

CAARA NEWS



Cape Ann Amateur Radio Association
Gloucester, Massachusetts
APRIL- 2024 EDITION



PRESIDENT'S COLUMN

by Brandon- NQ1W

Dear Members,

April is here and the club has so much going on! Our first YuKanRun race, the Fool's Duel, will be held on the morning of Saturday April 6th. Members are encouraged to join the race events team in Gloucester and help keep the runners safe on the course with radio communications. As of this letter there are still a few positions on the course open for volunteers. Send email to w1tat@outlook.com or info@caara.net and we will send you the race information and position on the course. It is always a good time and you'll feel great about using your skills in public service.



We also have a talk at the upcoming members meeting April 13th Our own Brian Lloyd KC1SOO will be giving a presentation on his experiences with APRS and setting up his own APRS digipeater. APRS is the primary use case for packet radio on VHF these days. With it you can track your radio, send text messages, get the weather, and many other things. Brian will go over how he sent up his own packet repeater and cover the basics of operation. It should be fun. Food will be provided at the talk for small recommended donation to the repeater committee.

In other news, our repeater committee has been working very hard up at Blackburn Circle getting the equipment ready for the delivery and installation of the new antenna system and hardline. We are hoping that will see it delivered from California this month and installed at the site. This should significantly improve our situation and enable some activities on the 2m W1GLO repeater that were hitherto challenging in severe weather. Most importantly, it will see the return of our club nets and the 6pm net to W1GLO. We will

be making a big announcement once we get closer to first transmission on the new system.

CAARA thanks our generous radio community and especially North Shore Radio Association for allowing us to camp out on NS1RA 2m repeater in Danvers during our antenna project. Although the repeater committee valiantly kept W1GLO operating locally during the repair work, the nets require a larger footprint and NSRA kept us transmitting in the interim. We also thank the members who have gone above and beyond in donation to help offset the huge capital costs of rebuilding a commercial grade 2m repeater system. We thank everyone for their patience and support getting the big antenna back on the air. It should be a fantastic asset for all to use once completed. We still appreciate any donations earmarked for repeater work, and thank you in advance for your generosity.

Finally, I want to repeat Jon's announcement that there will be CAARA members at the club on Wednesday mornings. Please come say hi or check out the new resources in the classroom between 10AM - Noon on Wednesdays. Of course if you are a member in good standing for over a year and have been checked out on the radio systems on the first floor, you can make any day a CAARA clubhouse day. To learn more, visit the club on a Wednesday or a members meetings to learn how.

As always, we thank all the officers, board members, and members who make our club work. It takes a village to keep the club going, and we thank you all for your time, financial support, and dedication to keeping HAM radio thriving at CAARA. Everyone is doing great work!

Happy Spring and 73,

Brandon Hockle NQ1W

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
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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 S tanwood 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.

This newsletter is published under the auspices of the Cape Ann Amateur Radio Association (CAARA), However, all content is the work of individual contributors and may contain ideas, opinions or views not necessarily shared or supported by the CAARA Board of Directors or the membership.



THE EMCOMM MINUTE

By Dean- KB1PGH

So I ended up buying a Yaesu FT 710 HF Rig and of course when you buy any new HF rig you want to make sure that you are modulating correctly and that your mike gain and speech compressor are set at the right levels so they don't push past the ALC levels on the radio so you won't sound like garbage over the air.

Plus you don't want to under modulate as well. Plus with the Yaesu Ft 710 it comes with a parametric equalizer for the microphone so you can tailor the sound of your voice. Many newer rigs today like the 710 have a monitor system built in so you can listen to your transmitted audio via the headphones. One thing about setting up all the parameters is that it's not good practice to do it over the air and to create interference so one good piece of test equipment that every ham should have is a dummy load.

The purpose of a dummy load that is hooked up to your rig is that it fools your radio into thinking that it is transmitting into a perfect antenna system that has 1:1 SWR and a 50 ohm resistance. A dummy load can allow you to test your transmitter and linear amplifier for problems and to see if the issue is with your antenna system or coax cable or the radio itself.

Plus like I said you can test your modulation speech processing and ALC levels as well as your over the air voice audio. You can also check to see if you have any microphone issues as well. All without transmitting over the air.

Of course there are many different types of dummy loads out there so shop around. I only need one that will allow me to test my Yaesu FT 710 at 100 watts. It's best to test your transmitting parameters at full power. So I went out and got the MFJ 260 C dry dummy load.

