The GARzette

The Official Newsletter of the Gwinnett Amateur Radio Society

August 2025 http://www.gars.org/ Volume 52, Issue 8

Inside

www.GARS.org

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TechFest
Gwinnett Amateur Radio Society

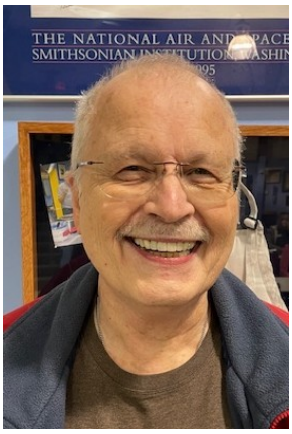
GARS January Exhibition of the Technical aspects of Amateur Radio
Held at the Gwinnett County Fairgrounds

The next TechFest is January 31, 2026

GARS Meeting: Operating Etiquette – VHF/HF, Rag Chew vs Contest – Various Speakers
Tuesday August 12, 2025 at 7:00 PM

President's Message

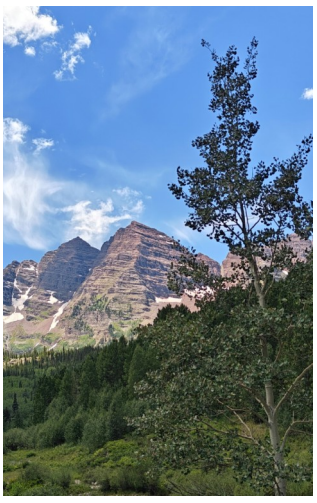
From the President…



We have a General HamCram coming up on August 23rd & 24th, This is only week after our GARS exam session. So, if anybody you know wants to get into ham radio, they can go from no license to General by studying for the Technician license and passing it on our exam session on 8/17 and then the HamCram will do the training to get their General. Going from no license to General in a week with only studying for the Technician license. What a great deal!

The Stone Mountain Hamfest is coming up in November and it is time to begin thinking about how GARS can help with the hamfest. Also think about our upcoming TechFest too. Still early, but beginning planning is taking place for both.

I just got back from a trip to Aspen. At first I was not impressed – comparing the Rockies to the Alps. But after a week there, I began to like the Rockies. Aspen is a tourist place with its higher cost of everything. I didn't get many good pictures, but enough to jog memories of the trip. I did not do any radio while there and was lucky to have a backup for the DMR net I run on Wednesday. It is really a good feeling the ham radio groups step up and help out when needed. I feel that way especially about the GARS members and want to thank everyone who has helped out to keep the group as vibrant as it is. I have not been on the radio much lately. I blame it on everything else that I do during the summertime.



The schools are starting and I want to mention all of the GARS work (thanks to Ralph KJ4CNC) with the schools to introduce them to ham radio and help with the schools radio clubs.

This month's GARZette has a new feature to spotlight GARS members. The first one describes Mark Bell's (N7GRB) extensive career and what his ham radio interests and his accomplishments. This is expected to be a recuring addition to the GARzette letting members know about the wide range of personalities making up GARS.

73,

Bob – K4CQO

Club President / GARZette Editor

GARS Repeaters and Other Communications

2 Meter Repeaters	6 Meter Repeater	
147.075(+) MHz Tone 82.5 147.255(+) MHz Tone 107.2	53.110 (-1 MHz) No Tone	6M Operational in Buford 147.075 Operational in Snellville 147.255 Operational in Snellville 224.580 Operational in Grayson 442.100 Operational at Goshen Springs Rd, Norcross 442.325 Operational in Buford 444.525 Operational in Snellville
1.25 Meter Repeater	**Other Resources:**	
224.580(-) MHz Tone 100.0, 1.6 MHz Offset	APRS	Link remote receivers being added
70 Cm Repeaters	144.390 -- 1200 Baud W4GR	
444.525(+) MHz Tone 82.5 442.100(+) MHz Tone 100 442.325(+) MHz Tone 100	D-STAR (WD4STR) 145.060 + (1.4 MHz) 440.550 + (5 MHz)	

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.

Need Help – Let GARS Elmers answer your questions

Send an email to elmers@gars.org with the subject listing the area (like Antennas, Repeaters, Digital, DMR etc.) of your query to get to GARS Elmer volunteers.

About the GARzette

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 [PS— Articles to publish in the GARzette, either written by GARS members or published elsewhere, are always welcome. —Ed.]
Newsletter Email: editor@gars.org Editor: Bob Hoffmann, K4CQO

GARS Meetings & Workshops

GARS Meetings and Workshops are held in-person at the EAA 690 Hangar, 690 Airport Rd, Lawrenceville, GA 30046.

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

When GARS meetings are available on **Zoom** the **login** info will be posted to http://www.gars.org prior to the meeting. Members are able to attend the GARS Executive Zoom Meeting on the 1st Tuesday of the month – send an email to the GARS President (president@gars.org) for information to attend.

GARS Meetings Schedule (second Tuesday @ 7:00 PM): (these are the presentations)

- August 12 – Operating Etiquette – VHF/HF, Rag Chew vs Contest – Various Speakers
- September 12 – Favorite Ham Radio and Related Websites and Apps
- October 7 – Show-n-Tell – Favorite Ham Projects – Hosted by Kevin Scott K4GTR

Workshop Schedule (third Tuesday @ 7:00 PM): (these are the Hands-on Workshops)

- August 19 – Operating Etiquette – VHF/HF, Rag Chew vs Contest – Various Speakers
- September 19 – Favorite Ham Radio and Related Websites and Apps
- October 14 – Show-n-Tell – Favorite Ham Projects – Hosted by Kevin Scott K4GTR

GARS Meeting – August 12, 2025
Operating Etiquette – VHF/HF, Rag Chew vs Contest – Various Speakers

On-air Operating Etiquette and Practices will include the following topics:

- DX
- Repeaters - How to initiate a contact or respond to a call, roundtables, nets
- DMR - How to initiate a contact or respond to a call, roundtables, nets
- D-Star - How to initiate a contact or respond to a call, roundtables, nets
- HF Ragchew
- HF Nets
- Contests
- Other digital modes

GARS Workshop – August 19, 2025

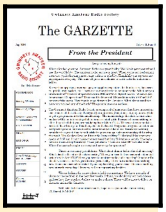
GARS workshops provide further information about the presentation given the week before on a one-on-one basis with the various presenters and there are also Elmers present on a variety of subjects to help with any questions you may have about ham radio – including help you're your equipment that you can bring in.

Elmers are always present at the GARS Workshops. Feel free to bring your questions to the Workshop. If your project is small enough to bring to the meeting, let us know in advance so we can bring tools, test gear, etc.

GARS would like to thank Ralph KJ4CNC for his presentation and the effort he does with schools to put together the ARISS communication from schools to the International Space Station along with all of the preparation needed to make it possible.

GARS Happenings

20 Years ago in the August 2005 GARzette:


The GARZETTE

From the President

- President, David KA4KKF, mention the CW requirement for licenses is going to end – ended in 2/2007
- Dacula had a 100 year parade GARS helped at (smaller than the Memorial Day parade)
- Earl, AF4FG, had a great article about GARS helping a scouting event "GARS and the Gold Rush"

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

Health and Wellbeing – Sandy Jackson, KJ4DRO

Look for this resource on Email (https://gars.org/contact/) and use it as a means to convey information about a GARS family member or Silent Key notification.

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 with the membership and awards to prove it. Our club is very busy and active, and we use the Monday night net to get timely 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 who make the net happen each week, and we need more members to volunteer to serve as Net Control Stations (NCS) on a rotating basis.

