



THE RICHMOND HAM

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August 2015

The RICHMOND AMATEUR RADIO CLUB will meet Friday, August 14th 2015, 7:00 PM, at the Bon Air United Methodist Church, 1645 Buford Road.

Coming Events:

August Meeting, August 14th, 7:00 PM.

VE Testing Session, September 12th, 2015 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: The August program will be a short how-to on Satellite Communication.

July 2015 RARC Meeting Minutes

Meeting Date: July 10, 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.
Directors: Dr. Joe Palsa, K3WRY; Buck Vaughan, KR4NL; and George Golding, W3PPY.
Newsletter Editor, Armand Hamel, WA1UQO.
David Robinson opened the meeting with the Pledge of Allegiance. Guest were asked to introduce themselves first and then all members introduced themselves.
Minutes for the June meeting were approved.
Richard Arnold gave the treasurer's report for July. He reported one new membership application from Craig Covey, K4VCU, General class. His request was approved. Welcome to the club.
VE testing was scheduled for Saturday, July 11 at 9:00 AM at the church.

Richard reported that there was a good turnout for Field Day VE testing even with the rain. Bruce MacAlister, W4BRU, reported that he put in an application for a booth at the Makers Fair in October. He also looked into locations for mounting an antenna on the roof of the Science Museum for the possible ISS contact by the club.

Tom Flippin, KD4CMK, reported that the Old Dominion Chapter of the National Railway Historical Society is celebrating its 100 years anniversary. The club will have a special event station and they will have a Morse code station like the old railroad station used.

Dr. Joe Palsa, K3WRY, gave the ARRL report for the Roanoke section. They traveled around the Virginia Field Day sites starting in the Eastern part of the state and working their way around, visiting as many as they could including the Richmond site.

Jim Bates, K8OI asked for anyone who took part in the radio run for June to turn in their reports.

He said that in September he would give a program about remote radio.

The meeting was adjourned and a program about Satellite Radio was to follow, but due to technical difficulties had to be postponed.

From The Prez

Here it is August already and I have some odds and ends. First, a big THANK YOU to John Demajo (K5HTZ), Dorothy Goerner (N5FRA), Bruce MacAlister (W4BRU), Buddy Hall (KM4JCP), Tom Flippin (KD4CMK), Jim Wilson (K4BAV), and Richard Arnold (WA4FEH) for making the Telegraphy portion of the Hull Street Railway Station a great success. It was touch and go at first, and then Dorothy (N5FRA) sat down at the key and started sending. Bruce (W4BRU) started reading at the other end until Jim Wilson (K4BAV) from the Albemarle Amateur Radio Club stepped up and

manned the sounder for the rest of the day. Many thanks, Jim for translating the code from the "clacker" into plain English. I understand that the Railway Museum folks would like to see us at more events.

Anyone interested in license upgrades, or who knows anyone wanting to get licensed, School registration is September 8th, 7-8pm, at the Church.

Mark your calendar for the September meeting, when Jim Bates (K8OI) will talk on remote operation, something we have been wishing for to assist our members whose QTH's preclude antenna installation in getting on the air again.

Lastly, part of the August meeting will be about the membership's ideas for programs they would like to see or present at future meetings and maybe a little different format, to boot. If you have any ideas or suggestions, we would like to hear them.

Hope to see you all at the meeting!

73 de KJ4LHP

(David)

RARC VE News

The September Testing session will be on the 12th 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.

2015 Refreshment Schedule

The refreshment schedule for 2015 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.

ARRL Files More "Grow Light" Ballast Complaints with FCC

The ARRL has filed three more complaints with the FCC, urging its Enforcement Bureau to investigate and initiate enforcement proceedings to halt the marketing and retail sale of certain RF lighting devices typically known as "grow light" ballasts, which, it said, violate FCC Part 18 rules. The largely identical complaints zeroed in on three specific products: The Galaxy Legacy Selective Wattage Ballast, the Quantum Horticulture HPS/MH-600W RF Lighting Ballast, and the Lumatek "Dial-a-Watt Air-Cooled" 1000 W Ballast. The League had [complained](#) to the FCC in March 2014 about another Lumatek product, and noted that "apparently nothing has been done to date" in that case. The ARRL asserted that the three devices that are the subjects of its most recent complaints generate "blatantly excessive conducted emissions." Further, the League alleged, the devices are being marketed and sold illegally — in both instances in violation of FCC Part 18 rules. Supporting all three complaints were detailed reports from the ARRL Laboratory that quantify the League's emission level concerns. "The level of conducted emissions from [these devices] is so high that, as a practical matter, one RF ballast operated in a residential environment would create preclusive interference to Amateur radio HF communications throughout entire neighborhoods," ARRL General Counsel Chris Imlay, W3KD, wrote in each complaint. The devices exceeded conducted emission limits under all test conditions, "sometimes by extreme margins, throughout most of the HF range," Imlay said in his letters. Samples of each RF lighting device cited were purchased by ARRL through retail outlets. All are manufactured overseas and imported into the US.

