



The SPARC

Amateur Radio - Communicating Worldwide for A Century

Newsletter of the Boston Amateur Radio Club

Serving Hams in the Greater Boston Area

January 2016 - VOLUME 28, NUMBER 1

www.barc.org - w1bos@arrl.net



Message from the President – Joe Harris, N1QD



Last summer, I proposed to the club that we convert our idle UHF repeater from analog to DMR digital. At the time, this was to be a simple matter of programming; the club had received a second-hand DMR-capable repeater as a donation and it was currently running in analog. Unfortunately, when the conversion was attempted, it was determined that the repeater was non-functional in DMR mode. A trip to the dealer confirmed this—there was no easy repair, and the repeater would have to be replaced. I was convinced that this would be the end of it. A new repeater would be almost \$2000, and there was no way we could purchase one without almost bankrupting the club.

Later in the year, I learned about a fundraising program that the NEAR-Fest organizers had in place. They would make a matching funds donation of up to \$500 for the expansion of digital voice networks! This is great, I thought, I can challenge the members to help raise the funds for the repeater. Not only would it be a great motivator for donations, but this would also be a great litmus test for the club. If there was enough interest in DMR for club members to put down their money, then I would know that I really had the club's support on this one. I released the letter with the fundraising challenge, and hoped for the best.

At the end of the fundraising period, I was floored to learn that, not only had the club maxed out the NEAR-Fest matching funds, they had raised the remaining purchase price of the repeater! Thank you to all who elected to fund this project! What a great way for BARC to kick off 2016! Keep your eyes on upcoming issues of the SPARC for further updates as this project progresses.

Joe Harris, N1QD

In this Issue of The SPARC

- Spring Public Service opportunities
- SKYWARN Recognition Day wrap-up
- Current DXpeditions
- 2016 meeting and VE session dates



BARC General Meeting Thursday, February 18, 2016 at 7:30pm

There will be no January General Meeting on account of the Holiday Party. The February General Meeting will be held on Thursday, February 18, at 7:30 p.m. at Eastern Bank in Jamaica Plain. A map for this meeting location, which will replace Brookline Police Headquarters in the months that facility is unavailable, can be found in this issue of *The SPARC*.

Repeaters: 145.230 (-) CTCSS 88.5

Simplex: 147.420

443.550 (+) DMR CC1 (soon)

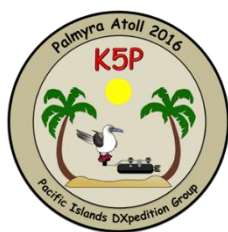
BARC's Online Discussion Group – Joe Harris, N1QD

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: <https://groups.yahoo.com/neo/groups/bostonARC/info>.

2015 Ham of the Year – Joe Harris, N1QD

The BARC Ham of the Year for 2015 is Joe Chapman, NV1W. After serving three consecutive terms as the club's president, Joe switched gears in 2015 and took on the role of Secretary, as well as newsletter editor. Joe's spirit of volunteerism is alive and well, and he is a valued asset to BARC! Please join me in congratulating Joe and thanking him for all his efforts to support BARC over the past few years.

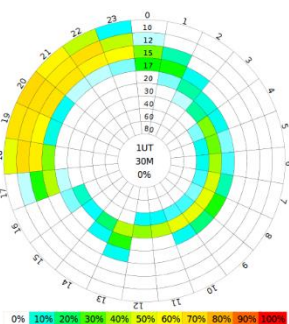
Upcoming DXpeditions – Joe Chapman, NV1W



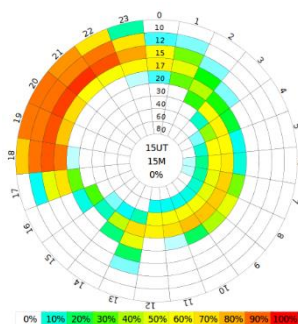
Until recently I was under the impression that Palmyra was the name of the manicurist in the TV commercial for hand-softening dishwashing detergent (I was thinking of Madge and Palmolive, of course), it turns out to be a small atoll near the equator that's number 9 on the ClubLog most wanted list. This month there will be a DXpedition on the island featuring many familiar calls from last year's operation on Navassa Island in the Caribbean. Like Navassa, it's a National Wildlife Refuge that involves much negotiation to visit, so this DXpedition is likely to be the last time the DXCC entity will be activated for at least a decade. For more details see <http://palmyra2016.org>. And as

Madge might say, Pileups? You'll be soaking in them!

