

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



FIRST CLASS MAIL



THE COMMUNICATOR THE COMMUNICATOR

December 2013

Upcoming Events

- Club Breakfast: Saturday Dec 14, 8 a.m.: Denny's, Greenfield
- E-Board meeting: Monday Dec 9, 7 p.m.: Location TBD
- Holiday Potluck : Monday Nov 16, 6 p.m.: Greenfield High School cafeteria
- New Year's net: Tuesday Dec 31, 11:50 p.m., 146.985 MHz
- Sawmill River Race: Wednesday Jan 1, 9 a.m. for radio ops: Montague Center
- E-Board meeting: Monday Jan 13, 6 p.m.: Greenfield High School cafeteria
- Meeting & Program: Monday Jan 13, 7:15 p.m.: Greenfield High School: Program TBA
- Club Breakfast: Saturday Jan 18, 8 a.m.: Denny's, Greenfield

December 2013

Calendar

DECEMBER CLUB BREAKFAST

The November club breakfast will take place starting at 8 a.m. Saturday, December 14 at Denny's Pantry, 469 Bernardston Rd in Greenfield

HOLIDAY PARTY

The FCARC Holiday Party will take place at the GHS cafeteria on Monday December 16th at 6 p.m.

As in past years we will have music provided by talented club members and an auction of radio and electronics stuff. Auction items may be personal, with a club contribution of a percentage of the sale price, or they may be donations to the club or surplus club-owned equipment.

Also, as in recent years, we do not have a designated co-ordinator for the pot-luck supper dishes. Various members have already pledged a spiral-cut ham, devilled eggs, and a cobbler desert. Bring a dish you like!

FCARC NEW YEAR'S NET

FCARC New Year's Net: On the air on the 146.985 KB1BSS repeater, starting at 11:50 p.m. on December 31st.

THE SAWMILL RIVER RACE: WEDNESDAY JANUARY 1, 9 AM

The Sawmill River Race in Montague will be held on Wednesday January 1 and the FCARC will again provide communications. Contact Al Woodhull, N1AW, to volunteer or for more information.

Secretary's Report

E-BOARD MEETING, MONDAY, NOVEMBER 18, 2013 – BOB DICKERMAN WA1QKT

1. Bob W1SRB asked for writings about foxhunt for Communicator
2. Bill N1EWK's license has been renewed, and we are planning to transfer trusteeship of repeater to Al N1AW; Al will get forms, need 2 signatures from E-board to transfer
3. Future meeting program topics possibilities
 - 3.1. WD4ASW Barry Baines, AMSAT President, on amateur satellites
 - 3.2. WA1MBA Tom Williams, on UHF/microwave/antennas - still waiting for response
 - 3.3. KC5ZTH Cady Coleman - still waiting for response
 - 3.4. Marcia KW1U manager of National Traffic System for parts of Massachusetts?
4. Holiday Potluck dinner Dec. 16
 - 4.1. Carter WA1TVS spiral-cut ham
 - 4.2. Bob WA1QKT devilled eggs
 - 4.3. Bob W1SRB, Bob WA1QKT, Chris K1SMY volunteered to play live music
 - 4.4. Auction will be held - members should bring equipment to be sold, and money for bidding
 - 4.5. Members may announce what food they are bringing on information net
5. Chris KB1NEK showed the new FCARC Yaesu FT-8800
6. Board agreed to sell two of Bert N1IUM's antennas to Bob WA1QKT for \$100.00
7. VE session scheduled for Monday, Nov. 25. Three candidates expected.
8. Bob WA1QKT sent letter to John Dobosz acknowledging John's request for ham radio assistance at Sawmill River run on January 1, 2014. We need to contact John again when a coordinator is identified.

9. Chris KB1NEK and Ron K8HSF are planning to talk to the Greenfield EMD about access to Greenfield EOC
10. N1XPT Chet's packet controller is operational on 145.050 MHz. N1AW's and Belle's KB1NOG's packet stations are on the air. Tom N1OTS's station has also been heard. Chet and Al are encouraging members to get packet stations on the air to help strengthen the packet network.

SECRETARY'S REPORT FOR NOVEMBER 18, 2013 FCARC MEETING – BOB DICKERMAN WA1QKT

We met in the GHS cafeteria. Bob WA1QKT and Al N1AW brought instant coffee, for which the reception was mixed. The meeting was brought to order at 7:15 PM by Chris KB1NEK.

(Note that construction has begun at GHS, so we now have to park on the north end of the school, which is the side closest to Silver Street.)

Since most of the attendees had been at the E-board meeting, no business was discussed at the general meeting, and we immediately started the programs.

