

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



FIRST CLASS MAIL



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# THE COMMUNICATOR THE COMMUNICATOR

**July-August 2018**

## Upcoming Events

- Aug 4 Sat 8:00 am FCARC Breakfast, Denny's Pantry
- Aug 5 Sun 7:00 am Greenfield Triathlon
- Aug 11 Sat 7:00 am Bridge of Flowers Road Race, Shelburne Falls
- Aug 13 Mon 6:00 pm E-Board, GCC Hammond Studio
- Aug 18 Sat 8:00 am Deerfield Dirt Road Randonee (D2R2) Bike tour, Deerfield
- Aug 19 Sun 7:00 am NoBARC Hamfest, Adams MA
- Aug 26 Sun 7:30 am Green River Marathon, Marlboro VT to GCC
- Sep 7 Fri (also Sat & Sun Sep 8,9) Boxboro Hamfest, Boxboro MA

Sep 8 Sat 8:00 am FCARC Breakfast, Denny's Pantry

Sep 10 Mon 6:00 pm E-Board, 7:15 General Meeting, GCC Hammond Studio

## Secretary's Report

### **E-Board & Annual Meeting June 18, 2018**

Chris Myers KB1NEK

***E-Board meeting began at 6:00 pm. Members present were Al, Belle, Howard, Chris.***

Motions were made and passed to reimburse Ron up to \$100 for purchase of screen for club owned canopy; to reimburse Chris for purchase of gas can and funnel for engine oil in generator; and to approve up to \$199 for the purchase of food and supplies for Field Day.

Updates on coming public service events: Jeanne reported that the city of Greenfield still has not been able to set the route for the Triathlon, due to planned closing for construction Nash's Mill Rd. bridge over the Green River. Chris reported that the Bridge of Flowers Race, also in August, will be over a shorter route than previous years, to avoid a hazardous stretch of Rte 112 in Buckland. There is a new race director, who has accepted the plan to have an amateur radio operator shadow her during the race, so monitors around the course can inform her of problems as they come up. Al reported that he and Bob Solosko will again coordinate the D2R2 bicycle tour on August 18.

Al mentioned he will probably not be able to attend the August 27th VE license exam session. Chris said he would be away. The session will take place at the First Congregational Church, 43 Silver St., Greenfield. Aaron and Rebecca are contributing the \$50 fee, and will be the contact people for the test.

The VE team is searching for a more accessible location than the one used for many years in Northfield. Since the church on Silver St. charges \$50 for the use of a meeting room, the Aug. 27 test will probably be the only time the club uses it. The search continues for a more affordable, accessible, and convenient location. Keith reported that the Greenfield Library is suitable, but is only willing to book up about a month in advance. In the past we have published test dates for a whole year ahead. Jeanne is exploring the possibility of persuading GCC to allow tests to be given even if she personally is not present. Until now she has only been able to schedule events in her capacity as a faculty member on the condition that she has to be there in person. Al also mentioned he wants to send one more contribution to the Church in Northfield for the use of its space for past tests. Howard reported there is \$400 in the VE account.

Chris gave a report on the transfer of the club's equipment from a storage container located beside the jail to one recently rented by FRCOG for the Mohawk Area Public Health Coalition (MAPHCO) program. It is located across the street from WHAI, at 78 Woodard Rd. The unit number is E86.

Some of the equipment is surplus to the club's needs and should be sold where possible. Al mentioned he plans to attend the NoBARC Hamfest in Adams on August 19th where he will try to sell some of the surplus. Anne and Keith said they would assist.

Field Day: Al will bring his own tent for CW station. Aaron will bring one for the SSB station to be located

inside the Poet's Seat Tower. Chris Barnes will bring a heavy duty 10 ft by 12 ft tent for GOTA station, or possibly for hospitality. He has sandbags to hold it down. The club will use one or two of its canopies with screens for hospitality, first aid, or miscellaneous.

### ***The Membership Annual Business meeting began at 7:15***

The nominating committee (Ron) reported in advance that a nominations had been made for Aaron Addison as president, Chris Myers for re-election as secretary, and Belle Dyer for re-election as Director. No other nominations were made from the floor. A motion was made and accepted to elect the slate nominated. The new term of office begins Sept. 1.

