F.C.A.R.C. Inc.
P.O. Box 773
Greenfield, MA 01302

FIRST CLASS MAIL

THE COMMUNICATOR

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November 2014

Upcoming Events

- Club Breakfast: Saturday Nov 15, 8 a.m.: Denny's, Greenfield
- Fox Hunt: Saturday Nov 15, ~10 a.m.: Start at Poet's Seat Tower
- E-Board meeting: Monday Nov 17, 6:00 p.m. : GCC
- Program Meeting: Monday Nov 17, 7:15 p.m.: Program TBA: GCC
- VE license tests: Monday Nov 24, 7 p.m.: Northfield Unitarian Church
- ARRL November Sweepstakes: CW Nov 1 -3, SSB Nov 15-17
- E-Board meeting: Monday Dec 8, 7:00 p.m. : Location TBA
- Club Breakfast: Saturday Dec 13, 8 a.m.: Denny's, Greenfield
- Holiday Potluck: Monday Dec 15, 6:00 p.m. : Location TBA
- New Year's net : Wednesday Dec 31, 11:50 pm. : 146.985 MHz

DUES are DUE now!

November 2014

DUES ARE DUE NOW!

Dues support the repeaters, the club activities and the Communicator.
General Adult - $15/year
Family Group membership - $18 /year
Repeater Patron donation - $10.00 or more Suggested
You may pay for multiple years of membership.

Mail dues to:
Franklin County Amateur Radio Club
PO Box 773
Greenfield, MA 01302
or to
Howard Field
7 Laurel St.
Shelburne Falls, MA 01370-1512

Make checks payable to **FCARC.**
Please include SASE if you wish to have your membership card or a receipt mailed to you.

Calendar

FOX HUNT FOLLOWING THE CLUB BREAKFAST ON SATURDAY NOVEMBER 15TH.

FCARC will hold a fox hunt following the club breakfast on Saturday November 15th, starting at approximately 10 am at the Poet's Seat tower in Greenfield. The "fox" will be hidden somewhere in Greenfield or one of the surrounding towns and will be transmitting on a 2 meter simplex frequency (TBA). The fox hunt is open to anyone, even non-licensed folks, and you can search for the fox by yourself or you can team up with other folks.

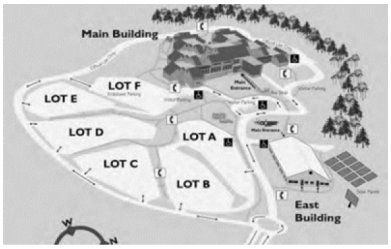
If you would like to participate in the fox hunt but can't make it to the breakfast, call on the 146.985 repeater around 9:30, somebody will be listening. If you can't rendezvous with us at Poets Seat tower at about 10:00 am or you arrive there late and we have gone, call on the repeater to find out what's happening if you are late and would like to join in.

If you plan to participate in the fox hunt it would be useful to have a good map of the Greenfield area and a watch set by WWV or another accurate source to synchronize your listening periods with the hidden transmitter's transmissions. There should be extra direction finding antennas and other gadgets, but it would be a good idea to operate as teams, anyway. Some direction finding equipment should be used for receiving only, transmitting may damage Doppler finders or receiver attenuators. So each team should have one transceiver, either an HT or a mobile, that can be used to transmit as well as receive, in case you need help from the fox or you want to collaborate with another team.

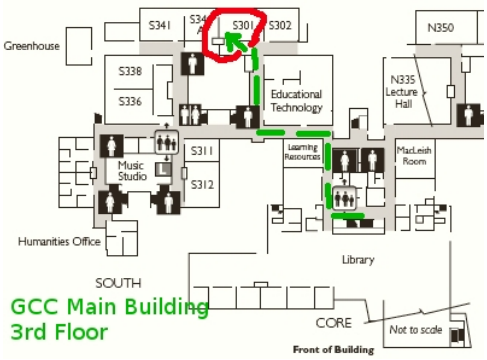
We will be conducting the fox hunt on the repeater output frequency. Our repeater is not very busy and the fox box transmitter signal will be weak, so if anyone else needs to use the repeater there should be no conflict.

