

CAARA NEWS



Cape Ann Amateur Radio Association
Gloucester, Massachusetts
AUGUST 2022 EDITION



PRESIDENT'S COLUMN

by Brandon- NQ1W

Dear CAARA Members,

With the vacation season upon us, things have been rather relaxed and low paced at the club house. I am looking forward to the next couple of months as we restart outdoor running and other special service events in August and begin planning for our yearly members meeting in September.

Now some big news for us all to cheer is the announcement of a newly minted Extra class amateur radio operator within our membership! Doris 'Dotty' Cole KB1WFZ not only passed the Extra test but passed flawlessly according to our Volunteer Coordinator Bill WZ1Z. Dotty is an active member of CAARA, a frequent participant in the 6pm nets, and a regular at our field day and practice events. She is a standout example of the dedication and skill of our members. Please join me in congratulating her on this milestone achievement in her ham radio career. Great job Dotty!

I also want to thank all of the volunteers who have been staffing our public service events. You guys have been knocking it out of the park this year with the number of events. If you are interested in helping volunteer for radio public service events please contact Fred walesu@comcast.net to find out more information. Another club who helps us find volunteers is the North Shore Radio Association, who host a sign up sheet and events listing on their website. As we hear of events that they need volunteers for we will try to help them too whenever possible. Our members are active on their nets and we share many operators in common with them.

As of this writing we still have not heard news about our foundation grant from the ARRL. There is still time to drop them an email in support of our STEM



initiatives here at CAARA. Every bit of support helps. You can reach our division director at ARRL New England Division Director Fred Kemmerer, AB1OC, 39 Baldwin Lane, Hollis, NH 03049. tel: 603-413-5400. email: ab1oc@arrrl.org

That is all for now. I look forward to seeing you at the August member's meeting. Please enjoy the summer and 73!

Regards,

Brandon Hockle NQ1W

President Cape Ann Amateur Radio Association

THE EMCOMM MINUTE

By Dean- KB1P

So I figured hat I would change it up a little this month and get away from ham radio to another type of "emergency Communication" Especially since it's the summer type and especially since we live



surrounded by water here on Cape Ann. I thought I would cover Marine Radio a bit. What got me a bit more interested was the fact that my 9 year old son Cliff likes to go down to the boulevard in Gloucester and watch all the boats go through the cut bridge. I noticed that the bridge tender listens on Marine channel 13 so I programmed it into my Yaesu 70D HT and now he loves to listen to the boats talk to the tender and the tender telling the boats to stop or go and that the bridge was going up or down.

HMMM-another way to get my kid hooked on radio? Another thing was that while I was talking to the Gloucester Police Chief about what services ham radio we could provide for them and he asked me if we had Marine Communications capability which we, and myself, do not. So as the local ARRL emergency coordinator that's a task I will have to solve. Since I live

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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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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 every Tuesday from 5- 8PM for CAARA members to stop by and socialize, as well as use the extensive collection of ham radio gear.



sort of close to the water I have my Uniden scanner programmed with Marine Channel 16 as well. So I decided to purchase a marine radio made by Standard Horizon. If Standard Horizon sounds familiar to you it's the same company under the name of Yaesu for ham radios.

I looked on Amazon and found the Standard Horizon HX 210 Marine Handheld for \$90. If you look around on Amazon Uniden makes a few handheld models as well. After a couple of days of listening with this radio I would recommend it as a buy. The channel display is large and backlit and the audio is loud and clear. For the radio itself it can float if dropped in the water and is waterproof for 30 minutes. It actually has a strobe light that flashes once it hits the water. A couple cool features is that you can listen to FM radio with the HX 210 and you can monitor the NOAA weather stations as well.

Operating the radio is pretty straight forward and the menu system is easy. It transmits at a typical 5 watts which is a 5 mile range in open water. The build quality is basic and the belt clip holds good and it feels decent in a grip in your hand. It comes with the typical lithium ion battery and well as a charging dock. It also has a 3 year warranty. Not a bad price for what you get and its interesting that a simple 2 meter Yaesu HT is more expensive and it's pretty much the same thing. I would highly recommend the Standard Horizon HX 210 for anyone who operates on the water. Especially for

anyone who kayaks, canoes, Sea Doos or has any other sort of personal water craft. As always you can't transmit with any Marine Radio if your on land.

So if you want to monitor any of the Marine radio frequencies here are the most important. Marine CH 16 is for emergencies, Marine CH 9 is for boat to boat calling and communications, Marine CH 13 is for communications between bridges and boats-my son cliffy and I pick up plenty of radio activity down at the Gloucester Blyman bridge down at Stacy boulevard on CH 13.

The last one is Marine CH 22 which the Coast Guard uses to issue Marine safety information such as hazards and weather warnings. Of course most amateur radio HT's can monitor Marine Channels ,you just have to program them in. So if your near the ocean or a lake take a look at monitoring the *Marine radio channels. Moving on to something else. I got a e mail form our ARRL ARES Section Emergency Coordinator Rob Macedo KD1CY* that the National weather Service announced that in July they had a "Hurricane Preparedness Week. Hurricane season starts in June and heats up in August through October. I looked through the e mail and here are a few things that the National Weather Service advises us to do before hurricanes strike .So it's a good reminder to asses what your risk is in hurricanes, especially if your home is prone to flooding and if you need hurricane or flood insurance. You can also strengthen your home to hurricanes by trimming big trees and securing outdoor furniture. Now's a good time to make sure to check up

on your disaster supplies and to make sure you have back up power, food and water for at least 3 days.

