

RICHMOND THE HAM March 2021

volunteers with EME experience to assist a Hopewell teacher with an ARISS contact.

.Show and Tell

Rick Waller (KA4OHM) showed us his Wolf River Coil and gave a short discussion on it.

Adjournment at 07:28

Program

Tonight's presentation is by John Portune W6NBC on Cable Balun's. It is viewable on the RARC Youtube channel.

The next general meeting: March 12, 2021 via ZOOM

Minutes respectfully submitted by:

David F. Robinson,
KJ4LHP, Secretary

From The Prez

Despite some nasty weather last month, it looks like Spring may have sprung for this year. The insane mother robin, that nests with us each year, is once again trying to break my windows as she attacks her own reflection, and the squirrels have taken over the yard. A substantial number of people are receiving vaccines, so maybe we can look forward to holding programs and activities this summer.

Personally, I can say that amateur radio has been the glue that held us together during this unprecedented situation. As a high risk person, many of the days that my wife and I spent isolated in the house, were made bearable by having the ability to get on the air. I have made more 40 and 20 meter DX contacts in the last year, than I did in the previous 60 years of operating. While isolating from our friends was not ideal, being able to talk with friends all over the world, and with other hams locally on Zoom and on the local repeaters, is what kept us bound to reality. I hope that all of you have gained this new appreciation for our hobby.

Let's look forward to better times ahead, and by all means, stay "Radio Active."

73

John K5HTZ

**RARC VE News
FCC EXAMS EVERY OTHER MONTH**

RARC offers VE Testing Sessions on the second Saturday of odd months except June to cover Field Day instead of July.

The March testing session will be on the 13th at 10:am. At the Chesterfield Library Bon Air Branch, 9103 Rattlesnake Rd North Chesterfield

If you have questions about a session, please see our website, www.rarclub.net or contact Allan, WA3J, at 804-399-8724, or ve@rarclub.net

Club Info...

RARC meets on the second Friday of each month at 7:00 PM, at the Bon Air United Methodist Church, 1645 Buford Road. All meetings will be virtual until the pandemic situation is resolved.

We offer 10-week license prep classes in September and March with exams following. Members provide VE testing sessions on odd-months during the year.

Join the Richmond Amateur Radio Club.

You don't have to have a ham license, just have a genuine interest in the hobby.

Annual Dues are:

80 and over \$0

Regular Membership \$20.00

Lots of information about the Club and our activities is available on our website, www.rarclub.net.

Nets

RARC has the first and only D-STAR digital repeater in the area. 147.255 (+ 600), 443.7125 (+ 5) and now 1284.0000 (-20). In addition to our Wednesday local D Star net (below), we link the D Star VHF module for the National Capital Region D Star Net on Wednesday nights at 9pm. On Tuesday nights at 9pm, we link our VHF module to the North Carolina D Star Net, and on Sunday nights at 9pm to the South Eastern D Star Weather Net.

Beginning on March 5, 2014, the RARC D Star Net which meets on Wednesday nights at 8:00pm will be accessible on our three D Star modules, all of which will be linked.

You can use any of the three frequencies, 2 meters, 70 cm or 23 cm, and you should hear and be heard by everyone.

If you participate in the net via DVAP or DV Dongle, you must link your device to Ref 062D rather than to any of our modules. Since the W4FJ stack will all be linked to Ref 062D, anyone linked to that reflector will be connected to the net.

Sunday	7:00 pm	50.135	USB
	7:30 pm	52.525	FM
Wednesday	7:00 pm	28.475	USB
	8:00 pm	147.255	D-Star Rptr
	8:15 pm	145.730	Packet

MRA

Interested in information or support of the Metropolitan Repeater Association (MRA)?

Call Ed, KG4SNK, at 804-513-1947. The sole business of the MRA is to own, operate and maintain the 145.430 repeater.

Show and Tell!

