Sidebands

The Newsletter of the EAST GREENBUSH AMATEUR RADIO ASSOCIATION

W2EGB

October 2023

www.egara.club

EGARA Promotes Amateur Radio at Community Day

Club members provided a hand-on demonstration of Amateur Radio during the second annual East Greenbush Community Day which was held at the Town Park on Saturday, September 16th. As part of the event, club members erected a G5RV dipole and operated one of the club's Yaesu 450D HF transceivers, as well as dual band HT radios.

"We used the day to promote the hobby as the 'original social media,'" said Club Vice President Walt Snyder, N2WJR. "Our goal is to entice younger folks to appreciate that amateur Radio can open the world to them in ways that traditional social media can't."

Also assisting at the event were Russ Greenman, WB2LXC, Steve VanSickle, WB2HPR, Frank Cavaliere, KE2ATD, Don Mayotte, KB2CDX, Andy Sullivan, KC2WWJ and Dave Smith, WA2WAP.

EGARA members promoting Amateur Radio during the East Greenbush Community Day

In addition to showing how Amateur Radio works, club members also made available promotional materials, club pens, and application forms offering discounted memberships for those attending the town's Community Day program.

In This Issue

Hudson Boat Trip Timed to Fall Colors

The club's annual Hudson River Cruise is set for Saturday, October 14th and will hopefully provide a spectacular ride accented by an array of beautiful fall colors.

The cruise will leave from the Port of Albany promptly at 10 am and last approximately three hours. Submarine sandwiches and beverages will be provided by the club at no charge.

As in the past, reserving a spot on the trip will be on a first come, first served basis -- with pre-registration required to ensure space on the boat and adequate food and refreshments. Club members wishing to sail the mighty Hudson should RSVP by email to W2RBJ@outlook.com no later than Tuesdasy, October 10th.

Next Membership Meeting - October 11, 2023 - 7 pm

EGARA Sets FCC Exam Session for October 28th

EGARA will conduct its annual fall FCC license examination session on Saturday, October 28th at the East Greenbush Community Library. The session will begin promptly at 10 am and exams for all license classes will be offered -- Technician, General and Extra.

At the time it was scheduled in mid-September, it was the only exam session offered locally during the month of October, providing prospective license applicants with an additional opportunity to gain their license or upgrade their existing license class.

Those wishing to take their exam should pre-register with EGARA by sending an email to W2RBJ@outlook.com. However, walk-ins will be accepted. Prior to the test date, applicants should make sure they have met all of the pre-test requirements, including registering for an FRN number with the FCC. Applicants should also have a valid email address, as the FCC now requires email for its communications. Complete information on testing is available on the club's website at: https://www.egara.club/ve-exams-sessions.

In addition to having an FRN number, test applicants must also bring a photo ID, a copy of their existing license if they are upgrading, and $15 for the test fee. New license applicants will also be required to pay $35, however this is paid directly to the FCC after successful completion of their exam and payment instructions will be sent by email. Applicants without an FRN number or email will not be eligible to take the licensing exams.

A Note of Thanks from Our Inbox....

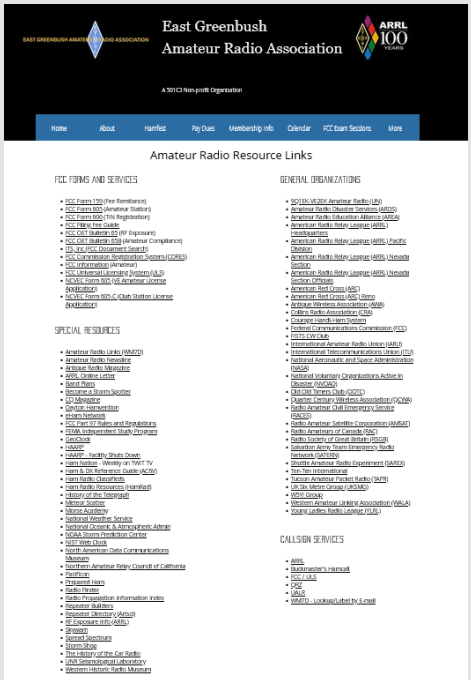
"I wanted to reach out to you because the East Greenbush Amateur Radio Association site has been super helpful for my son Troy and his buddy Chris! They are boy scouts currently in the process of earning their Radio badge… and they thought the Resource Links page was especially useful: https://www.egara.club/resource-links/

"The boys are really enjoying scouts together and are really taking an interest in learning about radio. They have been enjoying it so much that they actually spend a lot of time at home wanting to learn more! It's super cool to see them have so much excitement about this!

"Troy's Grandpa actually took an interest in amateur radio many years ago so they've been spending a lot of time with him.. and of course, as an invested parent, I want to be as supportive as I can with my son with everything he wants to do and learn.

"Together, we wanted to send you this thank you note! So thank you so much for all of your help."

Signed,
Susan Abelman


East Greenbush
Amateur Radio Association
A 501C3 Non-profit Organization
Home About Hamfest Pay Dues Membership Info Calendar FCC Exam Sessions More
Amateur Radio Resource Links
FCC FORMS AND SERVICES
GENERAL ORGANIZATIONS
SPECIAL RESOURCES
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Hams Asked to Help Science During Upcoming Solar Eclipse

October 14, 2023, and April 8, 2024, will bring both an annular and then a total solar eclipse. These celestial events will be followed widely by hams because of the sudden and dynamic changes that occur in the ionosphere during an eclipse. While much is known about ionospheric propagation, much is still to be learned. And these will be the last two solar eclipses in North America for nearly 20 years.

ARRL is partnering with HamSCI – the Ham Radio Science Citizen Investigation to encourage amateurs to get on the air and operate as part of the The HamSCI Festivals of Eclipse Ionospheric Science.

Propagation experiments will include the Solar Eclipse QSO Party using CW, FT4/8, SSB and other digital modes and The Gladstone Signal Spotting Challenge (GSSC) using CW, WSPR and FST4W modes.

