

# The SPARC

Amateur Radio - Communicating Worldwide for A Century

Newsletter of the Boston Amateur Radio Club April 2010 - VOLUME 22, NUMBER 4 http://www.barc.org - w1bos@arrl.net



## Message from the President

- Tom Bertolino, KB1P, President

Well, April is here, and I just put away my snow shovel. I hope everyone made it through the March wind and rain storms OK. I got off easy compared to what I saw on TV about the damage done by the floods. The mast for my vertical antenna is bent and my 20 Meter dipole blew down.

Back to club business, the club has a new Membership Service person, Linda Blair, NA11. Welcome aboard Linda. You can contact Linda by sending an e-mail to na1i@arrl.net.

April is a very busy month for Hams with a public service event scheduled for almost every weekend. BARC sponsors three events this month all on Sundays: the Boston MS Walk on 11 April; the BAA Boston 5K and 1 Mile Races on 18 April; and the Run of the Charles on 25 April. We still need volunteers for the BAA Boston 5K and 1 Mile Races and the Run of the Charles. If you can help, you can contact me at <kb1p@arrl.net>.

BARC elections will be held in June and nominations are announced in May. I will be appointing a nominating committee this month. The point of contact of the nominating committee will be announced during the April General meeting. Terms for club officers are for one year so some club officers may be up for re-election or offices may be vacant. If you do not like the way the Club is being run or you want to get more involved in the club's planning it's time to consider running for an office. If you would like to run for an office, please inform a member of the nominating committee.

We are considering sponsoring a Special Event Station at Blue Hill Observatory to help celebrate their 125th anniversary. The event will be held on Saturday, 2 October during the observatory's Fall Open House. BARC could use this event to promote HF interest among club members by allowing members who do not have 20/40 meter privileges to operate on these frequencies under the supervision of hams who do.

Before we commit to this event, the club will need a agreement from the members to support the effort. The commitment will be for about 8 hours. We will need hams for set-up, staffing stations, and take down. The planning process for this type event takes over 3 months. If you are interested in participating in the event you can contact me at <kb1p@arrl.net> or call me at 781.608.6186. I need your commitment by the end of May.

I'll see you at the April General meeting.

## **April's General meeting**

Our April General meeting will be held on Wednesday, April 14th (*Note temporary change of day*) at 7:00 pm in the Community Room at Brookline Police Headquarters. Topic for the night will be building a portable 2M/70 cm J pole. The address is 350 Washington Street. There is a municipal parking lot across the street behind the Town Hall on Holden Street. Parking is free after 6:00 pm. For those who take the **T**, the nearest bus stop is about 1 block away at Washington St and Harvard St (on the 65 bus "Brighton Center via Washington St" out bound from Kenmore Station). There is a map on the last page.

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I See the Future

## **BARC Officers and Staff**



**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.

interest to the readers, please let the Editor know.

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 Handi-Hams system.

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## Hams Needed For the Run of the Charles

#### -- Tom Bertolino, KB1P

Ham radio has been part of the Run of the Charles canoe races for more than 27 years. BARC has coordinated the hams for most of that time. This is a well run event which provides wetness for the participants and excitement for the hams (who stay dry). We are looking for more hams to help on Sunday, 25 April.

Our duties include reporting from hazardous portages around the many dams on the Charles River from Needham to Brighton. Various assignments start between 0700 and 1200, with assignment completions from 1230 to 1630. This is an excellent way for those new to public service to get your feet wet (figuratively only) and learn how hams can support the community.

It's an outdoor event, yet safe for hams. Because of the terrain along the river bank, a hand held radio with an antenna better than a "rubber duck" and a full 5 watts is necessary.

If you can help, contact me, Tom Bertolino, at **kb1p@arrl.net** or 781.395.5538.

## Hams Needed BAA Boston 5K & 1 Mile Races -- Bob Salow, WA1IDA

The Boston Athletic Association (BAA) presents a sanctioned 5K (3.1 miles) race followed by a series of four invitational 1-mile races. All races will give the runners the thrill of crossing the Boston Marathon Finish Line.