It can handle up to 300 watts. It has a air cooled non inductive carbon resistor inside that absorbs the power. It can hold a 300 watt load for 30 seconds but can hold a 100 watt load for almost 2 minutes. As you can see in the photo it has a silk screen chart on the back that tells you the time per power ratio which is nice. It can hold 25 watts continuous and has a 2 minute cool down period before reuse.

Its 2.5 by 2.5 by 7 inches long so its a perfect size for my Hf portable ops. As you can see in the photos it's pretty basic. Just a steel case with a SO 239 connector in the front. As you can see I hooked it up to my antenna tuner to test it out to see if it truly puts out a 1:1 SWR and a 50 ohm load and as you can see on the tuner it is



so. You can easily order the MFJ 260 C online for \$69.95 on Amazon. So this will make another good edition to





At races, walks, and bike tours annually
 Like sentinels guarding from beginning to end
 Attending to the welfare of all who attend
 At home in the shack or outside in the park
 Setting up equipment in daylight or dark
 To practice for harder times when they will need to be stable
 In helping to communicate when no one else may be able
 When emergencies arrive, making most people nervous,
 The amateur operator steps up for community service.
 Using whatever power source they can find
 To give those around them more peace of mind
 From their practiced hands, messages will arrive,
 Informing the public what we need to survive.
 Over the airwaves from disasters they strive
 To notify families that their loved ones are alive
 Continually vigilant, never looking for glory,
 This is the amateur radio operator's story

my testing tools. Every ham should have a decent dummy load and a antenna tuner and a multi-tester as well for the basics of every ham shack.

So 73 and Ill see you next month!
 Dean- KB1PGH

What Does a Ham Operator Do?

By KD1FW

What does a ham radio operator do?

Besides talk from here to Kathmandu?

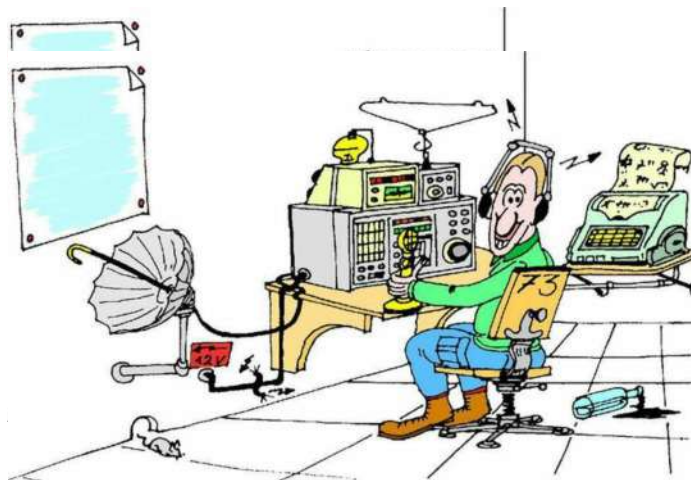
By conversing politely with others around the Earth

Through the power of radio, we show our worth

A licensed representative of their country's goodwill

Through conversation and mannerisms, this they help to fulfill.

Volunteering for public service hams you'll always see



NEXT MEETING AT THE CLUB
SATURDAY, APRIL 13th AT NOON
LUNCH AND SPEAKER ON APRS



Artificial Intelligence

by Curt- AABJE



Some time ago I moved to “Where the Moose Farts” in New Hampshire, seeking a quiet pastoral life, sort of a “WALDEN” thing, where rugged people lived in close harmony with nature.

What I did not know was that rugged people living in close harmony with nature do not live in the modern era. I first became aware of this the first winter when I discovered my neighbors on both sides heated with wood and could lay down a smoke screen over my house that would do credit to a WWII destroyer. Eventually I found out that two or three air cleaners in the house would make the home habitable (breathable).

I also found out that there was only one cable company (no over air TV at all in this region), no computer store within 120 miles, and that the cable company was well aware that they had a monopoly. After the first \$250 cable bill, I started into my adventures trying to cut the cable.

In previous missives, I have described how after 5 years I found a satellite system that actually worked, and I had Internet access with no cable. So, happy at last (\$90 a month), I switched over the devices in the house one at a time. Starting with my wife’s Tablet.



“HONEY? I CAN’T PRINT ANYTHING.”
Now I have learned not to try to find the manual, buried in the basement, so I called the computer company.

