



THE RICHMOND HAM

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March 2019

THE RICHMOND AMATEUR RADIO CLUB will meet Friday, March 8th 2018, 7:00PM, at the Bon Air United Methodist Church, 1645 Buford Road.

Coming Events:

RARC VE Testing Session. March 9th 2019.

This Month's Program:

Back to HF Digital by Bruce MacAlister, W4BRU

With HF propagation terrible, a new transceiver with an easy-to-use USB connection, and looking for something really useful to do with his Raspberry Pi W4BRU decided to re-visit HF digital mode.

He'll share the stumbles and road-blocks to getting there and some of the resources he used. And some things he still can't get working.

The presentation will be live with an Icom-7300, a Raspberry Pi, and a borrowed Buddipole antenna set up outside. The standard fldigi-supported modes are working. If he can get JS8Call going in time, you'll see that also. This could be full of surprises. If the live show fails, he'll have a canned set of slides to show but it won't be as much fun.

February Meeting Minutes

The regular meeting of the Richmond Amateur Radio Club was called to order at 19:00 on February 8th, 2019 at Bon Air United Methodist Church by President John DeMajo, (K5HTZ)

Members Present

All present signed RARC Log Book

Treasurer's Report

Ken Leidner, (WV0L) gave the Treasurer's Report, with an ending balance of \$8443.78. The Report was approved unanimously. Ken also

presented 9 prospective members: Gene Damon, KN4RQC; William Dresdner, KB2SUJ; Robert Fierro, KG4ZIK; David Melton KF4RAL; James Merritt, KK4IUH; Sean Pyne, W4BKR; James Rubin, W4PKR; John Watkins-Pitchford; Stephen Whitson, KF4WNU. All approved unanimously.

Committee Reports

Tech Committee:

Bruce MacAlister, (W4BRU) reported that Norman Marshall, KN4CZZ needs APRS assistance in relation to balloon tracking.

Dr. Joe Palsa, (K3WRY): Va. State ARRL section meeting at Frostfest - Roanoke division Director George "Bud" Hippisley spoke on ARRL vs ARES education requirements. The gist of which is that tests will be available free on line, with most detailed requirements for Leadership positions and proportionately less as you go lower in the Chain -of-Command

Testing:

Allan Johnson, (WA3J) reminded members that VEC testing will take place on March 9th at 9am.

License School:

Bruce MacAlister, (W4BRU) stated that Spring class registration will be on February 26, at 7pm.

Makers:

RARC makers group meets Tuesday at Ken Zutavern's, (K4ZUT) house from 2-4 pm

New Business

President John DeMajo (K5HTZ) donated funds for Ham Books in Libraries. This set will be going to Henrico County Library.

They were most appreciative and requested someone to present programs on Ham Radio. Dr. Joe Palsa, (K3WRY) and President John DeMajo (K5HTZ) volunteered to give the presentations.

Motion was made, seconded, and unanimously approved to thank Win Grant for his assistance on the Cell Phone legislation in the VA. General Assembly.

Show and Tell

John DeMajo (K5HTZ) had a restored Audion on display along with an article from the 1972 Times Picayune about him

Adjournment

Meeting was adjourned by vote. Gordon Miller, (NQ4K) gave his presentation on the Virginia QSO Party after a short intermission.

The next general meeting will be at 19:00 on April 12th, 2019 at Bon Air United Methodist Church.

Minutes submitted by: David F. Robinson ,(KJ4LHP), Secretary

From The Prez

The new year seems to be flying by. I have been informed that the Virginia Legislature failed to pass the no-hands cellphone bill this time around. Thankfully, our ability to communicate in public service situations, while operating a vehicle, has not been impacted. Thanks again to those who worked to make sure that our rights were protected.

This month, Bruce W4BRU will have a very interesting presentation for us at our monthly meeting. On that same note, I am sensing that there is a re-birth of the experimenter and kit builder spirit that was alive back in the 70s and 80s, which to me is indeed refreshing. I am hoping that this current wave of builder spirit is just the beginning of an opportunity for today's young hams to enjoy the satisfaction of once again being able to build at least some their own equipment. Remember too that our builders' group meets monthly. If you are interested in attending the meetings, held at the home of Ken K4ZUT, please let us know and we will add you to the mailing list.

Again, a reminder that we still have several openings for meeting programs for the remainder of the year, so if you have something that you would like to present, please email me so that we can set a date for you.

John DeMajo - 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: Bon Air United Methodist Church, 9 AM.

The March testing session will be on the 9th at the Bon Air United Methodist Church, 9 AM.

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.

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!

Interested in Fusion??

The Powhatan Radio Club is planning a group purchase of System-Fusion radios in the near future. There is a new listing on N4POW.COM to join the mailing list for a Fusion group purchase.

