



# THE RICHMOND HAM

Published Monthly by the Richmond Amateur Radio Club

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May 2023

## THE RICHMOND AMATEUR RADIO CLUB RARC Meeting in person!

Our monthly meeting is on Friday May 12th, 2023, 7:00PM, at the Bon Air United Methodist Church, 1645 Buford Road.

The May and June meetings will be in person only and hopefully will resume in July to a hybrid In person/Zoom format. Stay tuned!

### This Month's Program:

**May Program:** This month's presentation will be Darrell Basinger, WW4F's, experience with building a Raspberry Pi 4 controller for his Hermes Lite 2. For those who would like to learn more, Darrell has provided some great documentation.

- 1.) The open source SDR transceiver is a Hermes Lite 2 ( <http://www.hermeslite.com> ).
- 2.) The controller is based on a Raspberry Pi 4 with a 7" touch screen monitor, looking similar to the V2 Controller offered by Apache Labs ( <https://apache-labs.com/al-products/1054/Controller-V2.html> ).
- 3.) A Raspberry Pi 4 is plugged into a controller board assembly. Printed circuit board files (gerber files) were sent out for fabrication. [https://jlcpcb.com/?gclid=EA1aIQobChMI8K-ZgZ\\_c6wIVC-DiCh170QOQEAAAYASAAEgKwuPD\\_BwE](https://jlcpcb.com/?gclid=EA1aIQobChMI8K-ZgZ_c6wIVC-DiCh170QOQEAAAYASAAEgKwuPD_BwE).
- 4.) Most all parts were ordered from Mouser to complete the controller board using the BOM K9VIB created and shared ( [https://www.k9ivb.net/PiHPSDR\\_Project/index.htm](https://www.k9ivb.net/PiHPSDR_Project/index.htm) ).
- 5.) G0ORX created the PiHPSDR software that is loaded into the Pi 4. The files are found on GitHub. ( <https://github.com/g0orx/pihpsdr> ).
- 6.) The Raspberry Pi 4 software installation instructions are found here ( <https://github.com/g0orx/pihpsdr/blob/master/release/documentation/RaspPi%2BTinker-piHPSDR-CompileFromSources.pdf> ).
- 7.) CAD enclosure files were submitted to a panel shop for fabrication.

( <https://shop.frontpanelexpress.com/index.php#Shop> ).

8.) The Hermes Lite 2 is a QRP rig used as an exciter for a Hardrock 500 amplifier: ( <https://www.hobbypcb.com/index.php/products/hf-radio/hardrock-500-power-amplifier-support-package> ).

## Richmond Amateur Radio Club Meeting Minutes

April 14th, 2023

Abbreviated minutes: New members, PJ Calhoun, KO4RMV Technician. Phil Snider, K14EEE General. Kenneth W Viar JR, KU4SMC Extra.

Checking account balance: \$21,138.43.

Upcoming ( at the time ) monument avenue 10 k was discussed by Jim Rubin w4pkr. Upcoming special Olympics in June was discussed.

## From The Prez

Greetings RARC members. There is still time to volunteer for the Special Olympics VA event 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

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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!

### City hams unite for microphone equity!

Remember all the turmoil over texting while driving? It was a real problem and there were notable injuries and deaths from it. The City of Richmond was early on it and passed a poorly thought-out ordinance making illegal anything in your hand while driving except a steering wheel. Later the state started working on a similar law. When Mac McNeer, K4YEF, got wind of it, he alerted the club. A few of us got involved and Win Grant, W4WIN, (aka the Counselor) got involved by addressing the General Assembly committee. We got a law that made an exception for two-way radio for emergency services, utilities, CB radio, and amateur radio. Now as you drive from Chesterfield or Henrico into the city with a microphone in you hand you are an illegal. You won't be deported but you'll get a fine if you are noticed. Those of us in the city need to get that ordinance removed in favor of the state's law. I have a pretty good connection with my city councilor, Katherine Jordan, but I can't do it alone. I'd like my fellow city-dwellers to contact me so we can have a joint assault on our councilors to get it

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changed. It's tough to get their attention unless it's a major issue. Together I think we can make it a big enough issue to get their attention. My email address is w4bru@arrl.net. My phone 804-353-4269. I need your zip code and, if you know it, your district number and/or the name of your councilor. I'll call my councilor's assistant and get advice on timing. Bruce MacAlister, W4BRU