[ARRL Website](#)

New RVA Public Service Calendar

RVA Public Service Calendar is a consolidated link that gathers together all the public service event in and around Richmond. It includes descriptions and a calendar. Bookmark it and give it a try! <http://www.rvahams.com/>

Amateur Radio Vanity Call Sign Fee to Disappear in September

The Amateur Radio vanity call sign regulatory fee is set to disappear in the next few weeks. According to the best-available information from FCC sources, the first day that applicants will be able to file a vanity application without having to pay a fee is Thursday, September 3. In deciding earlier this year to drop the regulatory fee components for Amateur Radio vanity call signs and General Mobile Radio Service (GMRS) applications, the FCC said it was doing so to save money and personnel resources. The Commission asserted that it costs more of both to process the regulatory fees and issue refunds than the amount of the regulatory fee payment. "Our costs have increased over time, and now that the costs exceed the amount of the regulatory fee, the increased relative administrative cost supports eliminating this regulatory fee category," the FCC said in its Report and Order, which appeared on July 21 in The Federal Register. "Once [it's] eliminated, these licensees will no longer be financially burdened with such payments, and the Commission will no longer incur these administrative costs that exceed the fee payments." The FCC raised the Amateur Service vanity call sign regulatory fee from \$16.10 to its current \$21.40 for the 10-year license term in 2014. The \$5.30 increase was the largest such fee hike in many years. In a typical fiscal year, the FCC collected on the order of \$250,000 in vanity call sign regulatory fees. The FCC said the revenue it would otherwise collect from such regulatory fees "will be proportionally assessed on other wireless fee categories." Congress has mandated that the FCC collect nearly \$340 million in regulatory fees from all services in fiscal year

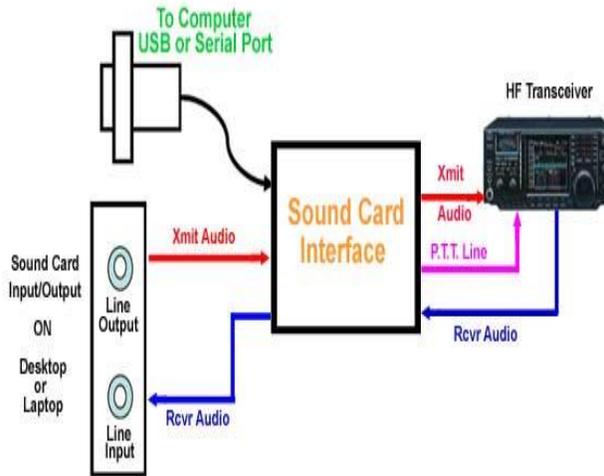
2015.

[ARRL Website](#)

Getting Ready for Digital Operation

http://www.oliviamode.com/getting_started.htm

Highly Edited by K8OI



The Transceiver

There are hundreds of ham radio transceivers and numerous commercial interfaces and dozens of magazine and internet articles about home brew interfaces ... so there are many ways to accomplish the goal.

The transceiver can be for ANY amateur radio frequency band that allows digital operation - which means most of them. The transceiver must be capable of transmitting a voice mode since the digital information will be comprised of audio tones of some sort. Most soundcard digital operation uses Single Side band (SSB) and most of it is in the UPPER sideband mode. However, soundcard digital operation can be done with any voice mode - such as FM and AM modulated rigs.

One important thing to remember about your transceiver is that with digital operation you should typically run the transmitter at 50% or less of the maximum rated output for the rig. Running at 100% of the rated power on digital

operation would exceed the rated duty cycle/power specifications of most rigs and could shorten the life of your transmitter or worse. Typically, if your rig is rated for 100 watts output - most digital operators would run it at 50 watts output or less.

Most HF amateur radio transceivers made in the last 6-8 years usually have one or more data connector plugs that are used for frequency control of the transceiver and/or for plugging digital interfaces into. Most older rigs have no such facility BUT can still easily be connected to a digital interface through their audio input and keying lines on the microphone plug and their audio output or speaker connectors. So, new or old, just about any rig that has SSB, AM, or FM could be used for soundcard digital operation. Though, in reality, on the HF bands most current activity is on SSB - in particular on upper sideband. FM digital soundcard activity on VHF/UHF is just now starting to gain a little in popularity.

