

THE MAINE TELEGRAPH

NEWSLETTER FOR MAINE
AMATEUR RADIO OPERATORS



Maine Mesh ARDC Grant Approved

WRITTEN BY CORY GOLOB, KU1U

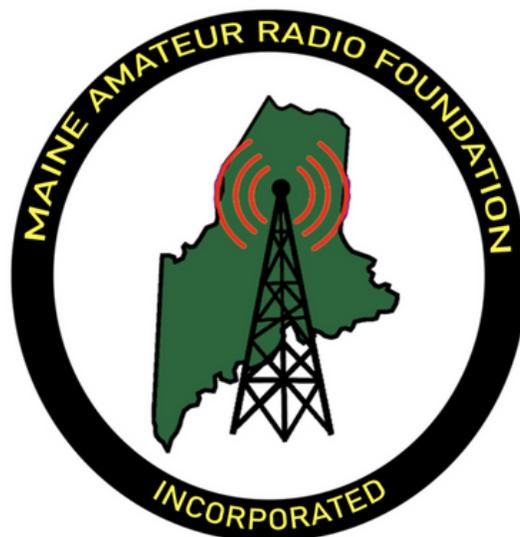
The Maine Mesh Networking group, with the backing of the Maine Amateur Radio Foundation (MARE), have spent the Summer forming a plan to expand the existing Mesh network between Brunswick and Topsham on 5.8 GHz and 2.4 GHz. The concept is to establish an RF-based backbone on 5.8 GHz between 15 sites ranging from Southern Maine to Bangor and then Downeast to Cooper. Home stations can use 2.4 GHz to join on to the network. MARE is an ideal candidate for backing since they are a 501c3 status organization and it mirrors their mission of supporting amateur radio in Maine by providing technical, physical and/or financial assistance to those residing within the state.

The ARRL is currently in the middle of their Club Grant program, which the Maine Mesh Networking group did consider, however, once projected costs were calculated for the project, it exceeded the \$25,000 limit. The project, as proposed, is approximately \$42,000 and must be completed within 2 years. Bill Richardson, NG1P, will be the project manager for this endeavor and Cory Golob, KU1U, will be the point of contact for communications, which will include a monthly update on the status of the project.

A mesh network will offer many benefits to the amateur radio community in Maine which includes the ability to send high speed data, support a PBX phone system, send video, link repeaters and more. Just think of how cool it would be to have a net where you could have live video. All of this is done on a standalone RF network WITHOUT commercial internet... just the way amateur radio was intended. Don't get me wrong, I love tech and the internet just as

much as the next person, but when you become dependent on it, it becomes a major inconvenience. People often look to hams to provide communication when normal means of communication have failed. We have strayed from this mentality more and more over the years and can start working back to being self-sufficient in our comms.

This project will utilize Ubiquiti equipment and Amateur Radio Emergency Data Network (ARDEN) protocols. Orv Beach, W6BI, provided an informative presentation on what the ARDEN network's capabilities and how it is being used in California. [You can watch this hour long video on the Maine ARRL Youtube page.](#) This plan for a mesh network will provide reliability, interoperability and best of all give younger hams a different look at this amazing hobby and spark new interest. Perhaps this can be the catalyst to get more people involved and active.



Frustrated

WRITTEN BY PHIL DUGGAN, N1EP

Amateur radio is an immense hobby and service, with so many aspects to it that I doubt any one ham can try, never-mind master, every single one. The ARRL, the national association for amateur radio, reflects that immense characteristic, as the League strives to protect and expand privileges, publish related ham radio magazines, deal with RFI, and so much more.

Being such a large organization (15 divisions, 71 sections, about 100 employees and countless volunteers), the ARRL gets plenty of feedback from members and nonmembers every single day. During a recent New Section Managers Workshop I attended in Newington, CT in September, ARRL CEO David Minster, NA2AA, spoke to us about the anger and frustration that is often directed towards the League and its employees. Who hasn't been frustrated with the League at one point or another? I know I have.

Staff answering the phone at HQ often get yelled and cursed at even though they have nothing to do with the concern.