“HELLO! I AM AN ARTIFICIAL INTELLIGENCE SYSTEM THAT CAN UNDERSTAND YOU LIKE A PERSON CAN. HOW CAN I HELP YOU?”

“I have a problem getting the printer to print on WIFI.”

“I AM SORRY YOU HAVE A PROBLEM. HOW CAN I HELP?”

“I need to talk with a service person.”
“YOUR COMPUTER NEEDS SERVICE? PRESS 8 TO BE RECEIVE INSTRUCTIONS FOR OUR MAIL IN REPAIR SERVICE.”

“I have a WIFI problem.”

“WIFI IS LOCATED IN THE “CONNECTIONS” APP. JUST CLICK ON THE ICON AND FOLLOW THE INSTRUCTIONS.”

“May I please talk to a person?”

“WE FIRED MOST OF THOSE. I CAN HELP YOU WITH MOST THINGS. PLEASE TELL ME YOUR PROBLEM.”

Twenty minutes later I finally reached a person.

(Hint: try screaming and sobbing into the phone.)

“My name is Melody. What is the serial number of your machine?”

“I found it and gave it.”

“Your service contract has expired. You have to renew.”

After renewing my service contract, we got down to business.

“Thank you for giving me control of your machine, it seems to be working perfectly.”

“It won’t connect to the printer.”

“You need to contact the printer manufacturer. Try the Internet. Here’s the website.”

Naturally I ended up getting another AI, and spent ten minutes working with that, I finally got a person.

“That printer should work fine. All our printers work fine.”

“It doesn’t. Won’t connect by WIFI.”

“Well, you need the IP address, subnet mask, LAN password, birthdate and your mother’s maiden name. Just press the green button and follow the prompts.”

“Right. I’m 75 years old.”

“I’ll talk you through it. Well, I will try. Your printer is so old it is not in my manual.”

After a half hour, we both gave up.

“Here’s the website. There may be a manual in the “Historical” section.”

After logging on the website, dodging the recommended automated help feature, I found

the manual.

“PRESS THE GREEN BUTTON. SCROLL DOWN TO THE CONNECTION WIZZARD.

PRESS OK”

And like magic, the name of the local LAN appeared, I entered the password, and the

printer coughed and spewed out a test page.

Success. But the streaming service still won’t work on any but the cable company LAN.

Amateur Radio Newline Report

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NETWORK NEWS REPORT DISCLOSES RETAILERS' SALE OF ILLEGAL JAMMERS

STEPHEN/ANCHOR: Our top story comes from a US broadcast network, which reported recently about illegal sales of radio jammers in the US. Kent Peterson KC3DGY brings us up to date.

KENT: In the US, the Federal Communications Commission has revealed that the agency has been investigating a number of online retailers and other sellers over possible marketing of wireless radio frequency jammers, which are illegal under federal law.

The disclosure by the FCC's Will Wiquist came following a report by NBC News that wireless jammers that were being offered for sale were being marketed as devices to interfere with the operation of drones. Federal law prohibits both the sale and use of devices that deliberately interfere with the signals of GPS units, mobile phones and other consumer devices. Such jamming devices have the potential to interfere as well with security cameras, Wi-Fi and emergency communications.

The FCC posts an explanation of its policy on its website, saying: [quote]: “Unlike other radio transmitting equipment, jamming equipment cannot be authorized by the FCC because the main purpose of jamming equipment is to interfere with radio communications.” [endquote]

The FCC made its revelation about conducting probes only after the news network released its own report about the sales of the jammers by more than a dozen companies.

This is Kent Peterson KC3DGY.

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POTA COMPLETES GLOBAL PARK RELABELING, CHINA RETURNS TO PROGRAM

STEPHEN/ANCHOR: The Parks on the Air program had a welcome announcement recently for fans of portable operation. Jim Meachen ZL2BHF shares this development.

JIM: There's good news for POTA hunters: As POTA completes its conversion of labels to conform to the ISO-3166-2 standard, China has returned to participating in Parks on the Air. China's re-entry follows a number of discussions to resolve what POTA describes as "simple language barriers." According to documentation on the POTA website, the misunderstanding over POTA's reorganisation of its code system resulted in an unfortunate breakdown in communications because of these language issues

On Monday, March 25th, POTA announced on its website: [quote] "We are happy to be able to reactivate China so quickly!" [endquote]

**

SILENT KEY: HAMVENTION 2022 AWARD RECIPIENT, ADAM FARSON VA7OJ/AB7OJ

ANCHOR: An amateur who was a respected re for technical expertise on a wide range of HF transceivers and amplifiers - and was honored at Hamvention two years ago -- has become a Silent Key. We hear about him from Jack Parker W8ISH.

