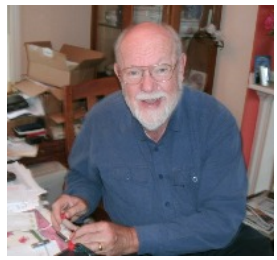
CAARA NEWS

Cape Ann Amateur Radio Association
MAY 2019 Edition

PRESIDENT'S COLUMN

by Hank- W4RIG.



Spring is actually here and the danger of postponed baseball games due to snow seems to be in Chicago rather than Boston.

Portable operations seem to be the theme at ARRL so warm up your mobile rigs and portable equipment. We are preparing for an active field day weekend in late June and glad to see some new members expressing an interest in working the airwaves from 6 Stanwood. Major antenna project underway to replace the main beam at 6 Stanwood. The old one not only got cranky but fell apart from the tower to the roof. We have already ordered a new beam that will cover 10 -15 & 20 meters as well as the Frequencies at 12 and 17 meters - spread out the bands and try them out - Jon, K1TP is supervising the installation before Field Day in June. We will ask for some help when Jon gets the equipment and bucket truck lined up. Public Service has kicked into high gear with road races several weekends in May and June. Contact Chris, K1TAT to help with the communications checkpoints - Thanks for the fine help on all members and friends helping Chris with the mobile operations. Gardi and Jake are also working on special events and could use some support with programs such as Museum Ships and Emergency Training. Bill Morris is cooking up some fine events and meals at 6 Stanwood - We are making Scholarship presentations at the high schools in Gloucester, Rockport, and Manchester-Essex - Bill and I will be at Gloucester High School on May 23 for a presentation at their awards night. Keep the airwaves active and 73 for now. Hank W4RIG

INFORMATION DESK

by Dean- KB1PGH

For this month we will start off with a reminder that the ARRL National Convention will be held in Xenia Ohio on May 17th through the 19th.Of course if you can`t go there are a always a couple of people who livestream it and place videos on Youtube afterwards.Just a quick note too that the ARRL Field Day event will be coming up soon on Saturday June 22nd and Sunday June 23rd so plan accordingly.There are no ARRL contests being held in the month of May but there is something else that is going on at the moment.As you know last year the ARRL did the National parks on the air event which lasted all of 2018.Well this year it is the Canada`s turn with the Canadian National Parks on the air .For more information on activations you can go to www.cnpota.ca .In the past month I decided to try out DMR or Digital Mobile Radio on my Openspot 2 and it`s not bad.I recently purchased a DMR capable TYT MD 380 HT for $89.00 at a company called www.buytwowayradios.com .You should give the website a look because they carry a bunch of different types of two way radios and I paid no shipping so they have some pretty good deals.If you are interested in finding out more about DMR you can click on www.dmr-marc.net and it gives you an idea of how DMR operates.I will have to say that with the Openspot 2 and Yaesu fusion and DMR there are no more reasons to have to listen to dead 2 meter and 440 repeaters. Digital radio opens up a whole new world of people to talk to.For this months product review,while it may not be totally ham radio related, I recently purchased a Anker 10000 powercore ultra compact external battery.I plan to use this to power my for my Openspot 2 when I take

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).

Jon Cunningham- K1TP Editor
Dean Burgess- KB1PGH Reporter

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 former W1RK 443.700 repeater is now on the ATT cell tower in the Blackburn Industrial Complex with greatly enhanced performance.

The Association is one of the few amateur radio clubs that has its own clubhouse. Located at 6 Stanwood Street in Gloucester, it includes a permanent HF station with beam, vertical/wire antennas along with an operating 2 meter packet station as well as 2/440 meter voice and 220 MHz Transceivers.

Amateur radio exams are held on the second Sunday of each month at 10:00 AM at the CAARA clubhouse. Anyone who is considering a new license or an upgrade, is welcome to test with us. Pre-registration necessary.
Contact the head of our VE team Rick Maybury-WZ1B if you have any questions about monthly testing.

Monthly member meetings are held on the second Saturday of each month at noon.

