



THE RICHMOND HAM

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January 2016

The RICHMOND AMATEUR RADIO CLUB will meet Friday, January 8th 2016, 7:00 PM, at the Bon Air United Methodist Church, 1645 Buford Road.

Coming Events:

January Meeting, January 8th, 7:00 PM.

VE Testing Session, January 9th, 2016 9am at the Bon Air United Methodist Church.

Club Members! If you are not receiving your copy of the Club's monthly newsletter, please contact Richard, WA4FEH, RARC's Treasurer, at wa4feh@gmail.com or phone 743-3899.

PROGRAM: To be announced

December 2015 RARC Meeting Minutes

Meeting Date: December 11, 2015
Meeting Time: 7:00 PM
Presiding Officers: David Robinson, KJ4LHP, President; Ken Leidner, WV0L Vice President; Richard Arnold, WA4FEH, Treasurer and Maylon Pearman, KG4RPQ, Secretary.
Newsletter Editor, Armand Hamel, WA1UQO and Registered Agent for SCC, Marshall Irvine, N4XBP.
David opened the meeting with introductions and then the Pledge of Allegiance.
Richard Arnold gave the Treasures' report for October and November. Because the November meeting was the Annual Banquet, there was no business meeting.
He announced new membership request from, William Hankison, K4DHO, Technician
Doug Zimmerman, KM4FWM, Extra

Persons who get the first year free through the school are:

Heather Button, KM4PBP, Technician but now Extra.

John Button, KM4PBS, Technician

David Guinn, KM4OWF, Technician

Jeff Hesson, KM4OKP, Technician

Sandra Kozlowski, KM4KON, Technician

Alan Perkins, KM4OWD, Technician

David Perkins, KM4OWC, Technician

Richard Sanders, KM4PBT, Technician

All were approved. Welcome to the club.

A motion was made and passed to accept the Treasurers' report.

David welcomed guess and asked to identify themselves.

John Hickman, N3KJ, gave the Club a banner that recognizes it as a Special Service Club.

Carol Worssam, KK4VIF, wants members to call Representative Dave Brat about HR1301 bill. That is the Amateur Radio Parity Act. She wants to get his support for the bill.

Bruce MacAlister, W4BRU, brought his laptop and offered help to anyone needing it with a HT. He offered to program them using Chirp software.

Motion was made and passed to adjourn the meeting.

The annual Christmas Party followed.

From The Prez

January, 2016 has snuck up on us and it's time to begin anew! What new things do you plan to start this year? For myself, if all goes according to plan, a tower will take root in my back yard. I need something to attach an IC-7100 to besides a ground-mounted vertical.
Don't forget Frostfest on Saturday, February 6. Yaesu will be there with their entire line, along with many other vendors. There will also be a Go-Kit competition at Frostfest, so you can take the kits you are working on for the RARC

contest there first – a chance to win two prizes.

The Richmond Railroad Museum is planning a celebration for the birthday of Samuel Morse. They have asked us to be a part of that. We need people to send and receive Morse code at the event. They have the old telegraph sounders set up in a telegraph office at the station on Hull Street. Contact Tom Flippen KD4CMK or Richard Arnold WA4FEH to volunteer.

The 2016 Virginia QSO Party will be held during the weekend of 19-20 March. The certificate this year will honor the Richmond Amateur Radio Club, and its predecessors the Richmond Shortwave Club and the Tri-County Radio Club, as the oldest ARRL-affiliated club in the State of Virginia. We plan to operate a club station at Glen Hicks property in Eastern Henrico. It will be a "Bonus Station" for the QSO Party and will run for the full event. Operators are welcome and needed. Contact David Robinson KJ4LHP.

The ISS contact at the Science Museum is scheduled for June. Date isn't firm yet, due to ISS orbital variations. We have an Icom 7100 and remote hardware to use as the primary station. There is still a lot to be done and plenty of opportunity for anyone interested to lend a hand. If you want to help, contact Bruce W4BRU or Tom KD4CMK to volunteer. See you all at the meeting!

73 de KJ4LHP
David

RARC VE News

The January Testing session will be on the 9th at the Bon Air United Methodist Church at 9:00am.

If you have questions about a session, please see our website, www.rarclub.net/ or contact Allan, WA3J, at 804-399-8724, or wa3j@arrl.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.