JACK: Hams everywhere sought out the wisdom and expertise of Adam Farson, VA7OJ/AB7OJ, whether they needed guidance on buying a particular HF radio or an amplifier. Adam's website and his array of published articles in different journals, contained years of his wisdom and hard work. Adam died on the morning of March 12th. A friend, Matt Erickson, KK5DR, wrote in a QRZ.com forum that Adam had been in failing health since the 1st of January, complicated by a relapse of pneumonia.

Much of Adam's technical expertise is shared on his website, which he created more than three decades ago. Matt said the site would continue to be maintained online for a time by the North Shore Amateur Radio Club where Adam was a longtime member. The retired telecomm engineer was a senior life member of the IEEE and was first licensed in 1962 with the callsign ZS1ZG while studying at the University of Cape Town.

In 2022, Adam received the Technical Achievement Award at Hamvention and was celebrated for his published work and for providing one of the internet resource amateurs turn to most for high technical details about a variety of radios.

**

NASA SUNGRAZER PROGRAM HONORS HAM FOR COMET-HUNTING SUCCESS

STEPHEN/ANCHOR: NASA's Sungrazer program is honoring an amateur radio operator in Australia for having tracked down previously unknown comets by studying spacecraft imagery. We hear about him from John Williams VK4JJW.

JOHN: Congratulations to Peter Berrett, VK3PB, who has been recognised by the NASA Sungrazer programme as one of the top successful volunteer comet-hunters. Sungrazer is a NASA-funded citizen science programme that encourages anyone to participate in the discovery and reporting of previously unknown comets. According to Sungrazer, Peter was the first to locate a comet in imagery from the Parker Solar probe launched by NASA in 2018. Using a computer programme he wrote for this

purpose, he has also identified comets in archived images that were collected by four spacecraft.

NASA Sun & Space made the announcement about Peter earlier this month on social media. Viewers of Amateur Logic TV may be most familiar with Peter through his previous appearances there

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SKYWARN TEAM TESTS RESILIENCE OF SIMPLEX OPERATION

STEPHEN/ANCHOR: In western Pennsylvania, a team of SKYWARN operators has been testing the resilience of simplex operation to prepare for emergencies. Randy Sly, W4XJ, spoke to one of the organizers.

RANDY: What would you do if you wanted to check into the local SKYWARN net with a severe storm report and the repeaters in your area suddenly went down? The obvious answer is working simplex...but how and where?

The Southwest District Skywarn Team Of Western Pennsylvania has started working on a more strategic answer by conducting a monthly series of simplex drills to coordinate frequencies and best operating practices in case of a scenario like this. Eddie Misiewicz (Mi-shÃ©-vitz - short e), KB3YRU, president of the group, told AR Newsline, <quote>â€œWe are working on and improving a communications plan one step at a time. In addition to improving radios, mast height and antennas, we have also learned to assign portable and mobile stations to strategic locations and positions.â€ <endquote> He said the hilly terrain and ridges in the area are presenting some significant challenges for an effective solution to ensure better simplex coverage.

The Southwest District SKYWARN team is also spreading the word at hamfests and other events about using simplex in emergency situations. They are inviting their fellow amateurs to prepare ahead of time for severe weather events while developing the right equipment and skills for successful simplex operations whether HF, VHF or UHF. The next drill is scheduled to be held Saturday, April 13th at 10 a.m. Eastern Time.

**

IOTA GRANT PROGRAM EXPANDS TO MORE LOCATIONS

STEPHEN/ANCHOR: Island on the Air has expanded a program that will help fund activations of more rare locations. Jeremy Boot G4NJH tells us what this means.

JEREMY: The Islands on the Air DXpedition Fund created last year to support activations in rare locations with no activity for at least 15 years has expanded its qualifications to include additional islands and island groups.

The fund's original announcement last September said it would provide grants to assist operations from IOTA references confirmed by fewer than one-quarter of IOTA members in the last decade. This has now been broadened to include operations to those locations confirmed by fewer than 30 percent of IOTA members on IOTA's Most Wanted List. Both categories must have had no activations for at least 15 years.