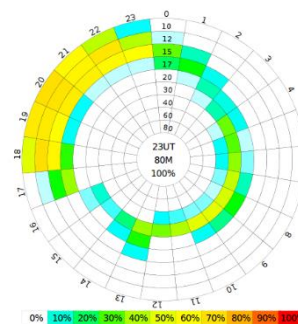
Palmyra lies at 5.88°N, 162.08°W, 6003 miles from Boston at a great-circle heading of 275°. VOACAP suggests trying 15 meters between 1800 and 2200 UTC; propagation diagrams are below. The K5P team has not published a band plan for various reasons (see the website for details) but they can be found on all the usual spotting networks.



Boston–Palmyra, 5W CW



Boston–Palmyra, 100W CW



Boston–Palmyra, 100W SSB

As if that weren't enough, another hard-core team is headed to South Georgia (ClubLog #8) and the South Sandwich Islands (ClubLog #3) in the southern Atlantic on the R/V *Braveheart*. You can find their story at <http://intrepid-dx.com/vp8>.

South Georgia lies at 54.28°S, 36.70°W, 6986 miles from Boston at a heading of 160°. South Sandwich is at 57.77°S, 26.46°W, 7390 miles from Boston at 157°. VOACAP has a lot of suggestions:

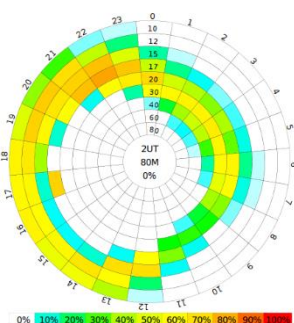


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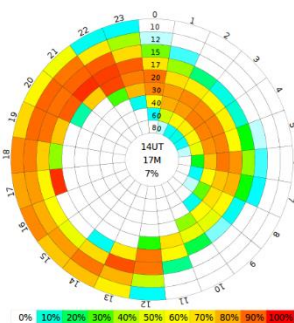
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443.550 (+) DMR CC1 (soon)

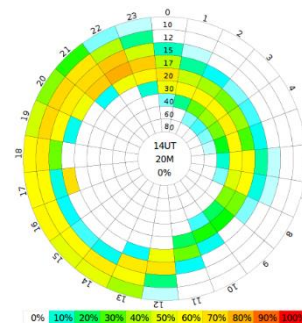
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Boston–South Georgia, 5W CW



Boston–South Georgia, 100W CW



Boston–South Georgia, 100W SSB

2015 BAA Half-Marathon Wrapup – Brett Smith, AB1RL

It's hard for me not to treat the annual BAA Half Marathon as a bookend event in the public service season. Each year it's the BAA's last race, and the last event I personally help organize. It's also the first event where I contributed to the organizing, working under Bob Salow, WA1IDA, in 2012. It ends up as a capstone on my calendar, marking another year contributing to public service work for amateur radio.

This year, chilly weather on the day meant all us volunteers had to bundle up, but it's great for the runners and contributed to a quiet day. We handled communications for medical teams at medical and hydration stations all along the course, and helped provide them with additional information about areas they couldn't cover. The team's experience really came through the airwaves, as all this traffic came through as efficiently as I can ever remember. With all the favorable conditions, I think it's safe to say everyone, runners and volunteers alike, had a good time.

Thanks so much to everyone who volunteered: Allan Cox, K1ALL; Gary Schwartz, N1ZCE; Stephen Evans, K9PUG; David Gilman, KC1DDH; Andrew Brockert, NE1X; Jack Carroll, W1PK; Brian Saper, KB1QLQ; Geoffrey Milner, W1ZAP; Mark Richards, K1MGY; John Nugent Jr., W1JAI; Rick Savage, KB1LPW; and Kathy Savage, KB1LYJ. Thanks also to the Northeastern University Wireless Club for allowing us to use their club repeater to provide redundant coverage along the course.