One other thing is to make sure what your evacuation route is. I also thought of the idea of making sure that if you have a boat make sure it's secure before the hurricane hits or take it out of the water early. If you got the funds it's a wise idea to buy a good scanner so that you can keep up with your local public safety agencies and if your not a ham radio operator you can listen in to our communications as well. So that's it for this month,

73 Dean



FCC Legacy CORES System to be Retired

The Federal Communications Commission (FCC) will retire the Legacy version of its COMmission REGistration System (CORES) on July 15, 2022. CORES is the FCC's public-facing database that enables and tracks certain types of FCC and FCC applicant actions, including amateur radio applications and licenses. Its implementation has enabled routine amateur applications and licenses to be issued overnight instead of over weeks, as was the case with earlier methods. ARRL The National Association for Amateur Radio® advises the amateur radio community to transition to the updated version of CORES as soon as possible.

In essence, CORES is designed to identify those who hold certain types of FCC licenses and FCC authorizations, including amateur licenses, and organize them in an easily accessible manner under a common FCC Registration Number (FRN) regardless of whether one holds a single such authority or thousands. The new CORES, in addition to assigning individual FRNs, allows holders of multiple FRNs to aggregate them under a single account where the licenses and authorization, fees and payments, and related actions can be administered from within the same account.

In effect, new CORES can be conceptualized as an electronic interactive file folder. The updated version of CORES has been available since 2016, and now its use will be mandatory for all amateur licensee when submitting amateur-related applications.

Starting on July 15, 2022, the Legacy CORES website will re-direct users to the Commission's updated CORES site. Although some functionalities in the old system will continue to work for a short time, the FCC has urged all users to transition to the updated CORES system to take advantage of its enhanced security and functionality.



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Register with the FCC

Licensees that do not already have an FCC CORES Username Account must create one with a unique username (a valid email address) and password. After creating the account, when logged in, users should associate their existing FRN or FRNs with this account. Instructions for doing so are on the FCC Registration Help page. One's FRN is printed on all current amateur applications and licenses, and will not change. FRNs can also be found by looking up one's call sign in the Commission's ULS (<https://wireless2.fcc.gov/UlsApp/UlsSearch/searchLicense.jsp>) or by using the FCC's advanced search page.

The FCC has posted Tutorial Videos to assist with the transition. ARRL VEC Manager Maria Somma, AB1FM, recommends viewing the videos "Getting Started With the New CORES," which explains how to register for a CORES Username Account, and "Associating an FRN to a Username," which instructs Legacy CORES users on how to link one or more existing FRNs to a username. FCC CORES Registration Instructions can also be found on the ARRL website.

Additional information is available on the FCC website or by calling the FCC Licensing Support Center at (877) 480-3201, Option 4, and on the FCC's e-support page.

Robin Hard

by Curtis- AA3JE

It's early summer. The grandchildren are due up. That means unless I schedule some outdoor adventures I will be losing a great many board games. I hate to lose. Those kids play Monopoly like the mob runs casinos. Secret deals, ganging up on the suckers, all of it. Everything but kneecapping the winners.



My plan year before last was to build a large arrow target, which I did, and take them out to teach them archery. This backfired. I had not pulled a bowstring since summer camp when I was 10 years old. The result was that both my grandchildren were much better shots than I was. (As in hit the target at all). Their bows had bunnies and kitty stickers, but shot ok. I had ordered them from a professional bow shop.

So I was ready this year. I had gone on the Internet, looked at the prices of professional archery gear, and after a really bad sticker shock (\$1750), finally found some gear at a discount. The item in question "Adult Compound Quality Target Bow" was only \$120, but the pop up said that bow shipped (disassembled) but for an additional \$50 I could get "professional setup" which was strongly recommended.

What a scam! I remembered from camp. Bow + string = assembled. I sent the \$120.

When it arrived, I was puzzled. The box was two feet long, but very heavy. Inside were multiple plastic bags and a large warning not to lose anything opening the bags. I cleared the dinner table, got the scissors, and took inventory. There were cables, there were pulleys, there were bushings, there were circlips, there was a bowstring, bow pieces, and poor instructions. I had no idea.

Back to the Internet and I found a copy of "The Compound Bow" for \$24, with only \$12 for express shipping. It came the next day, and I began bolting the thing together. I then discovered I needed a "bow press", which bent the bow while you struggled with the cables.

I got the bow press (\$40), tried to put the cables on, and was defeated. Each pulley had not one setting, but five. I was lost. The pictures were unclear and the Chinglish baffling. Fortunately, I had the number of a Bow Shop which had been very helpful in getting the kid's bows, so I called them.

"World of Archery, Shop services, can I help you?"

"Curt. You helped me with buying my grand kids's bows last year."

There was a silence. Then.

"Oh yes, I clearly remember you, Sir. I had to take my migraine medicine."

"I am having a little trouble assembling a bow."

"What Brand?"

"Er, Feng Shui Champion."

There was a patient silence.

"Do you have a piece of paper? A big one? Sit down, and I will give you the instructions."

Ten minutes and \$100 later, I had a complete set of instructions in English and an order for the other things I would need. This guy, I believed.

Four hours later, I had the bow assembled, and strung. I was ready to install the arrow rest, the peep sight, the silastic cord, the draw loop, and the string dampers. This involves NOT dropping the little screws, and using your dexterous fingers to fix things in place using little tiny screws and wrapping the string. Using the tiny "T" square kind of thing I did all of this despite my total lack of dexterous.

I was ready to sight it in.



Out to the target. Pulllll! Bwang!

The draw loop had pulled out. I had not done it right. Re-install draw loop and melt the ends into big plastic blobs. This involved a fifteen minute hunt for matches.

