



The Signal Report

A Publication of the Greenwood Amateur Radio Society (GARS)

VOLUME 19 ISSUE 7

JULY 2021

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

[W4GWD@ARRL.NET](mailto:w4gwd@arrrl.net)

2021 CLUB

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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



Analog Repeaters are up.
DMR and D-Star are up.
Echolink is down, continuing to undergo technical evaluation.
Repeater Linking Project-Linked now

July 2021

Breaking news!!!

The Greenwood Amateur Radio Society (GARS) is pleased to announce that we are resuming in person meetings on August 10, 2021. The location will change to the Wesley Commons Library, 1110 Marshall Road, Greenwood, SC. We will continue to hold our meetings on the second Tuesday of every month at 7:30 p.m. at this location until further notice. A big thank you to George, W3RXF for arranging this.



Greenwood Amateur Society Recurring Events:



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Chat 'N' Chew

Every Friday around 11:15 a.m. the members of the Greenwood Amateur Radio society meet at a local restaurant. Please feel free to join us and wear a mask if you would like. Locations will vary from week to week and will be announced on the weekly nets. The current rotation includes China Garden, Fat Daddy's and Smokehouse BBQ. *See you there!*

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) session is scheduled for Oct. 5, 2021 in the Wesley Commons Library, 1110 Marshall Rd, Greenwood, SC.

Congratulations!!

Happy Birthday!

Karla Cox	WB3LNX	July 4
Stephen Lyda	KA4PQA	July 4
Betty J. Powell	fmly member	July 15
Mitchell Litwer	KJ4JGP	July 24
Jennifer Lyda	fmly member	July 27
Jeremy Manning	KI4CCZ	July 28

Happy Anniversary!

Ken (KQ4RB) & Michele Trapnell	July 1
Bob (N2OEE) & Sue Wiener	July 3
David (W4MCC) & Brenda McCall	July 7
George (W3RXF) & Betty Crane	July 11
Joe (KK4RVC) & Wendy (KN4DYX) Suddeth	July 12
Stephen (KA4PQA) & Jennifer Lyda	July 16
Fred (K4RM) & Mary (N4MRY) Pinson	July 18

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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Presidents QSO

Days are getting hotter. GARS Field Day 2021 was a success and fun for all that participated.

We always appreciate the welcome and willingness of Coronaca Baptist Church for the use of their parking lot and fellowship hall. Not sure if we have in the past, as a club or individuals, but we may consider a contribution to them for their continued support of our club. 300 Highway 246 North, Greenwood SC 29649 Everyone pitched in for the setup, projects and breakdown. It was really good to see so many in person! Thanks again to K4DWR Dave and K4RM Fred for arranging the date & time with the church. K4XB Tommy coordinated towing the trailer and setup in the absence of AI4WN Tedd. Tedd we hope you had a nice visit with family, but missed you. KA4PQA Stephen, K4RM Fred, KG4WDS Straw provided muscle to handle the mast setup for the antenna. Also appreciated W3RFX George assisting with the launching and tying off of the antenna. It's hard to count a moving target, but I tallied some 25 members and guests. Each one made it happen by helping out with instructions, sharing knowledge, involving others and keeping the activity flowing. I'll probably miss a name here and there, but it is just oversight, not intentional. Hindsight is always 20/20, should have had a sign-in sheet, Duh!

A few of the high points were replacing radio equipment in the trailer handled by KG4WDS Straw, building a battery power box by K4XB Tommy with valued assistance from W3RFX George. WJ4X Adam helped me with my HF Rig and effective use of the antenna tuner.

The Contact Session began promptly at 2:00pm. Much of this was coordinated and manned by K4DWR Dave, KA4PQA Stephen/Jennifer, K4XB Tommy and the software on his notebook. They helped several non-hams make contacts working their way through pile-ups, frequencies, etc.

