

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



FIRST CLASS MAIL



THE COMMUNICATOR THE COMMUNICATOR

May 2014

Upcoming Events

- Club Breakfast: Saturday May 17, 8 a.m.: Denny's, Greenfield
- E-Board meeting, meeting & Program: Monday May 19, CANCELLED –see Calendar below
- VE License Tests: Monday May 26, 7:00 p.m.: Northfield Unitarian Church
- FCARC Picnic: Saturday May 31: Leyden Recreation Department's pavilion at the Pearl Rhodes Elementary School, Leyden
- Club Breakfast: Saturday June 14, 8 a.m.: Denny's, Greenfield
- E-Board meeting: Monday June 16, 6 p.m.: Greenfield High School cafeteria
- Annual Meeting, Officers Election & Program: Monday June 16, 7:15 p.m.: Greenfield High School: Program - Program: Demo of N1MM Logger by Matt, W1MSW
- Field Day: Saturday & Sunday June 28/29 all day: Poet's Seat Tower, Greenfield

May 2014

Calendar

SCHEDULE CHANGE FOR MAY

The May 31st FCARC picnic replaces the monthly meeting that was previously scheduled for May 19th. The E-Board will also meet at the picnic.

FCARC FOX HUNT AND PICNIC, SATURDAY MAY 31

There will be no meeting at GHS in May. The E-Board will meet during the picnic on May 31, and the picnic itself will take the place of a May general meeting, reviving the tradition an annual picnic every May.

The picnic will take place at the Leyden Town Field behind the Pearl Rhodes School (Leyden's elementary school) at the junction of Greenfield Road and Bernardston Road in Leyden. The venue provides a spacious shelter, rest rooms, and grill facilities (charcoal and propane), as well as a pavilion with space for a large crowd if rain threatens.

Present plans (subject to change) are to have a short-range fox hunt at 11 a.m., an E-Board meeting at 12:30 or 1 p.m., and the picnic itself at about 1:30. Hamburgers, hot dogs, beverages and utensils will be provided, but side dishes and desserts will be potluck - bring something! During and after the picnic we will have time for a general discussion of Field Day and the annual election of officers, both coming in June. We hope to have a station similar to our Field Day Get-On-The-Air (GOTA) station set up for anyone who would like to use it. A tour to see the nearby site of the KB1BSS repeater is also a possibility.

As the final approach has been the most difficult part of our recent fox hunts we are planning a short-range practice fox hunt as part of the day's activities..

The Google Maps view shows the site. It's only a few miles past where Leyden Road in Greenfield becomes Greenfield Road in Leyden, so if you can make it to Greenfield you'll find it accessible. We will have someone listening on the repeater to give directions if needed.



Secretary's Report

E-BOARD MEETING MONDAY, APRIL 28, 2014 – BOB DICKERMAN WA1QKT

1. Next VE Session 7:00 PM May 26 at Northfield Unitarian Church
2. Julie KB1WTP gave us information about the Tri-State Public Safety Day at GCC on Saturday, May 17. MEMA, MRC, CAP, Fire, Police, and others will be there, small structures will be burned, and water drops will be conducted (outdoors). Julie said she would provide FCARC with an outdoor table. This is an opportunity to discuss our emergency capabilities and recruit. Al N1AW, Belle KB1NOG, and Jeanne D. offered to staff table. Setup radio demo table and canopy at 9:00 AM, staff table from 10:00 AM to 2:00 PM. Contact Al if you would like to help.
3. The board voted to approve a legal agreement from FRCOG that, in part, indemnifies FRCOG against any damage to FCARC equipment stored at the Casey Storage facility in Bernardston (next to Leader Lumber).
4. Field Day (FD) planning
 - HF CW station: We'll use 6-person pop-up tent from Bob W1SRB, backup tent from Al. Radio will be FT-897D from Chris. Al will bring 80/40/20 m dipole. Bob WA1QKT will bring card table and 2 chairs for operating position.

