The SPARC

Amateur Radio - Communicating Worldwide for A Century

Newsletter of the Boston Amateur Radio Club

July 2011 - VOLUME 23, NUMBER 7

www.barc.org - w1bos@arrl.net

Message from the President - *Tom Bertolino, KB1P*

Summer is here and the kids are out of school. It's time for vacations and outdoor activities. BARC also takes the summer off. We have no meetings or VE sessions scheduled for July or August. This does not mean that club officials are sitting back and doing nothing. There are still some things that need to be finalized before the end of the summer. They are: • Are we going to have a club picnic at the end of August? • When will EchoLink be operational? • Are we going to hold a VE session during the summer break?

The Club is considering a picnic either at the end of August or in the beginning of September. The purpose is to bring the club membership together after the summer break. We are looking at a simple picnic at some central location where the members can get together and have some fun. Once the location is determined a notice will be sent out via The SPARC *and e-mail.*

I am having some problems making EchoLink available for the Monday night BARC net. Members have tried to connect to EchoLink with no success. They keep timing out. EchoLink tells me that the time out problem is a modem one. I have contacted my internet provider about the problem and have been told that my modem will not support the EchoLink Sysop mode. They are sending me a newer modem. I am hoping that is arrives soon so I can set it up and get it working.

We are considering holding a VE session in August. Linda, NA1I, is looking into that possibility. We will keep you updated and try to have an answer in the next The SPARC.

The Club's Field Day was a great success. We met our goal of having fun. The success was due to the excellent planning and organization skills of Mark, KB1EKN and Geri, KB1ISG. Thank you for your time and effort.

Here are a few stats [provided by Joe Harris, N1QD] from the BARC 2011 Field Day. We had 468 QSO's total. The QSOs by Band & Mode are shown below.

BAND	CW	PHONE	DIGITAL	TOTAL
160	0	0	0	0
80	10	18	0	28
40	71	53	0	124
20	45	59	0	104
15	47	62	12	121
10	15	71	0	86
6	0	4	0	4
2	0	1	0	1
TOTAL	188	268	268	468

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W1BOS Trustee Change Notice

Joe Harris, N1QD, is now the trustee of the club's station and call sign W1BOS. All coordination for the use of the club's 2 meter repeater, 145.230 (-) CTCSS 88.5, and the 70 cm repeater, 443.550 (+) CTCSS 110.9. Requests for event use must now go through Joe. Joe's email address is **n1qd@arrl.net**.

Officers Elected For the Next Year

The annual BARC election was held at the June General meeting and all incumbent officers were unanimously reelected. They are:

President	*Tom Bertolino, KB1P*
Vice President	*Linda Blair, NA1I*
Secretary	*Jim Bradley, KB1JKJ*
Treasurer	*Jim Clogher, N1ICN*

Thanks to Nominating Committee (Hank K1QK and Joe N1QD) for their hard work and assembling a slate of qualified candidates and running the elections.

Preparation! - *Eric Falkof, K1NUN*

As the saying goes, it was the best of times; it was the worst of times.

It was a beautiful day in Boston on Sunday, June 26. Even at 5:30 a.m., it was pretty. I was in Boston to help with the Boston Athletic Association's Inaugural 10K run. Naturally, I was helping with radio support for the safety of runners and spectators. Sorry, I don't run.

Bob, WA1IDA, Guru-Supreme, was going to be our Net Control operator, operating primarily with his HT from the Boston Common. He checked his HT through the repeater and it worked. I was using my #2 HT and saving the batteries of my #1.

Uh-oh! On the bus ride to my station, I dropped my #1 on the floor of the bus. Double uh-oh, I could not hit the repeater! Worse, I could not hear it either. My #1 HT with its fully charged battery and extra-long, gain antenna was going to be useless. Somehow, I could hear and hit other repeaters, but just not the Boston one. I was destined to use my smaller, weaker, and not fully charged stand-by HT for the main event.

It does not get better.

Bob's HT also failed. Somehow, his HT also stopped working and he did not know it. One of the other ops had to walk over and tell him, and bring him a spare HT. Bob had his own spare HT with which he was able to get back on the air, but he had been silent for over a half hour. Fortunately, nobody needed assistance or communication back to Net Control.

