

The

Modulator

Newsletter of the Newport County Radio Club, September 2017

So you Want to Use W1SYE

Using the club HF Call, W1SYE, has many benefits, including QSLing handled by the club QSL manager. But there are some steps to follow.

First, John Mills, K1JSM, is the call Trustee and has responsibilities to the FCC. You must contact John and request permission for the date(s) that you intend to operate using the call. One obvious reason for this is to avoid two simultaneous uses.

Second, you must deliver an electronic version of your log in ADIF format to NCRC QSL Manager, Chuck Kesson, N1CKT. Chuck will add your contacts to the club master contact record and *Logbook of the World*. Note that Dave, KC1GPA, is logging with a laptop computer in the station photo.

It's entirely OK to log on paper, but NCRC expects that the lead station control operator will e-mail an ADIF file (electronic record) to Chuck. Contact him if you have questions.

Whether paper or directly to electronic format, things can get squirrely for the logger. Before you forward the file to Chuck, take time to resolve as many irregularities as possible. In addition to the usual, logging the other op's name and location can save a busted call and so is worth the effort of including these data.

Beavertail on the Air

A Good Time on HF

Saturday, August 19th, found Steve Mead KC1AQQ, Paul Silverzweig, N1PSX, Scott Tillotson, WX1X, Dave Brown, KC1GPA, and Mike Seil, AA1XQ, setting up their HF station on beautiful Beavertail at the southern end of Conanicut Island.

This low-key operation demonstrates just how easy an informal activation can be and yet be completely successful. After operating for a few hours at midday, the team had logged 64 contacts, including two Internationals.



Beavertail HF Station

The tower visible in the background has been the source of problems in the past, so our resourceful ops rigged a simple dipole using telescoping fiberglass poles. They used an Elecraft K3 with a built-in auto tuner and so even the operating table was simple and bare.

The team used the club call, W1SYE, and logged many of our

regular contacts.



Dave, KC1GPA, logging while Paul, N1PSX, operates

This Could be You

To paraphrase *Forrest Gump*, HF operating is like a box of chocolates, you never know who you'll get. HF contacts might come from anywhere and that's part of the fun. Why not give it a try in the field?

Assuming you have the equipment and necessary license privileges, you need only three things:

- Site permission. Here, Steve, KC1AQQ, is on the Board of Directors for Beavertail.
- Publicity. Let NCRC know of your operation so members can join you on air.
- W1SYE authorization. This only applies if you intend to use our HF call. It's simple and the benefit of working with a well-known call is worth the minor extra step. (See ...*Want to Use W1SYE*)

Change to the By-laws

After reviewing the responsibilities of our officers, the Executive Committee has concluded that we need formal Membership Chair. The purpose of this Chair will be to facilitate the new member process, ensure applicants are vetted, have the proper paperwork completed, then help integrate them into various club activities. Therefore the following By-Law changes, in red, are proposed. According to our Constitution, a first reading of these amendments will take place at the September meeting with voting at the November meeting.

Article 1, Section 2

"The Vice President shall assume the duties of the President during an absence. The Vice President shall be in charge of all club social activities and other activities as assigned by the President. **The Vice President shall also serve as the Chair of the Membership Committee and may enlist other members to serve as needed. The membership Chair shall maintain a current roster of all members in good standing, receive applications for new membership and facilitate their transition through vetting to new membership, and encourage and engage new members in club activities."**

Article One Section 3

Paragraph 4: **Correct typographical error, The Treasurer** shall be responsible for all filings with the Rhode Island Secretary of State.

Paragraph 5: **Delete the duty of the Treasurer to maintain the roster.**

Coming to a Meeting Near You

Your Executive Committee is looking into the feasibility of using Skype to allow members to see and hear meeting proceedings. With a membership of over eighty and growing, many members miss meetings for various reasons. And of course there are those who live at distance for part or all of the year.

Skype

What is Skype? Originally developed by a Scandinavian team, Skype is now a part of Microsoft. The name began as *Sky peer-to-peer*, but evolved into its present form. There are several services, but we are looking at video conferencing.

