



# THE RICHMOND HAM

Published Monthly by the Richmond Amateur Radio Club

P.O. Box 35279, Richmond, Virginia 23235

April 2023

## THE RICHMOND AMATEUR RADIO CLUB RARC Meeting Virtually Happening and in person!

Our monthly meeting is on Friday April 14th, 2023, 7:00PM, at the Bon Air United Methodist Church, 1645 Buford Road, and also a virtual one. The Zoom meeting will start at 7:00pm.

Upon joining the meeting you will be muted. You may exchange greetings with members through the chat feature (keyboard).

Cell phone and tablet users please use Landscape orientation for better imaging.

**Kenneth Leidner is inviting you to a scheduled Zoom meeting.**

Topic: RARC Monthly Meeting - Virtual

Time:

April 14th, 2023 07:00 PM Eastern Time (US and Canada).

Every month on the Second Fri.

Please download and import the following

Calendar (.ics) files to your calendar system.

Monthly:

<https://us02web.zoom.us/join/join?meetingId=988518058584>  
<https://us02web.zoom.us/join/join?meetingId=988518058584>  
<https://us02web.zoom.us/join/join?meetingId=988518058584>  
<https://us02web.zoom.us/join/join?meetingId=988518058584>

Join Zoom Meeting

<https://us02web.zoom.us/j/88518058584>

Meeting ID: 885 1805 8584

One tap mobile

+13017158592,,88518058584# US

(Germantown)

+13126266799,,88518058584# US (Chicago)

Dial by your location

+1 301 715 8592 US (Germantown, MD)

Meeting ID: 885 1805 8584

Find your local number: <https://us02web.zoom.us/j/kbj882gslc>

Ken Leidner , WV0L

## This Month's Program:

**April Program:** A complete Homebuilt 500 Watt Station by Darrell Basinger, WW4F

## Richmond Amateur Radio Club Meeting Minutes

March 10th, 2023

The regular meeting of the Richmond Amateur Radio Club was called to order at 19:10 on March 10th, 2023 on Zoom and in-person by President Rick Waller, (KA4OHM).

**Members Present:** Check-ins on Zoom and in-person at the Church.

After a brief introduction of members present the business meeting was called. Minutes of last months meeting were approved unanimously.

**Old business:** None

**Treasurers Report:** Ken Leidner, (WV0L) gave the Treasurer's Report. We had an ending balance of \$21,037.43. New member David Thompson (KE0NTN) voted in unanimously. Welcome David!

**New Business:** Jim Rubin (W4PKR) asked for volunteers to assist with the Monument Avenue 10K Race on April 22<sup>nd</sup>. Interested partys can contact Jim at [W4PKR@arri.net](mailto:W4PKR@arri.net).

**Committee Reports:** Bruce, (W4BRU) reported on student signups. Tech - 15, General - 4, Extra - 7, RemmoteHams - 2, and Antenna Modeling - 1.

Dave Stevens (WB4DES) will be teaching a small group for Tech license at Hopewell Middle School.

Win (W4WIN) Told of a bad week for the D-Star repeaters. The UHF module amplifier is out of service to replace the cooling fan. Internet connection was also disrupted but should be back soon.

Rick (KA4OHM) asked to possibly have a Board meeting after the April RARC meeting.

Lauren Ware (WD4FMG) reminded us that the Virginia QSO Party was cumming up on March 18<sup>th</sup> and 19<sup>th</sup>.

Ken (WV0L) will be posting on the club website the process for giving the FCC your email

address. The FCC requires an email address to conduct any electronic transactions.  
Business Meeting was closed at 19:33.  
A presentation followed by Bruce (W4BRU) on the connecting up transceivers to computers for logging and digital modes.  
Meeting adjourned at 20:22  
Meeting minutes submitted by A.Hamel, WA1UQO.

