



The SPARC

Amateur Radio - Communicating Worldwide for A Century

Newsletter of the Boston Amateur Radio Club

Serving Hams in the Greater Boston Area

November 2017 - VOLUME 29, NUMBER 11

www.barc.org - w1bos@arrl.net



President's Message – Joe Harris, N1QD



It was almost two years ago now that the W1BOS DMR repeater went on the air, so let's look back at the brief history of 449.175.

In the spring of 2015, BARC welcomed Bill Barber NE1B to give a talk to the club on DMR, what was then a relatively new mode that had begun to pick up steam in the New England area. At the same time, the club's UHF repeater had been dormant and little-used for several years. At the June business meeting, it was voted on that the UHF repeater would be converted to DMR in an attempt to boost activity and bring the digital mode to Boston-area hams. Later that year, the club received an offer from the NEAR-Fest committee: arrange a fund-raiser for the purchase of the DMR repeater, and the organization would do a matching funds donation of up to \$500! During the two-week December fundraising window, the club members donated enough to not only max out the matching funds from NEAR-Fest, but to actually fund the purchase price of the repeater! The Motorola SLR5700 was ordered shortly afterwards. In February 2016, the W1BOS DMR repeater went live after moving to a new frequency at the request of the NESMC UHF frequency coordinator.

Since going on the air, the repeater has developed a large user base. There are three nets a week, including the Monday night New England DMR net, which takes place an hour before the BARC net. The repeater has also been used for public service events, supporting the Boston Marathon twice.

Joe Harris, N1QD

In this Issue of The SPARC

- Portable soldering irons
- Check your AC input!
- SKYWARN Recognition Day 2017
- Events, meetings, directions



Next BARC General Meeting Thursday, November 16, 2017 at 7:30 pm

The next BARC General Meeting will be on Thursday, November 16, 2017, at 7:30 p.m. at Brookline Police Headquarters in Brookline. Directions to this location can be found elsewhere in this issue and on the web at <http://barc.org/directions-to-brookline-police-headquarters-brookline/>.

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

Simplex: 147.420

449.175 (-) DMR CC1

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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>.

Thoughts on Portable Soldering Irons – Joe Chapman, NV1W

Several years ago I invested in a fancy temperature-controlled Hakko soldering station and I wouldn't use anything else at home, but there are times when I'm not near an electrical outlet and/or don't want to lug something large and heavy around with me.

You have three choices for a portable soldering iron: a 12V iron with an external battery connector, a cordless iron with internal batteries, or a butane-powered one. Personally, I don't do a lot of soldering in the field, and for an emergency go-kit it seems desirable not to have something that depends on electricity (for example, it may well be your power supply that needs soldering), so I lean towards the butane models. One place you can't take them is on an airplane (technically, if they've never been filled you can, but try telling that to someone at airport security).

For 12V external-battery irons, a Google search digs up a few very inexpensive ones that seem rather underpowered to me, plus a 25W Amtex model (the MLXS) for about \$60 (when you can find one) and a 42W Weller iron (the TCP12P) that costs about \$120. The cheaper irons come with a cigarette lighter plug, and the more expensive ones with battery clamps. The Amtex is a little more compact than the Weller, and it gets good reviews. Modified with a pair of PowerPoles stuck inline between the clamps and the iron, it would probably be my choice if I had more of a need for a battery-powered iron or was still living on an airplane like I was in the 1990's.

Hakko, maker of my home soldering station, makes an internal battery powered iron, the FX-901/P, for about \$30. I trust Hakko, and the iron has the usual combination of Internet reviews: a bunch of glowing five-stars and one one-star review from someone who probably has a legitimate gripe but is incapable of expanding on the judgment, "it's a piece of junk," in any useful way.

Which brings us to butane irons. These use the same butane fuel that things like cigarette lighters and crème brûlée torches use. You have to ignite them in some way and wait for the flame to blast the tip to an appropriate temperature (about fifteen or twenty seconds with the irons I have). You can also reconfigure most of them to make a small butane torch, which I use for the admittedly non-ham application of melting sealing wax.

My favorite is the Dremel VersaTip 2000 (\$39), which as you'd expect from Dremel is reliable, well-designed, and has just a few more extra fittings and doodads than you'll ever find a use for. Ignition is easy, and the manufacturer claims it will run for about 45 minutes on a filling.

Kit-building guru Rex Harper, W1REX, recommends an inexpensive butane iron from Radio Shack, the "Mini Butane Gas-Powered Iron" (pictured), for about \$22. As I write this it's out of stock, but it looks like the same thing as the Iso-Tip #7971 SolderPro 50 Butane Soldering Iron, which you can find from various vendors for a few dollars more. It is very portable (it fits in a shirt pocket) and it works well enough. Igniting it is a little fussy; there's a Zippo-style sparker on the cap of the iron.



All these are bicycle pannier, backpack, and go-kit friendly. The Hakko FX-901/P might even work as a light-duty home iron for someone who doesn't do a lot of soldering.