Richard KB1NOX gave a presentation and demonstration about HT batteries and battery charging.

Rich has found it advantageous to acquire batteries for his radios from two companies: Batteries America, of Middleton, WI, and W&W Manufacturing Co., of Hicksville, NY. He said that batteries from these companies are reasonably priced and are long-lasting. W&W will also rebuild obsolete battery packs, and can convert old battery packs from NiCad to NiMH.

Rich also showed us his drop-in charger, a Model UC-1, from W&W. This is a 1-station, 4-hour fast-charge charger, with a removable cup. A range of cups are available that will adapt the charger to many different models of radio. Your radio, with the battery attached, may be just dropped into the cup and left there to trickle-charge indefinitely, which is very convenient. The UC-1, with 1 cup, may be purchased for \$99.00. Other models are available with more stations.

Rich encouraged members to properly dispose of their worn-out batteries, at transfer stations or at metals recycling centers, since the batteries may contain hazardous materials such as cadmium and mercury.

We thank Richard for his enlightening and interesting presentation.

Al N1AW gave a presentation and demonstration about packet radio.

Some of Al's first experiences with packet radio were in Nicaragua, where he did technical support for an engineering school. These were in the days before the Internet, and the school actually used amateur radio packet to digitally connect two buildings in the same city there.

Al brought an entire packet radio station and set it up on a couple of tables in the GHS cafeteria. The station comprised a laptop computer, a Kantronics KAM Plus Terminal Node Controller (TNC), a Yaesu transceiver, and a 1/4 wave mag-mount antenna mounted on a cookie sheet. A terminal program was running on the laptop that would allow one to send text messages to, and receive text messages from, the TNC. The transceiver was tuned to 145.050 MHz - our local packet frequency - and set for simplex operation. A speaker was connected to the transceiver's receiver audio output so that we could hear the packet audio signals. The audio sounds just like the sounds that you may have heard in the past when you connected your computer to the Internet using a now-antiquated dial-up 1200 baud modem, because the modulation and signaling formats for these two

communications are practically identical. Al noted that, even if you don't have any packet equipment at all, you can hear the packet signals every few minutes if you tune your receiver to 145.050 MHz, and, if you can hear them, you can work them (by adding a little bit of packet equipment).

Al demonstrated "messages heard", "connect", "disconnect" and several other commands. He showed us that, while we were listening to him, his packet station in the GHS cafeteria heard many other local packet stations, including those of N1XPT Chet in Turners Falls, KB1NOG Belle in Colrain, N1OTS Tom in Greenfield, K1FFK at Mt. Greylock, and KA1HSP Joe in Ware. Al connected to some of those. He also demonstrated sending an email to Kevin KC5KKS's cell phone (Kevin was present at our meeting). Kevin replied to Al's email, and Al received Kevin's email on his (Al's) packet station. Al noted that Chet N1XPT uses Airmail software that allows attachment of documents to a transmission. Al and Chris KB1NEK noted that another system, Winlink, allows connection of VHF or HF radios to the Internet.

We thank Al for his practical and extensive demonstration.

9 people attended the meeting.

News, Activities & Articles

NOVEMBER VE SESSION IN NORTHFIELD, NOVEMBER 25, 2013



Ralph Mroz, Al N1AW, Belle KB1NOG, Dick AA1XU, Ron K8HSF

Our November VE session in Northfield resulted in one new Technician and two new Extra Class licensees. Ralph Mroz of Greenfield will receive a new Technician license. Paul Siqueira of Amherst and Kip Williams of Montague will start at the top, with new Extra Class licenses. Paul came in with a CSCE for passing the Technician and General level tests just last week at an HCRA VE session, and after a little review over the weekend came to our session to take the

Extra test. Kip came to us to do the whole thing in one night, passing his Technician, General, and Extra Class licenses with us. Don Snyder, who took part in our class last spring, did not pass the Tech test, but says he is up for trying again soon.



Al N1AW, Belle KB1NOG, Kip Williams, Ron K8HSF

FOX HUNT, NOVEMBER 16, 2013 - BOB W1SRB

FCARC held a fox hunt on Saturday November 16 immediately following the November breakfast at Denny's in Greenfield. A fox hunt is a hunt for a hidden transmitter (the fox) – our fox is set up to automatically send out a 30 sec signal every two minutes on 2m.

Participants included Bob Solosko W1SRB (i.e., me), who was the fox, Al Woodhull N1AW, Bob Dickerman WA1QKT, Chris Myers KB1NEK, Ron Niswander K8HSF, Julie Page KB1WTP, Richard Stewart KB1NOX, Chet Chin N1XPT, Jeanne Dodge, Chris Dickerman K1SMY, Alexander Rogers KB1YZA.