April Public Service Events – Brett Smith, AB1RL

April is always the big kick-off month for BARC's public service season. There are four events you can help with:

- MS Walk Boston: Sunday, April 3
- BAA 5K: Saturday, April 16
- Boston Marathon: Monday, April 18
- Run of the Charles: Sunday, April 24

Volunteer registration for the Boston Marathon and BAA 5K are open now until February 9 at <http://www.baa.org>. If you're interested in helping at any other event, or have any questions, please contact me at ab1rl@arri.net.

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SKYWARN Recognition Day 2015 – Joe Harris, N1QD



On December 5, BARC members converged on the Blue Hill Observatory in Milton for the 14th consecutive year to commemorate Skywarn Recognition Day. The weather on the top of Great Blue Hill was quite pleasant, with temperatures pushing into the high 40s. This was a welcome change, considering that in past years the club has been on the air in much worse conditions. HF conditions were not the best, and our QSO totals reflect that. That definitely did not diminish the fun had on the summit, however! We made almost 70 QSOs, reaching amateurs in 19 states and 4 countries. In addition, 9 fellow Skywarn Recognition Day special event stations were contacted. Two meter simplex proved very

effective this year, as almost a third of all QSOs were made on VHF. Thanks to all who supported this event, and we look forward to a fun SRD 2016!

Register Today to Volunteer at the Boston Marathon – Brett Smith, AB1RL

The new year is upon us, and that always means one thing: volunteer registration is open for the 2016 Boston Marathon! Sign up today at <http://www.baa.org>.

Don't delay! Registration is only open until February 9. Due to changes in the credential program, we won't be able to accommodate late registrations as in years past. If you plan to work with us but aren't sure you can commit yet, go ahead and sign up now. Just indicate in the registration comments when your plans will be more solid.

2014 saw a lot changes to the Marathon's logistics, and 2015 brought the event's communication plan in sync with those changes. The amateur radio community earned plaudits for how we collaborated in that planning process, and followed through with the changes on race day. It didn't go perfectly, and we'll be focusing on those areas we want to improve in 2016. But we have plenty to be proud of, and we're widely recognized throughout the BAA and other volunteer groups as important contributors to the race.

The credit and thanks for that belong to every volunteer. All the plans leading up to Marathon Monday would be pointless without volunteers carrying them out. If you volunteered last year, thank you for all your work. Either way, I hope you'll join the team in 2016 to help make another great Marathon.

Walter Pienton, AA1MA, SK – Bob Salow, WA1IDA

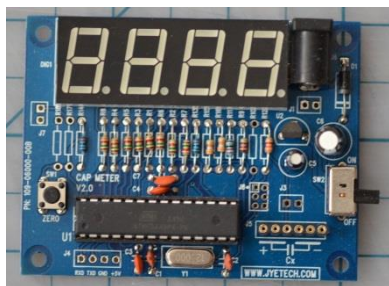
Walt Pienton was one of the earliest members of the Boston Amateur Radio Club. He was active on the HF bands, not an easy feat for someone living in Dorchester. He helped and made friends with many of the other hams in Dorchester and the Boston area. Walt died on 19 December at age 89.



Product Review: JYETECH Capacitance Meter Kit – Joe Chapman, NV1W

JYE Tech Ltd is a Chinese company that makes a number of small inexpensive test equipment kits. A review of their \$40 DSO138 Oscilloscope kit by Paul Danzer, N1II, appears in the January 2016 issue of QST. The Capacitance Meter kit is a small (3" × 2¼") board with a four-digit decimal readout and an ATMEGA 48PA microcontroller. I bought mine from Sparkfun for \$13.95 (<https://www.sparkfun.com/products/9485>).

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All parts are through-hole and the microcontroller is socketed. The instructions are somewhat sparse, but the only thing that made me pause was the correct orientation of the display. The obvious orientation (at the top of the board, oriented like the silkscreen text on the board) was correct, but the part did look like a pain to unsolder if I got it wrong. The other challenge involved the resistors, which are half the size of a grain of rice. I used a magnifying loupe to figure out the color codes and double-checked them with an ohmmeter. There are some unused holes in the circuit board but the instructions do warn you about this. Total build time was well under

an hour.