If you have an item, idea, latest and greatest, or whatever gizmo; please bring it to the RARC meeting. We have a table (usually) set up near the front where you can place your item and share/discuss it with others as they arrive. We also have a section of the agenda set aside for members to discuss their "Show and Tell" item(s). No need to be tentative; we are INTERESTED in what you are doing, how you are doing it and, in true Ham fashion, how much it costs!

RARC ELMER PROGRAM

Over the last few years, our license school and volunteer examiner programs have added many new hams to the ranks. When asked about the services they receive from the club, many new hams say that they need some further help in order to set up a station and to feel comfortable in communicating on the air.

To this end, it has been suggested that we place more emphasis on helping newly licensed hams gain the confidence and technical help that they need to get started. Suggestions have centered around the need for a formal Elmering program. In order to fulfill that need, we would need a committee of volunteers who would be willing to help, on an as-needed basis, one or two new hams per Elmer. This would involve possibly a few Zoom sessions, and perhaps answering an occasional question. To assist new hams, and minimize the need for help by the Elmers, we will be designing a kit of material that will be issued to anyone who obtains a technician license through our programs. It will include items such as a script that could be followed when attempting to use repeaters, a chart of allowable frequencies and modes, an explanation of how to program a VHF/UHF radio, and most importantly a membership application to the RARC.

Along with the kits, we would like to establish a pool of persons who would be willing to assist these new hams while they are getting started. Any member who would be interested in helping in this way, please contact Bruce McAlister, W4BRU.

QSO Today Virtual Ham Expo

**Coming to your desktop, laptop, and tablet:
March 12th, 2021 1800 PST for 48 Hours
and "on-demand" until April 12, 2021**

Whether you're a ham that doesn't want to travel because of Covid or just live too far from a hamvention, the QSO Today Expo offers the opportunity to learn from many great speakers, meet with exhibitors to see the latest technology, and engage with fellow hams without leaving your home ham shack. And save thousands of dollars since you don't have to worry about travel, food, and lodging! Early Bird Tickets are just \$10 (to help cover the cost of this event, \$12.50 at the "door") and include entry for the Live 2 day period as well as the 30 day on-demand period).

Listen to and engage with 60+ internationally recognized ham radio luminaries that have committed to lead Expo sessions. [For the list of speakers and speaker topic, click here.](#)

Take part in Live virtual kit building workshops. Kits will be available for purchase and delivered to you in time for the Expo so you can participate and build from the convenience of your home.

Walk through our virtual exhibit hall filled with popular amateur radio suppliers. Watch new product demos and interact directly with booth staff. At this Expo we'll introduce new video technology to enable a better experience when engaging with exhibitors.

Prior to the Expo, take advantage of our new speaker calendar technology to download speaker times in your local time zones to Google and Outlook calendars. This way you'll have a complete schedule of what sessions you want to participate in.

Return over the next 30 days to listen to speakers you missed during the Live period, explore, and re-engage exhibitor offerings.



To register for the Expo the website to visit is, <https://www.qsotodayhamexpo.com/>

Mark Your Calendar!

The Central Virginia Six Meter SSB Net will be holding its Spring Tailgate fest on April 10th. The location will be at the Scottish Rite Temple at 4204 Hermitage Rd. as usual. Sellers must provide their own tables if required. Set up starts at 7:am and there is no cost to participate. If you miss this one you've missed the best!

2021 Virginia QSO Party!

The Sterling Park Amateur Radio Club is once again pleased to announce the arrival of the Virginia QSO Party.

The snow is melting, the days are growing longer, the trees are starting to bud, and the grass is starting to turn green. Therefore, starting on the first day of spring, the Virginia QSO Party engages radio operators in a weekend of fun.

Yes, once again, during the third full weekend in March, this year on 20-21 March, operators throughout Virginia, the United States and Canada, and the World, will get on the air to celebrate amateur radio in Virginia.

The rules, operating aids, past Party statistics, and everything you need to know are on the web at:

https://www.qsl.net/sterling/VA_QSO_Party/2021_VQP/2021_VQP_Main.html.

