



THE RICHMOND HAM

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January 2018

The RICHMOND AMATEUR RADIO CLUB will meet Friday, January 12th 2018, 7:00PM, at the Bon Air United Methodist Church, 1645 Buford Road.

Coming Events:

Frostfest: Saturday, February 3, 2018, from 8:30AM to 3:30PM. <http://frostfest.com/wp/>

This Month's Program: Delayed Annual Holiday Social Meeting. Bring your favorite snack food and drink and finally have time to do all the socializing that you don't have time for at the monthly meetings!

December 2017 RARC Meeting Minutes

Meeting Date: December 8, 2017

Meeting Time: 7:00 PM

The December meeting was canceled due to inclement weather.

Letter from the President

What did Santa bring you - anything other than coal? Although right now a stocking full of coal might come in really handy - I am writing this article in the midst of some temps that are in the high teens (Fahrenheit) and I begin to understand the appeal of Florida, Arizona, and Texas. If you care, and I'm SURE you do, No - I still have not worked Hawaii and NO, I haven't built that 20m vertical that I FULLY INTENDED to build over the holiday season. I had all the best intentions mind you, I was all set to go and my XYL said those dreaded words, "Hey there, I have a few projects that 'WE' need to work on." So much for K8OI Project Time. Not bad projects, just not MY projects - but I suppose I'm all alone with these types of experiences...

On a serious note, I do hope each of you have written a letter/e-mail to your legislator about the Senate Bill which, as written, would severely affect Amateur Radio use of handheld devices while in motion in a vehicle. Strangely, CB radio,

is unaffected by this same legislation. I have written my Senator and STRONGLY encourage each of you to do the same.

FrostFest is coming up soon, Feb 3rd! This will be the last FrostFest notice in the newsletter because FrostFest will occur before next month's RARC newsletter and meeting. RARC's VP (W3PPY) has arranged a table and if you'd like to help, please reach out to George and ask where you might be of assistance. The RATS crew can ALWAYS use additional volunteers with FrostFest - if you would like to help them directly, please contact Tim Farrell (KJ4NPB).

So, lemme ask you - "Are you operating?" Doing anything on HF at all? How about driving around town - chatting with friends on any of the local repeaters? There sure are a lot of interesting aspects to Amateur Radio - one of the most FUN is to USE the airwaves; give a shout out and say hello to someone else who shares your same interest(s) and hobby!

We're also starting up the next iteration of "Radio School" - think about upgrading or even TEACHING a class on a subject that is near and dear to your heart! Do you love operating PSK/RTTY/FT8 - want to help others understand how it all works? Please consider running a 1/2 day session and help "Elmer" some of those folks who might have an interest, but don't really know who to contact to get some help!! It's a lot of fun to see other "catch" the excitement of an aspect of Amateur Radio that you also LOVE! Regardless, the class schedule will be out shortly (if not already) and we'd love to see you participate :)

73 de K8OI

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 January testing session will be on the 13th at the Bon Air United Methodist Church at 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.

RSS – a quick summary of RARC news

Look near the top of the club web site, <http://rarclub.net/>, and on the left you see an icon that looks like something radiating a signal. Actually it is a quick way to check on new entries on the website called an "RSS feed." Click it and you get a summary of the last few posts. You can have it put as a link in your on the browser list as you see in yellow. So each day or four you click the that link and you get a quick list of the most recent posts. If one looks interesting, click it in the list and it takes you directly to it. If everything looks boring, just go back to what you were doing.

Reported by Bruce MacAlister, W4BRU

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 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.

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!



Frostfest will be on **Saturday, February 3, 2018**, from 8:30AM to 3:30PM. Everything you need to know about Frostfest can be found right here!

<http://frostfest.com/wp/>

Star Trek or Harry Potter?

Nathan "Chip" Cohen, W1YW, of Belmont, Massachusetts -- the founder of Fractal Antenna Systems Inc and inventor of the fractal antenna -- has been granted a patent for deflective electromagnetic shielding -- essentially "cloaking" technology to defend against detection by radar and similar technologies.

"Ham radio experimentation can lead to some pretty cool innovations!" Cohen said in response to a recent QRZ forum post about the patent. "Let's keep that spirit alive in 2018."



Chip Cohen, W1YW, makes use of a Sputnik 1 satellite model during a demonstration.

The patent covers electromagnetic cloaking/deflection of, among other things, satellites, rockets, towers, antennas, vehicles, body coverings, ships, spacecraft, and even people.

"Much time and effort has been devoted to the quest for so-called invisibility machines," the patent's background information states. "Beyond science fiction, however, there has been little, if any, real progress toward this goal."