Reminder of the On-Air Meeting Tuesday July 13th at 8:00pm. I plan to email the agenda beforehand. We have an open Activities Manager slot and hope to vote to fill that vacancy during that meeting. If anyone has something for the agenda, please email me accordingly. The weekly Chat-n-Chews have restarted and a number of you have enjoyed these. Appreciate "Mr. Greenwood" KJ4BAK Kin for coordinating and announcing these. We are closer to meeting in-person and conducting VE sessions. Please stay tuned!

I'm sure W4DEW Buddy, AF4E Darrell and the others that maintain the grounds of the ETV Tower site would welcome any help from other members on the next duty day. We always appreciate their commitment.

I hope each of you and your families have a safe Independence Day. Whether you celebrate July the 4th at home or travel to special locations to recall the many freedoms, opportunities and blessings we have in These United States of America. We should thank God for these and Pray He continues to shine His favor on our country.

Russ, KN4TUI



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Some random pictures taken from the GARS 2021 Field Day





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Thank you to Mitch, KJ4JGP for accepting the nomination as our new Activities Manager filling the position left open by Andy Bagwell. Anyone with suggestions or who would like to volunteer to give a short presentation please contact [Mitch](#), KJ4JGP.

A big thank you to Mark, WT4KY for stepping up and accepting the position of Chairman of the Finance Committee. Also thanks to Robert W4KIA for filling a open position on the same committee.



VE testing will resume on the first Tuesday of even numbered months with the first one scheduled on October 5. Its location will also be in the Wesley Commons Library, 1110 Marshall Rd, Greenwood, at 7:00 p..m. Any questions contact [Buddy](#), W4DEW.



Weekly Chat and Chews have been resumed. There locations vary from week to week and are announced on both the Monday and Thursday night nets. Times 11.15—11.30 am. A big thanks to Kin, KJ4BAK for organizing these.



The Saluda repeater, W4DEW/R at 146.910 has Echolink operating with a tone of 123.0. Echolink Node 565891 & Allstar Node of 458591. Thanks to Buddy, W4DEW for providing this

GARS Member Pages



Hi, I'm Russ Myrick, KN4TUI, I am the current President of the Greenwood Amateur Radio Society (GARS) My shack (in a repurposed closet) consists of a Yaesu FT-840 with EFHW-8010 connected to an FC-10 antenna tuner and MFJ-4245 switching power supply for HF. For 2M/70cm I have an FTM-400XDR with a DBJ-1 Dual Band from Eds antennas. Most of the time power source is a Bioenno battery in a Powerwerx box instead of commercial power to the power supply as noise level is lower in the house. Enjoy checking in to our nets, the Augusta and Anderson 2M nets along with the SC SSB net a few nights a week. Also enjoy going to events conducted by other clubs. 73





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Hi, I'm Mike Wills, KA4CSM. I am a VE, Editor of the GARS Newsletter and have a extra class license. I enjoy working several 40m nets in the mornings, & DSTAR, 2m and 70 cm.. I retired from the Army in 1993 and the Post Office in 2011