A motion was made to change the regular meeting night from the third Monday of the month to the second Monday. This is necessary since Aaron almost always has a meeting on the third Monday with the Shutesbury Emergency Management Committee. After some discussion, the motion was altered slightly to specify that the E-Board will always meet at 6 PM on the 2nd Monday of the month, whether or not there is a membership meeting that night. A look at a calendar shows fewer holidays celebrated on the second Monday than the third Monday. So in October, for example, we will need to announce an alternative date. The modified motion passed.

It was also agreed that club breakfasts will still be scheduled in reference to the date of the e-board and membership meetings - that is on the Saturday preceding the second Monday, except when that conflicts with public service events.

Howard gave a financial report as follows: Club balance, \$5,768.78; Greenfield High School radio club, \$1,189; VE team, \$427

Al made a motion to approve up to \$500 to purchase a new duplexer for the 440 repeater on Rocky Mountain. He reports that he and Keith have made arrangements for Alex Rock to acquire, install, and tune up a Celwave duplexer with much greater attenuation strength than our old one. Al was not sure whether Alex already possesses one or will have to buy it, so the actual cost will be determined by such things as possible shipping and Alex's work doing the tune up. The motion passed.

Keith reported that the frequency coordinating committee has given the club until December with a construction permit for the 440 repeater. Once we get the repeater working on the new frequency pair, we get a trial permit for another six months. If no one objects to our use of that frequency, we can get a more permanent permit.

Field Day updates: Carson's Cans will deliver a Porta Potty around 8 AM Saturday. Keith and Chris will try to copy league messages sent from W1AW on Friday night. Someone should remember to send a message to the Section Manager, Ray Lajoie, on Sunday morning via the Western Mass. Emergency Net on 3.944 MHz.

League update: Al, Aaron, and Joe plan to go to the semi-annual New England ARRL Division cabinet meeting in late June in Boxboro.

Al urged people to come up with subjects for presentations at general membership meetings. Someone mentioned another session on programming radios.

## **E-Board Meeting July 9, 2018**

Chris Myers KB1NEK

*Meeting began at 6:00 pm. Board members present were Al, Joe, Howard, Ron and Chris. Others present were Aaron, Anne, Rebecca, Erika, and Keith*

Discussion began on the question of moving VE license exam sessions from Northfield Church to a place that is ADA accessible. Aaron has suggested the 1st Congregational Church at 43 Silver St. in Greenfield. It is definitely accessible, but would cost about \$50, which Aaron and Rebecca have offered to pay, if necessary. There is \$412 in the account set aside for VE session expenses. Al as VE team coordinator wants to send \$200 to the Unitarian Church in Northfield as a final contribution. Aaron took responsibility for contacting the 1st Congregational Church to see if we can use it for giving the license test scheduled for August 27. He will make the change on the ARRL web page.

Jeanne has made a request to GCC to allow us to have another person as point of contact to arrange meetings. The next e-board meeting will be Aug. 13, the second Monday.

Elmers: Several have urged the club to put more effort into helping newly licensed hams. At Field Day a couple of newly licensed participants made requests for more technical information. Al offered to write up something for the Communicator to ask for requests from readers about what kind of information would be useful.

Rebecca offered to administer the club's Facebook page, to help give it more circulation and make it more responsive to requests from members, especially new ones. She says it can be used to broadcast club announcements. Prior to Field Day, the ARRL included a pitch for social media for popularizing the message of ham radio. Al plans to revise the Activities Page on the club website.

Al requested suggestions for upcoming club meetings. He mentioned that club member Gerry Lempicki KM1MT is involved in hang gliding. Perhaps we could get him to come talk about it show videos, and tell how he uses radio during such adventures. Anne suggested a program geared towards younger interests, such as communications to satellite stations. Aaron and Rebecca suggested asking Shutesbury resident Tom Williams WA1MBA, who works professionally on micro-wave systems, to address a club meeting. Several other suggestions included the Pathfinder Group and Brian Arsenault.