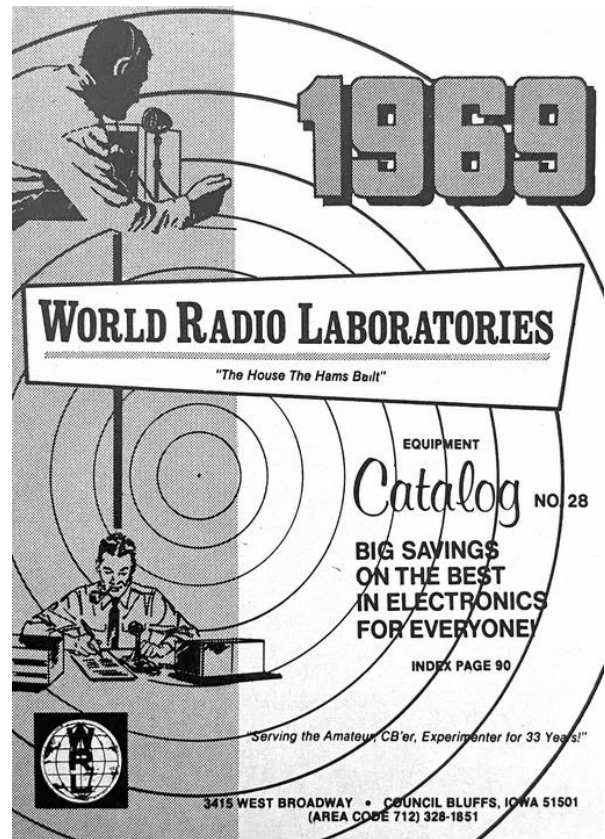


and, while the rest of the RF tubes are missing, I suspect that there was a nine pin oscillator tube and two additional 9 pin stages that are probably a doubler and tripler. It was plate modulated with a pair of 6V6 modulator tubes, a 12AX7 first audio and a 12AX7 driver / phase inverter.

The person from whom I obtained it, thought it was World Radio Labs, but I don't see anything in any of WRL's historic catalogs or literature that looks like it. I appreciate any info to help ID it.

Thanks,  
John DeMajo ,K5HTZ

Can You Identify This Radio??



I am trying to identify this transmitter as to who made it, and any info about it. It is definitely a 2 meter AM transmitter because the front panel indicates that the frequency range is 144-148 MHz. There is no name or numbers on it, but it looks to be commercially built. The final is a 2E26

## ARRL Dues Survey

This Monday, May 1, ARRL will launch a survey for members, encouraging their participation as we consider a dues increase.

The survey will include some short questions about raising dues and modifying the way some membership benefits are bundled. The survey will also include an opportunity for members to share their feedback.

**The participation of every member is important.**

Please encourage all the ARRL members in your radio club to complete the survey in May.

**The survey will open on May 1 at**

**[www.arrl.org/take-dues-survey](http://www.arrl.org/take-dues-survey)**. This is a member-only page. Members need to be logged into the ARRL website to take the survey. Members who are not logged in may select the Login button on the top of the web page, and they will be prompted to enter their ARRL website username and password. If they have not logged in since April 2022, they should use these **Login Instructions**.

Thank you in advance for urging all ARRL members to complete the survey.

73

Mike Walters, W8ZY

ARRL Field Services Manager

## ARLB006 ARRL Advocates for Radio Amateurs as FCC Proposes Changes to 60-Meter Band

The Federal Communications Commission (FCC) is seeking comments about changing the secondary allocation available to radio amateurs on 60 meters. The FCC issued a Notice of Proposed Rulemaking (NPRM) on April 21, 2023, that deals with the band. In a prior petition, ARRL, The National Association for Amateur Radio, urged protecting the existing use of the band by amateurs when adding a new allocation adopted internationally.

Currently, radio amateurs in the US have access to five discrete channels on a secondary basis: 5332 kHz, 5348 kHz, 5358.5 kHz, 5373 kHz, and 5405 kHz. Users of these channels are limited to an effective radiated power (ERP) of 100 W PEP.

The FCC proposes to allocate 15 kHz of contiguous bandwidth between 5351.5 - 5366.5 kHz on a secondary basis with a maximum power of 15W EIRP (equivalent to 9.15 W ERP). This allocation was adopted at the 2015 World Radiocommunication Conference (WRC-15).

The federal government is the primary user of the 5 MHz spectrum. The government's manager of spectrum use, the National Telecommunications and Information Administration (NTIA), has expressed support for implementing the allocation as adopted at WRC-15. Doing so would result in amateurs losing access to four of the five discrete channels, and power limits would be reduced from 100 W ERP to 9.15 W ERP. However, it would provide access to a new contiguous 15 kHz band that includes one of the current five channels.

In 2017, ARRL petitioned the FCC to keep the four 60-meter channels that fall outside the new band, as well as the current operating rules, including the 100 W PEP ERP limit.

The ARRL petition stated, "Such implementation will allow radio amateurs engaged in emergency and disaster relief communications, and especially those between the United States and the Caribbean basin, to more reliably, more flexibly, and more capably conduct those communications."