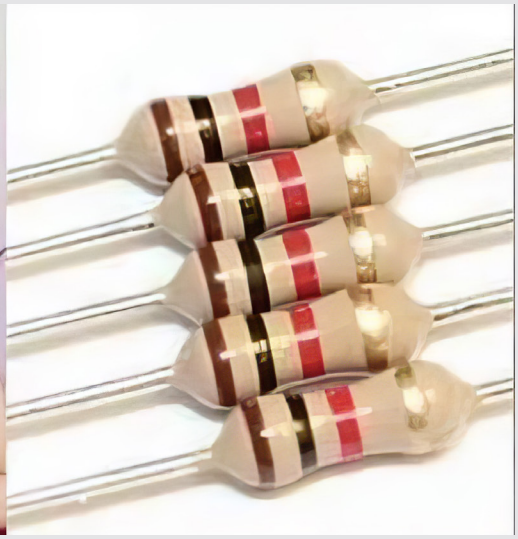
The October 14th event will run from 1200-2200 UTC and amateurs may operate on any band and any mode from 6-160 meters (except the WARC bands.)

All the details may be found at www.hamsci.org/eclipse. If you have any questions or know of a club that would be interested in having a presentation to learn more about the science around the events, please contact the HamSCI Public Relations Officer, Ed Efchak WX2R at pressrelations@hamsci.org. Ed is also the PIC for the ARRL Northern New Jersey section.

Help your local hams to save the dates…get on the air…and send in a log. Help be a part of science!

Ham Humor

A woman most hams find to be strangely irresistible



On the Beam
News & Notes

Bipartisan Support for AM Radio Legislation Grows

A whopping 184 members of Congress have cosponsored the AM Radio for Every Vehicle Act

It's a rare occasion when lawmakers on both sides of the political spectrum can agree on any given legislation, but that's just the case for the AM Radio for Every Vehicle Act. The bill, first introduced in May, continues to garner strong, bipartisan support, with one-third of all senators and members of the House of Representatives cosponsoring the legislation.

The AM Radio for Every Vehicle Act would give the government power to mandate that automakers maintain AM service in their future car models. If adopted, the act would direct the National Highway Traffic Safety Administration to implement new rules requiring car manufacturers to keep the service without any additional charges.

The bill also would direct the Government Accountability Office to study whether alternative communication systems could fully replicate the reach and effectiveness of AM broadcast radio for alerting the public to emergencies.

As of Sept. 7, 150 out of the 435 total members that comprise the U.S. House of Representatives have cosponsored the measure. Of those House representatives, 72 are Democrats and 78 are Republicans.

Additionally, 34 out of 100 senators support the bill. Of those members of Congress, 16 are Democrats and 18 are Republicans.

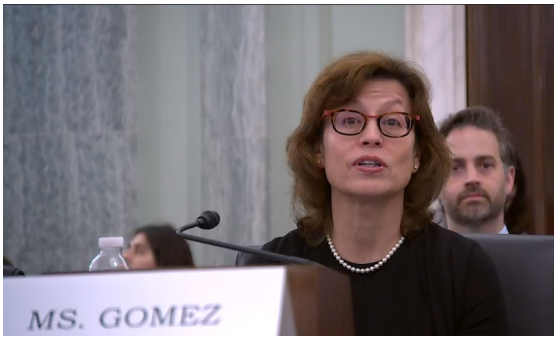
While 184 members of Congress publicly standing behind the issue feels impressive, it doesn't assure passage, at least not yet. However, the National Association of Broadcaster's Curtis LeGeyt sounded optimistic:

"The incredible bipartisan support the AM Radio for Every Vehicle Act has garnered in just a short time is a testament to the integral role AM broadcasting plays in informing, entertaining and connecting Americans across the country," said NAB President and CEO Curtis LeGeyt in a press release.

"America's broadcasters thank the members of Congress that are standing with their local AM station listeners and working to preserve radio's pivotal place in the car dashboard," said LeGeyt.

FCC Back to Full Strength

Anna Gomez has been confirmed as the Federal Communication Commission's newest commissioner. With her confirmation, Gomez will fill a Democratic seat that has remained open since President Biden took office. Senators voted 55-43 to confirm Gomez.



Gomez, a telecommunications attorney, previously served as a senior advisor for international information and communications policy in the State Department's Bureau of Cyberspace and Digital Policy, which she joined earlier this year. She is better known as a former deputy administrator of the National Telecommunications and Information Administration; and she served for 12 years in various positions at the FCC, including as deputy chief of the International Bureau and senior legal advisor to then-Chairman Bill Kennard.

Nominated by President Biden in May 2023, Gomez is the first Latina to serve on the commission in decades. According to the National Hispanic Media Coalition advocacy group, the last Latina to hold the role was Gloria Tristani, who stepped down from the agency in 2001.

EGARA September Meeting Minutes

- The September meeting of the EGARA was called to order by President Bryan Jackson, W2RBJ at 6:57 PM. There were 23 members in attendance at the Masonic Temple. After a round-robin introduction, the raffle was conducted, and several nice prizes were given out.
- Bryan Jackson, W2RBJ, gave his President's report as follows:
- The Town of East Greenbush will hold a Community Day celebration at the Town Park on September 16th. Club members are needed to setup and man the EGARA table. An HF station will be a part of the club display.
- Possible hamfest 2024 locations were discussed: St. Mary's Church, Gott Middle School, the American Legion, or the Masonic Temple. Bryan Jackson will be contacting the school personnel for additional details.
- The annual boat trip has been scheduled with Captain Dave, N2VLQ, for October 14 – rain date October 15th. Lunch and beverages will be provided by the club.
- The annual Christmas Banquet plans are being discussed, and locations are being considered. It will be held on Wednesday, December 13th. The annual pumpkin patrol will be conducted during the end of October – no dates are available as yet. Details on these events will be sent via e-mail.
- The club seeks a program chair/coordinator. Interested members should contact the Club President. The ARRL has increased membership dues and subscription rates. New and renewal memberships will not receive the print edition of QST magazine unless an additional $25 is paid. An online digital version will be included.
- Three LCD monitors have been donated to the club. These can be used with our annual Field Day setup.
- A VE session is tentatively planned for this fall at the Town Library (see story on page 2).
- The Lodge lawn and janitorial service is an ongoing responsibility of all EGARA members. Please consider donating an hour to come by and help out. Many hands make the job go quickly.
- Don Mayotte, KB2CDX will not seek re-election as club treasurer.
- Repairs have been made to the Temple lawn tractor – the club spent approximately $200 for replacement parts.
- Reports from the VP and Secretary were heard.
- A brief recap of work on the old WABY transmitter was given by Steve VanSickle, WB2HPR (see story on page 9).
- Items wanted of for sale can be listed in the club newsletter, SIDEBANDS for free. Please send you information to Bryan Jackson, W2RBJ.
- Refreshments were enjoyed by the membership. The meeting was adjourned at approximately 7:41 PM.
- Minutes recorded by Secretary Steve VanSickle, WB2HPR

