



THE RICHMOND HAM

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MARCH 2012

The RICHMOND AMATEUR RADIO CLUB will meet Friday, March 9, 2012, 7:00 PM, at the Bon Air United Methodist Church, 1645 Buford Road.

PROGRAM: *The Role of the FCC Enforcement Bureau.* Joe Husnay, Chief Engineer at the FCC's Enforcement Bureau, South Central Region is our speaker.

Coming Events:

Radio School Registration, March 6, 7:00 PM

VE Testing Session, March 10, 9:00 AM

Classic Trail Marathon, March 17, 8:00 AM

April Club Meeting, April 13, 7:00 PM

March of Dimes Walk, April 22

Getting to know this month's speaker...

Our March speaker is Joseph P. Husnay, Chief Engineer of the FCC's Enforcement Bureau – South Central Region. Joe joined the FCC in 1983 after graduating from the University of Buffalo with Bachelor degrees in Physics and Electrical Engineering. He started as a test engineer at the Columbia Maryland laboratory; worked in DC reviewing proposals for new communications systems in the Office of Engineering and Technology and then served as a supervisor in the Media Bureau's TV Branch. In 1991 Joe transferred to the Norfolk Field Office and National Training Center as the Assistant Engineer-In-Charge. In 1994, Joe became the Engineer-In-Charge until the office closed in 1996. From 1996 to 2011, Joe worked as a Resident Agent where he focused on identifying and eliminating interference and enforcing safety related and technical telecommunication laws in North Carolina and Virginia. Since 2005, he also worked to support the National Response Framework by working under the direction of FEMA and the NCS, and he has deployed to areas struck by hurricanes Katrina, Rita, Ike and Irene, the earthquake in Haiti, and the 2011 flooding in Mississippi. This past summer Joe joined the Office of the South Central Region where he now serves as the Region's Chief Engineer and advisor for training and emergency response.

From the Prez

My first experience with the FCC was when, as a holder of a novice class license, I received a mailing from an FCC monitoring station somewhere in the Midwest that I had been heard calling CQ on a frequency that I was not allowed to operate on. I was devastated. I feared that any minute the FCC would show up and confiscate my radio bringing a quick end to my ham career after being licensed for only two months. I was also perplexed at how I could have been heard on the 40 meter band when I only had a few crystals for 80 meters. It turned out that my second harmonic was being monitored.

Once I got over my embarrassment, I took a little pride in knowing that at least I was being heard almost 1,000 miles away! I then bought an antenna tuner kit, and that solved the problem with harmonics.

My second contact with the FCC was when my parents drove me to the Granby Street Post Office/Federal Building in Norfolk to take my General test. Years later, in my job as an Assistant United States Attorney, I had a referral from the FCC to assist with a matter where an unlicensed transmitter near the McGuire VA Hospital was operating on the commercial FM band. The FCC had made numerous attempts to convince this pirate broadcaster to cease and desist, but he ignored their requests. That's when I met our March speaker, Joe Husnay.

I was fascinated at the technology the FCC has for determining the location of a radio transmission, and I came to learn that protecting the airwaves for those who hold licenses, like us, is an important part of the FCC mission. Joe will be speaking about the role of the FCC Enforcement Bureau, and in particular, locating sources of interference and the FCC's role in emergency response situations. I'm sure you will find his talk fascinating.

73, Win

License Prep Classes Start March 6

Registration for the Spring license prep classes will be held on Tuesday, March 6th, at 7:00 PM. You may register the first night of class, March 13, if you can't make it to registration. Classes are held Tuesdays from 7:00 to 9:00 PM and run for ten weeks. Exams are offered the last week of classes. Tuition is \$15. We take orders for books at registration (\$30 which includes a CD ROM with practice tests) and the books will be available for pickup at the first night of class.

The spring 2012 school faculty include: Fritz Schumacher, K14HWQ, teaching the Technician class; Blake Forbes, KK4FLN, teaching General with Mayron Pearman, KG4RPQ, assisting; Bruce MacAlister, W4BRU, teaching Extra with Buck Vaughan, KR4NL, assisting.

Bruce MacAlister, W4BRU, school coordinator

The Tech Corner

The weather is getting warmer and a Ham's attention is turned to the outside and antennas. What is it that you can do to improve your station? What technical problems do you have that the Club can help you with? Win and the other officers work hard to come up with programs, but we are not very good mind readers. We need to know what topics you are interested in. We all enjoy the social part of the club meetings; however, we are a radio club. We really need some input on technical

interests and activities. What would you like to pursue in the way of Club projects? We did several kit building projects in past years – would you like to pursue several group kit builds or would a group project such as a fox hunt be of interest?