How Would it Work?

A laptop running under Linux would host Skype and be connected to an external camera, microphone, and Internet cable. Home viewers would run a version of Skype appropriate to their computer's operating system. Initially, home viewers would log into the meeting session and be able to see and hear everything that the meeting camera and microphone sees and hears.

If all goes well, we may be able to add two-way communication that would allow home viewers to ask questions or make comments. This second level involves meeting management questions that depend on participation and they have not yet been addressed.

How Far Along is it?

The first hurdle was to determine whether there might have been an issue with the network at KVH where meetings are held. That would have been a show-stopper, but fortunately that has been cleared. Next was the hardware. Pete Lawson, W1LAB, has donated an older laptop running Linux for the meeting side.

We'll test the system using the camera and microphone built into the laptop, but assuming that works, an external mike and camera will be needed to deliver reasonable sound and images.

The cost and management of this one-way arrangement should not be a burden, but managing a two-way system will probably require a person who actively monitors the meeting link so that remote speakers can be brought into the meeting conversation gracefully.

And there we have a Catch 22: Two-way communication will require more resources. That would be justifiable if there were sufficient participation. But one-way communication may not generate enough participation to encourage that next step.

We need your thoughts and guidance here; please make your views known so that we will have a better sense of what you, the membership, would like to see happen with this project.



Merit Badge Notes

A quick review of the merit badge requirements on the following page will show that the bulk of the tasks involve scouts explaining some part of radio. Some requirements ask the scout to prepare drawings.

This environment is a bit intimidating for a young boy, so do your best to ease him into the review. A good strategy is to introduce yourself and ask the scout for his name. Then you might describe your interest/involvement in radio briefly. If you are reviewing one of the requirements that involves a drawing, ask to see that first. That way the drawing will serve as a beginning point of conversation.

This isn't an examination for the Bar, so it's OK to use leading questions if things get stuck. If something just won't get going, leave it and try coming back to it later. If that doesn't do the trick, mark off partial completion on the Merit Badge Worksheet indicating the element that needs to be reexamined.

The distinction between some requirements is vague; requirements 4, 5a, and 5b for example. Feel free to check off requirements outside your station if they are met during the review of your station requirement.



JOTA, NCRC, and Radio Merit Badge

JOTA

JOTA is the largest Scouting event in the world. It is held annually on the third full weekend in October. NCRC has been the proud sponsor of JOTA, now going on four years.

Portsmouth's Troop 1 has been our anchor troop from the beginning, but participation by other troops has grown steadily. Held at the Glen, JOTA has been a delightful fall weekend year after year.



Campsites at the Glen

Radio Merit Badge

NCRC offers JOTO scouts the opportunity to earn the Radio Merit Badge during this weekend. Although many scouts have successfully completed their requirements, others have not had sufficient time to do so.

This year we've streamlined the qualification process by having some of the activities take place before the JOTA weekend. At the Glen, scouts will visit individual requirement stations set up cafeteria style under the pavilion and in the stables. This should allow more scouts to complete the merit badge.

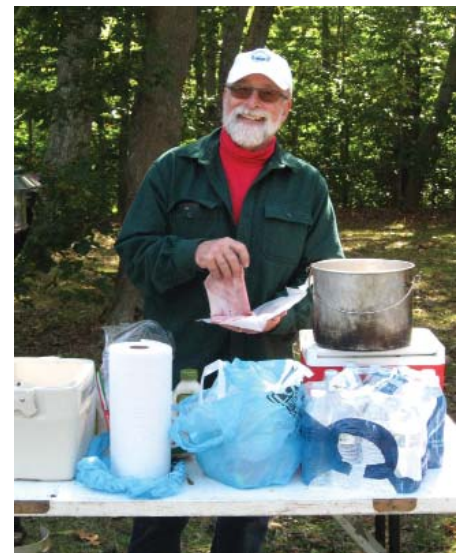
On the following page are the requirements for Radio Merit Badge. Each station will service one these requirements. The sta-

tion for requirement 9(b), operating, will be located in the stables, the others will be under the pavilion.