Each Sunday evening at 9:00 PM, the club operates a 2 meter 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.

it away from the house.The powercore 10000 will charge an I phone about 4 times. It has a high speed charge and recharges in about 4 hours.It is about the size of a deck of cards and weighs a little over 6 ounces.This external battery back up would be great for preppers .It only costs about $30.00 on Amazon.I t`s a great accessory to have when the power goes out.It is small enough to fit in a purse or backpack when you go camping or any other outdoor activity.I plan to buy another one to put n my cars glove box.There are more expensive models of these so take a look online to see what fits your needs.Moving on,now that spring is here I recently changed the oil on my Honda EU 2000i generator so I thought I would remind everyone else there to keep up the maintenance on your generators for ham radio use.Other than doing the usual tune ups make sure that you drain the gas out of the carburetors for winter storage and pour some nice fresh gas with Sea Foam gas treatment.The Sea foam will keep your gas from going bad over time.Make sure too that you start your generator every two weeks to keep the gas from drying out in the carburetor and creating a film that clogs the needle injectors.I use synthetic oil too which ,even though you pay a couple bucks more,you get

better engine performance.Well for me it`s just about time to do some portable HF operating.If you do the same it`s time to check all your gear before you head out.Especially if any of your gear had batteries in it.Put fresh top of the line batteries in your gear at least once a year.Old batteries do deteriorate and discharge.Plus you don`t want any of your gear to not work out in the field because the batteries went dead inside of them over the winter.Spend a couple bucks more and either get Duracell or the Energizer brand.I just get big packs of them and have a small battery box on hand.Especially since I have a six year old and all his toys.I have a MFJ antenna analyzer and I just put new batteries in it,Plus my multimeter got new batteries as well.So do an equipment check before you head out to operate so you don`t get caught in a jam.That`s it for this month.

CLUB KITCHEN FLOOR

I would like to thank Bill Morris- W1WMM for spending a full day at the club washing and waxing the club kitchen floor. 8 coats of wax were applied to the kitchen floor. Tony Marks was present to provide Bill transportation and provide moral support.

Bill has proven himself to be a workhorse in the kitchen and through his cooking events have raised over a thousand dollars in the past year which goes in the general fund or scholarship fund.

The Undersea World

by Curtis-AA3JE

Now anything worth doing is worth doing to excess! So after the great success of the first sump pump, I was left with a huge rock drill, and nothing to do. So I wondered what the OTHER side of the garage floor looked like (water runs down each side, as well as under the garage).

So I got to it, and soon confirmed my greatest fears.

Yep, water up to the concrete on that end as well. So I started digging. And ran into trouble again. Once down a foot or so, the sand acted like quicksand, and flowed into the hole as fast as I dug it out.

Now I am a confirmed video watcher, and I remembered a similar situation faced by a small resort town in Northern Holland. Some guys with a metal detector had found a HUGE signal, on the most popular beach, and discovered it was a WWII midget German submarine, complete with two live torpedoes, each holding about a thousand kilos of high explosive. Slightly decayed and overly sensitive high explosive.

So they drove interlinked sheets of iron down into the sand at a discreet distance, to form a cofferdam, and could gently remove the sand, and the explosive, and save the tourist season.

Now they used a derrick and a steam hammer, which was tempting, (I have never had a steam hammer) but I had no place to put one. But I needed a cofferdam, and I needed to get the pump about a foot deeper than the last installation.

But once again, HOME STUFF had a solution. Just cut the bottom out of five buckets, and slip them inside each other.

Bolt them together, drill 500 holes, and done!

Now I needed to sink the assembly into the sand. I didn't have a steam hammer, but I did have a 250 pound weight. So I placed it on the hole, and stood on top of it. This put it down about a foot or so, but then it stuck. I shifted my weight a little, and it sank a little.

So I tried the "Frug", the "Watusi", but quickly found that ole Chubby Checker and his "Twist" was most effective. So I got out my phone, found the right music, turned the volume to maximum, and did my best imitation of a disco girl on top of the bucket, twisting the morning away.

