The Official Newsletter of the Gwinnett Amateur Radio Society
March 2021 http://www.gars.org/ Volume 30, Issue 3

The GARzette

March 2021 GARS Meeting: Neil Foster N4FN – The Art of QSL'ing

The Georgia QSO Party

SECC SOUTH EAST CONTEST CLUB

SOUTHEASTERN DX CLUB

TechFest

Online GARS meeting Tuesday, March 9, 2021 at 7:00 pm

President's Message

From the President…

I have to start by stating that it has been a joy to be a part of the GARS leadership team for the past 3 years. Everyone has conducted themselves in a courteous manner, has a drive and desire for GARS to be productive in our community and has a genuine wish for GARS to prosper.

To those officers making their exit after three years of serving: John (WB4QDX, President), Sandy (KJ4DRO, Vice-President), & Randy (N4COR, Program), thank you very much for making my time as Secretary pleasant, memorable and a treasured learning experience. To Pam (WB1AKQ, Treasurer), thank you for the same and many thanks for staying on for another term. Please keep those great financial reports coming!

The rest of the GARS leadership team are the Committee Chairmen and Directors who also share their experience, insight, and have the same desire to see GARS prosper, to keeping our members and community in sync with the changing times, and to meeting the needs of Amateur Radio.

Just to introduce myself – I was first licensed in Amateur Radio in the mid 70's as a teen in Ohio as KA8LFL. I installed towers for other Hams and SWL folks in the community, but Ham Radio was not the biggest interest to me. I participated just long enough for me to make a dozen or so, NeRvE RaCkInG CW contacts. I received my Electronics education and moved to Georgia for work in 1983.

Some co-workers and I were discussing radio one day and thought it'd be interesting to get acquainted with the local ham radio club. So, we paid a visit to GARS on High Hope Rd., at a Red Cross building and joined their meeting of about 20 attendees. Afterwards, we studied, took the exams, and received our own licenses, where I became KE4FNI and joined the GARS Club. That was in April 1994. I earned my Extra Class ticket a few months later, trading in KR4IK for AD4PZ, and found myself, nervously working a rig for Field Day with the encouragement of the GARS hams on Bogan Road. I assisted with producing the Garzette for several years, serving as editor for two years. I have chaired a summer Field Day as well as a couple of Winter Field Days. I saw GARS go from 70 members, to a membership of 350 in just three years. This increase is due to the dedicated and enthusiastic leadership at the time. Obviously, I've been hanging around GARS for decades, and have been to my fair share of Executive meetings as well.

Outgoing President, John Davis (WB4QDX) has put the bar quite high, and I'm confident with the new team, we'll rise up and grab that bar for another great ride with GARS.

It'll be my pleasure to be working with the following fine folks:

Vice President – Jamie Burns (KX4HA)
Treasurer – Pam Meridy (WB1AKQ)
Secretary – Bill Hawkins (WR1TR)
Program – Kevin Scott (K4GTR)

We have a fund-raising event in late March with the Dog show, a fun Georgia QSO Party coming up, and our annual summer Field Day is being discussed already. Stayed tuned to gars.org for the latest best GARS has to offer.

This pandemic had been our 'low sun spot cycle', so to speak, but I believe we will have a great GARS year. I look forward to serving the club as President. Please feel free to call on any of the Officers and Committee Chairs for any assistance or suggestions.

73,

Joe Biddle, AD4PZ

Club President

GARS Meetings & Workshops

GARS Meetings and Workshops

Will be held online until further notice. See http://www.gars.org for more information

GARS Virtual Login and Zoom Etiquette

Due to COVID-19 the following events are being held via Zoom video conferencing. Login info will be emailed via Groups.io Subscribe at; https://groups.io/g/GARS

Meetings and Workshops are OPEN to all, feel free to share your invite with others.

- Workshops and Meetings will be **recorded**. By participating you consent to being **recorded**.
- Please change your display name to Your **FirstName CallSign**, e.g. **Hiram W1AW**
- **How to change Your Display Name in Zoom**
- Please stay muted until ready to speak. Your space bar works like a PTT for un-muting
- To be fair to everyone, there will be a three minute limit for each person during Q & A
- You may ask questions in chat; **please stay on topic while using chat.**

GARS Meetings Schedule (second Tuesday @ 7:00 PM):

- March 9, 2021 – Neil Foster N4FN – The Art of QSL'ing (or how I learned the hard way)
- April 13, 2021 – Jim Fenstermaker K9JF, ARRL Vice President - ARRL Foundation Scholarships
- May 11, 2021 – **Your chance to speak - Topic of your choice**

Workshop Schedule (third Tuesday @ 7:00 PM):

- March 16, 2021- Rich Donahue K0PIR - Improve your portable and RV mobile operation
- April 20, 2021 - Bob Wilson N6TV - Everything You Need to Know About USB and Serial Interfaces
- May 18, 2021 - **Your chance to speak - Topic of your choice**

GARS Meeting – March 9, 2021

Neil Foster N4FN – The Art of QSL'ing (or how I learned the hard way)

Neil Foster N4FN will present; The Art of QSLing (or "How I Learned the Hard Way"). For 100 years, amateur radio operators have been exchanging QSL cards to confirm two-way radio contact between stations. In this presentation, you'll hear about how it all works. Neil also holds the British "A" license as G0NBJ (ex G5DKW) and has been licensed since 1960. He has 12 DXCC awards and has 347 countries/entities confirmed in LoTW, Honor Roll, RSGB Commonwealth DXCC and needs only 3 for number 1 honor Roll. He has operated from 13 DX entities.

GARS Workshop – March 16, 2021

Rich Donahue K0PIR, Improve your portable and RV mobile operation

Rich is what many would call a ***YouTube Celebrity***. In the last 5 years, he has put together over 350 YouTube videos and articles covering the ICOM 7300, Icom 7610, and amateur radio software programs. He also started a website, www.K0PIR.us, to cover the ICOM 7300. After a close call with meningitis and a stroke in 2019, he decided to turn his attention to portable ops and relaxing in his travel trailer. The ICOM 7300 has a permanent spot in his camper and he enjoys experimenting with various antennas. If you want to hear more, you'll enjoy this workshop.

In the meantime check out his YouTube Channel "Ham Radio with K0PIR"

The GARzette March 2021

Inside

GARS Communication

2 Meter Repeaters

147.075(+) MHz Tone 82.5
147.255(+) MHz Tone 107.2

1.25 Meter Repeater

224.580(-) MHz Tone 100.0, 1.6 MHz Offset

70 Cm Repeaters

444.525(+) MHz Tone 82.5
442.100(+) MHz Tone 100
442.325(+) MHz Tone 100

6 Meter Repeater

53.110 (-1 MHz) No Tone (Offline for Maintenance)

Other Resources:

APRS

144.390 -- 1200 Baud W4GR

D-STAR
WD4STR

145.060 + (1.4 MHz)
440.550 + (5 MHz)

Don't forget to support our advertisers at the back of the *GARzette*.

Snail Mail Address:
GARS
P.O. Box 492531
Lawrenceville, GA 30049

Notable Web Links

Ham Radio Glossary: https://noji.com/hamradio/glossary.php a very comprehensive listing provided by Noji Ratzlaff KNØJI. On his site there is also a lot of information about getting started in ham radio.

The *GARzette* is the official monthly newsletter of the Gwinnett Amateur Radio Society, serving its members and other persons interested in the advancement of the Amateur Radio art.

Original articles, art, and photos are invited and encouraged. Previously copyrighted submissions cannot be accepted for reprinting unless permission from the appropriate publisher is provided in writing along with the information being submitted. If reprints are from publications allowing their unrestricted use, please include a copy of the printed permission contained in the publication.

If possible, bring your articles to the monthly meeting in Microsoft Word or rich text (.rtf) or text or HTML format or by e-mail to editor@gars.org. Artwork can be accepted in most any graphics format and can be submitted via e-mail to the same address. Alternate means of submittal can be arranged when necessary.

In keeping with the Amateur Radio spirit, permission is hereby granted for the reproduction of The *GARzette* articles by other Amateur Radio club newsletters provided that proper credit is given to the individual author and *The GARzette*.

