

The Signal Report

A Publication of the Greenwood Amateur Radio Society

VOLUME 14 ISSUE 9

SEPTEMBER 2018

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

W4GWD@ARRL.NET

2018 CLUB

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Michael Wills, KA4CSM

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

Infrastructure Update

Analog Repeaters are up.

DMR and D-Star is up.

Fusion is up.

Echolink is down, maybe for an extended time.

APRS iGate is up.

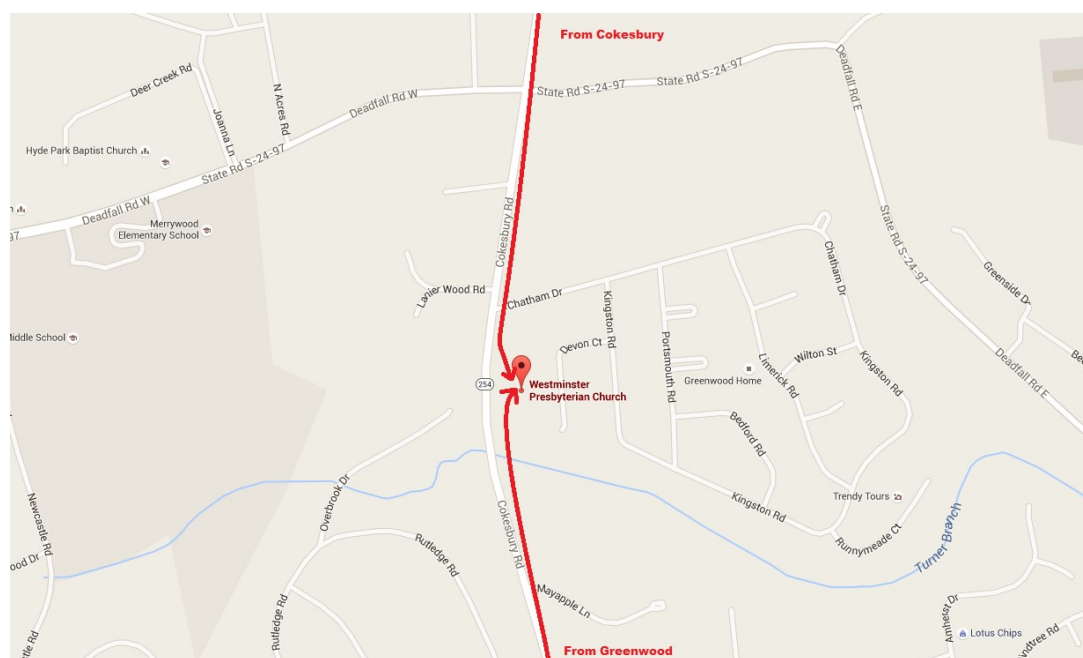
Packet Node is down when up it is connected to the Carolinas Packet System 145.010

Downtown Digi is up and operational

Repeater Linking Project—Linked now

September Meeting

Our Club meets at the Westminster Presbyterian Church, located at 2330 Cokesbury Rd, Greenwood, SC. We meet on the 2nd Tuesday of each month which will be the 11th of this month. Meeting starts at 7:30 Sharp.



Greenwood Amateur Society Events:

Chat 'N' Chew

Every Friday at 11:30am the members of the Greenwood Amateur Radio society meet at a local restaurant. Please check in to our weekly Monday or Thursday radio nets as locations change. Everyone is welcome to have lunch or sip your favorite beverage and chat for a while. **Dutch treat.**

Weekly Nets

The Greenwood Amateur Radio Society holds our weekly 2 meter net each Thursday night at 9 p.m. on 147.165 with a plus .6 mhz offset

Our UHF net is on 443.900 with a + 5 mhz offset and is held Mondays at 8pm

Help spread the word for everyone to check-in to our net. If you would like to fill in or be a backup net control please contact Tedd Davison ai4wn@arrl.net



Like Us on Facebook

facebook.com/
GreenwoodARS

VE Exam Session

The GARS ARRL Volunteer Examiners (VE) Team will have an exam session 7:00pm Tuesday, October 2 at the Westminster Presbyterian Church. The address is 2330 Cokesbury Rd Greenwood SC 29649-9515 We hope to see you there.