GARS Member pages cont'd

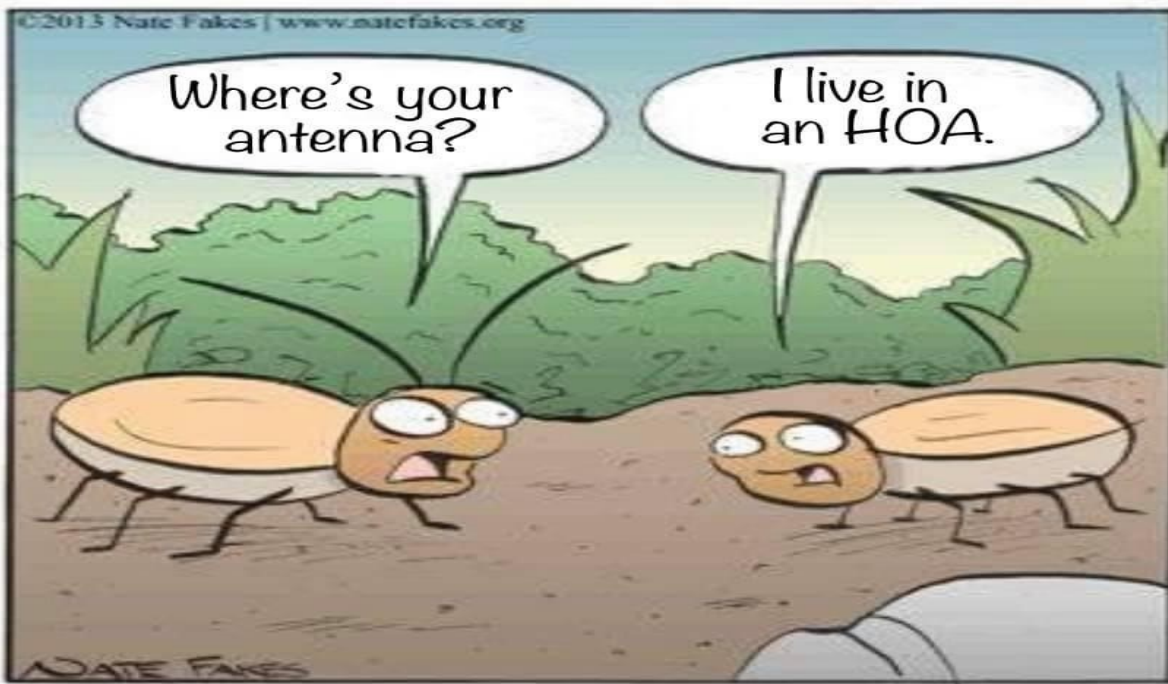


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Good Morning, my name is David Davenport, KY4GM. I typically run a Icom 746 with an end fed Tram 1491 and several handy Talkies.





" I'M A DO-IT-YOURSEFER, BUT I'VE NEVER BEEN A DONE-IT-YOURSEFER ... "



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All hams should have at least a limited understanding of basic circuits, and this means being able to differentiate between series and parallel components.

Besides numerous license exam questions (dozens below in green boxes; knowing helps you pass the exams), some technical discussions in ham radio will throw the terms around so let's explore the matter here. In addition to our own presentation, some excellent web references are given at the end for further (and often more interesting) information.

Before jumping into circuits, let's discuss series and parallel connections. Visualizing this will help us understand series and parallel circuits.

As the name suggests, series connections are lined up end-to-end.



We're demonstrating with resistors but the principle applies to any two-terminal component: capacitors, inductors, diodes, cells/batteries, and light bulbs can all be wired in series with two or more of each (or a mix of different parts). Lining them up terminal to terminal makes a series connection.

Schematically, 3 parts in series looks like this:



From this simple schematic we intuitively see that the current flowing through a series string has to be the same through the chain; there is nowhere else for electrons to flow (current).

Equal current is one way of defining a series circuit.

Series and Parallel Circuits, AF5NP



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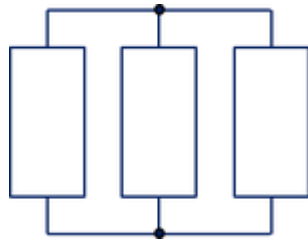
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Also as the term suggests, parallel connections are side-by-side.



Again, demonstrating with resistors and again, the principle applies to any two terminal component. Arranging components across each other makes a parallel connection.

Schematically, 3 parts in parallel looks like this:



From this simple schematic we intuitively see that the voltage across parallel components must be the same.

Equal voltage is one way of defining a parallel circuit.

We just learned that current is the same through components in series, and voltage is the same across components in parallel. What about the voltage across series components, and current through parallel components?



Based on the electrical properties of series components, the voltage across

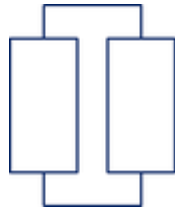
Series and Parallel Circuits, AF5NP



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each will be proportional to their impedance (following Ohm's Law), since the same current flows through both parts.

The sum of each will always equal the end-to-end voltage in a series string. If both parts have the same value, the voltage will divide equally.