The GARzette is published each month with the assistance of Karen KI4HPP and Kyle W4KDA who print copies for distribution at meetings, etc. and Dave Bruse, W4DTR, who distributes the newsletter electronically.

Deadline for submissions is the 28th of each month for inclusion in the following month's issue.

For additional information view our Website at: http://www.gars.org

Newsletter Email: editor@gars.org Editor: Bob Hoffman, K4CQO Assistant Editor: Bill Eggers, WB2RIS

GARS HELP WANTED

Speakers Needed for GARS Workshop Presentations, 3rd Tuesday of the month – Email workshop@gars.org to volunteer.
[PS— Articles to publish in the GARzette, either written by GARS members or published elsewhere, are always welcome. —Ed.]

GARS Happenings

20 Years ago in the March 2001 GARzette:

- Susan Swiderski. AF4FO gave her first President's pen with a Dog Show volunteer plea
- There was a request to generate a list of volunteer Elmers
- The 6m repeater was working 20 years ago
- Barry Zoll, N1TOQ continued his monthly "Hot Frequencies" listing maritime frequencies
- Victor Gann, W4VEG article about Venture Crew 73 task to build a Pixie2 with 9v & 30 parts

You can always browse the GARzette archive at http://www.gars.org/newsletters
73, Bob, K4CQO, GARzette Editor


Gwinnett Amateur Radio Society
THE GARZETTE
From the Oval Office

New Year, New GARS Officers

GARS has elected new officers in February. The new officers are:

- **President – Joe Biddle (AD4PZ)**
- **Vice President – Jamie Burns (KX4HA)**
- **Treasurer – Pam Meridy (WB1AKQ)**
- **Secretary – Bill Hawkins (WR1TR)**
- **Program – Kevin Scott (K4GTR)**

Congratulations, to the new officers!

GENERAL LEVEL LICENSE
(INTERMEDIATE LEVEL LICENSE)
MARCH 6,13 & 20, 2021
AMERICAN LEGION POST 294
3282 FLORENCE ROAD, POWDER SPRINGS, GA 30127

Students must attend all three classes. Classes are from 8:00 AM until 3:00 PM. There are no facilities for meals so you must bring your own or go out for lunch. We will take lunch from 11:00 AM to 12:00 NOON. There are restaurants nearby.

Students must register for the class. The ARRL General Manual will be used for the class. You can purchase the manual from the ARRL at www.arrl.org or from Amazon. You can also purchase the manual from Ham Radio Outlet, 6071 Buford Highway, Atlanta (about two miles North of I-285 on the right) or www.hamradio.com.

There is no fee for the class or for the FCC Exam at the conclusion of the class. **For more information or to register, please contact ELDEN MORRIS, N1MN at 770-713-4403 or by e-mail at N1MN@ATT.NET**

TECHNICIAN LEVEL LICENSE
(INTRODUCTORY LEVEL LICENSE)
MAY 1,8 & 15, 2021
AMERICAN LEGION POST 294
3282 FLORENCE ROAD, POWDER SPRINGS, GA 30127

Students must attend all three classes. Classes are from 8:00 AM until 3:00 PM. There are no facilities for meals so you must bring your own or go out for lunch. We will take lunch from 11:00 AM to 12:00 NOON. There are restaurants nearby.

Students must register for the class. The ARRL Technician Manual will be used for the class. You can purchase the manual from the ARRL at www.arrl.org or from Amazon. You can also purchase the manual from Ham Radio Outlet, 6071 Buford Highway, Atlanta (about two miles North of I-285 on the right) or www.hamradio.com.

There is no fee for the class or for the FCC Exam at the conclusion of the class. **For more information or to register, please contact ELDEN MORRIS, N1MN at 770-713-4403 or by e-mail at N1MN@ATT.NET**

Net Managers Corner

Monday Night 2 Meter "Want, Swap, Sell, and Information Net"

GARS NEEDS MEMBERS TO SERVE AS NET CONTROL STATIONS!

GARS is a great Amateur Radio service club and we have the membership and awards to prove it. Our club is a very busy and active club and we use the Monday night net to get the information out to our members. Weekly participation is needed to make our net function well. There is only a small group of very dedicated people that make the net happen each week, and we need more members to volunteer to serve as Net Control Stations (NCS) on a rotating basis.

Out of almost 300 members, there are only SEVEN primary people who serve as NCS for the GARS net every Monday night. In no particular order, they are:

Don - KW4AL	Ray - N4GYN	Bill - KK4AUA
David - KA4KKF	Kevin - KK4WOG	Chuck - KK4TKJ
Russell - AB4QQ		

As GARS Net Manager (Chuck KK4TKJ), I really need 26 people to fill NCS positions. I do plan and post the schedule months in advance. Any conditions will be accommodated that you as a rotating NCS need to place on the scheduling of your duties. If your plans change, I can make adjustments for the schedule to work, and I will make those changes happen as soon as I am notified of a problem. As Net Manager, I also send out reminders each week to let the NCS scheduled know he or she is NCS for the next Monday night net. In short, serving as a rotating NCS is a small duty but a great contribution to the club.

The "Want, Swap, Sell Information Net" begins promptly at 19:30 every Monday night and runs about 45 minutes. As a scheduled NCS, you will request the assistance of a volunteer alternate NCS each time you have Net Control. Your simple duties will be to tune in to the GARS repeater, read the script, take a few notes and forward the information to me for record keeping.

Please lend a hand and contact me at KK4TKJ@arrl.net. Sign up to help support the effort that makes GARS the great club that it is.

73 and see you on the Nets!

Chuck McCord, KK4TKJ

GARS Net Manager

Interesting Upcoming Happenings

To commemorate the ninth and final season of the **TV show, Last Man Standing**, a full week of on the air activities will be held from March 24th through March 30th on all bands and all modes. Last Man Standing featured Amateur Radio in many episodes throughout its nine seasons. The Special Event ends on March 30th coinciding with the final episode taping. Check out all of the activities and schedule at www.gsbarc.org/lms/ including the promo video. Contact KA6LMS on last time and get the special QSL card.

Huntsville Hamfest

The Hamfest Board has met with the Von Braun Center to learn about the current rules & regulations for mass-gatherings. In short, the insurmountable obstacles that prevented us from hosting a Hamfest last year have relaxed to the point where we can host a safe and successful event.

Additionally, our survey of commercial and flea-market vendors on their plans to attend returned very encouraging sentiments.

Adjustments to the floor plan are being made to keep everyone safe, in particular 12' aisle spacing. Additional space will be utilized this year to accommodate the commercial & flea-market vendors and visitors. Once that floor plan is defined in a few weeks we'll open the web portal up for vendor registration.

We highly recommend visitors to purchase tickets on-line this year. Will-Call windows will be set up to streamline the Saturday morning crush. The ticket web portal will open in a few weeks.

The Hamfest Board is excited at the prospect of hosting a live gathering in a safe way for everyone attending and we look forward to seeing many of our friends again.

Mark N4BCD
Huntsville Hamfest Chairman

Upcoming **Georgia QSO Party – Apr 10 & Apr 11, 2021**

https://gaqsoparty.com/default.html

Motorola's Beginnings

An Article provided by Ray - N4GYN

One evening, in 1929, two young men named William Lear and Elmer Wavering drove their girlfriends to a lookout point high above the Mississippi River town of Quincy, Illinois, to watch the sunset.

It was a romantic night to be sure, but one of the women observed that it would be even nicer if they could listen to music in the car.

Lear and Wavering liked the idea. Both men had tinkered with radios (Lear served as a radio operator in the U.S. Navy during World War I) and it wasn't long before they were taking apart a home radio and trying to get it to work in a car.

But it wasn't easy: automobiles have ignition switches, generators, spark plugs, and other electrical equipment that generate noisy static interference, making it nearly impossible to listen to the radio when the engine was running.

One by one, Lear and Wavering identified and eliminated each source of electrical interference. When they finally got their radio to work, they took it to a radio convention in Chicago.

There they met Paul Galvin, owner of Galvin Manufacturing Corporation. He made a product called a "battery eliminator", a device that allowed battery-powered radios to run on household AC current. But as more homes were wired for electricity, more radio manufacturers made AC-powered radios.