Pullllll. Bwang!

The peep sight had pulled out, I had tied the silastic cord wrong. Re-install peep, tie cord properly.

Pulll. Thwack. I hit the target about a foot off at ten yards.

Adjust sights. Multiple times.

Pullll. Thwack. On Target.

Set at 10, 20 and 50 yards.

I could now shoot as well as a 10 year old. Good enough.

Pull arrows out of target. The heads come off.

Lessons learned. Buy from a real bow shop. Pay for someone else to set up bow. Do not buy the cheapest internet arrows. Read the WHOLE instruction book.

Learn to lose at board games.

ARRL recognizes radio amateur

ARRL The National Association for Amateur Radio has recognized Dr. Ulrich L. Rohde, N1UL, as the 2022 recipient of the Institute of Electrical and Electronics Engineers, the IEEE, Photonics Society Engineering Achievement Award.

The award is for outstanding engineering achievement in the field of optoelectronic signal generation and optical measurement equipment for next-generation intelligent optical networks. Dr. Rohde is an ARRL Maxim Society and Life Member.

Dr. Rohde is currently a partner of Rohde & Schwarz, in Munich, Germany, and Chairman of Synergy Microwave Corporation in New Jersey. He is also President of the Communications Consulting

Corporation, serving as an honorary member of the Senate of the University of the Armed Forces in Munich, honorary member of the Senate of the Brandenburg University of Technology Cottbus-Senftenberg, and past member of the Board of Directors of Ansoft Corporation in Pennsylvania.

A high achiever indeed

Throughout his career he has been active in microwave technology and in 2017 was honoured for his work developing software-defined radio

Dr. Rohde has been an avid amateur radio operator holding several licenses in the United States and Germany. He has been licensed since 1956s.

He also operates N1UL/MM on his yacht, the Dragonfly, and is Trustee of the Marco Island Radio Club, K5MI.

National ARRL program for school teachers

Crescent-News (Defiance, Ohio) reports a local teacher was selected to attend the Amateur Radio Relay League HQ to participate in the Teachers Institute on Wireless Technology (TI)

Local teacher Gabe Oberlin (K8PHP) recently travelled to the Amateur Radio Relay League (ARRL) Headquarters in Newington, Conn., as he was selected to participate in the Teachers Institute on Wireless Technology (TI).

This professional development opportunity for educators is a technology focused, week-long course on electronics and radio communications. It works well for STEM teachers looking to update their knowledge and collaborate with colleagues from around the country.

All expenses are paid by ARRL and participants are given a significant package of supplies and books worth hundreds of dollars to use in their classrooms.

Several of the participants are amateur radio enthusiasts (hams) like Oberlin, but it is not required to be a practicing ham to qualify for TI.

Oberlin was first introduced to amateur radio while a student at Antwerp High School by math, chemistry and physics teacher, Ed Hohenbrink (N8IZL). It wasn't until years later, after he had been teaching for more than a decade, that Oberlin was reintroduced to ham radio.

He received a grant to purchase the supplies to participate in the Drones in Schools program. After-the-fact he learned that one of the requirements to legally operate the first person view (FPV) drones was that the teacher or coach had to have an amateur radio license. Getting his license opened a whole new world for him.

Fair Lawn (NJ) Amateur Radio Club leads participation in 40th anniversary special event station w2i

To commemorate its 40th anniversary, The Fair Lawn (NJ) Amateur Radio Club (FLARC) will take the lead in hosting the special event station W2I celebrating The Intrepid Sea, & Air and Space Museum on Tuesday, August 2, 2022, from 0000-2359 EDT (0400 August 2nd- 0359 August 3rd UTC) at various locations within the immediate New York City area. Primary bands will be 20 and 40 meters, SSB and CW. Look for spots on the various DX clusters and via the POTA app.

The Intrepid Museum, an American military and maritime history museum, opened to the public on August 2, 1982. Today, 40 years later, Intrepid, now a National Historic Landmark, serves as the centerpiece of the entire Museum complex. The museum showcases the aircraft carrier USS Intrepid, the cruise missile submarine USS Growler, a Concorde SST, a Lockheed A-12 supersonic reconnaissance plane, and the NASA Space Shuttle Enterprise. The Intrepid served the U.S. Navy for over three decades and played a role in World War II, the Cold War, the US space program, and the Vietnam War.

Both paper and digital QSL cards will be available. Find the QRZ specifics of this one-day event here. For more information about visiting the museum itself, go to www.intrepidmuseum.org

The Fair Lawn Amateur Radio is one of the New York metropolitan area's largest amateur radio clubs. With nearly two hundred members, it has its own club station (W2NPT) located in Fair Lawn Recreation Center with five operating positions. It includes nine special interest groups with its largest, Portable Ops, having fifty members.

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PUBLIC SERVICE OPPORTUNITY

We need volunteers for the upcoming **August 7th running event** in Rockport. CAARA provides communications for the YUKANRUN events and needs club members to station mile marker points and watch for any events that may need assistance such as traffic concerns, medical emergencies, etc.

It is a fun event and we get our name in the news for providing public service, it's what hams do for the community.

Foundations of Amateur Radio

The power supply connector dance contest...

In over a decade of writing a weekly article about all manner of different aspects of our hobby and community, I've never once talked about power connectors for your radio. It's so universal as to be invisible and rarely discussed. So much so, that something you do out of habit, makes another stop dead in their tracks and ask themselves why they never thought of it.

Despite how you might feel at the time, there's no such thing as a stupid question. The other day a fellow amateur Dave VK6KV asked about a power connector he'd seen at the local electronics store. That question started a group discussion about powering radios and how best to achieve that.