Chris spoke on the need to work on the storage site, both to make equipment easier to find when needed, and to make lists of the pieces we don't need and should sell. Chris is the point of contact with Greg Lewis, who works for FRCOG, the agency which rented the storage site. Greg will be away until the end of July, and Chris will be away until July 21, so the work project will have to wait.

We reviewed upcoming public service events. The Greenfield Triathlon is on Sunday, Aug.5. Belle, Erika,

and Jeanne have volunteered to organize it. Help is needed. The Bridge of Flowers Race in Shelburne Falls will take place on Saturday, Aug. 11. Chris and Howard are the coordinators, although not invited to the first coordinating meeting. While Chris is away, Howard will attend the next meeting. The Deerfield Dirt Road Rondoné (D2R2) will take place Aug. 18. Al and Bob Solosko will organize the club participation. Sometime in September, the Food Bank will hold its Will Bike for Food (WB4F), for which Ron will be our point of contact. We do not yet know when or where the annual Crop Walk will take place, or who in the club will coordinate our presence. Howard offered to find out the basic information.

Months ago Al, Belle, and Chris talked to Jane Dunning about removing some of her late husband's radio equipment, and to come back at some point to take down his vertical antenna. Since this subject was put on the agenda for the meeting, both Joe and Aaron have expressed interest in acquiring such an antenna, depending on the details. Chris offered to contact Jane Dunning to find out more.

## News, Activities & Articles

### **ARRL NE Division Cabinet Meeting**

AI N1AW

Tom Frenaye, K1KI, is the New England Division Director of the ARRL. The ARRL Board of Directors meets twice each year, and preceding each meeting Tom invites presidents of ARRL affiliated clubs to attend what he calls a "cabinet meeting". Although invitations go to club presidents, they are welcome to bring other officers or interested members. The FCARC has usually been represented by at least two members. On June 30<sup>th</sup> FCARC President AI N1AW, Vice President Joe KB1WVO, and President-elect Aaron KC1CXX attended the summer cabinet meeting in Boxboro.

A major part of the meeting was devoted to discussions of the proposals submitted to the FCC for expansion of Technician license privileges, ideas for getting more young people involved in amateur radio, ideas for clubs to attract new members, and the League's lifelong learning initiative, aimed at encouraging both older and newer members to try new things and work toward higher license classes.

Tom sends out fairly detailed notes on these meetings. I have posted some recent versions on the website in the [Files/ARRL\\_Notes folder](#) .

### **Field Day Report**

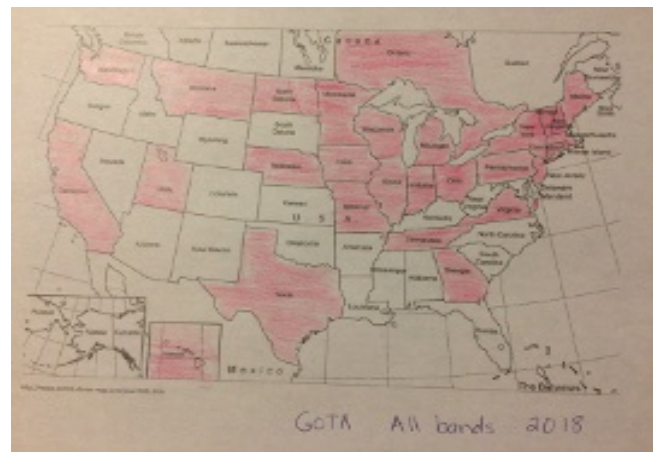
AI N1AW

Officially, Field Day is not a contest. So they say. But there is a complicated system of scoring. First there is a point system for successful two-way radio contacts completed. Contacts made with CW (Morse code) count twice as many points each as contacts made by voice. Groups where all transmitters run less than 150 watts, our category, multiply the contact points by two. For the GOTA (Get On the Air) station any operator who makes 20 contacts gets 20 extra points, and these bonuses are doubled if a full-time GOTA coach supervises. And then there are other bonus points for using emergency power, natural (solar) power,

and several other categories. The FCARC did very well when the final score was totalled. It was the best score in the sixteen years for which we have recorded scores on our web page. The summary below can be seen on our website, along with past records.