Please contact Buddy Willis W4DEW w4dew@arrl.net

Happy Birthday!

Betty Crane	fmly mbr	9-9
Tommy Owens	K4XB	9-13
Margaret Haynes	KJ4HDK	9-26
Earl Powell	KC4AXY	9-27
Carlis Myers	KG4RIT	9-28

Happy Anniversary!

Al & Jane West
9-8
Jim & Karla Cox
9-16
Patrick Holland
9-23

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



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>

Choosing the right Microphone for you and your radio (Part 2)

Dan Curry, KM4AJ



© 2014 K8JHR

Choosing a microphone for your radio:

Once you've determined the right microphone setup for you, now you have to select the right microphone for your radio. There are tons a microphones on the market today but most are designed for working with computer sound cards, smart phones and tablets. These may not work with your 20+ year old radio. So it's important to have an understanding of the types of microphones out there so you can select one that will work with your radio. Here is some information about the different type of microphone elements, thanks to Kevan N4XL.

Microphone types

From http://www.k8jhr.com/files/headset_notes_and_recommndations.pdf

Dynamic or Electret Condenser Microphones: Broadcast style headsets typically employ a dynamic microphone cartridge, which works well with most amateur band transceivers, the notable exception being the modern ICOM models, for which the default microphone type is an electret condenser capsule. Dynamic microphone cartridges do not require a constant bias voltage, as do computer gaming headsets which utilize small, inexpensive electret condenser capsules. Electret capsules tend to produce a significantly higher audio output (often called open signal voltage) than dynamic cartridges. Electret condenser capsules a good match for Icom and Elecraft radios and most computer sound cards, while the majority of ham transceivers seem set, by default, to work best with a dynamic cartridge. Some radios, including those made by TEN-TEC, have a dedicated hardware microphone gain pot on the circuit board, as well as a front -panel MIC GAIN pot, for adjusting microphone input volume.

Electret Microphone and Computers

<https://osdevices.net/electret-microphone-circuits/>

Electret type microphone circuits provide DC bias voltage to the mic element. That voltage is normally prevented from reaching the mic element by a blocking capacitor. It lets the AC voice signal through, but stops the DC voltage. Microphone circuits designed for dynamic elements do not use a bias voltage so there isn't a blocking capacitor in those microphones or boom mic headsets. It is possible (and has happened to me) that the bias voltage supplied by a sound card or radio is too high and if you accidentally connect a dynamic mic to an electret input it could damage the dynamic mic element. I blew out a Heil microphone once doing that. That was many, many years ago and I don't remember the details of what/when. It doesn't usually damage the element though so I would guess any dynamic elements you connected to your sound card are fine. Nothing much bad happens if you connect an electret to a dynamic input other than it sounds horrible -- which is most likely what was going on when you tried computer headsets with your Kenwood.

Choosing the right Microphone for you and your radio (Part 2)

KM4AJ

Koss SB-40 – A cost effective headset microphone that should work with most Kenwood type radios. I use this one with my Kenwood TS-440.

<https://www.amazon.com/Koss-SB40-Computer-Headset-Microphone/dp/B00005ML7T>
Note it says “Dynamic microphone”. Most, if not all, modern Kenwood’s use microphones with dynamic elements.

If you’re not sure what will work with your radio, one of the top brands for HAM radio microphones is Heil Sound. They are not the cheapest but are known for good quality HAM microphones that work with a large variety of radios. Check out their website and see what they have that is compatible with your radio.

<https://heilsound.com/heil-amateur-radio/>

With the right microphone for you and for your radio you will have a better radio experience. So don’t be afraid to try something new. After all, amateur radio is a hobby, so it’s supposed to be fun or you’re not doing it right.