Clubs, companies, and individuals are sponsoring 27 plaques commemorating achievements in many operating categories. The complete list of plaques is available on our web site. There is something for everyone. High, low, and QRP power categories; CW, phone, and digital mode categories; and fixed, mobile, and expedition station categories are available to fit your particular operating style.

Remember, the 2020 Virginia QSO Party will be held during the weekend of 20-21 March 2021.

Saturday, 20 March 2021 at 1400 UTC - Sunday, 22 March at 0400 UTC and Sunday, 21 March at 1200 UTC until 2400 UTC.

For Virginians, this is Saturday 10 AM - 12 Midnight and Sunday 8 AM - 8 PM Virginia local time.

Please join us on the air!



ARRL to Extend Field Day Rule Waivers from 2020, Add Class D and E Power Limit.

The COVID-19 pandemic-modified ARRL Field Day rules from 2020 will continue this June with the addition of a power limit imposed on Class D (Home Stations) and Class E (Home Stations-Emergency Power) participants. The news from the ARRL Board's Programs and Services Committee comes as many clubs and groups are starting preparations for Field Day in earnest. Field Day 2021 will take place June 26 - 27. "This early decision should alleviate any hesitancy that radio clubs and individual Field Day participants may have with their planning for the event," said ARRL Contest Program Manager Paul Bourque, N1SFE. For Field Day 2021, Class D stations may work all other Field Day stations, including other Class D stations, for points. This year, however, Class D and Class E stations will be limited to 150 W PEP output. For Field Day 2021, an aggregate club score will be published -- just as it was done last year. The aggregate score will be a sum of all individual entries that attributed their score to that of a specific club.

ARRL Field Day is one of the biggest events on the amateur radio calendar. Last summer, a record 10,213 entries were received. "With the greater flexibility afforded by the rules, waivers, individuals, and groups will still be able to participate in Field Day, while still staying within any public health recommendations and/or requirements," Bourque said. The ARRL Field Day web page contains complete rules and entry forms, as well as any updated information as it becomes available.

Quantum Receiver Can Detect Huge Swath of the RF Spectrum

US Army researchers have built a so-called “quantum sensor,” which can analyze the full RF spectrum and real-world signals, a [report](#) on Physics.org says. The quantum sensor — technically a Rydberg sensor — can sample the RF spectrum from 0 to 20 GHz and is able to detect AM and FM radio signals, as well as Bluetooth, Wi-Fi, and other RF communication protocols. The peer-reviewed *Physical Review Applied* published the researchers’ findings, “Waveguide-coupled Rydberg spectrum analyzer from 0 to 20 Gigahertz,” coauthored by Army researchers David Meyer, Paul Kunz, and Kevin Cox.

“The Rydberg sensor uses laser beams to create highly excited Rydberg atoms directly above a microwave circuit, to boost and hone in on the portion of the spectrum being measured,” the article explains. “The Rydberg atoms are sensitive to the circuit’s voltage, enabling the device to be used as a sensitive probe for the wide range of signals in the RF spectrum.”

Cox, a researcher at the US Army Combat Capabilities Development Command ([DEVCOM](#)) Army Research Laboratory, called the development “a really important step toward proving that quantum sensors can provide a new and dominant set of capabilities for our soldiers, who are operating in an increasingly complex electromagnetic battlespace.”

Cox said earlier demonstrations of Rydberg atomic sensors were only able to sense small and specific regions of the RF spectrum, but “our sensor now operates continuously over a wide frequency range for the first time.” The technology uses rubidium atoms, which are excited to high-energy Rydberg states. These interact strongly with the circuit’s electric fields, allowing detection and demodulation of any signal received into the circuit.