IOTA Ltd. believes that having two categories will provide an advantage for DXpeditions to an estimated 250 IOTA groups. Applicants should note the rarity of the IOTA reference they plan to activate, how long they will be there, how many operators they will have, the estimated number of contacts they expect to log, the bands to be used and, of course, the estimated cost of the DXpedition.

For an application and more details, visit the IOTA website using the link in the text version of this week's Newline script.

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FCC IMPLEMENTS TWO-FACTOR AUTHENTICATION FOR REGISTRATION SYSTEM

STEPHEN/ANCHOR: In an effort to make its online registration system more secure, the Federal Communications Commission is introducing two-factor authentication while signing on. As of the 29th of March, those wishing to access to the Commission Registration System known as CORES will need to request a six-digit secondary verification code to be sent to their email address. They will be required to enter the code into the system before they can go forward with logging in. This requirement will affect anyone looking to reset a password, request a new

Federal Registration Number or to pay any application or regulatory fees.

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FCC AUCTION PROGRAM RECEIVES EMMY AWARD

STEPHEN/ANCHOR: The Emmy Awards, best known for their celebrity recipients, has a new well-known recipient among the ranks: The US Federal Communications Commission. That report comes to us from George Zafiropoulos KJ6VU.

GEORGE: In the US, the Emmy Awards bestowed by the National Academy of Television Arts & Sciences, are best known for acknowledging stellar achievements in the television industry. This year, however, a somewhat unconventional award recipient stood out among the more typical award-winners in entertainment and sports programming.

The Federal Communications Commission, the US government regulatory agency, was the recipient of a Technology & Engineering Emmy Award for having held a broadcast auction. The auction, which took place over several years, opened the door for TV stations to receive incentive payments in exchange for their return of underutilized parts of the broadcast spectrum. The funds the stations received enabled them to reinvest in their own operations while the newly available spectrum was auctioned off to wireless broadband carriers, to use for 5G or other services.

The auction brought in a gross total of \$19.8 billion in US currency. Fifty broadcasters received a total of \$10.05 billion in payments. Another \$7.3 billion went into the US Treasury to help reduce the federal deficit.

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NOMINATE OUR NEXT YOUNG HAM OF THE YEAR

STEPHEN/ANCHOR: Do you know a promising young radio amateur who'd be a good candidate for the Bill Pasternak Memorial Young Ham of the Year award? Let Newline know! Candidates must live in the continental United States and be 18 years of age or younger. Tell our judges about your nominee's talent, promise and commitment to the spirit of ham radio. This is your chance to help honor and

acknowledge that person who will, no doubt, go on to teach and inspire others. Find the nomination form on our website arnewsline.org under the "AWARDS" tab. Nominations close on May 31st.

**

HAMSCI HOLDS WEEKEND WORKSHOP FOR CITIZEN SCIENTISTS

STEPHEN/ANCHOR: Just two weeks ahead of its Solar Eclipse QSO Party, members of HamSCI - the ham radio citizen science investigation organization - met with STEM educators, researchers and ham radio operators for its seventh annual workshop. It was hosted on March 22nd and 23rd on the campus of Case Western Reserve University in Cleveland, Ohio and online. Workshop topics ranged from a review of ionospheric data collected during last year's annular solar eclipse to various aspects of space weather. A major topic of the weekend was "Alignments between the Sun, Moon and Earth," in preparation for the April 8th total eclipse of the sun over North America. **

HAMS PREP FOR WORLD AMATEUR RADIO DAY

STEPHEN/ANCHOR: What are you doing on April 18th? There's something to celebrate, as Graham Kemp VK4BB tells us.

GRAHAM: Twenty-five countries formed the International Amateur Radio Union in Paris in 1925. There are now three regions across the world and 160 member societies. World Amateur Radio Day is being marked on April 18th and this year's celebration has been given a theme in anticipation of the IARU reaching its centenary next year. Organisers are calling it "A Century of Connections: Celebrating 100 Years of Amateur Radio Innovation, Community and Advocacy." The name acknowledges that ham radio became popular even before the IARU was created as an advocate for hams' roles in global communication and to defend amateur frequency allocations.

On April 18th, be listening for amateurs across Canada operating official stations ending in the suffix RAC, for Radio Amateurs of Canada. A more expanded on-air celebration is planned in Greece, where the Radio Amateur Association of Greece will be using the callsign SZ3WARD to mark the

occasion from April 15th to the 30th. Be listening around for other organisations in other nations and regions as they join the global celebration.**

WORLD OF DX

In the World of DX, be listening for ER3ARM, a special callsign marking the 30th anniversary of the Amateur Radio Society of Moldova, ER1KAA. Operators will be on the air until the 30th of April. See QRZ.com for QSL details.