Thanks, KM4AJ

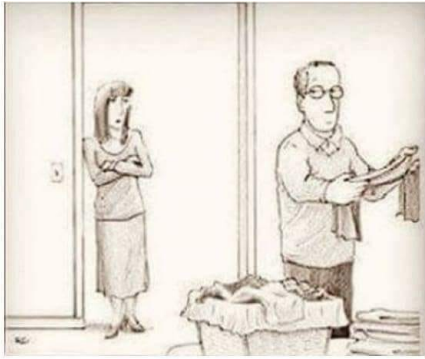


For those of you than drive into Georgia. I heard on the news last night that over 900 tickets were issued for violations of the following.

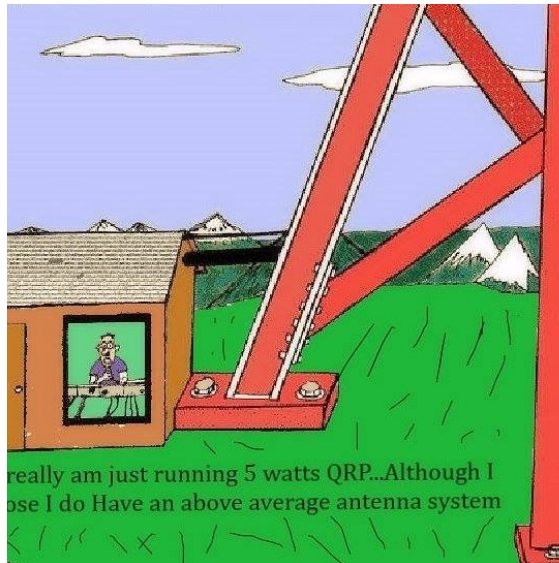
Mike KA4CSM

House Bill 673 also known as the “Hands Free Law” was passed by the Georgia General Assembly and signed into law by Governor Nathan Deal. The Hands Free Law will take effect on July 1, 2018. The following is a brief description what the law states and some frequently asked questions. A link to the complete law can be found at www.gahighwaysafety.org.

- A driver cannot have a phone in their hand or use any part of their body to support their phone. Drivers can only use their phones to make or receive phone calls by using speakerphone, earpiece, wireless headphone, phone is connected to vehicle or an electronic watch. GPS navigation devices are allowed.
- Headsets and earpieces can only be worn for communication purposes and not for listening to music or other entertainment.
- A driver may not send or read any text-based communication unless using voice-based communication that automatically converts message to a written text or is being used for navigation or GPS .
- A driver may not write, send or read any text messages, e-mails, social media or internet data content
- A driver may not watch a video unless it is for navigation.
- A driver may not record a video (continuously running dash cams are exempt)
- Music streaming apps can be used provided the driver activates and programs them when they are parked. Drivers cannot touch their phones to do anything to their music apps when they are on the road. Music streaming apps that include video also are not allowed since drivers cannot watch videos when on the road. Drivers can listen to and program music streaming apps that are connected to and controlled through their vehicle's radio.
- **The hands-free law does NOT apply to the following** electronic communication devices and the following devices can be used by the driver when on the road: radio, citizens band radio, citizens band radio hybrid, commercial two-way radio communication device or its functional equivalent, subscription-based emergency communication device, prescribed medical device, **amateur or ham radio device**, or in-vehicle security, navigation, or remote diagnostics system



"look at you – folding the laundry. And last night it was doing the dishes. Just exactly what part of 'No you're not buying another radio' don't you understand?"



really am just running 5 watts QRP...Although I use I do Have an above average antenna system



Oh, forget it. I can get a new suit any time.



AUGUST 2018
EDITOR'S COMMENTS Margie Spangenberg, KK4AGN Beginning in June this year, I began to proudly show my Fifty States QSL Card Quilt as well as give a talk about the story of my special quilt at the Atlanta Hamfest, Winnebago WIT Radio Club Rally, the Anderson Radio Club, and the Young Ladies Radio League Convention in Oklahoma City. My one-of-a-kind 5'x5' wall hanging quilt of red, white and blue bordering the 3-1/2" x 5" fabric copies of each QSL card state creates a very colorful and interesting to read quilt.