We have been asked to provide ham communications for these events. The date is Sunday, 18 April, with hams assembling at 0700. All events are expected to be over by 1130.

Note that there will be no interference with preparations for the Boston Marathon the next day. If you can assist or have any questions, contact Tom Bertolino, at **kb1p@arrl.net** or 781.395.5538.

## **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.

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.

## **BARC Volunteer Exam Sessions**

The Boston Amateur Radio Club holds monthly VE sessions on the second Monday of each month. Sessions are held at 7:00 pm at Brookline Police Headquarters, 350 Washington St in the Community Room across from the Information desk.

There is a municipal parking lot across the street behind the Town Hall on Holden Street. Parking is free after 6:00 pm. For those who take the **T**, the nearest bus stop is about 1 block away at Washington St & Harvard St (on the 65 bus "Brighton Ctr. via Washington St" out bound from Kenmore Station). Talk in on 145.230 MHz (-), PL 88.5 Hz. There is a map on page 7.

We give all exams (Technician, General, and Extra). Testing is by appointment only, call before 12:00 noon on the day testing. Please bring 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)
- 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** 

## **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.

Ira Deutsch K1YE Gary Perlman KA1BJX

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.

### K9HI ANNOUNCES ARRL SECTION MANAGER CANDIDACY

Phil Temples, K9HI has announced that he will be a candidate in the upcoming ARRL Eastern Massachusetts Section Manager election to be held this fall. Temples announced his candidacy at recent meetings of the Boston Amateur Radio Club and the Framingham Amateur Radio Association.

"I will release additional information over the next sixty days outlining my current concerns, planned changes, and future goals for the section field organization," said Temples.

Temples, an Extra class licensee, has been a radio amateur for 40 years. He lives in Watertown, Massachusetts. A biography of Phil Temples' Amateur Radio achievements can be found at http://www.grz.com/db/k9hi.

## SKYWARN Spotter Training in Concord

There will be a SKYWARN Storm Spotter training class on Saturday, 15 May at Concord Academy, in the Ransome room of the Math and Arts Center, located across from the Gym. Concord Academy is located at 166 Main Street in Concord. Parking at the school is limited; however, there is a municipal parking lot off Main Street on Keyes Road. The training is scheduled to begin at 1000.

The program covers topics such as hurricanes, lightning, tornadoes, down bursts and other summer and winter weather events. This highly informative and timely program will also provide information on identifying cloud formations, identifying hail sizes and estimating wind speed. The presenter will be Rob Macedo, KD1CY.

The training class is free. Excellent handouts (new this spring) and informative reference materials will be available. At the end of the program participants will have the opportunity to join the National Weather Service SKYWARN Spotters Program.

The program is open to all. It will be of particular interest to anyone who enjoys outdoor activities such as sports, camping, boating or is just interested in learning more about the weather. This program will also cover safety tips that are appropriate during severe weather events.

## Zola Center Report! – Short Wave Listening Program

#### By Eric Falkof, K1NUN

Last week, Chris Black, N1CP, presented an hour and a half program about "Broadcast Band DXing and Short Wave Listening" to the Zola Center for Persons with Disabilities. As you recall, several members of that group earned their Ham licenses a year ago, and this program was developed for general interest and was advertised locally for the public. There was a nice crowd of almost twenty people in attendance.

Chris explained the basic theory of wave propagation in simple, clear terms to dramatize the difference of long wave and short wave, medium frequency and high frequency. He drew charts on the wall and demonstrated some simple equipment that anyone can buy at reasonable cost. He showed QSLs, DX memorabilia, and answered audience questions.

A highlight of his presentation was a demonstration of software defined radio using a computer for decoding single signals from a wide bandwidth of the audio spectrum. The audience was spell-bound as he brought signals from a panoramic display of the spectrum.