I could draw parables and parallels, but the message is certain. When you go out to perform a public service activity, bring spare batteries, of course. However, a whole spare radio and its attendant supplies (batteries, antenna, and appropriate connector) are a necessity also. We pride ourselves on our ability to communicate without an infrastructure, but we need to ensure we have our own backups on hand and at hand.

Performing public service with just one radio is no longer an option for this Ham.

BARC Growth

It's a rare month when we fail to add or upgrade a few members. Periodically we publish their names so that you can give them a special welcome. There may also be some upgrades and long lost members who rejoin, so greet them, too.

Jimmy Chau	KB1VWX
Arty Mancusi	KB1VQE
Charles Geis	KB1LNA

Please welcome new BARC members and congratulate the new upgrades. Make it a point to introduce yourself when you see them at a meeting. In addition, we would like to note here all call sign changes. If you fit any of these categories, please promptly notify the Keeper of the Database, Bob Salow, WA1IDA at: 508.650.9440 or email: **wa1ida@arrl.net** .

A Ham Radio Website of Interest - *ARRL Contest Update, June 8, 2011*

There's an intriguing link on the Kansas Section web site, **http://ksarrl.org/deeplink/**, with the title "Amateur Nirvana! 500 Websites! All Ham links! Nothing but Ham Radio." It's a great resource for web information about our hobby.

Field Day 2011 - *Pictures by Geri Duff, KB1ISG*

Mark, KB1EKN

Linda, NA1I, signing in a Hingham town official

Tom, KB1P setup a Buddie stick antenna

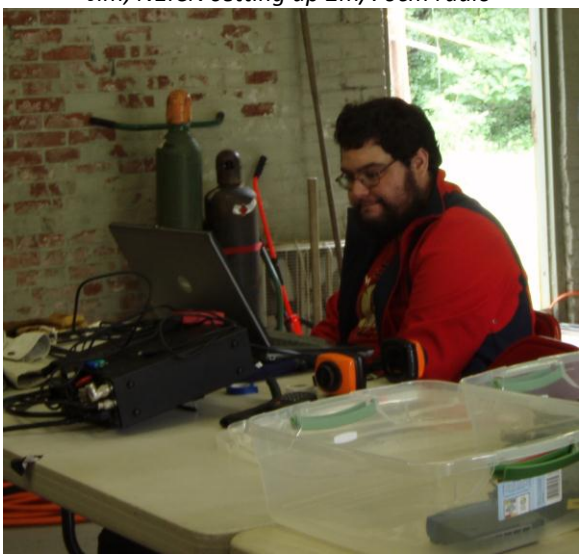
Eric, K1NUN explaining amateur to visitors

John, K1BBM and Hank, K1QK

Joe, N1QD, working CW

Jim, N1ICN setting up 2m/70cm radio

Joe, N1QD installing the logging program a computer



Nathaniel, KB1QHX

Field Day 2011 antenna setup

When All Else Fails…

From Tuscaloosa, AL to Joplin, MO to Springfield, MA, it seems that Mother Nature is striking with a vengeance. And pitching in in the recovery efforts are the Amateur Radio operators. Recently at an FCC conference, a FEMA spokesperson had this to say about Amateur Radio:

> *"We get so sophisticated and we have gotten so used to the reliability and resilience in our wireless and wired and our broadcast industry and all of our public safety communications, that we can never fathom that they'll fail. They do. They have. They will. I think a strong Amateur Radio community [needs to be] plugged into these plans. When you need Amateur Radio, you really need them."*

Hunting Foxes on the Air *- Jeremy Breef-Pilz, KB1REQ*

As record amounts of snow fell here in New England, I enjoy the time to operate HF DX and contesting, but I am always looking forward to the warm weather radio activities that lie ahead. One of these activities is radio direction finding, more commonly known as Fox Hunting. The core idea of Fox hunting is to locate a hidden transmitter by tracking its radio signal. The rules can vary greatly depending on the style of hunt the participants want. Some of the most challenging (a.k.a. fun) hunts forget the rules and let "the Fox" make all the decisions.

