

CAARA NEWS



Cape Ann Amateur Radio Association
Gloucester, Massachusetts
SEPTEMBER 2022 EDITION



PRESIDENT'S COLUMN

by Brandon- NQ1W

Dear Members,

It is my pleasure to announce the nominees for the Cape Ann Amateur Radio Association board of directors and officers for your consideration at the 2022 member's meeting.

Firstly our nominee for Vice President will be longtime board member and officer Larry Beaulieu. Larry has been an amazing contributor to CAARA and essential member of the hardware committee. He will be taking over for our Jake Hurd in that role.

Secondly, we have long time board member, officer and grill master Jon Cunningham our nominee for taking over the Treasurer's position. We are fortunate to have someone with such history with organization to take over that important position and who also has had such great experience in our other club committees.

Lastly but not least we have Jake Hurd who will have completed his term as Vice President and will be our nominee to fill a vacated position on the board of directors.

We are so grateful to these nominees, previous officers and directors who give their time, energy and monies to keep this organization alive and flourishing. We have lots of things planned for the next year and can't wait to share our passion and excitement for this hobby of amateur radio with you our amazing and supportive membership.

Can't wait to see you all the for the vote Sept. 24th at the club!

Warmest Regards,

Brandon Hockle NQ1W



THE EMCOMM MINUTE

By Dean- KB1PGH

So for this months edition of the "Emcomm minute" I think I will cover the topic of portable power and what I use when I operate HF portable. Ill try to cover as much as I can with a couple of hints and tricks. The two power sources I use for my amateur radio equipment is a Honda EU2000 i inverter portable gas generator and a Champion Group 27 size Marine lead acid deep cycle battery. I have both types of power just to have a back up .Plus I can use the battery indoors and the generator gives me direct access to a home 120 volt AC plug. First Ill start off with the generator. If your planning on running a generator for your amateur radio equipment make sure that you get one that has a inverter in it. What the inverter does is that it provides your equipment with a pure 120 volt sine wave just like you get out of your home electrical sockets. The inverter will help run your sensitive equipment with less electrical noise and most of todays



electronics need that pure electrical sine wave to run correctly instead of a stepped sine wave that you get without one. I have a Honda EU 2000i generator which I got back in 2013 for \$ 900 .Now they sell a bit of a upgraded model which is the Honda 2200i for \$1200-that darn inflation. These models put out around 1800 watts of power which is more that enough to run a 100 watt rig and both have a gas tank of about a gallon which will run your equipment for 12 hours I would say depending on the electrical load. Speaking of that they both have a switch where you can adjust the speed of the motor depending if you have a small or larger electrical load. Once again of speaking about smaller electrical loads. Honda sells a smaller version of the 22000i which is the Honda 1000i which puts out 900 watts of power. In the real world use the Honda EU2000i that I have runs pretty good. I've used it many times operating HF portable and I have never had a issue and I got it back in 2013.It's lighter than a full size car

CAARA Newsletter
Cape Ann Amateur Radio Association
6 Stanwood Street
Gloucester, MA 01930

CAARA Newsletter is a monthly publication of the Cape Ann Amateur Radio Association (CAARA).

It is the policy of the editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio and of interest to CAARA members, and space is available. Material is accepted on a first come, first serve basis. Articles and other materials may be submitted by internet to Jon at jpcrockport@gmail.com. If possible, material should be in Word format. Material may also be submitted as hard copy to Jon-K1TP or any Club Officer.

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Jon Cunningham- K1TP Editor
Dean Burgess- KB1PGH Reporter

Board of Directors- 2021/22

President: Brandon Hockle- NQ1W
Vice President: Jake Hurd- W1LDL
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Bill Poulin- WZ1L
Kevin Lyons- K1KL
Chris Winczewski- W1TAT

Welcome to CAARA:

CAARA, an ARRL affiliated club, operates the 2 meter W1GLO repeater on 145.130 MHz with antennas located on the ATT cell tower in the Blackburn Industrial Complex in Gloucester Massachusetts. It has an average effective radius of 60 miles, and serves Eastern Massachusetts, Cape Cod, Rhode Island, Southern New Hampshire, and maritime mobile stations.

CAARA also operates the W1GLO repeater on 224.900 located at the CAARA clubhouse.

The 443.700 repeater is now on the ATT cell tower in the Blackburn Industrial Complex with greatly enhanced performance running in fusion mode and linked to 10 other repeaters in the New England area.

The Association is one of the few amateur radioclubs that has its own clubhouse. Located at 6 Stanwood Street in Gloucester, with a variety of HF stations with beam, vertical, or G5RV antennas.

Amateur radio exams are held on REQUEST at the CAARA clubhouse. Anyone who is considering a new license or an upgrade, is welcome to test with us. Currently pre-registration is necessary. Contact the head of our VE team Bill Poulin- WZ1L if you have any questions about monthly testing.

Monthly member meetings are held on the second Saturday of each month at noon except for July and August.

Each Sunday evening at 9:00 PM, the club operates a 2 meter fm net on 145.130. This is an open and informal net which disseminates club news and prepares operators for emergency communications work. All are invited to check into the net as club membership is not a requirement.

The club is open most Tuesday's from 5- 8PM for CAARA members and interested parties to stop by and socialize, as well as use the extensive collection of ham radio gear.



battery. In the receive audio of my Icom 7300 I barely notice any RFI so the gas does not evaporate or EMI when listening to stations. Of course I have a shielded outdoor heavy duty electrical cord and I run the full length of the cord to keep the generator away from the antenna as far as possible to reduce whatever noise there is. Speaking of noise. When the generator is running it is built to be very quiet which it is. There's nothing more distracting than having a loud generator running next to you but the Hondas are real quiet. Plus if you really don't want to hear it just place it behind a car or run the full length of the electrical cord. Carrying it around is not much of a hassle. It is pretty lightweight. Lighter than a full sized car battery. There are a few different other brands of inverter generators out there as well if you shop around but the Hondas are top notch. By the way, no matter what generator you have here are a couple of tricks. One, buy "Sea Foam" gas treatment and put it in your gas so it will keep the gas fresher longer and will clean the engine at the same time. Two, run your generator every two weeks or so to keep the gas fresh in the engines carburetor so the gas will not evaporate and leave a film on the inside of the carburetor and eventually clog up the needles in it where the gas flows through. Third, if you plan to store your generator for the winter like I do please drain all the gas out of the carburetor so as not have old gas in there clogging up your needles. Gas lasts about 6 months before it starts to go bad. I also drain the gas out of the tank with a siphon and put that gas in my cars tank. Old gas sitting in a carburetor is the number one cause of engine troubles in all out door equipment. I would highly recommend one of the two Honda generators I mentioned but there are a couple other makes out there. Generac makes one and even Harbor Freight sells one which both are less expensive than the Hondas but you'll have to check on the performance. Just do a search on Google for inverter generators and you will find a few models.