- HF SSB station: Carter WA1TVS RV & Bob WA1QKT's FT-450AT. Considering eliminating 80 m, and raising a shorter 40 m dipole to a greater height; also hang the 20m Moxon from tower; have new desk mic to try.
 - VHF station: We have heard that Phill N1YPS is considering setting up in the grassy field this year, instead of on top of tower.
 - Thanks to Scott N1LYW and the Greenfield Board of License Commissioners for granting us a permit for Poet's Seat location.
 - Cindy W1CAD will help with food for Saturday lunch; starting point for menu will be last year's menu.
 - We will be using newer laptops and logging software this year. Al/Bob/Chris will bring laptops loaded with N1MM logging software.
5. Matt Wilhelm W1MSW will be presenting a demo of the logging program N1MM at our June 16 meeting. This is the "new" logging program we will use at Field Day this year, so folks who think they might want to try operating or logging at FD might want to come to the June meeting to become familiar with it (Al N1AW arranged this).
 6. Al N1AW said that Leyden grounds of Pearl Rose Elementary School are available for May 31. The board voted to spend \$75.00 to rent grounds. Tentative activities: very brief, close-in foxhunt on the grounds at 11:00 AM?, meal at 1:00 PM?, tour of Leyden repeater site?
 7. Elections: Chris KB1NEK will ask AC1L if he wants to gather nominations again this year. Scott N1LYW would like to pass FCARC Clerk position to another member, so we may appoint new Clerk at June meeting.
 8. Chris KB1NEK reported on Shelter Drill that was held at UMASS. Although ham involvement was "last-minute", organizers made efforts to exercise our radios during drill, and Chris thinks we made a good impression. Mike Nelson may still want us to do license course for a crop of prospective new hams in September.
 9. Jeanne D. and Al N1AW reported on their work at the Boston Marathon, at which about 300 hams volunteered. Jeanne was a medical volunteer with MRC at Station 12 in Newton, at the 18.3 mile mark. A large tent with air-conditioning and heating was set up there, in addition to the 5 tents her group brought. Medical personnel were extremely busy. A total of 70 ambulance calls were made during the race; 11 or 12 ambulance calls were made from Jeanne's station alone. Each station was assigned a doctor, a social worker, and an athletic trainer. Part of the social workers' jobs was to help convince runners whose health was in danger to stop running. Jeanne's station treated almost 200 runners, most in a 4 hour period. She had 3 hams assigned to her team, 1 at base station and 2 for "go teams" that would travel up and down the route. The base station made calls to and from the go teams, and called in treatment statistics each hour. Because there is significant international participation in the race, there were many non-English-speaking runners, and there was a need for translators. Partly because of this aspect, race workers wore color-coded jackets - white for medical workers, blue for radio operators, etc., to help runners identify emergency personnel. She said that the experience was very educational; race organizers had plans for everything, including 3 different diversion plans in case of trouble on the default route. She also said that the medical teams had the authority to stop the race. Al was stationed in Hopkinton, and worked with about 30 other hams that were organized into 5 teams, located at the starting position and various parking lot positions. These teams did communications for managing transportation services, including managing parking, and assigning busses to bus stops and parking lots. At each location simplex channels were used, and 5 repeaters near the route were used to communicate up and down the route. Chris KB1NEK said that western Massachusetts MEMA personnel were involved in emergency planning for the race, and that about 17 public safety radio channels were in use at the event.
 10. Chris KB1NEK said that MEMA now appears to want to again include amateur radio in emergency planning, after a hiatus in interest. May install new 75 m antenna at Agawam EOC, start monthly RACES drills again, and recruit RACES officers for each town. Also, progress is being made in creation of a ham operating station/operator team at Shelburne Control.

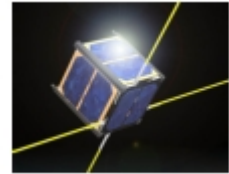
FCARC PROGRAM MEETING, APRIL 28, 2014 – BOB DICKERMAN WA1QKT

Before the meeting we had refreshments in the GHS cafeteria. Al N1AW brought coffee, Belle KB1NOG brought blueberry muffins, and Bruce C. brought pizza. The meeting was brought to order at 7:15 PM by Chris KB1NEK in the small auditorium.

