

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

FIRST CLASS MAIL



THE COMMUNICATOR

THE COMMUNICATOR

September 2017

Upcoming Events

- **Sept 16** Sat 8:00 am Breakfast at Denny's Pantry, 10:00 am Franklin County Amateur Radio Emergency Communications group at GCC Hammond Studio
- **Sept 18** Mon 6:00 pm E-Board; 7:15 pm General Meeting at GCC Hammond Studio, Topic: Some ARRL Issues (Discussion led by Al, Chris, and Joe)
- **Sept 24** Sun all day Public Service: WillBike4Food (Food Bank of Western Mass. benefit)
- **Oct 14** Sat 8:00 am Breakfast at Denny's Pantry, 10:00 am Franklin County Amateur Radio Emergency Communications group at GCC Hammond Studio
- **Oct 15** Sun 12:00 pm Public Service: Crop Walk, Greenfield (Church World Service benefit)

- **Oct 16** Mon 6:00 pm E-Board ,7:15 p.m. General Meeting, Topic: Topic TBA
- **Oct 10, 12, 17, 19** Tues/Thurs and **21** (Sat) Technician License Class at GCC

September 16th breakfast guest: Ray Lajoie, KB1LRL, candidate for ARRL WMA Section Manager, is expected to attend our Saturday breakfast on September 16 to do an informal meet and greet and maybe just a short intro about himself and what he will look to do if elected.

About the September 18th Program: In last month's *Communicator* we mentioned discussions of the Amateur Radio license structure that are going on within ARRL. In this month's issue we present a guest opinion from Dan Romanchik, KB6NU, on his view of some of the ARRL's problems. The editors of *CQ Magazine* have recently expressed doubts about the ARRL's position on pending legislation intended to deal with problems many amateurs have with antenna restrictions. The CQ document can be seen at

http://www.cq-amateur-radio.com/cq_highlights/2017-cq/2017-08-cq/2017-cq-white-paper.pdf

With an election for a new WMA Section Manager coming up we would like to have a discussion about these issues at our September meeting.

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 a receipt mailed to you.

Public Service Event: WILLBIKE4FOOD:

We will be providing communication support to the Food Bank of Western Massachusetts 50 mile and 100 mile bike routes for the annual WILL BIKE 4 FOOD event. These routes are mostly unchanged from last year. They have not yet determined the water stop locations for these routes. We will need operators for some of the water stops, operators for roamers in the areas of poor or no cell phone coverage and for net control in Hatfield. The event headquarters will be located at the Lion's Club Pavilion in Hatfield, same as last year.

We will need about 12 people to provide support for the event. Sign up will be available at the September monthly breakfast and at the regular September meeting. In addition, people can notify me or any of the club officers if they want to help with the event. This event will take place on the last Sunday of the month, September 24th.

Ron Niswander, K8HSF (reniswander@gmail.com)

Secretary's Report

E-board meeting Monday, July 17, 2017 – Chris Myers KB1NEK

1. The Hustler G7-144 antenna for the Leyden repeater has been purchased from HRO. Scott Conti will make an upper arm bracket to stabilize it. He will make plates for crossing U-bolts. Al believes the tower legs are about 18 inches apart. He says he and Scott plan to go up and take a close look before Scott starts his work.

2. Bob Dickerman has started to work on repairing the old repeater unit taken from the Leyden site because it started to malfunction after a recent thunderstorm. The main problem is that output power from the transmitter was very low, less than 1.0 W. A second, similar Mitrek transmitter that failed a couple of years ago had a similar "low output power" condition. In recent work on that second transmitter, Bob found that the low power condition was caused by a broken solder joint to one of the power amplifier transistor collectors; also possibly an open T/R relay was suspected, but not confirmed; shorting the relay contacts and re-working the transistor solder joint raised the output power on the second transmitter to a generally steady 34.0 W. However, the power was once seen to unexpectedly jump up to 43.0 W before dropping back to 34.0 W, and, further, the power was not able to be adjusted to a steady value any higher than 34.0 W (the transmitter is rated for 110.0 W, although we would have to reduce this for 100% duty repeater operation). No detailed testing of the first, most recently failed transmitter has begun yet. (Update: One original problem was that we didn't have a repair manual for the 110 W model of Mitrek transmitter. Bob recently ordered and received a manual with proper schematics and PCB artwork for the 110W transmitter, and will soon start looking at both of the 110 W transmitters again with the "new" 110 W manual in hand.)