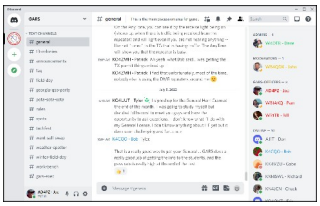
Out of almost 300 members, there are only five operators who serve as the NCS for the GARS net every Monday night. In no particular order, they are:

Ray – N4GYN David – KA4KKF Kevin – W4KIB Bill - WD4AMC Chuck – KK4TKJ Ed – W4BSR

As GARS Net Manager (Chuck KK4TKJ), I would like to have more volunteers 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 30 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 (Chuck) via Email (Click Here to Email our Net Manager) to help support the effort that makes GARS the great club that it is. See you on the Nets!

Don't forget about our Discord utility for GARS announcements, news, activity spotting and more. See http://www.gars.org top of the home page. This is a sample of Discord. →



GARS Member Spotlight

GARS and ARES Member: Mark Bell N7GRB

Mark Bell – N7GRB at his QTH basement operating position.

Mark Bell settled into west coast (Oregon) after ending his career in the US Navy and completing a master's degree at the University of South Carolina. His interest in Amateur Radio was sparked by his peer manager at Tektronix, who was a ham (as well as half the development management team). Mark earned his Technician License in 1984, upgrading to General the following year. Mark was very involved with the Oregon Wing Civil Air Patrol and used communications skills to become a Group level Communications Officer. As a mission pilot and observer, he would run airborne tactical nets circling at 10,000 over the rugged terrain. The OR CAP used Air Force Frequencies, which sort of bracketed the 2-meter band for tactical and on HF in the 4 Mhz range for formal traffic.

Moving to Georgia in 1992 Mark attended a few GARS meetings, but with Atlanta traffic and the work location, he could not reliably attend. So, there was a short recess in seeing him. Mark's work situation changed and in mid 2017 he joined GARS. Larry Whited, AB4NX, quickly recruited Mark into ARES with Mark with the assuming the role of Assistant Emergency Coordinator for Public Health focusing on supporting the Gwinnett hospitals and the Gwinnett Newton Rockdale Public Health Department. Larry also got Mark back on HF by strategically placing a myAntenna EFHW 8010 out-of-sight into trees behind his house.

Mark's current Ham favorite activity is Parks on the Air (POTA) in which he participates both activating and hunting parks. He uses an ICOM IC-705 in a W2HVH enclosure, a vertical antenna (Alpha FMJ Mil 2.0 6-80m vertical) and for an extended day operation a DIY battery box. He has numerous POTA awards and is still getting out there on the air having recently hit 2,500 unique hunted parks.

At Mark's home QTH he typically can be found in the basement operating an ICOM IC-7610 working both sideband phone and digital modes. For local communications a Yaesu FTM-400XDR or his IC-705 gives access to the W4GR VHF repeaters. A Zumspot provides access to the DStar network.

Mark hosts a Winlink Radio Message Server (RMS) on 145.590 Mhz providing coverage from Duluth to the west and Lawrenceville to the east. This RMS gateway is dual protocol providing support for classic AX.25 packet and the newer VARA FM modes. An Epic PwrGate is at the heart of the power supply. An Astron PSU and a 20Ah LiFePO4 for backup power connect to the PwrGate. Power is distributed to a Beelink miniPC, an Alinco DR-135 MK III 2m radio and lastly a Raspberry Pi with a Zumspot hat (used for DStar). A Masters Communications DRA-50 interfaces the Beelink PC with the radio. Antenna is a KB9VBR copper pipe Slim-Jim mounted in the attic.

The Basics

The Buck Regulator

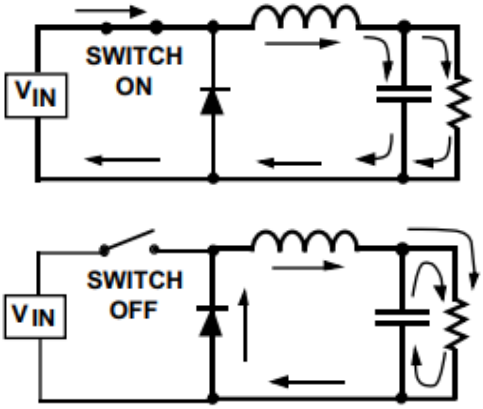
de: Bob Schmid, WA9FBO

Let's say you've built a project that requires +5 V at 1 A and want to power it from a +13.8 V supply. What kind of regulator would you use?

One choice is the common 7805 linear regulator, but it's not very efficient because it operates like a variable resistor. The +13.8 V supply would need to provide 13.8 V • 1 A = 13.8 W with 36% of the power going to the load (5 V • 1 A = 5 W) and 64% being wasted by the regulator (8.8 V • 1 A = 8.8 W). That regulator will need a good heat sink! (Sometimes designers put a fixed resistor in series with the regulator to offload some of the power dissipation.)

A better choice might be one of the popular buck regulators, such as the LM2575. It's offered by several manufacturers and is 80% efficient. And unlike a linear regulator, its efficiency doesn't decrease much as the input-to-output voltage ratio increases. A heat sink may not even be needed. Your design becomes more reliable because less heat is generated, and if less heat means omitting ventilation holes, the product can be better sealed against dirt.

The LM2575 can operate from as little as +8 V while supplying +5 V, so in a pinch your project could operate from a 12 V battery long after the battery is considered depleted. The regulator's maximum input is +40 V.



A basic buck regulator consists of a switch (a power MOSFET), a diode, an inductor, and a filter capacitor.

When the switch closes, current starts to flow from V_{IN}, through the inductor, and into the filter capacitor and load. The inductor's magnetic field increases, storing energy; this process creates a voltage that opposes ("bucks") the input voltage, causing the output voltage to be lower than the input voltage. During this time the diode doesn't conduct because it is reverse-biased.

When the switch opens, the inductor opposes the change in current by reversing the polarity of its voltage drop. It releases energy by supplying current to the filter capacitor. The current path is through the diode, which is now forward biased.

The switch opens and closes at a constant frequency. The duty cycle, which is the ratio of ON time to OFF time, sets the ratio of output voltage to input voltage. A control circuit varies the duty cycle to accommodate varying input and load conditions.

For best performance, use the suggested components and layout published in the regulator IC datasheet.

Ferrite

de: Bob Schmid, WA9FBO

FIGURE 1 - FERRITE

Conventional wisdom holds that when RF noise shows up on a power cable, USB cord, or the outside of a coax shield, the fix is a ferrite bead (Fig. 1). Ferrite material absorbs unwanted high-frequency energy and turns it into heat—no fuss, no tuning, no math. Unlike a capacitor or inductor, a ferrite bead doesn't react with the desired signal.

But wait a minute. If ferrite soaks up RF like a sponge, how come we find ferrite toroids in antenna tuners, baluns, and matching networks (Fig. 2)? Those applications call for inductance, not loss.

FIGURE 2 - BALUN

The answer is that not all ferrite is the same.

Not Just One Material

"Ferrite" isn't just one thing. It's a whole family of ceramic-like magnetic materials made mostly of iron oxide combined with other metals like manganese, zinc, or nickel. Different combinations give different electrical and magnetic properties. Some mixes are designed to be low-loss, making them great for inductors and transformers, where you want to guide RF without wasting it. Other mixes are intentionally lossy at RF, making them ideal for suppressing noise by turning it into heat. Depending on the mix and frequency, ferrite can act as a lossy absorber, an inductor for tuning, or a magnetic path in a transformer. See Table 1.