David told us about a ham that constantly and nastily attacked staff on social media, and in particular at one employee who was dealing with a serious health issue and later passed away. "The online chatter from the post became very aggressive and the young lady who passed was affected by both the message and the threatening tone. Not our best look."

The point is, we never know what people are going through in their lives. There is no need to cause anyone stress by yelling, cursing, or threatening them. The old adage, "honey goes further than vinegar" is appropriate here. Be kind and constructive and you are more likely to get your way.

Many of us have experienced some of this "anger" within our own clubs. Anger not directed at the ARRL but at something or someone in the club. Hotheads are sometimes a source of friction in any club, ham radio or otherwise.

Most Maine amateur radio operators are super friendly and would never act that way towards another human being. But we have a few of these people who were born angry. As section manager, I get feedback from Maine hams, but it has always been positive or constructive, of which I am thankful.

If you are frustrated with the League on any particular issue, please contact me and perhaps I can help you out. If you are frustrated because the FCC dropped the Morse code requirement, then I probably cannot help you with that, but if your @arrl.net forwarding email is not working (call ARRL customer service first) or you have a suggestion for League leadership or some other solvable issue, please contact me.

Finally, I appreciate the support and kindness I have been shown by Maine hams since I first became section manager last December. It is an honor and privilege serving you and I am looking forward to working with you in the future. 73

Portable Operations

WRITTEN BY TONY BAKER, AA3HD

Now that summer is officially over, I thought I might share my experiences with my portable HF operations over the summer. I spend most of the summer months in Little Deer Isle, Maine. I went to elementary school in Deer Isle, where my mother taught music. We still own a seasonal house on the bay side of the Little Deer Isle, and it is from there that I set up my portable operations.



A look in my go-box prior to setting up for operations.

I set up my HF rig in my truck. Some of you may be thinking that would make it a mobile rather than portable operation, but as you will see, that is not the case. According to the ARRL 2022 Field Day Rules, mobile operation is defined as: "(Class C) Mobile: Stations in vehicles capable of operating while in motion and normally operated in this manner. This includes maritime and aeronautical mobile." My set up did not allow me to operate in motion and was not normally operated in this manner.



My radio and manual tuner set up on top of my go-box in my truck.

When contemplating operating from Little Deer Isle, I always imagined it would be from a static position in my truck. I already had a 2m/70cm/DMR rig in my truck, (a true mobile set up by Field Day definition), but needed to figure out HF operations. I decided to use my Yaesu 991A with the MFJ-945E mobile manual tuner. Although the 991A has a built-in ATU, I knew that some mobile HF antennas may be beyond the capabilities of the ATU. The antenna I decided upon was the MFJ-1699S. This is a multi-band antenna that covers 2 to 80 meters. You manually pick which band you want to operate on by the use of a wander lead that you plug in at various coil points along the antenna and through adjustment of the length of a whip on the top. I attached the antenna to the top of the cab of my truck using the MFJ-336S tri-magnet mount and led the coax from the mount through my sliding rear window to the antenna tuner.



Antenna atop my truck and a close-up of the tri-mag mount.



A view of the back of my radio and tuner set up for portable operations.

Through this set up, I was able to make contacts on Field Day, during the 13 Colonies event, and to Windsor Castle during the operation of a special event station commemorating the Queen's Jubilee. Other contacts I made from my Little Deer Isle portable operations include a POTA activation in England, the special event station at the Indiana State Fair, the World's Largest Teapot special event, as well as 'routine' domestic and DX contacts. I used a paper log to log my contacts real time, and later input the data to my computerized logs.

I look forward to more portable operations from Little Deer Isle next summer.

FROM MAINE TO MASSACHUSETTS BY MICROWAVE

WRITTEN BY JOHN PUGH, WJ3P

The ARRL 10GHz & UP Contest is not something I ever paid any attention to... in fact, I had never had any experience with amateur operations in the microwave bands until the weekend of August 20-21 this year. While on a walk with my wife around Pemaquid Point, I noticed a truck with a 2-meter Yagi strapped to the roof and we stopped to talk with its owner, John K1OR, who was unloading at his vacation rental cottage. John and his wife had come to spend a week enjoying the Point, but his initial goal was working the contest from a few locations on the Maine coast.