3. During Field Day, high winds snapped a metal brace on the frame of the club's canopy. For several years, parts of the frame have developed cracks, so it is no surprise it finally broke. Al saw a similar canopy and frame on sale at Home Depot for \$99. A motion was made and passed to buy it. Chris volunteered to make the purchase.

4. A week or so earlier, Rob Quinn-O'Connor, the CERT coordinator, informed Al that CERT will need all the space in its storage container at the jail, and that we will have to move our equipment out by the end of the summer or early fall. Chris mentioned looking at several storage sheds at Home Depot, ranging from flimsy ones costing about \$550 to more substantial ones costing up to \$3,000. Al mentioned a temporary garage unit, which is a roof only structure, for \$169. Someone suggested we might be better off looking for a utility trailer, which would have the advantage of mobility in case we need to park it in a different property after a while. There seemed to be a consensus that we look in that direction. Joe volunteered to do some research.

5. Volunteer lists for Triathlon and Bridge of Flowers Race are slow to get filled. Several names were mentioned as deserving special phone calls for help. Al is also working on getting volunteers for the Deerfield Dirt Road Randonnee (D2R2).

E-board meeting Monday, August 21, 2017 – Chris Myers KB1NEK

Present were: Al Woodhull, Bob Dickerman, Bruce Fuller, Carter McDonald, Howard Field, Jeanne Dodge, Joe Henefield, Keith Rowley, Ron Niswander, and Chris Myers taking notes.

1. Ron reported on plans for the Bike for Food event which will take place Sunday, 24 Sept. The starting point and location for our net control station will again be in Hatfield. We will probably again make use of two repeaters because the southern-most part of the course cannot reach the Leyden

repeater, and we will need to use the one in Deerfield. While the 100 mile cyclists will start around 6:30 AM, we do not need to start radio operations that early. Ron plans to meet again with Food Bank people on Friday.

2. Al has been told by Rob Quinn-O'Connor at FRCOG that we will have to move our equipment out of the storage container at the side of the jail. They hope we will be out by the end of summer, but Al already told Rob that is not likely. We discussed several options. A utility trailer would be the best option because we can park it at one place for a while then move it again if we have to. Joe has looked at some possibilities and found the prices ranging \$2,000 and up.

Sheds used for garden tools start at around \$600 at Home Depot and range up to \$3,000. The cheapest ones can be put together from a box of parts, and the display models look very flimsy. Al mentioned he once built a garden shed that lasted about 25 years, but quickly said he is not volunteering to do that again. Even if we had a couple of volunteers to build a shed from scratch, we still have a problem if we need to move it again in the future, not an easy task for a home made shed.

An alternative raised was to rent a storage locker. Someone had looked up a price at a storage place in Greenfield and found a rate of \$65 a month, for 5ft X 10ft, which would come to \$780 a year. In three years that would add up to \$2340, about what a decent utility trailer would cost. As was pointed out, however, a trailer would have to be registered and insured if it is actually going to be towed on the road.

Questions were raised about how much space we need for our equipment. The space we have been using at the FRCOG container at the jail is about 8ft L by 3ft W X 10ft H, and is not large enough for the Hex beam that Bob Solosko donated or the plastic rain shields Dick Burnham made for Field Day. The hex beam and rain shields have been stored in members' garages for several year. Space large enough for them would be roughly 15ft L X 5ft W X 10ft H.

3. Now that the antenna at the Frizzell Hill repeater site has been replaced, we need to repair or replace the aging and defective Mitrek transmitter unit. Bob Dickerman has been working for a couple of months since the unit was damaged, probably by lightning. Bob actually has a couple of Mitrek 2m transceivers at his house, the recently damaged one and another that was used as a spare, but stopped working properly some time ago. Bob says he has fixed one of the units so it will run at 35 watts, probably with no problems. He thinks the unit was rated at 75 or 150 watts, but doesn't think we should try to run it at such high power. The units may be 30 years old or more, so some of the parts are not so robust as when new. If the old Mitrek will work reliably, we still need to make sure the old controller unit wasn't damaged by the same lightning strike. If it is working, or can be made to function without too much effort, we all would like to see the auxiliary features of that controller back in operation.

