The Signal Report

A Publication of the Greenwood Amateur Radio Society (GARS)

VOLUME 19 ISSUE 10 OCTOBER 2021

HTTP://WWW.W4GWD.ORG W4GWD@ARRL.NET

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.
Echo link is down, continuing to undergo technical evaluation.
Repeater Linking Project-Linked during nets and special occasions

October 2021

Due to an increase in Covid activity the following club activities are postponed until further notice. VE sessions, in person meetings, Chat-n-Chews & the GARS Hamfest originally scheduled for 1-8-2022. The next GARS club meeting will be held "On the Air" on 12 October 2021 at 8 p.m. A net roll call will be taken and it will become the official attendance roster for this meeting. The GARS 2m (147.165) and 70 cm (443.900) repeaters will be linked during this meeting time.

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Greenwood Amateur Society Recurring Events:

Chat 'N' Chews
Have been postponed until further notice due to Covid.

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, AI4WN.

VE Exam Session
Due to Covid all GARS ARRL Volunteer Examiners (VE) sessions have been postponed until further notice. Please contact Buddy Willis, w4dew@arrl.net with any questions.

Congratulations!!

Happy Birthday!

Russell Myrick	KN4TUI	Oct 6
Marsha Ridlehuber	KD4AYF	Oct 15
Mary Pinson	N4MRY	Oct 21
Bob Wiener	N2OEE	Oct 24
David Haynes	AJ4PU	Oct 28

Happy Anniversary!

David (K4DWR) & Betsy Russ
Oct 14

David (KG4WDS) & Sally Strawhorne
Oct 24

Russell (KN4TUI) & Judy Myrick
Oct 31

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

Well it was nice while it lasted, as the old saying goes. GARS in person meetings. Now back On Air starting with October 12th. Of course other club activities are suspended also. We are reviewing other meeting options and will keep you current as we proceed.

I continue to encourage you to consider preparing for license upgrades as well as encouraging friends to find out more about Amateur Radio.

One way to do that is to point them to ARRL.COM As most of you know the site provides information in so many areas of our hobby. A number of you are members of ARRL. I would encourage those of you that are to review the site routinely for information as well as using the magazine option of your choice.

Other clubs continue to adjust to the continual challenges and changes posed by Covid-19. A number of you check-in to area nets and view their websites too and hear what they are doing to maintain interaction and interest in Ham Radio.

Check on others to be sure they are OK and if needed lend and ear or hand to them.
Stay safe and well, use caution and good judgement and always be thankful for the many blessings we have.

73 and God Bless you.

Russ, KN4TUI

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Welcome Back to Andy Bagwell, KN4DYV

From the ARRL Contest Update for September 1, 2021, courtesy of Kevan

The Icom IC-7300 is a very popular radio, but the designers didn't anticipate every need. For example, there is no factory option for use of a dedicated receive antenna. Hamtenna seeks to fill that void with the IC-7300 RX-Antenna board. The product is a board that fits inside the radio, with a toggle switch and SMA connector taking the place of the auto-tuner connector on the radio's rear panel. The price is listed as kr1.290, which at today's rates is approximately $149 USD.

Excellent site for product reviews, forums etc.

https://www.eham.net/

Anyone interested in giving a short presentation, talk or leading a discussion online, please step up and contact Mitch KJ4JGP.

Club meetings etc. will soon be conducted via “Zoom.” Thank you to Tommy K4XB for taking the lead on this. More information will follow.

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THE EDITOR IS IN

I have published the GARS newsletter for over 4 years now and am considering turning it over to someone with fresh ideas and maybe take the newsletter in a different direction etc. Let me know if you are interested.

Mike KA4CSM

Any Veterans wishing to be recognized in our November Newsletter please submit information about your service to Mike31406@gmail.com. If you were recognized in last Novembers newsletter and do not desire to change what was printed, there is no need to provide me with anything as I will use the same information.

Use of a Multimeter, courtesy of AF5NP

Every ham should have a multimeter and know how to use it. Multimeter use is a practical skill not only for ham radio but also around the house for general power and wiring work. As with many topics on this site, details of the subject are too extensive to cover in a simple post so we will give you just basic info along with some resources for further study on your own. Even with minimal detail this is still a long, involved post.

By definition multimeters measure more than one thing. In electrical work a multimeter typically measures voltage, current, and resistance. Sometimes it is called a volt-ohm-milliammeter or simply a volt ohm meter (VOM). Note that these are the three fundamental electrical parameters as described by Ohm's law.

In addition to measuring the three core electrical parameters, multimeters may also read other things such as temperature, frequency, capacitance, plus provide quick checks of diodes and continuity. At minimum they will measure voltage and resistance, since these are the two most commonly read values.

To measure voltage you connect the meter leads between (across) two points. This parallel connection allows real-time undisturbed readings in live circuits or power sources.

Use of a Multimeter (Continued) , courtesy of AF5NP

Note that resistance measurements are also made with test lead parallel connections but ***never*** on live circuits; more on that below.

