

The Signal Report

A Publication of the Greenwood Amateur Radio Society (GARS)

VOLUME 18 ISSUE 8

AUGUST 2020

[HTTP://WWW.W4GWD.ORG](http://www.w4gwd.org)

W4GWD@ARRL.NET

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The W4GWD Repeater Network

147.165+ t107.2

Echolink: 584003

443.900+ t107.2

W4GWM/R

145.420- DV

W4DEW/R

146.910- t123.0

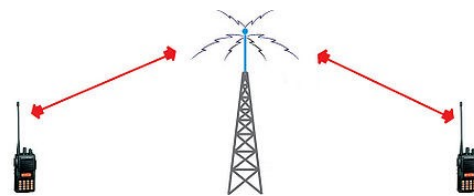
WJ4X/R

442.600+ t107.2 / DV

Ham Radio - Social Distancing for Over 100 Years



August 2020 Meeting



Our Club normally meets at the Westminster Presbyterian Church, located at 2330 Cokesbury Rd, Greenwood, SC. We meet on the 2nd Tuesday of each month making our August meeting on the 11th.

Unless notified otherwise it will be held “On the air” at 8 p.m.. A net roll call will be taken and it will become the official attendance roster for this meeting. The clubs 2m (147.165) and 70 cm (443.900) repeaters will be linked during that time. It’s still with us so continue to **practice social distancing, the frequent washing of hands and the wearing of masks, Covid-19 is still with us and taking lives.**

Greenwood Amateur Society Recurring Events:



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Chat 'N' Chew

Every Friday at 11:30 a.m. the members of the Greenwood Amateur Radio society meet at a local restaurant. However, due to Covid-19 they have been temporarily suspended until further notice.

Weekly Nets

Each Thursday night at 9pm on the 147.165+ machine, The Greenwood Amateur Radio Society holds our weekly 2 meter net.

Our UHF net on 443.900+ is held Mondays at 8pm

Help spread the word for everyone to check-in to our nets. If you would like to fill in or be a backup net controller please contact [Tedd Davison](#)

VE Exam Session

The next GARS ARRL Volunteer Examiners (VE) Team exam date is to be determined.

If you have any ideas for books you'd like to see in the GARS Library, Contact Mitch KJ4JGP

Congratulations!!

Happy Birthday!

Mike Wills	KA4CSM	8-9
Sherree Wills	fmly mbr	8-16
Darrell Manning	AF4E	8-31

Happy Anniversary!

Mitchell (KJ4JGP) & Diantha (N4DLL) Litwer
8-15

Are you an ARRL Member? Joining ARRL helps protect our rights as Amateur Radio Operators as well as providing education, QSL Bureau, technical advise, and the ARRL VEC. <http://www.arrl.org>





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AK4EK, James Clifford “Jim” Gresham, SK, July 7, 2020, Vietnam and Desert Storm Veteran, Current member of the Greenwood Amateur Radio Society, he will be remembered as always being willing to lend a hand and was a valuable asset to our club. He will be missed. RIP Jim.

KI4WJO, Jewell M. Mimms, SK, July 4, 2020 and her husband, Joe K4GBH, SK December 2015, came to Greenwood and joined our club in 2005. Jewell was a net controller on the GARS ladies net (147.165.) She was a friend to all and made you feel as if you had known her all her life. She will be missed. RIP Jewell

If you have any ideas for books you'd like to see in the GARS Library, Contact Mitch KJ4JGP

RFI Filters and Ferrite Chokes AF5NP

In our [previous post](#) we introduced the reality of radio frequency interference (RFI) which can affect hams on occasion.

A potential remedy for RFI (in addition to shielding, as mentioned there) is some form of RF filtering. Filters are used to either reject (attenuate) or accept (pass) signals over a range of frequencies. A couple of license exam questions down below exemplify this topic.



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RFI Filters and Ferrite Chokes, Continued

Filters are a fundamental concept in electronics but details can get complicated so we will share only basic info and give several references for your own research.

Before reading further the reader is strongly advised to review an excellent article, [Introduction to Filters](#), from All About Circuits. Credit to that site for the filter diagram below.

