



The SPARC

Amateur Radio - Communicating Worldwide for A Century

Newsletter of the Boston Amateur Radio Club

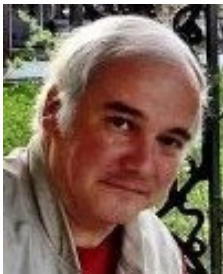
Serving Hams in the Greater Boston Area

August 2019 - VOLUME 31, NUMBER 8

www.barc.org - w1bos@arrl.net



Message from the Editor – Joe Chapman, NV1W



I have now been a member of the club long enough that everyone has heard all of my jokes at least twice. Still, having to come up with more material every month is pleasant compared to writing Silent Key notices. By now most people will have heard of the passing of Greg Bennett, KC1CIC. Like the death of Bill Collins, W1PL, it was sudden and something we'll remember especially on Field Day.

None of us is getting any younger, and I'd like to encourage folks to consider preparing a spreadsheet of their equipment, when it was bought, what (approximately) it's worth, and that kind of thing. People like me who are single or the only ham in their families should especially take note. I have at least one piece of equipment in my shack that has no markings whatsoever and a single pushbutton on the front (it's a USB CAT interface for the FT-897).

On a lighter note, or at least a differently heavy one depending on the number of pancakes you order, there will be a second summer lunch this month in Harvard Square, courtesy of the organizational skills of Doc, KE1ML, and Morgan, KB1ZFP.

73 and good radio!

In this Issue of The SPARC

- VHF/UHF at KE1ML
- Greg Bennett, KC1CIC (SK)
- More wire antennas and fireflies
- Meetings and events
- BARC's second Summer Lunch



No BARC Meetings until September

The next BARC General Meeting will be held on Thursday, September 19th at 7:30 p.m. at Brookline Police Headquarters in Brookline Village. Directions can be found at <http://barc.org/directions-to-brookline-police-headquarters-brookline/>.

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>.

Member News – Joe Chapman, NV1W

Send your contributions for this column to Joe Chapman, NV1W, at nv1w@arrl.net.

New Radio — New Mode – Doc Kinne, KE1ML, ORS

They say you can't get through a Field Day without the urge to get more radio equipment. It must be the fact that you're seeing so many different setups, and you think, "I could try that!"

I was not immune to this effect during our last Field Day a month ago. So many radios! So many things we were trying with no great thought as to how many points it would get it, but would it work, and how well?

My base station radio up to this point has been an IC-746. I'd gotten this radio several years ago when my old station, N2IKR, was based in WNY. The IC-746 is, of course, largely an HF radio, but it does operate on 6 and 2 meters. The reason for getting this radio years ago was that its T/R relay was fast enough to handle AMTOR, and in that mode it has given me several AMTOR contacts. As KE1ML, with my lack of any real estate, it's been limited to 2m, but it performed well there.



I made the "mistake" of reading NV1W's ad in *The SPARC* a couple months ago as he was selling his FT-736R. What attracted me is that this rig was fully loaded and could work not only 2m, but 1.25m, 70cm, and 23cm. While my current HT has access to 2m, 1.25m, and 70cm, there is a difference between a base station and an HT. And I could see being able to put up VHF/UHF antennas. So, I made the leap (see photo at left).

Due to personal circumstances, I wasn't able to pick up the radio until 1 August, but setup from that point was simple. I already had a working 2m antenna,

and NV1W had included a 1.25m J-pole antenna in the package. In sort order, I temporarily put up the J-pole by attaching it to one of my bookcases and was on the 220MHz Quincy repeater for the Heavy Hitters Net (see photo at right).

So, what else could be done? Well, I *think* the FT-736R's receive sensitivity is greater than the Icom's. One of the things I've been trying to do at this point is just *receive* satellite transmissions. I don't have a great antenna set up for any sort of satellite communication, but the antenna that I do have, a 2m ground plane, I thought, should be enough to do something with.

Owen Garriot, W5LFL, pioneered the use of Amateur Radio aboard the Space Shuttle. His initial experiments, and his contacts with school kids all over the US, led to a permanent Amateur Radio station being placed aboard the



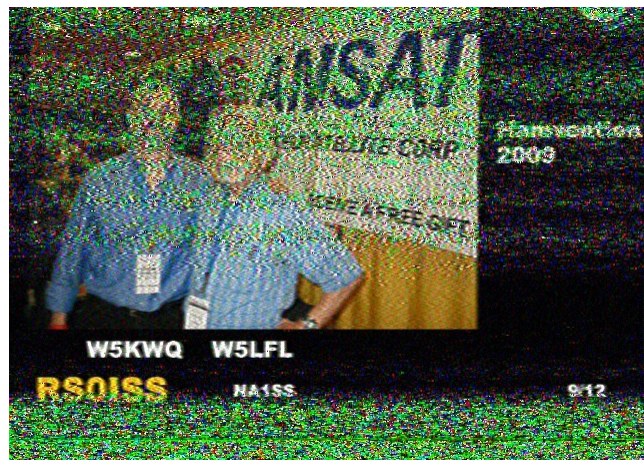
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International Space Station. Owen died last April and the ISS crew commemorated him with an event at the beginning of August that involved the ISS transmitting SSTV (Slow Scan Television) images on 145.80MHz as it orbited.