The type of hunt that I am most experienced with involves the Fox being a stationary person hidden in a preselected town or in a seven to ten mile radius of a well-known landmark. The participants use their cars to move around. The hunt is designed to last no more than two hours. One thing I have found, as a participant in these Fox hunts, is that it really draws many younger hams like me, and it is no wonder since Fox hunting, on top of being fun, is a fantastic hands-on learning experience.

Fox Hunting as an Introduction to Amateur Radio

We all get introduced to Amateur Radio in different ways; it can be from a friend, a family member or on our own, but Fox hunting is one of the most engaging ways to introduce someone to our hobby. The entire activity is receiving. One can fully participate in a hunt without having an Amateur Radio license. This allows you to share true ham radio fun with someone who is studying for a license, or just interested in radio - even an unlicensed parent! Fox hunting can provide genuine exposure to many aspects of Amateur Radio, including mobile and portable operating, VHF propagation, and antenna design - all without passing a licensing exam.

Team Sport

You might be led to believe that in a mobile Fox hunt we younger hams would be at a disadvantage since we have neither a car nor driver's license. The truth is, however, quite the opposite: a team of hunters is often in a better position to find the Fox first. The need for a driver to accompany us is an advantage since it allows us to simply get out, find the direction of the signal and get back on the road to find the Fox. Multiple hunters can also help find the Fox faster, especially if they are using different types of directional antennas. The team aspect of a Fox hunt is enhanced by the lack of requirement for a license that guides other Amateur Radio activities. Your friends can be invited as extra hunters to help you track the Fox and the driver too, can be anyone who is interested in trying out fox hunting, again, an unlicensed parent. (You can guess by now, none of my family members is a licensed ham.)

Antenna Needed

The antenna is the most important part of your Fox hunting gear. Any good receiver that can tune to the designated Fox frequency and has an S-meter, will serve you well for a Fox hunt. When I started participating, like most Technicians, I had a 2-Meter HT, but no directional antenna. As a result, I learned about what makes an antenna directional and the many types of these antennas that exist. I then decided to build one myself. I found that it is one thing to read about or even see a Yagi or Moxon antenna, but quite another to build your own and find where the gain and null sides are. Building antennas for fox hunting is a great way to build antennas on a manageable scale which conform to the same principles as large HF arrays. These antennas do not have to be expensive or complicated. One of the most popular and effective antennas for fox hunting is a three element Yagi, with a boom made from PVC pipe and the elements made from sections of a tape measure.

Learn Important Skills

Fox hunting introduces an entirely different dimension to VHF FM. Fox hunts are conducted on simplex, where no repeater is involved. Usually a low-profile station, such as a mobile or HT, acts as the Fox. This means that generally the signal will be weak - even from a few miles away. Using a directional antenna will help hear these weaker signals. As a result, however, unlike most HT antennas, the signal can fade from full quieting to no signal in a small change of location. You also have to take into account your surroundings. VHF is line-of-sight propagation than can be affected by large buildings, hills and leaves on the trees. Having to consider the path of the signal and what is affecting it while competing to locate the Fox makes the principles of radio wave propagation seem more real than simply reading about them. Radio direction finding itself is a very useful skill, and can be employed in many ways from finding an interfering source on a local repeater to locating the emergency beacon of a downed aircraft or ship.

A Social Gathering

It would be untrue for me to claim that everything I have stated in this article was learned by simply participating in Fox hunts. As a matter of fact, most was learned after the hunt. The gathering at the "Fox's den" after the hunt is the best way to learn the tips, tricks, and techniques for Fox hunting. Successful hunters are proud to show off their antennas and suggest ways to improve yours. Everyone shares how they found the Fox, what threw them off, and what drew them in to the den. This is a great time to socialize and learn about many aspects of the hobby. It is a fun way to end a good Fox hunt.

Fox hunting is an activity that I enjoy within our great hobby and so do many other hams, regardless of age. Fox hunts can be held anywhere and in any climate, all that you need is a group willing to give Fox hunting a try. I hope you can give it a try and have some fun for yourself.

