

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



FIRST CLASS MAIL



THE COMMUNICATOR THE COMMUNICATOR

October 2013

Upcoming Events

- Club Breakfast: Saturday Oct 19, 8 a.m.: Denny's
- CROP Walk - Shelburne Falls: (date corrected) Sun Oct 20, 1 p.m. for radio ops: Contact Phil Grant, N1YPS to ask questions or volunteer.
- E-Board meeting: Monday Oct 21, 6 p.m.: Greenfield High School
- Meeting & Program: Monday Oct 21, 7:15 p.m.: Greenfield High School: Program TBA
- Club Breakfast: Saturday Nov 16, 8 a.m.: Denny's
- E-Board meeting: Monday Nov 18, 6 p.m.: Greenfield High School
- Meeting & Program: Monday Nov 18, 7:15 p.m.: Greenfield High School: Program TBA
- VE license test: Monday Nov 25, 7:00p.m.: Northfield Unitarian Church

DUES are DUE now!

October 2013

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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

OCTOBER CLUB BREAKFAST

The September club breakfast will take place starting at 8 a.m. Saturday, October 19 at Denny's Pantry, 469 Bernardston Rd in Greenfield

PUBLIC SERVICE: FRANKLIN COUNTY CROP HUNGER WALK

Sunday October 20 is the date of the annual CROP Hunger Walk, taking place this year in Shelburne Falls. FCARC participation will be coordinated by Phill Grant N1YPS (e-mail phill112643@verizon.net). Radio operators should check in at event headquarters, Trinity Church on Severance St. by 1 p.m. The walk starts at 2 p.m. CROP Hunger Walks are community-wide events sponsored by Church World Service and organized by local congregations or groups to raise funds to end hunger at home and around the world.

SEPTEMBER E-BOARD AND PROGRAM MEETING

The E-Board meets at 6 p.m. on October 21 at GHS, prior to the regular club meeting.

Our Program Meeting will be October 21 at 7:15 p.m. at GHS. The program is TBA.

Secretary's Report

E-BOARD MEETING, MONDAY, SEPTEMBER 16, 2013 – BOB DICKERMAN WA1QKT

1. We passed trailer ownership docs to Bill K1WHO; Bill arranged for trailer to be moved to new owner for re-use. We thank Bill and Vicki KB1FNP for all their patience and help.
2. Public Service:
 - Crop Walk will be on Sunday, October 20 in Shelburne Falls this year, Phil N1YPS organizing.
 - We'll be assisting with ecomm for Food Bank of Western Mass "Will Bike for Food" fundraiser bike tour on Sept. 29. Chris KB1NEK and Al N1AW organizing.

- Franklin Land Trust fundraiser bike tour D2R2, Aug. 24, recap: Considering using formal message forms and net control training for next event.
3. Chris KB1NEK is still investigating possible sharing of CERT/MRC storage space in Bernardston, will offer to clean/organize space in return for small space.
 4. Chris questioned whether club equipment was satisfactory for club events; battery, "duplex 2m radio", and "simplex 2m radio" in fair condition (Note: "duplex 2m radio has since become suspect with distorted audio -RLD)
 5. Upcoming program meeting topics:
 - We will ask Chet N1XPT if he might talk about D-STAR, a digital voice and data protocol sold by ICOM, at a future meeting.
 - Al will ask Rich AB1RS whether he will talk about U.S. railroad system.
 6. Chris KB1NEK will contact Cathy KB1SNA to check status of ham radio station and operators at Greenfield EOC.
 7. 440 Repeater is on the air again, Al N1AW separated TX and RX antennas as an interim fix.

SECRETARY'S REPORT FOR SEPTEMBER 16, 2013 FCARC MEETING – BOB DICKERMAN WA1QKT

We met in the GHS cafeteria. Al N1AW brought coffee. 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 almost all members had attended the Executive Board meeting, we simply began with the program presentations.

Bob W1SRB showed us a presentation of his new antenna farm at his new home in Easthampton. He has constructed what he called an "Unobtrusive Antenna System", which seems to be working quite well. It consists of a vertical fan dipole for 10 m, 15 m, 17 m, and 20 m, and an inverted V, off-center-fed dipole that will cover 40 m, 80 m, and 160 m, as well as the higher-frequency bands. The antennas are located almost 100 feet from his home in a wooded area. All RF is routed through a single RG-8 cable that, with the use of bias tees, also carries a remote antenna switch control signal used to control the remote antenna switch that selects one of the two antennas. The inverted V uses a remote (in the woods) SG-230 automatic tuner that Bill N1EWK originally used for his top-of-the-RV random wire antenna, and is connected to a ladderline feeder. The SG-230 is controlled from Bob's shack using a 4-conductor cable that runs next to the RG-8 in a buried 2" conduit. Some of the antenna raising was done with AA1XU's spud gun, and some was done with heavy equipment that was on the building site. Bob says signal reports have been good!