Galvin needed a new product to manufacture. When he met Lear and Wavering at the radio convention, he found it. He believed that mass-produced, affordable car radios had the potential to become a huge business.

Lear and Wavering set up shop in Galvin's factory, and when they perfected their first radio, they installed it in his Studebaker.

Then Galvin went to a local banker to apply for a loan. Thinking it might sweeten the deal, he had his men install a radio in the banker's Packard.

Good idea, but it didn't work. Half an hour after the installation, the banker's Packard caught on fire. (They didn't get the loan.)

Galvin didn't give up. He drove his Studebaker nearly 800 miles to Atlantic City to show off the radio at the 1930 Radio manufacturers Association convention.

Too broke to afford a booth, he parked the car outside the convention hall and cranked up the radio so that passing conventioneers could hear it. That idea worked -- He got enough orders to put the radio into production.

WHAT'S IN A NAME

That first production model was called the 5T71. Galvin decided he needed to come up with something a little catchier. In those days many companies in the phonograph and radio businesses ed the suffix "ola" for their names - Radiola, Columbiola, and Victrola were three of the biggest.

Galvin decided to do the same thing, and since his radio was intended for use in a motor vehicle, he decided to call it the Motorola.

But even with the name change, the radio still had problems: When Motorola went on sale in 1930, it cost about $110 uninstalled, at a time when you could buy a brand-new car for $650, and the country was sliding into the Great Depression. (By that measure, a radio for a new car would cost about $3,000 today.) In 1930, it took two men several days to put in a car radio -- The dashboard had to be taken apart so that the receiver and a single speaker could be installed, and the ceiling had to be cut open to install the antenna.

These early radios ran on their own batteries, not on the car battery, so holes had to be cut into the floorboard to accommodate them.

The installation manual had eight complete diagrams and 28 pages of instructions. Selling complicated car radios that cost 20 percent of the price of a brand-new car wouldn't have been easy in the best of times, let

alone during the Great Depression.

Galvin lost money in 1930 and struggled for a couple of years after that. But things picked up in 1933 when Ford began offering Motorola's pre-installed at the factory.

In 1934 they got another boost when Galvin struck a deal with B.F. Goodrich tire company o sell and install them in its chain of tire stores.

By then the price of the radio, with installation included, had dropped to $55. The Motorola car radio was off and running. (The name of the company would be officially changed from Galvin Manufacturing to "Motorola" in 1947.)

In the meantime, Galvin continued to develop new uses for car radios. In 1936, the same year that it introduced push-button tuning, it also introduced the Motorola Police Cruiser, a standard car radio that was factory preset to a single frequency to pick up police broadcasts.

In 1940 he developed the first handheld two-way radio -- The Handy-Talkie for the U. S. Army.

A lot of the communications technologies that we take for granted today were born in Motorola labs in the years that followed World War II.

In 1947 they came out with the first television for under $200. In 1956 the company introduced the world's first pager; in 1969 came the radio and television equipment that was used to televise Neil Armstrong's first steps on the Moon.

In 1973 it invented the world's first handheld cellular phone. Today Motorola is one of the largest cell phone manufacturers in the world. And it all started with the car radio.

WHATEVER HAPPENED TO

The two men who installed the first radio in Paul Galvin's car? Elmer Wavering and William Lear, ended up taking very different paths in life.

Wavering stayed with Motorola. In the 1950's he helped change the automobile experience again when he developed the first automotive alternator, replacing inefficient and unreliable generators. The invention lead to such luxuries as power windows, power seats, and, eventually, air-conditioning.

Lear also continued inventing. He holds more than 150 patents. Remember eight-track tape players?

Lear invented that. But what he's really famous for are his contributions to the field of aviation. He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, and in 1963 introduced his most famous invention of all, the Lear Jet, the world's first mass-produced, affordable business jet. (Not bad for a guy who dropped out of school after the eighth grade.) Sometimes it is fun to find out how some of the many things that we take for granted actually came into being!

The entire article is available on-line, see
http://www.gars.org/newsletters/2021_03_GARZETTE.pdf

DMR – Using a Hotspot

An Article provided by Bob Hoffmann, K4CQO

This article is going to talk about the hotspots that I am familiar with, specifically pi-star hotspots and another very new entry the DroidStar app for Android phones. But first let's talk about the different types of hotspots.

There are 2 basic types – simplex and duplex. There are a lot of people that are very satisfied with simplex hotspots. I have a duplex one and that is my recommendation – although it costs more than the simplex version.

So, what are the differences between simplex and duplex hotspots. Simplex ones only use one of the timeslots (TS) in the signal. The duplex one uses both. Physically, you can see the difference because the duplex one has 2 antennas and the simplex one has 1. The advantage of being able to use both TSs is that one can be used for a TG that has lots of traffic, and the other TG can still be used to initiate connections to a different TG.

For example, I have TS 2 as static for TG 91: World Wide TG that is very busy and TG 3113 on TS 1. TS 1 is also where I have all of the tac channels assigned for my hotspot. While a TG is busy, you can't use it too – like trying to transmit over a conversation on a frequency that is being used to just call CQ. With DMR, that TS is used even if you switch to a different TG that is using the same TS. If that TS is busy, you are out of luck to use it even for a different TG – like TG 3113: Georgia State. While you can have multiple static TGs on the same TS, having them on different TSs allows an easy switch between them because there is no traffic / busy interference between them. Having an extra TS allows the disconnect TG to be used to stop a PTT activated TG without having to wait for a pause in the conversation.

Simplex hotspots use TS 2 for all of their traffic.

In order to get your radio to be connected to a hotspot, the hotspot and radio have to have the TX and RX frequencies coordinated. Hotspot and radio TX and RX set to correspond correctly. The reason that I mention this is that I have in the past reversed them, so it is easy to do. radio TX = hotspot RX, and radio RX = hotspot TX. For duplex hotspots, the RX and TX are different, for simplex hotspots, the RX and TX are the same. When choosing a frequency, be aware what frequencies are assigned for usage.

Simplex Channels

- 430.4125 Mhz
- 430.4250 Mhz
- 439.4125 Mhz
- 439.4250 Mhz

Duplex Channel Pairs

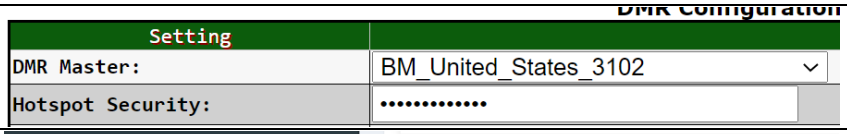
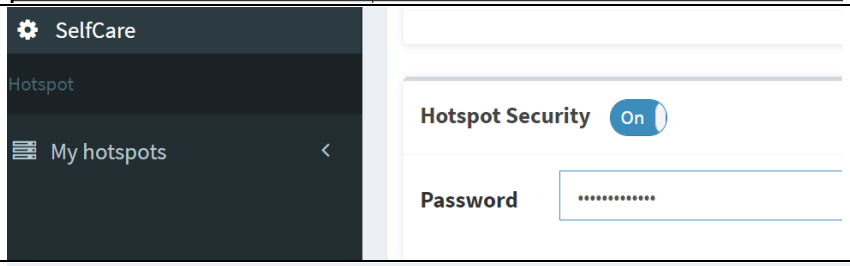
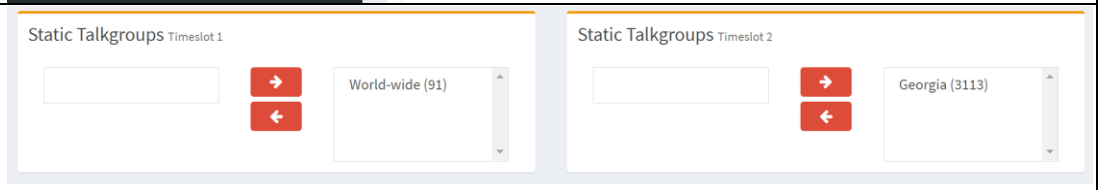
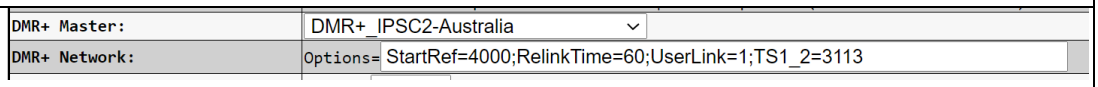
- 430.4375 MHz / 439.4375 MHz
- 430.4500 MHz / 439.4500 MHz
- 430.4625 MHz / 439.4625 MHz
- 430.4750 MHz / 439.4750 MHz

Duplex hotspots are considered "repeaters" since they are provide similar capabilities at a much lower power level. Hotspots operate a mw levels – and your radio should be set at the lowest power level it has when talking to a hotspot that is very nearby. I use one watt setting on my HT (lowest setting) with a stub antenna and can reach the hotspot anywhere in my house and yard.