Call	Score	Class	QSOs	Mult	GOTA	Sec	#	Club
AC1L	4729	2A	1050	2	KB1MSU	WMA	27	Franklin Co ARC
QSOs: HF c.w. 805, phone: 245 (HF: 150, GOTA: 95)								
QSO points: 3710, bonus points: 1010, total: 4720								
<a href="#">Submitted entry is here.</a> <a href="#">Past scores are here.</a>								

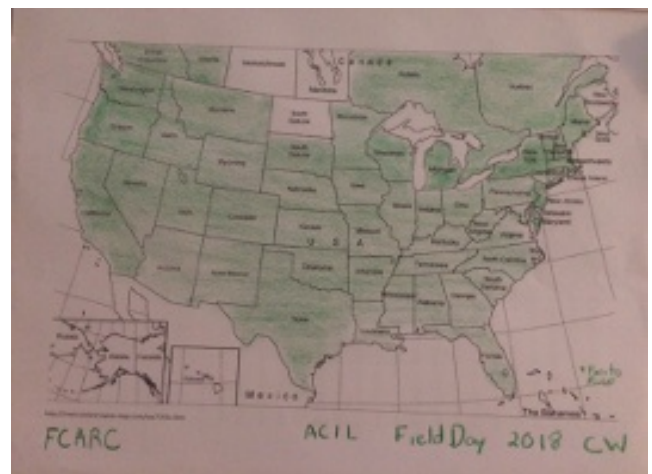
Thanks to the work of Anne KC1CRS, our GOTA station made a big contribution to our score. We also hope that those who participated as supervised guest operators at the GOTA station will remember the occasion and be motivated to go forward to a new or higher class of amateur license. To complete the occasion, Anne gave each successful GOTA operator a certificate summarizing their experience.



On the back side of the certificate there is an outline map of the US, with the states contacted filled in. Anne analyzed the SSB and CW station logs and made similar maps for those:



States worked by AC1L SSB station, all operators



States worked by AC1L CW station, all operators

## **Repeater Report**

AI N1AW

As mentioned in the June E-Board minutes, the club authorized purchasing a new duplexer for the 448.275 MHz repeater in Greenfield. Keith and AI met Alex Rock at the Greenfield site on July 5th, and Alex completed and tested the installation. Both of our Greenfield repeaters on 448.275 MHz and 147.120 MHz are now up and running, with Yaesu System Fusion digital modes enabled. The new frequency of 448.275 does not suffer the interference from Connecticut that we encountered on the old 448.875 frequency. We are running both of these at intermediate (20 watt) power level.

The Leyden 146.985 MHz repeater seems to be running well, but not perfectly. Some more distant users find access is more difficult than it once was. We don't know if there is interference from a new source or if there is another explanation. The repeater is located at the WPVQ transmitter site on Frizzell Hill in Leyden. We hope to have time to do more with it now that the Greenfield repeaters are taken care of.

## **Change of License Exams Location for August; Future VE Plans**

AI N1AW

The August 27th Amateur Radio License Exam session location has been changed. It will take place at the First Congregational UCC Church at 43 Silver St. in Greenfield. The time remains 7 p.m. Aaron Addison KC1CXX will be the contact person for anyone who has questions about this session. Phone is 413-367-6505.

Please check the website Amateur Radio License Exams page for more information and possible future changes in time and location. The FCARC has been conducting License Exams for over 30 years, and for many years we did this four times year, on the fourth Monday of February, May, August and November. Walt Congdon W1ZPB lived in Northfield, and Walt arranged for us to conduct our VE sessions at the Northfield Unitarian Church. The church has kindly accommodated us for many years, but the lack of handicapped accessibility there led us to decide a change is necessary.

As we have looked for other sites to hold our exams we have learned that there are other questions than just location. Some possible locations charge for the use of their space. (The Northfield Church now charges rent to organizations who want to use their space; they have not asked us to pay, but for many years we have made irregular contributions to that organization.) Some organizations do not allow us to reserve a space for multiple future dates. Some spaces are not available later than 8 p.m. on weekday nights. Some spaces are available only on Saturdays. Because there are so many things to consider we have not yet scheduled additional VE sessions after August. Probably we will continue to offer four VE sessions every year in addition to those associated with license classes. But dates, times, and locations are still to be determined.