The next morning, I found John and his friend Larry K1CA at the southernmost edge of the point with two microwave stations set up pointing roughly southwest. The 2-meter Yagi was installed on a mast anchored under the truck's tire. I learned that 2-meter SSB is one of the ways microwave operators contact each other to set up a QSO. By the time I arrived, they had already made contact with Block Island, RI and were working on a contact with Charlton, MA. John was on his cell phone with the MA group, getting their grid square location and operating frequency. This was punched into the computer and an azimuth heading was produced to which John and Larry then adjusted their tripods that hold the radio and dish antenna in one neat package. The same thing was happening on the other end.

Unlike a VHF or HF station where the antennas are usually distant from the transceiver, a microwave station is as compact as possible to minimize feedline losses between the radio and the antenna. The dish antenna is mounted onto a box containing the radio and other equipment, all on top of a tripod carefully calibrated to allow accurate positioning toward the target station. Larry's radio was operating on 2-meters with a transverter in line to reach 10GHz, finally running through an amplifier. The box contained a laptop computer for analyzing the spectrum for signals and calculating beam headings. A CW key was mounted on top.

One of the MA stations (there were 4 of them set up next to each other at the same site) was sending a series of dashes - the beacon on which John and Larry could zero in their tuning. Then Larry sent dashes for a while so the others could zero in. This all took quite a while, as one of the MA folks was having trouble with their equipment and had to recalibrate to get it working.

Once the tuning up was done, the two-way contacts began. John was coordinating on his cell phone, and he told the other folks to go ahead. We copied their callsign and grid square on CW, and John acknowledged the contact. Then another person sent theirs, and so on. When it was our turn, John sent his call and grid (we were at FN53fu) to each receiving station, then it was Larry's turn to work the others. If signal strength was good, they also worked on SSB phone.

I learned that there are all sorts of ways microwave operators set up contacts, because just calling CQ on a frequency will not get you anywhere! The small number of microwave operators (relative to operations on many other amateur bands) combined with the narrow beamwidth of a microwave signal make it impossible for random contacts to occur. They use the internet to establish scheduled contacts, along with 2-meter SSB and DMR tactical channels. In real-time, cell phones are placed in service – well, I guess it's RF, isn't it? (Not long ago, there would have been no cell coverage at Pemaquid Point and even today it's spotty. They got lucky!)

John and Larry planned to head north to a mountain top on Sunday, with the expectation of some even higher-frequency contacts (47MHz?) over to Mt. Washington. I hope they did well and had fun in the contest. In contrast to HF contesting, where several contacts can be made every minute, the effort to make a few microwave contacts was astounding, as each of the guys got about 4 contacts in the hour or two I spent with them. They were very gracious to me during my visit, explaining everything, and I had a blast learning about this amateur radio band segment.

North Woods Gravel Grind Bicycle Race Public Service Event

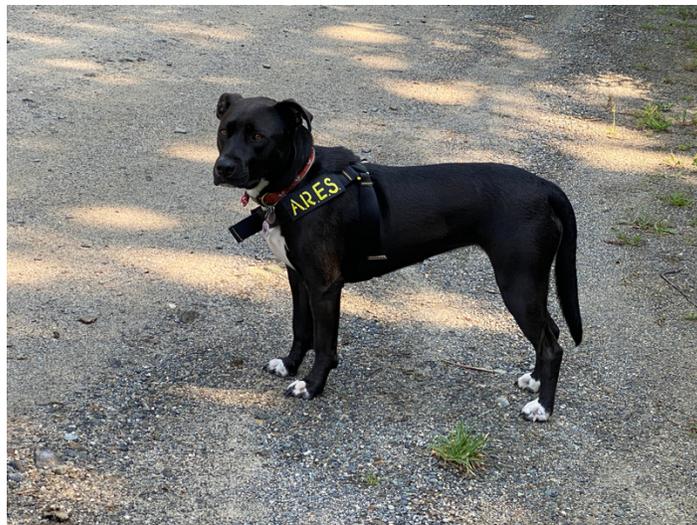
WRITTEN BY PHIL DUGGAN, N1EP



Nearly 200 riders entered the seventh annual Northwoods Gravel Grind in the Rangeley area of Maine September 10, which encompassed parts of Franklin and Somerset counties. The course included 35, 50, and 68 mile loops.