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.

FCC EXAMS EVERY OTHER MONTH on the SECOND SATURDAY. For January and all odd-numbered months: Bon Air United Methodist Church, 9 AM. Call coordinator, Allan Johnson, WA3J, 399-8724, or visit <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 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 007D rather than to any of our modules. Since the W4FJ stack will all be linked to Ref 007D, anyone linked to that reflector will be connected to the net.

The Club sponsors several local radio nets each week. Join in for the informative discussions and fun.

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 Repeater
	8:15 PM	145.730	Packet

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	\$20.0

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

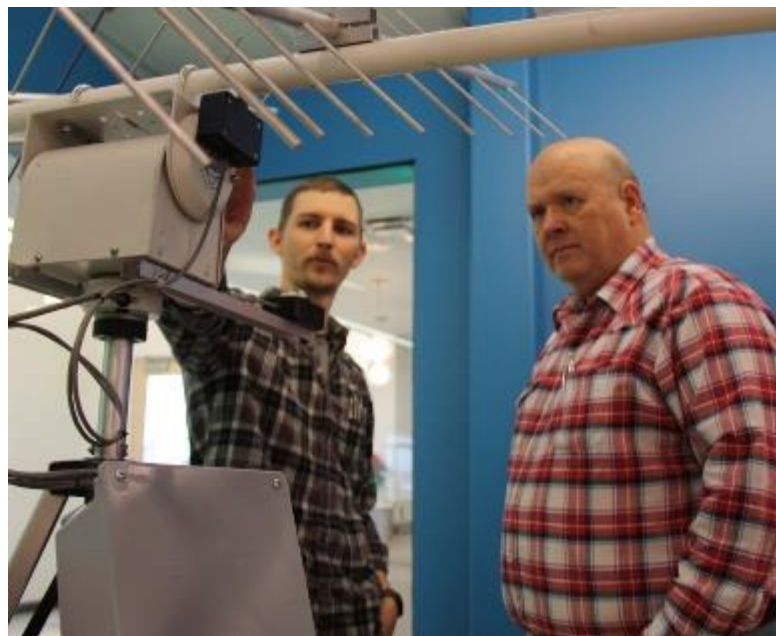
2016 Refreshment Schedule

The refreshment schedule for 2016 is wide open! Consider signing up for your favorite month. The entire year can be covered by only ten volunteers. Let's see some new contributors!!

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.

First amateur radio in geosynchronous orbit will aid disaster communications



Hume Center Director of Research Robert McGwier (right) and research associate Zachary Lefke are building radio antennas that will be used in the Virginia Tech Ground Station.

BLACKSBURG, Va., Dec. 22, 2015 – Researchers at the [Ted and Karyn Hume Center for National Security and Technology](#) are preparing to send an amateur radio transponder into a geosynchronous orbit in 2017.

“Seven days a week, 24 hours a day, 365 days a year, a new ham band will be available for the Americas,” said Robert McGwier, a research professor in the [Bradley Department of Electrical and Computer Engineering](#) and the Hume Center’s director of research. “It will allow rapid deployment to disaster areas and support long-haul communications for first responders.”

This would be the first amateur or “ham” radio payload in a geosynchronous orbit, and would significantly enhance communications capabilities for amateur radio operators, in particular following

natural disasters or other emergency situations. The Hume Center team met with Federal Emergency Management Agency Administrator Craig Fugate in September to discuss the project. There are more than 2 million amateur radio operators around the world, and the community has a long history of assisting with emergency communications when traditional communications networks collapse, because they typically rely on cell towers and the Internet. Ham radio signals require only compact, mobile equipment that can be easily transported to an emergency site. “Hams show up at every disaster, no matter what,” said McGwier, referring to amateur radio operators. After events like Hurricane Katrina and the Indian Ocean tsunami, “for days, the only way that people communicated out of those communities was amateur radio.” In fact, the Federal Emergency Management Agency signed an agreement in 2014 with the American Radio Relay League, also known as ARRL, that describes how the two organizations will work together to provide disaster relief, and the Federal Communications Commission has specific regulations authorizing the use of amateur radio in situations which threaten life or property. But even amateur radio isn’t always available. Currently, most amateur radio operators communicate by bouncing their signals off the ionosphere. Solar flares, geomagnetic storms, and other events that change the condition of the ionosphere can affect the efficiency of radio signal propagation, making it unpredictable. Sending radio signals to a satellite, instead, would be much more dependable, allowing radio operators to help emergency personnel reliably access supplies, logistical support, and medical assistance. They key is to ensure that the satellite would always be accessible to the radio operators — which is why the geosynchronous orbit is critical.