Filters can be categorized into four essential types:

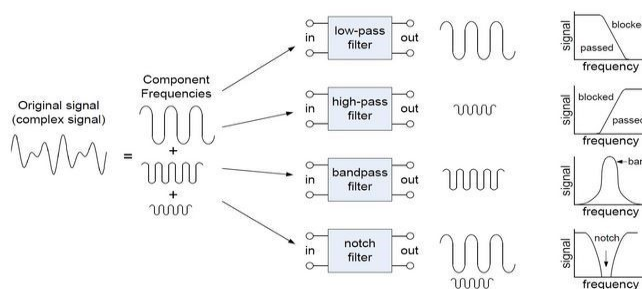
Low-Pass: Passes frequencies below cutoff and attenuates higher frequencies

High-Pass: Passes frequencies above cutoff and attenuates lower frequencies

Band-Pass: Passes frequencies only within a specific range, attenuates others

Band-Stop/Band-Reject (Notch): Attenuates frequencies within a specific range, passes others.

This diagram compares and clearly illustrates how these four operate:





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RFI Filters and Ferrite Chokes, Continued

Regardless of design and type, all filters will introduce some loss of the passed signal ([insertion loss](#)). Good filter designs will minimize loss and allow the protected device to function properly.

In audio equipment the [tone controls](#) are typically high-pass and low-pass filters with adjustable cutoff for treble and bass . More sophisticated tone controls may add a mid-range adjustment while a graphic equalizer adds filters for multiple narrow frequency ranges.

Many RFI filters are low-pass because hams may need to remove transmitted HF or VHF/UHF signals from low frequency (50/60Hz) AC power lines, audio (25Hz-25kHz) signals, VGA video (31kHz) signals, or lower-frequency (AM) radio.

Filters can be made using active circuits and/or software but more commonly, RF filtering is accomplished with simple passive electronic components: capacitors (C), inductors (L), and resistors (R). Simple LC, RC, RL, or RLC filters can be made from combinations of these parts. The simplest low-pass filter is a capacitor across (shunt) a signal, an inductor in line (block), or both.

Besides electronic components, something completely different and maybe unexpected can also form of passive low-pass filter. Ever wonder what that bulge is near the end of many audio, video, and computer cables?



RFI Filters and Ferrite Chokes, Continued

Specifically, it's a [ferrite bead](#) or choke. If you cut one open, under that plastic cover you would find that the cable passes through a gray tube.



That tube is made of ferrite material, a ceramic with high iron content and high [permeability](#). While more complex than this, an easy way to visualize how ferrite beads work is to say that signals passing through them are coupled into the material which becomes resistive over the intended frequency range and dissipates the unwanted energy as heat.

Seems a bit mysterious and magical, but it's science. Different ferrite compositions have varying frequency, power handling, and temperature characteristics so selection is critical.

Ferrite beads (chokes) are typically simple and inexpensive interference filters to install on household and ham cabling to solve RFI problems. Add-on clam shell ferrite suppressors can be snapped in place over existing wiring.





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Congratulations To Russell Myrick, KN4TUI for becoming our clubs newest Amateur Extra on 6-28,20. Good job Russ

HAMXIETY



THE FEAR OF ANTENNAS NOT WORKING CORRECTLY ONCE THEY ARE MOUNTED ON TOP OF YOUR TOWER.

Radio Amateur's Call for Help Relayed from across the Atlantic

06/25/2020

When Richard Tashner, N2EO, of Massapequa, New York, suffered a medical emergency on May 18, his DMR radio was closer than his phone. His call for help was answered by Maxis Johnston, GM0MRJ, who put out a call for "anyone in the states."

Kent County Amateur Radio Club member Ken Dix, KB2KBD, in Delaware heard the call on the local 146.91 MHz repeater, which was linked to the North American talk group. Dix called authorities in Tashner's vicinity, and help was dispatched.

Dix said the dispatcher in New York was able to hear part of the call and was amazed at how an amateur radio communication had gone from New York to Scotland to Delaware and then back to New York. The dispatcher expressed surprise at how quickly the information had been relayed across the Atlantic. The Delaware repeater, at the Delaware State Communications complex, is set on C4FM Fusion and linked to DMR on "America's Net." — *Thanks to the ARES E-Letter via Jerry Palmer, N3KRX*

Try something new—Virtual Ham Expo, August 8 & 9,

<https://www.qsotodayhamexpo.com/>

Current list of active and on the bench GARS Net Controllers. Please thank them for their contributions to our club.