There are configuration settings for the hardware in your hotspot that I am not going to talk about – it is specific to each hotspot. There are settings that are general, and those I am going give suggestions and the reasons behind them.

Since this is DMR centric, I assume that the pi-star is set to DMR. The next thing to set is the server to use. There are 2 main options and many selections in those options. Brandmeister (prefixed with BM_) and DMR+ (prefixed with DMR+_IPSC2_). Brandmeister server requires a security password for connection to its servers. DMR+ has an option field that appears. That option field is where static TGs are set. For Brandmeister static talk groups are set by going to the Brandmeister website and logging in. It is easy to get a Brandmeister login – you just have to have an DMR ID and then make up a password. I know that having separate PWs for each login is the best practice, but I use the same PW for the hotspot login and for everything related to DMR – so I use the pi-star hotspot, Brandmeister login, and security PW the same. Works for me and I do not forget it. Once setup, going to the Brandmeister web site is not necessary for the hotspot operation. You may want to be more security conscious and have them separate. The Brandmeister web site is also the location where you

set the password that is needed to be set in pi-star “Hotspot Security”. That PW controls whether the hotspot can access the Brandmeister servers.

pi-star BM password	
BM website password – in the SelfCare section	
BM static TG setting – TS 1 is set to TG 91, TS 2 is set to TG 3113 Simplex hotspots only have TS 2 static Talkgroups	
DMR+ static TG setting in the options. The TS1_2-=3113 sets TG 3113 as static on TS 2.	

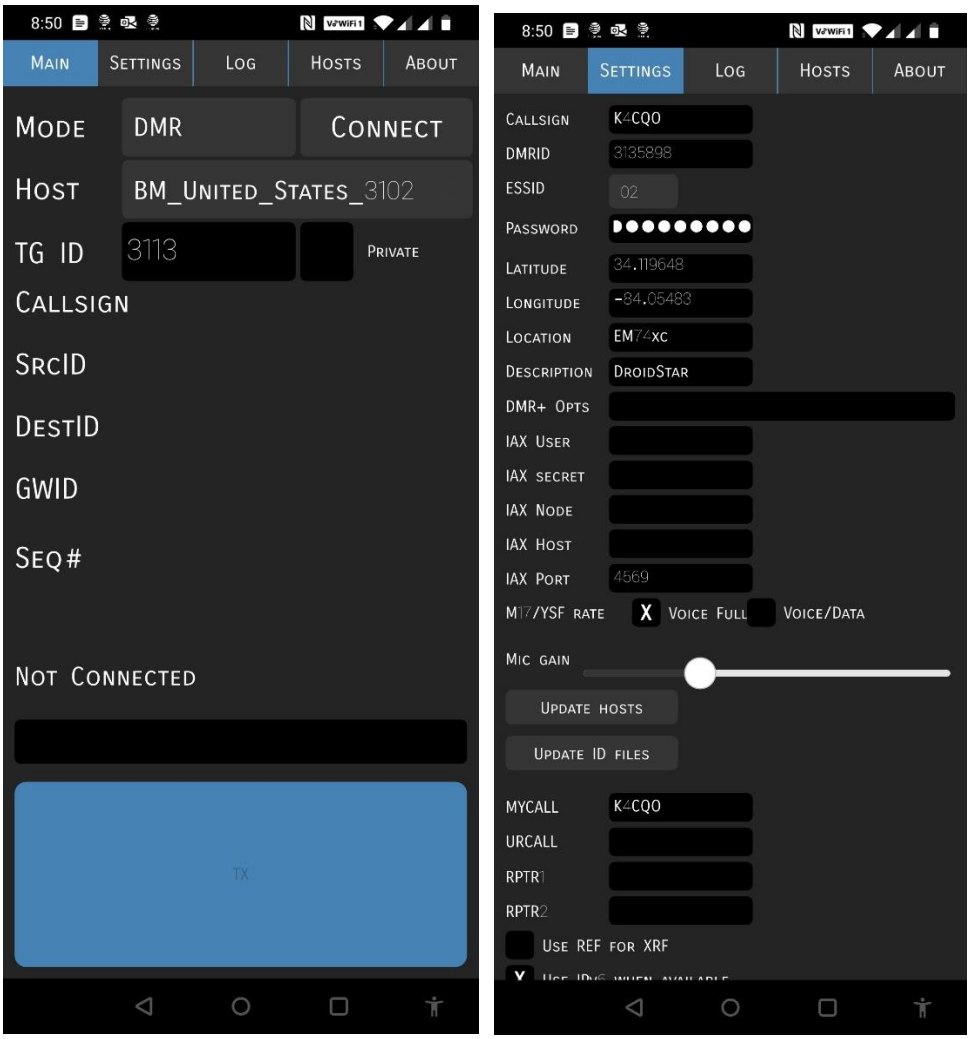
There is an SSID setting that adds an additional number to your DMR ID. This is used if you have more than 1 hotspot. I do not use the SSID on the hotspot, but add a 02 to the DroidStar.

There are firewall settings that are recommended to keep your hotspot free from unwanted manipulation. The following settings are the ones that I use. The uPNP setting is off. A security guru suggested that setting. uPNP allows any IP device to connect – it is used by the web appliances to connect to each other, like the wireless light switch that I have that uses it to connect the wall switch to the plug switch to turn off the desk lamp. Allowing easy access into the hotspot also allows access into your Wi-Fi network thru the hotspot and can be a gateway into any of your devices. So, safer to have it “off”.

Firewall Configuration

Setting	Value	
Dashboard Access:	(•) Private ( ) Public	
ircDDBGateway Remote:	(•) Private ( ) Public	
SSH Access:	(•) Private ( ) Public	
Auto AP:	(•) On ( ) Off	Note: Reboot Required if changed
uPNP:	( ) On (•) Off	

Now, to talk about DroidStar. Below are the settings that I use. There isn’t much to actually set, and DroidStar acts like a simplex hotspot to the server. For example, there is only 1 TS box on Brandmeister to setup your static TGs. I have both TG 91 and TG 3113 set on DroidStar like I do on my hotspot.



There are some things I have found using DroidStar. DroidStar has been having updates fairly often, so my comments here may not be relevant in the future. When DroidStar was first introduced, it would work in the background, but the audio was choppy when it was in the background. DroidStar fixed that by disconnecting it from the server when in the background. If you have 2 static TGs connected to the DroidStar app, doing a PTT on the app, DroidStar will stay on that (PTTed) TG for a while, 5-15 minutes depending on the Brandmeister server settings that are beyond your ability to change. I also noticed that it does not currently connect to my to my car's system using Bluetooth. It tries to use the Bluetooth, but is quiet in the car speakers which only allows the phone connection as a phone call. The app does not do this, and it does not seem to allow the audio to play like a music. Bottom line is DroidStar does not integrate to my cars Bluetooth system. Maybe you and your car have better luck.

The static TG settings at Brandmeister are separate for DroidStar from those of your other hotspots – remember the SSID settings? That number allows different settings for them. Each is listed under the Brandmeister site "hotspot" settings.

DMR keeps evolving as it grows. I find it to be something that is always interesting and its ability to reach the world is one of its nice features – even for the Technician class operators. It does take getting used to how it works and how to set it up correctly, but after that learning curve, it can be a nice addition to our amateur radio arsenal. I hope that these articles have helped in understanding DMR. Enjoy this part of the hobby!