The last time we had a fox hunt the fox box was set to generate a signal that lasts about 35 seconds - about 20 sec of slow Morse and 15 seconds of tones - and repeat every 2 minutes. So it's a little less than a 25% duty cycle. In between fox box transmissions hunter can talk to each other or the fox master can transmit through the repeater to give hints or encouragement.
See "FOX HUNTS – WHAT YOU NEED TO KNOW" below.

NOVEMBER E-BOARD AND PROGRAM MEETINGS AT GREENFIELD COMMUNITY COLLEGE



The e-board and program meetings on November 17th will again be held at the Greenfield Community College Main Campus in the Engineering Classroom S301 on the 3rd floor of the Main Building. The GCC Main Campus is off Colrain Rd, near the Big Y Plaza in Greenfield. From north or south, take Exit 26 on Rte. 91 for Rte. 2 West, Colrain Rd is first right off Rte. 2 (traffic light here), proceed about 1/2 mile to the College entrance on the left (road construction here as of Sept 2014). The Main Building is the only multistory building, and is at the far end of the campus from the entrance.



To get to room S301 of the Main Building, take the elevator or stairs to the 3rd floor and follow signs toward south wing classrooms. ~~The meeting program will be the year in review.~~

Secretary's Report

E-BOARD MEETING MONDAY, October 20, 2014 – CHRIS MYERS KB1NEK

2m Repeater: No one has had time to start diagnosing the intermittent problems in the receiver section of the unit we took out of the shed on Frizzell Hill over a month ago. The spare repeater we put in its place is not properly sensing the CTCSS tones on its input. We have run tests where we can trigger the repeater sending from a radio with no transmitted tones. Jeanne suggested we consider asking Ted Johnson for his advice, since he used to manage the NOBARC repeater system on top of Mt. Greylock.

Chris mentioned that long time club member, Bob Bessette had sent him an e-mail message asking how much a new repeater costs. Chris asked Richard Stewart to check with his contacts. Shortly before the meeting Rich sent information from Paul Allis that a decent 2m repeater, analog only, is listed at about $1,500 but might be obtained within a range of $1,200 to $1,300. It is not clear if Paul was talking about a used unit or a discounted new unit for this price.

Al asked Howard to report on how much money we have in our account. Howard checked and said we currently have $1,700. This includes $200 recently received for the sale of the surplus Kenwood TS-140. So at the moment we have enough money to purchase a new repeater unit, but it would not leave much in the account.

Chris mentioned we have potential buyers for the surplus Kenwood TS-850 and the Ten Tec Omni. We are currently listing two other pieces of surplus equipment for sale on the club website: an Icom desk microphone, for $150, a West Mountain Radio CLRSpeaker, for $120, and a Bencher paddle for $60. We could put up for sale the LDG-1000, an auto-tuner capable of handling 1000 Watts, donated by the Berrigans. Al suggested we wait to get an idea of whether we could get enough from that to be able to buy a more modest unit. We also still have an un-needed Astron 35A power supply, not yet listed. [After the meeting, Howard mentioned that one of his sons might want the surplus Astron.]

The surplus TS-850, along with a switching power supply (donated by the Berrigans) was loaned to Amy McNeil at the end of the meeting. Bruce Fuller offered to keep track of equipment out on loan: the TS-850 to Amy and the Ten Tec to Keith Rawley. The expectation is that if Amy or Keith decides to keep the radio, they will pay the club $350 for it.

Al asked for suggestions for future programs. Rich suggested inviting a speaker from the repeater coordinating group. After some discussion, we asked Rich to make some phone calls to see if he could get someone to agree to come.

Bob Solosko announced he cannot be the “fox” for the hunt scheduled after the November club breakfast. Chris offered to take on the job.

We took up the old business topic of contributing to the space we share with MRC and CERT at Casey Storage Solutions. The original amount mentioned at a previous e-board meeting was $30 a month. A suggestion was made to reduce the offer to $20, but Chris moved that the e-board propose to the general membership meeting an amount of $30 a month. It is understood from MRC and CERT coordinator that for the next few months a grant from Yankee Candle is paying for the entire unit, and has invited a request to be submitted after the new year to perhaps continue paying for it. In this event, the club will not have to make good on its commitment. The motion was accepted unanimously.

Bruce reported that technician level classes will be held in November at the Holyoke Hospital. Jeanne Dodge plans to take them. Bruce also says he has informed others in Hampshire County interested in a course that the best bet for the near future is the one about to start in a few weeks. Al said he plans to attend the course to get a better idea of the method they plan to use, which we already know will focus mostly on answering students questions rather than trying to explain things.