From 2015 to March this year, I had collected all 50 states QSL cards and began brainstorming what would I do with these special cards except store them away in a shoebox or in an album. Finally, I decided to make a quilt using the 50 states QSL cards. In a way quilting and amateur radio are similar. Since quilting is a very popular self-satisfying hobby for females and males and requires one to use their art skills and their time so is the hobby of amateur radio which is self-satisfying, a learned skill and requires one's time. To have a better idea what kinds of quilts have been made, I went to the internet searching for quilts. I found blocks and patch quilts, including a high school/college T-shirt quilt, a photo memory quilt, a wedding dress quilt, a baby's first year clothes quilt, and a Grateful Dead Skirt quilt that the woman quilter wore to many of the band's concerts. My QSL quilt would have sentimental value just like many of the quilt creators I saw on the web. Lastly, so I could be reminded of the fine QSL cards sent to me my quilt would be a hanging on display on my office wall. And most importantly, I was sure no other ham had a wall hanging QSL quilt or even a non-ham quilter.

One essential part I need to mention is that I am not a quilter and I would have to find someone who could make my quilt. After visiting my Aunt Judi Kilmer in Bellefonte PA I found out she was a quilter and she would design and make my quilt. After sending her by US mail 50 sheets of 8-1/2" x 11" Jet Ink fabric with copies of each QSL card, she began designing and sewing the quilt. My only request to her was that the quilt have red, white and blue borders around each QSL card so it would have the same colors as the American flag. Amazingly, within a month, she mailed me my beautiful detailed Fifty States QSL Card Quilt labeling the back of the quilt with her name, officially making my quilt an heirloom.

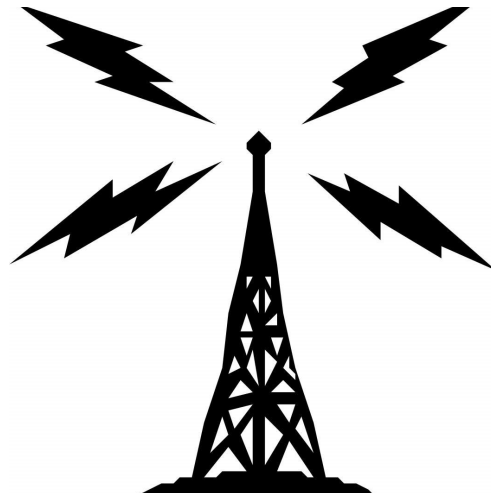
I will continue showing and talking about my Fifty States QSL Card Quilt at upcoming radio clubs in SC, NC, and GA and at Hamfests in NC and GA and to several ham quilt clubs and quilt shows. Because of Aunt Judi's meticulous work of choice of material, design and the quilt's fine stitching and as well as the hams who sent me their QSL cards from their home state, I look forward again to meet more nice and interesting people as I proudly show my red, white and blue Fifty States QSL Card Quilt.



Margie Spangenberg KK4AGN, has agreed to come to our club meeting on the 11th of September. Look her up on QRZ, she has been a ham for many years with many accomplishments. She will be bringing a QSL quilt she had made and give us a short talk about it. Please bring friends/family or anyone interested in quilting. She will be first up on the agenda so any non-hams will be free to leave before the business meeting begins if they so desire.



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



For all of those who have signed up for the ARES exercise to be conducted on 8 September there will be a meeting in the Greenwood County Courthouse parking lot from 8 to around 8:30 am. Assignments will be made at that time. The exercise will end around noon and a lunch will be provided to those who participated.