Riley Burke, SWL and **Noah Burke, SWL** brave the elements for a Fox Hunt. They use a tape measure antenna (built by their father) to track the origin of "the Fox's" signal.

-- Photo by **Don Burke, KB1LXH**

Business 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 x 2 in. (business card) $15 per issue
1 col x 2 in. (business card) $75 per 6 consecutive months
1 col x 2 in. (business card) $125 per 12 consecutive months
1 col x 4 in. (1/2 column)$30 per issue
1 col x 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 Tom Bertolino, KB1P, at 781.608.6186 or <**kb1p@arrl.net**>; or Bob Salow at <**wa1ida@arrl.net**> or 508.650.9440.

Online Certificate Service *- ARRL Contest Update, June 8, 2011*

If you'd like to print out a spiffy version of your hard-won Amateur Radio license, try this online certificate service at **www.ae7q.net/generate.php**. It's not official, but good enough to show your family or all the other hams you know.

The 10K Was More Than Just a Race - *Bob Salow, WA1IDA*

The inaugural 2011 Boston Athletic Association (BAA) 10K Race, on June 25, 2011, went together in spectacular style. Considering the short time from concept to feet on the road: 1) it was the first time for the event, 2) the City of Boston had to approve the route among all the other events asking for space that day and that weekend, 3) police and EMS details had to be arranged, 4) food and water for the runners had to be bought and scheduled, 5) shirts had to be designed and manufactured, and, among many other tasks and supplies, 6) hams had to be extracted from Field Day.

We did have some critics who neglected to account for the shortage of ham volunteers due to Field Day, and for the hams who forgot to use the backup cell phones when radios crashed.

The above does float on the world-class reputation and experience of the BAA, BARC and our ham radio public service team. Our performance was well recognized and commended. Here are the hams who participated:

Bill	N1RYT	Jay	W1NEW	Eric	K1NUN	Steve	N1XNX
Neil	KA1PPG	Russ	WB1DGS	Nathan	KB1VGZ	Bob	WA1IDA

Recovering From the Lost Art of Cable Lacing *- Dan Romanchik, KB6NU*

The *Make: magazine* blog is a wealth of information for Amateur Radio operators. Recently, they ran a post on what they consider to be on the "lost technology" of cable lacing at: **lost-knowledge-cable-lacing** .

The blog post does a great job of explaining the technique and includes several illustrations. One of them, **cdn.makezine.com/lost_knowledge_cable_lacing/** is a drawing from an old *ARRL Handbook*. There are also a link to the Wikipedia page on cable lacing **wikipedia.org/Cable_lacing**.

Nowadays, we mostly use zip ties to bundle cables, but there are disadvantages to using them. For one thing, to apply them properly, you should have a tool that controls how tightly the zip tie holds the wires. This is to prevent crushing the insulation.

Also, I've found that zip ties don't do so well when the cable has only two or three wires. They're just not designed to hold so few wires. I think that cable lacing would do a much better job of keeping a small bundle of wires together, say wires that connect front panel components to a PC board.

Cable lacing certainly looks much cooler than zip ties. This is the perfect technique for those homebrewers that want to make their projects look great as well as work great.

I asked on my blog, "Now, where can I find the 'wax-impregnated cotton or twine'?" and my readers came through. Hamilton said, "Apparently you find wax string here: **www.kitkraft.biz/product.php**. I remember using it for something as a kid, but I can't place it," Ron McKenz wrote. "I notice that a number of telco vendors sell waxed lacing cord." Here are a few URLs: **www.sourcetelsupply.com/catalog/index.php**, **www.tessco.com/yts/resourcecenter/pdfs/clablelacing-FAQ.pdf**, and **www.oelsales.com/product.cfm/267**.

Ned, WB4KBO, said, "I would suggest a large roll of dental tape and a large-diameter curved sewing needle for fabricating harnesses. I was told that this was the material of choice for lacing harnesses when I worked at Heath Company many years ago. Makes sense to me. Buy it at Meijer for an occasional harness, or a dental wholesale supply house if you are going into production. Also great stuff for kite rigging, vine lacing and many other things."