If you want some serious handholding, there's a video on Youtube (<https://www.youtube.com/watch?v=9pLx6vqK7Vs>) by Max Goodman.

The capacitor under test plugs into two sockets of a 6× female header strip. I didn't do extensive testing, but it seemed to match the markings on all the capacitors I threw at it. You can even test surface mount parts with a few solderless breadboard jumper leads and some patience. It would be nice to figure out a simple way to do this, since unmarked surface-mount parts are the ones you're most likely to have to measure. The published range is 1 pF to 500 µF.

You could mount the whole thing in an Altoids tin if you're better at punching holes in Altoids tins than I am. There are also holes in the board for a standard six-pin programming header and something that looks like a serial interface. The microcontroller sources aren't published, but I can't think of any hacking I'd want to do on the thing anyway.

Capacitance Meter DIY Kit, KIT 09485. Available from Sparkfun Electronics, 6333 Dry Creek Parkway, Niwot, Colorado, 303-284-0979, www.sparkfun.com. \$13.95.

BARC Meeting Calendar for 2015 and 2016

Unless otherwise noted, all meetings will take place at the Brookline Police Headquarters. A map for the new Eastern Bank substitute meeting location can be found below.

General Meetings

February 18	2016	Thu	7:30 pm (at Eastern Bank, Jamaica Plain)
March 17	2016	Thu	7:30 pm (at Eastern Bank, Jamaica Plain)
April 21	2016	Thu	7:30 pm (at Clay Center, Brookline)
May 19	2016	Thu	7:30 pm
June 16	2016	Thu	7:30 pm — Elections
September 15	2016	Thu	7:30 pm
October 20	2016	Thu	7:30 pm
November 17	2016	Thu	7:30 pm

VE Sessions

April 11	2016	Mon	7:45 pm (note time change)
July 11	2016	Mon	7:30 pm
October 10	2016	Mon	7:30 pm

Business Meetings

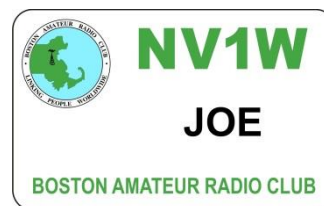
March 3	2016	Thu	7:30 pm (at Eastern Bank, Jamaica Plain)
June 2	2016	Thu	7:30 pm
September 1	2016	Thu	7:30 pm
December 1	2016	Thu	7:30 pm



BARC Badges! -- Joe Chapman, NV1W

Rick, NV5A, the Sign Man of Baton Rouge, is now offering BARC badges. They're full-color plastic badges with our logo and your call sign and first name, at a basic price of \$11.50 for a badge with a safety pin fastener. Rick was a great help in designing a badge for us, and he does good work and ships promptly.

See our listing on the Sign Man's web site: <http://www.thesignman.com/clubs/boston.html> for details and fastener options.



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-in's 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

30 Jan–1 Feb	ARRL January VHF Contest
7 Feb	North American Sprint, CW
13–14 Feb	CQ WW RTTY WPX Contest
18 Feb	▲ BARC General Meeting , Eastern Bank, Jamaica Plain
20–21 Feb	ARRL International DX Contest, CW
27–28 Feb	North American QSO Party, RTTY

▲ 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”

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443.550 (+) DMR CC1 (soon)

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.

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 February issue must be received by February 6.



**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



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; or Bob Salow, WA1IDA, at wa1ida@arrl.net or 508.650.9440.

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 **3 March 2016** at Eastern Bank in Jamaica Plain. 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.