The very first thing to discuss is that the vast majority of amateur radio transceivers expect a nominal voltage of 13.8 Volt DC. That might sound like a strange requirement, but it's the voltage that comes from a fully charged 12 Volt lead acid battery, which is what many radios use as a power reference.

The next thing to consider is that a transceiver can draw quite a bit of power when it's transmitting. My Yaesu FT-857D user manual suggests 22 Ampere, but I've never seen that in the decade it's been in my possession.

When you purchase a radio, you'll likely discover that it either comes with bare wires, or some random connector that doesn't fit anything else. In many cases I've discovered that people cut off that connector and replace it with whatever standard they've come up with in their shack, but when they take their kit out on a field day, or acquire a new radio, the problem starts all over again.

Let me suggest a different approach.

The Anderson Power company, founded in 1877 by brothers Albert and Johan Anderson in Boston

Massachusetts, make a range of connectors called the Anderson Powerpole and they come in a variety of ratings, sizes, shapes and colours.

First introduced as a standard by the ARRL Emergency Communications Course in December of 2000, after previously being adopted by amateur operators in California, the Anderson Powerpole PP15/45 series was selected. The Coordinator for Hawaii State Civil Defense RACES, or Radio Amateur Civil Emergency Service, Ron, then AH6RH, now KH6D has a detailed description on his QSL page on how this came about.

As a result, the stackable, asymmetric, genderless plugs are in wide use within the amateur community. The plugs are designed to be joined together using various orientations, creating a unique connector to suit your purpose. The Amateur Radio Emergency Service or ARES standard is one such orientation and before you adopt the Anderson Powerpole in your shack, make sure you use their orientation to avoid magic smoke from escaping your equipment.



Picking a connector is just step one.

When you acquire a new piece of 12 Volt equipment, you can cut off the connector and replace it with the ARES Anderson Powerpole connector orientation.

Many amateurs I know then throw away the unusable connector, or shove it into a box for later.

Instead, what I do is, terminate the plug that you just cut off in exactly the same way. Essentially, from a visual perspective, you've kept the power cable intact, but inserted a Powerpole join into the lead. As a result you now have a standard Powerpole power lead and you have a new Powerpole adaptor to suit the new connector.

For that reason alone, I tend to bring a box of spare Red and Black Powerpole connectors to any field day and use the opportunity to spread the love around.

As I said, the individual plugs come in a variety of colours, I have a selection of eleven in my shack, where for me a different colour means a different voltage or purpose. For example, I've adopted green as the colour for antenna radials.

One challenge I'd not been able to resolve, until suggested by Ben VK6NCB, was how to avoid plugging a 12 Volt power supply into something that expects say 7.5 Volts. Colour alone isn't sufficiently idiot proof, especially in the dark. Ben suggested that I adjust the orientation of the plugs, preventing connectors of different colours to mate. Looking back, I can't understand why I didn't think of that in the decade I've been using them.

I will note that there are other Anderson connectors in use. A popular one is the grey double connector, used in portable solar installations and caravans. I'd recommend that you consider if you really want to plug your radio directly into a solar panel or not and choose your connectors accordingly.

Before you ask, to my knowledge the Anderson Power Company doesn't know I exist, nor did I get compensated in any way to say Anderson Powerpole. It's the ARRL Emergency Services standard and I'm happy to advocate for its use everywhere I go.

So, whether you're using bare wires, banana plugs, Molex connectors or some other random barrel connectors, consider cutting the lead and inserting Anderson Powerpole connectors.

When was the last time that you had to do the 12 Volt connector dance?

I'm Onno VK6FLAB

Health and Wellness Check

Jake - W1LDL (Vice Pres.) is back from a lengthy stay in the hospital and rehab and looks wonderful. Jake attended the last BOD meeting.

Chris- W1TAT (BOD) is back from a lengthy stay in the hospital and rehab and is feeling great after suffering a heart attack.

Richard- KB1JWO is in the hospital with complications from back surgery and will finish up in rehab for a while.



Never underestimate the creative mind of the ham radio operator to get things done!

BE CAREFUL WHERE YOU TRANSMIT

Authorities in Graham, Texas, seized a handheld radio that they said had been transmitting illegally for months on emergency frequencies used by the Young County Sheriff's Office. According to local media reports, the transmissions on the dispatch channels often included the voices of a man, woman and some children yelling at one another and the sounds of a barking dog. A story in the Olney Enterprise newspaper said that the police were so hampered in using their own assigned frequencies that they often had to use cellphones instead to communicate. Sheriff Travis Babcock contacted the Federal Communications Commission which provided him with an official statement to read on the emergency channel but that failed to bring the transmissions to a halt. The news report said that on July 8th two officers patrolling in their car heard the unauthorized traffic and were able to track down the radio and its owner. The owner of the radio was not identified.

Thank You Note from Senior at Rockport High School

Thank you so much for granting me the CAARA Scholarship. This means the world to me. You have truly changed the course of my education. I am very excited to start my journey as a broadcast journalism major at Suffolk University.

Sincerely,

Emily Corrao



Amateur Radio to be showcased at 2022 EAA AirVenture in Oshkosh, Wisconsin

ARRL member-volunteers will ensure amateur radio is well-represented at the annual EAA AirVenture in Oshkosh, Wisconsin, on July 25 through July 31. More than 10,000 aircraft and a half-million flight enthusiasts make Wittman Regional Airport the busiest airfield in the world during AirVenture.