## **Website and Social Media Notes**

AI N1AW

The FCARC has had a website since 1998. Before I became active in the club the website was important to me as a way of learning when there would be an interesting speaker which would make the trip from home in Amherst to Greenfield worthwhile. When I learned that the club webmaster was looking for someone to take over the job I volunteered. My goal has been to have something new on the front page of the website often enough that members will look at the main page at least once a month with an expectation of seeing something new.

In 2015 the FCARC Facebook Group was created. There was grumbling from people who never used Facebook and didn't see the use. They mostly still don't use Facebook, but the Group has become a medium used by many others, some of them rarely seen at club activities. So it has proved to be an effective tool for extending our reach.

More recently Rebecca K1BKY has volunteered to help with administration of the Facebook Group. She has also set up an FCARC Facebook Page. The difference is that a Group can be viewed only by Facebook members, and can be written to by any person who has asked for membership and approved by an administrator of the Group. A Page works more like a web page – you don't have to have to be a Facebook member to view posts to the Page. Rebecca has also set up an FCARC twitter account.

The Facebook Group and Page and Twitter were all used by Rebecca to help publicize Field Day, incidentally bringing us bonus points for using social media.

## **Social Media and Ham Radio and our Club**

Rebecca K1BKY

Social Media covers a lot of territory. Some club members use social media and some do not. Those of us who do use it use it in different ways. I am by no means an "expert". I'm just a frequent user.

A quick Google search on "Social Media for newbies" gives back several places to get started. Here's a few from the top of the list:

<https://moz.com/beginners-guide-to-social-media>

<https://mashable.com/2012/06/12/social-media-beginners-guide/#8Vy23y15Y8qw>

This is a great opportunity for us but it does take work. We can use social media to get the word out about our events and build community with our members.

For a long time we've had a Facebook group that has had some activity. We've tried to boost that recently. In the past few weeks I've created a Facebook page also. The group is a good place for discussions and community. The page is a good place to post events and information.

We also now have a Twitter account. Twitter is more limited because of the character limit. For the club it's a good place to say "Hey we're doing this... and go to the website for the details...."



The ARRL has a social media presence in several places- Facebook, Twitter, Instagram, YouTube, SnapChat, and LinkedIn.

All the “cool kids” use Instagram and Snapchat. I’m personally NOT that cool yet so I haven’t taken those on for the club. If you are one of the “cool kids” and want to help let’s talk! We could expand our club’s social media outreach to other platforms.

From personal experience- The Facebook group has some local interaction. The Facebook page helps us to promote the club to people who might not be members. With Twitter we can use #Hashtags and reach people who have never heard of us. I found Twitter to be a great source of support when I was studying for my license exams. By using #hamradio and #amateurradio I was able to build an online support network that guided me toward better study materials and acted as an online support group when I struggled with the Extra exam. For me, Twitter and Facebook reach different audiences. Your mileage may vary.

I think that having a solid website is the backbone of our club’s online presence. From that we can reach out through social media to draw people in. Think of social media as the advertising and the website as the actual storefront. Of course ourselves, our events, and our community are the real deal behind it all.

A longer version of this article is available at <http://storiesfromclessonville.blogspot.com/2018/07/social-media-ham-radio-and-our-local.html>

## **Public Service Notes**

AI N1AW

August is our peak season for public service events. We have something coming up on every weekend. For the events below there will probably be signup lists at the August 4th breakfast at Denny's. But, please, if think you can participate in some of these events, please e-mail the person listed as coordinator, right now! Planning is a lot easier if resources available are known ahead of time.

We have quite a few newly licensed hams resulting from the classes we taught at GCC in Fall 2017 and Spring 2018. If you haven't worked a communications event before you can pair up with someone. Or if you don't have a mobile or portable radio let the event coordinator know and we'll find you a loaner.

Note that several of these events also give T-shirts to volunteers. Those interested should volunteer early and give their T-shirt size.