The normal schedule should be:

2 meter	First Thursday month	Arthur Gillespie	KJ4UAU
	Second Thursday month	Tommy Owens	K4XB
	Third Thursday month	Dave Russ	K4DWR
	Fourth Thursday month	George Crane	W3RXF
	Fifth Thursday choices	David Haynes	AJ4PU
		Mitch Litwer	KJ4JGP
		Arthur Gillespie	KJ4UAU
		Tedd Davison	AI4WN

70 cm	rotates Mondays	Stephen Lyda	KA4PQA
		Andy Bagwell	KN4DYV
		Kin Maffett	KJ4BAK

On the bench

Kevan Nason	N4XL
Fred Pinson	K4RM
Buddy Willis	W4DEW

The AV-680 style antennas with counterpoises like that work better being high off the ground Rodney so it is worth a try. Always fun to experiment! Not sure how high you have it now or even if you have it up at all. Generally speaking 10 ft is still kind of low, especially for 40 and 80 meters, but it is much better than just a couple feet up. I once owned and R5 and it worked good at 10 feet when I lived near a salt marsh in Rhode Island, but once I moved inland it really needed to be up high in the air before I accepted its performance. I bought an R7 a few years back that I will someday put up. After my R5 experience and also reading N6LF's studies about verticals I decided when I get around to using it I will get it up to at least 20 feet using some of those army surplus poles.

By the way, when in high school a science teacher put up a multi-band vertical on top of the school in the center of the roof. It was 80 feet in the air and had a 200 x 200 ft 1/4 inch steel plate across the entire roof top. It was a killer antenna. Wish I had a set up like that now!

Kevan, N4XL



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EYE TEST



If you see these bananas as:

YELLOW: You're Normal

RED: You may have Coronavirus

BLUE: You need to buy another RADIO

How the hams who are against digital modes look



to those of us using digital modes.

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Popular Electronics, January 1955, submitted by Darrell AF4E

<https://worldradiohistory.com/Archive-Poptronics/50s/55/Pop-1955-01.pdf>

Alden Sumner Jones IV, KC1JWR, of Bennington, Vermont, is thankful for amateur radio, after he suffered a medical incident and lost consciousness on June 15 while hiking with others along a remote section of the Long Trail, not far from his home. An EMT from Appalachian Mountain Rescue (AMR), who was hiking nearby, saw Jones pass out, but was unable to connect with 911 via his cell phone. Jones, 41, regained consciousness and was successful in contacting Ron Wonderlick, AG1W, via the Northern Berkshire Amateur Radio Club's K1FFK repeater on Mount Greylock. Wonderlick initiated what turned into an 8-hour effort to get Jones off the trail and to a medical facility, acting as a relay among Jones, emergency crews, and other agencies involved. As the *Bennington Post* [reported](#), "The Vermont State Police also received assistance from several licensed amateur radio operators who helped facilitate communications, greatly assisting in the rescue."

Matthew Sacco, KC1JPU, headed to a staging area where rescue crews were gathering. When he could not make it into the repeater, he employed some ham radio ingenuity to fashion a J-pole antenna from some window line he had on hand, casting it into a tree using a fishing pole. That did the trick. An individual on site was able to obtain an accurate location for Jones using the GPS on his cell phone.

After it was determined that rescuers could not reach Jones using an all-terrain vehicle, arrangements were made to have a search-and-rescue crew from New York retrieve Jones by helicopter. Amateur radio participants were able to relay critical information, including an accurate location, as preparations continued.

Jones, meanwhile, took advantage of his time with the EMT and other rescuers to talk up amateur radio and explain how to get licensed. According to one account, rescuers were having trouble making contact with the helicopter, so Jones loaned them a better antenna he happened to have.