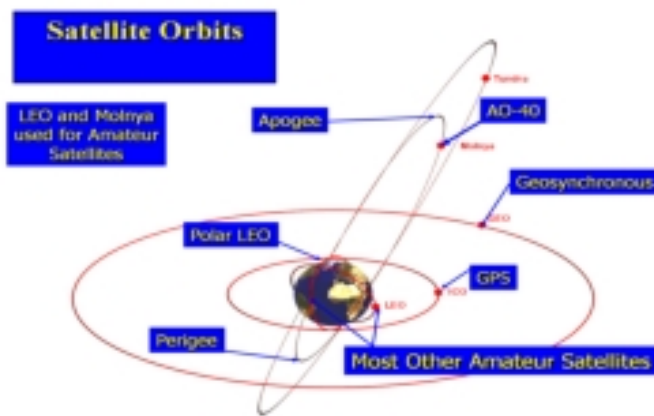
(Note that construction has begun at GHS, so we now have to park on the north end of the school, which is the side closest to Silver Street.)

Since most of the attendees had been at the E-board meeting, again no business was discussed at the general meeting.

Our guest speaker was Barry Baines WD4ASW, president of the Radio Amateur Satellite Corporation, or AMSAT. He is familiar with the area, since he went to school at Eaglebrook School in Deerfield. He went on to college, and later joined the Navy. He became a member of AMSAT in 1982, a board member in 1999, and president in 2008. He said that AMSAT is almost entirely a volunteer organization, with only one paid employee, who works at the main office in Kensington, MD.



Barry then gave us a brief history of amateur radio in space. One of the most amazing historical facts he related was that the first ham satellite, OSCAR 1 (Orbiting Satellite Carrying Amateur Radio 1), was put into orbit in 1961, only 4 years after Sputnik was launched!

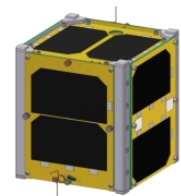


Since then, many dozens of satellites with amateur radio have been put into orbit. Almost 20 of these are still at least partially operational. The remaining operational satellites are all Low Earth Orbit (LEO) satellites, about 400 miles up, traveling at about 17,000 mph. Most of these circle the poles, north-to-south and south-to-north. Because of the low altitude and the high speed, pass times observed on the ground are around 5 to 10 minutes. Communication with some of the FM repeater satellites can be accomplished with equipment as simple as an FT-60 dual-band HT and a dual-band beam antenna. It also requires that you know when and where the satellite will "appear" in "your sky"; at

the correct time of day, you can point your antenna and listen, then transmit.

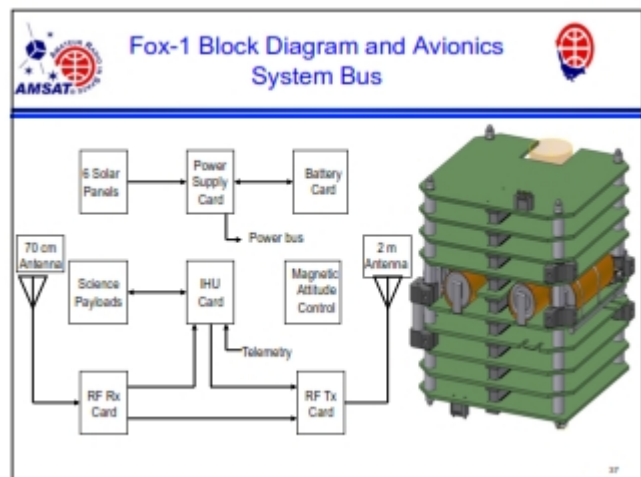
High Earth Orbit (HEO) satellites, at altitudes of more than about 10,000 miles or more, have the advantage that pass times are much longer; however, launch cost is in the neighborhood of \$10 M, versus "only" \$100K for a small LEO satellite. Even the smaller launch cost may be a daunting barrier for a non-profit organization that depends on donations to for its income.

In light of these cost barriers, AMSAT hopes to meet its goal of keeping amateur radio in space by partnering with other organizations, such as universities and laboratories, that need satellite services. AMSAT is developing a standard satellite design with a 9600 bps communications link (and amateur radio equipment) and some space for an experiment payload. A university that wants to run a space experiment, for example, will work with AMSAT to integrate their experiment into such a satellite, and then the university will pay for the launch.