OCTOBER MEETING NOTES - October 20, 2014 – CHRIS MYERS KB1NEK

Al announced we had some real business to discuss, the proposal to contribute $30 a month to MRC and CERT for our share of the space at Casey Storage. Since the contribution would add up to more than $200 a year, the club’s by-laws require a full membership vote. Chris made the motion, seconded by Belle. Al noted that Bob Dickerman, who was unable to attend, was opposed to the idea. The members present voted unanimously in favor.

Al announced the guest speaker, Matt Wilhelm, W1MSW, who has recently been appointed Contest Branch Manager for the ARRL. Matt has also been a member of the FCARC for several years, even though he lives in Northampton and has been an active member of the Hampden County club.

Matt opened with a list of reasons for contesting: practicing communications skills, working enough states, zones, or countries to win awards, and the thrill of competition. He explained that each contest has its own rules, but that universally all of them require the sending of a signal report, which invariably is “59" regardless of the facts of the situation. Matt said that he finally realized that even when the “59" is a polite fiction, it serves to cue up the rest of the required exchange of data, so it makes it easier for the receiving station to pay attention to the data that follows, which will be unique, and which must be copied accurately.

Matt also explained the requirements for submitting logs, and the system for checking them. The Cabrillo format that is now used by almost all contests, allows a master computer program to check the submission for errors, and send an immediate response back to the sender to request corrections. Once the report passes the Cabrillo checking process, it is run through special software that checks the logs against one another to determine which calls were copied correctly. Points may be deducted for busted calls and exchanges. Chris asked if unverified entries cause a deduction in the score. Matt explained that usually the points will be kept, but that a log that has a lot of unverified entries may trigger more serious challenges.

Matt explained the different contest categories, especially the distinction between assisted and unassisted. Assisted can include the use of some computer aids that alert a contester to stations in other parts of the band. Assistance could also include an actual human acting as a logger or spotter.

Al and Bob Solosko recommended that a good way for a casual contester to have some fun and even a chance to win a category that is geographically limited, is to wait until near the end of the contest period, when the really serious “big guns” are desperately seeking out a few last contacts, especially in a county or zone that is sparsely populated.

Contesting related web sites:

- Converting paper logs to Cabrillo: www.b4h.net/cabforms
- ARRL Contest Rules: www.arrl.org/contest-rules
- ARRL Contest Basics: http://www.arrl.org/contest-basics
- ARRL Contest Toolbox and Tutorials: http://www.arrl.org/contest-toolbox-tutorials
- ARRL Contest Update Newsletter Subscription: http://www.arrl.org/the-arrl-contest-
- update
- Popular Logging Software – Windows:
    - N1MM Plus: http://n1mm.hamdocs.com/tiki-index.php
    - DXLog: http://dxlog.net/
    - N3FJP: http://www.n3fjp.com/
    - Writelog: http://writelog.com/
- Popular Logging Software – Mac:
    - RUMPed: http://www.dl2rum.de/rumsoft/RUMPed.html
    - SkookumLogger: http://www.k1gq.com/SkookumLogger/

News, Activities & Articles

PRESIDENT'S RANDOM THOUGHTS - AL WOODHULL N1AW, NOVEMBER 2014

Well, I let myself be elected president of the club. You may all still regret it. It occurred to me that a club president ought to exercise leadership. I'm going to define leadership this way: thinking of things to be done and getting other people to do them. So here are some thoughts of things that you could do to help the club:

1. Volunteer to be NCS: We have two weekly nets on the repeater, the Emergency Net on Tuesdays at 9 p.m. and the Information Net on Thursdays at 8 p.m. If you look at the schedules for net control operators (on the website at http://www.fcarc.org/netlistings.htm) you will see that currently only three people share net control duties on each of these nets. A total of five people (Chris takes a turn on each net). Chris, KB1NEK, is our net manager; please contact him to volunteer for this. It's not hard; and the more people we have doing it the easier it will be. On that same website there are links for net control preambles and templates.
2. Arrange a meeting program: if there is something related to ham radio that you are particularly interested in, contact someone who knows a lot about it and ask if they would like to be a guest speaker at one of our 3rd Monday meetings. Maybe there is something you know a lot about and you could present a program yourself. It doesn't have to be specifically about ham radio narrowly defined - in the past we have had guest speakers talk about solar energy, telephone technology, meteorology.
3. Develop a Saturday morning project. A suggestion has been made that we do group construction of J-pole antennas. But I don't think anyone has stepped up to say, "Yes, I'll find instructions and familiarize myself with them and arrange to get materials together for a group build." Other kinds of antennas, small simple receiver or transmitter kits, Morse code practice oscillators, keys, or paddles are all possibilities.
4. Organize an outing. The ARRL and W1AW in Connecticut are a possible destination. There is a Vintage Radio Museum in Connecticut. K1TTT in Peru MA has a multi-multi contest station and occasional open houses.