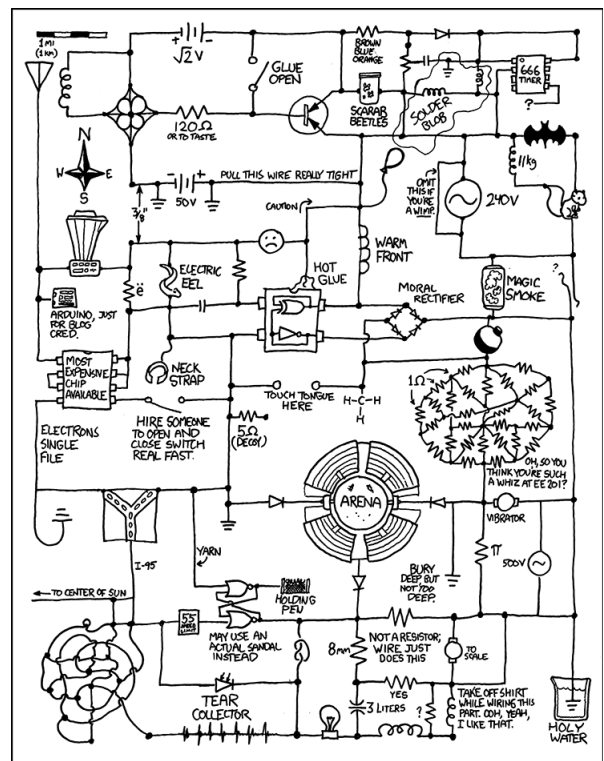
According to the detailed description, the technology "provides one or more surfaces that act or function as shielding and/or cloaking surfaces for which at least a portion of the surface includes or is composed of 'fractal cells' (small fractal shapes, functioning as

antennas or resonators) placed sufficiently close to one another, so that current present in one fractal cell is replicated or reproduced to an extent in an adjacent fractal cell. Without being limited by any theoretical explanation, surface plasmonic waves are believed to cause such replication in conjunction with evanescent waves." The resulting surface would deflect around an object.

In terms of backscatter, upon which radar systems depend, Cohen has explained it this way: "The incoming wave reflects off a boundary condition at the object. Its reflection is out of phase and phase-cancels with the incoming wave. Bye-bye, backscatter."

Fractal Antenna Systems first publicly demonstrated "person invisibility" in 2012 for a Radio Club of America audience. He also has demonstrated invisibility cloaks at Hamvention® and at the ARRL New England Division Convention. According to the company's *BusinessWire* release, "Uses of the newly patented technology extend to commercial needs such as towers, antennas, people, and shielding, but it may also be used in defense and intelligence arenas."

Cohen, 62, applied for the patent in 2012. An ARRL Life Member and active DXer, he has been a radio amateur for more than 50 years.



Radio 101 #7

by John DeMajo K5HTZ

As noted in our last segment, Amateur radio enjoyed the solid interest of many early experimenters during the first quarter of the twentieth-century. There was, however, a break in all activity between 1914 and 1918, the years when World War I occupied attention of the country and the world. Copious amounts of historical information is available, indicating conditions endured by ham operators during that period. For example, early issues of *Wireless Age Magazine*, which are now available on-line, detail the efforts of the U.S. Government to censor radio communications between countries, and the counter litigation filed by the Marconi Company and others to circumvent the Wilson Proclamation of September 1914, which was initially intended to maintain a neutral position for the US in the war. The Marconi Company, which had a foot in both America and Europe, failed to adhere to the censorship requirement of the act. After it was reported that non-neutral transmissions had been handled by the Marconi station at Siasconsett, Massachusetts, the U.S. government shut that station down.

In the years that immediately followed, numerous articles appeared in *QST*, *Radio Amateur News*, *Wireless Age*, and other publications, explaining the various views on how the war should affect and be affected by radio. Radio provided a means to warn troops of an approaching enemy attack, and it was soon learned that Germany was directing its Zeppelin attacks and battle maneuvers by radio.

Of course Radio Espionage then became a genuine concern. In the U.S. Ham radio realm, a complete moratorium was placed on the operation of amateur radio transmitters. The American Radio Relay League's July, 1917 *QST* magazine contained a report by Arthur C. Young entitled "What Happened at Buffalo When Closing Orders Were Received," which described the dismantling of a university club station. *QST* also began carrying periodic reports from former amateurs who were enlisted in the Navy. In the September, 1917 *QST*, the final issue before suspension of publication for the duration of the war, an article entitled "Another Open Season,"

questioned the very future of amateur radio.

While the demands of war placed the future of amateur radio into a period of uncertainty, there were many developments which evolved from the needs of war. One such development was the use of broadcast music to calm soldiers who were in combat. It is believed that the success of these military conducted psychological experiments, prompted the use of music for entertainment even in early post-war radio programs. Other wartime advancements included the invention of the transceiver, developed by AT&T, to provide two-way radio communications with aircraft, and also the somewhat portable radio station which could be carried by mule, along with a number of measures and counter-measures designed to triangulate and track radio transmission sources.