How Can You Help?

You can see that we will need nine stations under the pavilion, each needing an adult to meet and review the material with scouts. As some requirements are more detailed than others, having more than one station for some requirements would be very helpful. We are calling on NCRC members to help by staffing these stations.

Saturday's events get underway around 09:00 and taper off by 14:00, so a full watch will run



five hours, but we would be most happy to have you for any part of that time. The job is simply a conversation about our hobby and an opportunity to pass on your interest in radio and electronics. We are already into the planning, so sign up soon by contacting me at:

Editor@w1sye.org



Radio Merit Badge

NCRC Cafeteria



1) Introduce yourself by saying your name, then spelling it phonetically. Example: "Hi, I'm Jim, Julliett-India-Mike."

Explain what radio is. Then discuss the following:

(a) The differences between broadcast radio and hobby radio.

1(b) The differences between broadcasting and two-way communications.

1(c) Radio station call signs and how they are used in broadcast radio and amateur radio.

1(d) The phonetic alphabet and how it is used to communicate clearly.

2. Do the following: Make the sketch beforehand, but be prepared to answer questions about your sketch.

2(a) Sketch a diagram showing how radio waves travel locally and around the world.

2(b) Explain how the radio stations WWV and WWVH can be used to help determine what you can expect to hear when you listen to a shortwave radio.

(2c) Explain the difference between a distant (DX) and a local station.

2(d) Discuss what the Federal Communications Commission (FCC) does and how it is different from the International Telecommunication Union.

3. Do the following. Make and label your chart beforehand:

3(a) Draw a chart of the electromagnetic spectrum covering 300 kilohertz (kHz) to 3000 megahertz (MHz).

3(b) Label the MF, HF, VHF, UHF, and microwave portions of the spectrum on your diagram.

3(c) Locate on your chart at least eight radio services, such as AM and FM commercial broadcast, citizens band (CB), television, amateur radio (at least four amateur radio bands), and public service (police and fire).

4. Explain how radio waves carry information. Include in your explanation: transmitter, receiver, amplifier, and antenna.

6. Explain the safety precautions for working with radio gear, including the concept of grounding for direct current circuits, power outlets, and antenna systems.

7. After you have had your turn at the radio stations, return to the pavilion for this last requirement. Discuss what types of equipment you saw in use, how it was used, what types of licenses are required to operate and maintain the equipment, and the purpose of the station.

5. Do the following: Make your drawing beforehand.

5(a) Explain the differences between a block diagram and a schematic diagram.

5(b) Draw a block diagram for a radio station that includes a transceiver, amplifier, microphone, antenna, and feed line.

5(c) Discuss how information is sent when using amplitude modulation (AM), frequency modulation (FM), continuous wave (CW) Morse Code transmission, single sideband (SSB) transmission, and digital transmission.

5(d) Explain how NOAA Weather Radio (NWR) can alert you to danger.

5(e) Explain how cellular telephones work. Identify their benefits and limitations in an emergency.

8. You may write up your choice of career for the more detailed description beforehand, but be prepared to discuss that choice.

Find out about three career opportunities in radio. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you.

9(a) Amateur Radio. Do this requirement at the pavilion.

(1) Tell why the FCC has an amateur radio service. Describe activities that amateur radio operators can do on the air, once they have earned an amateur radio license.

(2) Explain differences between the Technician, General, and Extra Class license requirements and privileges. Explain who administers amateur radio exams.

(3) Explain at least five Q signals or amateur radio terms.

(4) Explain how you would make an emergency call on voice or Morse code.

(5) Explain the differences between handheld transceivers and home "base" transceivers. Explain the uses of mobile amateur radio transceivers and amateur radio repeaters.

9(b) Amateur Radio. Do this requirement at the stables.

(6) Using proper call signs, Q signals, and abbreviations, carry on a 10-minute real or simulated amateur radio contact using voice, Morse code, or digital mode. (Licensed amateur radio operators may substitute five QSL cards as evidence of contacts with five amateur radio operators. Properly log the real or simulated ham radio contact, and record the signal report.)