ARRL has participated at AirVenture since 2018, supporting an exhibit that encourages pilots and aviation enthusiasts to discover radio communications and radio technology through ham radio. ARRL Director of Public Relations and Innovation Bob Inderbitzen, NQ1R, has organized a booth (#2152 in Hangar B) and an all-volunteer team.

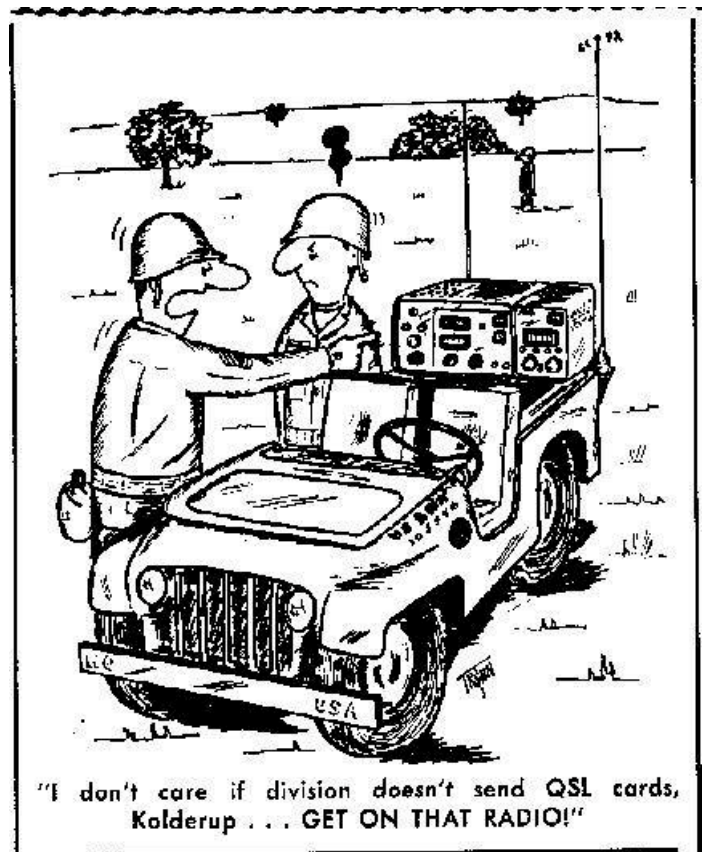
"There's a kinship among the aviation and amateur radio communities," Inderbitzen said. "In addition to introducing newcomers to ham radio, we expect to meet hundreds of ham-pilots at AirVenture. This is a great opportunity to show off ham radio at such a large-scale event." Frederick Hart, AA0JK, and Bob Inderbitzen, NQ1R, wrote "Growing Amateur Radio, One Pilot at a Time," in the January 2019 issue of QST, describing some of the opportunities and experiences pursued by pilots who become active ham radio operators.

At KidVenture, a highlight for children attending AirVenture, kids can build and take home a radio receiver to listen to air traffic and other nearby transmissions from approximately 65 - 140 MHz. The kit, designed by student engineer Levi Zima, KN4YHS, with additional support from his sister, Kirsten Zima, KC9RWG, has been an ARRL offering since 2021 (see ARRL's Introduction to Radio Receiver Kit). "It's great fun to see children at AirVenture walking around with the radio kits they've built and tuning in to the busy Air Traffic Control Tower throughout the event," said Inderbitzen. "Radio communications is a key part of learning about avionics. ARRL is grateful to EAA AirVenture for sponsoring the activity, which promises to introduce a lot of young people to radio."

The EAA Warbirds of America Board of Directors will be sponsoring a special event station, W9W, which will be on the air all week during daylight hours throughout AirVenture. The station will be located on the Warbirds' grounds near their headquarters, against the backdrop of

the display of historic and vintage ex-military aircraft. Look for W9W on 40 - 10 meters near 7.225, 14.250, 21.235, and 28.425 MHz. The station will also operate on the 2-meter and 440 MHz bands, simplex. A special event QSL card will be issued for contacts with W9W. Icom America will support the event with HF, VHF, and UHF radio equipment. Other sponsors include Heil Sound, Radio Wavz, DX Engineering, and US Tower. If you would like to get on the schedule to operate W9W, please contact Ray Novak, N9JA.

Members of the Fox Cities Amateur Radio Club (FCARC) will be operating station W9ZL from Pioneer Airport at KidVenture -- an activity area for children and their families attending AirVenture. Club members and other volunteers will operate HF stations on 20 and 40 meters, 6-meter SSB (on, or near, 7.250, 14.270, and 50.150 MHz), plus local communications on 2 meters. A special event certificate will be available.



CALL SIGN CHANGE

Please note that club member Jim-WOZEN has changed his call sign to K1TT. Nice cw call sign and close to mine, K1TP!

PROJECT BIG E TO HIGHLIGHT MODERN AMATEUR RADIO

Project Big E is a 17-day amateur radio exhibit to be held at the 2022 Big E from September 16-October 3, 2022 in West Springfield, Massachusetts. Western Massachusetts ARRL Affiliated Club Coordinator and Hampden County Radio Association president Larry Krainson, W1AST, is the Project Big E General Chairman.

The Big E, formerly known as The Eastern States Exposition, is billed as “New England’s Great State fair.”

It is the largest agricultural event on the eastern seaboard and the sixth-largest fair in the nation. In 2021, the Big E had 1.5 million visitors, and over 1.6 million visitors in 2019. [Wikipedia.org]



Planning for Project Big E is underway. An impressive ham radio booth will showcase the many aspects of modern ham radio, and provide an avenue for people to sign up for information and courses in their local area.