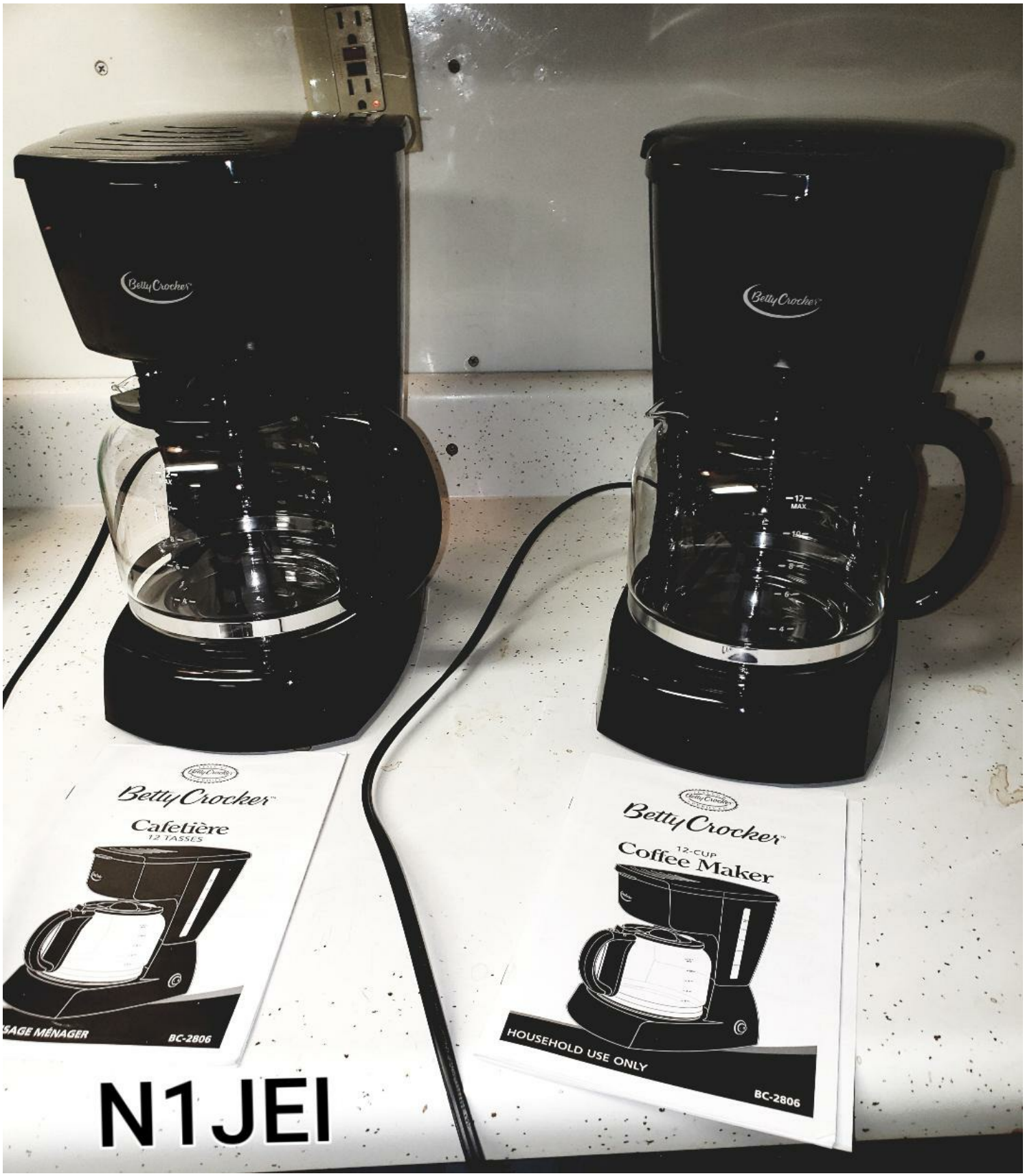
"WHAT ON EARTH ARE YOU DOING?" came a harsh voice.

"It's a cofferdam, dear. See, the sand flows in, and has to be held back. Once I sink the assembly I can ……."

"I DON'T WANT TO KNOW. JUST CLOSE THE GARAGE DOOR SO THE NEIGHBORS CAN'T SEE YOU. WE HAVE TO LIVE HERE!"

"Yes, dear."

Twenty minutes of twisting later, I had the bucket assembly down, took the post hole digger, dipped out the sand to the bottom of the assembly, added two inches of crushed stone, and dropped in the pump.



We want to thank Bill Canty- W1OKD for his donation of two coffee makers to the CARA club kitchen…the were greatly needed and will be appreciated by all who visit our club.

We also want to thank Tony Marks- N1JEI and his wife for donating a new baking sheet to the club kitchen for Bill to cook his magic on.

We need a set of stainless or glass mixing bowls for doing the pancakes, eggs, etc. if anyone can help!

Fire Drill #2

By Curtis- AA3JE

I have already written about our first fire drill, the time that I overloaded the wood stove and plugged the spark screen with creosote. I solved that.