Please click on the Events & Activities tab, then scroll down to the bottom where you can join the mailing list for this purchase. Any people you know that may have interest should join this mailing list. This opportunity is not limited to PARC members, **anyone** can participate. Joining the list does not commit anyone to actually making a purchase.

Once we have an idea of the quantities, I will negotiate a discounted price for everyone. At that time we will take orders and payment. This will require payment by cash or check as we can't take your credit card for this purchase. The radios will all be shipped to PARC for distribution to the purchasers. Repeater owners are being incentivized to promote Fusion technology right now. Depending on the quantity we order, the discount could be very good. I am thinking it may take a few weeks to discover interest and put the deal together. If you know what model you have an interest in, please include that information when you join the list. This offer is limited to only Fusion capable Yeasu radios. We will schedule a Saturday for everyone to come to Fire Co #2 and pick up their radios. We might even have some instruction, or programming services available.

Spread the word!

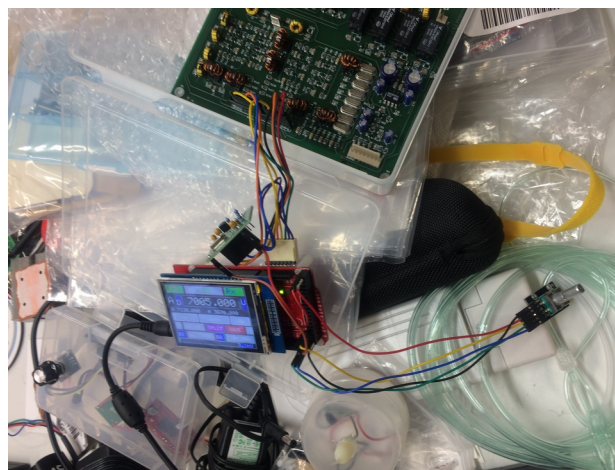
73's

Jim, KK4IUH

Builders Group Update

At the February Builders' Group the focus was on a uBitX that was not working properly. Rick Waller, KA4OHM, thought it was a defective Arduino board so other builders who has put together a uBitX brought theirs to compare and swap Arduino boards. The swap showed that the original was bad. Besides diagnostics the hams discussed each of their future build projects. It's what we do.

Bruce, W4BRU



The Cat, the Astron and ARRL Insurance

I recently told my tale of woe on the RARC D Star net, but for those of you who missed it, here's the short version. On a recent Sunday night, I went down to the basement ham shack and immediately noticed that unmistakable smell of burning electrical components. I also noticed that three radios which I had turned on earlier in the day were off.

A stray cat that my wife adopted about 15 years ago had gone into the basement, climbed up on a RigRunner 4012 power distribution box which sat on top of an Astron RS 35A power supply and urinated. Why he had to climb up on the equipment is a mystery unless his goal was to "piss me off." He succeeded. The RigRunner shorted which caused one of the four pass transistors on the Astron to short out which caused the output voltage from the power supply to jump from a nominal 12 volts to 26 volts. I don't have to tell you what that does to equipment designed to run on 12 volts.

As a result of the high voltage, I lost an Icom ID 5100A, Icom ID 880H and a three week old Yaesu FTM-400XDR. Two other devices which were also plugged into the RigRunner and fed by the Astron supply were fortunately turned off and suffered no damage. I replaced the shorted 2N3771 pass transistor (for less than \$1.00), and the supply produced the appropriate 13.8 volts, but I was concerned why the crowbar circuit did not do its job of preventing the high voltage from getting to the radios. Crowbar protection is one of the key features of Astron supplies that you may not find on less expensive supplies.

I started gathering parts with a view toward replacing some of the more likely parts of the crowbar circuit that might have failed when I learned that Astron sells the entire regulator board, including the crowbar circuit, for \$20. That was a no brainer, and is one of the best electronic repair bargains ever. Take lots of pictures before you begin unsoldering wires so you will know where they go on the new board. I installed the new regulator board in about an hour by unsoldering seven wires from the old regulator board and moving them to the new board. It was like working on a Heathkit from the 1960's. No surface mount technology here. The power supply seems to be working fine with the new circuit board. You will find a wealth of information on repairing these supplies at <http://www.repeater-builder.com/astron/astron-index.html>.

If you own an Astron linear supply, check the 3AG fuse on the back of the unit. I checked five different Astron 35 amp linear supplies of various age and models, and found three different fuses. All of them have "8 Amp Fuse" stenciled on the case next to the

fuse holder. The fuse value will depend on the rated current output of the power supply model. If the crowbar overvoltage circuit functions properly, an SCR is supposed to fire when the voltage exceeds about 15 volts and ground the output of the power supply before damage is done to connected devices. The fuse should blow if this happens. If the fuse is higher than specified for your power supply, the crowbar circuit may not perform as designed. My RS 35 that caused the damage had the proper fuse, but it never blew. The correct fuse for the 35 amp linear supply is an 8 amp fast blow fuse. I could not find an 8 amp 3AG fuse, but 7.5 amp fuses made by Buss are available at NAPA Auto Parts in a pack of five for \$3.00. Avoid the Chinese fuses sold on Amazon and ebay. Many of them are about 2 mm shorter than a standard 3AG fuse and will not fit snugly in a spring loaded fuse holder.