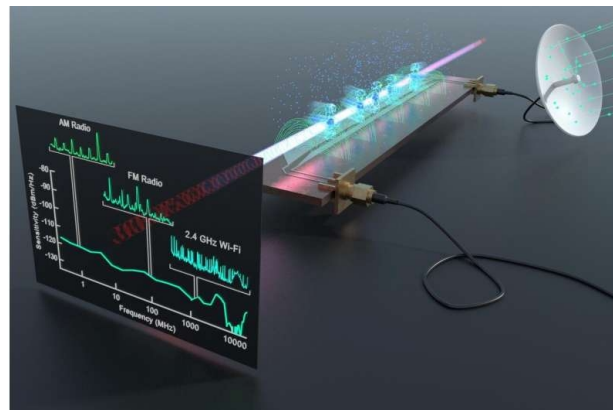
The report says the Rydberg spectrum analyzer has the potential “to surpass fundamental limitations of traditional electronics in sensitivity, bandwidth, and frequency range.”

According to Meyer, “Devices that are based on quantum constituents are one of the Army’s top priorities to enable technical surprise in the competitive future battlespace. Quantum sensors in general, including the one demonstrated here, offer unparalleled sensitivity and accuracy to detect a wide range of mission-critical signals.”

The researchers plan additional development to improve the signal sensitivity of the Rydberg spectrum analyzer, aiming to outperform existing state-of-the-art technology. “Significant physics and

engineering effort is still necessary before the Rydberg analyzer can integrate into a field-testable device,” Cox said.

ARRL 03/04/2021



Dues by Pay Pal!

Recently, members had expressed a desire to be able to pay club fees on line through Pay-pal. With the introduction of our new website, it became possible to add the feature, although it has taken a lot of work and testing to implement it. Thanks to the work of our treasurer Ken Leidner, and webmaster Bruce MscAlister, the Richmond Amateur Radio Club will soon begin to accept dues, license school, donation and other payments by PayPal. The system is being tested this month, and the board has approved taking this step on our website, so the site should soon offer this new feature.



Then he said, "You two sure do talk an awful lot!" and went back into his Ham Shack. I laughed and laughed!

The SWAP SHOP

Club members may list their wares in the newsletter. Send descriptive information to Armand at wa1ugo@arrl.net, or call me at 508-838-8353. The Swap Shop is presented in the newsletter as a benefit to our members. RARC takes no responsibility for items sold or traded in this newsletter. The ad will appear three times unless extended. Interested parties will contact you directly. ***You must be an RARC member to place an ad.***

The Richmond Amateur Radio Club has a set of original complete years of QST from 1925, 1927, 1928, 1929, 1930 and 1931, available for sale in ARRL binders, for \$25 per year. We also have a 20Mhz oscilloscope for sale. Proceeds of sales go directly into the RARC club treasury. These old issues of QST are priceless for anyone interested in the history of ham radio and are being offered for way below what QSTs are selling for on EBAY. Contact John DeMajo, K5HTZ (jdemajo@demajo.net) if interested.

Thought For The Day

If you find it hard to laugh at yourself, I would be happy to do it for you.

John DeMajo	K5HTZ	President	(504) 858-7689	jdemajo@demajo.net
Allan Johnson	WA3J	Vice President	(804) 318-6951	wa3j@arrl.net
Dave Robinson	KJ4LHP	Secretary		
Ken Leidner	WV0L	Treasurer		

The Little Black Box of jewels and rocks
with lanterns that flicker and glow,
make lighter the gloom in my little back-room
where often I hasten to go.

An anthem it peals of whistles and squeals
and voices so ghostly and dear
that you'd never decry, should you chance to pass by-
what a brotherhood foregathers here!

Each separate tone has a soul of its own;
each voice is the voice of a friend.
United through space in this gathering-place
at the radiant signal's end.
Reverberant sounds ride the wave that rebounds,
like the waves of the sea from afar,
reporting the doings, the comings and goings
of brothers... wherever they are.

A curious band, spread over the land,
yet joined from equator to poles
disperses the gloom in the little back-rooms
by this magic communion of souls.
I could part with a lot of the things that I've got,
but I'll carry my love to the tomb,
of that little black box and the joys it unlocks
... when I enter that little back room.

By Max P. Vander Horck, WA6HUW
Published in QST, November 1966, page 33