But this morning when filling the stove, I noticed a small ember on the hearth.

“That will create a smell!” I thought, so I wet the hearth broom, brushed the ember into the dustpan, and took it and put it in the ash bucket. But I made a mistake, it being early morning, and I did not put it in the covered metal can, but the big bucket. The open top bucket. The plastic flammable bucket.

I forgot, as described above, that I had swept the floor and put the floor sweepings in the big ash bucket.

So SHE, sweetly resting, was jarred from sleep by a 120 decibel horn and a robot voice!

“SMOKE DETECTED! SMOKE DETECTED! EVACUATE! EVACUATE!”

Now this is not an unusual event. It occurred when I ran the 40 meter magnetic loop too close to the CO detector, it occurred when I ran an unscheduled test of the fire alarm system, it occurred when I forgot the biscuits in the oven, and it occurred when the master alarm lost touch with a battery operated slave alarm. Indeed, howling sirens have been a rich and fulfilling part of our married life.

But not smoke. Thick smoke. The last two times we had thick smoke like that the furnace had plugged up, despite annual cleanings.

I was out in the garage, but when the alarms went off, I ran to the house. I opened the door, and was greeted by a thin blue haze, that grew much thicker when I opened the door to the room with the wood stove.

At that point I was greeted by a robust shriek.

“WHAT HAVE YOU DONE NOW? AND IT BETTER BE A REAL FIRE OR YOU ARE MOVING TO THE THE CARDBOARD BOX UNDER THE OVERPASS!”

“Working on it, dear. Don’t worry.”

“THERE IS A FIRE ALARM YELLING FOR ME TO GET OUT OF THE HOUSE, THE HOUSE IS FILLING WITH SMOKE, AND I AM NOT TO WORRY? ARE YOU INSANE?”

“Working the problem, dear.”

“I WILL BE WAITING ON THE PORCH.”

The stove room was full of smoke, indeed, the whole basement was, but there was no fire. I ran to the storage room. There, sitting calmly, there was a 50 gallon plastic bin full of ashes, with a thin layer of dirt and wood chips, smoldering robustly.

I dragged it out, only to be greeted by further shrieks.

“NOW THE PORCH IS BURNING! WHAT HAVE YOU DONE?”

I got a bucket, doused the burning embers, opened the doors, set the fans to work (every home should have 2000 CFM emergency ventilation fans), cleared the smoke, and everything was OK.

Sort of.

“What did you do?”

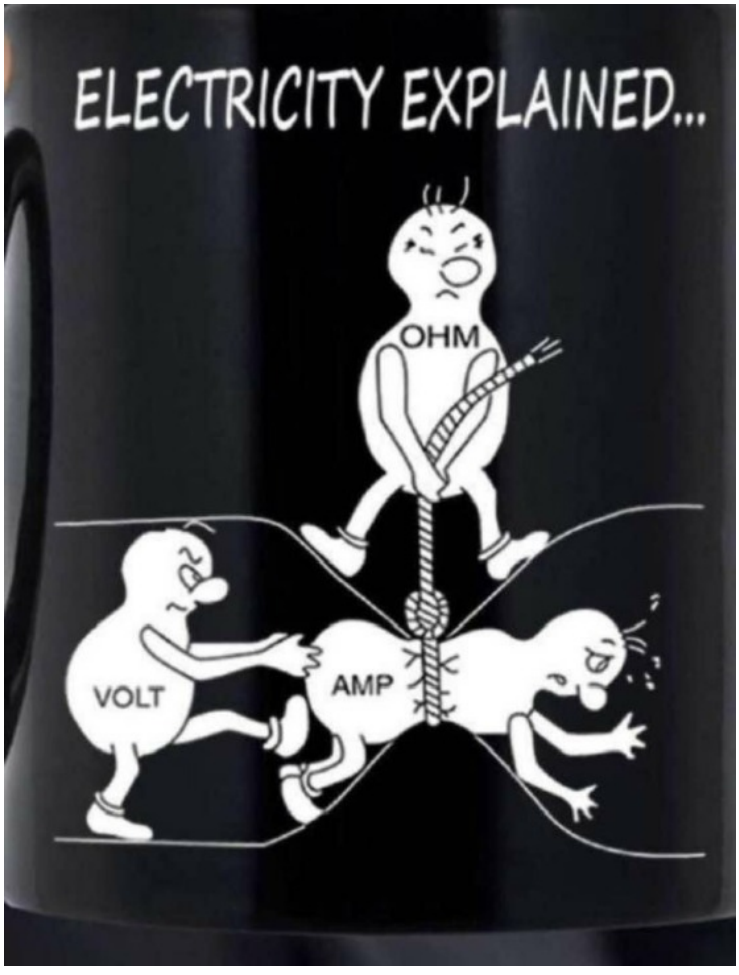
“When I loaded the stove, an ember fell out, and I put it in the wrong bucket.”