So moving on to battery power. I like using batteries to power my Icom 7300 when I'm operating portable. There are as quiet as you can get during receive since they do not create RFI or EMI. Plus they obviously make zero noise all the time when you use them, thus creating no audio fatigue like a running generator would. They can tend to be heavy though. I use a marine deep cycle lead acid battery. I use deep cycle ones because they are made for the sole purpose of

discharging over a long period of time, unlike your regular car batteries that are just supposed to give you a short burst of energy for start up. I am currently using a Champion battery but I've had good luck with any make I've used. I use one with over 100 amp hours which will give me over 12 hours in the field. So here's a couple of tips for lead acid batteries. Please make sure you check the water levels in the batteries cells every three months because the water level will drop over time. You can refill them with distilled water, not household water. Regular tap water has minerals in it which will foul the cells over time. I like to use an automatic float charger for my batteries to keep them at a top charge all the time. Of course batteries only put out 12 volts and HF rigs need 13.8 so you will need a battery booster for it and I will show you in another article. Batteries are also good because you can run them indoors as well, or in a tent if



your operating portable You'll get 4 or 5 years out of lead acid battery. The lead acid batteries are the cheapest compared to a AGM battery which is more expensive. At least with the absorbable glass mat battery you won't have to worry about the refilling the water in it. The lead acid batteries are in the \$150 to \$200 range and AGM batteries will be in the \$300 range. Now if money is no object you can get a large Lithium Ion battery. These will run you over \$700 for one over 100 amp hours. if you want to check them out go to www.dakotalithium.com. One good thing about batteries though is you can go green and recharge them with solar panels. Many hams do that at field day. One other good

thing about batteries is that you can get any size you want to fit your needs. The big Group 27 deep cycle battery I have is really heavy so I have a portable, foldable dolly which helps lug it around So that's what I use for portable HF power.

See you next month and 73, Dean



August Board Meeting at the CAARA clubhouse

ATTENTION ALL CAARA MEMBERS:

PLEASE JOIN US FOR THE SEPTEMBER 24TH ANNUAL NOON MEETING TO VOTE IN THE NEW BOARD MEMBERS AND DISCUSS CLUB BUSINESS AND GOALS FOR THE NEW YEAR.

LUNCH WILL BE SERVED! WE WILL PROVIDE FOOD AND DRINKS AND ASK MEMBERS TO BRING A DESSERT, CHIPS, DIPS, etc. TO HELP OUT.

Lockout

by Curtis- AA3JE

Like many of us, my father handed down some firearms, two cheap 22 rifles, to me when he passed on. Twenty years ago, when I moved to Massachusetts, I had to get a permit, and I had to take a class on firearm safety and safe usage. I paid attention, and went out and bought a small safe, perhaps a foot in each direction, to lock up ammunition, and a larger one for the firearms.

It was cheap, convenient, and effective. You punched in the combination on a keypad, the thing clicked, you turned a knob and opened it. I promptly forgot it. When I moved to New Hampshire I moved it, bolted it into a convenient closet, and forgot it again.

But one day, I was cleaning up, and I idly punched in the combination. No Click. I briefly considered leaving it a problem for my heirs, but that was cowardly. Besides, I had forgotten what was in it.

Having faced this before, I popped the plastic cover off, expecting to see a battery compartment. No compartment.

To replace the batteries you had to open the safe. But with dead batteries, you could not open the safe. Catch 22. There was a key slot, however. After searching a few hours, I realized that the key had disappeared into the morass of three household moves.

I called the company.

“Yes, we can send you a new key. You need a copy of the original bill of sale, a notarized request, and the safe serial number and a copy of the key code.”

I explained that the bill of sale had gone long ago.

“Well, what is the serial number?”

I read it to the nice lady.



“That model is 30 years old. We can’t help you. But we can help you if you buy a new safe.”

“How?”

“We send you an email reminding you to change the batteries.”

“Thanks.”

I went to YouTube, which has numerous articles on how to open gun safes (unnerving), but all the methods they suggested failed, mostly because the thing was still bolted down in the closet.

I needed to cut the bolts. This meant a trip to Hometown Freight.

“I need a foot long hacksaw blade for a demolition saw.”

“Do you want the Trojan, the Barracuda, or the Godzilla?”

“What’s the difference?”

“What are you cutting?”

“5/16 bolts.”



“Godzilla, definitely Godzilla. The other two brands don’t cut steel so well.”

I briefly wondered what the value of hacksaw blades that did not cut metal might be.

So, armed with a ten pack of Godzilla blades, I slipped the long blade under the safe, and tried to cut the bolts. The

vibration meant that the contents of the upper shelves cascaded downward on my head. There was also no evidence of any cutting action. I went back, got some real hacksaw blades and a handle, and tried again. Seven hundred and fifty strokes later, I got the bolts cut, had the safe out, and had heat exhaustion. I tried the YouTube methods again. No results, other than a few dents.

Taking the safe out to the shop, I set it up in the milling machine. This worked, but after cutting two horizontal slits, I realized the safe was too tall to cut the other two. Setting out flame retardant blankets, I got the angle grinder and a cutting wheel, and after a VERY exciting spray of sparks, I had the thing open. Putting out the small fire, I examined the contents.

Contents- two jackknives and one half-empty box of 22 Long rifle cartridges.

Note to self-

1. Put key in safe place.
2. Change batteries once a year.
3. Wet down floor before grinding.
4. When bolting down safe, leave a little slack to get the blade in there.
5. Leaving problems to your kids builds character.

Foundations of Amateur Radio

The microphone gain game ...

One of the most misunderstood settings on your radio is the microphone gain. You'll often hear people talking about adjusting it up or down depending on what they hear and the results are often displeasing to the ear. The very first thing to know is that the microphone gain is likely the single most audible setting on your radio, right after the tuning frequency. It's pretty much the first variable between your voice and your transmitter. Set it too low and you'll hear nothing, set it too high and you'll hear gibberish.

I said it's pretty much the first thing, but it's not the very first. That's your voice, unique in all its glory, loud, soft, happy, sad, funny or not, it's the thing that your microphone captures to transmit. Closely coupled to your voice is the distance between your mouth and your mike. The closer you are, the louder, the further, the softer and the more background noise creeps in.