The riders were not out there in the Northwoods alone. Besides deer, moose, and bear, there were about 15 amateur radio operators assigned at various locations and in sweep vehicles throughout the course. Franklin County ARES and friends made sure important safety and logistical information was relayed to net control and they did this by 2 meter simplex!

Many of the hams were using their mobile rigs in vehicles with mag mount antennas or similar aerials. A few hams setup external jpole or high gain antennas 20 feet or higher at key locations, and they were invaluable in relaying communications if net control (Randy KB1RDG and Ruth KB1SBZ) could not hear a particular mobile or portable station.





I had the privilege of helping out. It was enjoyable being out in the woods listening to the call of the loons. And why not? I was assigned to Loon Lake RD next to Loon Lake! Franklin County ARES Emergency Coordinator Russ Norris, KA1FKC, stopped by and chatted with me for a while. Have you ever seen his vehicle? There is no doubt he is a ham radio operator! And I absolutely loved his pooch, Mabel, who wore a fancy harness labeled ARES. So maybe her call sign should be K9ARES? What's an extra letter? Ha Ha.

Many times throughout the race riders would thank me for being there, and I am sure the other hams got this feedback as well. Public service events such as NWGC promote our hobby in a positive way. They also help hone our emergency communications skills. If you have never volunteered to help out in such events, you should do so. It is rewarding and fun. Contact myself n1ep@arrl.org or Cory GOLOB, K1UIU, New England Division ARRL Assistant Director for Public Service & EmComm, ku1u@nediv.arrl.org and we can share when public service events need hams.

Hams that participated in NWGC 2022 included KA1FKC, KB1RDG, KB1SBZ, AA1XD, WA1KLI, N1TCJ, KB1YES, NT1N, KC1LGJ, KC1ROC, N1EP, KC1RID, K1OK, K1NEO, N1TCJ



Annual NEDECN DMR Picnic

WRITTEN BY TONY BAKER, AA3HD



After a two-year hiatus due to Covid and a summer of rain and West Nile mosquitoes, the annual NEDECN DMR picnic took place this year on Saturday 17 September at Hopkinton State Park in Massachusetts. The New England Digital Emergency Communications Network (NEDECN) is focused on emergency preparedness with 90-plus repeater sites backed up by battery and generator power sources. The repeater sites link all of the New England states, the Canadian Maritimes and Quebec, and parts of New York and New Jersey for Digital Mobile Radio (DMR) operations.



Users of the NEDECN DMR network gathered for a picnic in Hopkinton State Park, MA. As you can see, it was a beautiful day.

Although the name of the organization might imply that its use is exclusively for emergency communications, that isn't the case. It also facilitates mobile roaming routine communications throughout the coverage area, as well as providing Special Event communications for such things as the Boston Marathon and the Maine Dog Sled Race. But, it's SKYWARN emergency communications capabilities also were recently activated with hurricane Fiona edging the New England coastline. NEDECN also serves as an umbrella organization supporting local amateur radio groups through funding to expand the network and enhance local communications, and as a training ground for technical and communicator resources.



Tony – AA3HD, Jim – WA2UMP, and Mark – W1MTW discuss the idiosyncrasies of DMR.



Jim – AE1C grills up burgers for the hungry HAMs!

For those of you unfamiliar with DMR, each repeater in the system has a variety of talkgroups that it supports. A talkgroup is like a specific channel. In the NEDECN system, individual talkgroups include one for each of the New England states, and SKYWARN, as well as a World Wide talkgroup! That's right, the World Wide talkgroup ties into other DMR networks around the world, like Brandmeister, with digital clarity...i.e., no static. Most of the repeaters in the NEDECN network support at least 14 different talkgroups. In many areas of New England, the NEDECN system can be accessed with just the power of an ht. The system can also be accessed through hot spots.



Brian – W1BKW and Mark – W1MTW look on as Gary – KC1PRF focuses on Dan – N1UKJ who is programming a DMR handie-talkie.