The entire article is available on-line, see
http://www.gars.org/newsletters/2021_03_GARZETTE.pdf

Collins KWM-2- Desktop Station

Vintage Amateur Radio

de Bill Shadid, W9MXQ

Collins Radio Company was certainly on a mission to reinvent the ham station back in the 1950's and 1960's. A few months ago we talked about "The Day the Universe Changed" and Collins announcing the game changing S-Line Station. Now we come to the next big step with the 1959 introduction of the KWM-2 Transceiver. This month we will also see the 30S-1 and the 30L-1 companion Linear Amplifiers. The 30L-1 Desktop Linear Amplifier is still often seen in a modern ham station. Recall the 30L-1 was shown with the S-Line article.

Here is the KWM-2A Station that is in operation at W9MXQ . . .

Collins KWM-2A Transceiver, 312B-5 External VFO, 30L-1 Linear Amplifier
Also, Electro Voice 638 Microphone and Heathkit HD-1410 Keyer

(W9MXQ Shack Photo)

(Not shown is the Collins 516F-2 AC Power Supply – installed out of this view)

The KWM-2 (and its extended frequency range sister, the KWM-2A, pictured above), took the KWM-1 Triband Transceiver concept (20-15-10 meters) and added 80 and 40 meters. The design basis for the KWM-2 was changed to the recently introduced S-Line rather than the KWM-1's reliance on technology coming from the 75A-4 Receiver and KWS-1 Transmitter. Many consider the KWM-2 as a 75S-1 Receiver and 32S-1 Transmitter (the original S-Line units) in a single cabinet. That is a very nice thought, but it is not so. While many elements were part of the separate units, a true transceiver is the combination of shared components and circuits – not separates residing in a single box.

I would draw your attention to my previous installment on the S-Line separate receiver and transmitters for an explanation of the Standard and Expanded Coverage radio differences. In this case the KWM-2 was the Standard Coverage and the KWM-2A was the one with Expanded Coverage. (For this article, unless addressing a specific difference, I will refer simply to KWM-2.)

The KWM-2 lacked any sort of interference fighting tools other than the very selective Collins Mechanical Filter in the i-f section of the radio. The excellent -6 dB @ 2.1 kHz and -60 dB @ 4.2 kHz bandwidth (for a slope factor of 2:1) does a good job of keeping out of bandwidth interference and away from the receive audio. This performance is in keeping with what we expect from i-f filter performance today.

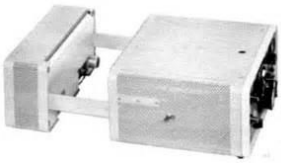
Some operators felt they needed more interference rejection for their use of the transceiver. Waters Manufacturing, Inc. came to their assistance with a cleverly designed Q-Multiplier add-on that installed a circuit module with controls that were mounted piggyback to the Power/Function Switch. As if that was not enough, there is a factory wired phono jack on the chassis of the KWM-2 that is a direct input for a Heathkit (or another brand) Q-Multiplier. I have a Heathkit GD-125 Q-Multiplier that works perfectly with my KWM-2A and even matches the Collins radio in color, if not styling. A Bing™ or Google™ search on "Q-Multiplier" will provide more information on this remarkable device. Heathkit and National, and others made external Q-Multipliers in some form.

There were many accessories for the KWM-2 Transceivers. One is shown in the picture at the intro to this article – the 312B-5 External VFO. Those units together allowed:

- Transceive with the KWM-2 VFO
- Receive with the KWM-2 VFO and Transmit with the 312B-5 VFO.
- Receive with the 312B-5 VFO and Transmit with the KWM-2 VFO.

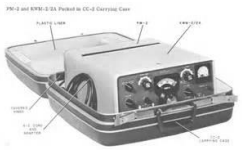
The separation between receive and transmit was essential with the KWM-2 on CW. Due to a design flaw in the KWM-2, the offset to allow one to hear the other station was absent and was never fully corrected as long as the KWM-2 was manufactured.

Collins offered a portable AC Power Supply – in compact format – for the KWM-2. Called the PM-2, it clamped to the back of the radio and provided for a self-contained unit that could merely be plugged into an AC outlet for operation. Even a CC-2 Carrying Case was marketed to make taking the KWM-2 on a road trip . . .



PM-2 Sliding into KWM-2

PM-2 (left) on KWM-2



PM-2 and KWM-2 in a Collins CC-2 Case

These Pictures from Collins Collectors Association website

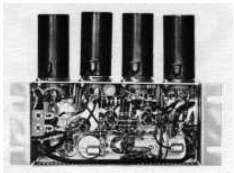
The KWM-2 design focused on mobile operation with a 351D-2 Mobile Mount that allowed for “slide-in” connections to the radio – no hand connection of power, speaker, or antenna leads were required. The mobile mount folded away when not in use thus making for minimal intrusion onto the riding area of the front seat when the radio was not installed.

For power while driving, the KWM-2 used the MP-1 Mobile Power Supply – designed to be mounted on the engine side of the fire wall and provided a cable that went through the firewall and into the cockpit area of the car to the 351D-2 Mobile Mount.

Also for mobile use, Collins offered the 136B-2 Noise Blanker that mounted under the top cover of the radio using screws that came through the ventilation holes in the cover. It was a rather inglorious mounting. I have a 136B-2 that I have tried but have learned that its primary noise target was the ignition noise prevalent in automotive ignition systems of the day. I did not permanently mount the 136B-2 in my KWM-2A. One interesting design parameter of the 136B-2 was based on Collins’ engineering research that showed noise to peak at approximately 40 Mhz. To the end, the 136B-2 had a connection to attach the automobile’s broadcast radio to a noise sensor terminal connector on the Noise Blanker. That antenna was to “see” the noise signal and use it for a trigger for blanking operation.

MP-1 Mobile DC Power Supply

351D-2 Mobile Mounting Bracket



136B-2 Noise Blanker

These Pictures from Collins Collectors Association website

Another interesting accessory for the KWM-2 was the 399B Novice Adapter. Those of you in ham radio long enough will remember that Novices on HF were limited to 75 watts input power on CW only. Power was easy enough to set during the CW tune-up process, but another requirement was that the transmitter had to be crystal controlled. This device accommodated crystal control on up to four different crystals.

To compliment portable operations, Collins offered a Tape Reel Dipole Antenna, the model TD-1. It would extend a metal ribbon tape on both legs that were calibrated to show proper length for a resonant installation. The

product included nylon rope for attaching each end to a support point as well as a length of RG-58 coaxial cable feedline.

For an installation not requiring a separate VFO – as the 312B-5 shown above – there was a 312B-4 Station Console shared with the separate S-Line stations. Like the 312B-5 it includes a wattmeter, speaker, and phone patch – but not the External VFO function.

399B-2 Novice Adapter (CCA)

TD-1 Portable Dipole Antenna (CCA)

312B-4 Station Console (CCA)

Other accessories as diverse as Mounting Plates for aircraft use (351E) and Rack Mounting Adapters (351R). A wide range of microphones were available in the SM-1, SM-2, and SM-3 Desk Microphones as well as the MM-1 Mobile Microphone and the MM-2 Headset were ready for any installation reality. Also, there were several custom-made Samsonite™ Carrying Cases for KWM-2 and S-Line portable use (CC-1, CC-2, and CC-3). To permit complete 3.5 to 30 MHz spectrum coverage, a set of crystals for every 200 kHz range were included in the CP-1 Crystal Packet. That CP-1 Crystal Packet is a part of the of the W9MXQ station using the KWM-2A here.

Two major accessory items for the KWM-2 Transceiver (as well as the other S-Line Receiver-Transmitter Stations) were two excellent Linear Amplifiers. Those included the very popular 30L-1 Desktop Linear Amplifier and the somewhat less available 30S-1 Floor Mount Linear Amplifier as shown here . . .

(W9MXQ Shack Photo)

The Desktop 30L-1 Linear Amplifier had an input of 1,000 watts (DC and PEP) with a CW and SSB output of 500 to 600 watts output. It had a solid-state power supply rectifier system and used four 811A Triode final amplifier tubes.