Felipe, CE3SX, is active as CB0ZIX from the Juan Fernandez islands until the 4th of April. You can hear him on 6 metres SSB and FT8 in fox-hound mode. See QRZ.com for QSL details.

Pete, G4TLE is using the callsign V4/G4TLE from St Kitts, IOTA Number NA-104, until the 5th of April, operating CW and SSB on 40-10m. QSL details can be found on QRZ.com.

Listen for Torsten, DL9GG, active as ZD7GG from St. Helena Island, IOTA Number AF-022 until the 30th of March. Torsten is using CW and some SSB on 160-10 metres. QSL via home call, or eQSL.

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KICKER: SEEDS FOR YAGIS AND DIPOLES? ANTENNAS ARE A GROWTH INDUSTRY

STEPHEN/ANCHOR: We end this week's newscast with a special report from our April Fool's Day correspondent, Pierre Pullinmyleg. Pierre has spent the last several decades as an investigative reporter for Newsline and he has a groundbreaking report that will change the lives of hams living in communities that impose antenna restrictions. This report is a Newsline exclusive. Pierre?

PIERRE: Ah, cherie, we must rejoice: After years of research and experimentation zee famous French scientist, Jacques N. d'Beanstalk, has created not just ham radio's best engineered antennas but ham radio's first genetically engineered antennas - zee are antennas you can grow from seed! You can now plant Yagis, hex beams, quads and longwires and as zay spring up from zee earth, zee will all look like zee green beans, zee sunflowers, zee Big Boy tomatoes. Zee homeowner association president, ah, she will never know you are growing a true antenna farm! Zeese Brussels sprouts can get you DX in Brussels! Zeese tall French green beans will get you a contact

with.....Moi, Pierre Pullinmyleg, living just outside of Marseille, where I am growing my own crop of tender end-fed half-wave dipoles. Ah, and if after trimming your antenna, you still cannot get good SWR, simply keep trimming and turn your antenna into a salad!!!! Oooh! Oooh! Oooh la lah! Now Pierre is so very hungry. Au revoirs, mes amis, I must go fricassee my J-pole.

International Marconi Day 2024

This year, International Marconi Day (IMD) is on April 27. Italian inventor and electrical engineer Guglielmo Giovanni Maria Marconi was born on April 25, 1874, and is credited for inventing the radiotelegraph system, creating Marconi's law, and sending the first wireless transmission over the open sea.

IMD was created to honor Marconi and is hosted annually by the Cornish Radio Amateur Club, GX4CRC. The purpose of the day is for amateur radio enthusiasts around the world to contact historic Marconi sites using communication techniques similar to those that he would have used.

The 24-hour event will operate from 0000 UTC to 2359 UTC, and registration is required. Participants can register at GX4CRC's registration web page.

Stations in the United States, including Marconi Cape Cod Radio Club, KM1CC, in Massachusetts, are already registering for the event. KM1CC hosts several on-air events each year to keep the accomplishments and story of Marconi and his wireless station site in South Wellfleet alive. In 1975, the Wellfleet station was listed as a National Historic Landmark on the National Register of Historic Places and is now part of Cape Cod National Seashore, a unit of the National Park Service. When possible, KM1CC sets up a temporary radio station inside the park. More information about KM1CC is available on their Facebook page.

Next April's total solar eclipse promises to be a scientific bonanza

Florida. April's total solar eclipse promises to be a scientific bonanza, thanks to new spacecraft and telescopes and cosmic possibilities.

The Moon will be very close to the Earth, causing a long and intense period of darkness, and the Sun

should be more active with the possibility of spectacular plasma explosions. Then there is the densely populated corridor of totality that stretches from Mexico to the United States and Canada.

Hundreds, if not thousands, of the tens of millions of viewers will act as citizen scientists helping NASA and other research groups better understand our planet and our star.

They will photograph the Sun's corona-shaped outer atmosphere, or corona, as the Moon passes between the Sun and Earth, blocking out the Sun's light for up to 4 minutes and 28 seconds on April 8. They will observe the stillness of the birds and other animals as the midday darkness falls. They will also measure falling temperatures, monitor clouds and use amateur radio to measure communications disruptions.