Mike, WA6ARA, wrote, "What you want is Mil-T-43435. It is better than a cord, it is a flat weave tape, nylon, and waxed. It is made for cable lacing but is use now in the parachute industry as "super tack". Item T1050 at **www.paragear.com**."

So, there you have it. Links to show you how to do it, and a couple more links for where to find the lacing material. I now expect all of our homebrew to look a lot neater.

When not worrying about how to lace cable instead of using zip ties, **Dan, KB6NU**, blogs about ham radio , teaches ham radio classes, and operates CW on the HF bands. Look for him around 7.030 MHz or email him pictures of your beautifully-laced cables at <**cwgeek@kb6nu.com**>.

Ham Hearing Aids *-- Ward Silver, N0AX -- ARRL Contest Update, 11 May 2011*

I wear hearing aids in both ears and have for nearly twenty years - even during contests! Here are a few tips and thoughts on hearing aids that might be of interest to those of you who need a little help with your hearing or who aren't getting any younger and thinking about it. Bear in mind that my hearing loss is basically a high-frequency roll-off above a couple of kHz. Your specific need should be evaluated by a professional and may have stronger bearing on what type of hearing aid you need than the following topics.

Digital or Analog? There's not even a question - get digital aids. They use similar signal processing to what we have in our radios, with similar effects on the audio output. This is now the dominant technology and rapidly replacing analog instruments. Your main questions will be about the signal processing features discussed below. Digital aids act as a multi-band graphic equalizer, very similar to those used in audio systems. In addition, the digital aid will have several "programs" that set up the aid's features in different ways for different environments. The hearing aid technician will explain this to you in detail. It would be a good idea to make it known that you have some technical background so the discussion can take advantage of your expertise.

Behind-the-ear or In-the-ear? I started with behind-the-ear aids because at the time, the smaller in-the-ear aids were too expensive. This has changed, with the new "open ear" style offering a lot of features without the molded housing that goes in the ear canal. I have tried the open-ear style and I do like the sound quality. I changed to in-the-ear aids, however,

because placement of the microphone in behind-the-ear aids tends to skew its pattern to above, behind, and to the side of the listener. This may not help with face-to-face conversation and dead-ahead audio sources, such as TV. In-the-ear aids can take advantage of the natural focusing provided by the external ear. Behind-the-ear microphones also don't help as much with most telephone handsets - you have to learn to hold a cell phone farther back so that the speaker is closer to the aid's microphone, for example.

Behind-the-ear aids are also generally quite uncomfortable with earmuff-style headphones that many of us prefer in the radio shack - if they can be worn under earmuffs at all. If you have to take the aids out when wearing headphones, they can't help you with receiver audio. So I wear a mid-sized, in-the-ear aid that has worked out well. Many vendors will let you try open-ear-style aids as way of finding out what features and settings you like whether you buy behind-the-ear or in-the-ear aids.

Signal Processing The first component of audio processing you'll notice is compression or AGC. Compression is good in a hearing aid because it prevents overload and distortion. The cost is somewhat increased background noise. In addition, if you are using the aids with a radio, the two AGC systems - one in the radio and one in the aid - increase the amount of compression. The interacting time constants of the compressors can actually hurt intelligibility of the received audio. You'll also notice that just like a ham receiver's DSP, some of the features of the hearing aid will color the audio in perceptible ways. For example, feedback cancellation is a nice feature but it will also try to get rid of single-tone signals like CW!

The effects of noise reduction in the hearing aid are also similar to a receiver's DSP. You get used to them and the benefit of reducing noise generally outweighs the presence of artifacts. This is where the different programs of the digital aids become really handy.

While the advanced features are great in normal conversation, they get in the way when on the radio, so be sure to have one program in which compression is turned off along with feedback cancellation and other artifact-inducing features. Say to the technician, "I want one program that has only gain and frequency response correction." If you have enough programs, you might even want to try to set one up for CW and one for voice! It would be a good idea to take an audio player with recorded CW and voice signals to use when the aid is set up for you. The gain-and-frequency response program has also turned out to be the right one for me to use when I'm listening to music, as well.