### From The Prez

Greetings RARC members. Special Olympics VA has requested support again this year to provide communications for their summer games, at the University of Richmond. They will be on Friday June 9th and Saturday June 10th. This is a wonderful and fun event to participate in. If you would like to help please contact Darren Faulkner, KG4INW at [darrenthebaron@comcast.net](mailto:darrenthebaron@comcast.net). 73, Rick, KA4OHM.

### RARC VE News

We have two different groups that provide testing. One is free, but only offers testing sessions on the second Saturday of odd months except June (Field Day) replaces July. **The next session will be on Saturday May 13<sup>th</sup> 2023.**  
The other one cost \$15.00, but offers testing sessions on the 1st Saturday of every month. RARC offers Free VE Testing Sessions on the second Saturday of odd months except June (Field Day) replaces July. Currently all testing starts at 10:00 AM and is at: Chesterfield Library Bon Air Branch 9103 Rattlesnake Rd North Chesterfield, VA 23235.  
Pre-registration Required. Walk-ins Accepted. Pre-Registration required for Techs and for special needs applicants. Anyone taking the Tech exam needs a FRN from the FCC (Google obtaining a FCC FRN) and bring that info to the session. If you have questions about a session, please see our website, [www.rarclub.net](http://www.rarclub.net) or contact Allan, WA3J, at 804-399-8724, or [ve@rarclub.net](mailto:ve@rarclub.net)  
KC4TS Cats Vet (Cats Volunteer Examination Team) offers VE Testing Sessions that cost \$15.00 on the 1st Saturday of every month. Currently all testing starts at 10:00 AM and is at: Gospel Light Church 2109 Anderson Hey Powhatan VA. Check-in is between 10am and 12pm and we stay as long as needed to finish all the exams. Walk-in candidates are welcome! You just need a valid ID, an individual FCC FRN, and the testing fee of \$15 which goes directly to the ARRL (cash or check made payable to "ARRL VEC"). We can provide pencils and a very simple calculator or you can bring your own. See <http://kc4ts.org/> for more information.

### 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.

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 \$22.00

Lots of information about the Club and our activities is available on our website, [www.rarclub.net](http://www.rarclub.net).

### Nets

RARC has the first and only D-STAR digital repeater in the area: 147.255 (+ 600), 443.7125 (+ 5) and 1284.0000 (-20). In addition to our Wednesday local D Star net (below), we link Module C (VHF) to REF 062A for the National Capital Region D Star Net on Wednesday nights at 9pm. On Tuesday nights at 9pm, we link Module C (VHF) to REF 054C for the North Carolina D Star Net.

The RARC D Star Net meets on Wednesday nights at 8:00pm and is accessible on our three D Star modules, all of which will be linked together via REF 062D. So if you are in RF range of the repeater, you can join the net on any of the three RF modules and be heard by everyone.

If you participate in the net via DVAP, DV Dongle or a Hotspot (such as Pi Star), you should link your device to REF 062D rather than to any of our modules which will allow you to be heard by everyone.

Any questions, contact Win - W4WIN at [wingrant@gmail.com](mailto:wingrant@gmail.com)

<b>Sunday</b>	7:00 pm	50.135	USB
	7:30 pm	52.525	FM
<b>Wednesday</b>	7:00 pm	28.475	USB
	8:00 pm	147.255	D-Star Rptr
	8:15 pm	145.730	Packe

### MRA

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

The sole business of the MRA is to own, operate and maintain the 145.430 repeater. For information please visit our website at <https://sites.google.com/view/kg4mra/>.

### 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!

### Eleven year old and his teacher get their FCC license

24 March 2023 – An 11 year old middle school student and his teacher got their Technician license with the leadership of new RARC member Dave Stevens, WB4DES. There is no good information on how to teach a middle schooler a largely adult subject. Dave did it and we plan to document the major things we learned about that. There are few licensed hams that young. I am working on a press release for ARRL, the RARC, and others.  
Bruce MacAlister, W4BRU



Left to right: science teacher Alexandra Perry, 11-year-old Aiden, Tech instructor Dave Stevens, WB4DES

### A Little RTTY History

Landline teleprinter operations began in 1849 when a circuit was put in service between Philadelphia and New York City. Émile Baudot designed a system using a five unit code in 1874 that is still in use today. Teleprinter system design was gradually improved until, at the beginning of World War II, it represented the principal distribution method used by the news services.