“METAL ASH BUCKET, TIGHT FITTING LID, KEPT OUTSIDE! NEVER INSIDE, NOT IN THE GARAGE, NOT ON THE PORCH, OUTSIDE!!!!”

SHE was a Fire Captain’s daughter.

Anyway, if you have a fireplace, get a metal can with a tight fitting lid, and keep it OUTSIDE!

(Or just grit your teeth, turn up the thermostat, and pay the bill).



NEW HAMFEST

Saturday August 3, 2019, Ossipee Town Hall, 55 Main St, Center Ossipee, NH 03864

Setup 0800, Open at 0900, VE session at 1330 please preregister

Buyers $5, sellers $10 includes one entry and a table, VE exams $15

Talk-in 147.03+, PL 88.5

Contact N1VAU@arrl.net or KC1DNA@arrl.net

APRIL CLUB BREAKFAST


EXIT
Welcome
Cape Ann Amateur Radio
USS JUNEAU
LPD 10
K1AID
PAUL
Club Breakfast
N1JEI


FREQ. CNTR.
SCANNER

The beam at the club has finally fell apart….good thing we ordered a new Mosley beam a week ago. The beam will arrive sometime in late May. We hope to have it up in place by Field Day.

ARRL Reply Comments Stress Need to Update Technician Privileges in a Digital World

In reply comments to the FCC (comments on comments already filed) on its Petition for Rule Making (RM-11828), ARRL has stressed that updating HF privileges for the entry-level Technician license "is the sole subject and intent" of the petition. ARRL filed its reply comments on April 29, urging the FCC to disregard comments irrelevant to its petition and maintaining that Technician privileges must be relevant within the context of today's technological environment.

"[T]he increasingly rapid pace of change in communications technologies, coupled with the national need for self-training in science, technology, engineering, and math" necessitate the rule changes requested, ARRL asserted. "ARRL made its request because of the gap between today's digital technologies and the privileges accorded the current entry-level Technician license." ARRL characterized its proposal to update the rules as "balanced and modest.

"If adopted, there would be no change to the operating privileges for all licenses classes other than those of the Technician class," ARRL said. ARRL in 2018 asked the FCC to expand HF privileges for Technician licensees to include limited phone privileges on 75, 40, and 15 meters, plus RTTY and digital mode privileges on 80, 40, and 15 meters. The FCC invited comments on the proposal in April.

ARRL pointed out that some comments filed on its petition address subjects related to other open proceedings rather than expanding Technician privileges, citing comments cross-filed in such proceedings as WT Docket 16-239, RM-11708, RM-11759, and RM-11831. "Those filings should be considered in the proceedings that they address, rather than here," ARRL said.

ARRL said some opposition appears based on fears of increased interference potential due to additional digital operation by Technicians. "It is improbable that all, or even a majority, of Technician licensees suddenly would develop a passion for the same digital technology," ARRL said. "Our hope and expectation is that many will engage with digital modes on the high-frequency spectrum at issue, but it is unrealistic to suggest that every Technician licensee blessed with new privileges would suddenly appear on the same band."

The comments note the development of very efficient digital modes such as FT8, which occupies just 90 Hz of spectrum per signal. "The experience with FT8 clearly demonstrates the attraction of the digital modes and the spectrum efficiencies that can be achieved," ARRL said. "This is why opening up limited digital opportunities to new radio amateurs so clearly would serve the broad public interest as well as the specific purposes of Amateur Radio in experimentation and innovation, as enumerated in the governing FCC rules."

Museum Ships Weekend Set for June 1 – 2

Museum Ships Weekend will take place over the June 1 – 2 weekend, sponsored by the Battleship New Jersey Amateur Radio Station NJ2BB. Radio operation will be from a variety of vintage and noteworthy vessels. This is not a competition.