5. Make a new connection for the club. Do you know a school science teacher? A Scout leader? Maybe you can think of a way we could put on a demonstration or assist with a science project.

FRANKLIN COUNTY CROP HUNGER WALK, SUNDAY OCTOBER 19, PHILL GRANT N1YPS

The annual CROP WALK (a fundraiser for world hunger) 2014 edition, was held on Sunday, October 19th at the First Congregational Church in Montague Center, MA. Our volunteers arrived on time, got their assignments and were ready for the walk which began at 2PM. We used my equipment and operated on the FCARC repeater frequency.

The day was cold, windy and mostly gray. The only incident was someone "activating" their mic PTT which made conversation nearly impossible. After chatting about it with Chet, someone called in to apologize. Chet thought some of the interference came from other sources. Anyway, all was cleared up in short order. The walk was a success I was told, and the refreshments were fantastic.

The following hams took part in the event: Jeanne, no call as yet; Bob, WA1QKT; Richard, KB1NOX; Bruce, KB1TLX; Kip, AB1UU; Al, N1AW; Chris, KB1NEK; Carter, WA1TVS; Cathy, KB1SNA; Andrew, KB1TKB; Roy, KB1LKY; Chet, N1XPT (net control) and me, Phill, N1YPS.

FOX HUNTS – WHAT YOU NEED TO KNOW

[Editor's Note: this article is a conglomeration of extracts from a number of different articles about fox hunting]

Classic US single transmitter mobile foxhunting is a map and compass exercise as well as a test of RDF skills. Successful hunters, (usually a team of two), pay careful attention to their own location and the bearing to the fox at all times, plotting them on street maps provided by the hunter. They know that if they miss a fox bearing, they must wait to hear the fox again.

Since this is done on the Amateur (ham) radio bands is a license required? No ... a license is not required, since you are receiving and not transmitting when you participate in a radio orienteering event.

You can get started with just a portable 2-meter receiver or HT that has a signal strength meter. You'll also need some type of directional antenna, a compass and a map of the area in which the fox is hidden.

To find the fox, you need two pieces of information:
1. Distance, or range (how far you are away from the fox)
2. Direction, or bearing (which direction you should go)

Most modern radios, whether a mobile or a HT, have some form of a "bar scale" (modern "S" meter) to show you relative received signal strength. Generally one bar is a very poor signal and 4, 5 or more bars, depending on the radio, indicates a stronger signal. The closer you are to the fox, the stronger the signal will be. However, as you get closer to the fox, your S-meter will be "pegged" (at the maximum reading) and it will be of little use to you. You must find a way to attenuate (diminish or knock down) the received signal so that it registers again on your S-meter. Use one of the following methods to attenuate the signal. The last one can also be used to give you the direction to the fox.

Techniques
- Tune slightly off frequency: The radio energy coming into your radio is greatest on the frequency of the fox. However, a transmitter emits a slight amount of energy outside the exact transmission frequency. By tuning slightly off frequency, your S-meter may be able to detect it.
- Remove the HT antenna: The antenna is designed to make reception more efficient. The worse your antenna, the lower your S-meter reading will be for a given signal strength. So if you remove your antenna altogether, your S-meter reading will go down dramatically. CAUTION: Make sure your transmit lock is on, so you don't inadvertently transmit without your antenna in place.
- Body Block: Use this technique to determine the direction to the fox. You can use an object that is dense enough to absorb enough of the incoming signal so that your S-meter reading falls. One object you always have with you is your body. Try holding the radio against your body and turning slowly. When your body is directly between you and the fox, the S-meter may drop (you may also hear the signal get weaker).