Several years ago interest was expressed in building a vacuum tube project. We need to keep our skills polished on foundation technology, if nothing else for pure fun. Would you be interested?

I encourage everyone to read your QST articles and take advantage of all the great resources the ARRL has to offer. If you are not an ARRL member, please join. It is vital for the hobby, good for you and the Club.

Please contact Win Grant or any of the officers with input to the above questions. I would be happy to talk any time or receive an email. All members should have received a Club roster with names and contact info.

73, Tom Flippin, KD4CMK – littleredhouse4@verizon.net

RARC VE News

Our next VE testing session will be **Saturday, March 10th, 9:00 AM**, at the Bon Air United Methodist Church.

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

February Meeting Minutes

Meeting Date: February 10, 2012

Meeting Time: 7:00 PM Called to order at 7:03 PM

Presiding Officers: Pete Fundinger, AA4PF, Vice-President and Patricia Johnson, N8WEA, Secretary

The Vice- President called the meeting to order and welcomed all. Visitors included were: Jack Simala, Matt Sahhar, Al Sahhar, and David Bell, KE4HUJ (whom also became a member tonight)

Old Business:

The January minutes were approved and motioned to accept.

The November Treasurer's report was provided by Patricia Johnson, N8WEA (in the absence of the treasurer, Richard Arnold, WA4FEH).

Marshall Ervine, N4XBP reported that he had completed an audit of the financial records of the Richmond Amateur Radio Club. Richard had furnished all the necessary information for the audit. All records were found to be complete and correct. (To the penny...good job Richard)

Pete announced that the RARSFest flyer was available if anyone was interested. The hamfest will be Saturday, April 7, 2012 from 8:00 – 3:30 at the Jim Graham Building, State Fairgrounds in Raleigh, NC.

New Business:

- New membership application was received from Robert Threatt (no call yet, will be taking the upcoming class) and David Bell, KE4HUJ. A motion was made and seconded

to approve the applications. Welcome to the club!

- Bruce MacAlister, W4BRU gave a report on the RARC School. The new classes will begin March 13, 2012. Registration will be on March 6, 2012 at the United Methodist Church. The classes are all fully staffed now and classes will be offered for tech, general and extra. Thanks to all those who stepped up to help. Flyers were available on the back table to inform anyone interested about the school or club.
- Tom Ebbert, KG4BIZ Frostfest coordinator, thanked all that helped man the tables at the Frostfest. He was pleased with all the assistance and encouraged it in the coming years.
- Joe Palsa, K3WRY, member and also vice president of RATS, announced that the Frostfest was a big success and well attended. (@ 2,500 attendees). There were 60 or more tests administered and many passed. All vendors were happy and pleased with sales. (Thanks for the good weather). Big thanks from RATS for all who helped out.
- Jim Bates, KJ4WLH, announced that he has a DVD on D-STAR if anyone would like to borrow. It could be passed around to members. Thanks, Jim! ☺

There was no further business, so the meeting was adjourned @ 7:20 PM. Pete, AA4PF, announced that the original speaker for tonight, Dave Metzger, WG4T was unable to attend due to health reasons, so he would be presenting a slide presentation on wireless access points, himself. The program was enjoyed and allowed time for any discussion. Thanks to Jim, KJ4WLH, for his assistance also.

Respectfully submitted,
Patricia Johnson, N8WEA

Welcome our new members!

David Bell, KE4HUJ, and Robert Threatt, (no call yet).

Public Service Events

The Classic Trail Marathon for the Fisher House for Vets is Saturday, March 17, at Pocahontas State Park. It is from 8:00 AM until 2:00 PM and we need people with HTs only. We are looking for a dozen people. If you are interested in helping out, please email Brad Price at ki4bwj@ki4bwj.org.

This year the March of Dimes march for babies is being held on Sunday, April 22, in Monroe Park. Volunteers will need an HT and good shoes. Come on out and have some fun. This event usually takes till about noon. If you can help, please contact Roy Schultz at royschultz@hotmail.com.