I had the privilege and pleasure of talking with Chris before and after his presentation and learned more about his trips to Canada and along Cape Cod for the purpose of listening to far-away stations. Remember, these AM stations are intended to be heard locally, not a continent of more away. He explained how you can hear Cuba now and sometimes certain European stations if your receiver is more selective. Modern digital signal processing allows the broadcast band DXer to separate these signals, but even simple radios of the ten to twenty dollar variety can be put into effective service. Some broadcast band DXers have logged well over 1000 stations, and there is an active internet information exchange of slogans, musical intros, and more to aid in identification in different languages.

See the World Radio and TV Handbook and Passport to World Band Radio for your own reference and, of course, search the internet yourself to find a new way to enjoy your radio hobby. There's a lot more to be heard out there. See how far you can hear too.

Chris loaded his car afterwards for his return home to Yarmouth. He came a long way for this speech that was well appreciated. More than one attendee was sparked to listen in.

## 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 (nonbusiness) 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>.



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

# ARRL, Red Cross Sign Memorandum of Understanding

#### -- ARRL Bulletin, March 30, 2010

The ARRL and the ARC have signed a new Memorandum of Understanding (MoU). It provides a framework for cooperation between the ARRL and the ARC in preparing for and responding to disaster relief situations at all levels, in rendering assistance and service to victims of disaster, as well as other services for which cooperation may be mutually beneficial."

The Red Cross usually requires the completion of a criminal background check to participate in Red Cross activities and provides a process by which a volunteer may have a criminal background check performed at no cost to the volunteer. However, in the case of ARRL volunteers, the Red Cross has agreed to accept an alternative process: ARRL volunteers may arrange, at their own initiative and expense, to have the criminal background check performed by a state or local law enforcement agency. The Red Cross has also agreed that ARRL volunteers shall not be asked or required to consent to credit checks, mode of living investigations or investigative consumer reports in order to provide a communications function.

Both the ARC and the ARRL encourage interested volunteers in their respective organizations to become members and to participate in the activities of the other organization. ARRL volunteers should be aware that if they wish to become Red Cross volunteers, they may be required to consent to additional background checks in accordance with Red Cross policy that may include credit checks, mode of living investigations or investigative consumer reports.

Per the MoU, "both ARRL volunteers and ARC workers will work cooperatively at the scene of a disaster and in the disaster recovery, within the scope of their respective roles and duties as recommended."

During a Red Cross Disaster Relief Operation (DRO) and depending on their training and qualifications, ARRL volunteers may perform in one or more of several roles, including Amateur Radio Liaison, Communication Equipment Operator, Communication Equipment Installation/Repair and Disaster Assessment. ARRL volunteers who are assigned roles by the Red Cross during a DRO will be provided with Red Cross credentials as required by the role, consistent with Red Cross policy.

### Looking Ahead At Public Service - Bob Salow, WA1IDA

When hams engage in public service as mandated by the FCC Rules, the benefits go well beyond just following the rules. We can enjoy our hobby - have fun! We protect the health and safety of event participants. We support worthy charities. We learn to work within an organized effort. We experience the technical aspects of operating under adverse conditions. We practice communicating under emergency conditions. We can demonstrate these qualities to the communities we serve and thus promote our service for their acceptance.

Throughout the year BARC coordinates numerous public service events. Most of these are open to hams who are new to helping at such events as well as experienced hams. For 2010, we have already been tasked with several events, and more are expected. Feel free to contact Tom Bertolino, KB1P, at 781.608.6186 or **kb1p@arrl.net**.

- Multiple Sclerosis Boston Walk 11 April 2010 (Boston and Cambridge)
- BAA Boston 5K Race & 1 Mile Races 18 April 2010 (Boston)
- Run of the Charles 25 April 2010 (Charles River – Needham to Boston)
- Multiple Sclerosis Journey of Hope 22 May 2010 (Natick)
- Bikes-Not-Bombs Bike-A-Thon 6 June 2010 (Boston and suburbs)



Other events may jump in on short notice. Among our skills is the ability to apply our technical, organizational and staffing quickly and proficiently. Join our team and join in the fun and learning.