The war ended in 1918, and by 1919, amateurs had begun the transition to civilian life, bringing with them a wealth of experience gained. Much of that spirit has been captured in the articles from *QST* that appeared during that post war era. In researching the history of radio, one soon finds that *QST* is so much more than just a journal for the reporting of amateur radio contests, activities and technical articles. It serves as detailed documentation of the entire history of ham radio, covering every facet of the hobby from its very beginning. The Museum Of Yesterday is fortunate to have a collection that includes every issue of *QST* from its beginnings in 1915, through the 1980s. This collection has been invaluable in producing our "History Of Radio" series, and in organizing our collection of radio artifacts from the Ham radio side of communications history.

Unfortunately there are very few examples of actual WW-I military electronic gear for historians to preserve. Remember that radio was in its infancy during that period, and hence it played only a small role in the war. Reliable communication by field equipment was limited to around 2000 feet, and radio equipment was primarily bulky tube and storage battery based units which required mules for transportation into what was a war fought mostly by foot soldiers. Telephone and telegraph played a somewhat more extensive role, but the military did

manage to see the value of wireless communications in combat.

Our Museum Of Yesterday exhibit that accompanies this article, is an authentic World War I combat portable telegraph station made for the U.S. Army Signal Corps. It is a complete sending and receiving telegraph office, in a pocket-sized container, which could be carried by field soldiers, and connected to existing telegraph lines, or newly provided field wiring.



RARC Club Items for sale

Below is a list of items belonging to the RARC and will be for sale at Frostfest.

If you're interested and want first crack contact Jim Bates.

Used price range	Current Location	Manufacturer	Model	Serial	Working Status	Description
\$75 - \$114	RARC locked cabinet	Astron	RS-20M	97060035	Working	29 amp, ~12v DC power supply
\$50 and up	RARC locked cabinet	Telegraph Apparatus Co	none	none	Untested	Antique bug
\$40 new	K4ZUT	Daiwa				Coax Switch, 2 way, So239
\$15 to \$25	K4ZUT	Neiko		1.306E+10		Digital tachometer
\$100.00	K4ZUT	TYT Electronics	TYT-MD380	605A37661	New, untested	DMR UHF 5-w HT
\$100 new	K4ZUT	DX Patol				DX Patrol SD Rcvr 100KHz - 2GHz
\$30 - \$50	W4BRU	Micronta (Radio Shack)	22-220a		New, boxed	FET Analog Multimeter 22-ranges
\$70 to \$95	RARC locked cabinet	Wavetek	142	55303	Untested	AF VCG generator 1KHz to 10MHz, missing power cord, Belden 17258S
\$60 new	K4ZUT	TDXOne	TDQ8A			HT 136-174; 400-480 MHz
\$1,100 eBay	RARC locked cabinet	Yaesu	FT-736	51970023	Untested	Transceiver 2m + 70cm
\$35 – price of Baofeng	W4BRU	Yaesu	FT-252	3E010326	Working	VHF handy talky, 120v charging stand, antenna

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.**

For Sale: Carolina windom wire antenna kit. Radio works model short40.

New never been opened. Pictures available. \$99,95 plus freight. Get on the air today with this bargain.

Flex 5000a SDR transceiver, 100 watts 160 to 6 meters. Comes with remote tuning wheel, fire wire cable, Built in 100 watt antenna tuner and 12VDC power cable. \$1399 cash. Pictures available.

Yaesu Vx7R HT. Water proof. 5 watts. Also RT systems software for easy programming. Microphone, hi speed plug in desk charger, wall wart. All in original box. \$249.00 cash. Great hand held all channels. Pictures available. Contact Jon Bennett, 804-241-6555

Wanted: 100 Watt Dummy Load From NQ4A, Jon Bennett 804 241 6555

Wanted: 23CM Beam. Contact Ben Richardson, K4ITQ. 804-840-6800 - kd4tzq@comcast.net

For Sale: Yaesu FT-897D 160-6M + 2M + 440 MHZ. Pristine condition. \$700.00. Call Lew Best @ 804-740-3890 / lewbest@verizon.net.

Thought For The Day!

People who say it can't be done, should not interrupt those of us who are doing it.

Jim Bates	K8OI	President	(804) 592-1068	jl Bates4@gmail.com
George Golding	W3PPY	Vice President	(804) 318-6951	w3ppy@arrl.net
Tom Newman	KJ4LVC	Secretary		
Ken Leidner	WV0L	Treasurer		

Famous Hams?