The **Greenfield Triathlon** will take place on Sunday August 5th. Erika KC1IJJ, [erikalaforme@yahoo.com](mailto:erikalaforme@yahoo.com) is coordinating. If she knows in advance that you are going to participate she can assign you a position and tell you about it by e-mail in advance. Net control will start to set up at the Green River Swimming Pool at 7 a.m. As this is being written we are not sure whether net control will be inside the vehicle-restricted area or outside in the parking lot. If you have an assignment and know how to find it you can go directly to your position and check in via the repeater without fighting the crowd at the swimming pool. Everyone along the route should try to be in place by 7:30; otherwise you may have to talk your way past police who will want

to close roads to traffic. When the event is over be sure to return to the swimming area, there is always a lot of food for volunteers as well as athletes.

The **Bridge of Flowers Road Race** is on Saturday August 11. Contacts are Chris KB1NEK, [camyers\\_1@verizon.net](mailto:camyers_1@verizon.net) or Howard N1LUP, [howfield@comcast.net](mailto:howfield@comcast.net). Volunteers should check in at Net Control which will be set up starting at 7 a.m. on Bridge St in Shelburne Falls. The route has changed this year, volunteer positions will be different. There is a short race in the town on the Shelburne side preceding the long (5 mile) race. The Bridge of Flowers committee wants a list by Friday August 3rd.

The **Deerfield Dirt Road Randonee (D2R2)** is Saturday August 18. This is a benefit for the Franklin Land Trust. Contact Al N1AW, [aswoodhull@yahoo.com](mailto:aswoodhull@yahoo.com) or Bob W1SRB, [bobsolosko@outlook.com](mailto:bobsolosko@outlook.com) to sign up. Over 1000 cyclists will each follow one of six routes, the longest of which is 180 km. Headquarters and net control will be in Deerfield, riders will range as far as Marlboro VT in the north, Hawley in the west, and Williamsburg in the south. Radio communication is needed between Deerfield and sites in Colrain MA, Guilford VT, and Whingham VT - cell phones are useless in much of this area. We will be active from 8 am until after 4 pm, some sites we will cover with shifts of two to four hours. Volunteers may check in by radio if they are to be stationed in northern areas. All volunteers are welcome to finish the afternoon at the event headquarters in Deerfield, where dinner and beer will be available to all.

The **New England Green River Marathon** on Sunday August 26 is new this year. Joe KB1WVO, [joehenefield@comcast.net](mailto:joehenefield@comcast.net) will coordinate FCARC volunteers. The race will begin at Marlboro College in Vermont and end at Greenfield Community College. The organizers have asked for radio support for an EMT team that will be stationed at the Guilford VT covered bridge. Presumably this will require a fairly small number of volunteers over a long stretch of time, with an early start and a late finish, possibly working in shifts as with the D2R2.

Future Events: **Will Bike4Food** Benefit for Western Mass Food Bank, September 30. **Crop Walk**, October 14. More info next month.

### **FCARC First Annual YL Picnic**

Anne KC1CRS

Since the fall of 2017 FCARC has seen markedly increased enrollment and participation of women. We had the use of the pavilion at Northfield Mountain Recreation and Environmental Center all day on Saturday, July 21, 2018 for our first annual YL picnic. The weather was amazing and the location beautiful. While the turnout was small the picnic was a huge success. Fresh tomato, basil, and mozzarella salad; hummus; cold beverages; fresh fruit; and lots of snacks made for delicious dining. We were able to contact Greenfield, Turners Falls, Montague, and Colrain from the banks of the Connecticut River on two meters using the Leyden repeater. We met a wonderful family who enjoyed trying out amateur radio with us and hope to join us for the Fall Technician class at GCC. Special thanks to KC1DCQ, KC1IJJ, and Northfield Mountain.



## The Elmer Column

### **How Can We Help?**

Aaron KC1CXX and Rebecca K1BKY

Are you newly licensed in ham radio? Do you have questions? Do you need a little or even lots of help getting started?

The FCARC is here to help you, we have monthly meetings at 7:15 pm on the second Monday of each month. These meetings have demonstrations and talks on a wide variety of topics and will provide you a good place to meet people like you, and people who have decades of experience. Please check <http://www.fcarc.org> for the exact schedule.

If you have specific questions you are welcome to contact me at [kc1cxx@arrl.net](mailto:kc1cxx@arrl.net) with any questions. We also welcome suggestions on things you would like to have a demonstration on at one of our meetings.