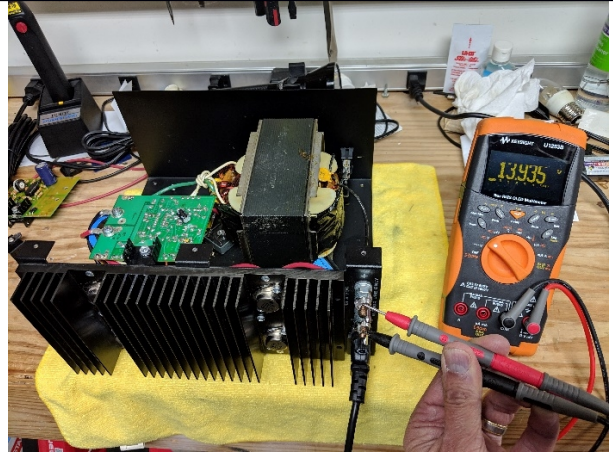
Now the good news. I had both Icom radios listed on my ARRL equipment insurance. I have had this insurance for years, but never filed a claim. I called the company that handles claims, and they emailed me a claim form. It took five minutes to provide the information. Within 24 hours of emailing it back, I received a phone call from an adjuster for Hanover Insurance which underwrites the ARRL insurance program. The adjuster was very nice and commented that he had never had a claim filed as a result of a cat peeing on something. He asked me to send him some screen shots of vendors selling the Icom radios to establish the replacement cost. The Icom 5100A is still in production, so that was easy. The Icom 880H has been discontinued, so I sent some shots of dealers selling used versions of the radio. The next day, the adjuster told me he was approving my claim, and a check arrived a few days later. I was very impressed with the ease of making a claim and the way Hanover handled it. The process took less than a week. I highly recommend the ARRL equipment insurance.

The three week old Yaesu radio that suffered the same fate as the Icoms was not scheduled on the ARRL insurance policy. It was so new, I had not gotten around to adding it, but my wife reminded me that my Chase Visa card, with which I had purchased the radio, has a benefit that covers purchases for damage, loss or theft within 120 days of purchase. Again, the claim process was simple. I emailed a copy of the credit card statement showing the date of purchase for the damaged item. Unlike Hanover Insurance, Visa has requested a written repair estimate or statement from an authorized repair facility that the radio is not repairable. While this is an extra bit of hassle, it's worth going through the process to obtain reimbursement for a \$400 radio.

West Mountain Radio manufactures the Model 4007U RigRunner which has over and under voltage cutoff protection built in to the PowerPole distribution box. It claims to shut off power to connected devices within 15 milliseconds if the voltage exceeds 15 volts. I have installed the Model 4007U in place of the Model 4012 RigRunner that did not have the over voltage protection. I hope I never have to find out if the protection circuit works. You can also purchase West Mountain Radio's PWRguard Plus which performs the under and over voltage cutoff, but lacks the PowerPole distribution feature and digital voltage and current display on the 4007U RigRunner.

The takeaways from my experience: 1) sign up for ARRL equipment insurance; 2) don't assume that old Astron power supply is bulletproof; 3) if your Astron linear supply fails, you can probably fix it for a fraction of the cost of a new supply; 4) consider an external device to protect your equipment from a power supply failure resulting in over voltage; 5) keep pets away from your ham gear.

Win Grant - W4WIN



Astron RS-35A with new regulator board.

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 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

Two (2) surplus type '30 (thirty) thermionic triode valves.
Matched pair preferred.
Will buy or trade.

Contact Alexander Sahhar at 804-560-3449 agsahhar@gmail.com

A donation of an older 2 meter rig (base or mobile, it doesn't matter) that doesn't do the CTCSS (PL) tones. I want to try creating my own tone generator to make these old radios work with the local repeaters. If successful, I will share the schematics and code with the group. The radio needs to be in working condition. Thank you. Please call Dan (w4erf) 540-872-5946 or email chronobot2001@gmail.com

For Sale: Kenwood TS430s, PS430 power supply and AT250 antenna tuner for sale \$950 plus shipping in US. It passed all the tests, USB, LSB, CW & AM on the Ham bands. Bought new in the box, 1984. call Bruce Haynes at brucehaynes@comcast.net

Thought For The Day!

Age is an issue of mind over matter. If you don't mind, it doesn't matter.



John DeMajo
Allan Johnson
Dave Robinson
Ken Leidner

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