Mix Type	Frequency Range, MHz	Lossy or Low-Loss	Common Use
31	1–50	Lossy	Common-mode chokes (HF RFI suppression)
43	25–250	Moderately Lossy	HF chokes, clamp-on beads, baluns
61	200–1000	Low-Loss	VHF transformers, tuned circuits
67	100–300	Low-Loss	Wideband RF transformers
73	1–10	High Loss	Low-band noise suppression (1.8–7 MHz)

TABLE 1 - FERRITE MIXES

Intentional Loss

When we want to suppress RF, we choose a ferrite mix that has high resistive losses in the relevant frequency range. It acts like a series resistor to RF: it doesn't reflect or resonate, it just dissipates. Wrapping a few turns of the cable around the toroid or simply clamping on the bead creates a common-mode choke. It won't affect the desired signal, which flows in differential mode.

Efficient Coupling

On the other hand, when making inductors, transformers, baluns, matching networks, or tuned filters, we choose a ferrite that has low loss in the desired frequency range. These cores still have high magnetic permeability, which means they concentrate magnetic fields and couple energy well between windings, but they don't soak up the signal like lossy ferrites do. Instead of dissipating power, these ferrites store and transfer energy, just like an air-core inductor—but in a smaller space, with better magnetic coupling.

Hamfest Ferrites

Since the balance between loss and inductance varies among ferrite products, how can we tell whether those "mystery toroids" we picked up at a hamfest will work for a particular project?

Lacking part numbers, it can be tough to identify ferrite toroids in the wild because they're rarely color-coded. (Powdered iron toroids are usually color-coded, but they're different. They're not ferrite and they

have low loss, making them suitable for inductors but not common-mode chokes.)

Visual clues may help. Grainy, unpainted, dark gray or black matte cores are often lossy, useful for suppression. Painted, metallic gray, shiny, or smooth cores are more likely to be powdered iron or lower-loss ferrites, useful for tuned circuits.

A good way to evaluate a ferrite core is to use a NanoVNA to generate an impedance vs. frequency plot (there are several online tutorials). In general, an impedance that rises smoothly with frequency but stays relatively low indicates mostly inductive behavior—often seen with powdered iron cores or low-loss ferrites, which are good for RF inductors. Conversely, a broad, high, and relatively flat impedance suggests resistive or lossy behavior, meaning the core may be better suited for noise suppression.

An LCR meter or Q meter can also help evaluate ferrite cores, especially at fixed frequencies. These instruments measure inductance (L), resistance (R), capacitance (C), and quality factor (Q), depending on the mode. In general, a core that shows high inductance and high Q (low loss) at a given frequency is likely made of a low-loss material. A core that shows lower Q and significant resistance is likely made of a more lossy material.

General HamCram August 23 and 24

WHEN: Saturday 8/23/25 and Sunday 8/24/25; 8:00am to 4:00pm each day, exams start at 4:00pm Sunday (this is a CLOSED exam session, only open to registered students of the class).

WHERE: EAA 690 Hangar, Gwinnett County Airport – Briscoe Field, 690 Airport Rd, Lawrenceville, GA 30046

MORE INFO: To register for our 2-day HamCram Class, use our registration form below. Pre-registration is REQUIRED. No Walk-ins accepted. This fee is non-refundable. Our $25 fee covers the class and lunch both days, and the exam fee for the exam given Sunday at 4:00pm. Lunch will be brought in to save time.

We will be using the Ham Radio School General License Study Guide for this class. You can purchase the study guide locally at Ham Radio Outlet in Doraville, or purchase the book online at HamRadioSchool.com. We encourage you to at least look over the material in a study book and take some practice tests. We will go over every question in the question pool during the class, but remember that the test will only be 35 multiple choice questions. If you get 26 out of the 35 questions correct, you will pass the test. We suggest that you take some practice tests prior to the class to familiarize yourself with the question format and some of the material. Go to our exam page for sample online tests towards the bottom.

QUESTIONS: Questions about the class or the exam session — **click here** to email the instructors.

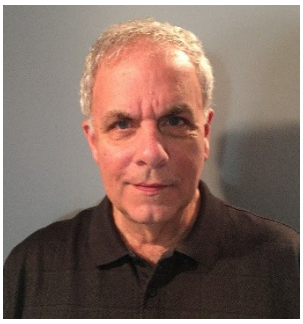
REGISTRATION:
***** Pre-registration is Required *****
***** There is a no refund policy for no shows *****

https://gars.org

Little Tips and Tricks with Vintage Radios

Vintage Amateur Radio

de Bill Shadid, W9MXQ



Every once in a while, it is a good idea to share a few details of simple tricks learned over the years that can help keep a Vintage Amateur Radio – or an inventory of these interesting and challenging historic items – working and performing.

This month we will get into several subjects relating to things discovered over the years to make Vintage Amateur Radios work and perform better.

Replacement for Incandescent Pilot Lamps:

One of the first things that happens with a vintage radio is that one of the little light bulbs used to illuminate the frequency readout dial or the panel meter(s) is burned out. We refer to these as "lamps." For most of us, we are referring to the #47, 6.3-volt, or the #1851, 12.6-volt, lamps that are common. The 6.3-volt or 12.6-volt operating voltage is not all that uncommon as it matches the voltage rating of most of the vacuum tubes in the radio. Some radios require such lamps to comfortably read the dial for determining frequency.

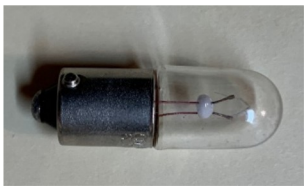
Finding suitable replacements for the common #47, #1851, or any of the other 2.5-volt, 5.0-volt, 6.3-volt, 12.6-volt, and more incandescent bulbs has become somewhat problematic. While suppliers from Asia exist and are plentiful at the present time, they lack the quality and consistency of the classic American bulbs from General Electric, Chicago Miniature, and others. The classic bulbs are available as new old stock (NOS) from the original manufacturers – but are becoming harder and harder to find. The Asian equivalent parts are inconsistent as to internal structure and can project objectionable shadows in the viewing area. The internal structure of a high-quality pilot lamp is consistent with the placement of the alignment pins in the base. The original radio manufacturers used this alignment to properly orientate the lamp mounting to provide a clear projection of light onto the panel – absent any shadowing from internal lamp parts.

A reasonably acceptable alternative to the classic incandescent lamp for use in radios comes in the form of LED Replacement Bulbs. I have found over time that the highest quality LED Replacement Bulbs come from a company called Titan Pinball. I have no association or connection with that company. However, in my opinion, they make a quality product. They can be found on eBay™ by doing a search (within eBay) for "Titan Pinball." Look for "Warm White" color – or color temperature of about 2700-3000 Kelvin. That color target removes most of the harsh tones of the typical white LED. The light diffusion from the little LED bulbs is excellent.

Take a look at a comparison of a Titan Pinball LED Replacement Lamp and a traditional one from Chicago Miniature Lamp Company. The Titan Pinball product is a replacement for the 6.3-volt #47 Lamp. The Chicago Miniature Lamp Company lamp is an original #47 design.