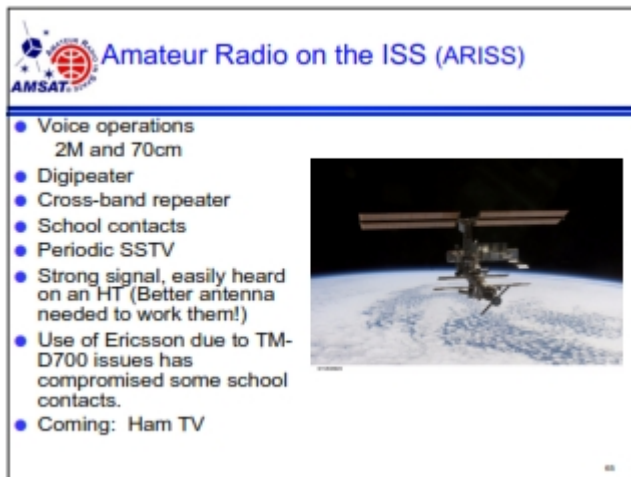


The new standardized design is called the Fox series. The Fox satellites are based on a CubeSat design, which is a small (4" x 4"), low-cost modular satellite, weighing about 3 pounds. They may be stacked in groups of 2 or 3 to

increase the experiment payload size, if needed. The satellites are designed to continue working under several single-fault equipment failure conditions. For instance, if its batteries fail open or shorted, a satellite




should continue to work during those times when it's solar cells are illuminated. The Fox design effort is ongoing.



Amateur Radio on the ISS (ARISS)

- Voice operations
2M and 70cm
- Digipeater
- Cross-band repeater
- School contacts
- Periodic SSTV
- Strong signal, easily heard on an HT (Better antenna needed to work them!)
- Use of Ericsson due to TM-D700 issues has compromised some school contacts.
- Coming: Ham TV



The International Space Station (ISS) is also a LEO satellite, although it is much larger than communications satellites. ISS ham radio facilities include an on-board FM repeater and digi-peater, as well as a radio station that licensed astronauts may use for contacting ground stations. In general, these facilities may or may not be in use at any time, depending upon astronauts' schedules, and depending upon the requirements of scientific experiments and other operations on board. However, educational ham radio voice links with schools are planned and promoted ahead of time, and so may be monitored on a known schedule.

Another new development in space communications is Digital Amateur TeleVision (DATV). This just passed a

flight test last month on the ISS.

Barry encouraged anyone interested in satellite operation to join AMSAT and become involved with the organization.

We thank Barry for his entertaining and informative presentation.

After WD4ASW finished his presentation, Rich KB1NOX showed us his satellite setup - an dual-band HT with a dual VHF/UHF crossed-element duplexed Arrow antenna. The equipment is small enough and light enough so that the antenna can be held in one hand while the HT is held in the other. He said that this equipment works well for International Space Station (ISS) communications, as well as for satellite communications.

For more information on satellite communications, go to www.amsat.org.

19 people attended the meeting.

News, Activities & Articles

FCARC ELECTIONS: NOMINATIONS ARE OPEN

The June 16 meeting will be the annual FCARC Business Meeting, including election of officers for the term that begins on September 1, 2014.

Dick, AC1L, is unable to serve as our Nominating Committee as he has done for many years in the past. The three officers whose terms are not expiring this year, Al N1AW (vice-president), Howard N1LUP (treasurer), and Ron K8HSF (board member) will act as the nominating committee. You may contact any one of them to nominate a member for election to an open office. They will contact nominees to obtain their agreement to be nominated. If you don't wish to identify yourself publicly as a nominator you may ask to have your identity kept secret, but obviously you must identify yourself as a club member to the nominating committee.

Nominees known by May 31st will be announced at the picnic and announced in the June Communicator but nominations do not close then. Additional nominations can be made at the election meeting, providing a nominee is present and accepts or has made his or her agreement to serve known to the nominating committee in advance.

The regular positions whose terms expire this year are president, secretary, and one board member. These positions are currently occupied by Chris KB1NEK, Bob WA1QKT, and Belle KB1NOG. Chris has said he does

not want to serve another term as president (but you can try to persuade him). Bob and Belle are both willing to be re-nominated as of this writing.

A person currently serving in one position can be elected to an open position, in which case the E-Board will appoint a successor to the position being vacated to fill the remainder of the regular term.