Bob WA1QKT showed his "bug catcher" 80 m portable antenna that he built so that he could continue to operate on Wednesday night Snail Nets from his car while waiting to pick up Chris K1SMY from his ground school class at the Northampton Airport. The 8-foot antenna was built from mobile antenna plans found in the 1996 ARRL Handbook. It consists of part of an old TV antenna, a piece of curtain rod, some 2" x 4", a piece of drainage pipe, some copper wire, a mag-mount base from a 2 m boneyard antenna, a piece of RG-58 with UHF connector, and a small tuning coil and alligator clips for adjusting the tuning. After some iterations, the antenna is now tuning quite well (SWR = 1.0:1 at the center frequency), and the settings are "fairly reproducible". It has a very narrow SWR bandwidth, approximately 20.0 KHz for SWR < 2.0:1, so it can take a few minutes to manually tune to a new frequency. It has been adequate to reach Easthampton, Whately, Shelburne Falls, and Leyden from Northampton, although when band conditions are poor, it is marginal. The loading coil is wound on a car-top-mounted, oatmeal-box-sized form that seems to attract a lot of attention; when parked at the airport, he has had several passers-by stop and ask "What is that thing, and who are you talking to?!"

Al N1AW showed us pictures of his rapidly growing antenna farm and some of his other projects. He is setting up his shack in a former bedroom, and runs most of his feedlines inconspicuously through a closet floor to feedthroughs located in the basement. Outside the house are enclosures that contain antenna and feed connections and binding posts, grounding, and lightning protection, including lightning arrestors, 1 MOhm resistors to drain static charge, and a knife switch for grounding an antenna when not in use. He showed us his HF6V multi-band vertical with elevated radials, that are about 12' above the ground, his gigantic inverted-L with four elevated radials or counterpoises that he has tuned up for 160 m as well as other bands, and his 6 m, 2 m, and 440 MHz beams. All of these antennas seem to be working well. Al has been using websdr.org and the "reverse beacon network" at <http://www.reversebeacon.net/> to objectively evaluate his HF antennas and the range of his HF station. These are relatively new facilities, based on Software-Defined Radios (SDR) that one can use to easily check where, and quantitatively how well, your CW or RTTY station is being heard around the world.

Al also showed us his homebrew Arduino keyer that he built and wrote the C software for. 80 m Snail Netters have heard the keyer on the air, and it sounds great!

8 people attended the meeting.

News, Activities & Articles

PROGRAM IDEAS?

Do you have a suggestion for a guest speaker or topic for an FCARC meeting? Let us know! Write to Al, N1AW (n1aw@arrl.net) or any other club officer.

BIKE4FOOD, SUNDAY SEPTEMBER 29 – AL WOODHULL N1AW



The Western Massachusetts Food Bank sponsored a fund-raising bicycle tour event, Bike4Food, on Sunday September 29.

The FCARC attempted to provide radio links between event headquarters in Hatfield and remote water/rest stops where cell phone service was not available. In addition, radio operators accompanied Food Bank volunteers in route patrol vehicles.

Not everything worked out as planned. This was the Food Bank's third running of the event, the first for some of the routes. Errors were made in planning and marking the routes. For radio operators, some of the remote sites proved difficult for various reasons. However, the overall feeling is that our participation was helpful. Having radio operators in the patrol vehicles was particularly useful in the late stages of the event, as cyclists tired or dealt with bicycle problems.

FCARC participants included Chris KB1NEK, Bruce KB1TLX, Richard KB1NOX, Bob WA1QKT, Carter WA1TVS, Ron K8HSF, Chet N1XPT, and Al N1AW.

Like the Franklin Land Trust D2R2 event of last month this was a long-distance, all day event. As such it presented challenges similar to those we may have to deal with in



emergencies, including the need to plan for multiple shifts, lack of advance knowledge of conditions at remote sites, and impracticality of all volunteers meeting together before the start of the event. As the boys of South Park say, "We learned something today..."

HAM RADIO COMMUNITY INVITED TO SAY "HI" TO JUNO SPACECRAFT

NASA's Juno spacecraft will fly past Earth on October 9 to receive a gravity assist, putting it on course for Jupiter. To celebrate, the Juno mission is inviting Amateur Radio operators around the world to say "HI" to Juno in a coordinated Morse code message. If enough operators participate, Juno's "Waves" radio and plasma wave experiment should be able to detect the message. The Say "HI" to Juno web page (<http://www.jpl.nasa.gov/hijuno/>) will be updated with additional information as the event approaches. All transmissions will take place on 10 meters, with the precise (suggested) frequency determined by the last letter of your call sign (see Juno Flyby Table in "Photo Gallery" below).

Sponsors say Juno will have a better chance of detecting signals from many operators if the transmissions are spread out across the spectrum. The Juno Waves instrument is a broadband receiver, and the detector being used for this event has a passband that's 1 MHz wide.