The History of Ham Radio: Family Harmonics

Chris Codella, W2PA, author, John Pelham, W1JA, editor, Phil Johnson, W2SQ, editor

(Editor's note: By special arrangement with the authors, Sidebands is pleased to present this multi-part series on the history of ham radio. Subsequent chapters will be published in future monthly editions of the newsletter)

Amateurs could anticipate at least some of the effects of the recently concluded 1927 Washington Convention that would occur in the coming year. Call signs would be changed, and nations around the world would allocate bands adhering to the convention's guidelines.

Most importantly, there was about to be a rush by commercial interests to claim new frequencies in the short waves. The newly freed portions of former amateur bands would be in highest demand since they had not previously been available—specifically 7,300–8,000 and 14,400–16,000 kHz. Six months early, the FRC was already issuing construction permits for commercial stations in those windows using approximately 30-kHz spacing at 40 meters and 60-kHz spacing at 20 meters, continuing their practice of assuming a wider channel width was necessary in direct proportion to the operating frequency.

Amateurs therefore could expect to begin hearing non-amateur incursions into the current bands as 1928 drew to a close. On the other hand, they'd also expect to see non-amateur stations that were currently operating within the new international band limits move elsewhere as those frequencies became exclusively amateur allocations.

The ARRL had once suggested subdividing the 40- and 20-meter bands according to groups of geographically related nations, believing it to be an effective way to avoid interference. But the consensus now seemed to be that it was unnecessary, an optimistic view that Warner judged to be "a most healthy and wholesome sign," even as he remained skeptical.

At least one thing was certain: equipment would have to change. The US was considering regulating transmitter power in certain bands and establishing power-supply requirements in order to abolish "the hated 'raw a.c.'" from the air. And it was beginning to seem that modifying equipment to adhere to the new regulations would be less onerous than once thought, as new designs for higher-power transmitters, more-selective receivers, and more-accurate wavemeters were rapidly being developed.

Another big change was the use of frequency instead of wavelength. The Washington Convention specified allocations in frequencies, the world had adopted it, and it was finally time for amateurs in the US to do so as well. Besides wavelength being difficult to measure directly, its derivation from frequency, which was an easily measurable quantity, depended on the accurate measurement of the speed of light. That, in turn, got more accurate every year as science improved its ability to measure it. This meant that all precise notations of wavelength would change every time the speed of light specification did (in order to keep the same frequency). At short wavelengths, it was also much easier to talk in terms of whole cycles-per-second than tiny fractions of a meter.

But how many signals could fit into a given band? Here, the conventional theory went horribly, but temporarily, wrong. Most amateurs failed to anticipate the possibilities of ever advancing technology despite having witnessed it—or caused it—so many times.

They assumed that "Even the best adjusted station occupies a little slice out of the spectrum and this 'slice' is to be expressed as a percentage of its operating frequency, so that as we get into a higher frequency band we find that the width of the channel required for a single station is greater, and that a wider band will not necessarily accommodate more stations," as Warner expressed it.

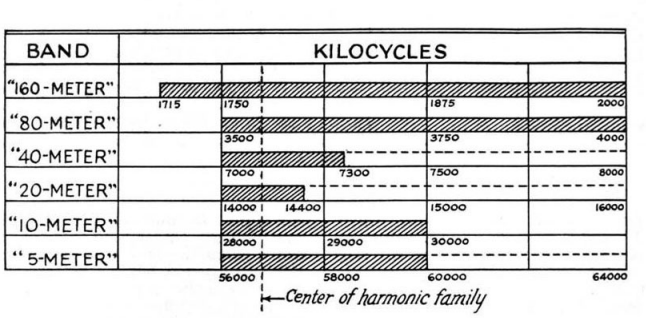
While proposing the use of frequency instead of wavelength, amateurs apparently missed the opportunity to stop thinking of signal width in terms of wavelength too. This was not due to signal bandwidth per se, but because of a practical consideration of the accuracy and stability of a transmitter's signal, which properly could be expressed as a percentage of the operating frequency. This was partly Kruse's "wabbulation" complaint.

In QST, Warner went so far as to present a diagram showing the relative widths of the 160- through 5-meter bands, taking into account transmitter accuracy as a percentage of operating frequency, showing that the practical width of 160 and 80 exceeded that of all the other bands combined.

(continued on page 7)

History of Amateur Radio...

It also vividly illustrated the losses of space in moving from the pre-convention allocations to the new ones for 1929. And it showed how amateurs were no longer assured that their harmonics would fall automatically into a higher frequency amateur band.



Warner's band widths diagram, from the September 1928 issue of QST

Viewed in this manner, where effective signal width increases with frequency (e.g., a signal at 14 MHz would be twice the width of one at 7 MHz), the 20-meter band is seen to be the narrowest and most restrictive. The fewest number of signals could fit there even though it was wider (in kHz) than 40, 80, or 160. So, Warner used the center of the 20-meter band to define the center of the newly established family of harmonically related bands.

Put another way, 14,200 kHz was the center frequency defining a set of harmonically related band segments in which harmonics were still guaranteed to fall within an amateur allocation, even under the new, narrower allocations.

Prior to the changes (indicated by dotted line band widths), the harmonic centers coincided with the actual centers of all the bands (160m being the lone, slight exception), and they were all the same width – nice and neat. The new allocations abandoned this orderly plan to satisfy the intense demand for more frequencies coming from all services.

The 160-meter band ran from 1,715 to 2,000 kHz with a defined harmonic center at 1,775. It was allocated internationally to amateur, mobile, and point-to-point services, but in the US the Federal Radio Commission intended to license only amateur operations there. Amateurs used the band chiefly for phone operation and it was considered a good short-range telegraphy band too—a band for beginners and possibly for experiments in picture and television transmission.