I left to set up the fox as the fox hunters were gathering at Poet's Seat. On our previous fox hunt, the fox was in a park between steep hills and reflections off of the hills made the fox very difficult to locate. This time I planned to make it easier by having the fox in line of sight from Poets Seat so there

would be minimal reflections. However, since I didn't want it to be too easy, I planned to partly hide it behind a tree so it wouldn't be immediately visible. Originally I had a number of possible sites for the fox within Greenfield, but a few days before the fox hunt, Al N1AW told me that I could also consider some of them surrounding towns. Thus, I hid it just off of a road behind Deerfield Academy near the Deerfield River. While this spot was line of sight from Poets Seat to the north, right behind it to the south was a huge mound of dirt that made it much more difficult to locate once you were near it. Al N1AW, in his thoughts below has some good suggestions for rules to make our fox hunts less difficult. The fox hunt started sometime about 10:30 AM, and the fox was found by Chris KB1NEK around 12:15 PM.

From Bob WA2QKT

I got off to a somewhat late start, but Al helped me out by lending me his antenna and fixing it, on the spot, for me, after we found a broken wire. Then I had a few minutes of trouble remembering what angle north corresponded to. I took my first heading, perhaps standing too close to the iron railing and tower; it was to the west-southwest. I went to the town pool, which was a little north of my first "line", and got a 2nd heading in the same west-southwest direction. This happened to "point" to GCC. I went to a GCC parking lot, and got a heading of south-southwest – my first accurate heading during the hunt. After that, I wandered around the area south of GCC for a while, chasing a weak signal that was detectable, but which varied from "no bars" to about "2 bars". I strayed as far as a few miles west on Route 2, but lost the signal and came back. At one point I saw Alex and Andrew driving around the cemetery near the fairgrounds. At some point, I heard Ron say he was near Eaglebrook, and fox Bob W1SRB replied that he was in the right neighborhood, so I went south on Route 10. I stopped when I got to the Wok, and got another heading in the direction of DA. Then I went to the DA playing fields, and saw Al. After that, I just followed Julie, Jeanne, and Rich down the driveway and haplessly milled around until Chris found the fox. The same day, after the fox hunt, while hanging around Greenfield before picking up K1SMY, I bought a topographic map of the Greenfield area at Baker's. I thought I might use it to ID reflecting hills, and high spots where I could go to get better "cross headings".

From Al Woodhull N1AW

First, observations for the Communicator: Chris KB1NEK rode with me and I thought we did pretty well until we got really close. From Poets Seat we seemed to get a bearing due south. We also tried to get bearings from the Middle School field, the end of Highland Ave, a parking lot in the Cheapside area, and a field next to Woolman Hill Conference Center. All readings were consistent with a fox located to the south, i.e., Deerfield. The signal at Woolman Hill seemed weak, but I thought it might be because there was a higher part of the hill blocking the signal. Most of this direction finding was using body fading - not very exact, but rarely confusing. At the northern entrance to Old Deerfield off Routes 5 and 10 the signal was strong enough for my Doppler finder to work, and here we had to choose two directions, either slightly east of south (I suspected Pocumtuck Rock above Eaglebrook) or west of north, in the fields north of Old Deerfield. We chose to explore the latter first as it was closer. We went pretty far that way. We met Chet there, which we took as a clue that we might be right, but soon we decided we were going the wrong way. It didn't look like the signal was coming from up on the ridge, however, we thought it more likely that it was directly south, perhaps south of Deerfield Academy and all of Old Deerfield. We were heading that way when Bob Solosko came on the radio saying he had seen my car. At that point we parked. Relating further details isn't worthwhile. I wandered all over the Deerfield Academy lawns and playing fields. Eventually it seemed it had to be close to the big leaf compost pile. I said to Bob, "certainly the fox would not be buried under a pile of leaves?" and he replied, "Well, maybe partly buried." I'm not sure exactly how Chris actually found the box. I knew we were close because my mini-HT in my pocket without an antenna didn't pick up anything except in a very limited area near the leaf pile.

I thought this went quite well for an event that was planned pretty much as a last minute event. Maybe somebody else will decide they'd like to organize another one. The fox box is ready for use and we

can get the word out quickly. I also have a copy of a book on transmitter hunting - I would be happy to lend it to anyone who wants to read it.

Thoughts for next time: (1) If we want an easy fox hunt (and I don't think anyone is ready for a really hard one yet) we should probably have a rule about having the fox box fully visible from a road or at least a beaten path, not everyone was physically up to going through the brush. (2) We should not turn the fox box off until everyone has had a chance to test their direction finding devices from a place where they can actually see the fox box. (3) We should state clearly the rules for where the fox could go - whether limited to the borders of a town or a particular road or air distance from the starting point.