See Below for a list of topics we are considering

*Poll: How Can We Help, please add options that you would like included.*

*[ ] What's Pathfinder Regional doing with ham radio?*

*[ ] Emergency Communications*

*[ ] Learning about FT-8*

*[ ] Programming your radio*

[ ] Building antennas (let us know if there is a particular kind)

[ ] Mobile communications

[ ] General exam prep class

Please add your thoughts to this list! You can email your comments to [KC1CXX@arrl.net](mailto:KC1CXX@arrl.net).

### Tech License Class at GCC in October

The Fall 2018 GCC Lifelong Learning Catalog lists an Amateur Radio Technician License Class, course WFD 522-90, scheduled for six sessions, T/Th Oct 9-25, 6 pm to 9 pm. Jeanne Dodge is listed as the instructor. The description reads, "Be Prepared. An FCC-issued amateur radio license allows you to operate two-way radios to communicate with other licensed amateurs in your own town or in foreign countries. The licensing exam will be held on the last day of class."

Stay tuned, let Jeanne know if you want to help teach. Planning is still in a preliminary stage.

### Pictures, Field Day





Pictures, Storage Moving Day



## Technical Stuff

(Guest column)

### Get your free copy of *A Field Guide to Simple HF Dipoles*

by Dan Romanchik, KB6NU

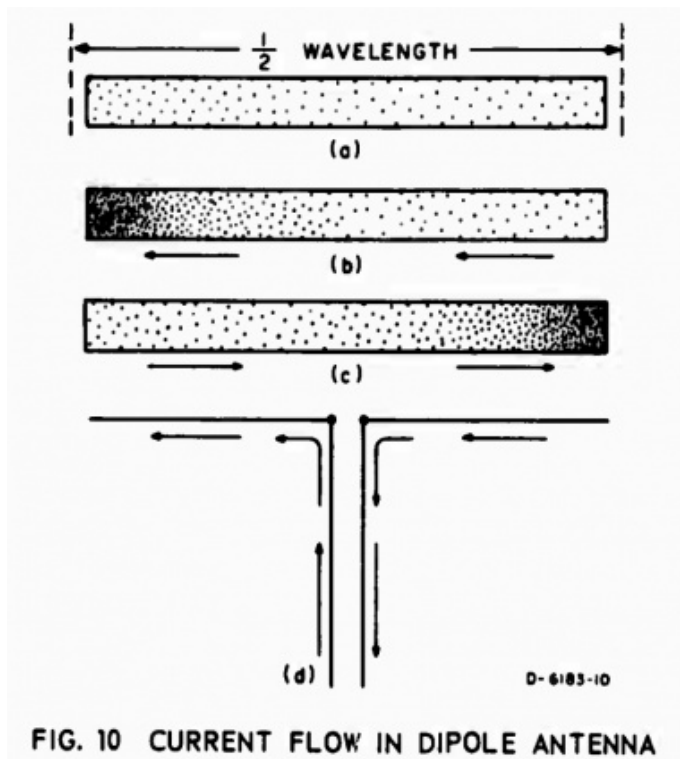
A link to *A Field Guide to Simple HF Dipoles* (<http://www.dtic.mil/dtic/tr/fulltext/u2/684938.pdf>) was posted to reddit recently, and I liked this document so much that I thought I would share it with you. It was originally written for the military, but is now available for free from the Defense Technical Information Center.

The preface to this document reads:

“Under project Agile, Stanford Research Institute has supplied several teams to assist operating personnel in improving the performance of field radio networks. In this work, it has been observed that U.S. military and civilian antenna manuals often contain misleading information regarding the operation of field antennas and tend to be overly complex. Consequently, this guide has been prepared to assist in training personnel concerned with the construction of simple HF antennas in the field.”

I must say that *A Field Guide to Simple HF Dipoles* does this very well. It not only explains how dipole antennas work, it also does a very good job of describing the basics of radio waves and propagation. And it does this without getting overly technical.

For example, below is Figure 10. It's used to describe current flow in a dipole antenna.