So far 75 ships are on the roster to take part. All stations working at least 15 different participating ships will receive a certificate, if they send a copy of their log showing these contacts.

While operation on any amateur frequency is allowed, most ships will be operate in the General portion of the bands. PSK31 operation will be on 14.070 MHz, 10.142 MHz, 18.100 MHz, 21.070 MHz, and 28.120 MHz.

Some ships also may be found on 75 meters (3.880 – 3.885 MHz) and on 40 meters (7.290 MHz) using AM, some using the vessel's original restored equipment.

National Voice of America Museum of Broadcasting to Expand Hours during Hamvention

The National Voice of America Museum of Broadcasting, located at the site of the former Voice of America Bethany Relay Station in West Chester, Ohio (between Dayton and Cincinnati, off the I-75 Tylersville Road

exit), will expand its hours during Hamvention 2019 weekend. The WC8VOA station will be open. The museum includes a comprehensive collection of Drake Amateur Radio gear. Extended hours for Hamvention attendees will be Thursday and Friday, May 16 and 17, 4 – 9 PM; Saturday, May 18,1 – 9 PM, and Sunday, May 19, 1 – 5 PM. More information is on the VOA Museum website.

World Scout Jamboree Gearing Up for Significant Amateur Radio Presence

Amateur Radio will play a role in this summer's 24th World Scout Jamboree in West Virginia, the first World Jamboree held in North America. The Jamboree has chosen the theme "Unlock a New World." Thousands of Scouts and Scout leaders from some 200 countries are expected to attend. The Jamboree's Amateur Radio Exhibit will use the call sign NA1WJ — North America's 1st World Jamboree. It will be on the air during the event, July 22 until August 2, at the Summit Bechtel Reserve, hosted by Canada, Mexico, and the US. Amateur Radio testing is expected to begin as early as July 14. Operating frequencies will be posted in real time via Facebook and Twitter or via an NA1WJ email group.

"The goals of the Amateur Radio station at the World Scout Jamboree are to introduce Amateur Radio to Scouts and Scout leaders through hands-on participation in two-way communication with other stations across the globe. This activity will also serve as the Amateur Radio voice of the Jamboree," the World Scout Jamboree Amateur Radio Exhibit Operational Vision document states. Other facets of Amateur Radio at the Jamboree will include Amateur Radio direction finding (ARDF), Amateur Radio satellite contacts, and a scheduled Amateur Radio on the International Space Station (ARISS) contact with an ISS crew member.

"We also expect to launch one or two balloons with Amateur Radio payloads and track them as they cross the Atlantic," the vision document continues.

Organizers are encouraging radio amateurs around the globe to get on the air during the World Jamboree to help NA1WJ demonstrate Amateur Radio for Jamboree visitors.

The 2019 World Scout Jamboree operation at the Summit Bechtel Scout Reserve will take advantage of lessons learned by the K2BSA Amateur Radio operation during the 2013 and 2017 USA National Jamborees. It will also take advantage of the existing infrastructure, which includes three VHF/UHF repeaters installed by Icom America, as well as the utility poles for installing antennas. K2BSA ham gear stored in West Virginia includes antennas, rotators, and cables.

Evening operation from NA1WJ will involve at least two operators using the buddy system. VHF-UHF repeaters will offer full coverage of the Jamboree area via handheld transceivers, facilitating networking as well as emergency communication. The exhibit will include an Amateur Radio station with the special event call sign W8J.

The Demonstration Station will include multiple operating positions offering a variety of modes. These include six stations with 100 W HF transceivers, computer logging software, and large screen computer displays; two VHF-UHF stations for demonstrations and repeater monitoring, and two satellite communication systems. The antenna farm will include two HF directional antennas, three HF dipoles, three HF vertical antennas, VHF/UHF verticals and satellite antennas with azimuth and elevation control, a trailer-based crank-up tower, a five-band Yagi, a 40-meter rotatable dipole, and a 6-meter Yagi.

Each station will be able to accommodate four participants at a time, plus one control operator. The goal is to give each participant up to about 10 minutes of operating time

The K2BSA Amateur Radio Association will host a "Radio Scouting" booth at Hamvention® (Booth 2205 in Building 2).