[Editor's Note: we could also hold a practice fox hunt in which the fox is hidden as in a regular fox hunt, but everyone's told its location at the start].

Personally, I should not have depended so much on one technical gadget - my Doppler finder did not work far from the fox where the signal was weak, and it didn't help much when I was really close, where the signal was strong.

Photos by al N1AW and Bob W1SRB

At the start at Poets Seat



Ron K8HSF and Chris KB1NEK



Chet N1XPT, Richard KB1NOX and Julie KB1WTP



Alex KB1YZA, Chris K1SMY and Bob WA1QKT

At the Finish



The fox behind the tree



Chris KB1NEX standing on the fox box



Jeanne and Rich KB1NOX



Chris K1SMY and Alex KB1YZA



Chet N1XPT



FCARC IN QST

In the December 2013 QST, Phill N1YPS has another Hints and Kinks article published, on page 53. The FCARC's Field Day 2013 score is reported at the bottom of the first column on page 75. Our score of 2,418 ranks 171st of 441 entries reported in class 2A.

KB1NOG PACKET STATION UP

Several years ago the FCARC placed a packet radio station at Belle Dyer KB1NOG's house at 1600' above sea level in Colrain. The primary purpose of this station is to serve as a packet node that can relay packets to connect stations that cannot connect directly due to our rugged topography. This station has been down for a while, but now it is up again. The configuration still needs some tweaking, all services may not yet be working. But that is coming. Even if you don't currently have packet radio at home you can still determine whether you are in range by listening on the 145.050 MHz channel used locally for packet. Like many other packet stations the KB1NOG node sends a Morse code callsign beacon periodically.

ARRL E-MAIL FORWARDING PROBLEM??

Many ARRL members take advantage of the ARRL e-mail forwarding service. You can register for an e-mail forwarding address like n1aw@arrl.net - mail sent to such an address will be forwarded to an e-mail address you specify. The service was recently upgraded and moved to a new server. A notable improvement is that the ARRL will inform a sender if mail cannot be delivered. This is good, now you will know if an e-mail you sent was undeliverable. However, recently your webmaster, N1AW, had several messages rejected which should have had valid addresses. As a precaution all e-mail addresses on our Club Officers page that had been listed as ARRL forwarding service addresses have now been changed to the real addresses.

VOICE POWERED RADIO (from Al N1AW)

Many of us tried the old "Two tin cans connected by a string" experiment as kids. [Michael Rainey, AA1TJ] never quite forgot it. Back in 2009, he built "El Silbo", a ham radio transmitter powered entirely by his voice. El Silbo is a Double Side Band (DSB) transmitter for 75 meters. While voice is used to excite the transmitter, it doesn't actually transmit voice. El Silbo is a CW affair, so you should bone up on your Morse code a bit before building one. Like many QRP transmitters El Silbo's circuit is rather simple. A junk box loudspeaker is installed at the bottom of the can to convert voice power to electrical power. The signal is passed through a step up transformer, and used to excite a 75m crystal. Two NPN transistors (in this case MPS6521) pass the signal on through a second transformer. The signal is then routed through an LC network to the antenna.

Back in 2009, [Michael] brought El Silbo to the Maine coast in an attempt to make a transatlantic contact. This isn't as far-fetched as it sounds – [Michael] has "crossed the pond" on less power. While the attempt wasn't successful, [Michael] has made connections as far as 1486km, or 923 miles. That's quite a distance for simply yelling into a tin can! One of [Michael's] favorite El Silbo stories is a 109KM conversation (QSO) he had with W1PID. [Michael] found that the signal was so good, he didn't have to yell at all. He reduced power by dropping to his normal speaking voice for the "dits and dahs". The two were able to converse for 17 minutes with [Michael] only using his speaking voice for power. We think this is an amazing achievement, and once more proof that you don't need a multi-thousand dollar shack to make contacts as a ham.

THE COMMUNICATOR is an informational publication for members of the Franklin County Amateur Radio Club. Officers: President: Chris Myers, KB1NEK (camyers1@verizon.net), Vice President: Al Woodhull, N1AW (n1aw@arrl.net), Treasurer: Howard Field, N1LUP (howfield@comcast.net), Secretary: Bob Dickerman, WA1QKT (rld@dickermanelectronics.com), Director: Belle Dyer, KB1NOG (bdyer58@mtdata.com), Director: Ron Niswander, K8HSF (reniswander@gmail.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.