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Member News – Joe Chapman, NV1W

October was one of those rare months when BARC didn't pick up any new members. However, in late September a team of volunteer examiners led by Linda, NA1I, conducted an exam session at Harvard that drew 15 candidates! Jim, N1ICN, Joe, NV1W, and Bill, W1PL, rounded out the exam team.

Congratulations to our friends at the Harvard Wireless Association, and to new Technician licensees Soham P. Pawar KD2OHB, Allison C. Tsay KE0OQC, Liam J. Fitzgerald KC1IFS, Adham Omar Meguid KC1IFT, Jason Huang KC1IFU, Elton G. Lossner KN4GIT, Robert D. Anderson KC1IFV, Raphael Rouvinov KD9JKS, Jonathan K. Kosgei KC1IFW, Jeb King KD9JKT, Alexander F. Wulff KD2OHC, and Gunnar L. Plunkett KM6NFL.

Check Your AC Input! – Greg Bennett, KC1CIC

As is too often then case, the best lessons are learned the hard way. For me, the latest lesson is to check the AC source voltage before you plug in.

Last month I was participating in a training exercise with a local served agency and was using one of the go boxes I built. I was going to be using a served agency supplied portable generator. Having used the BARC generators for the past three Field Days, I thought nothing of it.



I asked the person responsible for the generator if it was set for 120VAC and he confirmed that it was. So, I plugged in to the generator turned on the power supply and smoke emerged from the go box! I immediately pulled the plug. Obviously the go-box was dead and not available for the exercise. An electrician was brought in to test the output of the generator. According to his meter the generator was putting out in excess of 155VAC!! What happened to my go-box? That is an interesting story in itself. Everything in the box is fused so I was hoping the fuses protected everything. Not a single fuse blew. Why? Fuses protect equipment from current spikes, not voltage spikes. What protected my equipment was the power supply taking the hit. It has over volt protection but it doesn't survive the experience. So, what did I learn from this?



The first lesson was never trust what someone else says, measure it for yourself. I added a voltmeter to my go-kit. I can vouch for this one from Amazon as it has been in my tool bag for years. This Neiko 40508 Multimeter sells for \$9.00 and it's yellow so harder to lose it in the field. There are many types of meter out there; the point is if you have a go-kit, add a volt meter to it. The second lesson was to provide surge suppression to the box. In retrospect this makes much more sense than I ever considered. Working under emergency conditions is more than likely to involve generator power. Even a well maintained generator can throw a voltage spike now and then. So, I added this Trip-Lite Spikecube from Amazon for \$8.25 to my box as well. It comes with a



Lifetime Warranty and \$5,000 Ultimate Lifetime Insurance for connected devices.

Replacing the power supply was an easy fix and took about 20 minutes to swap it out for the new one. The new power supply only cost \$129.00. That is cheap money when you consider the rest of the items in the box add up \$1800.00! The two items that I purchased to prevent this from happening again cost a mere \$18.25.

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I consider myself lucky that this happened during a training exercise. Had it been a real emergency all the work and effort to be ready to assist would have been for nothing! So, if you think training exercises can be boring or routine, you might want to think again. There is always something to be learned, and that is probably the most important lesson of all.

November General Meeting – Joe Harris, N1QD

This month's general meeting will feature Gary Schwartz N1ZCE giving a talk about radio programming. Join us in the Community Room at Brookline Police HQ, 350 Washington St., Brookline, on Thursday November 16 at 7:30pm.

No December General Meeting – Joe Harris, N1QD

Please be aware that BARC's SKYWARN Recognition Day event takes the place of the December club meeting. See the article elsewhere in this issue of *The SPARC* for more details on SRD.

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

In November, 1997, the meeting speaker was Mike Goldberg, K1LJN, talking about the Official Observer program — President Mike Ardai, N1IST, reported on repeater work, the club's work on forming an emergency plan and emergency response team, and the upcoming Holiday party — Terry Koen, N1IWF, and Dick Doherty, KA1TUZ, announced a tour of the Boston Fire Department Fire Alarm Office — RACES, ARES, and SKYWARN announced a simulated emergency test for December 6 — Two meter tracking stations were solicited to follow a balloon launch as part of a Plymouth middle school earth science project — The FCC opened a new "gate" of vanity calls — Calls were made for more participation in BARC events — *And elsewhere, the film Titanic premiered.*