Recently Yaesu announced it is coming out with the second generation of the dual digital and analog repeater we bought two years ago. We have two of them - one at the water department site in Greenfield, and the other now working in Leyden, but which was working as our 440 repeater. The advantage of the Yaesu repeaters is that they can easily be set for operation on the 2m or 440 band, and will work traditional FM or the new C4FM digital voice mode Yaesu is promoting.

Final details of the upgrade models are not yet available, especially the critical detail about how much power they can run on a 100% duty cycle. Yaesu has promised a trade in option for owners of the current DR-1X who want to move to the DR-2X. Al says the company will release the full details on Sept. 2. We may need to consider the upgrade if Bob can't put the old Mitreks back into reliable running shape. However, even if the DR-2X will run a full 100% duty cycle at 50W, it is not compatible with our old controller unless we buy an additional interface.

Al offered another alternative - to use the final amplifier stage of one of the Mitreks to amplify the output of the Yaesu DR-1X. This is an interesting possibility, but would probably need time and effort to make it work.

The need for storage and to bring our repeater system back up to full power will obviously cost more money than we have on hand. Howard estimated we have about \$1,000, but expect to receive a bill from the climbers who replaced the antenna. The engineer for WPVQ originally estimated that our cost would be around \$300, but it appeared to those of us who watched it done, that the installation of the upper support bracket took them longer than we or they might have expected.

4. Knowing we were going to need to raise more money than usually comes in from annual dues, Chris and Joe presented their draft of a fund raising appeal letter. After some discussion, Al made a motion to have Chris and Joe re-write the letter to include the kind of details we had just discussed in regard to storage and the repeater. When they are done, they will circulate a final version by e-mail and ask for comments, rather than wait for another e-board meeting. When the new version appears to be agreeable, it will be published in the Communicator and sent as an e-mail message.

5. We outlined events scheduled for the next two months.

a. Club breakfast Sept. 16

b. Membership meeting Sept. 18 Al will invite Ray Lajoie to attend. Ray has announced he is a candidate for the Section Manager election later in the fall.

c. We will give classes for technician license on Oct. 10,12,17, and 19, with a review and test given on Oct. 21.

d. Club breakfast Oct. 14, membership meeting on Oct. 16

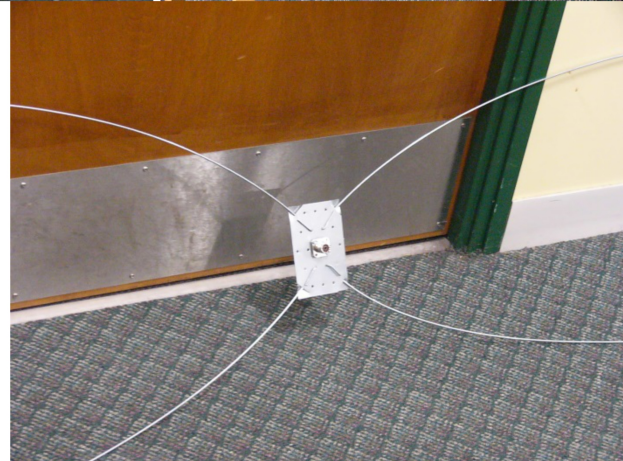
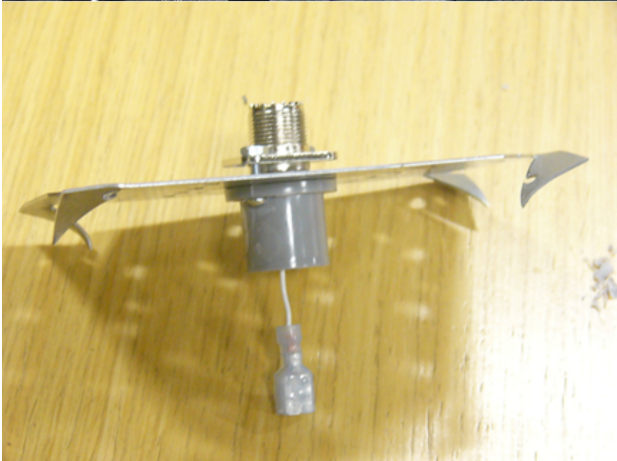
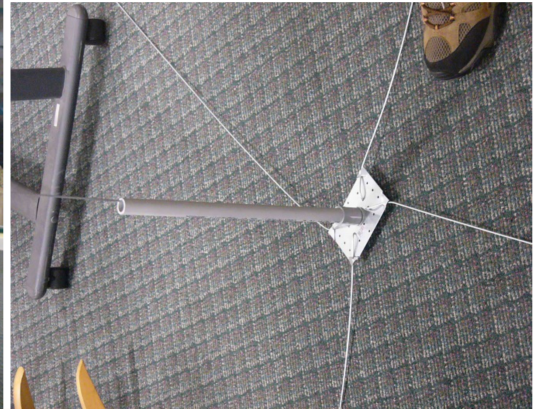
e. The Crop Walk will take place some Sunday in October - possibly on the 8th. We will need to find someone to coordinate our activity there. (Note, date will be Sunday October 15)