As an aside, speaking of noise, there's background noise at play, but there's also the noise that comes from the audio circuitry itself, which can for example change depending on the temperature of your radio. I'm going to refer to both as noise here, even though they're slightly different.

So, starting with the ideal model where you always speak in the same way, at the same volume, at the same distance from the microphone, with a constant temperature in your radio, at all times, the next thing is the microphone gain, or gain.

Gain is an imperfect attempt at corralling your utterings into electrical signals without causing the audio circuit to distort or drown in noise. Distortion comes as a result of overloading of the audio circuit when the gain is too high, causing clipping, which essentially changes the audio waveform into something that no longer resembles your voice. At the low end of the gain range there is no difference between audio and noise which results in your voice being buried inside a hissing noise. You might wonder why we don't just build transmitters that cannot clip and increase your volume. Well, we do. We use things like AGC, or Automatic Gain Control to attempt to prevent such things from happening, but this isn't perfect.

All this results in the microphone gain being a setting that you need to tune to your voice and adjust as things change. Overall, the best outcome is when you set the gain so the AGC just engages when you talk normally. This gain setting also applies to computer generated signals, often fed into your radio via an audio or microphone input. If you set the gain too low, noise is the problem, set it too high and the Automatic Gain Control will distort the signal to the point where it no longer works and causes interference for everyone else including the station that you're trying to contact.



On older radios the output power was fixed. This is also true for Software Defined Radios. To reduce output power, you can change the microphone gain down and reduce the power. Change it to halfway and your output power is essentially reduced to half power. This works for a range of settings, but get too low and we're back to noise and audio fighting each other.

The opposite isn't true.

You cannot increase the microphone gain to increase power. The moment you exceed the audio circuit range your signal is distorted. On an SDR this means that you're exceeding the ability of the Analogue to Digital converter to represent your audio. In digital terms, zero means no sound and all on means 100%. If your audio is so loud as to only be 100% on, that's like sending a

tone out the transmitter, resembling anything but your voice.

All of what I've talked about is related to SSB signals and to some extent AM. FM is a different animal entirely. For starters, output power on FM is fixed. The next difference is the signal or channel width. Without going into full detail, FM comes in different widths, WFM or Wideband FM, NFM, or Narrowband FM, and between the two, "normal" FM. To make things more fun, not everyone agrees on what each one means at any given time. Also, channel width and channel spacing are not the same thing, but that's for another day.

Gain aside for a moment, consider two matched FM radios using the same channel width. Your voice volume is determined by how much of the channel you use. Louder means wider, softer means narrower. Adjust the gain up, the signal gets wider, but the limit of the channel width remains, get too high and it clips at the channel width and distorts. At the other end, changing the gain down, you'll use less of the channel width and eventually the noise and your voice will be at the same level and you won't be heard.

Let's look at what happens when you use a normal FM signal to transmit to a narrowband FM receiver. Essentially your signal is too wide and the result is that your voice will be clipped unless you speak really softly or if you've set the gain really low, either way comes with more noise.

Similarly, if you transmit a narrowband FM signal to a normal FM receiver, then your voice will be very low, regardless of the microphone gain setting and turning it up will only distort it due to clipping inside your transmitter.

So, for FM, before fiddling with the gain, make sure that you're using the same FM mode as the other station. One thing to remember is when you use a repeater, if the audio is always too loud for everyone, your mode is probably too narrow. Similarly, if the audio is always too soft and you always need to turn up the volume on your radio, your mode is likely too wide. Check your radio specifications to determine what each mode means.

In broadcast audio this whole thing is managed by calibration using standard tones, but as amateurs we

tend to rely on other people reporting their feelings on the quality of your voice with the often heard admonishment to adjust the microphone gain.

I'm Onno VK6FLAB

Radio amateur awarded six-figure NSF grant

The National Science Foundation (NSF) awarded a grant of \$399,211 to Nathaniel Frissell W2NAF, Ph.D., assistant professor physics and electrical engineering at The University of Scranton

The Scanton press release says:

Nathaniel Frissell, Ph.D., assistant professor of physics and electrical engineering at The University of Scranton, will lead a \$399,211 National Science Foundation (NSF) grant-supported collaborative research project entitled "Measuring Daily Ionospheric Variability and the 2023 and 2024 Solar Eclipse Ionospheric Impacts Using HamSCI HF Doppler Shift Receivers."

As the lead principal investigator, Dr. Frissell will work with students at the University of Scranton, collaborators at Case Western Reserve University, and volunteers across the nation to study how dawn, dusk, and solar eclipses affect the electrified portion of the upper atmosphere known as the ionosphere. This will be done using a network of Global Navigation Satellite System (GNSS) stabilized/synchronized high frequency (HF) receivers (known as Grapes), which were developed as part of the \$1.3 million NSF-funded HamSCI Personal Space Weather Station (PSWS) project he was awarded in 2019.

An annular solar eclipse will take place on Oct. 14, 2023 and a total solar eclipse will take place on April 8, 2024.

"These are the last solar eclipses to traverse the continental United States until 2044, and are therefore important, time-sensitive, information rich opportunities for running unique and 'controlled' ionospheric experiments," said Dr. Frissell. "This project takes advantage of the unprecedented opportunity to study the ionospheric impacts of the 2023 and 2024 solar eclipses and the daily ionospheric variability associated with dawn/dusk transitions."

A better understanding of the impact of ionospheric disturbances is imperative, because these changes can affect crucial navigation and communications systems.

According to Dr. Frissell, this new NSF grant will fund an additional 30 Grape receivers that will be deployed throughout North America. Volunteers from the HamSCI amateur radio community will be able to fund and field additional stations. All stations will run continuously from deployment through at least the end of the project in 2025, and will capture the 2023 and 2024 eclipses. The grant will also support master's and Ph.D. level student participation in the research data collection and analysis.

"This project will also establish a new network of measurement instruments that, due to its low- cost and operation by volunteers, has the potential to provide measurements for years to come," said Dr. Frissell, who also noted that results of the project "will be shared widely with the amateur radio community through presentations at amateur radio conventions, local clubs, and publication in amateur radio magazines and journals."

Dr. Frissell joined the faculty at Scranton in the fall of 2019. . He is the founder and lead organizer of the international citizen science space physics research collective known as the Ham Radio Science Citizen Investigation (HamSCI.org). HamSCI is recognized as an official NASA Citizen Science Project. Fess Elisha Parker Jr. (born F. E. Parker Jr.; August 16, 1924 – March 18, 2010), was an American film and television actor best known for his portrayals of the titular characters in, respectively, the Walt Disney television miniseries Davy Crockett (1954–55; ABC) and the long-running television series Daniel Boone (1964-70; NBC). He was also a winemaker and resort owner-operator.