The 80-meter band, from 3,500 to 4,000 kHz, had a harmonic center at 3,550 and was the only band to retain its pre-convention boundaries intact. It supported most of the amateur traffic handling. As with 160, it was allocated internationally for amateur, mobile and fixed services but the Commission, recognizing the importance of amateur traffic operations, intended to make it available in the US only to amateurs and specific military sharing as before. Mostly a telegraphy band, phone was again permitted from 3,500 to 3,550.

The 40-meter band, for telegraphy only, ran from 7,000 to 7,300 kHz, had its harmonic center at 7,100, and was considered the "million-dollar band," the most heavily-used nighttime DX band, and was the segment most hotly contested at the international convention. It was "where we acquired the heartache and lost our shirt to Europe and Canada," wrote Warner, adding bitterly that it was "viewed with envy and cupidity by a crass and vulgar commercial world." Here, the League proposed to the worldwide community that the band should be used primarily for DX work, limiting intra-continent work to distances over 1,500 miles. It also proposed to divide the band according to geographic location, with the US staying primarily below 7,150 and the rest of the world in partitions within the upper half of the band (almost the opposite of what would occur years later). The geographic segmentation idea was never adopted.

The 20-meter band, which was 2-MHz wide before the convention, was now defined as 14,000 to 14,400 kHz, telegraphy only, with its harmonic center at 14,200. It was used primarily as a daytime DX band and for nighttime "super-DX." A geographic segmentation was proposed similar to the scheme on 40 but, again, was not considered necessary by most and never came about.

Although the new 10-meter band occupied 28,000 to 30,000 kHz, it was considered half the effective size of the 80-meter band because of the percentage-based scheme for thinking about signal bandwidths and the resulting common practice for allocating commercial channels. Its harmonic center was at 28,400 kHz. Widely considered beyond the commercially useful upper frequency limit, the band was yet to be fully explored, though early users were reporting extraordinary propagation. It was internationally designated an amateur and experimental allocation.

(continued on page 8)

History of Amateur Radio...

Lastly, the old 5-meter band was recast as 56,000 to 60,000 kHz with a harmonic center at 56,800 and, like 10 meters, was also designated an amateur and experimental allocation, open for telegraphy or telephony.

On-air operation and identity were due to change as well. The FRC announced that amateur call signs in the United States would begin using prefixes on 1 October 1928—W for the US and K for territories and possessions. At the same time the DE intermediate would be used instead of the IARU's nu.

As yet, there was no official news of what prefixes would be used by other countries, although there was an "international table of allocation of call signals" produced at the Washington convention from which countries must select official prefixes. A few countries were allocated entire blocks of single or multi-letter prefixes. For example, the US was assigned all prefixes beginning with W and France all beginning with F. Most countries were assigned ranges where two to three letter prefixes could be used, for example EAA-EHZ for Spain.

Procedurally, the biggest change was that CQ replaced QST as a general call, even for broadcasts. When used for a broadcast, one did not send K at the end—that was the only difference. QST became unassigned in the new list of Q signals, which had been expanded from the old list, and even had new meanings substituted for old ones. An officially agreed upon list of CW abbreviations was also issued, mostly intended for the fixed and mobile services, but widely adopted by amateurs as well. And a new audibility scale replaced the old R1 to R9 scale. It was a five-level scale added to QSA, as in "QSA 3," which meant "fairly good" signal strength.

The Federal Radio Commission announced in December that it would adhere to the international boundaries of the amateur bands below 6,000 kHz, assuring amateur use of 160 meters and the all-important 80-meter band where most traffic handling was done—"the only place in the spectrum where we really have room enough to turn around in," as Warner put it.

The US government had been a strong advocate for amateur radio throughout the post-war period including at the international convention. As everyone prepared for the changes in the coming year, the Commission in its annual report to Congress declared that "the amateur has sufficiently demonstrated his usefulness, both in furthering the progress of the science of radio and in furnishing service in times of emergency, to justify a liberal policy with regard to his operation." And the Chief of the Radio Division at the Department of Commerce echoed the sentiment in his own report, writing that, "The amateur radio operators have received international recognition," at the Washington convention, and, "his service as an experimenter and his value in promoting international good will recognized, and his continued activity assured by the allocation to him of certain specified wave lengths."

Further acknowledging the less direct but equally important way amateur radio had influenced the radio industry by providing a training ground for engineers and industry leaders, the Radio Division chief asked the ARRL to "survey to determine to what extent amateurs and former amateur radio operators are occupied in the radio industry."

The survey found that "Of those engaged in executive positions in the radio industry, the list of amateurs includes 45 presidents, 16 vice presidents, 5 general managers, 69 managers, 37 owners, 324 engineers, 19 announcers, and 11 directors." Though the Congress and general public may have found this surprising, for amateurs it was common knowledge.

In a minor clarification, and a marked difference from how regulation changes had previously been handled, W. D. Terrell, Chief, Radio Division, Dept. of Commerce, informed Warner that the only change on 1 January 1929 would be the band limits. No station license recalls would occur, and holders of licenses issued before the turn of the year would receive copies of the new regulations.

A summary was printed in QST as requested by the Department of Commerce. Despite an intent to move to specifying bands by frequency instead of wavelength, they were still listed in wavelength order and it was evident that people still gave priority to wavelength when thinking about locations in the spectrum; for example, the 40 meter band was listed as 7,300 to 7,000 kHz, or 41.10 to 42.86 meters (opposite from how we'd do it today), and the full table ran from shortest to longest wavelength.

Old habits die hard.

Progress Report:
Restoration of the Former WABY 1000-D Broadcast Transmitter

By Steve VanSickle, WB2HPR

Last November, a group of EGARA volunteers rescued the retired WABY transmitter, prior to the demolition of the station's old studio and transmitter building in Albany. Since then, I have been slowly working to restore the vintage transmitter to operating condition for the Ham bands. Much of the work has involved removal of some 50 years of dirt and grime, as well as testing and repairing of the internal circuitry. Thanks to Tom Scorsone, KC2FCP for his help with installation of heavy-duty casters – this allowed moving the transmitter's heavy cabinet during service work.