ARRL said that years of amateur radio experience using the five discrete channels have shown that amateurs can coexist with primary users at 5 MHz while complying with the regulations established for their use. The petition also stated, "Neither ARRL, nor, apparently, NTIA, is aware of a single reported instance of interference to a federal user by a radio amateur operating at 5 MHz to date."

In the NPRM, the FCC recognizes that Canada has already adopted 60-meter allocations and related rules that align with those proposed by ARRL. The Commission wrote, "Finally, we note that Canada has essentially implemented the same rules as ARRL has requested." The NPRM can be found online at, <https://www.fcc.gov/>.

The FCC proposed to allocate the 15 kHz bandwidth but stopped short of making a proposal on whether the existing channels should remain allocated to amateur radio and what the power limitations should be. They requested comments on their proposal and the related channel and power issues.

Comments will be due 60 days after the NPRM is published in the Federal Register, which is expected within the next two weeks.

ARRL

### The SWAP SHOP

Club members may list their wares in the newsletter. Send descriptive information to Armand at [wa1uqo@arri.net](mailto:wa1uqo@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>.

**For Sale:**

Comet CX-333 tri-band antenna. Used 3 years, still in very good condition and had a low SWR on all bands when decommissioned.

SPECS: Coverage: 2M, 1.25M, 70cm, VSWR: 1.5:1 or less, Max Power: 120 watts, Length: 10' 4", Weight: 3 lbs 8 oz , Connector: SO-239.

Construction: Heavy-duty Fiberglass, 2 sections

Asking \$90. Contact Dave White, W4IIA for information.

804-501-8857

### *Thought For The Day*

***Doing nothing is hard, you never know when you're done.***

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		

**RARC Twenty five years ago!**

# THE RICHMOND HAM

published monthly by the richmond amateur radio club

p. o. box 73 , richmond , virginia , 23218

*69th Anniversary Year 1929-1998*

MAY  
1998

W4ZA Repeater - 146.34/.94

**MEETING NOTICE:** The Richmond Amateur Radio Club will meet Friday the 8th 8:00pm at the Bon Air Methodist Church on Buford Road.

**PROGRAM:** Virginia Special Olympics for the Handicapped. DENNIS WYMAN, KB4DCE, will tell us the purpose and problems in supplying communications for this 2-day event. FRIDAY and SATURDAY. He will show some slides. This is the 14th year that amateurs have supported this compassionate public service. DENNIS has coordinated this event for the past seven years. EARL BISHOP, N4WXQ, was the NCS prior to 1992.

HARRY MILLER, W4PDX, has offered to "Tell the club how to tell time".

**HAMFEST:** SUNDAY, JUNE 7th, Manassas, Va. The 24th year of this Old Virginia-Hams sponsored hamfest. At the Prince William County Fairgrounds on Rte. 234. BIG flea market, indoors and outdoors. Talk-in 146.97 Info telecom 703-369-2877

**VE EXAMS:** SATURDAY, JUNE 6th, 9:00am at the John Tyler Community College, Moyer Hall Rm 221. Pre-register with TONY AMATO, KR4UQ, at 717-5237 enter #999. Leave your name, phone number and details.

**VE EXAMS:** SATURDAY, JUNE 13th, 9:00am at the J.S. Reynolds College East Parham Road. Pre-register with PAT WILSON, N4PW, at 804-932-9424 or RAY ROBERTS, W4MYI, at 740-5850.

**REPEATER NEWS:** MONDAYS at 9:00pm tune to the 145.511 repeater. JIM FITZGERALD, K40JE, is the Newscaster. He will give news of Club programs, and other items of interest.

**TEN-TEN NET:** WEDNESDAYS at 7:00pm on 28.470 MHZ. LUKE BANNISTER, AD4MG, is NCS.

**ESA:** The EUROPEAN SPACE AGENCY. Their equivalent to America's NASA, National Aeronautics and Space Administration. ESA, headquartered in Paris, has been very aggressive in space research. One of it's very effective efforts is its satellite ULYSSES.

This space probe launched over seven years ago has covered 2.5 billion miles orbiting over both poles of the SUN.....

The month Ulysses returns to its point in space where its journey began, but Jupiter is not there with its slingshot maneuver.

So, Ulysses is now just a man-made comet, forever bound into a 6-year polar orbit of the SUN. Its second orbit will place it over the SUN's poles in 2000-2001 just as the count of sunspots reaches a maximum. And such can harm satellites, endanger astronauts, power systems and communications.

**New Solar Cycle:** 28MHz, 50MHz, 144MHz, and up are all responding to the incoming 23rd solar cycle. Local AE4TC QSO'd HH7PV in Haiti, and Bob, W4DR QSO'd ZL2TPY....both on six meters....

**JOIN THE RICHMOND AMATEUR RADIO CLUB** Dues \$15.00  
Family 20.00  
Under 18 or over 65 10.00

73

*Walt Wesell*

WALTER WESSELL, KC4PQM  
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