Radioteletype evolved from these earlier landline teleprinter operations. The US Department of the Navy successfully tested printing telegraphy between an airplane and ground radio station in August 1922. Later that year, the Radio Corporation of America successfully tested printing telegraphy via their Chatham, MA radio station to the RMS *Majestic*.

An early implementation of the Radioteletype was the Watsongraph, named after Detroit inventor Glenn Watson in March 1931. Commercial RTTY systems were in active service between San Francisco and Honolulu as early as April 1932 and between San Francisco and New York City by 1934.

The US Military used radioteletype in the 1930s and expanded this usage during World War II. The Navy called radioteletype RATT (Radio Automatic Teletype) and the Army Signal Corps called radioteletype SCRT, an abbreviation of Single-Channel Radio Teletype. The military used frequency shift keying technology and this technology proved very reliable even over long distances.

After World War II, Amateur radio operators in the US started to receive obsolete but usable Teletype Model 26 equipment from commercial operators with the understanding that this equipment would not be used for or returned to commercial service.

"The Amateur Radioteletype and VHF Society" was founded in 1946 in Woodside, NY. This organization soon changed its name to "The VHF Teletype Society" and started US Amateur Radio operations on 2 meters using audio frequency shift keying (AFSK).

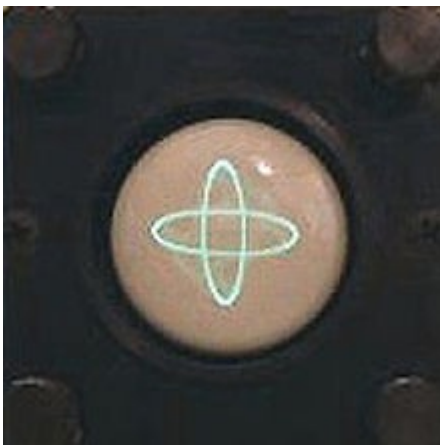
The first two-way amateur radioteletype QSO of record took place in May 1946 between Dave Winters, W2AUF, Brooklyn, NY and W2BFD, John Evans Williams, Woodside Long Island, NY. On the west coast, amateur RTTY also started on 2 meters. Operation on 80 meters, 40 meters and the other High Frequency (HF) amateur radio bands was initially accomplished using make and break keying since frequency shift keying (FSK) was not yet authorized.

In early 1949, the first American transcontinental two-way RTTY QSO was accomplished on 11 meters using AFSK between Tom McMullen (W1QVF) operating at W1AW and Johnny Agalstoff, W6PSW. The stations effected partial contact on

January 30, 1949, and repeated more successfully on January 31. On February 1, 1949, the stations exchanged solid print congratulatory message traffic and rag-chewed. Earlier, on January 23, 1949, William T. Knott, W2QGH, Larchmont, NY, had been able to make rough copy of W6PSW's test transmissions.

While QSOs could be accomplished, it was quickly realized that FSK was technically superior to make and break keying. Due to the efforts of Merrill Swan, W6AEE, of "The RTTY Society of Southern California" publisher of *RTTY* and Wayne Green, W2NSD, of *CQ Magazine*, Amateur Radio operators successfully petitioned the U.S. [Federal Communications Commission](#) (FCC) to amend Part 12 of the Regulations, which was effective on February 20, 1953. The amended Regulations permitted FSK in the non-voice parts of the 80, 40 and 20 meter bands and also specified the use of single channel 60 words-per-minute five unit code corresponding to [ITA2](#). A shift of 850 hertz plus or minus 50 hertz was specified.