The Sunday weekly Dirigo net at 10:00AM utilizes the NEDECN system on the Maine statewide talkgroup. A Vermont state-wide net that takes place on Tuesday evenings on the Vermont statewide talkgroup, and a weekly Sunday net at 8:00PM is for all of the NEDECN repeaters and occurs on the New England wide talkgroup. For those interested in SKYWARN, their net takes place on the SKYWARN talkgroup on Thursday evenings. For those who seek more information on NEDECN, please go to nedecn.org.

NEDECN users from every New England state except Connecticut attended the picnic. Those of us who travelled from Maine used the new Haverhill repeater, which has a large coverage area. Hope to see you at next year's get together.

On your mark, get SET, go!

WRITTEN BY KEITH ANOE, KE4UCW



As my first 90 days as the Maine Section Emergency Coordinator (SEC) ends and fall begins, we prepare for winter and the 2022 Simulated Emergency Test (SET) on October 22nd. Over the last month, I've had the opportunity to meet with the dedicated ham radio operators of the Aroostook County ARES/RACES in Caribou ME and EMA Directors Mr. Andrew Sankey (W1AXS), Mr. Dale Rowley (KC1LKI) and Mr. Bradley Nuding (KC1HVP). All dedicated to Emergency Management and emergency communications supported by hams. This relationship forms a unique team that provides an opportunity to help others.

To support this, this year's SET will begin developing a new Maine Sections Emergency Communications Plan. The old one is over ten years old! The SET will be used to identify group capabilities. What frequencies, stations, and modes are available to you and your group? This information will be the base of the new plan so we can manage events and pass information internally and at the state level as needed in a known plan.

Then simple quarterly drills can be held to test the communication plan with SMART objectives (Specific, Measurable, Achievable, Realistic, and Time-bound). We can't set it and forget it. Continued improvement with coordination of group leaders and volunteer operators throughout the year is needed. In addition to continuous training in identified weak areas. With work on responsiveness, consistency, and predictability as constant goals.

If you are looking to support emergency communications, contact your local ARES/RACES group or me at keith@anoe.us or call me (207) 629-7197.

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KE4UCW

Keith Anoe / KE4UCW

Maine Section Emergency Coordinator (SEC)

Androscoggin County Emergency Coordinator (EC)

The 2022 Dempsey Challenge and Challenges

WRITTEN BY KEITH ANOE, KE4UCW

The 2022 Dempsey Challenge was completed on September 25, with the last biker crossing the finish line at approximately 17:00hrs, concluding two days of events ranging from a 5K run walk to a 100-mile bike course. The event presented a return to normalcy with a record number of participants and fundraising, passing the \$1,600,000 goal with a total of \$1,610,758 for the Dempsey Center in Lewiston, Maine.

The Dempsey Challenge did present challenges with meeting the need to provide ham operators for five rest stops and 12 sags. The challenge resulted in the five rest stops being manned by ham volunteers and only seven sags with commercial radios. Ham communications this year was supported by the WIPIC Wales repeater group, which resulted in the best communications for the event to date. The ham support added value and reliability to the event as the rest stops supported sags that could not communicate on their commercial systems.

The Dempsey Center has expressed its thanks to the following four supporting the event with their equipment and time:

NCS Cory GOLOB - KU1U
RS1 Pete THUOTTE - N1ZRL
RS2 John TARBOX - WA1KLI
RS3 Ivan LAZURE - N1OXA
RS4 Peter HATEM - KC1HBM
RS5 Jose DOUGLAS - KBITCD
RS6 Travis JOHNSON - KB1ZID
RS7 John DONAHUE - N1JD
RS8 Deb & Paul LEONARD - KB1DEB & KE6PIJ

I would also like to thank the groups, and all that responded to support the event. Some challenges were had with the wrong location giving Jose providing the opportunity to set up two times. (Sorry, Jose). In the end, no one was hurt, and our communication supported the event without any issues making it a success!

de KE4UCW Keith Anoe / KE4UCW





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Contact Ron, KFIH, if interested in any items: KFIH@myfairpoint.net

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