He served in the U.S. Navy in World War II on board the USS Clay (APA-39) and participated in mopping-up operations in the Philippines aboard the USS YMS-334. Parker's height prevented him from entering Navy flight school. Then he tried for aviation radio gunners school in the Navy. "They threw me out because I was too big. They said, "You'll never get inside the cockpit." But because he had gotten Morse code training, he was shipped off to the Marines in Oceanside, Calif., where he trained for beach landings carrying a 50-pound field radio. "We were all just a bunch of kids, Happy Jacks," he remembered. One day, command called the group together and split them into two groups. The other group went to Iwo Jima. "They lost 5,000 people just getting

off the beach," he remembers. "I assume someone had said, "That guy's too big." I was fortunate all the way through."

NET HISTORY

by Bill, W1WMM

The 6 O'Clock Net was started on March 18, 2020, at the beginning of the Covid19 pandemic when Jon, K1TP and I, W1WMM thought it a good idea, especially when lockdowns were initiated, and social isolation became the norm. The idea was to start a Health and Wellness Net, the purpose of which was to be checking in on each other and monitoring how we were all doing during the just-initiated lockdowns. I picked 6:00 pm to give it a shot and simply put out my callsign for check-ins-- and people did! Gardi, KA1BTK, and Ruth, WW1N, got on board as Net Controllers to help. It was seven nights a week! Gardi and Ruth stepped down from Net Control after a couple of weeks and I continued it nightly until June, when my mother passed. Jon K1TP, Chris, W1TAT, and Ruth, WW1N took it over until July 3 and the net shut down.

After regular check-ins said they were missing the Net, I restarted it on July 17, 2020. Ruth WW1N helped me with Net control, until August 19, when I had to step down due to some personal issues. Ruth then took over Net Control duties and ran the Net until January 1, 2021, still on a seven nights per week basis.

Kevin, K1KL, Chris, W1TAT, and I then shared Net Control responsibilities and changed the net from seven to three nights per week. In April 2021, I stepped down from Net Control duties due to health reasons. K1KL and W1TAT continued the Net on Mondays and Wednesdays, until Fred, WA1ESU picked up Net Control on Fridays and the Net returned to three days each week.

In June 2022, Chris, anticipating relocating to western MA, stepped down as a Net Controller and Paul KC1HHK picked up the Wednesday night net, Kevin controlling on Mondays and Fred on Fridays.

Chris changed his plans to move away from Gloucester, survived a serious health challenge, and returned to Monday night Net Control after a remarkable recovery. Kevin took the opportunity, with Chris' return, to step back from Net Control as a summer of heavy family obligations approached. The trio of Chris (Monday),

Paul (Wednesday), and Fred (Friday) now anchors the net. Kevin posts topics and maintains the web site.

The 6 O'Clock Net has evolved from a Health and Wellness Net to a net with nightly topics through which everyone can learn and share. The Net continues to attract new people and is still growing-- with strong check-in numbers even in the summer months. It really is a success story of Cape Ann area hams helping each other, and it has most definitely created a strong sense of community among the participants.
<https://sites.google.com/view/6pmnet/home>

TRIVIA

Fess Elisha Parker Jr. (born F. E. Parker Jr.; August 16, 1924 – March 18, 2010), was an American film and television actor best known for his portrayals of the titular characters in, respectively, the Walt Disney television miniseries Davy Crockett (1954–55; ABC) and the long-running television series Daniel Boone (1964-70; NBC). He was also a winemaker and resort owner-operator.

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International Space Station

ARISS, Amateur Radio on the International Space Station, announced that simultaneous operations of the ARISS Voice Repeater and digital APRS communications on the Space Station is now a reality. Current ARISS operations include voice repeater transmissions with the JVC Kenwood D710GA in the Columbus module and APRS packet operation from an identical radio in the Service Module (Zvezda). Packet operations are on 145.825 MHz.

The ARISS Russia and USA teams have been working for several weeks to prepare the Service Module radio for APRS operations. ARISS Russia team member Sergey Samburov, RV3DR, led the effort, working with Russian mission controllers and the on-board ISS cosmonauts to configure the Service Module radio for APRS ops. On August 11, final checkouts were completed and the APRS packet mode was switched on for amateur radio use.

ARISS-International Chair Frank Bauer, KA3HDO, said, "Simultaneous operation of APRS and the voice repeater on ISS is transformative for ARISS and represents a key element of our ARISS 2.0 initiative, providing interactive capabilities 24/7 that inspire, engage and educate youth and lifelong learners—especially life-long learning in ham radio operations. ... Our heartfelt thanks to Sergey Samburov, RV3DR, for making this crucial ARISS 2.0 initiative become a reality."

The Columbus Module radio uses the call sign NA1SS and the new Service Module radio uses RS0ISS. Aside from the call signs, the radios are identical and packet operations are the same as before. Hams can use RS0ISS, ARISS, or APRSAT as the packet path. Also, both radios are expected to be on full time, except during educational contacts, EVAs, and dockings or undockings.

ARRL Welcomes Director of Information Technology

ARRL The National Association for Amateur Radio® has announced the hiring of Steve Berry, N1EZ, into the new position of Director of Information Technology. He's from Bedford, New Hampshire, and has been a radio amateur for 45 years.