During the summer, good progress has been made – here's an update:

June: Completed the rebuild of the low level RF and audio stages (Exciter Module). This included replacement of netting capacitors (no longer available) with air trimmers and numerous defective parts. Modification and testing on 4 mHz to simulate operation on the 75 meter phone band. This was accomplished by constructing a unique test fixture to allow testing of the exciter on the workbench, outside the main cabinet (Fig. 1,2,3)

July: Removal/cleaning/testing and re-installation of the variable PA screen rheostat which helps to set the power output of the transmitter, which is remotely controlled. Re-installation of the Exciter Module. Testing of all metering functionality. Meters were checked for calibration. Cleaning of the Modulator and RF Power Amplifier tube sockets. Cleaning and testing of all Power Amplifier RF tank circuit components. (Fig. 4,5)

August: Reset of the RF PA tank to 1400 kcs. Band pass response verified with spectrum analysis. Calculated new tank circuit component values to allow operation of 4 mHz. Conducted proof of performance of the new tank component values. Further verified with R/L/C bridge and second spectrum analyzer. Began verification of the High/Low RF power selector system. Now in process of hand-drawing an actual schematic of the existing wiring – which does not agree with the current documentation. It will take some time to correct the circuit drawings to match. (Fig. 6,7)

September: I have not completed the schematic drawing at this time, but when I do, hands-on work will resume – and I will give you a further update. At this time, the wire tracing and drawing is both tedious and time-consuming. -- Stay tuned!

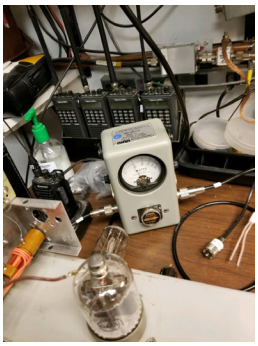


Fig. 1

Fig. 2

Fig. 3

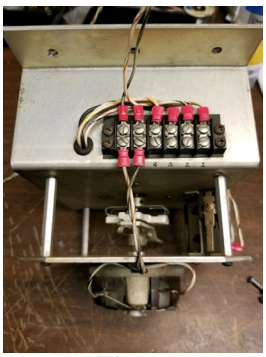


Fig. 4

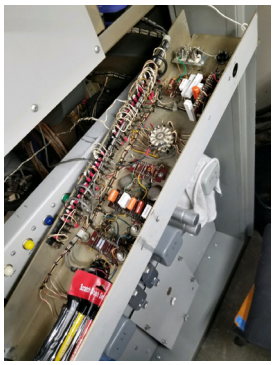


Fig. 5

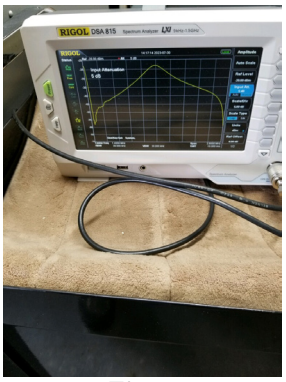


Fig. 6

Fig. 7

Long-Wave Radio Fans Mourn Fading Frequencies

By Chris Baraniuk
BBC Technology Business Reporter

As he turned the dial gently but purposefully, the sound of people speaking in foreign languages and the lilt of unfamiliar music burst through a haze of crackle and buzz. Clint Gouveia was only about seven years old at the time, listening to long wave radio in bed, late at night.

"I could hear all these voices from far away," he recalls. "It inspired me to want to see the world when I got older, to travel, which eventually I did."

Back then, in the late 1970s, there were dozens of long wave stations broadcasting. Now, only a handful are left. Among them are those in Denmark and Iceland - but they are due to shut by the end of 2023 and during 2024, respectively.

The BBC still broadcasts Radio 4 on long wave as well as on digital radio, FM, and online. However, separate scheduling of BBC radio programs on long wave will end in March next year - for example Test Match Special will not be available on long wave. The long-term future of the BBC's long wave output is far from certain.

The only other remaining broadcasters in the world using the long wave band are those in Romania, Poland, Algeria, Morocco and Mongolia.

"The band is basically almost dead," says Mr Gouveia, who enjoys listening to radio stations from his home in Oxford. "It all feels a bit sad, really." He adds that, when a long wave station shuts, he makes an effort to record its last moments.

Among those who have urged the BBC to continue supporting long wave are Blur's drummer Dave Rowntree, who also recalls listening to long wave radio as a child. The BBC has not yet confirmed when, exactly, it will cease long wave broadcasts.

A private firm, Arqiva, owns and operates the Droitwich transmitter in Worcestershire as well as two additional transmitters in Scotland. All three broadcast Radio 4 long wave on the 198 kilohertz frequency.

Changing the Feeder Switch at Droitwich Transmitting Station, October 1935. Long wave transmissions from Droitwich started in 1934

In a statement, Arqiva says, "The current long wave network assets have been operational for 36 years and are energy intensive." They add that "significant further re-investment" is required to continue long wave broadcasting.

Some reports have suggested that the long wave service has become too expensive to maintain, especially now that energy prices are so high following Russia's invasion of Ukraine. Plus, an article in The Guardian in 2011 claimed that only a small number of spare valves were still available for the transmitter.

"Long wave is coming to the end of its life as a technology," a BBC spokeswoman tells BBC News, adding that Radio 4 long wave is currently set to continue broadcasting beyond March 2024.

"We always work closely with organizations that support vulnerable audiences around the time of any platform closure, ensuring we migrate listeners to our other platforms in a timely and sensitive manner," she says.

The long wave transmitter at Droitwich also supplies a service called the Radio Teleswitch Service (RTS), which beams energy tariffs to some electricity meters. Just under one million such meters are still in use in the UK.

"Customers should contact their electricity supplier at the earliest opportunity to arrange for their RTS equipment to be upgraded to a smart electricity meter," a spokesman for Energy UK says. He adds that Energy UK and other bodies are seeking to extend RTS provision until December 2025.

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Mourning the Loss of Long Wave...

The death of long wave, when it comes, will be mourned by many radio fans, says John McCullagh, president of the Radio Society of Great Britain.