One thing you will probably notice the first time you go fox hunting is some people will be using directional antennas and even inline signal attenuators. These are good tools to make you better and faster but the basics discussed above when used correctly will lead you to the fox. If this is your first attempt at fox hunting do not concentrate on trying to be first. More importantly concentrate of finding the fox. Once you begin developing skills and your own methods, then and only then work on winning.

From "Stalking the Fox", QST October 1993
The transmitter comes on the air at a prearranged time, Hunters swing their antennas to take their first bearing. Within a few minutes, everyone jumps into their cars and the chase is on. Hunting is easier and more fun when done with another person. While one drives, the other checks the maps and swings the antenna.

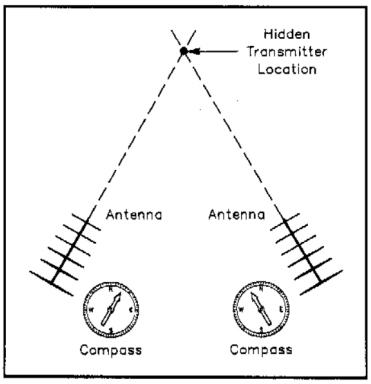


Fig 1—When you're close to a hidden transmitter, you can use *triangulation* to pinpoint its location. Take two bearings from locations a few hundred feet apart and draw lines representing the bearings on your map. The transmitter is located very near the point that corresponds to the intersection of the two lines.

Once you have a rough idea of the area in which the transmitter is operating, you get as close as you can and take more bearings. Each set of bearings should bring you closer to the transmitter. When you're very close to the transmitter (it takes a lot of attenuation to keep the signal from overwhelming your receiver at this point), taking a bearing from a second location lets you triangulate to get a better idea of the transmitters location (Fig. 1).

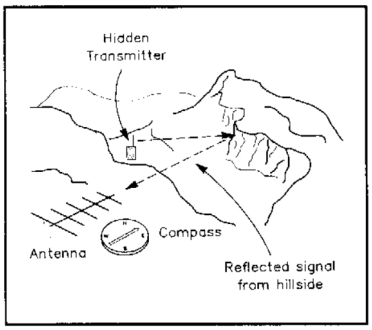


Fig 2—A transmitter hidden in a valley can cause misleading beam headings. In this example, the transmitter antenna is a beam, pointed at the hillside. The strongest signal is coming from the hill. With experience you'll be able to detect and identify the weaker signal coming from the transmitter itself. A similar effect occurs when the transmitter is hidden among buildings or other reflective surfaces, like railroad cars or truck trailers.

Foxes aren't known for making life easy for hunters. You can bet the terrain will be challenging. If the world was perfectly flat, it would be relatively simple to find and hidden transmitter. Hills, mountains and buildings are good reflectors of VHF signals; so transmitter hunting becomes a real challenge when they're in the vicinity. Fig. 2 shows a typical case.

Things Al N1AW learned about fox hunting:

- My hand-held Doppler device is hard to use from far away or from nearby.
- My handheld is not well enough shielded, signals get into it even without an antenna.
- My body is not rf-dense enough to make body shielding work.

N1AWS HOUSE AFTER THE SEPT 6 MICROBURST

Here is a picture of Al N1AW's house taken two days after the Sept 6 microburst that took down many trees in a five mile long, half mile wide path through Leyden and Bernardston. Parts of several wire antennas, a Ringo Ranger and a 2m/70cm dual band ground plane are underneath the fallen trees.

Here's a picture of my Ringo Ranger after the trees were removed from my roof.

THE COMMUNICATOR is an informational publication for members of the Franklin County Amateur Radio Club. Officers: President: Al Woodhull, N1AW (n1aw@arrl.net), Vice President: Ron Niswander, K8HSF (reniswander@gmail.com), Treasurer: Howard Field, N1LUP (howfield@comcast.net), Secretary: Chris Myers, KB1NEK (camyers1@verizon.net), Director: Belle Dyer, KB1NOG (bdyer58@mtdata.com), Director: Bruce Fuller KB1TLX, perkinsdowns@yahoo.com. This is your newsletter! Amateur radio information of general interest, club member project descriptions and doings, radio applications to other activities, corrections, or suggestions are all welcome. Individual submissions make for variety! We need more writers! Send submissions to Bob Solosko at w1srb@arrl.net.