The *Field Guide* reads:

“Electric current in a conductor consists of the flow of small particles called electrons. Figure 10(a) represents a dipole with electrons in it. When the transmitter is turned off, the electrons distribute themselves evenly throughout the dipole, as shown. All electrons repel each other and try to get as far from each other as possible; that is how they achieve the uniform distribution shown in Figure 10(a). When the transmitter is turned on, the electrons flow back and forth from end to end as shown in Figures 10(b) and 10(c). First the electrons flow to the left and crowd at one end as shown in Figure 10(b). Second, since the electrons repel each other, they push off to the right and get crowded together at the other end, as in Figure 10(c).”

It then uses this description to talk about voltage and current distribution along a dipole antenna:

“The difference between voltage (volts) and current (amperes) in a dipole is also illustrated by Figs. 10(b) and 10(c). You can see that the maximum flow of current is going to be in the middle of the dipole. An observer at the center of the dipole would see the electrons rush past, first one way and then the other. The center is the maximum current point. Very little current flows near the end of the dipole; in fact, at the extreme ends there is no current at all for there is no place for it to go. However, at the ends of the dipole, there is a great change of voltage; when the electrons are densely packed, this represents a negative voltage, and when there is a scarcity of electrons, it represents a positive voltage. Thus you can see that the voltage at each end swings alternately positive and negative. An end of the dipole is a maximum voltage point.”

A Field Guide to Simple HF Dipoles is packed with all kinds of goodies like this. Download it (<http://www.dtic.mil/dtic/tr/fulltext/u2/684938.pdf>) right now.

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When he's not building dipoles or teaching ham radio classes, Dan blogs about amateur radio, writes exam study guides ([www.kb6nu.com/study-guides](http://www.kb6nu.com/study-guides)), and operates CW on the HF bands. Look for him on 30m, 40m, and 80m. You can email him about your experiences with simple HF dipoles at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).



# NoBARC

Northern Berkshire Amateur Radio Club



SANCTIONED

# HAMFEST

## Sunday Aug. 19, 2018

Bowe Field (Adams Agricultural Fair Grounds)  
Right off of Route 8 in Adams, Ma.

Large Pavilion !! - Tailgating - Food - Coffee - V.E. Session 9:00 A.M. - LOTS OF PARKING !!

Check [www.nobarc.org](http://www.nobarc.org) For Updates !!

### Prize Raffle 11 A.M.

Presence NOT required to win

Raffle Tickets  
\$4.00 ea. / 3 for \$10.00  
Available through NOBARC Members

1st FT 100DR and HRI 200 wires X



2nd FT 3200DR  
#

3rd FT 70 DR

### Gates Open:

**Sellers: 6:30 A.M.**

**Buyers: 7:00 A.M.**

Admissions: \$5.00  
Children under 12 FREE!

Tailgating (outside):  
\$10.00 w/one admission.

Vendors (pavilion):  
\$10.00 w/one admission.

**Talk-in On 146.91 / PL 162.2**

### DIRECTIONS

Location: N 42° 39.163', W 073° 06.888°

3 Orcutt St Adams MA 01220  
Contact Eric @ 413 743 9975

#### From the North

Route 8 into the town of Adams. Look for the Racine Corn sign at Butler Road on the right side of the road. Approximately 1/4-mile South of the North Adams Line.

#### From the South

Follow Route 8 into Adams. Go through the town of Adams on Route 8. Look for the Racine Corn sign at Butler Road on the left. Approximately 1/4 mile past Pfizer's (Specialty Minerals).

#### From The East or West

Take I-90 to Exit 2. Follow Route 7 North into Pittsfield. Take Route 8/9 toward Dalton. Take Route 8 before Dalton to Adams.

*You see, wire telegraph is a kind of a very, very long cat. You pull his tail in New York and his head is meowing in Los Angeles. Do you understand this? And radio operates exactly the same way: you send signals here, they receive them there. The only difference is that there is no cat.*

*- Albert Einstein, when asked to describe radio*

**THE COMMUNICATOR** is an informational publication for members of the Franklin County Amateur Radio Club.

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*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: Jeanne A. Dodge, KC1DCQ ([j.anndodge@gmail.com](mailto:j.anndodge@gmail.com)).*

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