BARC to Participate in SKYWARN Recognition Day 2017 – Mark Duff, KB1EKN

On December 2, 2017, and for the 15th consecutive year, BARC will once again participate in SKYWARN Recognition Day. SRD is a joint event support by the ARRL and the National Weather Service where weather stations and weather buffs from across the country contact each other for fun and to promote the SKYWARN Program. Our station, **WX1BHO**, will be located at the summit of Great Blue Hill in Milton, MA. For several decades, hams have assisted the National Weather Service by providing real-time reports of severe weather and storm conditions. Although the NWS operates a network of 120 Doppler radars to track severe storms, at greater ranges weather radar has a difficult time sampling conditions close to the ground. The information radio operators located near a storm provide plays a key role in aiding forecasters. Stations will exchange signal reports, location and a brief description of the current weather at their respective locations ("sunny," "partly cloudy," "windy," etc.). BARC will be on the air from approximately 0900 to 1500 local time. The event itself is a great way in a low-key environment to make HF contacts and get your feet wet in the HF Spectrum. In past years we have endured all kinds of weather including warm and cold days, clear and cloudy days, and yes, even a blizzard. Access to the summit is gained by a 20 minute hike from the base of Great Blue Hill located on Route 138 next to the DCR Trailside Museum or (if you arrive early in the day) by car. Further information is available by contacting Mark Duff, KB1EKN, at emgmt@comcast.net.

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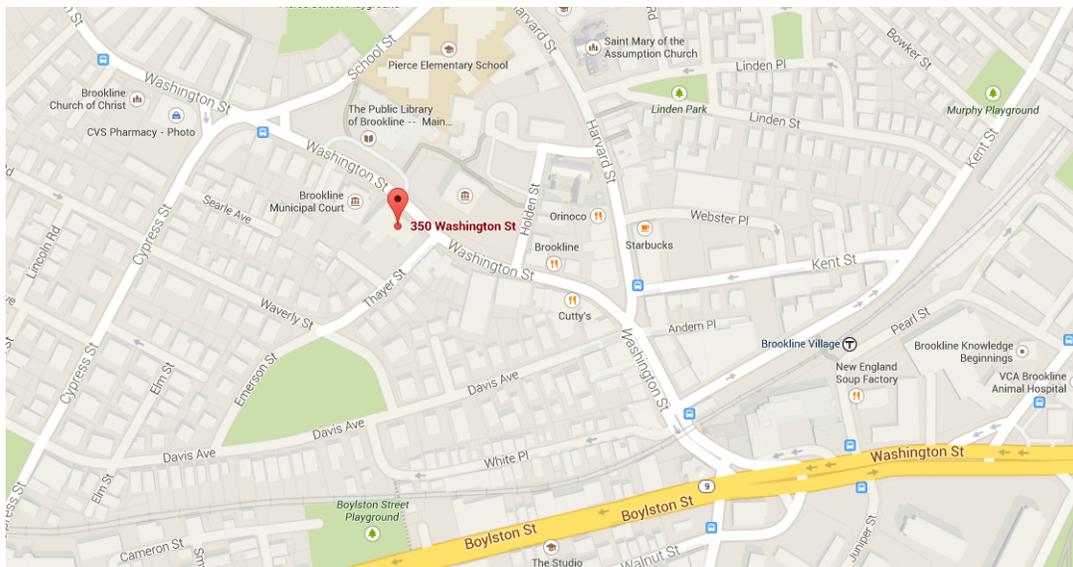
BARC Meeting Calendar for 2017

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

Business Meetings

December 7 2017 Thu 7:30 pm

Area Map for Brookline Police Headquarters, 350 Washington St., Brookline



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

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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

16 November	BARC General Meeting, Brookline Police Headquarters, Brookline, 7:30 pm
18–20 November	ARRL November Sweepstakes, Phone
1–3 December	ARRL 160 Meter Contest
2 December	SKYWARN Recognition Day, Great Blue Hill Observatory, Milton
7 December	BARC Business Meeting, Brookline Police Headquarters, Brookline, 7:30 pm
9 December	Deadline for articles for the December SPARC
9–10 December	ARRL 10 Meter Contest
17 December	ARRL Rookie Roundup, 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>.

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 December issue must be received by December 9.

Thanks to Greg, KC1CIC, for contributing to this month’s issue.



**The Clay Center Observatory
Welcomes BARC members**

www.claycenter.org

Public Astronomy Nights, Astronomy Day Events,
Amateur Radio Classes, Amateur Radio Youth Club,
Community and Adult Education, Weather Festival,
Science Lecture Series, Educational Outreach

20 Newton St., Brookline, near Larz Anderson Park



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Quarterly Business Meetings – Bob Salow, WA1IDA

As the Bylaws require, BARC has Business meetings quarterly. Unless circumstances warrant, BARC Business meetings will be held on the first Thursdays of December, March, June, and September. The next such meeting will be on **December 7, 2017** 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.

A short opening period of each General meeting will continue to be used to bring any immediate business matters to everyone's attention.

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 President Joe Harris, N1QD.

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.

BARC Volunteer Exam Sessions

The Boston Amateur Radio Club schedule has been revised to suit the needs and interests of the applicants and examiners. **The next exam session will be in early 2018.** Generally, 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 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.

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Your Personal Ad Could Have Been Here

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 Officers and Staff

President: Joe Harris, N1QD

781.844.8684; n1qd@n1qd.org

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 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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2



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