Features proposed for Project Big E will include:

- #an EmComm display

- # DMR and/or other digital mobile mode demo

- #Digital HF modes on a big screen

- #A special event station (N1E) with unique QSL cards

- #SSB, CW and digital modes

- #Demonstrations of portable stations for field operation (i.e., Parks On The Air, Summits On The Air)

- #A live ARISS contact

Project Big E can succeed only if there is a sufficient number of volunteers and radio clubs who agree to participate in the event. A web page has been created at <https://nediv.arrl.org/ProjectBigE>.

Also, a special Groups.io mailing list group has been established. To join, send an email to ProjectBigE+subscribe@groups.io. Contact:

Larry Krainson, W1AST
100 Kenmore Drive
Longmeadow, MA 01106-2759

Tel: 413-348-3289 Email: wlast@arrl.net

CAARA provides Public Service for the annual Horrible's Parade in Gloucester

On Sunday, July 3rd members of the Cape Ann Amateur Radio Association and the North Shore Radio Association provided logistical and safety communications for the Gloucester Horrible's parade. Communications started at 5:30 PM and lasted until 8:30 PM and was held on CAARA's 2 meter repeater. Bill W1WMM was net control and Fred WA1ESU was incident command and Jim KB1KQW was in the lead police cruiser. Here's a list of the hams who came out and helped provide public service communications for the people of Gloucester. A big thanks goes out to all who helped out

WA1ESU -FRED -INCIDENT COMMAND

KB1KQW -JIM - LEAD

KB1PGH- DEAN - CP1 - TAIL

N1JEI-TONY-CP2

W4RIG- HANK - CP3

KB1WFZ- DOTTIE - CP4

W1WMM - BILL - NET CONTROL



Tennessee Post forms TALARC amateur radio club

The American Legion Amateur Radio Club (TALARC) provides both a hobby and emergency communications “when all else fails.” TALARC was added as one of our CSM Gary W. Crisp Post 289 programs in Clarksville, Tenn. According to Commander David Zeveney, in May 2011 The American Legion National Executive Committee added the radio program; but before that, in January 2005, the Legion signed an agreement with the Department of Homeland Security to support emergency disaster preparedness. Subsequently, the Disaster Preparedness Booklet was made available to posts. Amateur-radio support was an integral entity.

It's been a while in getting started. Larry Johnson, a local Legionnaire and amateur radio operator, was instrumental in making this process happen. We at Post 289 are proud to have our own Clarksville American Legion radio club.

Membership is open to all American Legion, Sons of The American Legion and American Legion Auxiliary members from any Legion post in the area who have an amateur radio license. Our call sign is KA4TAL and

our radio club meetings are on the fourth Wednesday of every month at 6:30 p.m., at 726 Gardendale Rd, Clarksville, Tenn. This club is a non-commercial association of persons, organized for the promotion of interest in amateur radio communication and experimentation and education, for the establishment of emergency communications in the event of disasters or other emergencies, for the advancement of the radio art and public welfare, and for the representation of the radio amateur in legislative matters.

Most of our members started with the Clarksville Amateur Transmitting Society (CATS) club and it was the natural thing to do get our own club up and running. Are you a licensed ham operator or interested in becoming one?

Our radio club is currently set up to host the Boy Scouts National Jamboree on the Air and on the internet, along with help from the Clarksville Amateur Transmitting Society, on Oct. 15, 2022. This program is run like a camporee; we set up outside Troop 525's Scout building at the Civitan Building behind Byrns Darden Elementary School, establish radio stations and attempt to communicate with any other Scout Jamboree stations on the air



QST Now Offering a Column for Radio Clubs

ARRL invites you to be part of “Club Station,” the newest column in QST. This column is a space for radio clubs to share the different ways in which they’re successful to help other clubs grow. They do this by offering advice, and practical solutions to common experiences and problems.

In each issue, a different club will share how they undertook a specific activity or project, how and why it was successful, and any challenges they may have had to overcome throughout the process. Some examples include, but aren’t limited to, successful community club projects, innovative ways to attract new members, getting youth involved with ham radio, and developing active hams.

“Clubs are the backbone of the amateur radio community,” said ARRL Field Services Manager Mike Walters, W8ZY. “If your club is doing something that will inspire other clubs, we want to hear from you!”

“In order to help you tell your story, ARRL has published author guidelines that are geared toward ‘Club Station,’ and they include a club profile form,” said QST Editor L e a n n a F i g l e w s k i, KC1RMP. Both of these documents can be found at www.arrl.org/qst-club-station-guidelines-and-profile-form. “You don’t have to have writing experience to be published in QST. If your submission is accepted, our editorial staff will work with you to get your story ready for publication.”

All clubs are welcome to

participate. The first iteration of “Club Station” appeared in the August 2022 issue of QST and includes more information about what members can expect to see from the column.

If you have any questions, contact us at clubs@arrl.org. We look forward to hearing from you about your radio club!

READING A METER

Once in a while I run into folks that do not know how to properly read a cross needle Standing-Wave Ratio/power meter. I have witnessed some amateur radio operators that hate them because they don’t understand them.