Roy, K14MCX

LightSquared Loses On Frequency Allocation Over GPS Interference

The FCC reversed its tentative approval of the LightSquared Inc. LTE network and denied the application because of the network's interference with GPS devices. LightSquared Inc. was created by the head of a large hedge fund with strong political connections to both political parties. As reported by the Wall Street Journal on February 17th:

"Philip Falcone, the money manager who has staked his hedge fund on wireless network start-up LightSquared Inc., has hired lawyers to map out a strategy to overcome a regulator's decision blocking the network's launch. Hedge funds that own some of LightSquared's \$1.6 billion of loans have also sought advice on possible litigation."

So, it's not over yet. The unexpected FCC reversal seems to be because of strong opposition of major GPS-dependent organizations such as the airlines, trucking companies, and the military.

That's quite different from the fate of smaller, less powerful spectrum users like hams. Talk to hams operating in the Manassas area when the BPL tests were occurring. It took a federal lawsuit by the ARRL to get a review of that decision and then the FCC only gave a little. Then there is the Recon Scout and some new medical gear that take over some of the 70-cm spectrum (440MHz) that we use on a secondary basis.

For those not familiar with the controversy, LightSquared bought some satellite frequencies near those used by GPS satellites to provide smartphone broadband service – LTE or Long Term Evolution – to sell to wireless phone companies. To augment the weak satellite signals they were building 40,000 high power ground stations. As carefully controlled tests showed, it's these ground stations and their power that swamped the GPS satellite signals and made GPS receivers near a LightSquared transmitter unreliable. It will be interesting to see what the multi-billion-dollar hedge funds do to get their investment back. It will probably get nasty.

- Bruce MacAlister, W4BRU

The Mis-Adventures of a Backyard Antenna Hanger

By Jim Bates, KJ4WLH, January 2011

The sky was blue, the temperature was (finally!) a comfortable 40 +/- degrees Fahrenheit and the day had arrived – I was finally ready to hang a new antenna in the back yard.

I am a very new member of the hobby. I was licensed as a Tech in July, 2010. As an aspiring operator, I needed to operate SOMETHING. That 'something' happened to be a 2m/70cm rig – which, of course, needs an antenna to operate.

I'm something of a chicken when it comes to heights (and snakes!); if I never climbed a ladder for the rest of my life, I think I'd be quite content. My challenge was where could I mount a 2m/70cm antenna. I'd selected the Diamond X50 as the model and was debating (with

myself) as to the merits of mounting it on our chimney or inside our attic.

My chicken spirit won the debate and I mounted the X50 in the attic, which was around 30 feet above ground level. My wife wouldn't go for the antenna on the chimney... *yeah – that sounds good!* Never mind that I couldn't image getting on a ladder 35 feet in the air and trying to mount it.

The X50 worked well. All things being equal, it would work forever just fine. I could easily hit all of the local repeaters and simplex operation covered plenty of area. When the D-Star repeater went online late last year, I was able to hit the repeater BUT, I needed to bump the power up to 50 watts for "reliable" communication. 5 watts wouldn't do it, and 15 watts was somewhat hit or miss. What to do, what to do...

I have yet to meet a HAM who is content with all of his gear; you're now reading a story written by a discontent HAM. My wife has a different opinion; perhaps I should be pleased with my current setup. "Who else could I want to talk with anyway? Doesn't all that radio stuff already do what you NEED it to?"

Well, I guess she has a point, BUT, back to my dilemma: Could my attic be "significantly" causing interference? Is the height of the antenna too low? Am I losing "too many" dB with my coax loss? Should I get an antenna with better gain? WHAT SHOULD I DO? Days turned into weeks, weeks into months and finally – a PLAN!

I NEEDED, notice that I didn't mention the word WANT, I NEEDED to get my 2m/70cm antenna outside of the attic. That's the only way that some of those pesky questions would ever get resolved. Since I planned on relocating the antenna outside, this might also be a really convenient time to reconsider addressing some of the other questions: Should I get an antenna with better gain? YES! Diamond X300 on the way. Am I losing "too many" dB with my existing coax run? YES! Relocating my "shack/desk" to a nearby window and using 35 feet of LMR400 will surely help. Is the antenna too low? YEP! The antenna needs to be as high as "chickenly" possible. Hmm, how to get an antenna in a tree? How indeed?

Well, I've learned there are many ways for those who love the earth and have neither the courage, strength, nor coordination to gain altitude. Bow and arrows, slingshots, fishing rods, spears, bricks, stones, hire young kids who like to climb trees – a variety of unique ways to get a piece of rope up in the limb of a tree. Slingshot!? Hey, my 11 year old son has one of those! That sounds pretty easy!