Measuring current with a common multimeter is more disruptive because it requires the circuit to be broken somewhere and have the meter leads inserted in-line to read amperage, and that is not often very convenient.

This series connection requirement for measuring current is the main reason it is less commonly used, and why clamp-on (non-contact) current meters are sometimes favored at the expense of accuracy and greater cost.

So what would the ham or handy homeowner need a multimeter for? The possibilities are endless but common scenarios are testing batteries, locating blown fuses, verifying DC and AC power supply voltages, and checking cables for undesired opens or shorts. For kit or DIY circuit builds it is also useful to verify resistor values and test active circuit voltages. Here is a link to a list of Ten uses for a multimeter from Ham Radio School.

There are a few safety considerations to note when using a multimeter. Two involve the test leads which connect the meter terminals to the circuit being measured. First, the leads (probes, wires, and connectors) should be rated for at least the voltage being measured. The meter itself must also be rated to exceed this voltage.

They will also be rated at least 600V as marked on the probe for general measurement below that voltage. Special high-voltage probes are used for measuring higher voltages, but it's unlikely that the average ham will need to do so.

Use of a Multimeter (Continued) , courtesy of AF5NP

You may come across some old and/or cheap test leads which have no rating, no shrouded plugs, and no finger safety rings. These should be avoided due to increased risk of shock when measuring hazardous voltages.

The second safety consideration involving test leads is to not blindly trust them. Unreliable connections within the test probe set frequently occur. So if you are using a meter to verify that no hazardous voltage exists, it will read 0V with defective (open) test probe. Best practice is to test the meter and probe on a known voltage to make sure it indicates correctly immediately before doing a hazardous voltage safety check. At least perform a quick continuity verification of the leads by touching the probe tips together on resistance setting before switching the meter back to voltage.

This suggestion highlights another safety consideration when using a multimeter: that is to ensure that you do not measure live voltage with the meter in resistance (ohms) setting.

In resistance mode the meter is looking for a low-level signal and has its internal current source actively driving an output. Should the meter leads be connected to an external voltage source in this situation, damage to the meter is likely to occur, and possibly a violent eruption inside the unit (if applied voltage is high enough) which might cause fire or operator injury.

When measuring a hazardous voltage (more than 24V, generally) take great care with your hands to ensure no incidental contact with live conductors (avoid shock). Use only one hand where possible.

Multimeter appearance, features, and cost vary greatly between manufacturer and model. In addition to what parameters are measured, some will have a fixed scale, meaning the operator has to select the expected input range, vs auto-ranging units which scale the measured values based on measured input. In both cases you will always have to select the basic functions of AC voltage, DC voltage, resistance, and current (AC or DC). More expensive models will read non-sinusoidal AC values known as true root mean square (TRMS) for special applications, The average ham or DIY homeowner is unlikely to need TRMS.

Two basic types of multimeters are used in amateur radio work: Analog and digital.

Old-school analog meters feature a needle which moves over a reference scale and require visual interpretation of the value These work well for a few applications such as when the signal being monitored is changing, as the moving needle highlights the change.

Digital Multi Meters (DMM) feature a numeric readout of the actual value. The combination of direct readout and good interface circuitry give digital meters a distinct advantage over analog for general use.

Digital multimeters by design have high input impedance. Analog multimeters may also have an active interface circuit on their input, in which case it is termed a vacuum tube volt meter (VTVM), or electronic equivalent. In either case the intention is to minimize influence of the meter on an active circuit (load).

Buying a multimeter for home and/or amateur radio use is not difficult or terribly expensive. You choose which features you want and shop what is available. Avoid the super small and cheap meters which tend to compromise on safety and reliability. A good basic DMM should cost in the $50 to $200 price range.