6. Al asked that someone consider taking on some of the tasks of keeping our web page up to date.

Emergency Communications group

6 Meter Antenna Build

After the club breakfast August 5, 2017, the Emergency Communications Group of FCARC met at GCC Hammond Studio (thanks Jeanne), for a 6 meter antenna build project. Many thanks are due to Aaron, KC1CXX, who presented the workshop. He also generously provided the materials which he had pre-drilled and pre-soldered. He presented an antenna model that is low cost with most of the materials available from Home Depot. This workshop was attended by Al, Chris, Bob D, Joe, Jeanne, Roy, Bruce, Keith, and Justin.



News, Activities & Articles

Upcoming Tech class to get licensed

The Club is going to run a class for folks who want to get a Tech license. We are looking at four evenings over two weeks and a Saturday morning followed by an exam in the afternoon. The cost will be the book (about \$25). If you know anyone who would like to have some support to get their license please have them contact Jeanne Dodge KC1DCQ, dodge@gcc.mass.edu. The class will be at GCC and Jeanne is the contact person there. A list will be started for those who are interested. If you know of anyone who would like to take the class, they can register thru this link.

<http://greenfieldcc.3dcartstores.com/search.asp?keyword=radio+license&search=GO>

VE Session results

As a result of the August 27th VE session we have a new Technician Abraham Jansen KC1IBE from Keene. Listen for him on the airwaves. Also, Peter Brulotte, KC1FEN from Colrain upgraded to Extra.

Annual Fox Hunt

We will have our annual fox hunt on Saturday, November 18th, after the club breakfast. All are invited to come; if you know anyone who would like to join us they are most welcome. If you have never done a fox hunt, there will be folks with experience to pair up with. Participants in the Emergency Communications Group are invited to participate.

The Annual Greenfield Triathlon , Richard Stewart KB1NOX

The night before the Triathlon it poured down rain until 5:00 AM. The temperature was ideal for the athletes. The race went off without a hitch and no fallen cyclists and no injuries of any kind. The good news overall, was that every participant in the race whether on the short course or the long course, this year, no one had to be given a lift back the pool ground. Every participant made it all the way around and came in under their own power. At the Net Control tent we had visitation of the Triathlon referee KB1WWR, Robert Betts from Rochester, New Hampshire.

Volunteers this year were: K8HSF Ron Niswander, KB1NEK Chris Myers, N1AW Al Woodhull, K1LKY Roy Morgan, WA1QKT Bob Dickerman, WA1TVS Carter MacDonal, KC1CRS & KU1N Anne & Keith, KB1AKU Gary Roy, KB1NOG Belle Dyer, New member first event KC1HEG Justin Norman, KB1WVO Joe Henefield and Erika LaForme.

Bridge of Flowers Race, August 12th, Chris Myers KB1NEK

Saturday, August 12, fourteen members of the club provided communications for the safety of runners at the annual Bridge of Flowers Race in Shelburne Falls.

For the second year, we had Anne, KC1CRS, "shadow" the race director all through the event in order to provide quick information to her needed for making on the spot decisions. For the first time, we also provided an operator, Belle, KB1NOG to start early at the registration desk to relay requests or information from there to the director. It appears that placing these two operators at key decision making points, starting well before the race began, helped to insure a smooth start to the day.