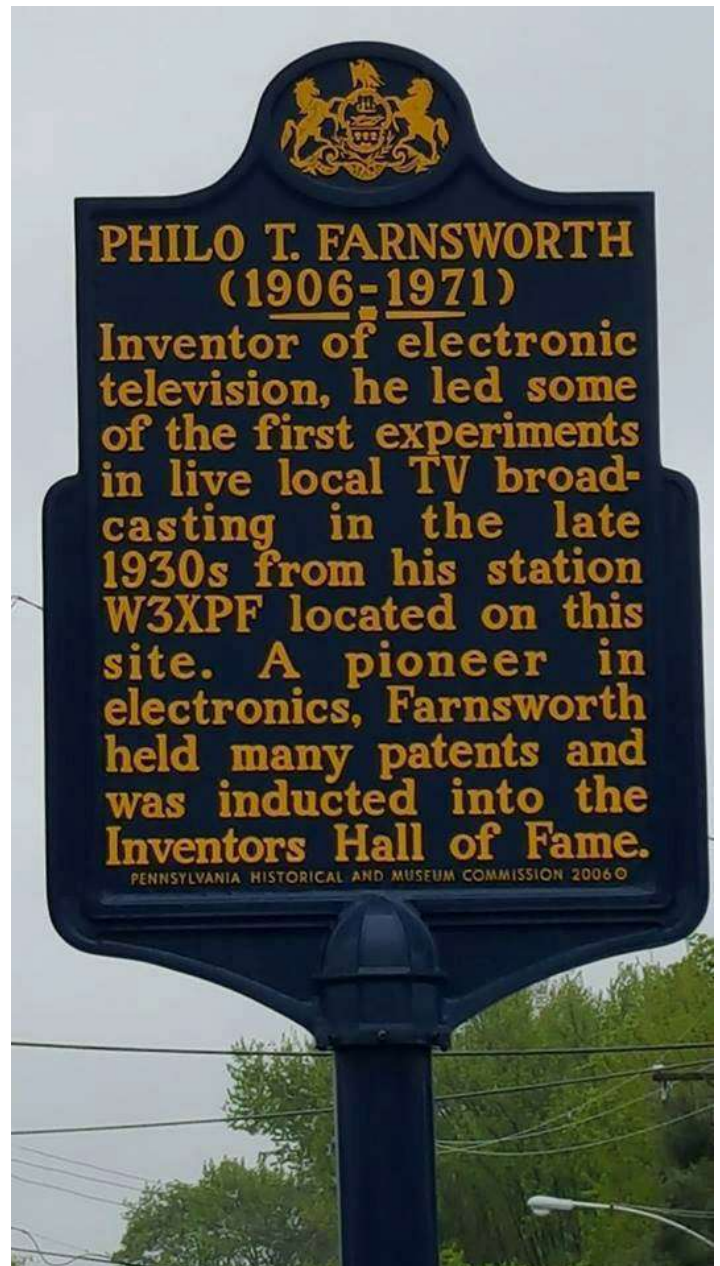
Berry began his 35-year IT career in software development within a wide range of environments, from firmware to Unix device drivers and application development. While working for AT&T Bell Labs (now known as Nokia Bell Labs) as a network consultant, he built his first consulting firm focused on Unix networking and electronic publishing.

After the acquisition of that firm, he worked in senior-level management positions within systems integration and consulting organizations before founding Strafford Technology in 1995.

Strafford offered Business Intelligence consulting services and eventually focused on delivering Enterprise Performance Management solutions to Fortune 500 organizations based on Oracle/Hyperion technology."I'm pleased to welcome Steve into this new role at ARRL Headquarters," said CEO David Minster, NA2AA. "The position and its responsibilities are key to helping us achieve ARRL's ongoing digital transformation for the benefit of our members."

As Director of Information Technology, Berry is responsible for the overall strategic and operational IT functions, including continuous evaluation and execution of processes, systems, applications, and infrastructure. Berry manages a team of professional IT contributors, including a development team and project leaders. Together, they fulfill a variety of technology services for the organization, such as corporate databases and systems, websites and web services, server support, and coordinating outside suppliers of technology services and contracted resources.

"I feel truly honored to give back to ARRL and the hobby. Both have done so much for me, especially with the many friends I have made over the years and the ham mentors who gave me a start in my career."



YuKanRun Triple Threat Communications Team

Rockport, MA

Event date: Sunday, August 7, 2021

On Location: 8:00 am – 4:00 PM

Starts: 5K Run = 8:00 am Half Marathon Run = 9:00 am

Frq: W1GLO Repeaters 145.130 – PL:107.2 Back up: 443.700 + PL:107.2

FOR 5K RUN

Net Control W1WMM Bill

Start / Finish Incident CMD WA1ESU Fred

YuKanRun Director Phil Cell

Trail Vehicle K1DSL Dan

Cp2 Old Garden Road. KC1HGD Jim

Cp3 Atlantic Ave & Mt Pleasant St. KC1FFA Ken

FOR Half Marathon RUN

Net Control W1WMM Bill On Air 7:30

Start / Finish Incident CMD WA1ESU Fred

Yukan Director Phil Cell Phil 978 578 3649

Trail Vehicle K1DSL Dan .

Cp2 Old Garden Road. KC1HGD Jim

Cp3 Atlantic Ave & Mt Pleasant St. KC1FFA Ken

Cp4 Penzance Road. K1KL Kevin



Amateur Radio Newline Report

US EMERGENCY BROADCAST NETWORK DEEMED VULNERABLE TO HACKERS

JIM/ANCHOR: Our top story this week is about a word of warning experts have issued to the US Emergency Broadcast Network, calling it vulnerable to hackers. Andy Morrison K9AWM brings us those details.

ANDY: The United States' national broadcast network which transmits child abduction alerts and severe weather warnings - is becoming increasingly vulnerable to fake alerts from hackers unless state and local governments fix security weaknesses in devices t

That was the warning delivered recently by the nation's Department of Homeland Security, which repeated its cautionary message about the US Emergency Alert System at a recent session of DEFCON, a major hacking conference held in Las Vegas, Nevada.

Homeland security officials said that ongoing vulnerabilities in the encoder/decoder devices enable hackers to transmit the bogus warnings over radio and TV stations. Cybersecurity researcher Ken Pyle, who is credited with discovering the vulnerability, told reporters recently that without a necessary software update for these devices, hackers can pre-empt broadcast signals, exploit web servers and disrupt the legitimate system. He said the problem has existed for several years and has gone uncorrected.

Reporting on this issue, Cable News Network asked the Federal Communications Commission for a tally of how many devices are running the vulnerable software. The FCC had no immediate response.

This is Andy Morrison K9AWM.

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NEWSLINE PRESENTS YOUNG HAM OF THE YEAR AWARD IN HUNTSVILLE

JIM/ANCHOR: The Huntsville, Alabama Hamfest is history now and Newline was happy to be there to meet with this year's Young Ham of the Year Award. Don Wilbanks AE5DW tells us all about it.

DON: "Good afternoon everyone, it is a little after two o'clock on Saturday at Huntsville, that means it is time for the Young Ham of the Year Award. My name is

Don Wilbanks AE5DW, I'll be presenting the Young Ham of the Year this afternoon to Audrey McElroy KM4BUN. We're so proud of her, and first off I want to say that after two years of being away, it is so good to be back at untsville, Alabama at the hamfest!"

That was how the first in-person Young Ham of the Year presentation in two years began Saturday, August 20th on the main stage at the Huntsville Hamfest. I read off a short list of the many accomplishments that earned Audrey this honor and then the floor was hers.

"Hello everybody, I am so happy to be here! Huntsville Hamfest is definitely my favorite place to be! I'm sure a lot of you can agree. I'm very honored to receive this award! My brother and I have worked in amateur radio for many years now but I can't not thank the people who helped me throughout this. Of course, my parents Tom McElroy and Janet McElroy along with others like Carole Perry WB2MGP, Bill Brown who is right there, WB8ELK, and tons of other people who have been mentors to me and helpers to me because if it wasn't for them I wouldn't be able to do the things I'm able to do. And so I hope in the future I can continue pushing for bringing more youth into amateur radio as well as bring more women into STEM and the wonderful world of amateur radio. So, thank you all again."