The Floor Mounted 30S-1 Linear Amplifier had an official input of 1,000 watts (DX and PEP). At about the time of the introduction of this amplifier there began an understanding that PEP input was generally “twice average DC” so amplifiers of the time were tuned up at a lower plate voltage to allow for legal DC tuning at 1,000 watts. After the tuning procedure was done, the amplifier was switched to a higher voltage to run an actual peak input of 2,000 watts. (Therefore, older amplifiers, including the 30S-1, have a CW and SSB switch position.) The 30S-1 had a solid-state lower voltage system, high-vacuum 3B28 high-voltage rectifiers, and an Eimac 4CX1000A Ceramic Power Tetrode in is amplifier circuit. What this amplifier lacked in desktop compactness it made up for in having a fantastic station presence!

Collins Collectors Association website

There are a few more points about the KWM-2 Transceiver's history. One of these may be due to inventory supply issues tied to discrepant material received at the factory (or one of many other reasons). The front escutcheon of the radio could have some different model numbers other than the official KWM-2 or KWM-2A model names. Note below a picture of the escutcheon and some variations I have noted over the years.

(W9MXQ Shack Photo)

Shown is he front panel escutcheon for the KWM-2A at W9MXQ. For a Standard Coverage unit this would be marked as KWM-2. However, over the years I have noted the following variations:

- KWM2
- KWM2A
- KWM2-A

No one has ever offered any good explanation for this but, to the disappointment of the collector, the appearance of one of these deviations does not seem to impact value – up or down. I have never seen this kind of variation on other S-Line components.

The other change shows a Dial Brake added to the radio near the end of production. This picture below shows the minimal appearance changes over time compared to the picture at the beginning of this article . . .

Very late production KWM-2A

Collins Collectors Association website

First, see the late version Rockwell Collins logo over the escutcheon. The Dial Brake is visible at the lower left side of the main tuning knob. The product remained an all vacuum tube design right down to the accessory 312B-5 AC Power Supply that included tube rectifiers.

The KWM-2 was manufactured in nearly original form into the 1970's and was perhaps the very last of the S-Line radios to be available. The KWM-2 was even more of a "game-changer" than the S-Line Receivers and Transmitters. Think about the impact of a single package with a complete station – the "Transceiver," as we like to call it. What one of us does not use this concept today? The sophisticated, ubiquitous SSB/CW station transceiver owes its existence to the KWM-2 – or at the very least, its predecessor Collins KWM-1 Tri-Band Transceiver. Suffice it to say it is owed to Collins Radio Company.

I want to thank my long-time friend, Phil Rebensburg, KC9CI, for helping find and add this gem of a radio and accessories to my collection.

Epilog. . .

I would be remiss if I left out another Collins KWM-2 that is in my radio collection. This set, including a KWM-2 Transceiver, 312B-5 Remote VFO/Station Console, and 516F-2 AC Power Supply is separate from the setup shown at the beginning of this article. It came to me from another local friend, Paul, W9SIZ. Paul, who is still active on the HF bands is a World War II veteran. Most particularly, Paul is a veteran of the Battle of Normandy – the D-Day invasion of Nazi Germany's "Fortress Europe." As we all know now, that signaled the beginning of the end of Nazi Germany's occupation of Europe. Paul was storming the beaches at Normandy that fateful day – 6 June 1944.

Here is a picture of this beautiful station – looking every bit the same today as it did when brand new:

Collins KWM-2 HF Transceiver
With Collins 516F-2 AC Power Supply and 312B-5 Remote VFO
W9MXQ Shack Photo

This complete station was purchased brand new in 1961 at Amateur Electronic Supply, Milwaukee. As near as I can determine, it was in the first 1,100 KWM-2's built, in 1960. It was late in that production that included 1,094 KWM-2 units and 5 KWM-2A units. Production was at the Collins facility in Anamosa, Iowa, about 30 miles from the Cedar Rapids home of Collins Radio Company.

Paul, W9SIZ, is an accomplished CW operator so perhaps I am the first person to seriously use this radio on SSB. As mentioned earlier, serious CW operation with the KWM-2 and KWM-2A required the use of the 312B-5 Remote VFO. That was likely well known to Paul when he purchased this station.

A special thanks go to Bob, W9DYQ, for his proof reading. I appreciate that you read my articles. Remember that I am open to questions and comments at my email address, W9MXQ@TWC.com.

W9MXQ ©2021

The entire article is available on-line, see
http://www.gars.org/newsletters/2021_03_GARZETTE.pdf

GARS Membership

February New GARS Members
Frank Hummel (KO4MRQ) Tom Lewis (KO4MII) Joel Thomas (KK4OFE) Traci Thomas
New Members: 4
Total Members as of March 1, 2021 340

March GARS Birthdays
Deidra Atkin Ryan Bibby (KN4RQL) John Bojack (N0HRM) Dave Bruse (W4DTR) Martin Goff (KK4EBS) Jim Hawkins (KF4RX) Robert Lopez (KN4NSP) Mary Marlowe Jack Mason (KK4ULP) Kyle Scott (KN4UWV) Pete Sheldon (KD4AKM) Madai Similao Mike Smith (KK4KHS) Tom Tcimpidis (K6TGT) Joel Thomas (KK4OFE) Brent Woodman (N2BAB) Ed Woodrick (WA4YIH)

Join GARS members for our weekly breakfast gathering at

7:30 AM most Saturdays

Now at

Cracker Barrel Restaurant
75 Celebration Dr.
Suwanee, GA 30024

GARS MEMBERSHIP

Your current GARS membership status is shown in the monthly newsletter e-mail towards the bottom of the message.

To become a GARS member, or to renew your GARS membership, please visit our website—http://www.gars.org

To make changes to your GARS membership (moved, new e-mail address, new phone number, etc.), please e-mail the Membership Committee - membership@gars.org

You can renew or update your Amateur Radio license information with the FCC at their website for free http://wireless.fcc.gov/uls/index.htm?job=home

To update your ARRL information, please visit their website - http://www.arrl.org

Membership Chair: Karen Albritton, KI4HPP

Committee Members: Dave Bruse, W4DTR

Repeater Status

6M	Currently down
147.075	Operational in Snellville
147.255	Operational in Snellville
224.580	Operational in Grayson
442.100	Operational at Goshen Springs
442.325	Operational in Buford
444.525	Operational in Snellville

Link remote receivers being added

Donating to GARS

Your GARS donation can be used for a certain purpose by donating to one of these funds:

- GARS SK Memorial Fund for Education (to remember and honor Silent Keys);
- GARS Scholarship Fund (Administered by the ARRL for awarding scholarships);
- GARS General Fund (any club purpose).

GARS has joined these rewards programs (a portion of every purchase you make through these merchants may be donated to GARS):

- Amazon Smiles;
- Kroger Community Rewards program.

For more information on how to sign up for these rewards programs, or to donate to GARS, visit http://gars.org/gars/donations-to-the-club

GARS on Social Media

Discord Request: http://gars.org/discord

Groups.io: http://gars.org/groups.io

Visit GARS on Facebook: http://gars.org/facebook

Follow GARS on Twitter: http://gars.org/twitter

Join GARS on YouTube: http://gars.org/youtube

Officers		
Joe Biddle, President	AD4PZ	
Jamie Burns, Vice President	KX4HA	
Bill Hawkins, Secretary	WR1TR	
Pam Meridy, Treasurer	WB1AKQ	
Kevin Scott, Program Manager	K4GTR	
Managers and Committee Chairs		
Karen Albritton, Membership Chair	KI4HPP	
Dave Bruse, VE Team Leader	W4DTR	
David Adcock, Webmaster and Field Day Chair	KA4KKF	
Ralph Pickwick, Apparel Manager and Education Chair	KJ4CNC	
Glen Wendt, TechFest Chair	W3WWT	
Bob Hoffmann, GARzette Editor	K4CQO	
Eddie Foust, Repeater Chair	WD4JEM	
Mike Weathers, WAS / DXCC QSL Card Checker and Historian	ND4V	
Chuck McCord, Net Manager	KK4TKJ	
Steve Back, Technical / RFI Advisor	WB2OGY	
Joe Biddle, Winter Field Day Chair	AD4PZ	
Kyle Albritton, Multimedia Chair	W4KDA	
Don Stewart, Elmer Manager	KW4AL	
Dave Slotter, Georgia QSO Party Chair, Workshop Leader and Public Information Officer	W3DJS	

Directors and Trustees			
John Davis, WB4QDX		Rick Cobb, N4XYY	
Mike Weathers, ND4V		Bill Cherepy, WB4WTN W4GR Trustee	

GARS Meeting Minutes

Gwinnett Amateur Radio Society – GENERAL Meeting Minutes 2/9/2021

President John Davis (WB4QDX) and Opened the meeting at 7:00pm and Closed the meeting at 8:15pm

(Covid-19 Alternative Online)

~~EAA Facility, 690 Hanger Rd. Lawrenceville, GA.~~

Online participants: 41

Treasurer Report: Pam (WB1AKQ) presented the financial report.