At the same time, rockets will lift off with scientific instruments toward the electrically charged portion of the atmosphere near the edge of space known as the ionosphere. The small rockets will lift off from Wallops Island, Virginia, about 400 miles from totality but with 81 percent of the Sun obscured in a partial eclipse. Similar launches were made from New Mexico during the solar eclipse of ring of Fire last October that devastated the western United States and Central and South America.

It's time for the most important thing! It's very exciting!!! said rocket mission manager Aroh Barjatya of Embry-Riddle Aeronautical University in an email.

NASA's high-altitude jets will also fly again, chasing the Moon's shadow with upgraded telescopes to study the solar corona and surrounding dust.

Dust sounds boring acknowledged Kelly Korreck, director of NASA's eclipse program. But at the same time, this one is really interesting. Those are the remains from when the solar system was forming.

College students will launch more than 600 weather balloons along the runway, providing live feeds as they study atmospheric changes. Cloudy skies shouldn't matter.

Luckily for us, balloons that fly at 80,000 feet or higher don't care if it's cloudy on the ground.said Angela Des Jardins, an astrophysicist at Montana State University who coordinates the nationwide project.

And if the Federal Aviation Administration approves, a 6.5-meter kite will lift a scientific instrument 5 kilometers above Texas in an experiment conducted by Shadia Habbal of the University of Hawaii. She also wants to overcome any clouds that might hinder her observations of the Sun.

The crown, hotter

Normally obscured by the Sun's glare, the corona is revealed in its entirety during a total solar eclipse, making it a prime research target. The spiky tendrils emanating thousands of miles into space are disconcertingly hotter than the surface of the Sun, by millions of degrees, versus thousands.

Science still cannot explain how the corona heats up to such extreme temperatures said retired NASA astrophysicist Fred Espenak, better known as Mr. Eclipse for his graphics and books on the subject.

The United States won't see another total solar eclipse of this scale until 2045, so NASA and everyone else are doing everything they can.

The April eclipse will begin in the Pacific and make landfall in Mazatlán, Mexico, and pass through Texas and 14 other US states before crossing into Canada and emerging into the Atlantic in Newfoundland. Those outside the 185-kilometer-wide path will get a partial eclipse.

Scientists got a glimpse of what's to come during the 2017 total solar eclipse that stretched from Oregon to South Carolina. This time, the Moon is closer to Earth, resulting in more minutes of darkness and a longer path.

Every time we can observe for longer, scientists get more data Korreck said.

Another scientific advantage this time: the Sun will be just one year away from its maximum solar activity, unlike 2017, when it was close to its minimum. That means a lot more action on the Sun, possibly even a coronal mass ejection during the eclipse, with huge amounts of plasma and magnetic field launched into space.

Additionally, there are two new spacecraft studying the Sun: NASA and the European Space Agency's Parker Solar Probe and NASA's Solar Orbiter. They will join other eclipse spacecraft, including the International Space Station and its astronauts.

Closer to home, the April eclipse, unlike previous ones, will pass by three US radar sites typically used to monitor space weather. The stations will tune in to what's happening in the upper atmosphere as the skies darken.

World Amateur Radio Day is April 18, 2024

World Amateur Radio Day (WARD) is celebrated each year on April 18.

The theme for 2024 is, "A Century of Connections: Celebrating 100 Years of Amateur Radio Innovation, Community, and Advocacy." The global event covers all of the International Amateur Radio Union (IARU) regions and spans 2 days: Thursday, April 18, 2024, 0000 UTC to Friday, April 19, 2024, 0000 UTC.

On April 18, 1925, the IARU was formed in Paris and will celebrate its centenary in 2025. American Radio Relay League (ARRL) Co-Founder Hiram Percy Maxim was the organization's first president.

All radio amateurs are invited to take to the airwaves to enjoy the global friendship with other amateurs and to show their skills and capabilities to the public. WARD is not a contest but rather an opportunity to talk about the value of amateur radio to the public and fellow amateur colleagues. It is also a great opportunity to talk about local radio clubs and amateur radio in local media as a lead-up to ARRL Field Day, which is held each year during the fourth full weekend in June. You can also promote your personal WARD activities on social media platforms like X and Facebook by using the hashtag #WorldAmateurRadioDay.

For more ideas and information, visit World Amateur Radio Day (arrl.org).