Representatives from CQ Communications, Yaesu USA, Heil Sound, RadioWavz Antennas and GigaParts had remarks and gifts for Audrey. Of course, we mentioned the last two honorees, Christopher Brault KD8YVJ from 2020 and Faith Hannah Lea KD3Z from 2021 who were presented their awards virtually online. Sadly, neither could attend live this year due to prior school commitments.

All of us at Newline including our awards committee and judges wants to congratulate Audrey. She is a shining example of why Bill Pasternak was so committed to honoring the amazing young people in this hobby and service. She carries the torch high.

If you would like to hear the entire, unedited presentation audio you can find it on our Extra page at arnewline.org.

Speaking for our Young Ham of the Year committee chairman Mark Abramowicz NT3V and our panel of judges, we can't wait for next year! See you there.

I'm Don Wilbanks AE5DW.

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ROMANIAN STUDENTS RETURN FROM 4-DAY SOTA EXPEDITION

JIM/ANCHOR: Students in an amateur radio club in Romania have returned home with full hearts and full logbooks after four days of activating the countryside's beautiful mountains. More on their trip from Ed Durrant DD5LP.

ED: Accompanied by their teacher Adrian YO5IA, and other mentors, a group of young amateurs from the school radio club YO6KGS in Romania set out from Râciu Village in late July for their latest adventure, a four-day SOTA expedition in the Giumalau Mountains. After watching demonstrations by Csaba, YO6PIB, and Eva, YO6EVA, who activated their first summit, Giumalău Peak, the students joined them on 20m and 17m. Ranging in age from 12 to 20, many of the students had gone on previous activations with the school club and their advisors. Mihaela, YO5MCM, could not be there in person this time but made sure to chase the group from her QTH in Cluj about 200 km away. There was also a family reunion, ham radio style, as Nico YO6YLJ, made a summit-to-summit contact with his father, Mihai YO6SM, who was operating from Norway using the call sign LB9HI. Mihai was able to give the other students their chance for a summit-to-summit contact too. Everyone spent comfortable nights in a mountain cottage and by the final night they had earned some bragging rights: The whole team had activated Giumalău summit, YO/EC-007, and logged summit-to-summit QSOs from Muncel, YO/EC-527, to Giumalău on VHF and UHF. Daria YO6CDC wrote in her online diary that until the next time: [quote] "We have the radio waves, the contests, the radioclub where we meet, while the memories last forever." [endquote]

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TOP HONORS FOR CALIFORNIA AMATEUR'S DOCUMENTARY AT LOS ANGELES FILM FEST

JIM/ANCHOR: A documentary film celebrating the spirit of invention has just won top honors at a Los Angeles Film Festival. Not surprisingly, the film's creative team included a ham. We hear more from Mike Askins KE5CXP.

MIKE: "Pathways to Invention," a newly released documentary film directed and coproduced by a Santa Barbara, California amateur radio operator, has been

chosen as Best Documentary Feature at the Los Angeles Independent Film Festival Awards. Levi C. Maaia, K6LCM, is both a teacher and a tinkerer who believes that technology can be a driving force to power education. A proponent of the Maker movement, Levi and his production partner Noah G. Mark follow 10 emerging innovators on their journeys to become inventors. The film was made with the support of the Lemelson Foundation. At the festival, the film also received awards for best producer, best original music score and best director of a documentary feature. The film is to premiere this year.

Levi has been active on the education committee of Amateur Radio on the International Space Station. He is also a life member of AMSAT and a board member of the Santa Barbara Amateur Radio Club

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INDIAN AMATEURS MARK NATION'S 75 YEARS OF INDEPENDENCE

JIM/ANCHOR: India has just marked its 75 years of independence and hams have been busy celebrating on the air. Jim Meachen ZL2BHF tells us some of the ways they're

JIM: Amateurs throughout India and beyond have been marking that nation's 75 years of independence with special event stations and commemorative nets. Special event station AT75CW will be on the air using CW from September 1st through October 2nd from northern India. Rajesh, VU2CW, is the same operator who activated AT75RADIO earlier this month on SSB.

Meanwhile, the Indian YL Net on the India Conference Server on Echolink marked the nation's independence with a series of guest net control operators during the week of Monday, August 15th. Guests net controllers on this daily net included Dr. S. Sathyapal, VU2FI, director of the Indian Institute of Hams, using the call sign AU75IIH, and Omprakash Khyani, VU2KOC, who runs a popular net in India. He used the call sign AU75KOC.

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ITCHING TO WORK THE SCRATCHIN' POST QSO PARTY

JIM/ANCHOR: If you want to have a QSO party, all you need is a reason. Much like the World's Largest

Teapot event that recently concluded, this ARES special event station is just dripping in Southern charm.

DON: In coastal Mississippi exactly 40 miles north of the Gulf of Mexico and 10 miles west of the Alabama state line lies the friendly little town of Lucedale, Mississippi, founded in 1901, population 24,762. Right in the heart of downtown Lucedale on the corner of Mill and Main you'll find a four-by-four wooden notched post known as The Scratchin' Post. From 1937 until 1993 there was a very popular 24-hour restaurant at that site known as The Coffee Pot, renowned for its 5-inch tall merengue pies. The restaurant is long gone, a victim of progress and rerouted highways, but The Scratchin' Post still stands tall. And on Saturday, September 3rd, George County ARES will put it on the amateur radio map with The Scratchin' Post QSO Party. You may be asking why is it called The Scratchin' Post? It was a tradition when entering and exiting the restaurant to scratch your back against the post. Several famous spines found comfort in rubbing up against that hunk of wood. Baseball legend Dizzy Dean. Country music legends Tennessee Ernie Ford and Ernest Tubb. Actors Kirk Douglas, Gene Autrey and Roy Rogers. Even Ronald Reagan in his Hollywood days as well as Tom Lester, "Eb" on "Green Acres." You can scratch that radio itch by listening for K5K on 20 and 40 meters phone as well as FT4 and FT8. Operating hours are 1300 to 2300 UTC on Saturday, September 3rd. They will be operating Field Day style from the downtown City Park. If you're in that neck of the woods, stop by and enjoy some fine Southern hospitality. Everything you need to know, as well as a picture of The Scratchin' Post, can be found on the K5K QRZ page. Sounds like the perfect excuse for a QSO party.