"Ah! The perfect test," I thought! Of course KE1ML had never done any image work. Twenty-five years ago N2IKR, my former station in WNY, had done some some fax reception on HF, but that was as far as it went.

Once the idea hit me, I had less than an hour and a half to figure out the details because that's when the ISS would come over head again, and orbiting satellites wait for no man or god!

In that 1.5 hours I managed to find software, configure the sound pathways on the computer, procure the needed cables, configure the hardware pathways between the computer and the radio, and I actually managed to test things using data from a Tuesday Houston Amateur Satellite podcast!

I was ready with 7 minutes to spare! I tuned to 145.80MHz, routed the radio's audio to the computer, and told the program to start saving data files.

My orbital prediction program said the ISS had just come over the horizon. I set the squelch on the radio all the way down. The hiss of no signal filled the room. Three minutes went by as the ISS slowly climbed to about 16° above the horizon... and a warble started to make itself heard over the hiss. The program recognized and decoded the type of SSTV signal it was hearing, and started to place image data on the screen!

As you can see (*top image*), it started out rough and then ended up rough, but for a first try the image was recognizable and you could make out details with no problem. Personally, I think I did better than NASA did on their first tries from the moon, but that's just me!

Subsequent tries would get better, but I think that had more to do with the orbital elevation of the ISS than anything I changed on my end (*best image at right*).

While Slow Scan Television has traditionally been seen as an HF mode, these experiences with the ISS—and indeed past experiences that included both the Space Shuttle and the Russian MIR space station—show that the mode is certainly “frequency agnostic.” Slow Scan Television will even work over FM repeaters. The Houston AMSAT net regularly transmits SSTV photos that have been captured by satellite stations over their weekly nets.



One of the great things about Amateur Radio is that there is always something new to try, and, with the increasing digitization of things, the chances are that you already have the materials to give something a try already in your shack. Thirty years ago, Slow Scan TV required specialized equipment and cameras that, in and of themselves, were valued at the cost of a medium-end transceiver. Now, such images can be received from space using the computer, rig,

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and antenna you already have. All I had to add was the software—MMSSTV—and a cable to go from the rig's headphone jack to the computer's mic jack.

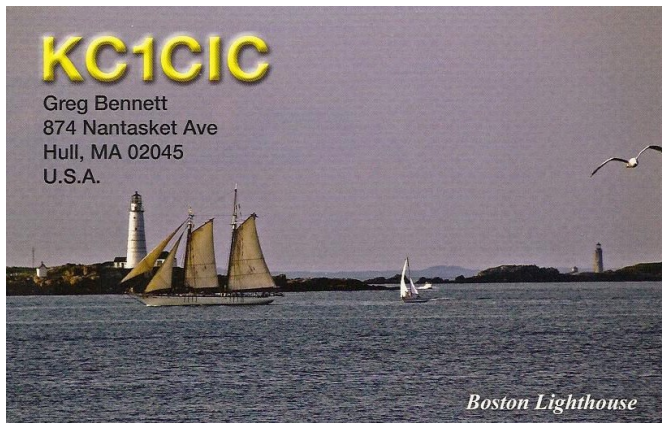
In the end, though, this is only half the story. I have yet to transmit! Anyone want to try it with me?

Making Wire Antenna Elements for Portable Operation II – Joe Chapman, NV1W

Last month I described a strategy for making wire elements for portable operation out of 26 AWG “Silky” wire and the 2 mm plugs and sockets used by remote-control plane hobbyists. I noted that I was still working on strain relief ideas.

I ended up buying a kit of ferrules. An assortment of more than I'll ever need in my life, plus a crimping tool, was a little over \$20 on Amazon. About four inches back from the tip of the plug or socket, I fold the wire over, and slide on the ferrule and crimp it in place, making a half-inch loop. It will accommodate a plastic S-clip.

For brief operations I'll probably stick with the 40/20/10 Trail-Friendly end-fed or the PackTenna mini, but for longer periods of operating I now have a light and portable 40/20 dipole without too many compromises.



Greg Bennett, KC1CIC (SK) – Joe Chapman, NV1W

Like many of his friends, I was shocked to learn of the sudden death of Greg Bennett, KC1CIC, on July 19. Greg had been a BARC member since getting his license five years ago, and was a fixture on the 8 p.m. traffic net on the Boston repeater and an occasional contributor to *The SPARC*. He was regular participant at Field Day, and everyone will remember the portable station he called his “box.”