CAARA RACE SUPPORT and PUBLIC SERVICE EVENTS

<https://sites.google.com/view/caararaces/home>

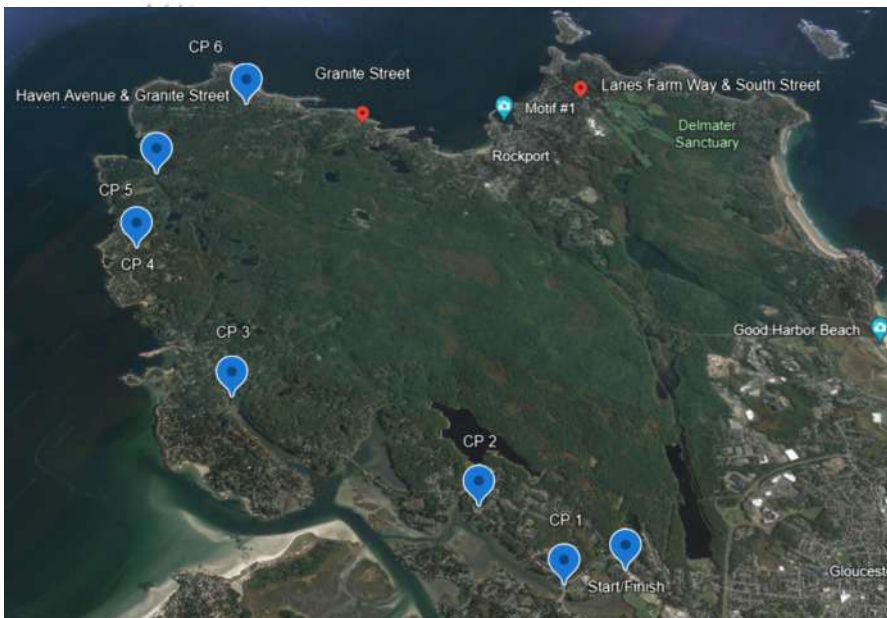
2024 YouKanRun Races

All Half Marathons

Cape Ann Amateur Radio Association

Providing Radio Safety Support

April 6 (Sat.)	Fool's Dual	Gloucester
April 21 (Sun.)	Fast Half	Hamilton
May 4 (Sat.)	Twin Lights	Gloucester
June 2 (Sun.)	Twin Lobster	Gloucester
June 9 (Sun.)	Town & Country	Newburyport
July 21 (Sun.)	IPA	Newburyport
August 4 (Sun.)	Triple Threat	Rockport
Sept. 15 (Sun.)	By-The Sea	Manchester B-T-S
Sept. 29 (Sun.)	Port Run	Newburyport
Oct. 6 (Sun.)	Around Cape Ann	Gloucester
Nov. 3 (Sun.)	Ocean View	Ipswich
Dec. 8 (Sun.)	Happy Holidays	Gloucester



This is a map of the first race on April 6 in Gloucester. The positions are all filled for this race but we need your help filling the future races.

We receive a donation for each race we do and it is one of the major reasons we can afford a clubhouse. Please consider donating some time to these valuable events. We can provide you with a radio for your car if needed!

All you need to do is park at a checkpoint and observe if any runners need help and just report it to net control. Easy!

REMEMBERING Gilbert Edmund Guerin K1VDE

CAARA member Gilbert Edmund Guerin K1VDE (the gentlest of gentlemen and a friend to all who knew him) passed away unexpectedly at his Essex home of sixty-two years on January 8, 2024, he was 94.

Gil had a strong sense for public service, some in public view but others more privately. As a MARS volunteer, Gil would spend countless hours, oftentimes into the early morning, connecting service members overseas with their families across the United States through his ham radio system.



Thanks Bill- W1WMM

REPEATER NEWS:



The repeater group of Larry-AJ1Z and Jon- K1TP has been busy while the 2 meter repeater is down at the cellular site....basically now waiting for the delivery of the antenna and hardline.

We are expecting delivery in early April and will get it installed ASAP. The estimate for antenna, hardline, standoffs, connectors, etc. and the climbing fee is about \$7600.

Generous hams in the club have donated over \$1000 cash towards the project.

The ace eBay team of Jon- K1TP, Larry- AJ1Z, and Larry- K1MDK have sold over \$3000 in radio gear that was donated to the club over the past few years.

We have now raised \$4000 toward the project!

This allows us not to tap in to the club bank account for all the work being done.

Please consider donating any gear you might not need to the club towards this project. We can provide a letter of donation towards your tax return from our non-profit club status. Every bit counts!

Jon- K1TP

Please consider a donation to the repeater Antenna Project- it is tax deductible!