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VOLUNTEER MONITORS SEND HAMS COMMENDATIONS, NOTICES

JIM/ANCHOR: A recent trip to the mailbox brought surprises for some hams - some pleasant surprises, others not-so-pleasant. Sel Embee KB3TZD explains.

SEL: The Volunteer Monitor Program, begun in 2020 as a cooperative effort between the FCC and the ARRL, recently released its report for July of this year. The program delivers commendations as well as notices of improper operation to hams as a way of boosting compliance with amateur radio license regulations.

The latest commendations include a ham in Columbia, South Carolina for helping amateurs complete programs for the Community Emergency Response Team and for assisting those involved in the county's Emergency Operations Center. Commendations were also given to hams in Poughkeepsie (poo-KIPP-See) New York for conducting the community bulletin board on a local repeater. Hams in Roslyn, Pennsylvania were also given commendations for involving the Phil-Mont Mobile Radio Club in Field Day and MESH operations.

Meanwhile, notices for unlicensed operation were sent to logging companies in Washington state for their use of 2-meter amateur frequencies. Another notice for unlicensed operation was sent to an operator in Indian Hills, California for operating 2m simplex APRS during a high-altitude balloon flight, one year after the operator's license had been cancelled by the FCC.

Notices for operating FT8 outside license privileges were issued to a Technician class operator in Martinez, California and a General-class operator in Trenton, New Jersey. Notices for operating on SSB outside their General class privileges were issued to hams in Massapequa (massa-PEE-KWAH), New York, and Trenton, New Jersey.**

SPECIAL 9/11 EVENT MARKS TERROR ATTACKS' 21st ANNIVERSARY

JIM/ANCHOR: Recalling the difficult day that was September 11th, 2001, a group of US amateurs is marking that grim anniversary with a special event starting very soon. Jack Parker W8ISH tells us what their plans are.

JACK: Members of the Alabama Contest Group will be carrying the message "Nine Eleven, Remembered Once More," during a special event being activated to honor the victims of terrorism who perished 21 years ago in New York City, Washington, D.C., and Shanksville, Pennsylvania. Stations will be using the callsign K4A starting at 0001 UTC on September 8th and running through to September 12th, operating on all bands and using CW, SSB, FT8 and RTTY. Organizers are expecting many hams to be calling in with stories of remembrances from September 11th, 2001.

Planners have been busy on the Discord chat app making a schedule that will be accessible to amateurs worldwide. An extra effort will be made on CW and FT8 to help Pacific DX operators, especially in VK and ZL, make contacts. Certificates will be available in

addition to QSL cards. QSOs are needed on four bands in any combination of modes to qualify for a certificate. Outside of North America, only three bands are needed.

According to the QRZ page for K4A, this event recognizes "peace-loving people all over the world." Visit the page for K4A or WA1FCN for more details.

WORLD OF DX

In the World of DX, members of the Zagreb Amateur Radio Association will activate the special callsign 9A24ZRF during the 24th ZagrebRadio Fest on September 2nd and 3rd. QSL via the Bureau or LoTW.

In Malaysia, the Taiping Amateur Radio Club and the Malaysian Amateur Radio Transmitter Society (MARTS), will be using the callsign 9M65MA from August 30th through to September 1st. This is to mark the 65th anniversary of Malaysia's independence. Listen on various HF bands for operators using CW, SSB, FM and the Digital modes. QSL via 9M2OHM direct.

Trinidad and Tobago will be marking the 60th anniversary of their independence with an amateur radio special event operated by members of the Trinidad and Tobago Amateur Radio Society. They will be using the callsign 9Y60TT between the 26th of August and the 2nd of September. Listen on HF as well as the VHF bands where operators will be using CW, SSB, Slow Scan TV, Digital Modes and Moonbounce. They will also be making use of satellite contacts and APRS via the International Space Station. Be listening as well on DMR, C4FM, D-Star and EchoLink. QSL using LoTW, ClubLog or QRZ.com.

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KICKER: ONE ANTENNA THAT'S A-MAIZE-ING

JIM/ANCHOR: We end this week's report with a story about field day. No, not THAT field day. For this story, we're going straight to the field - the corn field, that is. Ralph Squillace KK6ITB brings us some kernels of wisdom.

RALPH: If you're stalking the newest and most unusual kind of antenna, look no further than the two 8-foot-tall green stalks that Kevin KØKLB harvested recently in an Iowa cornfield to create the homebrew vertical he called the CornTenna. Relying on the combination of two stalks plus their inherent conductive moisture, Kevin had a hunch that by joining them and adding a

copper wire, mounting them on a wooden batten and adding radials, he might get an SWR acceptable enough for some QSOs on 20m. With a little adjusting, the CornTenna tuned right up in the field and, well, things were soon popping. Operating at 5w QRP, he logged two contacts in Texas and had a few other contacts that almost made it into the log. Not quite smooth as silk, but for a Corn-Tenna? Downright a-maize-ing. You can see Kevin and the CornTenna in action on YouTube at the link in the text version of this week's newscast at arnewline.org. He's got a real antenna farm and yes, he's having a field day.

Meanwhile, one lingering question remains: Whether this innovative vertical can hold its own in a real amateur radio DX CORNtest. We're all ears.

Foundations of Amateur Radio

Loyalty in Amateur Radio The second clause of the original Amateur's Code reads:

The Amateur is Loyal. He owes his amateur radio to the American Radio Relay League, and he offers it his unswerving loyalty.

The 2022 ARRL handbook presents it with the following words:

The Radio Amateur is LOYAL...offers loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

The ARRL website goes the extra mile to make this hard work and states that:

The Radio Amateur is LOYAL...He/[She] offers loyalty, encouragement and support to other amateurs, local clubs, the IARU Radio Society in his/[her] country, through which Amateur Radio in his/[her] country is represented nationally and internationally.

Pronouns aside, this has got to be one of the more tortured efforts you might subject an entire group of humans to. Written in an attempt to enumerate each and every specific version of the global amateur radio community, it excludes more than it includes and in doing so completely fails the one thing it aims to achieve, a sense of belonging, being part of something bigger than you.

So what does loyalty look like?

Is providing constructive feedback loyalty? Is giving your time and energy a loyal thing? What about being a member of a club?

The dictionary suggests that loyalty is a strong feeling of support or allegiance. Originally the code suggested that this should be directed at the ARRL, even the handbook continues to suggest that today, but is that relevant for me here in Australia? Should I be a loyal member of the ARRL, or should I be a loyal member of the WIA? What if there is a second body in your country? In Australia there is another organization attempting to reshape the hobby, RASA, the Radio Amateur Society of Australia, should I be loyal to that? Can I be loyal to both, or neither? What happens if I am not comfortable with either organization, who should I be loyal to?