While the Waves instrument is sensitive to radio signals in all amateur bands below 40 MHz, sponsors chose 10 meters, because experience with the University of Iowa instruments on the Galileo and Cassini Earth flybys showed significant ionospheric shielding at lower frequencies. Sponsors actually are hoping for poor band conditions on October 9, so an appreciable fraction of the radiated energy can escape the ionosphere into space.

Indicators on the Say "HI" to Juno web page will instruct participants when to transmit and when to stop transmitting. Each will have a timer to indicate how long until you switch from one mode to the other mode. Stations should transmit a legal station identification as the FCC or non-US regulators require. Participants should consider their stations to be operating as attended beacon stations and should avoid transmitting on top of ongoing communications.

Stations with directional antennas should check the web site for information on what headings to use during the event. Visit the Say "HI" to Juno web page for full details and to obtain the latest information. The activity begins October 9 at about 18:01 UTC and continue until about 20:41 UTC. Operators taking part should make sure their computer clocks are synchronized to network time prior to the event. The web page will indicate when you start or stop transmitting (key down/key up).

Participants can receive a QSL card for contacting Juno. E-mail your call sign and mailing address. Additional information is available at NASA's Juno web site and the Mission Juno web site. — NASA Jet Propulsion Laboratory; thanks to John Andrews, ACØXY

FCARC 2 METER NET LISTINGS

Currently two weekly nets and one monthly net are held on the KB1BSS 146.985 Mhz repeater.

The weekly Amateur Radio Emergency Service (ARES) net and the monthly Radio Amateur Civil Emergency Service (RACES) net are not FCARC club activities, but the FCARC makes its repeater available for these nets. The KB1BSS repeater has been determined by the State of Massachusetts and the ARRL to be the best repeater to serve the 2-Meter communications needs for ARES, RACES and Skywarn in Franklin County, MA, due to its location and coverage.

If you would like to take a turn as Net Control Station (NCS) for the ARES net, contact Chris Myers, KB1NEK, net manager, at 413-625-0344, or by e-mail, camyers_1@verizon.net.

The weekly FCARC information net, held each Thursday, is less formal and is intended to be an occasion for club members to keep in touch with each other on the air. Currently the club is looking for someone willing to coordinate the net (which means making up the schedule of who will act as NCS each week). Please get in touch with Dick Burnham, AC1L, e-mail ac1l@mtdata.com, if you would like to volunteer, either as an NCS operator or as net manager.

SHOULD THE FCC ALLOW ENCRYPTION? - DAN ROMANCHIK, KB6NU

One of the most fundamental rules in amateur radio has been the prohibition against the use of codes or ciphers meant to obscure the meaning of a message [Part 97.113 (4)]. Recently, that long-standing prohibition was challenged (<http://www.arrl.org/news/rules-change-sought-to-permit-encryption-of-sensitive-emergency-communications>) to allow encryption when passing emergency health and welfare traffic. The idea was that encrypting these messages would protect the privacy of individuals. In his Petition for Rulemaking (<http://apps.fcc.gov/ecfs/document/view?id=7022424684>), Don Rolph, AB1PH, pointed out that Australian amateur radio rules permit encryption for emergency services operation or related training exercises.

Oddly enough, the pushback against this petition has been loud and swift. The ARRL quickly came out against the petition (<http://www.arrl.org/news/arrl-urges-denial-of-petition-to-permit-encryption-of-some-emergency-communications>), and when I blogged about this issue (<http://www.kb6nu.com/im-jumping-on-the-anti-encryption-bandwagon/>), several hams replied that they didn't think allowing encryption was a good idea.

The main arguments against encryption seem to be that: * It will make people suspicious of amateur radio operators and bring unwanted scrutiny upon amateur radio. * Make self-policing more difficult.

Among the arguments for allowing encryption are that cryptography is a fundamental element of modern RF communications, and that not allowing it, negates one of the purposes of amateur radio. Namely, that one of the purposes of amateur radio is to "advance the state of the radio art."

In late September, the FCC dismissed this particular Petition for Rulemaking (<http://www.arrl.org/news/fcc-dismisses-encryption-petition>). It stated specifically that "the record does not support Mr. Rolph's assertion that the prohibition on encrypted amateur communications is impairing the ability of the Amateur Radio community to provide effective support to public safety agencies during emergencies."

Of course, this discussion isn't over yet. Encryption is now employed routinely for even the most common types of digital communication, and as a newer generation of amateur radio operators take over, they'll want to experiment with these digital communications techniques. One commenter suggested that a portion of the 900 MHz band or maybe the 5 GHz band be set aside for experimentation with encryption. I think that is an idea worth exploring.

What do you think? Does encryption have a place in amateur radio?

THE COMMUNICATOR is an informational publication for members of the Franklin County Amateur Radio Club. Officers: President: Chris Myers, KB1NEK (camyers_1@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.