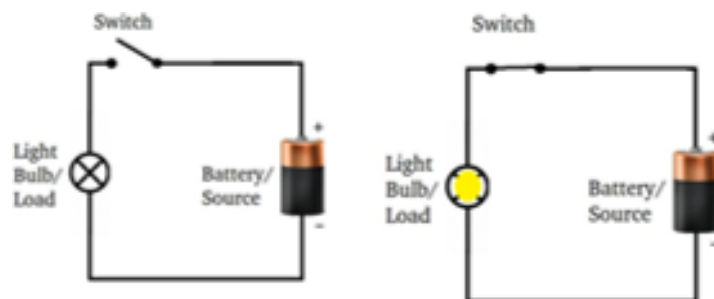


Based on the electrical properties of the parallel components, the current through each will be inversely proportional to their impedance (following Ohm's Law), since the same voltage appears across both parts.

The sum of each will always equal the end-to-end current in a parallel string. If both parts have the same value, the current will divide equally.

Applying the concept of series and parallel connections to circuits, first we must understand exactly what is a circuit. An electric circuit is at its most basic a path for current to flow from one pole of a DC or AC voltage source to the other.

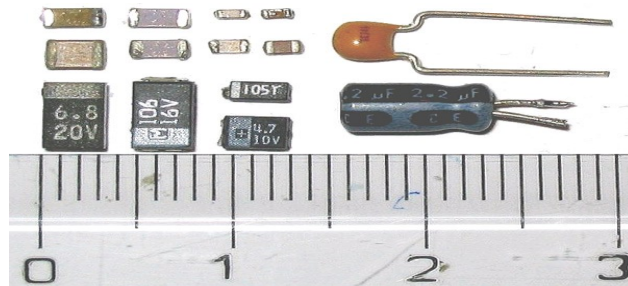
The simplest circuit consists of a light bulb controlled by an on/off switch.



As you can imagine, most circuits are more complicated than this, although



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they can often be broken down into simpler individual ones for easier analysis and understanding.

When the three basic passive component types are combined in series or parallel, we get some interesting results. Resistors and inductors in series simply add their values together ($R_{total}=R_1+R_2+R_n$; $L_{total}=L_1+L_2+L_n$).

Capacitors in parallel add their values together ($C_{total}=C_1+C_2+C_n$). Conversely, capacitors in series divide their capacitance. With equal values it works out simply to divide the unit value by the number of components.

When resistors are unequal the net value will always be less than the smallest resistor.

With equal values it works out simply to divide the unit value by the number of components.

Batteries in series add their voltage together; identical batteries in parallel have the same voltage with multiplied current capacity (Ah).

Except for the most rudimentary of circuits, most real electronics circuits are formed by a combination of series and parallel components. Don't worry, you don't have to know or understand this, just be aware.

If this doesn't make complete sense or if you want to dive more deeply into the topic, there are many web links to help explain better, with good graphics and some videos.