I'd seen advertisements for the slingshot with a fishing reel mounted on the front. \$90 for that? Really? Seems like a whole lot for something so simple, I think I'll pass on that and make my own. I mean, how hard is getting a small sinker tied to some monofilament over a branch.

I've got it – I know how to make my own launcher! I'll take some coat wire hanger and form a T shape with it.

I've got a spool of monofilament; I'll just push the coat wire hanger through the center of the monofilament spool and be able to hold the wire/spool with my hand while I hold the sling shot. Easy to make and parts are readily accessible!

Well, back to the moment at hand! The day is beautiful, wonderfully mild after weeks of unseasonably cold, wet, and sometimes snowy weather. I've got my spool of 10 pound test monofilament, my homemade spool holder, a package of 1 ounce lead sinkers and my sling shot. I'm more than ready to go! Let's get this rope in the air.

I've never claimed to be an engineering genius and today was wonderful confirmation that I am not. As I assemble the parts, I get the spool of monofilament and pull off the rubber band which holds the monofilament from unspooling/unraveling. It seems that the monofilament was desperate to obtain relief from being constrained on that spool and immediately 3 feet or so unraveled in less time than a heartbeat. Hmm. That stinks... I'd better "re-wrap" it on the spool. Before I re-spool, I might as well tie on the sinker. Done. As I begin to fumble with re-spooling the monofilament, I accidentally drop the lead sinker. Since the sinker was tied to the monofilament, the monofilament comes off the spool and wraps itself around my fingers.

My eyesight is not what it once was and 10 pound monofilament is pretty hard to see sometimes. Fortunately, all the monofilament is still connected to the sinker and the spool – so I just put everything I'm holding on the ground. I grab the spool and try to "re-spool" the monofilament. Not so fast, the monofilament is wrapped around the slingshot tubing and I think it's now in a knot. Arghh. Ok, now I've got the slingshot unraveled – back to "re-spooling". I think it is amazing that monofilament can catch on things I can't see – like small twigs, pieces of bark and other miscellaneous yard debris. Even the slightest bit of breeze helped the monofilament catch on the tree bark of a nearby tree.

All right! I've got the gear all set up again, spool held in place in front of the slingshot, slingshot in hand and lead sinker ready to go. Here we go, I look up and estimate the trajectory so I can get it over just the "right" branch. I pull the sinker back, things are looking good! I let go of the sinker and POP! The monofilament had, unbeknownst to me, unwrapped itself around the back of the spool. The sinker arced beautifully across the Carolina Blue sky without any hindrance at all! Free flight, the sinker was free! I watched as it went over the roof of my house and somewhere in either my or my neighbors front yard it landed – permanently. 1 sinker lost...

Ok, I know what went wrong. I've just got to remember to make sure that the monofilament doesn't "unspool". Seems like fishing reels deal with this problem pretty well. I suppose I can just take one of my fingers and gently keep some light pressure on the monofilament and as soon as I let go of the sinker, the monofilament will spool off as intended. I've got the plan down and I start to "rebuild."

Pick another sinker, tie it on the monofilament and drop it. Again. Spend some more time picking small sticks out of the monofilament, oh, and untying a knot. Finally done. I've been outside now for a good half hour and my hands are starting to get pretty cold. Tying monofilament in the cold is no fun.

I've got the slingshot ready for round two. Everything is ready, I've got the monofilament right where I want it – a finger lightly preventing the monofilament from unspooling. This time will be perfect, I just know it. I pull the lead sinker back and...

Have you ever experienced a moment that you just know lasts for a much longer time than actually happens? You hear about folks in a car crash that say it seemed like the crash took a whole minute, but it was really over in seconds? It's like time slows down and their brain is super active, noticing the most minute details. I had that experience...

In "super slow" time I noticed, EXACTLY as I let go of the sinker that the monofilament had wrapped itself around the slingshot band. Yep, as careful as I thought I had been, I wasn't careful enough.

I watched the sinker, it was the most amazing slow motion, leaving the slingshot pocket and with the slowest movement go past my hand and past the slingshot frame. Then, the sinker slowed down, I'm telling you that I saw it stop in mid-air and then start BACK at me. I knew it wouldn't be good, I mean, I KNEW it. I just watched it like I was watching a train wreck in slow motion – here comes the sinker, 1 ounce of hard, cold lead and then POP! It hits my knuckle hard. Dead on the knuckle, no bone, no flesh, right on top.