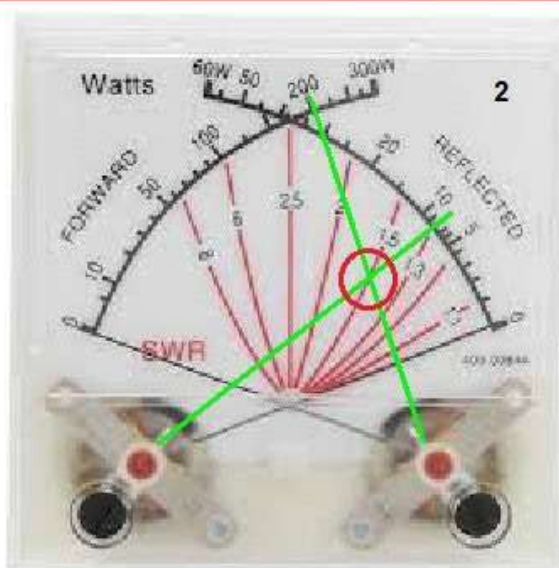
These meters give you three distinct readings at a single moment. Once you understand these cross-needle meters, they are easy to read.

They give you readings of forward power (power going out to the antenna system), reflected power (power coming back from the antenna system), and the resulting standing-wave ratio (SWR) all at a single reading.

I hope this helps those of you who might not yet know how to read this type of meter reading.



100W OUT, 4W REFLECTED, 1.5:1 SWR



200W OUT, 8W REFLECTED, 1.5:1 SWR

This is how you read a cross needle swr/power meter. Notice meter 1 shows 100 watts out, about 4 watts reflected, and where the 2 needles crosses at the red line showing a 1.5:1 swr. Then skip to meter number 2 where it shows 200 watts out, 8 watts reflected power, and the 2 needles still cross each other at the red, 1.5:1 swr line showing that as forward power increases, reflected power also increases, but the swr stays the same. SWR is not read from the end of the reflected power needle and reflected power and swr are 2 totally different readings but are related. The 1.5:1 is merely a ratio of forward power verses reflected power.

The 6 O’Clock Net

The net has a regular summer following and lots of interesting and educational topics - about ham radio and about life!

Chris, W1TAT is back on Monday evenings as net controller, feeling well and sounding great.

Paul, KC1HHK, coming “across the bay” as net control on Wednesdays, always has a great topic and Fred, WA1ESU ends the week on Friday with a look at what’s going on in the news and ham radio.

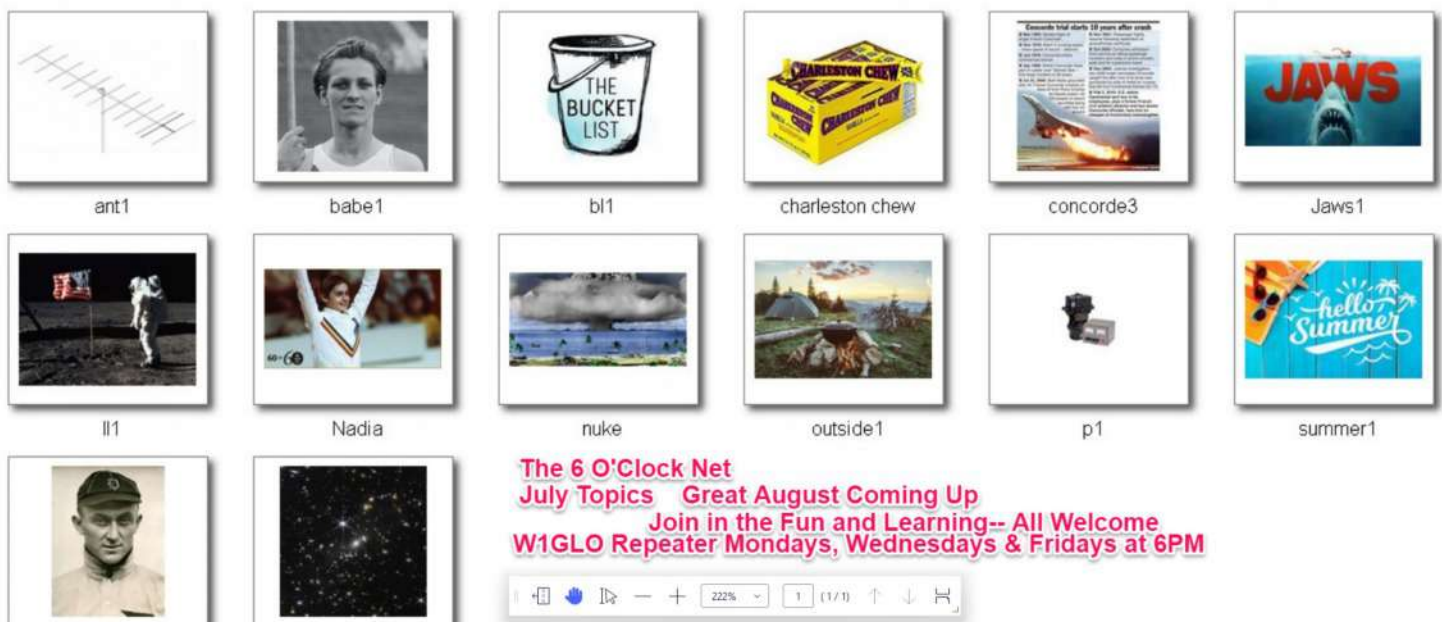
Topics over the last month have included:

Vacations; Yagi v. Verticals; Big Ben; Skylab; The James Webb Space Telescope (JWST); Nadia Comăneci; Ty Cobb; Lunar Landing (53 Years ago); the Charleston Chew; the iPhone; Babe Didrikson-Zaharias; the Summer of ’68 (wow, what an important time in history); National Let It Go Day; the movie Jaws, released 47 years ago!

There really is something for everyone, and it’s enjoyed by a tight community of hams that is welcoming to all, new check-ins and returnees.

The Net’s check-in list (unique call signs) has grown to 137 Stations in 12 States, 5 Countries.