"It has a particular resonance that people like to listen to," he says, describing the noisy sound of the long wave band, which can be affected by lightning and interference from electrical devices, such as LED lights. That lack of high fidelity is not loved by all but it does give long wave its own character, he explains.

Given enough power, and the right conditions, long wave signals from a lone transmitter can travel for thousands of miles.

"A lot of European countries are quite nicely sized for long wave in the sense that one long wave transmitter can do the country," says Chris Greenway of BBC Monitoring, who has been tracking the demise of long wave services.

But in Asia, Mongolia is also a prime example - a large country with a small population where the cost of putting an FM network in place, requiring many transmitters, would perhaps be hard to justify, he points out.

Long wave transmissions allowed the BBC to reach the whole of the UK

The BBC first began broadcasting on long wave in 1925, from a transmitter in Daventry.

It was this that allowed the BBC to "claim to be a national broadcaster," argues Mr Greenway. The signal was strong enough to reach up to 94% of the population at the time.

Among the long wave services that have come and gone over the years was Atlantic 252. It used a transmitter in Co Meath, Ireland that went on to carry Irish radio station RTÉ Radio 1 on the same frequency. RTÉ Radio 1 ceased its long wave broadcasts in April this year and the transmitter was demolished in July.

Many ex-pats still use long wave signals to connect with their home country, says Jessica Foley, a lecturer at the Institute of Art, Design and Technology in Dublin.

This was the case for many Irish people living in Great Britain, until RTÉ Radio 1 shut its long wave service. The station continues to be available on other frequencies and platforms.

It is worth investing in long wave transmitters, even if they only serve a relatively small number of people, suggests Dr Foley: "It is a question of culture and how willing we are to tolerate the minority."

Long wave also provides a connection to things "as vast as the cosmos", she adds. A phenomenon called the skywave effect enables some radio signals to travel further at night. This is because a layer in the Earth's atmosphere called the ionosphere cool down, making it more reflective. Electromagnetic signals can, as a result, bounce back towards the ground and cover greater distances.

Mr Gouveia says, proudly, that he has been able to listen to radio broadcasts from Mongolia, in part thanks to this effect.

However, the equipment required to hear long wave broadcasts is arguably now obscure. It wasn't always like that.

In his spoken word song "On Hyndford Street", the Northern Irish singer Van Morrison recounts many memories from his childhood. He appears to allude to how the skywave effect helped to bring one now defunct, but formerly much-loved station - Radio Luxembourg, which broadcast on long wave and then medium wave from 1951 - to listeners on distant shores:

"And in between the silence there was conversation,

And laughter, and music and singing, and shivers up the back of the neck,

And tuning in to Luxembourg late at night."

2023 SET Exercise to Test Skills and Emergency Preparedness

The ARRL Simulated Emergency Test (SET) is scheduled for October 7 - 8, 2023.

The SET is ARRL's annual national emergency exercise designed to assess the skills and preparedness of Amateur Radio Emergency Service® (ARES®) volunteers, as well as those affiliated with other organizations involved in emergency and disaster responses. The SET is open to all radio amateurs and partner organizations, in additon to national, state, and local officials. Besides ARES volunteers, those active in the National Traffic System (NTS), Radio Amateur Civil Emergency Service (RACES), National Weather Service's SKYWARN® Storm Spotter program, Community Emergency Response Team (CERT), and a variety of other allied groups and public service-oriented radio amateurs are needed to fulfill important roles in this nationwide exercise.

During the exercise, volunteers can assess equipment, modes, and skills under simulated emergency conditions and scenarios. Individuals can use the time to update a go-kit for use during deployments and to ensure their home station's operational capability during an emergency or disaster.

To get involved, contact your local ARRL Emergency Coordinator or Net Manager.

SET guidelines and report forms can be found at: ***https://www.arrl.org/public-service-field-services-forms***

In addition to the ARRL SET exercise, as part of their communications interoperability outreach to the amateur radio community, the US Department of Defense (DOD) will be conducting a DOD COMEX 23-4 exercise. During the week of October 16, they'll conduct a series of high-power HF information transmissions on 60 meters and channel 1 (5330.5 kHz). This event will coincide with the ARRL SET.

WI-FI 7: THE NEXT BIG LEAP OR A WHOLE LOTTA NOTHING?

For most people, the Wi-Fi hardware of today provides a perfectly satisfactory user experience. However, technology is ever-evolving, and as always, the next advancement is already around the corner. Enter Wi-Fi 7: a new standard that is set to redefine the boundaries of speed, efficiency, and connection reliability.

Wi-Fi 7 isn't just another incremental step in the world of wireless tech. It's promising drastic improvements over its predecessors. But what does it bring to the table? And how does it differ from Wi-Fi 6E, which is still relatively fresh in the market? Read on.

Wi-Fi 7 is recognized in the official naming convention as IEEE 802.11be. It's headline feature is speed. Wi-Fi 7 is expected to provide speeds up to up to 46,120 Mbit/s. That's over four times faster than Wi-Fi 6 and 6E, or over 4,000 times faster than 802.11b, the first Wi-Fi standard the world fell in love with.

Wi-Fi generations					
	Wi-Fi 4	Wi-Fi 5	Wi-Fi 6	Wi-Fi 6E	Wi-Fi 7 (expected)
Launch date	2007	2013	2019	2021	2024
IEEE standard	802.11n	802.11ac	802.11ax		802.11be
Max data rate	1.2 Gbps	3.5 Gbps	9.6 Gbps		46 Gbps
Bands	2.4 GHz and 5 GHz	5 GHz	2.4 GHz and 5 GHz	6 GHz	1–7.25 GHz (including 2.4 GHz, 5 GHz, 6 GHz bands)
Security	WPA 2	WPA 2	WPA 3		WPA3
Channel size	20, 40 MHz	20, 40, 80, 80+80, 160 MHz	20, 40, 80, 80+80, 160 MHz	20, 40, 80, 80+80, 160 MHz	Up to 320 MHz
Modulation	64-QAM OFDM	256-QAM OFDM	1024-QAM OFDMA		4096-QAM OFDMA (with extensions)
MIMO	4x4 MIMO	4x4 MIMO, DL MU-MIMO	8x8 UL/DL MU-MIMO		16x16 MU-MIMO

Wi-Fi 7 is also engineered with advanced features to combat latency, bolster capacity, and enhance stability and efficiency.