Another position is open this year, that of Clerk. The Clerk position is a legal requirement of our type of organization, and is not elected for a two year term - his main duty is to provide a name and legal address for the Commonwealth of Massachusetts to interact with the Club. The Clerk serves as long as he and the Board are satisfied with the arrangement. Scott N1LYW has served in this capacity for more years than some of us remember, and has asked the club to identify a successor. The Clerk can be someone who holds another regular elected office.

If you would like to see the legal basis for all of this, the FCARC bylaws are posted on the website at [http://www.fcarc.org/Files/ FCARC Bylaws Ver. 2.pdf](http://www.fcarc.org/Files/FCARC%20Bylaws%20Ver.%202.pdf)

If this sounds like a lot, well, it's not really. The June meeting will also have a speaker, Matt Wilhelm W1MSW, plans to give us a demonstration of the N1MM Logging Program which we will be using for the first time at our Field Day. More on this will come in the June Communicator.

FCARC MEMBERS AT THE BOSTON MARATHON

At least three FCARC members – Bruce Fuller, WA1TLX, Jeanne Dodge (no call yet), and Al Woodhull, N1AW, participated in the ham radio support for the Boston Marathon.

Al, N1AW: My day was spent at the Hopkinton State Park, used for parking, drop-offs, and transfers from the Southborough MBTA station to buses that took runners and spectators to downtown Hopkinton. Here's a photo of volunteers with long shadows just after sunrise, a row of empty buses, and the entrance to a parking lot that is already almost full. There were a total of more than 30 volunteers on the Start Team in Hopkinton. I worked with a group of 8 hams at the State Park, and all of my interaction was on a simplex channel with this group. Our job was to direct vehicles and buses so adequate bus capacity would be available at the loading point in each of the parking lots in the Park. It wasn't exactly exciting, but it was important. Buses were already loading when I arrived at 5 a.m., and our work was done before noon.



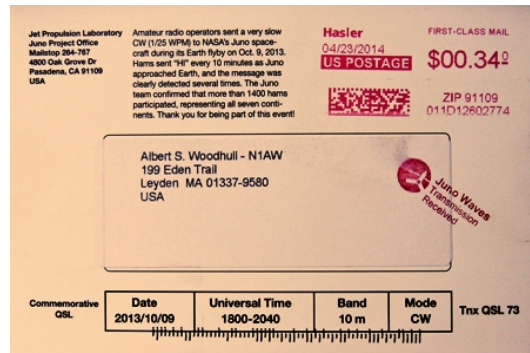
Bruce, KB1TLX: I am totally impressed with the Boston Marathon. With 35,000 people running by, I think I had motion disturbance later. Am rested and trying to get into the working groove. Hope to part of it next year. I think the W16R station I was at was very well run. Our Medical Consultant did not show up so we were on our own. Fortunately we had 2 EMT's in disguise and we were ok. We had a couple of incidents that required Medical intervention and that worked out alright, as there was an ambulance on site most of the time staffed with 2 paramedics and the Hospital was about a mile away. The Ham side of radio communications I believe ran well. I was in a location where I had to move to another location for better transmission even with a 15" antenna on my HT. The Turbo radio left a lot to be desired. Even with the security add-on, it was difficult to hear. The dispatcher was less than perfect to say the least. He/she needs some more practice. I almost gave up trying to use it.

Jeanne: My team treated nearly 200 runners with 11 or 12 going out by ambulance. I dealt with soft tissue issues and assessments. I treated muscle cramps (often 2-6 at once on the same runner), with other folks helping and following my directions. I also triaged/assessed many runners needing to have vital signs taken and started the process for them to have more advanced (hospital) care. I taped (sports taping) many ankles, knees and IT bands. My niece is the team record keeper, she tracked every runner who came into our station and worked with the Radio person assigned to the main station to send in numbers totals every hour. Our group has had the same radio folks for the last few years. One is assigned to the station, and one each are assigned to the two "go teams" (they respond to runners who need help before and after our station).