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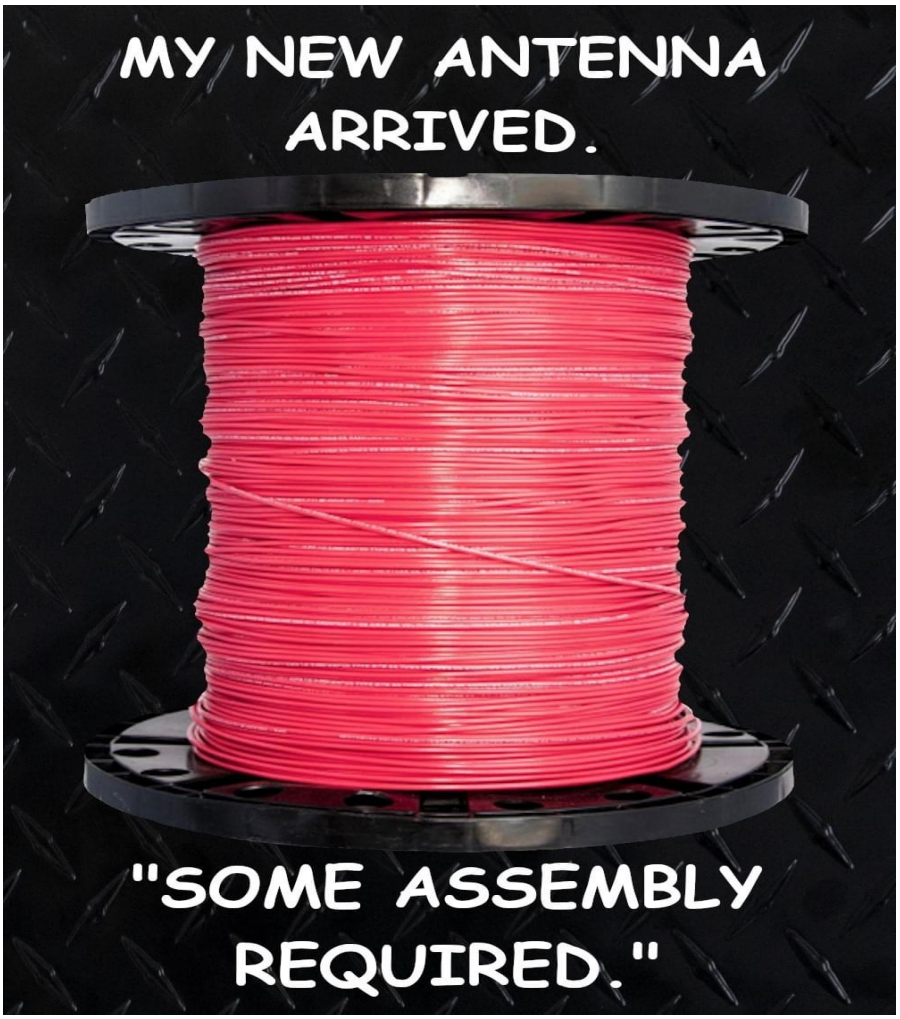
GARS August 2021 Net Summary, courtesy of Tedd, AI4WN

2m

check-ins	91
traffic	5
sessions	5

70cm

check-ins	66
traffic	5
sessions	5



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Old Radio Catalog, 1927

Harry-Alter's-Radio-Book-1927.pdf (worldradiohistory.com)

Please think carefully about using your callsign on a vanity plate. It may tip-off criminals that there is exotic and expensive equipment inside.

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US call signs are not issued by the FCC, Courtesy of Kevan, N4XL via ARRL

Now You Know!: US Call Signs Not Issued by the FCC

If you're an American ham, chances are that your call sign was issued by the Federal Communications Commission. A "no brainer," right? Well, if you're an American ham who happens to be stationed at Guantanamo Bay or at one of the US bases in the Antarctic, your call sign is not issued by the FCC -- it's issued by the base commander. Guantanamo Bay (or Gitmo as it's commonly called) uses the KG4 prefix, followed by a two-letter suffix; this block is reserved exclusively for American hams at Gitmo. As for Antarctica, the Antarctic Treaty, signed on December 1, 1959 (and entered into force on June 23, 1961), established the legal framework for the management of Antarctica, including allocation of amateur call signs; the National Science Foundation received their block on July 1, 1959. US military hams in Japan and Korea are also issued special call signs:

KA2AA-KA9ZZ -- reserved for US Army-authorized amateur stations in Japan.
KC4AAA-KC4AAF -- reserved for the National Science Foundation's use at the South Pole.
KC4USA-KC4USZ -- reserved for US Navy-authorized amateur stations at their Antarctic bases.
KG4AA-KG4ZZ -- reserved for US Navy-authorized amateur stations at Guantanamo Bay).
KL9KAA -- KL9KHZ -- reserved for assignment to US personnel stationed in Korea.
The 40 call signs having the first two letters AF, KF, NF or WF and the letters "EMA" following a numeral are available to the Federal Emergency Management Agency (FEMA).
The FCC once issued call signs to hams who lived in the Caroline Islands and the Marshall Islands. Even though these entities -- former United Nations Trust Territories -- now have their own sovereignty (and DXCC prefixes), the FCC will not issue call signs in the following blocks:

KC6AA-KC6ZZ -- KC6 was two DXCC entities: The Eastern Caroline Islands and the Western Caroline Islands. The Eastern Carolines became the Federated States of Micronesia (V6) and the Western Carolines became the Republic of Palau (T8).
KX6AA-KX6ZZ -- the former Marshall Islands, now the Republic of the Marshall Islands (V73).

HAMFESTS & EVENTS

Rock Hill Hamfest, Saturday October 2, 2021, 8AM—3PM., 175 Museum Rd, Rock Hill, SC 29732 Questions contact John at NJ4Z@ycars.com

42nd Annual Lake Hartwell Ham fest sponsored by the Anderson Radio Club, October 16, 2021

The Greenwood Amateur Radio Society (GARS) Ham fest originally scheduled for January 8, 2022 has been postponed due to COVID. It has been rescheduled for January 14, 2023

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:

Nothing submitted

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