A geosynchronous orbit has the same period as the Earth’s rotation — just under 24 hours. A satellite in such an orbit is easy to locate and access. In this case, the satellite will always be within a band of longitudes over the Americas, continually accessible to any amateur radio operator there, including the students and researchers at the Virginia Tech Ground Station.

The satellite itself will be operated by Millennium Space Systems on behalf of the United States Air Force; the Radio Amateur Satellite Corporation, also known as AMSAT, will operate the radio, which will be designed and built by Virginia Tech students — making this project a unique collaboration among the university, nonprofit organizations, private companies, and the federal government.

The Hume Center team is also engineering a ground terminal that emergency personnel could use to relay their own existing communications channels through the satellite. This setup could be deployed through the American Radio Relay League and the Radio Amateur Satellite Corporation as a key part of a robust national emergency response system, allowing trained operators to reliably mobilize to disaster areas in the first critical hours after a devastating event.

Organized under the umbrella of the [Institute for Critical Technology and Applied Science](#), and with operations at the [Virginia Tech Research Center – Arlington](#) and the Corporate Research Center in Blacksburg, the Hume Center leads Virginia Tech’s research, education, and outreach programs focused on the communication and computation challenges of the national security community.

A premier [Research Institute of Virginia Tech](#), the [Institute for Critical Technology and Applied Science](#) ensures a sustainable future by advancing transformative, interdisciplinary research at the intersections

of engineering, the humanities, and the physical, life, and social sciences.

Thanks Marshall I N4XBP

Commemorative EME Transmission Set from Refurbished Dish on "Project Diana" Site

Radio amateurs will attempt an Earth-Moon-Earth (EME, or "moonbounce") transmission on January 10, using the 60 foot diameter TLM-18 dish on the former "Project Diana" site, now part of the [InfoAge](#) Science History Museum in New Jersey. This month's event marks the 70th anniversary of Project Diana. It was on the InfoAge site, then a part of Fort Monmouth, that the US Army's Project Diana team on January 10, 1946, first received radio signals bounced from the moon. During the anniversary event, the TLM-18 reactivation team, consisting of volunteers from the [InfoAge](#) Science History Museum, the Ocean Monmouth Amateur Radio Club ([OMARC](#)), and Princeton University will transmit on 23 centimeters from N2MO, the OMARC club station, adjacent to the dish that offers 35 dBi gain at 465 MHz. The former US Army tracking dish was used as a ground station for the TIROS I and II weather satellites and for Project Vanguard, which led to the launch of *Vanguard 1*, the second US satellite, in 1958. The dish was demilitarized in the 1970s. Daniel Marlow, K2QM, an InfoAge board member who teaches physics at Princeton, plans to use the dish as a radio telescope to see the 21 centimeter radiation from the Milky Way. But he also wants to observe radio pulsars, and since that activity can be performed at 70 centimeters, the TLM-18 dish is being made available to the Amateur Radio community for EME at 432 MHz on a secondary basis. Project Diana occupied the building housing N2MO. — *Thanks to InfoAge and Martin Flynn, W2RWJ*

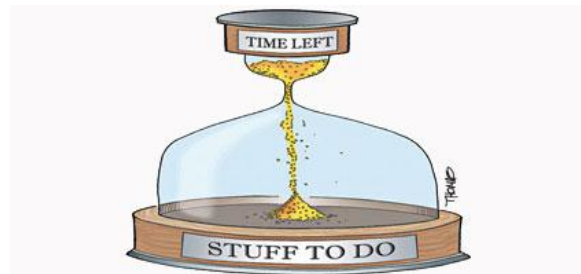


The TLM-18 dish.



K4ADL <http://www.qsl.net/k4adl>

New Year's Resolution??



The SWAP SHOP

Club members may list their wares in the newsletter. Send descriptive information to Armand at wa1uqo@arrl.net, or call me at 804-454-0564. 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.***

Thought For The Day

The only reason people get lost in thought is because it's unfamiliar territory.

73 de:

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