newer hams; see below.*)

Old radios typically using 200–350V DC on the tubes' plates were driven by power supplies with big, fat high-voltage filter capacitors. When they sit for long periods of time, the capacitors lose their filtering ability and look like electrical dead-shorts. There's a school of thought that says, bring the line voltage up slowly on a variable auto-transformer (Variac or Powerstat brand devices) to lessen the I shock and “form” the caps.. What happens is that you can observe the radio burning into a crisp at say, 87 volts instead of the full 120V AC. I don't recommend this practice. *Never* plug in an old radio until you've opened it up and done a thorough visual inspection. And *never* run a radio without its own fuse.

So go out there and have fun. It's Hamfest season. Google “W1GSL List”, Steve Finberg's New England flea market listing. And just pretend, when you're shelling out 25 bucks, that you just bought three lottery tickets. Hope for the best, expect the worst. Big Fun!

I See the Future

14 April	ARRL Rookie Roundup, Phone
15 April	Maritime Radio Day (<i>see article</i>)
15 April	Boston Marathon (Rp)
18 April	BARC General Meeting, Eastern Bank, Jamaica Plain, 7:30 pm ▲
20 April	Lakes Region Repeater Association Flea and VE Session, Ossipee, NH

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21 April	Flea at MIT, Cambridge
27 April	International Marconi Day (<i>see article</i>)
28 April	Run of the Charles (Rp)
3–4 May	NEAR-FEST, Deerfield, NH
4 May	Deadline for articles for the May SPARC
4 May	SKYWARN Training, Natick, MA. 10:00 am
4–5 May	New England QSO Party
16 May	BARC General Meeting, Brookline Police Headquarters, Brookline, 7:30 pm ▲
17–19 May	Hamvention, Dayton, OH
19 May	Flea at MIT, Cambridge
23 May	SKYWARN Training, Milford, MA, 7:00 pm
25–26 May	CQ WW WPX Contest, CW

▲ **Note change from usual date and/or location**
(Rp) = BARC Repeater likely to be used

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 May issue must be received by May 4.

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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 Monday, April 8, 2019.** 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, or Linda Blair, NA1I, na1i@arrl.net.



NEW ENGLAND SCI-TECH

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.



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BARC Officers and Staff

President: (*position vacant*)

Vice President: Mark Duff, KB1EKN
781.749.7664; emgmt@comcast.net

Secretary: Joe Chapman, NV1W
617.267.6349; nv1w@arrl.net

Treasurer: Jim Clogher, N1ICN,
781.901.3545; n1icn@arrl.net

Volunteer Exams:

Jim Clogher, N1ICN, n1icn@arrl.net

Linda Blair, NA1I, na1i@arrl.net

Public Service Coordinator: Brett Smith, AB1RL
859.466.5915; ab1rl@arrl.net

Public Information Officer: Geri Duff, KB1ISG
781.749.7664; geriduff52@juno.com

Membership Services: Linda Blair, NA1I
617.500.4406; na1i@arrl.net

Newsletter Editor: Joe Chapman, NV1W
617.267.6349; nv1w@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 Council of Eastern Massachusetts Amateur Radio Clubs (CEMARC) and 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 7:30 pm	Clay Center ARC 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 Newsline)	145.470 (PL 136.5)
Sun 9 pm	CAARAnet	145.130 (PL 107.2)

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