Selecting a Vendor There are number of good hearing aid companies. The mid-range to high-end hearing aids are all very good. Initially, I selected independent local hearing aid companies with good prices and excellent service, but both struggled and were eventually purchased by a national manufacturer. My current set of aids is of a national brand with offices in shopping malls around the country. Because I travel frequently, I like knowing an office is probably handy as I have had to get a microphone port unplugged while on the road. Your circumstances will dictate your choice but I strongly recommend making service following the sale a primary evaluation criterion.

Do I Need Them How can you tell if you need a hearing aid? Ask your family for their honest opinion and then listen to what they tell you. "Green-bar guys" are an industry legend, referring to the volume control on the TV that they are always turning up and up and up. Meanwhile, they insist that their hearing is just fine and why does everybody mumble? If you're not hearing the phone, if you can hear someone talking but can't understand what they say, if the pileups all sound like mush - you probably need help with your hearing. One way to experiment before trying a hearing aid is a pocket graphic equalizer, such as the Koss three-band Portable Stereo Equalizers that can be found on the Internet for about $20. Wire it up to your radio or audio player and experiment with the settings. You may find that a little boost on the high frequency channel or dropping the low frequencies helps or maybe just some additional gain is what you need. The cost is low and you'll learn something without having to make an office visit.

Summary All of us are getting older and hearing often takes a hit on the way. Younger hams that have grown-up with ear-buds cranked up to 11 are discovering that those fragile hair cells of the cochlea have worn out early. Meanwhile, the perceived stigma of wearing hearing aids is largely non-existent as people are wearing headphones and earpieces everywhere you look. Good hearing matters not only on the radio but in our personal lives, too, especially to the people around you. Take advantage of what is becoming ubiquitous technology to restore your hearing.

I See the Future

17 Jul	MIT Flea (Cambridge)
21 Aug	MIT Flea (Cambridge)
28 Aug	NoBARC Flea (Adams)
17 Sep	RIFMRS Flea (Forestdale RI)
18 Sep	MIT Flea (Cambridge)
9 Oct	BAA Half Marathon **(Rp)**
14,15 Oct	NEAR Fest (Deerfield NH)
16 Oct	MIT Flea (Cambridge)
4 Nov	HCRA Auction (Feeding Hills)
5 Nov	IRS Flea (Londonderry NH)
12 Nov	Falmouth ARA Flea (Bourne)

(Rp) = BARC Repeater(s) may be used

Note: *In the June issue of this newsletter there were some incorrect references to the date of the BAA Half Marathon. The correct date is Sunday, 9 October.*

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 New England and some of New York, 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.

Please be alert for the following stolen HT.

-- Linda is a member of the Boston ARC.

Stolen while on the MBTA in a bag attached to her wheelchair – Yaesu VX-5R (Ser. # 9D042285) with 2 extra batteries, External speaker/mic, Power cable with Anderson connectors and SMA to SO-239 antenna adapter cable.

$100.00 reward for the return of this equipment.

Contact Linda M. Blair, na1i (na1i@arrl.net)

"All Thumbs" Hams: You Can Learn To Solder

Check out this website booklet and your fright should go away. Of course, if you think you do know how to solder, you might learn how to really do it. Click on: http://mightyohm.com/files/soldercomic/fullsoldercomic_en.pdf.

New Online Introductory Emergency Communications Course Now Available

-- ARRL Letter, June 16, 2011

Registration is now open for the new online *Introduction to Emergency Communications* course (EC-001). Course information, including a description, pre-requisites and instructions on how to register are available at <**www.arrl.org/online-courses**> on the ARRL website. Slots are still available for the section beginning Friday, July 29; the registration deadline is Sunday, July 17.

The new *Introduction to Emergency Communications* course includes updated content from the previous *Basic Emergency Communications Level 1* course, as well as some content previously included in the former Level 2 course. The EmComm training program has now been restructured to offer just two courses. This enhanced basic course for EmComm volunteers who want to serve as part of an ARES® response team and the management course, *Public Service and Emergency Communication Management for Radio Amateurs* (EC-016, is also available on the ARRL website), for those who are serving in ARES® leadership and management roles.

ARRL members who register for online courses will receive a substantial discount on the enrollment fee.