Titan Pinball
LED #47 Lamp Replacement

W9MXQ Photo



Chicago Miniature Lamp Company
#47 Lamp

W9MXQ Photo

There is a nasty little secret when using LED Replacement Bulbs that can spell doom for your vintage radio. Occasionally, LED devices can fail to a short rather than an open circuit. Such a short on the filament line of the radio's power transformer can very quickly burn out the filament winding and significantly damage the radio. At the very least you must then find a replacement power transformer (almost unobtainium), have a custom transformer made (guess where that falls in price??!!), or find a suitable filament only transformer and install it in the radio. The failure of these devices to a short was unknown to me but came up in a discussion with a very well-respected radio technican who is a friend, Jeff Covelli, WA8SAJ. I believe this to be a very real potential problem.

To mitigate the dangers of damaging or destroying the power transformer of the radio, I urge you to follow WA8SAJ's suggestion and install a Pico Fuse[1] between the LED Replacement Lamps and the filament circuit of your radio. Only add this fuse in line with the LED lamps – not the overall filament circuit. I suggest a 0.5 ampere fuse here for two to four lamps.

Many old radios had a fuse in such voltage feeds. If not an actual fuse, some had a small loop of fuse wire that would melt and open in over current occurrences. Also, carefully check the filament line circuit diagram. This array of voltage and current distribution often is complicated and sometimes uses the current running the incandescent pilot lamps to provide adequate loading in places within the distribution. Only if the pilot lamps are directly across the filament winding of the transformer should LED lamps be considered. When in doubt, find a replacement incandescent pilot lamp!

My personal use of LED Replacement Bulbs has run from quick adaptation to the idea and now back to refusing to use them. For this collector, the "look" of the best of the LED bulbs is not acceptable to my eye. While they truly do save energy, the savings in miniscule at best. So, I have put together what I consider a lifetime supply of high-quality new old stock (NOS) General Electric and Chicago Miniature Lamp Company pilot lamps. Your preferences may differ and if the LED look is acceptable to you (and you protect the radio's power transformer) then this is a good way to go.

Checking Crystals:

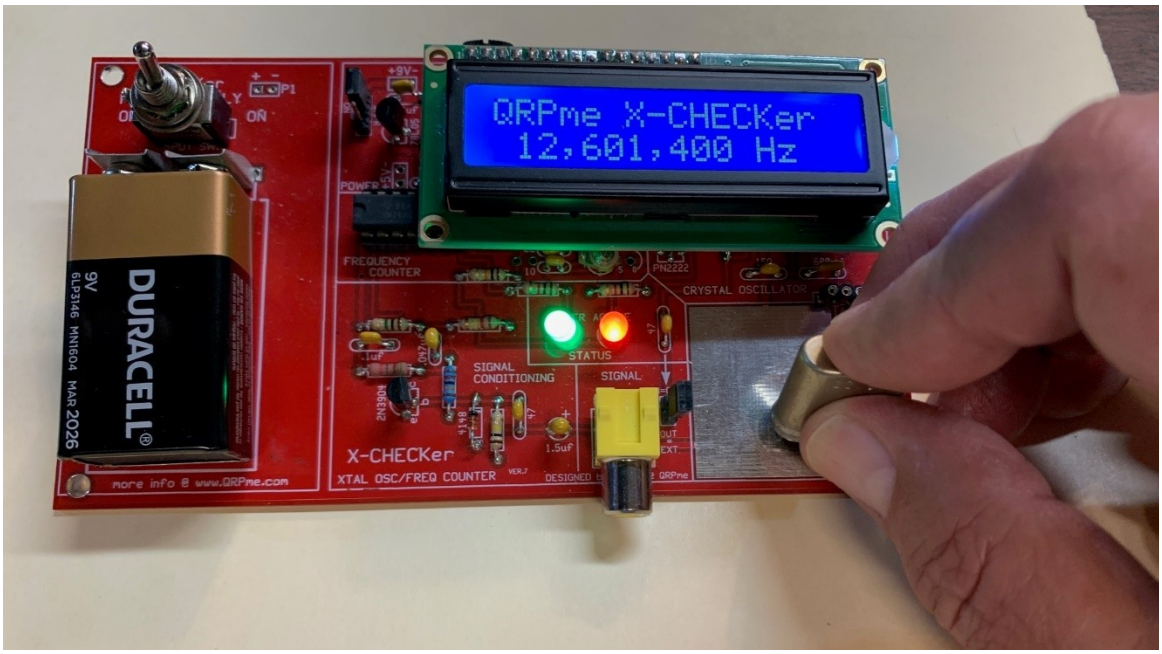
As time goes on in restoring and using Vintage Amateur Radio equipment, we are finding that crystals are not a "forever device." They age and they sometimes become inoperative or move in frequency. In my collection of radio parts, I have crystals from the 1930's right up to crystals used for heterodyne band setting in radios from the 1980's. All groups share the same faults of being inoperative, off frequency (but probably within tolerance), off frequency to the point of being worthless, or oscillating right on (or very close to) posted operating frequency. It is good to check for crystal frequency accuracy before getting too far into the process of alignment.

So, okay, how does a restorer go about testing a crystal? I imagine there are all kinds of ways, but I used a small Crystal Activity Checker, called the "X-CHECKer." This little circuit board kit is available here: http://qrpme.com/?p=product&id=Q17

X-CHECKer Crystal Activity Checker from QRPme

W9MXQ Photo

Looking at the above picture – note the power toggle switch in the upper left-hand corner of the circuit board. You can also see the boot-up screen in the two-line LCD readout. The illuminated green LED indicates that power from the 9VDC battery (lower left corner of the board) is engaged, and the little checker is awaiting a crystal to check. The checking pads are located at the lower right-hand corner of the circuit board. See below for use of the device:



Checking a Crystal on the X-CHECKer

W9MXQ Photo

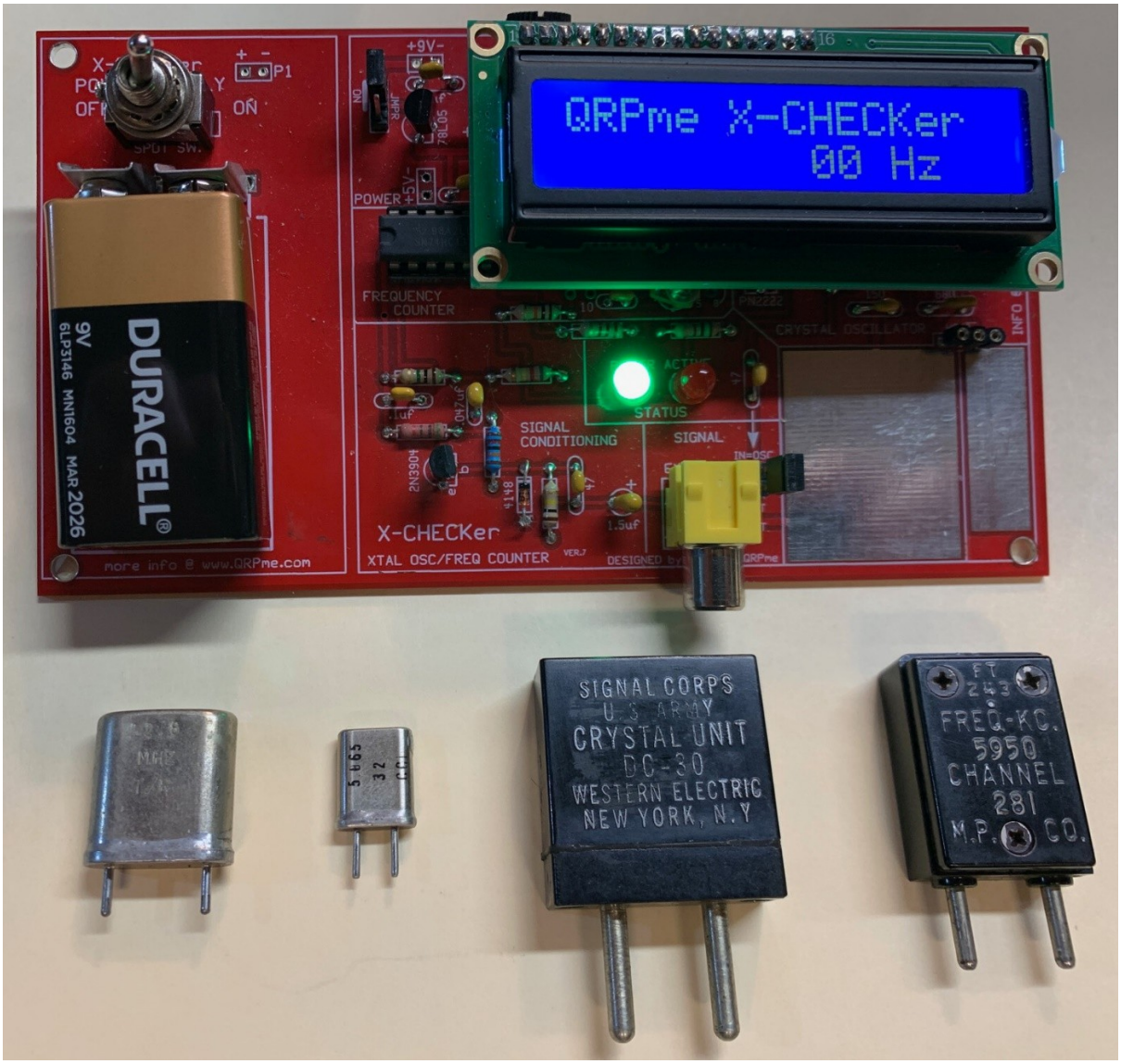
Holding the crystal in one's hand and touching its connection pins on the pads is all that is required to make a test on the X-CHECKer. The crystal shown is a 160-meter band range heterodyne crystal for a Drake R-4(x) series Receiver or a Drake T-4X(x) series Transmitter. The posted reading on the crystal body shows this to be a 12.6 MHz crystal. It shows itself to be oscillating at 12,601,400 Hz, or 12.601400 MHz. This is well within tolerance, and this is a good crystal.

Using the X-CHECKer requires some thought and checking of the design of the circuit. For instance, some are used in circuits that use frequency multiplication. In such cases it is to be remembered that the crystal will be marked by the factory to show its frequency in use – not necessarily the frequency for which it actually oscillates.

Let's take an example of what is presented in the previous paragraph. For 160-meters the Drake radios mentioned use a 12.6 MHz heterodyne crystal that works at its fundamental (12.6 MHz) frequency. This when mixed with other mixers in the radio nets a range of 1.5 to 2.0 MHz – which includes the 160-meter band. When the desired frequency range is 28.0 to 28.5 MHz, however, the crystal required is much higher in frequency. In this case, it is 39.1 MHz. That crystal value is too high for this kind of crystal, so the circuit takes the third harmonic of the crystal. So, 39.1 MHz divided by 3 would equal 13.033 MHz. The crystal I tested for that position in my Drake R-4C Receiver shows a reading of 13,025,730 Hz, or 13.02573 MHz. That is close enough for proper operation.

When I say, "close enough for proper operation," I mean that the difference in dial readout is easily accommodated by the mechanical dial adjustment on the R-4C Receiver.

Here is another picture of the X-CHECKer shown next to several of the kinds of crystals it can test.



QRPme X-CHECKer Device
Readout is indicating it is ready to test a crystal.

W9MXQ Photo

Shown above are four crystals. The one at the left is the 12.6 MHz 160-meter range crystal first mentioned above. The next from left is a range crystal from the Swan 100MXA Transceiver at W9MXQ. The large crystal, second from the right 7930.000 kHz crystal from WWII surplus. It oscillates at 7929.79 kHz, which is acceptable. The crystal at the right is an FT-243, WWII surplus crystal marked as 5950 kHz. It checks at 5949.24 kHz. Again, it is acceptable.

Another example is the crystal in a 1961 vintage Collins KWM-2 for the 7.2 to 7.4 MHz range. It is designed to operate at 10.355 MHz. The radio proved to be way out of range and even sluggish in working at all in that band position. When testing the crystal on the X-CHECKer, I found it to be operating at 10.400006 MHz. It was way off and needed to be replaced. Clearing that issue up before digging into other circuits in the radio is very beneficial.

I was made aware of the X-CHECKer from a good friend in the hobby. He is also a seller of vintage radio equipment[2].

Operating with Excessively High Primary AC Line Voltage:

Many radios built in the 1950's and even into the 1960's are designed to operate with 110 or 115 VAC as the primary supply voltage. These radios, operating today, see 120 to as much as 127 volts (personal experience) from the AC mains. As I write this, I am seeing 123 volts from my AC line monitor. That works well with my Yaesu FTdx-101MP that specifies 100 VAC to 200 VAC that is automatically accommodated. So. all is well with a current model radio.

This is much different as we move to older equipment. I find specifications to 110, 115, and 117 VAC as required power input from AC Mains. This tends not to apply to later vacuum tube radio equipment. For instance, the Drake R-4C Receiver, made up until about 1979 or 1980 specified 120 VAC – so it is relatively safe to use on today's AC Mains. The real problem collectable radios are the likes of the Collins S-Line Separates and the KWM-2 Transceivers using the 516F-2 AC Power Supply. It specifies, in my documentation, an AC Mains supply of 115 VAC.

These differences do not seem like much but a 6.3 VAC tube filament on a circuit design for a 115 VAC Primary will see over 6.8 volts at a 122 VAC primary. That will shorten the life of the tube. Similarly, the voltage developed by the power transformer for receiver and transmitter plate voltage will be increased to a point where they will stress the power supply components in the high voltage circuits.

Over the years, I had chosen to ignore this issue – that is, I ignored it until doing the math and understanding that in such delicate items as power amplifier tubes with their very narrow range of tolerance for over (or under) filament voltage for proper operation and tube life. The final straw for me was watching that my Collins KWS-1 Power Amplifier was significantly high in filament voltage on the 4CX250B finals and also generating enough extra plate voltage to compromise the filter components in the power supply. Equally, this was impacting many radios of that 1950's vintage Gold Dust Twins[3] setup.

So much for the problem. How do we solve it? Actually, for the 110- to 120-volt side the solution is relatively simple with readily available equipment. Handling 220 VAC equipment is more involved and will be covered a bit later. For the 110- to 120-VAC items, I use an autotransformer (generally known as a Variac™ but this one is not a trademark Variac product). These are common on eBay and can come from Bulgaria, China, or other offshore makers – all seem to look similar. The one I bought was sold on eBay, was brand new, beautifully made, and shipped from a warehouse in the United States. It was made in China and, from my experience, source by a company providing for good oversight of the manufacturing plant. Contact me (W9MXQ@TWC.com) for details.

Meter on the autotransformer ("Variac™) is reading voltage to the radio or device/load connected. Hard to read here but it is 110 VAC.

Meter on the AC Socket (on the right) is reading 122 VAC.

Shown at the top of the transformer is the voltage adjustment knob.

2000 VA Autotransformer – Variac™ Device

W9MXQ Photo

The pictured device runs cold with one of my Swan 550-watt 500cx or 750cw Transceivers, the Swan 600-watt 600-T/600-RC Transmitter/Receiver Twins. I set the secondary at about 110 volts. Output is sourced from the two outlets you see on the front of the autotransformer.