But while it will be backward compatible, like prior Wi-Fi standards, unlocking its full potential will require users to upgrade their devices.

Will RadioShack Return?

You might suspect that if you wanted to write a blockbuster movie or novel, the wrong approach would be to go to a studio or publisher and say, "I have this totally new idea that is like nothing you've ever seen before…" Even Star Trek was pitched to the network as "Wagon Train to the stars."

People with big money tend to want to bet on things that have succeeded before, which is why so many movies are either remakes or something like *Star Trek XXII: The Search for 4 PM Dinner Specials*.

Maybe that's what the El Salvador-based Unicomer Group had in mind when they bought one of the favorite brands of hams -- *RadioShack*. The Central American company is reportedly planning a major comeback for the beleaguered brand both online and in the physical world.

In all fairness, the Shack may be better in our memories than in our realities. It was handy to stop off and pick up a coax connector, even if it cost three times the going rate for one. There was a time when RadioShack offered reasonable parts for projects, and it seems like near the end, they tried to hit that target again, but for many years, you could not find the typical parts for a modern project there anyway.

However, Unicomer isn't just a random group of investors. Apparently, Unicomer has been operating in Central America as a RadioShack franchisee since 1998. In 2015, they bought the RadioShack brand for Central America, the Caribbean, and South America. But now, they've acquired the rights to the brand in over 70 countries, including the U.S., Canada, China, and Europe.

Rudy Siman, president of RadioShack International and new businesses, franchises, and trade VP at Unicomer, told the Wall Street Journal that more than 500 new products will be added for sale online and be made available to U.S. dealers. Items will include "more end products than the stores have typically sold, focusing more on cellphone products, headphones, batteries and adapters, for instance."

RadioShack will seek to establish an Amazon.com storefront and revive franchise development. Founded in 1921 to provide equipment for amateur ham radio operators, RadioShack now has around 400 stores worldwide, down from a peak of over 7,000 in 2003.

The former owner Retail Ecommerce Ventures, which acquired RadioShack in 2020, relaunched RadioShack last year as a crypto exchange called RadioShack Swap as the cryptocurrency market was crashing.

However, RadioShack's return to its traditional focus on consumer gadgets and adapters means the new owners will have to overcome the problems that led to the first bankruptcy in 2015, including heightened competition for consumer electronics from online players like Amazon and big-box stores such as Best Buy.

Smartphones have taken the place of the multiple consumer gadgets RadioShack used to sell. The influx of cheaper copycat gadgets manufactured abroad also hurt the business.

Private label offerings, including drones, headphones, radios, and adapters, were strongly emphasized pre-bankruptcy to offset the margin pressures, a push expected to be continued under the new owners.

"We will continue to offer a robust innovative product portfolio that makes the life of our customers easier, along with an extensive benefit program that adds value to every purchase," Unicomer's Siman said in a statement. "Our challenge is to continue innovating in both directions and remain on our customers' top of mind."

So stay tuned!

Is this Good Business or Boneheaded?

By Dan Romanchik KB6NU

I recently saw an online post from Michelle, W5NYV, that said:

"*There's something that's happened recently over at the #arrl, which is the national #hamradio organization for the USA.*

ARRL identified, by name, clubs and organizations that produce educational videos as "being in competition with" the ARRL "Learning Center".

*ARRL then retaliated against these clubs and organizations, calling them up and stating that these organizations *would be excluded from ARRL publications and partnerships**

Firsthand, #qsotoday and #ratpac are affected. This is bad."

I found this to be kind of amazing, so I contacted Dan, K7REX, one of the RATPAC organizers and Eric, 4Z1UG, the man behind the QSO Today Academy (formerly the QSO Today Virtual Ham Expo). Both verified this story.

Dan, K7REX, said: "*Sadly, what Michelle posted appears to be true. RATPAC has been on the league's naughty list for sometime. For us, it started when we began working with FEMA and other such organizations. Since then, the ARRL came up with their Learning Center and apparently we qualify for their naughty list for that too.*"

Eric, 4Z1UG, said: *"I was told orally by [an ARRL official], in a telephone conversation, that QSO Today Academy is in competition with the "Learning Center". Therefore, [the official] says that the ARRL cannot endorse, put on their Events Calendar, or promote QSO Today Academy in their press because of this direct competition. I was also told that because I did not have the ARRL logo on the new Academy webpage, that I had made a decision to keep the ARRL out of the Academy.*"

Good business practice or boneheaded?

So, is this good business practice or just boneheaded? I'm leaning towards boneheaded. I seriously doubt that this move by the ARRL is going to put either RATPAC or the QSO Today Academy out of business. In fact, it may make them even more determined to continue to provide the services they do to the amateur radio community.

And, for the life of me, I can't see how this policy makes amateur radio better. It seems to me that the ARRL's biggest fault is that when it makes decisions like this, they only consider what's best for the ARRL, not what's best for amateur radio. They fail to see if they made decisions as to what was best for amateur radio in general, the ARRL would benefit in the long run.

Since posting this, discussions have popped up on both the subreddit /r/amateurradio and the Facebook group My ARRL Voice. Most of the comments are negative, although some challenged W5NYV's post as lacking any backup info. This blog post and a comment from K7REX in the My ARRL Voice discussion should dispel those doubts.

A personal story

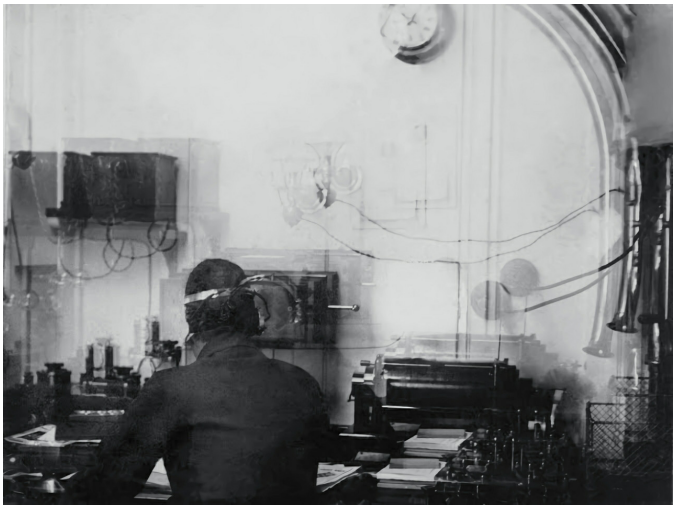
I may also have been affected by this new policy. About a month and a half ago, I received an email from an ARRL editor asking if I would be interested in doing some freelance writing and editing on ham radio-related news pieces. She noted that this typically required less than 10 hours per week. I replied that I'd be happy to do this for them and asked how much they were paying.