Spread Spectrum Rules Revised *- ARRL Bulletin 12, March 31, 2011*

Revisions to the FCC rules affecting Spread Spectrum transmissions are in effect. The Report and Order eliminates the requirement that amateur stations transmitting Spread Spectrum use Automatic Power Control (APC) to reduce transmitter power. The Commission also reduced the maximum power of a Spread Spectrum emission from 100 W to 10 W PEP.

The Question Pool Committee of the National Council of Volunteer Examiner Coordinators has removed a related question, **E1F13**, from the Amateur Extra Class Question Pool.

Details on the revisions can be found on the web at, www.arrl.org/news/fcc-adopts-spread-spectrum-rules-changes .

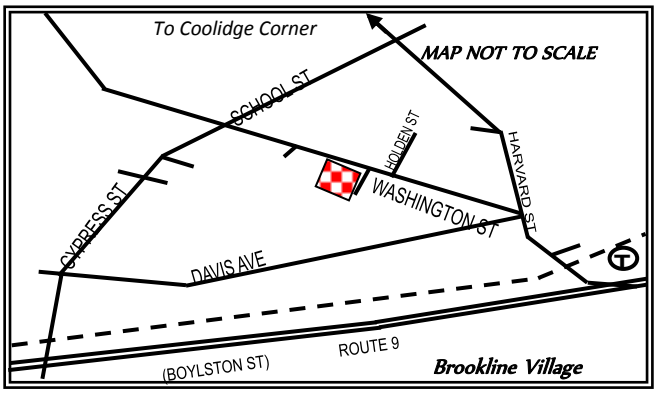
A Continuing Need for Our 70cm Repeater *- Bob Salow, WA1IDA*

Your help is needed to verify the coverage and signal quality of our 70cm repeater. At several times of the day, please try to make contacts and get signal reports. Make notes of your location, the type of radio, the power used, and the reported signal quality. Send this information to Tom Bertolino, KB1P, at **kb1p@arrl.net** or call him at 781.608.6186.

The frequency is: 443.550 MHz (+), CTCSS 110.9 Hz. Check it out and please report.

Based on these reports and other measurements, further tuning and other improvements are in progress. Please continue checking and reporting to help make this repeater fully operational.

Directions to the Brookline Police Headquarters, 350 Washington Street, Brookline MA



BARC Volunteer Exam Sessions

The Boston Amateur Radio Club holds monthly VE sessions on the second Monday of each month. ***The July and August exams are omitted.*** Sessions are held at 7:00 pm at Brookline Police Headquarters, 350 Washington St in the Community Room across from information desk. A map is shown below

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 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.

For further information, contact:
Jim Clogher, N1ICN, 617.364.4658 **n1icn@arrl.net**
Tom Bertolino, KB1P, 781.395.5538 **kb1p@arrl.net**

Got a Story? Why not share It! *-- Jim Bradley, KB1JKJ*

We are always looking for articles for the newsletter. So I have reserved this space for your articles, tips, how-to's, or other ham related information. Send your submissions to the Editor, Jim, KB1JKJ, at <james.bradley4@comcast.net>.

Articles for the July issue need to be received by 30 July.

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 Tom Bertolino, KB1P, at <**kb1p@arrl.net**>.

BARC Officers and Staff

President: Tom Bertolino, KB1P;
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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 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.

Greater Boston Net Directory

Daily 5:30 pm	**Eastern Mass/Rhode Island Phone Net (NTS)**	**3.915**
Daily 7 and 10 pm	**Eastern Mass/Rhode Island CW Net (NTS)**	**3.658**
Daily 8 pm	**Eastern Mass 2M Traffic Net (NTS)**	**145.230 (PL 88.5)**
Daily 8 pm	**Slow Speed CW Net**	**28.160**
Daily 10:00 pm	**Heavy Hitters Traffic Net (NTS)**	**MMRA-linked repeaters: 146.610, 146.670, 146.715, 146.820, and all 222 and 440 repeaters**
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)**
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	**HHTN Swap Net**	**146.640**
Thu 8:30 pm	**AMSAT Net**	**146.640**
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**