The weather favored the racers. While it rained during the night before the start, it remained dry and cool throughout the event. In contrast to last year, there seemed to be no racers suffering from heat, and no shortage of water at points along the way.

As always, the club's efforts were appreciated by the race staff while providing us an opportunity to exercise our skills

Deerfield Dirt Road Randonee (D2R2), August 20th, Al N1AW

Our role in the annual D2R2 benefit for the Franklin Land Trust is very specific: we provide communication between the event HQ in Deerfield and several sites where no other form of communication, including cell phones is possible, short of satellite phones (which were tried before we became involved and found to be unsatisfactory as well as extremely expensive). The pictures below show the site next to the Guilford VT covered bridge where 1000+ cyclists are provided with lunch. This year the event went well, there were no accidents or other emergencies to report. However, when the event had barely begun event staff at two sites found that there had been mistakes in provision of needed supplies and equipment. We delivered the messages and our volunteers also provided transportation to get what was needed to the remote sites.

As always, our volunteers also enjoyed the delicious dinner that followed the event, with liquids

donated by Berkshire Brewing Company.



New Repeater Antenna

On August 16th our new antenna, with the brace custom made by Scott, N1LYW, was installed at the KB1BSS repeater on Frizzell Hill in Leyden. The photos show Scott testing the fit of his brace at the base of the tower before installation day, and the professional climbers installing the antenna and adding the brace.



Some musings from Bob Bessette, W1DKY

While the drift in our hobby seems to be away from the technical is pretty obvious, our hobby, at first glance, would seem to be “dumbing down” ham radio with the result that new hams seem to have little knowledge of what makes the hobby possible.

Accordingly, what follows is a very elementary treatment of three basic things that help to make the hobby understandable by using a historical approach;-The VOLT, the AMPERE, and the OHM-

The VOLT-Traceable to the last name of Alexander Volta, an instructor in a school in North East ITALY, who while visiting another instructor who was engaged in dissecting frogs – divesting them of the legs – for use in studying their response to mysterious electrical experiments, noticed that when lightning flashed nearby, the frogs' legs moved. How could this be – there was no visible connection between the lightening and the legs? While at first Volta seemed inclined to dismiss the problem, fortunately he thought better of it and wrote up the phenomenon which was then published in the school "newspaper." As a result, his superiors decided to recognize him as the discoverer of the unit of force in electrical engineering that we recognize as the VOLT.

The AMPERE – Work done by another fellow in Italy resulted in the "birth" of the AMPERE. This unit is used to identify how much electrical current is flowing in a circuit.

The OHM – The unit that controls the flow of electrical current thus reducing the amount of pressure is the OHM named in honor of Frederick Ohm, a Danish mathematician.

So, three important things that should be known when hams become involved in ham radio and the equipment used by hams are: the VOLT, the AMPERE and the OHM.

The relationship of these three things is shown below:

VOLTAGE = CURRENT TIMES RESISTANCE

CURRENT = VOLTAGE DIVIDED BY RESISTANCE

RESISTANCE = VOLTAGE DIVIDED BY CURRENT

These should be memorized.

In closing, let's just agree that we are talking exclusively about direct current electricity. Alternating current – let's leave for the trained electrical engineers.

Field Day 2017 VHF (6m) Some additions to the notes from the last issue about Field Day – Phill Grant, N1YPS

FCARC has been on 6 meters every field day since 2011. Often it was a struggle to exceed a dozen QSOs. WELL, this year was fantastic!! We logged 36 contacts (plus a few dupes) and we actually witnessed several pileups. As N1EWK often told me; 6m is the magic band.

I used my home-made 3 element beam mounted on top of the tower and the rotator was of the "armstrong" type. The transceiver used was a IC-706. We were located in W1SRB's tent which stood gale-force winds all day Saturday...or so it seemed.

Our (unofficial) log sheet showed contacts in New England and from the following states: NY, NC, AL, KY, MO, TN, IN, KS, FL, GA and OH.

Operators were: KU1N, KB1NOX, W1SRB and N1YPS.

-Phill Grant, N1YPS, FD 6 meter station manager.