At W9MXQ, only current vintage equipment plus later vintage Drake and Cubic equipment operate without the autotransformer. The Drake and Cubic equipment are rated for 120 VAC – very close to the 123 VAC experienced here.

Now let's discuss a 220 VAC Circuit. If you can imagine the distribution of 220 VAC circuits in the United States and Canada you will note that it is not really 220 VAC – it is 110-0-110 (or, as it is here right now, more like 123-0-123 VAC. While a 0-240 VAC autotransformer would seem to work, they are intended for other locations, such as Europe. A single autotransformer will not work because in our installations (USA and Canada) we see the center-tap ground. So, rather than 0-240 volts, we like to see 120-0-120 VAC for our 240-volt AC installations. To accomplish what is needed, a user would have to have two of the above 0-140 VAC autotransformers in tandem – one on either side of the 120-0-120 circuit. While it is possible to combine two separate 0-120 VAC units, it is better using a single assembly where the two 0-120 VAC units are mechanically connected with a common rotating shaft and therefore always matched as to voltage setting.

At W9MXQ, I use a surplus General Radio W20G2 Dual Autotransformer 140-0-140 VAC to run Vintage Amateur Radio equipment requiring "220 VAC" primary. This includes the Collins KWS-1 Transmitter (1955 vintage), the Hallicrafters HT-45 Linear Amplifier (1963 vintage), and the National NCL-2000 Linear Amplifier (pre-1969 vintage). In all of these cases, the autotransformer is set to 110-0-110 VAC. The W20G2 Autotransformer will handle about 2,800 watts of power to the load.

Here are a couple of views of the General Radio W20G2 Autotransformer:

General Radio Dual W20G2 140-0-140 VAC Autotransformer

Showing the two identical connection panels for the tandem 0-140 VAC autotransformers.

Showing the top panel with the voltage control knob plus additional view of the mechanical construction.

W9MXQ Photos

This Autotransformer has recently been removed from service and is awaiting installation in a roller equipped floor cabinet.

In this dual configuration, each of the two separate transformers are linked by a common shaft and control knob.

The W20G2 140-0-140 VAC Autotransformer weighs about 45 pounds. It was sourced from the University of Iowa in a sale of excess laboratory assets several years ago. I found it via a lead from a fellow Collins collector. These, in surplus, cost about $200.00 and then another $100.00 to pack and ship. It appears to never have been used (but was sold as a “used, like new” unit). Note some missing screws on the connection panels. Those are part of my removed cable harness that I fabricated for installation with the various radios. That cable and new connectors will be integrated into the new cabinet installation.

In closing this section, it is my suggestion that if your line voltage is close to 120-volts AC then you should be using an autotransformer with your vintage radios. If the radios are the vintage of later Drake models – then they are okay at current AC power voltage levels. I would, however, question the vintage of the AC-3 Power Supply (for the TR-3 Transceiver, the original R-4, R-4A, and R-4B Receivers and matching T-4X and T-4XB Transmitters (with early AC-4 Power Supplies). When in doubt, setup an autotransformer equipped circuit for using these radios. ANY, Hallicrafters radio should be using the autotransformer – and the same with Hammarlund, National, and others of the same period. Am I overly cautious? Probably. But being over cautious with Vintage Amateur Radios is always acceptable.

Cleaning Wrinkle Black Cabinets and Panels:

Many Vintage Amateur Radio pieces have cabinets that are painted with what is called Wrinkle Black Paint. Chemically, this paint is designed to have the top layer constrict a bit (I am not a chemist!!) when drying and thus provide an attractive finish that does not show finger marks and is remarkably durable. This is not to be confused with the smooth pebble texture finish found on many later Hallicrafters and Drake cabinets. Most will recognize this as the finish on virtually all Swan radio outer cabinets (top and sides). Going back into the 1930’s through the 1950’s, it was very common[4].

This finish is very attractive but since it has pockets and folded over areas from the constriction of the drying paint, it tends to attract dirt from the hands when handled and generally grim from just being in the open air. Simple cleaning can actually make it look worse than when dirt first appears. While very durable, you must be very careful when cleaning it. Some cleaners, in my experience, such as Krud-Kutter™ tend to clean but at the same time can soften the paint – and allow damage when scrubbing the surface to remove dirt[5].

For Wrinkle Paint cleaning I use one or the other of two products – 409™ or Fantastic™. I buy whichever one is the lowest price when I need to refill my supply. Spray the cleaner on the part and spread it around the surface with your fingers (unlike Krud-Kutter™, 409™ and Fantastic™ are safe to touch). After a few minutes, scrub all areas of the panel with a soft toothbrush (or similar soft bristle brush. Then rinse the part in water that is as mineral free as possible. I use Reverse Osmosis (RO) water for this purpose. You may need to repeat multiple times. The result is a very nearly brand new look. The key ingredient in my two favorite cleaners is ammonia. You can use household ammonia mixed in water (following the instructions on the ammonia container) but I dislike working around ammonia in its pure state, so I prefer the commercial cleaner version[6].

There is another method – well known but not as preferred in my experience. These parts can react well to being run in a short cycle in the dishwasher. (Not the entire radio, mind you!!) I have tried this method and found that it can begin to lift the paint in some cases. Those cases are likely tied to the original preparation of the metal for painting or even the actual paint mixture in spots. Be sure that the dishwasher is on a very short cycle, all heating is off, and water temperature is just slightly warm, at the

highest. I experienced some bubbling of the paint that easily pressed back in place immediately after removal with no damage apparent once dry. I have never used this method again, however. It may work well – and maybe your dishwasher has more temperature control than mine.

A beautifully clean Swan 750cw HF Transceiver

After cleaning the top and sides with Fantastic™ Cleaner, scrubbing with a soft bristle toothbrush, then flushing with water.

(Cover is removed for the process, of course!!)

W9MXQ

When flushing the final cleaned part with water, be sure to get collected water out of the areas where the metal is folded back onto itself to create a smooth edge. These folds collect water – and that can encourage rust. The thin steel of the Swan cabinets (typical of many of the time), are very susceptible to such damage.

Everybody has favorite tips they have mastered for the restoration and maintenance of vintage radios. Paint and finish seem always an issue as to aging components (off tolerance or failing crystals, resistors, and capacitors). Another area of concern with vintage radios is how to make them more able to deal with today's band crowding and the noises that make their way into the speaker and headphones of today's operating. That will be one of several topics covered the next time I pen an article on operating and maintenance tips. Do you have a favorite fix or technique you would like presented? Let me know at the address in the next paragraph and I will include your thoughts, with proper credit to your work.

I appreciate that you read my articles. Remember that I am open to questions and comments anytime at my email address, W9MXQ@earthlink.net.

A special note of thanks to my proofreader, Bob Bailey, W9DYQ. Bob is a lot more than a proofreader as he often adds commentary that makes it into the article. Certainly, in an article like this, it is good to have a second person review the process.

Credits and Comments:

[1] A Pico Fuse is an **axial leaded subminiature fuse. They are similar is size to a resistor.**

[2] My good friend and equipment seller is Mark Olson, KE9PQ, at Nationwide Radio & Eq. Sales LLC, Suamico, Wisconsin. He can be located at https://ke9pq.com

[3] The Collins "Gold Dust Twins," as I have often mentioned are the Collins KWS-1 Transmitter, 75A-4 Receiver, and 270G-3 Speaker Console setup. They were called the "Gold Dust Twins" because of their high selling price back in 1955, when introduced.