Interested in other Public Service Volunteer Opportunities in the New England Division check out the PSLIST at <u>http://www.n1nc.org/PSLIST/</u>

## Fallen Antennas Are No Good

The following information appeared last fall on barclist but with no attribution. Spring is here and antenna season has begun. Here are some ideas to make sure yours stays up where you want it.

(1) Use double-braided, black, Dacron line. No other combination of material(s) and construction at least nothing that a ham can afford - stands up as well to extended exposure to weather, especially including sunlight. So-called "double-braided" line has a braided outer jacket and, inside, a bundle of straight, not braided and not twisted (at least, not twisted much), fibers. The jacket does not bear tension but protects the inside fibers from both sunlight and abrasion. Dacron stretches and creeps less than any other affordable fiber. Also, because the tension-bearing fibers in "double- braided" line are not twisted, there is no twist to unwind and lengthen the rope. Kevlar may sound better than Dacron but it's not better in this application. It doesn't last, and it's brittle. Also, Dacron withstands shock better. Shock happens when a tree limb falls on your antenna or its halyard.

(2) The tension in a Dacron line, and in any antenna wire, should be set (by pulleys and weights) equal to 10% of the rated breaking strength of the line or wire. This fraction may seem too conservative, but it's not. It allows for shock, for gusty wind blowing on an ice-covered line or antenna, for the weight of ice, for the gradual weakening of a line that occurs due to fatigue, internal abrasion, sunlight, acid rain, etc. If you take suitable countermeasures against fatigue and abrasion (see below), a Dacron line will last five years. If you don't, it may fail in one year even if you loaded it to only 10% of its breaking strength.

(3) Before considering fatigue and internal abrasion, the line must obviously be protected from external abrasion. A line should never contact or wrap around a tree branch, a structure, or another line. If it does, then it will wear through at the contact point since the wind will cause fatal abrasion.

(4) Fatigue and internal abrasion damage are usually hidden, and may occur faster than you imagine. Wind causes the tension in a line to increase and decrease in potentially thousands of cycles per day, a hundred thousand cycles per month, or a million cycles per year. Like any solid material, Dacron is damaged by stress cycling. Even in the absence of abrasion, the tensioned fibers inside a line are slowly but surely weakened by the accumulation of fatigue damage. Remember that the "elastic limit" of a line is far short of the breaking point; and that a line is not perfectly elastic even at 10% of its breaking stress. Each stress-strain cycle leaves behind some broken and slipped molecular bonds.

(5) Internal damage to a line occurs also by abrasion, when the line alternately rolls around a pulley wheel or "sheave" and straightens out, as the wind causes supporting trees to sway. When a line curves and partially flattens itself against a pulley wheel, there is differential stretching and rubbing of one fiber against another; and, when the line rolls off the wheel and straightens out, the fibers rub the other way.

(6) An antenna halyard is most likely to fail where it rolls over a pulley wheel. The smaller the diameter of the wheel, the faster the halyard fails. Looking at a double-braided Dacron line that has failed at a pulley wheel, the outside braid looks pretty good; but all the tension-carrying fibers inside have broken.

(7) There are two simple and effective ways to reduce the rate of damage that occurs at a pulley wheel: (a) increase the diameter of the wheel; and (b) replace the wheel with a wider one or (better) with two or more parallel wheels, and replace the original line with two or more parallel lines, dividing the load equally between the multiple lines. Pulley designs have graduated from single pulleys with wheel diameters of 1.5 to 2 inches, then up to 3-inches. Another approach is to use double- sheave blocks with five-inch diameter wheels, and double up the line. Another method is to use thicker, stronger, line. It isn't necessary to double the line or make it thicker for its entire length. Just double and/or make it thicker for the six or ten feet (or whatever) that will roll back and forth over the pulley wheel(s) when the wind blows.