Membership Report: John (WB4QDX) reported the Membership is at **[340]**.

Programs – Randy (N4COR)

- **March – Neil Foster (N4FN)** – The Art of QSL'ing (or how I learned the hard way)

Workshop – **Dave (W3DJS)** announced the following upcoming Workshops:

- **January – Brian Haren (W8BYH) –** Georgia Amateur Radio Situation Awareness Map
- **February - Lee Johnson (N4WYE)** Nano VNA (Vector Network Analyzer) more in depth

GARS Club Officers 2021 – The current slate of club officers were announced by **John (WB4QDX)** and solicited the membership for any last officer nominations. None were volunteered and John commenced to call for the voting of each position. Each position was officially voted in.

Those GARS Officers for 2021 are:

- **President – Joe Biddle (AD4PZ)**
- **Vice President – Jamie Burns (KX4HA)**
- **Treasurer – Pam Meridy (WB1AKQ)**
- **Secretary – Bill Hawkins (WR1TR)**
- **Program – Kevin Scott (K4GTR)**

Winter Field Day – Joe (AD4PZ) January 30th, 31st.

- Folks seemed to have a good time and the bands were pretty active. **David (KA4KKF)** put together the procedure and sent it out to the membership. We now are waiting to see our scoring details / placement from WFD.com.
- The use of the GARS contest scoreboard (dashboard) remains to be popular in seeing how everyone is doing at a given time and where the 'fish' are biting, so to speak.

Fundraiser (Dog Show) – David (KA4KKF) The Dog Show is still a 'go'. March 31st – April 4th

- Some of the event's operations are in flux as far as where or how much of the show will be indoors or not.
- Parking will certainly be different from last year.
- Will need 15 or more volunteers to staff this event.
- Positions will vary from handling admittance to directing vehicle parking.
- Stay tuned for more details and how to sign up.

Program - John Kludt (K7SYS) – The 4-Year Amateur Radio Upgrade to ISS

****Future Event dates** are recorded at the time of the General Meeting and subject to change.

Submitted by: **Joe Biddle (AD4PZ) GARS Secretary**

Gwinnett Amateur Radio Society Workshop Minutes - February 16, 2021

Number in Attendance: 37

Workshop Topic: NanoVNA (Vector Network Analyzer) Part 2

Presenter: Lee Johnson N4WYE

Brief Summary: Lee gave a quick review of our January presentation and then moved to how to calibrate the NanoVNA. We had a short side-bar and found that about 8 of the 30+ attending had already purchased a NanoVNA. Then Lee proceeded on how to make 2-port measurements of an 80m Dunestar BandPass Filter that was clearly out of specs. The insertion loss was well over 1 dB in the passband and the roll-off was 5 dB down at 4Mhz, the top end of the 80m band.

This led to the discussion of testing the GARS set of BPFs we use for events like Field Day. David KA5KKF and Kevin K4GTR have that for action.

Door Prize Winners: Joel WA4HNL and Paul W4KLY - 10$ HRO Gift Certificates.

Submitted by: Dallas N4DDM

Events – GARS and others

ARRL CONTESTING INFO

From ARRL Contest Calendar
> For more information click the links <

March 2021
6-7 International DX– Phone

April 2021
11 Rookie Roundup – Phone

(no ARRL contests in May)

June 2021
12-14 June VHF
19 Kid's Day
26-27 Field Day

July 2021
10-11 IARU HF World Championship

August 2021
7-8 222 MHz and Up Distance Contest
14-15 10 GHz & Up – Round 1
15 Rookie Roundup – RTTY

September 2021
TBD EME - 2.3 GHz & Up
11-13 September VHF
18-19 10 GHz & Up - Round 2

October 2021
18-22 School Club Roundup
TBD EME - 50 to 1296 MHz

November 2021
6-8 Nov. Sweepstakes - CW
20-21 Nov. Sweepstakes - Phone
TBD EME - 50 to 1296 MHz

December 2021
3-5 160 Meter
11-12 10 Meter
19 Rookie Roundup–CW
18-19 EME - 50 to 1296 MHz

January 2022
1 Straight Key Night
1 Kid's Day
8-9 RTTY Roundup
15-17 January VHF Contest

February 2022
14-18 School Club Roundup
19-20 International DX – CW

For more information:
http://www.arrl.org/contest-calendar

HAMFEST CALENDAR

[Please confirm the status of a Hamfest before making plans to attend. – Ed.]

03/06/2021 - Charlotte County Hamfest
Location: Punta Gorda, FL
Type: ARRL Hamfest
Sponsor: Peace River Radio Association
Website: http://www.peaceriverradio.com

03/19/2021 - 03/20/2021 PARC Hamfest
Location: Fort Walton Beach, FL
Type: ARRL Hamfest
Sponsor: Playground Amateur Radio Club
Website: http://w4zbb.org

03/20/2021 - CANCELED - 46th Annual Martin County HamFest
Location: Stuart, FL
Type: ARRL Hamfest
Sponsor: Martin County Amateur Radio Association (MCARA)
Website: www.stuarthamfest.com

03/20/2021 - Titusville ARC Free Tailgate
Location: Titusville, FL
Type: ARRL Hamfest
Sponsor: Titusville Amateur Radio Club
Website: http://www.titusvillearc.org

03/20/2021 - ZAARC Spring Tailgate Swap Meet
Location: Zephyrhills, FL
Type: ARRL Hamfest
Sponsor: ARRL
Website: http://zaarc.org

03/27/2021 - DeKalb County ARC Tailgate
Location: Fort Payne, AL
Type: ARRL Hamfest
Sponsor: DeKalb County Amateur Radio Club
Website: http://w4gbr.org

04/24/2021 - Savannah Area Swap Meet Hamfest
Location: Savannah, GA
Type: ARRL Hamfest
Sponsor: Coastal Amateur Radio Society
Website: http://coastalamateurradiosociety.net/wpW4LHSblog/?page_id=1001

06/19/2021 - Black Warrior Hamfest
Location: Northport, AL
Type: ARRL Hamfest
Sponsor: Black Warrior Hamfest
Website: http://BlackWarriorhamfest.org

When searching by division, remember some states adjacent to GA are in different divisions:
Southeastern: GA, AL, FL Delta: TN Roanoke: NC, SC

GARS Events Calendar for 2021

TechFest	Canceled for 2021
General HamCram	TBD
Dog Show Fundraiser	April 1-4 2021
Georgia QSO Party	April 10-11 2021
North metro area Fox Hunt	April 2021
Memorial Day Parade	May 31 2021
ARC/KARC Hamfest	TBD
Field Day	June 26-27 2021
Tech HamCrams	TBD
JOTA	October 16-17 2021
Maker Faire	TBD
Stone Mt. Hamfest	November 6-7 2021
Holiday Party	December 14 2021