[4] Wrinkle Black Paint can also be known as Black Crackle Paint. As you come across this finish you should be aware of several finish appearances. Swan paint of this variety seems to have been unique – with the common variety found on

military surplus equipment and several other amateur radio brands being of a more open texture than Swan.

[5] I am a faithful user of Krud-Kutter™ for many areas of cleaning up old radios. However, be very careful with it as it will tend to remove silk screen lettering on radio chassis' and panels. It softens paint, as mentioned in the article.

[6] Remember that ammonia or cleaners including ammonia can cloud clear plastic or Plexiglas™. These cleaners can ruin clear plastic covers over readouts, meter crystals/bezels, or other clear or shiny color opaque plastic parts. Beware!

Remember that these old radios are dangerous and unforgiving. High voltages that are way beyond the 12 VDC running today's radios. Keep your wits about you when you work with vacuum tube radios. Here are the scenarios:

Laugh Later

Laugh Never

GARS Membership

New Members in July

John Aguirre (KQ4EJV)
Maritza Aguirre
David Aguirre
Simon Aguirre
Rachel Buzzerd (KR4EAV)
Karen Langley

New Members: 6

Total Members as of August 1, 2025 349

Join GARS members for our:

- weekly lunch bunch at 11:30 AM most Fridays
- weekly breakfast gathering at 8:00 AM most Saturdays

Friday weekly gatherings are held at the Chilli's at:
947 Lawrenceville Suwanee Rd
Lawrenceville, GA 30043

Saturday weekly gatherings are held at the Cracker Barrel at:

75 Celebration Dr
Suwanee, GA 30024

Birthdays in August

Emory Albritton
Kyle Albritton (W4KDA)
Jim Barrett (K4PDY)
Franco Bocalon (KQ4SAX)
Stephen Dearman (KI4IXR)
Philip Graham (N4PRG)
Paul Hachey (KC4YRV)
Jared Hawkins (KM4SSI)
Conor Huneycutt (KN4VNU)
Leonard Johns (KQ4OSW)
Jason Johnson (KN6PIN)
Gary Jones (W4HX)
Robert Keeney (KN8RG)
Deon King (KR4CUN)
Ron Langston (WE5O)
Samuel McClure (KM4AAO)
Judyth Perry (KD6LNP)
Jayden Proctor (WX4LZU)
Lige Sims (AB4OK)
Robert Sloan (WA4DD)
Robert Thacker ( )
Sahan Thanthiriwatte (KQ4BKE)
Connie Weathers
Earl Whatley (AF4FG)
Larry Whited (AB4NX)

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 – www.gars.org/gars/membership/. To make changes to your GARS membership (moved, new e-mail address, new phone number, etc.), please contact the Membership Chair at Email (https://gars.org/contact/) with any changes to your Membership information.

Membership Chair: Karen Albritton, KI4HPP
Committee Members: Dave Bruse, W4DTR, Pam Brown, KJ4RYV, John Aguirre, KQ4EJV

ARRL MEMBERSHIP

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

MAINTAIN YOUR LICENSE

You can update your Amateur Radio license information with the FCC at their website for free - https://www.fcc.gov/wireless/universal-licensing-system. License renewal is subject to the $35 FCC fee.

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):

- Kroger Community Rewards program.

For more information on how to sign up for these rewards programs, or to donate to GARS, visit

https://gars.org/gars/donations-to-the-club

GARS on Social Media

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

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

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

Follow GARS on X:
https://x.com/GARS_Hams

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

GARS Mail Address:

GARS
P.O. Box 492531
Lawrenceville, GA 30049

 Bob Hoffmann, President K4CQO

 Richard Kitz, Vice President KM4SWL

 Harold Brown, Secretary KI4FPR

 Glen Wendt, Treasurer W3WWT

 Kevin Scott, Program Manager K4GTR

Managers and Committee Chairs

 Karen Albritton, Membership Chair KI4HPP

 Dave Bruse, VE Team Leader W4DTR

 David Adcock, Webmaster KA4KKF

 Ralph Pickwick, Education Chair KJ4CNC

 Earl Whatley, Apparel Manager AF4FG

 Bob Hoffmann, GARzette Editor K4CQO

 Eddie Foust, Repeater Chair WD4JEM

 Mike Weathers, WAS / DXCC QSL Card Checker & Historian ND4V

 Chuck McCord, Net Manager KK4TKJ

 Steve Back, Technical / RFI Advisor WB2OGY

 Dallas Mellichamp, Workshop Leader, Field Day Chair N4DDM

 Sandy Jackson, Health and Wellbeing KJ4DRO

 Kevin Igarashi-Ball, Multimedia Chair W4KIB

 Dallas Mellichamp, Georgia QSO Chair N4DDM

 Neil Derryberry, Elmer Manager WD4NET

 Edwin Henderson, TechFest Chair W4BSR

Open Winter Field Day Chair

Directors and Trustees

 Joe Biddle, AD4PZ

 Kyle Albritton, W4KDA

 John Davis, WB4QDX

 Bill Cherepy, WB4WTN W4GR Trustee

GARS Meeting Minutes

July 8 2025 GARS Meeting

Opening Meeting: Meeting opened at 7PM (1900hrs) by President Bob Hoffmann. General information was conveyed as to exit, bathrooms, safety and exit from the Airport ramp gate. Welcomed visitors and members. Acknowledge new Hams and upgrades.

Birthday Acknowledge: As listed in the newsletter.

Treasurer Report: By Glen Wendt

Membership Report: 349 as of July 2025

Programs: Kevin Scott manager. Ralph Pickwick, Education Chair on Ariss and an overview of all the logistic of arranging with the space station. Very interesting and a lot of hard work and coordination involved. August program will be on Ham Etiquettes.

Education: Ham Cram for the General Class to be held August 23 and 24, 2025.

Upcoming Events: See Education and monthly ham exams. Jamboree on the air in October 2025.

VE Status: One General in June.

Apparel: Available at each meeting or event.

Field Day: Dallas Mellichamp gave a report of the June Field Day. Overall it was a great event well coordinated by Dallas which was his first to organize after participating for years. Great Job.

New Business: None.

Closing: 8:50PM (2050hrs.)

Workshop Minutes – July 15, 2025

Attendance: 15

Workshop Topic: Field Day After Action Review

Presenter: None

Brief Summary: This Workshop did not follow the GARS presentation on ARISS (Amateur Radio onboard the International Space Station).

- Touched on submiting the Field Day logs and report to the ARRL
- Discussed some of the GARS leadership roles, volunteer positions, and how to help
- Welcomed 3 first-time Workshop Visitors: Danielle, Eddie, and Patrick
- David and Richard powered up Ron's (new to him) VHF/UHF all-mode rig and explained some of the functions of all the knobs and buttons
- Plus, 3-4 members at the DMR table

Elmers are always present at the GARS Workshops. Feel free to bring your questions to the Workshop. If your project is small enough to bring to the meeting, let us know in advance so we can bring tools, test gear, etc.

73 Dallas N4DDM
Workshop Chair

From the Membership Committee

The GARS Membership committee would like to welcome 2 new committee members.

Pam Brown, KJ4RYV, will be helping with general membership, processing renewals, and adding new members.

John Aguirre, KQ4EJV, will be helping Dave Bruse, W4DTR, to maintain and enhance the GARS Membership Database System.