(8) To prevent abrasion of a line where it's attached to an insulator, counterweight, or any solid item by using a "thimble." A thimble (not for sewing) is a metal (usually) protector to keep the line from directly contacting the solid item. They are available in many sizes at most hardware stores. Wrapping the line with a couple layers of Scotch 33+ or 88 electrical tape as it goes around the solid item is a less satisfactory alternative.

(9) It's good practice to inspect your lines annually, and to replace them every two years. Many a sorry ham wished this rule were observed more often. In heavy ice storms wire antennas can sag to the ground (and the counterweights on the ends of the halyards lift way up). In heavy wind storms, the counterweights may rise and fall more than ever expected. As long as the counterweights have enough room to move (important!), nothing breaks.

(10) In a wind storm, a freely hanging counterweight not only rises and falls; it can swing like a pendulum. Be sure to hang it where it won't swing into something and get caught or fouled up, either while it is rising or while it is falling. A protection in this case is to have the counterweight move up and down within a hollow tube. Be sure the tube is open at the bottom so ice does not accumulate inside.

## **BARC Elections are Coming Soon**

As designated in our bylaws, the election of officers will take place at our June General meeting. On track to that, a Nominating Committee is appointed at the April meeting.

The function of the Nominating Committee is to seek out a slate of candidates for officers, but this does not limit any member from being nominated (or self-nomination) from the floor in addition to the slate. The slate is only a proposal and there is no restriction on any member who wishes to run for office. In fact, we would recommend a competition for the offices so that each nominee would present qualifications and proposals to the members.

The Nominating Committee will report its slate at the May meeting for publication. Nominations for each office by members are open until balloting at the June meeting.

This is your opportunity to help steer the club where you think it should go. If you are not happy with the way the club in being run or want to be more involved in the decision making, now is your chance to run for an elected office in the club. The qualifications to run for an office in the club are to be a valid club member and have a valid Amateur Radio license. All members are urged to consider making this contribution to the hams of our community. If you are interested, please come forward. Contact any officer to have your name placed on the ballot for a particular office. Contact information is in every issue of *The SPARC*.

Every current officer's term is up this year. Mark Duff, KB1EKN, our Vice President has announced that he will not be running for any office this year. The other club officers have not yet made their intentions known.



## Field Day? It's Only Two Months Away

No, no, it is not too early to start planning for Field Day 2010. Start by thinking about how our 2009 Field Day went. We opted for a limited club contribution, but open to all. We provided compact HF stations, antennas and generators. Beyond that, anyone could participate in the club activity by providing their own station facilities – and they did.

The result was a resounding success. We set up, operated, and tore down with ease – and had fun doing it. This year the place is the Bare Cove Fire Museum in Hingham again; 26-27 June is the weekend.

The fun is yours for the taking. We will be discussing it at our General meetings and at special planning meetings to be announced. Bring your ideas, or just say you want to be there – to see, to learn, to try, or maybe to see how other people have fun.

The point here is that even if you hold a Novice or Technician license, you can operate on the HF bands and get the feel for your upgrade.

## Public Service Spotlights

#### The MS Boston Walk

#### What is Multiple Sclerosis?

Multiple sclerosis (or MS) is a chronic, often disabling disease that attacks the central nervous system (CNS), which is made up of the brain, spinal cord, and optic nerves. Symptoms may be mild, such as numbness in the limbs, or severe, such as paralysis or loss of vision. The progress, severity, and specific symptoms of MS are unpredictable and vary from one person to another. Today, new treatments and advances in research are giving new hope to people affected by the disease.



#### The Run of the Charles Canoe and Kayak Race

Charles River Watershed

**Association** (CRWA) mission is to use science, advocacy and the law to protect, preserve and enhance the Charles River and its watershed.

One of the country's oldest watershed organizations, CRWA was formed in 1965 in response to public concern about the declining condition of the Charles. Initiatives over the last four decades have dramatically improved the quality of water in the watershed and fundamentally changed approaches to water resource management. Boston Amateur Radio Club PO Box 15585 Boston MA 02215-0011 Forwarding Information Requested

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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