GARS Recurring Calendar

- 2nd Tuesday of the month at 7 pm (except December): Monthly Club Meeting **(online until further notice)**
- 3rd Tuesday of the month at 7 pm (except December): Monthly Workshop **(online until further notice)**
- 2nd Sunday of the Month at 2 pm **(suspended until further notice)**:
  GARS Ham Exam Session
  Fire Station #24
  2735 Mall of Georgia Blvd
  Buford, GA 30519
- Every Monday at 7:30 pm: GARS Want, Swap, Sell, and Information Net on the GARS 147.075 MHz repeater
- Every Monday at 8:30 pm: ARES Training on the GARS 147.075 MHz repeater
- Most Saturdays at 7:30 am :
  GARS Weekly Breakfast
  Cracker Barrel Restaurant
  75 Celebration Dr., Suwanee, GA 30024

GARS CALENDAR FOR March 2021

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 **7:30 – 8:00 PM GARS 2M Net**	2 **7:00 – 8:00 PM GARS Exec Meeting (Online)**	3	4	5	6 **Breakfast at Cracker Barrel in Suwanee 7:30 AM**
7	8 **7:30 – 8:00 PM GARS 2M Net**	9 **7:00 – 8:00 PM GARS Meeting (Online)**	10	11	12	13 **Breakfast at Cracker Barrel in Suwanee 7:30 AM**
14 **GARS VE Exam Session (Cancelled)**	15 **7:30 – 8:00 PM GARS 2M Net**	16 **7:00 – 8:00 PM GARS Workshop (Online)**	17	18	19	20 **Breakfast at Cracker Barrel in Suwanee 7:30 AM**
21	22 **7:30 – 8:00 PM GARS 2M Net**	23	24	25	26	27 **Breakfast at Cracker Barrel in Suwanee 7:30 AM**
28	29 **7:30 – 8:00 PM GARS 2M Net**	30	31			

Active VE Testing Sessions

On-Line Testing at hamstudy.org

So you want to take a remote exam…

If you read our recent press release then you already know about the group that grew up to take on this new challenge and it has been our privilege to provide the software that nearly all of them use.

To find an exam session, go to https://ham.study/sessions/online

Cherokee Amateur Radio Society

We may only be able to accommodate a few simultaneous tests so we can maintain the safety of everyone. We recommend highly that you register if you want to be accommodated.

Register with John Reynolds (VEC) W4TXA
Phone: (770) 715-9640
Email: wx4txa.john@gmail.com

Where: Cherokee County Charter Academy. 2126 Sixes Road, Canton GA, 30114 (We will be outside, under cover sidewalk, West/Left side of Building)

Time and date: see https://www.wx4car.org/testing2021.html

Testing will be outdoors, but requires the wearing of a mask to keep everyone safe.

For more information, please visit their website at https://www.wx4car.org/

Stephens County Amateur Radio Society

VE session (date TBD) from 1 till 4 pm in Lavonia GA at 1240 E. Main St, at the white gazebo. [Lavonia, GA is off I-85 near the Georgia / North Carolina border... - Ed.]

If you need to test please get a hold of us at (kr4cw1@gmail.com.) We are working on a 2nd test session , if you would like to be a part of it please send us a contact email to club email and will be glad to help you on the prelist of this….

We will be giving All Tests (Tech, General, Extra) Cost will be $15.00 must have ID and copy of License, if you're upgrading…if it's your first time taking a test please go to the FCC website and sign up for a FRN number and create your Account. Here is the link to get started: https://apps.fcc.gov/coresWeb/regEntityType.do

Please make sure you print this off and bring with you, so you will have your FRN number. Without this we cannot submit your test.

Source: http://www.sc-ars.org/

Stone Mountain GA 30083-3653

EXAM SESSION 03/20/2021

Sponsor: Alford Memorial Radio Club
Date: Mar 20 2021
Time: 9:30 AM (No Walk-ins / Register or Call ahead)
Contact: Frank Haynes
(678) 467-3712
Email: fhaynes@vatmom.net
VEC: ARRL/VEC
Location: Stone Mountain Masonic Lodge
840 VFW Dr
Appointments Required
Stone Mountain GA 30083-3653

Local VE Sessions & Meetings

Local VE Testing

[Please check with each session contact for current status.—Ed.]

GARS publishes Metro Atlanta VE exam schedules as a service and is not responsible for errors or changes. Call and confirm schedules before going. All sessions are walk-in, unless otherwise noted. Take copies of current license and certificate of completed elements with you to all sessions. Find additional sessions online at http://www.arrl-ga.org

First Sunday, ODD Months
2 pm (Jan, Mar, May, Jul, Sep, & Nov)
VEC: WCARS
Braselton Public Utility Building
4986 Highway 53, Braselton, GA
Contact: Nat Christman K4VQ, 678-371-7103
christmans30680@gmail.com

First Sunday, EVEN Months
2 pm (Feb, Apr, Jun, Aug, Oct, Dec)
VEC: WCARS
Hall County EOC
470 Crescent Dr. Gainesville, Ga.
Contact: Perry Roper, KO4RD
(770) 536-3056

Second Saturday
10:00 AM
Alpharetta North Park, Adult Activities Center
13450 Cogburn Rd, Alpharetta, GA 30004
Contact: Ian Kahn, KM4IK
E-mail: km4ik.ian@gmail.com

Third Saturday, ODD Months
VEC: ARRL
9:30 am (Walk-ins welcome)
Stone Mountain Masonic Lodge
840 VFW Drive
Stone Mountain, GA 30083
Contact: Frank Haynes, KV4SP
Email: fhaynes@vatmom.net
(678) 467-3712

First Sunday, EVEN Months
VEC: WCARS and W5YI
2 pm @ Barrow Co. Emerg. Serv. Bldg
66 McElroy Street
Winder, GA 30680
Contact: Mike Wolcott, W4WYI
(404) 281-6581
E-mail: W4WYI@ARRL.net

Fourth Tuesday
ARRL VEC
7 pm @ United Way Service Center
6279 Fairburn Rd., Douglasville
Contact: Jessie Clower, KB4WFK
(770) 942-6466

Fourth Sunday
2:30 pm Georgia Tech
VanLeer Elec. Building
Rm. W218, 777 Atlantic Dr.
For more information go to www.w4aql.com and click on "Test Sessions"

GARS VE Testing

Second Sunday
VEC: W5YI
2 pm
Fire Station #24
Mall of Georgia Boulevard
Buford, GA 30519
Contact: Dave Bruse, W4DTR
E-mail: exams@gars.org

(**Suspended** until further notice)

No GARS VE Session.

[Other local clubs are starting to hold limited VE sessions. See the articles on page 23 in this issue of the GARzette for more details. —Ed.]

GARS VE Team Leaders
E-mail: exams@gars.org

GARS VE Website:
http://gars.org/exams

Local Meetings

[Please check with each club for meeting schedule and method (online, etc.) - Ed.]

First Tuesday
Kennehoochee ARC
Fire Station #1, Training Room
112 Haynes Street, Marietta, GA
Meeting begins at 7:00pm
Talk In 146.880(-)

First Thursday
Atlanta Radio Club
Georgia Red Cross HQ
1955 Monroe Dr., Atlanta, GA
Meeting is at 7:30pm
Talk In -146.820(-)

N.E. Georgia ARC
Commerce Public Library
1344 South Broad Street, Commerce, GA
Meeting is at 6:30pm
Talk In - 147.225(+), PL 123.0

Second Monday
Georgia Tech ARC
Room W218
Van Leer Electrical Engineering Bldg.
Georgia Tech Campus
Meeting at 7:00pm

Sawnee Amateur Radio Association
Beaver Toyota
1875 Buford Highway, Cumming, GA
Meeting at 6:30

Second Thursday
Alford Memorial Radio Club
Annistown Road Baptist Church
Annistown Rd & Spain Rd
Stone Mountain, GA
Dinner at 6:00pm, Meeting at 7:30pm
Talk In - 146.760(-)

Second Saturday
North GA QRP Club
Board Room of The Shepherd Center
2020 Peachtree Rd, NW, Atlanta, GA
at 10:00 AM

Third Tuesday
North Fulton Amateur Radio League
Alpharetta Recreation & Parks Dept.
Alpharetta Adult Activity Center
13450 Cogburn Road, Alpharetta, GA
meeting at 7:30pm
Talk In - 145.47(-)
For more information, go to:
http://www.gars.org/

GARS Supporters

[Note: No store access; curbside delivery available until further notice. - Ed.]