Annual Armed Forces Day Crossband Test Set for May 11

The Army Military Auxiliary Radio System (MARS) will host the traditional military/Amateur Radio communication tests to mark the 68th annual Armed Forces Day (AFD) on Saturday, May 11. The event is open to all radio amateurs. Armed Forces Day is May 18, but the AFD Crossband Military-Amateur Radio event traditionally takes place 1 week earlier in order to avoid conflicting with Hamvention®. Complete information, including military stations, modes, and frequencies, is available on the US Army MARS website.

“For more than 50 years, military and amateur stations have taken part in this event, which is only an exercise scenario, designed to include hobbyist and government radio operators alike,” the event announcement said. “The AFD Crossband Test is a unique opportunity to test two-way communications between military communicators and radio stations in the Amateur Radio Service, as authorized in 47 CFR 97.111. These tests provide opportunities and challenges for radio operators to demonstrate individual technical skills in a tightly-controlled exercise scenario that does not impact any public or private communications.”

During the event, military stations in various locations will transmit on selected military frequencies and announce the specific ham frequencies they are monitoring.

Military stations expected to be on the air for the event include those in Arizona, Japan, Hawaii, Okinawa, Washington, DC (and elsewhere in the contiguous states), the USS Midway, the USS Yorktown, the USS Iowa, LST-325, the US Naval Academy in Annapolis, and the Newport Naval Radio Station Museum in Rhode Island. The MARSCOMM and MARSRADIO nationwide networks will have multiple stations on the air across the continental US.

An AFD message will be transmitted utilizing the Military Standard (MIL-STD) serial PSK waveform (M110) followed by MIL-STD Wide Shift FSK (850 Hz RTTY), as described in MIL-STD 188-110A/B. Technical information is available. The AFD message will also be sent in CW and RTTY, as indicated on the full schedule. Anyone wanting a QSL should complete the request form on the MARS website

How does a Software Defined Radio or SDR work?

If you've been around the hobby in the past decade, you may have come across the invention of a Software Defined Radio, or SDR. You might even own one and if you've looked into how it works, read the explanation that essentially describes it as a traditional radio where all the components are implemented in software. To me that's like explaining how a radio works by waiving your hands and saying: here is magic.

How it actually works is something all together more interesting and thought provoking.

If you think of sound, like my voice, coming from a speaker, you can imagine putting a volt meter on the speaker terminals and measuring every second what the voltage is. As my voice gets louder you might measure a large voltage, as I take a breath, it will be smaller. You could chart the different measurements and show a waveform that would represent the loud and soft parts of what I'm saying. The faster you measure, the more accurate the picture represents my voice. For comparison, a CD player does this measurement 44 thousand times per second.

If you were to play back those sound measurements at the same rate into a speaker, you'd end up with my voice, and that's actually more or less, what's happening if you're listening to this podcast. Yes, for the purists, there's more to it, but not relevant at this point.

Similarly, if you were to hook up a volt meter to an antenna and take measurements, you'd end up with a chart that represented the signal strength that your antenna is receiving and the faster you measured, the better the representation. What it exactly represents I'll come to in a moment.

The waveform that represents my voice is actually a very complex signal. In much the same way as a piece of music is made up of different notes, played in sequence and in concert with each other, my voice is also made up of separate frequencies, played together to form the words that you hear.

If you were to measure those separate frequencies and draw a waveform for each, you'd see how every one contributes a little to the overall effect, and if you were to add them all together, you'd have my voice again.

In the same way, the waveform that represents an antenna signal is made up of all the separate frequencies that go into the overall signal. You might be surprised to learn that an antenna is actually hearing all frequencies at the same time. Some better than others, but typically, all of the RF spectrum at any given time.

Your radio is also essentially hearing all frequencies. When you tune to a local station on 720 kHz, you're actually telling your radio to ignore all the stuff that isn't 720 kHz and to only process that small bit of what it's hearing. The selectivity of a radio is the measurement that represents how good your radio is at being deaf to all the things you don't want to hear.

To help that filtering, a traditional radio and antenna works by pre-selecting part of the RF spectrum, when you press the AM button on your car-radio, you're selecting which chunk to listen to, press the FM button on the same car-radio, you'll select another chunk. On an amateur radio, you select by choosing the 80m band, the 40m band, etc. Similarly, your antenna is pre-disposed to hearing a particular chunk better than others, but that doesn't make it immune to signals across the entire range.