National bodies aside, what about clubs? Am I required to be a club member and be loyal to it? What if I'm a member of more than one club? Should I be more loyal to one than the other? Should I be more loyal to the national body or my local club? What if I'm not a member of any club? What should I be loyal to then?

What if loyalty is coupled to an idea instead of a specific body? What might that idea look like? The revised version of the clause already includes concepts such as encouragement and support to other amateurs. What if we just omit any specific bodies and replace it with the idea of the global amateur community in all its many splendored diversity?

While we're looking at this, the word encouragement includes the action of giving someone support, confidence or hope, so we're repeating ourselves by using support and there's plenty of other things we could share around.

Here's a philosophical question to wrap your mind around. If you have

a drivers' license, but you don't drive, are you a driver? Similarly, if you have an amateur license, but you don't do anything with it, are you an amateur? Perhaps the nub of this lies in participation.

Taking those thoughts into account, we could rephrase the second clause of the Amateur's Code to: The Radio Amateur is LOYAL...offering encouragement and participation to the global amateur community.

If this clause was part of the Amateur's Code, would it help you feel like you belonged, would it travel beyond the borders of your country and would you feel part of something bigger?

I'm Onno VK6FLAB

Howard Hughes test flying a radio control scale model of the Spruce Goose in California, circa 1947.



DXCC Country/Entity Report

According to the Amateur Radio Cluster Network for the week of Sunday, 21st-August, through Sunday, 28th-August there were 215 countries active.

Countries available:

3A, 3B8, 3B9, 3D2, 3DA, 3V, 3W, 3X, 4J, 4L, 4O, 4S, 4U1U, 4W, 4X, 5A, 5B, 5H, 5R, 5V, 5W, 5X, 5Z, 6W, 6Y, 7Q, 7X, 8P, 8Q, 8R, 9A, 9G, 9H, 9J, 9K, 9M2, 9M6, 9U, 9V, 9Y,

A3, A4, A6, A7, A9, AP, BV, BY, C2, C3, C5, C6, C9, CE, CE0Y, CE9, CM, CN, CP, CT, CT3, CU, CX, D2, D4, DL, DU, E4, E5/n, E5/s, E7, EA, EA6, EA8, EA9, EI, EK, EL, EP, ER, ES, EU, EX, EY, F, FG, FH, FK, FM, FO/m, FR, FS, FW, FY, G, GD, GI, GJ, GM, GU, GW, H4, HA, HB, HB0, HC, HH, HI, HK, HL, HP, HR, HS, HV, HZ, I, IS, J2, J5, J6, J7, JA, JD/o, JT, JW, JX, JY,

K, KG4, KH2, KH6, KL, KP2, KP4, LA, LU, LX, LY, LZ, OA, OD, OE, OH, OH0, OJ0, OK, OM, ON, OX, OY, OZ, P4, PA, PJ2, PJ4, PY, PZ, S0, S5, S7, SM, SP, ST, SV, SV5, SV9, T7, TA, TF, TG, TI, TK,

UA, UA2, UA9, UK, UN, UR, V2, V3, V4, V5, V8, VE, VK, VK0M, VP2E, VP2M, VP6,

Quick update on our club grant from the ARRL and thanks!

Monday, Aug 29, 2022

TO CAARA,

Hello,

Just a quick note to both thank and update the CAARA board, Dick, and also Stanley (I figured Stanley would appreciate this too since he was the original grant man.)



We won our new grant from the ARRL!

My understanding is that it is \$25,000 disbursed out in a few chunks as we progress through our plan.

Big thanks to Director Kevin Lyons K1KL who helped my planning and provided great moral support during the drafting of our proposal. And Also to my wife Ashley who helped me with all the editing and let me run all the ideas before I even set pen to paper. And thanks to Stanley Stone as I read through all your proposals for the clubhouse etc. and found them to be an enormous help and inspiration to apply for this grant.

Now the good part begins as we start to spend \$\$ and hold some fun classes and presentations for hams, our families and the community at large. I think this will really give us a nice boost to our ability to do many fun things at the club.

Regards and thanks to all of us!

Brandon Hockle NQ1W

CAARA President

MFJ to Celebrate 50th Anniversary

08/12/2022 MFJ Enterprises, an amateur radio electronics manufacturer and retailer, will celebrate 50 years in business this October. Martin Jue, K5FLU, founded the company in 1972 after building a CW filter kit that sold for less than \$10. Since 1990 the company has made five acquisitions, including Hy-Gain and Cushcraft antennas.

MFJ Customer Services and Public Relations Manager Richard Stubbs says the company continues to grow with the popularity of amateur radio and currently manufactures over 2,000 products. "I've been with the company for 28 years and the numbers are good," said Stubbs. "Amateur radio continues to grow worldwide."

Quite a few of MFJ's employees have worked there for years, such as MFJ Product Representative Phyllis Randle, who will be retiring in September after 45 years with the company. She started working there when she was a teenager in 1977, and she is now the Product Representative for all MFJ dealers.

Jue graduated from Mississippi State University with a bachelor's degree in electrical engineering, and he earned a master's degree in electrical engineering at Georgia Institute of Technology (Georgia Tech). He served as a professor of electrical engineering at Mississippi State University from 1972 until 1979, but abandoned his doctorate in 1977 because of MFJ's growth.

Currently, because of COVID-19 concerns, the company does not have any plans for a special event to celebrate the anniversary, although Stubbs said that may change in the months ahead.

ANNUAL MEETING DETAILS

Saturday, September 24 at noon

The Annual Election for the 2022-23 CAARA Officers and Board of Directors will be held during this meeting. We will be serving lunch and drinks and appreciate any extras you might be able to bring such as desserts, chips, dips, etc.

We will answer any questions about the club, repeaters, planned future meetings, possible classes, etc. We are always looking for volunteers to help around the club in one of the many committees. This is your club, if you have any requests, ideas, or questions, this is a good meeting to bring them up.

The main discussion after lunch will be the club's recently acquired ARRL grant of \$25,000. The grant is aimed at turning CAARA into a modern teaching facility for the community. New equipment for the club will include a projection screen, computer, learning modules and kits, work stations for presenting lectures and offering hands on lab work for perspective hams, community members, and club members.

This grant has enormous potential for the CAARA club and community, exciting times. This is a meeting you will not want to miss! We need volunteers to help with this massive undertaking: setting things up, developing and teaching curriculum, class assistants, etc. I am sure we all have something to offer and it will be a fun undertaking for all involved.