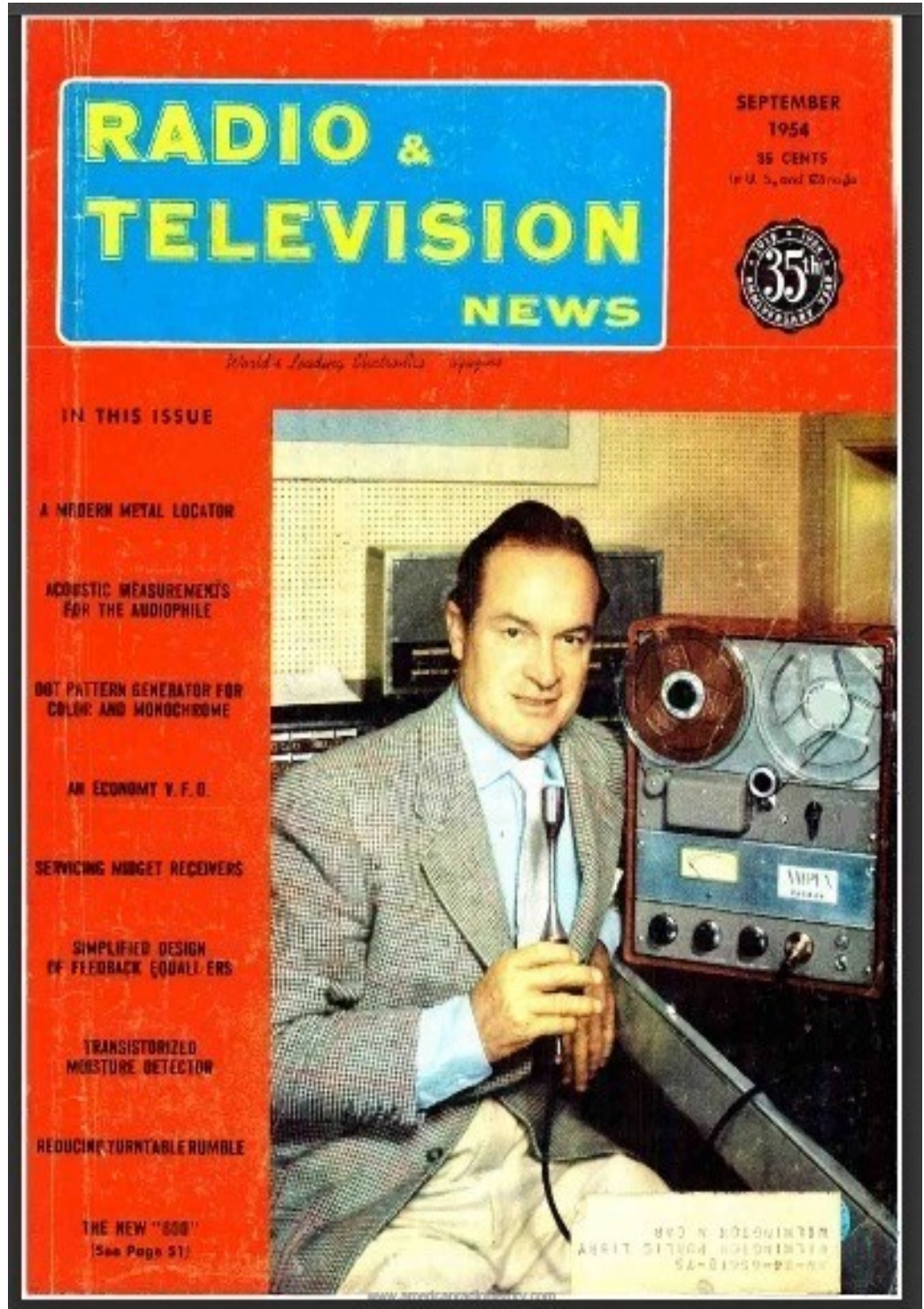
Jones was eventually flown to a hospital in Albany, New York, again taking advantage of the occasion to promote amateur radio to the helicopter pilot and crew. Jones is said to be recovering.

"Ham radio saved my life last night, and I am very thankful for how everyone helped me," Jones said afterward.



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HAMFESTS & EVENTS

Shelby Hamfest, 4-6 September 2020 **Cancelled**

Blue Ridge Amateur Radio Society Upstate Hamfest, 12 September 2020

W4DXCC DX and Contest Convention, Pigeon Forge Tn, 25 & 26 Sept 2020 **Cancelled**

Rock Hill Hamfest, October 3, 2020

Lake Hartwell Hamfest, Darwin Wright Park, Anderson, October 17, 2020 8 a.m. until ?

Stone Mountain Hamfest, November 7 & 8, **Cancelled**

Greenwood Amateur Radio Society Hamfest (GARS) January 9, 2021

Hamcation , Orlando, Florida 11-14 February 2021

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- * The American Radio Relay League protects our rights as Amateur Radio Operators <http://www.arrl.org>
 - * Support for SERA supports proper coordination! <http://www.sera.org>
 - * Remember your local and regional interest clubs!
 - * Southeast DX Club <http://www.sedxc.org>
 - * Spread the word GARS weekly nets: 147.165 2m Net Thursdays 9 p.m.
443.900 70cm Net Mondays 8 p.m.
 - * Callsign info <http://www.ae7q.com>*
 - * Track us on APRS: <http://aprs.fi>
 - * Swamp Fox Contest Group <http://swampfoxcontestgroup.com>
-

Classifieds:

Classifieds will be run for 3 consecutive months then removed. They may be may be posted again after a 3 month period. 3 on then 3 off.

I hope you have enjoyed reading our newsletter. Please contact me at Mike31406@gmail.com to place a classified ad or with any ideas/ comments/suggestions etc.

Mike