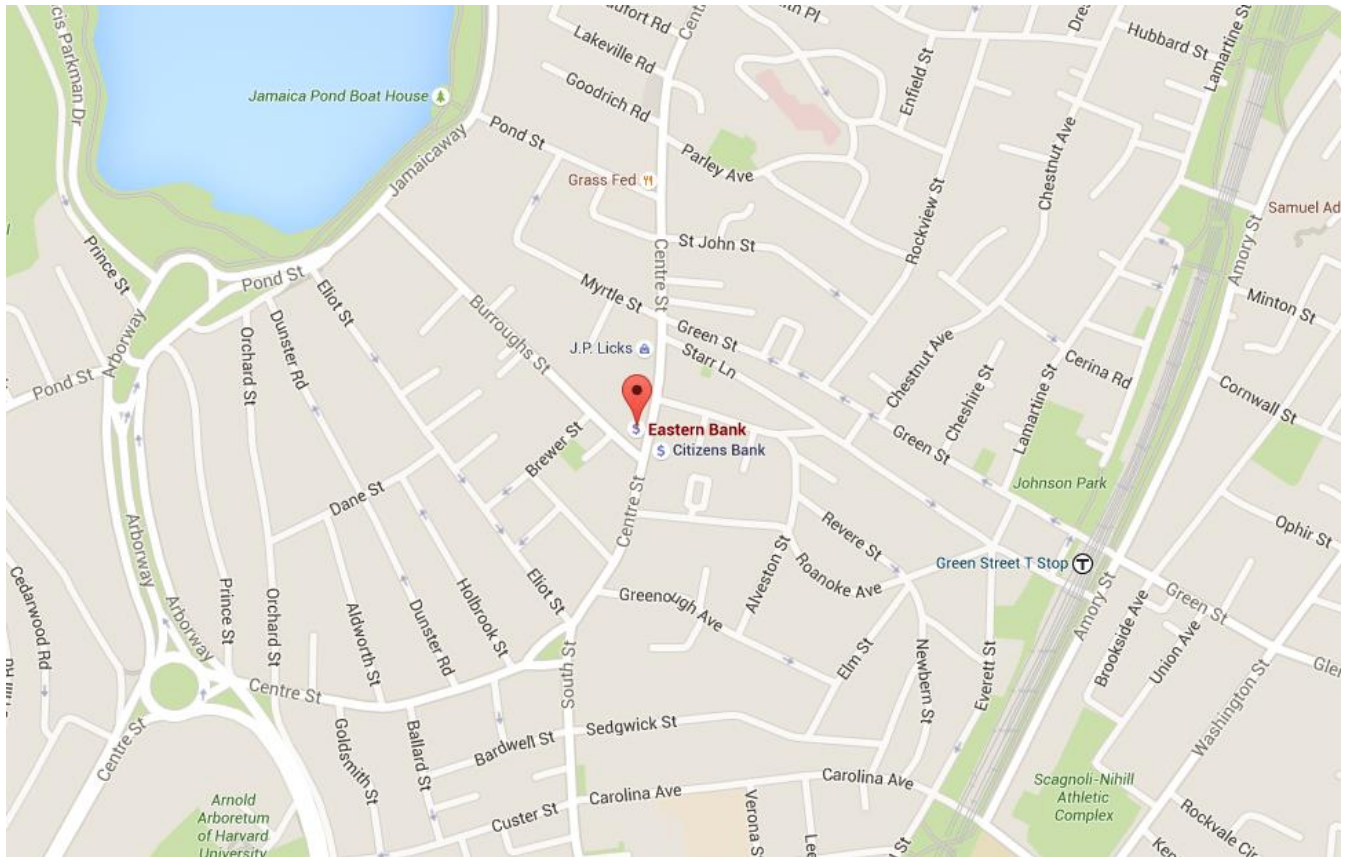
To provide continuity of club business between meetings we also have a virtual business meeting via an email list. Any member interested in the affairs of the club can ask to be on this virtual meeting list—just give your name, call and your email address to President Joe Harris, N1QD.

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Area Map for Eastern Bank, 687 Centre Street, Jamaica Plain MA



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 2016 exam session schedule is shown elsewhere in this newsletter issue.** 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 ID (picture ID preferred)
- 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.

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 the Editor, Joe Chapman, at nv1w@arrl.net.

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443.550 (+) DMR CC1 (soon)

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,
617.908.5019; n1icn@arrl.net

Volunteer Exams:
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859.466.5915; ab1rl@arrl.net

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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 Special Service 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)
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 9 pm	BARC Club Net	145.230 (PL 88.5)
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 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)