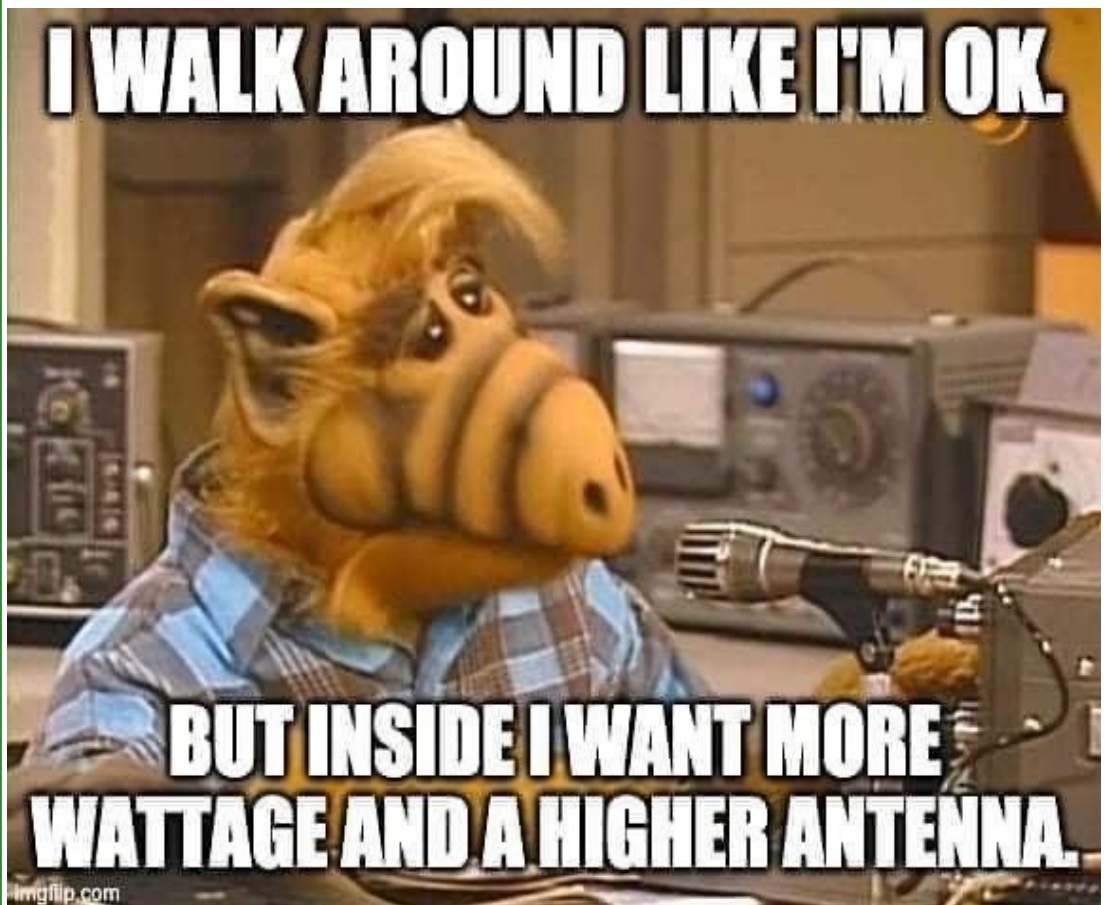
Sorry for the long but foundational entry. We bring up the series/parallel topic because some future posts will involve the concept. Be on the lookout for those and hopefully this will better prepare you to understand.

From the upcoming SFCG Newsletter, courtesy of Kevan , N4XL



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- Propagation prediction has been an almost mystical art. The best practitioners often benefit from their knowledge by adding many hard to get multipliers to their contest score or catching that DX band opening many others missed. Jose Nunes, CT1BOH, has discovered a real time method for identifying band openings using FT8 spots and near real time ionosode data available on the internet. It is cutting edge technology and likely to be a game changer just as the proliferation of international spotting networks like the RBN have been. He presented "There is nothing magic about propagation. In search of MUF isolines" to the 2021 Contest University. Video is available from website <https://www.youtube.com/watch?v=q-esob7Bptc> starting at minute 5 hrs 39 minutes. It so impressed the CTU organizers they have invited him to give a more in depth talk to next years Propagation Summit.
- - If you are thinking of SO2R or just want to understand more about the mechanisms of how two radios close together can cause interference and how to combat it (as in a local ham or Field Day operation), then check out W2VJN's book "Managing Interstation Interference". It has been made free via PDF download at http://www.vibroplex.com/techdocs/INRAD/MII_W2VJN.pdf



HAMFESTS & EVENTS

Shelby Hamfest, September 3-5, 2021

[2021 Shelby Hamfest - Shelby, NC - Shelby Amateur Radio Club - Shelby Hamfest 2021](#)

W4DXCC Contest Convention, Pigeon Forge, September 24 & 25, 2021

Greenwood Amateur Radio Society Hamfest (GARS) January 8, 2022.

Hamcation , Orlando, Florida 11-13 February 2022,



- * 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.

Allen West, KB4RA is looking for a variable transmitting capacitor that can handle 100 watts and vary from 0 to around 500 pf. If you know of one please contact him at his email.



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