Guest Opinion: ARRL Finally Realizes Status Quo Isn't Going to Cut it

By Dan Romanchik, KB6NU

An item in the July 2017 ARRL board meeting caught my attention. It notes that a committee of staff members was tasked with identifying the challenges facing ARRL and possible solutions. The August 3, 2017 issue of the ARRL Letter ran the following report:

"ARRL Chief Executive Officer Tom Gallagher, NY2RF, presented the report of six Headquarters staffers who had been tasked with identifying the challenges facing ARRL and devising feasible solutions. Specifically, the committee addressed market research findings that have continued to reveal that only a small percentage of new hams join the League, and only about one-half of new hams actually get on the air.

"The committee began with the premise that ARRL must act in order to remain relevant going forward. It proposed instituting a Lifelong Learning Program to focus on developing a clear developmental path for all radio amateurs, from newcomers to established radio amateurs. The committee recommended the creation of new programs and services to increase the knowledge base of newcomers in order to get them active, as well as programs to keep experienced amateurs up to date with changing technology and practice."

The board meeting minutes were a little more detailed:

"Mr. Roderick yielded the floor to CEO Gallagher who presented the report of a committee of staff members tasked with identifying the challenges facing ARRL and possible solutions. The members of the committee - Diane Petrilli, KB1RNF; Norm Fusaro, W3IZ; Becky Schoenfeld, W1BXY; Debra Jahnke, K1DAJ; Steve Ford, WB8IMY; and Sean Kutzko, KX9X, joined the meeting at 9:20 AM, to present this report. Their findings show the importance to ARRL of getting newly licensed hams actively on the air and how that relates to continued growth of the organization. In order to achieve that goal, the committee proposed developing a lifelong learning department, which would address the needs of all amateurs with the focus being on developing a clear knowledge path for all amateurs. They proposed creating straightforward programs and services to enhance the knowledge base of new amateurs as well as to enhance their sense of community within the hobby.

"Another recommendation involved refocusing the priorities of the emergency preparedness department to address the current trends in public service.

"A third recommendation was to improve the value proposition of membership. The committee proposed doing a survey, which would include test material that is targeted to the interests of newer hams. The content would include a strong emphasis on serving communities, agencies, and partners; digital communications, and human interest. Projects would be simple. The survey would obtain information on new ham's interests and needs in the hobby. The survey would also try to determine the delivery system that might best meet the newcomer's desire for receiving this type information (print, digital, messaging, etc). The test material is proposed to be delivered to recipients in fall 2017.

"From the committee's vantage point, the status quo is no longer adequate: we need to have a vision of the future and convey it to our current membership. If we do not convey the need to change the paradigm, the ARRL's relevancy will not move forward."

The good thing here is that the ARRL finally realizes that there are some serious problems. I've written about these in the past. I've challenged the ARRL to set a membership goal of 25% of the licensed amateurs in the U.S (<http://www.kb6nu.com/arrl-membership-is-25-asking-too-much/>). I've also

encouraged the ARRL to play a bigger part in emergency communications research (<http://www.kb6nu.com/go-big-go-early-go-fast-smart/>).

Unfortunately, it appears that the ARRL is approaching this issue in typical ARRL fashion. That is, working on these issues in their little cocoon in Newington and then issuing these statements as if they expect everyone to just fall in line. I quote, "From the committee's vantage point, the status quo is no longer adequate: we need to have a vision of the future and convey it to our current membership." That approach is doomed to failure. Any "visioning" or strategic planning that doesn't get the membership involved right from the start just isn't going to work.

The ARRL HQ staff just doesn't have the horsepower to pull this off properly. The staff is already pretty bare bones, and they still have to publish QST every month, keep Logbook of the World running, process thousands of license applications, etc., etc. The only way this is going to be a fruitful effort is if they get members—and lots of them—involved in this process.

If you agree with me, please let your director know. Contact your director and tell him that you want to be involved. The status quo of having the HQ staff not working with the membership "is no longer adequate." That's how we got here in the first place.

Dan, KB6NU, is the author of the "No Nonsense" amateur radio license study guides and blogs about amateur radio at KB6NU.Com. You can email him at cwgeek@kb6nu.com.

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: Joe Henefield, KB1WVO (joehenefield@comcast.net), Treasurer: Howard Field, N1LUP (howfield@comcast.net), Secretary: Chris Myers, KB1NEK (camyers1@verizon.net), 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: Jeanne A. Dodge, KC1DCQ (j.anndodge@gmail.com).