The Interface

There are, as stated above, numerous commercial interfaces ranging from about \$40 on up to \$300 and more. There are also lots of articles that have been published on how to construct a home brew interface. Digital soundcard interfaces are very simple devices and do NOT need to be complicated or expensive. You can even manually or semi manually interface the rig and the computer.

The main things that an interface needs to do for soundcard digital operation are:

- Take the audio output of the transceiver and connect it into the audio input of the computer - so the digital software on the computer can decode the audio tones from the digital signal that it receives.
- Take the audio output from the computer and run it into the audio input of the rig - so your transceiver can transmit the audio tones generated by the digital software on the computer.

- Provide a way to key the rig. (Press the PTT)

This can be accomplished with almost any rig with one of the many available digital interfaces or a home brew interface. It can also be done manually or semi-manually without buying or building anything BUT this may NOT be very convenient.

I have had several QSO's on digital where the other guy was taking the audio out of their transceiver speaker jack and running it into their computer via the line in or microphone input (using just an audio cable with mini stereo jacks on them) to receive and decode my signal. They would use a desk microphone on their HF rig and just put their microphone next to their computer speaker to pick up the tones generated by their digital software. They would then key their microphone on their HF rig, click on the TX button on the digital software program they were using, and start typing their message to me. The audio tones generated by their digital program went to their computer speaker and the mike on their rig picked it up and transmitted it on the air. When they turned it back to me for my turn to type, they would unkey their microphone, click on the RX button on their software, and the received audio from my signal went into their computer and was decoded by their digital software.

I would call this a manual or semi-manual interface and it works BUT not really the ideal way to do it all the time. It is a great way to test and play with digital modes though and see how you like it BEFORE you spend any money or effort on a home brew or commercial interface.

If a commercial interface works with ANY soundcard mode they will generally work with ALL soundcard modes whether they list them or not. I personally think there is little to gain by spending several hundred dollars or more on a high end interface UNLESS you have special needs or interests and you really understand what you are getting. I originally bought a BuxComm interface in 2003 for \$35 and used it until late 2008 with NO problems. I

am now using the SignalLink USB which cost about \$100 (with proper cable for my rig). I got it ONLY because it has its own built-in low noise soundcard and was simple to set up. I really like the SSignalLink USB unit BUT for Olivia operation the BuxComm worked just as well - the SignalLink USB was just a bit more convenient with its own soundcard and audio controls.

Most interfaces either come with a cable (sometimes at additional cost) that will fit your rigs DATA plug OR Microphone plug depending on which you have or plan to use. IF you have BOTH - it is always better to use the DATA plug. That way you don't have to unplug the microphone to do digital operation since they are usually independent of each other.

When you order most interfaces you need to know ahead of time what kind of DATA plug or microphone plug your rig has and how many pins it has. Many rigs have 2 DATA plugs on them also. One is often for controlling frequency and other rig control functions via computer software. The other is for hooking up a digital interface. Some rigs may do this in a single plug (not sure of that) but many have 2 plugs. So, if you are going to just get an interface - you need to make sure that you identify the proper plug for the proper function.

On my Yaesu FT-100D, for instance, I have a 6 pin data connector that is used to connect to the SignalLink USB interface via the cable that came with it (I specified my rig when I ordered it). I also have an 8 pin Data connector that I use a CAT cable with (I bought separately) to do rig/frequency control. One end of the CAT cable goes to the 8 pin Data connector on the Yaesu while the other end terminates in a serial port plug and connects to the serial port on my computer. The rig control can be accomplished with various software programs and I can change freq, mode, band, and a few other things on the FT-100D without having to physically touch the rig. Most of the digital programs can utilize both the CAT and the interface functionality at the same time so I seldom actually touch the rig any more.

2015 Radio Run Results

Call Sign	Name	Comments
K8OI	Jim Bates	4th Year in a Row
KV4VP	Julian Bailer	2nd Year in a Row
N4MW	Dave Meier	3rd Year in a Row
N4ZRW	Cissy Meier	3rd Year in a Row
WA1UQO	Armand Hamel	3rd Year Completed

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

If you look like your passport picture, you probably need the trip.

73 de:

David Robinson	KJ4LHP	PRESIDENT	(804) 226- 4295	thedarbinian@comcast.net
Kenneth Leidner	WV0L	VICE- PRESIDENT	(804) 790- 0008	kleidner@earthlink.net
Maylon Pearman	KG4RPQ	SECRETARY		
Richard Arnold	WA4FEH	TREASURER		