I've hit my thumb plenty of times with a hammer, the pain was pretty close. Not agonizing pain, mostly the pain of stupidity. I couldn't do anything but laugh. It was nothing but my own doing, honestly – I never thought that I'd launch a 1 ounce sinker at something and have it come back the way it did. But isn't this the way all these kind of stories work? "I didn't think such and such would ever happen, but it did."

Well, my engineering feat was clearly a failure. I know the reasons why but I still had the challenge in front of me. I needed to get that rope up in the tree. Clearly, using the spool of monofilament wasn't in the future for me. How about using a fishing rod? That might work...

Back to garage to find a fishing rod and my 11 year old son! I cut the dastardly sinker from the spool of monofilament and tied it to the monofilament on the fishing rod. A few words of direction, "Son, hold the rod and aim it directly at the branch." I grabbed the sinker; aimed and launched it on what I hoped would be its final journey for the day!

At last! The sinker arced over a branch that would work and fell to earth trailing the monofilament! I thanked my son for his help and enjoyed the moment of victory. The moment was only tainted by the dull throbbing of my 3rd knuckle on my left hand.

For those curious, the dB gain helped a lot! The relocation increased my S-Meter reading for one particular repeater from S5 to S9+20. I'd do it again in a heartbeat, but not with my homemade knuckle buster – rather, with my 11 year old son and his fishing rod ☺

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 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/>.

For February and all even-numbered months, FCC test sessions are provided by the RAVE group. Coordinator, Pat Wilson, W4PW (932-9424) has information on his website <http://w4pw.org>.

- RARC has the first D-STAR digital repeater in the area. 147.255 (+) and 443.7125 (+). We now have the gateway tied into the worldwide D-STAR network.
- The Club sponsors several 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
Age 12 and under	\$5.00
Age 13 to 18	\$10.00
Regular Membership	\$15.00

- Lots of information about the Club and our activities is available on our website, www.rarclub.net. Check it out!

RARC's Field Day

1940's Style



The SWAP SHOP

Club members may list their wares in the newsletter. Send descriptive information to Barbara at wa4vuo@arrl.net. 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.***

For Sale: Two 2-meter radios. **ICOM IC-211**, 2-meter SSB, CW, FM transceiver, mic, manual, IC-RM2 computerized remote controller. \$200. Also, **Kenwood TS-700A**, 2-meter SSB, CW, FM transceiver, mic, manual, VOX 3 VOX unit. \$125. Will sell both radios for \$300. Call Jerry Jones, WA4COX, (804) 449-6245.

Thought for the Day

Some people hear voices. Some see invisible people. Others have no imagination whatsoever.

73 de:

Win Grant	WA4SSG	PRESIDENT
Pete Fundinger	AA4PF	VICE-PRESIDENT
Patricia Johnson	N8WEA	SECRETARY
Richard Arnold	WA4FEH	TREASURER

Virginia Ham Radio Cruise-In

Cruise to Charlottesville and receive a "Certificate of Participation" just for showing up. No mobile rig required; however, special certificates will be awarded to the most innovative mobile station shown in a car, truck, RV, motorcycle and bicycle; as well as a certificate for the ham traveling the longest distance.

April 28, 2012 - 10 AM to 4 PM - Darden Towe Park - Charlottesville (A Half-Mile North on Route 20 from Route 250 East of Charlottesville). Talk-In will be on 146.760 Repeater with WA4TFZ No Tone Required. Query: Jim Crosby, K4JEC, 434-823-2277.

Come to Charlottesville and participate in a showcase of mobile amateur radio equipment. Pack a picnic lunch and spend a fun day in the park with your fellow hams from all over Virginia. To exhibit your vehicle, please register below. Pre-registration is not required for participation but will be appreciated for planning purposes. Admission is FREE but a registration fee of \$5 will be collected to be judged.

Check our website: www.albemarleradio.org for specific and last minute details. Mail to: AARC, P. O. Box 6833 Charlottesville, VA 22906. email to: k4jec@arrl.net. Rain or Shine, the event will go on with shelter available. This event is sponsored by the Albemarle Amateur Radio Club.

Pre-registration

Call: _____ Name: _____
(First & Last Name Please)

Mailing Address: _____

City: _____ State: _____ Zip: _____

Email Address: _____