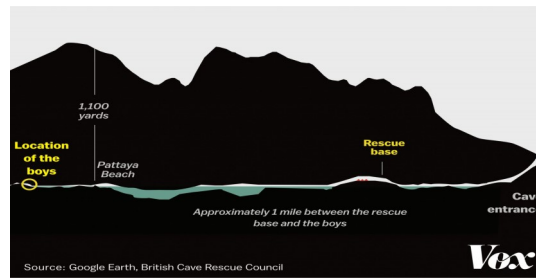
For more information contact Tedd Davison, AI4WN at AI4WN@arrl.net



Not many people know of this but, it's good PR for amateur radio.

HAM-DESIGNED GEAR USED IN THAILAND CAVE RESCUE

Unless you live in a cave, you've probably heard a little about the ...thirteen people — mostly children — trapped in the Tham Luang Nang Non cave in Thailand. What you may have missed, though, is the hacker/ham radio connection. The British Cave Rescue Council (BCRC) was asked for their expert help. [Rick Stanton], [John Volanthen] and [Rob Harper] answered the call. They were equipped with HeyPhones. The HeyPhone is a 17-



year-old design from [John Hey, G3TDZ]. Sadly, [G3TDZ] is now a silent key (ham radio parlance for deceased) so he didn't get to see his design play a role in this high-profile rescue, although it has apparently been a part of many others in the past. The HeyPhone is actually considered obsolete but is still in service with some teams. The radio uses USB (upper sideband, not universal serial bus) at 87 kHz. The low frequency can penetrate deep into the ground using either induction loop antennas like the older Molephone, or — more commonly — with electrodes injecting RF energy directly into the ground.

You can find a very detailed article about the radio from 2001 if you want more details. The system is somewhat dated, but apparently works well and that's what counts.

What we find interesting is that in today's world, people take wireless communications for granted and don't realize that cell phones don't work underground or in the face of widespread disasters. We would imagine most Hackaday readers know how cell phone towers use "cellular reuse" to support more than a handful of phones. Ask some non-technical friend if they know how a cell phone works and you'll be surprised how few people understand this. Ham radio operators and hackers are vital to building and deploying specialized radio systems in times of disaster or — in this case — where people need rescuing from an odd environment.

We were glad to see a nod to some hacker gear in the popular press. But we almost wish there had been more reporting on the volunteer divers and their hacked radio gear.

We've talked about VLF radios before, but not for caving. Of course, in the old days, all radio was VLF and it might have even had some unintended consequences.

<http://bcra.org.uk/creg/heyphone/>

Courtesy of Buddy Willis, W4DEW

HAMFESTS and EVENTS:

Shelby Hamfest

August 31—September 2
Shelby, NC.

DX and Contest Convention

September 21-22
Pigeon Forge, TN.

Greenwood Amateur Radio Society Hamfest
Piedmont Tech Greenwood, SC
January 12, 2019

- * 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://.sedxc.org>
- * Spread The Word! 147.165 2m Net Thurs. 9pm
- * Callsign info <http://www.ae7q.com>
- * Track us on APRS: <http://aprs.fi>
- * South Carolina DX Association <http://scdxa.org/>
- * Swamp Fox Contest Group <http://swampfoxcontestgroup.com>

Classifieds:

Price reduced & component added

Hy-Gain TH7DX 10-15-20 M beam. Verified SWR 1.5 to 2.5 on all bands at 13' off ground. New plastic parts i.e. end caps and trap covers. Including an **Alliance Rotor** (has pitted bearings but races are smooth) Can be mounted inside tower or attached to mast. The connector and controller need to be replaced. Retail \$900, asking **\$300.00** Teddy AE4TJ myemail122060@yahoo.com

Large black power supply, belonged to my Dad. Unmarked as to type, model, watts etc. I would like to **trade** it for a mag mount dual band mobile antenna. 2 Baofeng HT antennas for sale at best offer. Very heavy box of QST magazines. Best offer. Stephen Lyda, KA4PQA, stephenlyda@yahoo.com

Hope you have enjoyed reading our newsletter. Please contact me with any ideas/suggestions etc. Submit articles, including where you got it, for inclusion in future editions to me at Mike31406@gmail.com

Mike