Jim Palmer shared this link: <http://www.arrl.org/news/more-than-300-amateur-radio-volunteers-support-2014-boston-marathon>

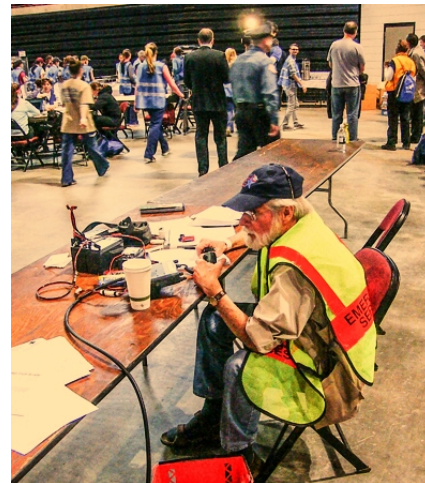
“HI JUNO” EXPERIMENT

In the "Hi Juno" experiment last October, amateur radio operators around the world participating in sending synchronized very slow CW signals in the 10 meter band, within the frequency range of signals that the Juno spacecraft is designed to detect when it reaches the orbit of Jupiter. The experiment was a success and participants recently received commemorative QSLs from the Juno project.



UMASS SHELTER DRILL

Bruce Fuller, WA1TLX, Jeanne Dodge, and Al Woodhull, N1AW, participated in the UMASS Shelter drill in April. Al acted as net control for ham radio support for the drill.



NEW ENGLAND QSO PARTY

A number of FCARC members, including Bob Dickerman WA1QKT, Al Woodhull N1AW and Bob Solosko W1SRB, participated in the New England QSO Party (NEQP) on May 3rd and 4th. This is an easy contest to do – it runs on Saturday from 4 PM until 1 AM and on Sunday from 9 AM to 8 PM. The exchange is simply a signal report (“59” for phone, “599” for CW), county (“FRA” for Franklin) and state (e.g., “MA”). You get 1 point for each phone contact and 2 points for each CW contact. For hams in New England, your score is multiplied by the number of states worked. For hams outside of New England, the score is multiplied by the number of New England Counties. Since there are so few hams in Franklin county that participate, everyone wants your contact. *Bob Dickerman, WA1QKT*: I wanted to double our score from last year, which I did, but it took 11 hours (!). 100 Watts, 159 SSB QSOs, 42 multipliers, score 6510, most contacts on 40m & 20m, a couple on 80m & 15m.

Chris made some contacts, but I couldn't get Cindy or Jenna interested enough to try.

I didn't have as much trouble setting up N1MM as I did the last time, partly because I had config file & some notes from last year's NEQP, and also, I found a N1MM page devoted to setup for NEQP.

One new thing (for us) was that I connected the laptop to the internet and K1TTT's Telnet DX cluster, so we had the DX spots (and a couple of NEQP spots) on the band map window. With this, I was able to click on the callsign spotted on the web, and the radio tuned to the spotted station, like they were doing when we visited K1TTT. It was cool, but I was not able to hear most of the DX stations, and I'm not sure whether I got even a

single QSO out of the spotting feature. However, I did see your station "N1AW 40m CW" scroll down on the K1TTT Telnet window (spotting list) at one point.

Before the contest, I looked up last year's scores, and I saw that Frandy & Jim got a score over 100,000 last year in VT, and had multiplier of about 90, I think, so my guess is that one secret to giant score is to work a lot of DX, so you can get giant multiplier. For this reason, I'm guessing that the Telnet or packet DX spotting would be important for getting giant scores. I want to ask them about this, next time I see them.

Al Woodhull N1AW: I wasn't able to get on the air for the NEQP at all on Saturday, and I didn't get N1MM working right for this contest until afternoon today. I was on for a total of 90 minutes, 50 CW QSOs, 19 multipliers, score 1900. I did not want to connect to a DX cluster, I wanted to be pure unassisted single operator. I was astounded that made so many contacts calling CQ - almost 40 of my 50 contacts were made that way. I guess FRA is a rare county. Running really notches up the rate compared to search and pounce, but I never thought it would work well for QRP.

Bob Solosko W1SRB: I got on for about an hour shortly after it started on Saturday. 80m was dead and 40m wasn't great but I managed 6 SSB QSOs on 40m and one on 20m. All of the CW I heard was much too fast for me. I got on again for about 1/2 hour late Sunday morning - again 80m was dead and 40m was almost dead. I had 2 SSB QSOs on 20m and one CW QSO on 40m. Sunday night, in the last 10 minutes of the contest and just before the Snail Net I tried again and quickly worked 4 SSB QSOs on 40m. Total: 7 counties, 10 states, 13 SSB QSOs and 1 CW QSO in a little over 2 hours of operating.

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.