In many ways, Greg personified the best of the hobby. He was friendly, enthusiastic, helpful, and technically savvy. I never heard him say a negative word about anyone. He was a generous contributor to BARC's repeater fund, and when I assembled a team earlier this year to contact the ISS for Children's Hospital he was quick to offer \$500 for needed equipment. The kids would probably have loved him, since he called to mind Santa without the beard.

He was active with the National Traffic System, keeping alive the founding mission of the ARRL as well as a critical component of emergency work. He was Assistant Section Traffic Manager for eastern Massachusetts and a DEC in ARES, helping to coordinate NTS and ARES. There was no mistaking his voice on the air!

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A former Green Beret, Greg was not one to complain about health problems, and it wasn't until I read his obituary that I learned he'd had serious knee problems stemming from an accident in the service, had lost one kidney to cancer, and that his remaining kidney was failing.

Rest in peace, Greg. It was good to see you at Field Day, and we'll miss you.

BARC Meeting Calendar for 2019

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

General Meetings (* Business/General Meetings)

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

VE Sessions

| | | | |
|------------|------|-----|---------|
| 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 **September 19, 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.

Nature's CW Operator: The Firefly – Joe Chapman, NV1W

As an urbanite, I am rarely treated to the summer evening spectacle of a swarm of fireflies (or “lightning bugs” as we called them in the ninth call area patois of my youth).

While there are many species of fireflies, *Photinus pyralis* might be regarded as representative. A male seeking a mate flies at dusk about eight feet above the ground in the shape of a J. Every five seconds or so he sends a “dah.”

If a female sitting in low vegetation sees this, and likes his fist, she waits two seconds and sends a “dit.” They then mate, which is a pretty remarkable amount of information transfer for such a short exchange.

Curious nerds need to know: does the firefly qualify for the 1000 watt-per-mile club? According to Professor Woods and his colleagues (Woods, W.A. Jr, Hendrickson, H., Mason, J., Lewis, S.M. (2007). Energy and predation costs of firefly courtship signals. *Am Nat.* 170(5):702–708), *Photinus* fireflies use 51.2 μ W when flashing and 37.1 μ W at rest, i.e., 14.1 μ W for the signal.

Definitely QRPp, but only a touch over 100 miles per watt. No certificate for you, Rufus T. Firefly!

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BARC's Second Summer Lunch – Doc Kinne, KE1ML, ORS

Pinning for those long lost days when we used to meet between meetings at the Old Country Buffet? Do you need to see the real faces of your BARC friends both old and new during the long days of summer? Need a place that doesn't feel like an oven set to broil?

If you answered "yes" to this—and who wouldn't?—come join the BARC club members for lunch (or breakfast. They'll do both!) at the IHOP in Harvard Sq. at Noon on 17 August!

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 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

| | |
|---------------------|--------------------------------------------------------------------------------|
| 17 August | BARC Summer Lunch, IHOP, Cambridge, 12:00 pm |
| 17–18 August | North American QSO Party, SSB |
| 17–18 August | ARRL 10 GHz and Up — Round 1 |
| 18 August | ARRL Rookie Roundup, RTTY |
| 18 August | Flea at MIT, Cambridge |
| 24–25 August | W/VE Islands QSO Party |
| 6–8 September | ARRL New England Division Convention, Boxborough |
| 7 September | Deadline for articles for the September SPARC |
| 14–16 September | ARRL September VHF Contest |
| 15 September | Flea at MIT, Cambridge |
| 19 September | BARC General Meeting, Brookline Police Headquarters, Brookline, 7:30 pm |
| 21–22 September | ARRL 10 GHz and Up — Round 2 |
| 21–22 September | ARRL EME — 2.3 GHz and Up |

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

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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@ar1.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@ar1.net. Articles for the September issue must be received by September 7. Thanks to Doc, KE1ML, for this month's article.

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@ar1.net.

BARC Volunteer Exam Sessions

The Boston Amateur Radio Club offers license exams quarterly. **The next exam session will be on Monday, October 14, 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 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)

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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 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

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Vice President: Mark Duff, KB1EKN
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Treasurer: Jim Clogher, N1ICN,
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Newsletter Editor: Joe Chapman, NV1W
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The Boston Amateur Radio Club is a non-commercial association of persons interested in the Amateur Radio Service. The Club is organized for the promotion of interest in Amateur Radio communication and education, for the establishment of emergency communications in the event of disasters or other emergencies, for the advancement of the radio art and the public welfare, for the representation of the radio amateur in legislative and regulatory matters, and for the maintenance of collegiality and a high standard of conduct.

The Club is open to all persons interested in Amateur Radio without regard to race, color, religion, creed, national origin, gender, disability, or sexual preference. Our General and Business meeting locations are handicap accessible. Other meeting and activity locations may be handicap accessible by arrangement.

The Club is an ARRL-affiliated club, and is a member of the 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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