Karen Albritton
KI4HPP
Membership Chairman

Events – GARS and others

ARRL CONTESTING INFO

From ARRL Contest Calendar

> For more information click the links <

January 2025
1 Straight Key Night
4 Kids Day
4-5 RTTY Roundup
18-20 January VHF

February 2025
10-14 School Club Roundup
15-16 International DX – CW

March 2025
1-2 International DX– Phone

April 2025
13 Rookie Roundup – Phone

May 2025 (no ARRL Contests)

June 2025
7-8 International Digital Contest
14-16 June VHF
21 Kids Day
28-29 Field Day

July 2025
12-13 IARU HF World Championship

August 2025
2-3 222 MHz and Up Distance Contest
16-18 10 GHz & Up – Round 1
16-17 EME - 2.3 GHz & Up
17 Rookie Roundup – RTTY

September 2025
13-15 September VHF
13-14 EME - 2.3 GHz & Up
20-22 10 GHz & Up - Round 2

October 2025
TBD Collegiate QSO Party
11-12 EME - 50 to 1296 MHz
20-24 School Club Roundup

November 2025
1-3 Nov Sweepstakes–CW
8-9 EME - 50 to 1296 MHz
15-17 Nov Sweepstakes–Phone

December 2025
5-7 160 Meter
13-14 10 Meter
21 Rookie Roundup–CW

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

HAMFEST CALENDAR

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

08/16/2025 - 08/17/2025 Huntsville Hamfest, ARRL Alabama State Convention
Location: Huntsville, AL
Type: ARRL Convention
Sponsor: Huntsville Hamfest, Inc
Website: http://hamfest.org

08/23/2025 - TarcFest
Location: Tampa, FL
Type: ARRL Hamfest
Sponsor: Tampa Amateur Radio Club
Website: http://www.hamclub.org

09/06/2025 - Dalton Swapfest
Location: Dalton, GA
Type: ARRL Hamfest
Sponsor: Dalton Amateur Radio Club, Inc. (W4DRC)
Website: https://www.qrz.com/db/W4DRC

09/19/2025 - 09/20/2025 Gadsden Hamfest 2025
Location: Gadsden, AL
Type: ARRL Hamfest
Sponsor: Gadsden Amateur Radio Club
Website: http://k4jmc.com

10/03/2025 - 10/04/2025 Hamfest Chattanooga 2025
Location: Ringgold , GA
Type: ARRL Hamfest
Sponsor: Chattanooga ARC & North Georgia GMRS Network

10/10/2025 - 10/11/2025 Melbourne Hamfest, ARRL Florida State Convention
Location: Melbourne, FL
Type: ARRL Convention
Sponsor: Platinum Coast Amateur Radio Society
Website: https://pcars.org/wp/melbourne-hamfest-2025/

10/10/2025 - 10/11/2025 NOARC Annual Hamfest
Location: Crestview, FL
Type: ARRL Hamfest
Sponsor: City of Crestview Florida
Website: https://w4aaz.org/noarc/hamfest-2025/

10/18/2025 - Savannah Hamfest and Swapmeet
Location: Savannah, GA
Type: ARRL Hamfest
Sponsor: Coastal Amateur Radio Society

10/25/2025 - Wiregrass ARC - Fall Tailgate
Location: Headland, AL
Type: ARRL Hamfest
Sponsor: Wiregrass Amateur Radio Club
Website: http://w4dhn.org

11/01/2025 - 11/02/2025
Stone Mountain Hamfest, ARRL Georgia State Convention
Location: Lawrenceville, GA
Type: ARRL Convention
Sponsor: Alford Memorial Radio Club W4BOC
Website: https://stonemountainhamfest.com

For more information: www.arrl.org/hamfests-and-conventions-calendar

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 2025

TechFest	February 1 2025
Winter Field Day	January 25-26 2025
Dog Show Fundraiser	March 26-30, 2025
Spring Technician HamCram	March 29-30, 2025
Georgia QSO Party	April 12-13 2025
North metro area Fox Hunt	April 2025
Memorial Day Parade	May 26 2025
ARC/KARC Hamfest	June 7 2025
Field Day	June 28-29 2025
Summer General HamCram	August 23-24 2025
Fall Technician HamCram	September 2025
JOTA	October 2025
Stone Mt. Hamfest	November 1-2 2025
Holiday Party	December 2025

GARS Recurring Calendar

- 2nd Tuesday of the month at 7 pm (except December)
  Monthly Club Meeting
  690 Airport Rd, Lawrenceville, GA 30046
- 3rd Tuesday of the month at 7 pm (except December)
  Monthly Workshop
  690 Airport Rd, Lawrenceville, GA 30046
- 3rd Sunday of the Month at 3 pm
  GARS Ham Exam Session
  690 Airport Rd
  Lawrenceville, GA 30046
- 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
- Every Friday at 11:30 am, GARS Lunch at Chilli's
- Every Saturday at 8:00 am GARS Breakfast at Cracker Barrell

GARS Calendar for August 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1 **11:30 AM Lunch at Chili's**	2 **8:00 AM Breakfast at Cracker Barrel**
3	4 **7:30 PM 2M Net 147.075(+) MHz Tone 82.5**	5 **7:00 PM Exec Meeting**	6	7	8 **11:30 AM Lunch at Chili's**	9 **8:00 AM Breakfast at Cracker Barrel**
10	11 **7:30 PM 2M Net 147.075(+) MHz Tone 82.5**	12 **7:00 PM Meeting EAA 690 Hangar**	13	14	15 **11:30 AM Lunch at Chili's**	16 **8:00 AM Breakfast at Cracker Barrel**
17 **3:00 PM Ham Radio Exams, EAA 690 Hangar**	18 **7:30 PM 2M Net 147.075(+) MHz Tone 82.5**	19 **7:00 PM Workshop Meeting EAA 690 Hangar**	20	21	22 **11:30 AM Lunch at Chili's**	23 **8:00 AM Breakfast at Cracker Barrel** **General HamCram EAA Hanger**
24 **General HamCram EAA 690 Hangar**	25 **7:30 PM 2M Net 147.075(+) MHz Tone 82.5**	26	27	28	29 **11:30 AM Lunch at Chili's**	30 **8:00 AM Breakfast at Cracker Barrel**
31						

More information about the above calendar events can be found on GARS Calendar

Local Ham Radio Exams & Meetings

GARS Ham Radio Exams

GARS Exam Sessions are held the 3rd Sunday of the month

Preregistration is REQUIRED
Doors open at 2:45pm, exams start promptly by 3:00pm
For more information and to preregister, please visit https://gars.org/exams/

GARS VE-Team
VEC: W5YI-VEC
EAA 690 Hangar
690 Airport Rd
Lawrenceville, GA 30046

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

July 2025 Results

The GARS VE Team exam session results from July 20th.

1 new Technician:

- Zachary D Allen - KR4FLS

1 Upgrade to General and then Extra:

- John L Chambers - KN4BVJ

Special thanks to the Volunteer Examiners who made this exam session possible:

KK4TKJ – Chuck Mc Cord
WB2OGY – Steve Back
AI1U – Tony Perales
WS3V – Bill Rudd
K4BYE – James Cheshire
K4CQO – Bob Hoffmann
N4MPC – Pat de Loe
KM4SWL - Richard Kitz
NG4H - William Beguhn

Thanks & 73, Chuck Mc Cord (Co-CVE)

Local Ham Radio Exams

In order to find an exam session near you, please visit http://www.arrl.org/exam_sessions/. Contact the information in the listing for further information.

Local Ham Radio Meetings

In order to find a local Ham Radio Club meeting near you, please visit http://www.arrl.org/find-a-club. Contact the club for meeting information.

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