The SIX O’CLOCK Net - operates on the Gloucester, Massachusetts 2-meter repeater, W1GLO, 145.13 MHz with a negative offset and a PL of 107.2 Hz. Participants thank the Cape Ann Amateur Radio Association, CAARA, for the use of its repeater. The 6 O’Clock Net Website offers advance copy of net topics and features other ham-related news. Find our website by Googling 6pmnet.



Foundations of Amateur Radio

What's with the repeater offset again?

As a new amateur one of the initial perplexing issues you're confronted with is setting up your first radio to talk to the local repeater. The question is so common that it's almost an invisible rite of passage to a new licensee. While I'm a fan of learning, there is plenty of that to go round and setting up your radio to talk to a repeater shouldn't be a hurdle to getting on air and making noise.

Ignoring the whole repeater thing for a moment, let's consider your radio. It doesn't matter if it's a handheld, a base station, a boat anchor or something else. To participate in the whole repeater experience, you need to tune your radio to hear it.

Technically, if I told you that you could tune to a local repeater on 146.750 MHz, that would be enough information to get you going, but this depends entirely on a set of standard assumptions that are likely not obvious to you. Let's explore what's going on.

Given that frequency, you can set your radio to 146.750 MHz and in most cases, you'll be able to hear the repeater. To actually participate, you would need to do some more work to get your transmitter to be heard.

As I said, standards are what makes that possible, but like every human endeavour, caution must be applied. As Andrew Tanenbaum said: "The nice thing about standards is that you have so many to choose from." With that in mind, let's proceed. Before you start yelling, I'll add caveats at the end.

Armed with a repeater frequency, you have enough information to get on air, but it assumes that you know a couple of things. So let's delve into those assumptions.

For starters, there is an assumption that you're aware that to operate a repeater you must transmit on a different frequency than what you're listening on. Why that is the case is a whole other discussion which I'll leave for today.

There is the assumption that you know that the two frequencies, one for listening, one for transmitting, are separated from each other by a known distance, a so-called offset.

You're also assumed to know that this offset is fixed but different for each band.

There's more, but let's start here.

For your radio to transmit on a different frequency than you listen, you must tell it to. In many cases tuning your radio to a so-called repeater frequency will already do this for you, but not always.

You might need to specifically program your radio for repeater operation, or turn on the offset mode, or use two memories, or some other thing specific to your radio. Read *The Friendly Manual*, I know you know how.

The next step is to look at the band you're on. In this case the 2m band. This means that the standard says that the difference between the receive and transmit frequency is 600 kHz. I'm studiously ignoring other bands at this moment because, standards.

At this point you know that your radio should be tuned to 146.750 MHz, it should be in repeater mode and the offset should be 600 kHz. That's when the next question arises, should that be plus 600 or minus 600?

Guess what, another standard. If the receive frequency is less than 147 MHz, the answer is minus 600 kHz. If it's more than 147 MHz, it's plus 600 kHz.

Notice that I didn't specify what happens if it's exactly 147 MHz? That's because nobody knows. Seriously though, the local repeater owner will know, but you can try either and get your answer.

Now for the caveats.

Let's start with the 147 MHz cross-over exception. This isn't global, for example repeaters in California use several different ranges for such a cross-over point.

I also didn't tell you about repeaters on other bands because the offset depends on where you are. In many cases the 70cm repeater offset is 5 MHz, but in Europe it's mostly 7.6 MHz, unless it's 9 MHz. The 10m repeater offsets are often 100 kHz, but sometimes they're 1 MHz, similarly the 6m repeater offset is 1 MHz, except when it's not.

The point being that starting with a receive frequency, there's a great number of assumptions, many of which you'll need to discover for your own location. A great resource which I've mentioned before is the brainchild of Garrett KD6KPC, the repeaterbook.com website and app, maintained by a global group of volunteers, which lists many repeaters and their specific settings, frequencies and locations.

So, armed with this knowledge, I expect that you can now find a local repeater and make use of it. When in doubt, contact the owner and ask for help, they're a friendly bunch. Remember to say thank you!

So, what excuse do you have not to get on air and make noise?

Oh, before I forget, if you don't hear anything, or if transmit isn't doing what you expect, check that you've configured CTCSS, another assumption.

I'm Onno VK6FLAB

Portable 7-band End-Fed Half-Wave (EFHW) antenna

Stephan Schmid HB9EAJ has made available a PDF (in English) describing his portable 7-band End-Fed Half-Wave (EFHW) antenna

This document is about a multi-band shortwave (HF) amateur radio wire antenna that does not need an antenna tuner. The described antenna is based on the widely used end-fed half-wave (EFHW) dipole antenna design, improved for a bigger variety of bands, maximum efficiency and optimized for portable QRP communication.

The antenna system consist of a 20m-long radiator wire with one bypassable loading coil that in sum is resonant on the 60-, 40-, 30-, 20-, 17-, 15- and 10-meter bands, which I have never seen before. A small and efficient broadband transformer is used to match the impedance of this EFHW antenna to a 50Ω coaxial cable.

The document starts with the definition of the described EFHW antenna system, the author's personal portable antenna requirements, the history of choosing and developing the described antenna system and then continues with antenna experiments and their conclusions.

Further, it gives some hints on how to build the proposed antenna system, as well as its compact backup antenna, and shows how to add additional bands to both of them.

Practical technical tips and references to other EFHW websites and documents complete the document.

Download PDF of A Portable 7-Band End-Fed Half-Wave (EFHW) Antenna

https://hb9sota.ch/wp-content/uploads/2021/08/Portable-7-Band-EFHW_HB9EAJ-V1.2.pdf

Until next month, 73, K1TP