Amateur Radio operators also had to identify their station callsign at the beginning and the end of each transmission and at ten-minute intervals using International Morse code. Use of this wide shift proved to be a problem for Amateur Radio operations. Commercial operators had already discovered that narrow shift worked best on the HF bands. After investigation and a petition to the FCC, Part 12 was amended, in March 1956, to allow Amateur Radio Operators to use any shift that was less than 900 hertz.  
(Wikipedia)



## NASA Names Three Hams for Artemis II Moon Mission Crew

NASA and the Canadian Space Agency (CSA) announced the four astronauts who will venture around the moon on Artemis II. This will be the first crewed mission on NASA's path to establishing long-term moon science and exploration development. The agencies revealed the crew members on Monday, April 3, 2023, during an event at Ellington Field near NASA's Johnson Space Center in Houston, Texas. Three of the four crew members are amateur radio operators.

"The Artemis II crew represents thousands of people working tirelessly to bring us to the stars. This is their crew, this is our crew, this is humanity's crew," said NASA Administrator Bill Nelson. "NASA astronauts Reid Wiseman, Victor Glover, and Christina Hammock Koch, and CSA astronaut Jeremy Hansen, each has their own story, but together, they represent our creed: E pluribus unum - out of many, one. Together, we are ushering in a new era of exploration for a new generation of star sailors and dreamers - the Artemis Generation."

The crew will work as a team to execute an ambitious set of demonstrations during the flight test. Their assignments are as follows: Commander Reid Wiseman, KF5LKT, Pilot Victor Glover, KI5BKC, Mission Specialist 1 Christina Hammock Koch, and Mission Specialist 2 Jeremy Hansen, KF5LKU. Koch had planned to study and take her amateur license exam in 2019, but her flight was suddenly rescheduled 6 months earlier than originally planned. She had to immediately begin preparing for her flight instead of studying.

The Artemis II mission is scheduled to launch in November 2024. The approximately 10-day flight test will launch on the agency's powerful Space Launch System rocket, prove the Orion spacecraft's life-support systems, and validate the capabilities and techniques needed for humans to live and work in deep space. (ARRL)





## The SWAP SHOP

Club members may list their wares in the newsletter. Send descriptive information to Armand at [wa1ugo@arri.net](mailto:wa1ugo@arri.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.**

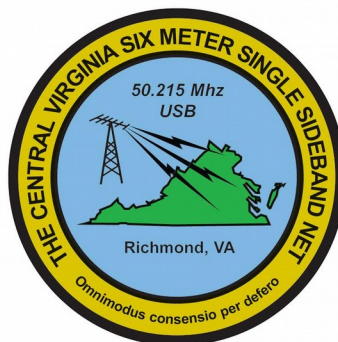
**Wanted:** Monitor or TV with HDMI input, 20 to 25 inches, inexpensive. (I have a Raspberry Pi pining to display itself.) contact Bruce Mac Alister at Daytime: 804-353-4269.

**For Sale:** QDX 5-band QRP Kit with Case and Power Plug. Asking \$80.00. Contact J.B. Edmons at [edmonds.j.b@gmail.com](mailto:edmonds.j.b@gmail.com). Can be brought to the 6M tailgate on the 15<sup>th</sup>.

## Thought For The Day

*It's funny how nobody notices what you do until you don't do it.*

Rick Waller	KA4OHM	President	(804) 971-5815	<a href="mailto:president@rarclub.net">president@rarclub.net</a>
Darrell Basinger	WW4F	Vice President	(804) 672-7928	<a href="mailto:vicepresident@rarclub.net">vicepresident@rarclub.net</a>
Dave Robinson	KJ4LHP	Secretary		
Ken Leidner	WV0L	Treasurer		



Universal harmony through communication

## Central VA Six Meter Group Spring Tailgate

April 15, 2023 8:00 am to Noon

The fenced rear parking lot of Hatcher Memorial Baptist Church, 2300 Dumbarton Road, Richmond, VA. Located on Clarke Street, between Hermitage Road and Wilson Avenue, directly behind the church building. [Please click here for a detailed map.](#) We hope to see you there, there is no admission or attendance fee.