Since it seemed to me like they needed someone sooner rather than later, so I emailed them four days later when I didn't hear back from them. The editor replied, "Sorry for the delay. I'm in the process of gathering further details. Will get back to you shortly."

Well, I never did hear back from her. After reading this, I'm guessing that someone recognized my call sign and told the editor, "Hey! We can't hire that guy. He's one of our competitors!" This might have been an amusing thing to do. If anyone at the ARRL is reading this, I'm still available.

US Aims to Block Expedition to Recover Titanic's Radio

It regards the wreck as a grave site and intends to preserve it that way, asserting who can recover artifacts



Wireless operator Jack Phillips working Titanic's radio set during her ill-fated maiden voyage. This is the only known photo of the radio room taken during the trip.

The US government has approached the District Court in Norfolk, Virginia, to block a proposed expedition to the Titanic wreck site planned for May next year. The expedition, planned by a Georgia-based firm, aims to recover the Marconi telegraph wireless machine that sent out the distress signals on the fateful night in 1912 when the ship struck an iceberg and sank on her maiden voyage.

Back in 1985, when the wreck of the ocean liner was first spotted, the US Congress called for a global accord to formalize norms for access to the wreck, which became a grave site for more than 1,500 people. Along with the US, the UK, France, and Canada deliberated on the terms of the accord.

More than three decades later, the countries have not come to an agreement. Only the US and the UK ended up in an agreement that prohibited anybody from carrying out research, exploration, salvage, or any other activity that would disturb the wreck site -- which lies in international waters -- without permission from the US Secretary of Commerce.

The accord between the two nations goes against the norm of maritime law, where finders of the wreck normally salvage all the cargo. Interestingly, in the case of the Titanic, the French-American company that discovered the wreck did not want salvage rights. This presented an opportunity for others to move in and Georgia-based RMS Titanic Inc. gained exclusive salvage rights in 1994.

Since then, the company has recovered thousands of artifacts that have been seen by millions around the globe. In May 2020, the company secured court permission to salvage the Marconi wireless telegraph machine on the grounds that it was "historically and culturally important," AP News reported. Recovering it from the wreck site would prevent it from decay and contribute to the legacy of the sunken ship.

The government had then opposed the expedition, which never took place due to resulting complications from the Coronavirus pandemic. Now, as the company plans another expedition to recover the machine from the radio room, the US government has filed its opposition in the court again.

On its part, the company states that it works to "preserve the memory and legacy of the Titanic" and has a clear plan to recover the device without damaging it. An un-crewed submersible will enter the ship through the broken skylight or cut through the roof, which is already corroded.

The radio is located in the deckhouse near the grand staircase. The company then plans to use a suction dredge to remove the silt and manipulator arms will cut the electrical cords, facilitating recovery. It also wants to exhibit the radio alongside stories of people who sent out the distress calls.

RMS Titanic states that it will work in collaboration with the National Oceanic and Atmospheric Administration (NOAA), which oversees the wreck, but the government is adamant that it needs a permit to proceed and approached the Norfolk court to enforce one.

Not only does the government believe that the recovery will physically alter the wreckage, but the company's refusal to comply also hurts the US reputation in implementing a "global" accord.

RMS Titanic is expected to fight the proposed restriction, but experts believe a legal battle could last many years.

CALENDAR

October 11, 2023 - 7 pm - Regular monthly club meeting, East Greenbush Masonic Lodge

October 14, 2023 - 10 am - Annual Hudson River Cruise, Port of Albany. Rain date, Sunday, October 15th.

October 28, 2023 - 10 am - FCC Exam Session, East Greenbush Town Library

January 1, 2024 - ARRL annual dues increase takes effect

Pro Tip: An Old Friend in a New Form

We all have used legendary WD-40 as a lubricant or to free up rusted parts. It's mostly been used in the aerosol can form, which is fine if you don't mind spray on adjacent parts. But even the flexible straw aerosol version can cause unwanted overspray.

Listening to its customers, the folks at the company now offer the pinpoint accuracy of a porous chisel-tip so you can apply the product exactly where it's needed.

The WD-40 Precision Pen delivers the original WD-40 formula in a compact pocket-sized design.

A package of three pens costs roughly $15.

The East Greenbush Amateur Radio Association

Organized in 1998, by Bert Bruins, N2FPJ, (SK) and Chris Linck, N2NEH, the East Greenbush Amateur Radio Association, an ARRL affiliate, is committed to providing emergency services, educational programs, and operating resources to amateur radio operators and residents of the Capital Region of New York State. The club station is W2EGB. The club also has several VHF and UHF repeaters open to club members and the public.

GEAR FOR SALE

- **Astron Power Supply - RS50m**. Email for details.
- **Kenwood TS440sat**. With hand mic. No power cable. Very clean. Asking$350.00

Contact info: wa1miu@yahoo.com

- **Chameleon MPAS 2.0 Portable Antenna System**. Selling Price $500.00. Erected only about 10 times. Great Antenna all bands all mode.

Contact: Fred Carroll
aj4cn.x@gmail.com
704-756-3951

- **Cobra Ultra Lite 80-10M dipole** $75.00 w/ balun.
- **Heil RS 1 12' riser** brand new $ 30.00

Contact Walt, N2WJR, N2WJR07@gmail.com

- **Arrow 4 element 6 meter yagi,** rated for 500 watts. Complete with stainless mounting hardware. Assembled and tested. Perfect condition. $35

Contact Steve, WB2HPR, svansick@nycap.rr.com

Sell your unused gear with a free ad in Sidebands! Send details to: W2RBJ@Outlook.com