You may have heard described that a Software Defined Radio hears all frequencies at the same time. Essentially it's a volt meter connected to your antenna, spitting out measurements as fast as it can for processing by a computer.

The waveform that comes from those antenna voltage measurements represents all of the RF spectrum and it's just the beginning of what you can do next.

In the same way that my voice is made up of lots of different parts, all played together, the RF spectrum is made up of the local broadcast stations, the local TV stations, mobile phones, garage remotes, Roy on the 7130 DX net, this podcast on your local repeater, all at the same time, all played together, to make the waveform that represents the measurements you make at the base of an antenna.

I'm going to ignore for a moment how exactly we extract the various bits, or how we decode an FM or SSB signal using software, it involves some math, instead we can look at something that is easier to explain.

Unlike with a traditional radio, which has to work hard to filter out undesirable information, a software defined radio can filter out information by just deleting those measurements you're not interested in.

PUBLIC SERVICE ROAD RACES

CAARA Public Service Schedule 2019

1 Fool's Dual March 31, 9:00am 5K Race Start 10:00am Half Marathon O'Maley Middle School 32 Cherry Street Gloucester, MA.
2 Twin Lights Good Harbor Beach April 27, 9:00am Half Marathon Start Thatcher Road Gloucester, MA.
3 Rocky neck Art Assn. 5K. Run/walk Team Challenge May Date T.B.D.
4 Fast Half May 11, 9:00am Half Marathon Start Hamilton - Wenham High School 775 Bay Road South Hamilton, MA.
5 YMCA Backshore 5K Thursday, May 16th, 6:00pm:, Good Harbor Beach, Gloucester
6 Motif No.1 Day Arts Fest & 5k Fun Run Date T.B.D.
7 Cape Ann Trail Stewards. Dogtown 5 Mile Trail Run 19 May 2019 9:00 AM
8 Twin Lobster June 2,8:00am 1-Mile Race Start 8:30am Half Marathon Start Gloucester High School 32 Leslie O Johnson Road Gloucester, MA.
9 YMCA Father's Day 5K Sunday, June 16th, 9am:, Rockport High School, 24 Jerdens Ln.
10 YMCA St. Peter's Fiesta 5K Thursday, June 27th, 6:00pm:, Stage Fort Park, Gloucester
11 Triple Threat August 4,8:00am 1M Race Start 8:20am 5K Race Start 9:15am Half Marathon Start Rockport High School 24 Jerdens Lane Rockport, MA.
12 Half Marathon by the Sea September 22, 10:00am Half Marathon Start Manchester Essex Memorial Elementary School 43 Lincoln Street Manchester-by-the-Sea, MA
13 The Lone Gull 10K Road Race September. Date T.B.D.
14 Parker River Half Marathon. October 6, 9:00am Half Marathon Start Triton Regional High School112 Elm Street Byfield, MA 01922
15 Ocean View November 3, 8:30am 5k Race Start 9:30am Half Marathon Start Ipswich High School 134 High Street Ipswich, MA 01938
16 Holiday MerryThon. December 1, 9:00am 5K Road Race Start 10:00am Half MerryThon Start Good Harbor Beach Thatcher Road Gloucester, MA.

Why should you participate in race events?

It helps the club financially, we receive a donation for each race. You are using amateur radio to provide a needed public service to ensure the safety and smooth running of a public event in local communities.

I would but I do not have a radio.

No excuse, we have loaner radio's available with a mag mount that will work in your car just by just plugging it into the cigarette lighter socket. We have loaner hand held radios as well!

I don't have transportation.

No excuse, we will pick you up and drop you off at your house.

I do not have the time to spare for a whole race.

Well, you can commit to a time slot, for just two hours. We will bend over backwards to get you to participate.

CAPE ANN AMATEUR RADIO ASSOCIATION

6 Stanwood Street
Gloucester, MA 01930

978-282-7645
www.caara.net

**Repeaters on 145.130
224.900 & 443.700**

S	M	T	W	T	F	S
		Open House-5-10pm	1	2	3	4
5 CAARA NET ON THE 145.130 REPEATER EVERY SUNDAY NIGHT AT 9PM	6	7 Open House-5-10pm	8	9	10	11 BOD Meet-11am Members Meet Noon
12	13	14 Open House-5-10pm	15	16	17	18
19	20	21 Open House-5-10pm	22	23	24	25
26	27	28 Open House-5-10pm	29	30	31	