



The

GARzette



The Official Newsletter of the Gwinnett Amateur Radio Society

August 2026 <https://www.gars.org/> Volume 53, Issue 8

Inside

President's Message	2
GARS Repeaters and Other Communications	3
About the GARzette	3
GARS Upcoming Meetings & Workshops	4
GARS Happenings	5
Net Managers Corner	5
GARS Stripers Get Together	6
GARS Sundays in the Park	7
Dave's Computer Tips – Getting Started on APRS	8
July General HamCram Results	10
The Basics by Bob Schmid, WA9FBO	11
What Did Yagi Do?	12
Ten-Tec Corsair and Corsair II	14
GARS Open Positions – Help Wanted	23
GARS Membership Pricing	23
GARS Membership	24
GARS Meeting Minutes	26
GARS Calendar Events	27
Events – ARRL Contests / Hamfests	28
GARS Ham Radio Exams & Results	29
GARS Supporters	30



[www.GARS.org](https://www.gars.org/)

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



**GARS Exhibition of the
Technical aspects of
Amateur Radio**

The next TechFest is early in 2027

**GARS Meeting: Meshcore by Mark Bell
Tuesday August 11, 2026 at 7:00 PM**



President's Message

From the President...

We had a very good turnout for the Meshtastic presentation from Ed Labra and he gave a good overview of what it is and what it can do. He also did a pretty good comparison between Meshtastic and MeshCore which is on the agenda for this month's meeting. Ed also came in-person to the Workshop and help with the set-up and answer individual questions about Meshtastic. If you missed his presentation you can listen to it on YouTube where we not place all of our meeting presentations thanks to Ed Henderson (W4BSR).

I just got back from a week long trip to Denver. I visited with my son who drove there from Albuquerque. I didn't bring any of my ham equipment with me but I did have the VoxDMR app on my phone so I could still do some radio stuff while I was there. I did look into their DMR repeater systems and was a little surprised how it was organized. Denver has a linked repeaters on their own system not connected to servers like Brandmeister – so my phone app was not useful to connect to it. It makes a nice way to connect all of their repeaters but does make it hard to connect to without an RF connection.

I just have to post some pictures of my driving around the Denver area – and the city itself seems to be very land conservative since the area does not have large house lots and lots of narrow town houses. Surprising to me since Denver has plains on one side with not much there and mountains on the other side. It was hot there – temps over 100, but dry so not as bad as GA heat!



GARS has a couple of fun things coming up. The first one is a night at the Stripers baseball game on Friday 8/21. The game is being held in Buford and the Friday game has fireworks and should be a good time to join some of the other GARS members for a non-radio outing.

In September GARS is starting Sunday's in the Park. It is on the second Sunday of the month starting in September. Being informal, if you are free please drop by and enjoy a radio get together and even bring your Go Box to join in the fun. Details about the September outing is detailed in an article in this GARzette.

There is a survey about who is reading the GARzette. You should be answering the survey by clicking on the link – which I did not do the first time I thought I was doing the survey and just responded to the email. I should have read the entire email instead of just the email response. Being the editor along GARS President, I sure would like the members to read the GARzette. There is information about GARS and also with the Basics and Vintage Radios articles contain a lot of interesting information.

The GARS VE team and the HamCram instructors are helping out for a special Ham Cram class for the EMA folks. This is one of the things GARS does to support ham radio for the community and makes me proud to be part of GARS.

Bob – K4CQO

Club President / GARzette Editor

GARS Repeaters and Other Communications

2 Meter Repeaters

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

1.25 Meter Repeater

224.580(-) MHz Tone 100.0, 1.6 MHz Offset – Grayson

70 Cm Repeaters

444.525(+) MHz Tone 82.5 – Snellville
442.100(+) MHz Tone 100 – Norcross
442.325(+) MHz Tone 100 – Buford

6 Meter Repeater

53.110 (-1 MHz) No Tone – Buford

Other Resources:

APRS

144.390 -- 1200 Baud W4GR

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, etc., Dave Bruse, W4DTR, who distributes the newsletter electronically, and Mark Prichard KN2TOD who delivers the GARZette to our local HRO store.

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 Upcoming 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, they can be found on [YouTubeLive](https://www.youtube.com/watch?v=...) each month on the second Tuesday at 7:00 PM Eastern (information also available on <http://www.gars.org>). Members are able to attend the GARS Executive Meeting (via Microsoft Teams) 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 11th – MeshCore by Mark Bell
- September 8th – CubeSat Presentation by Annie Mehta KQ4NJC
- October 13th - Favorite Projects and Websites - Various GARS Members

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

- August 18th – MeshCore by Mark Bell
- September 15th – CubeSat Presentation by Annie Mehta KQ4NJC
- October 20th - Favorite Projects and Websites - Various GARS Members

GARS Meeting – August 11, 2026 MeshCore by Mark Bell

The August GARS Meeting topic will be Meshcorp vs Meshtastic. For July, we had a presentation on Meshtastic which uses the secondary and shared amateur radio allocation in the 902-928 MHz ISM band. Users of these modes do not have to be ham operators for several reasons (low power, for example) but many ham operators are using these modes. Lately, it seems that many are migrating from Meshtastic to MeshCorp. Mark will be giving a presentation on the MeshCorp side with much of his personal experiences as well as other GARS members operating both modes to see which one "wins". Some of his topics will include:

- What is MeshCore
- Getting started
- MeshCore roles (companion, repeater and room server)

MeshCore vs Meshtastic

GARS Workshop – August 18, 2026 MeshCore

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 Ed Labra for his Meshtastic presentation and additional Workshop help with setting up member's Meshtastic systems.



GARS Happenings

20 Years ago in the GARS, ham radio, newsletter, Gwinnett 2006 August GARzette:

- 20 years ago the Dog Show was held in August
- There is an article about the Double Bazooka antenna

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



In order to update information about a GARS member or to report a Silent Key, use www.gars.org/gars/membership-chairman or www.gars.org/gars/email-health-wellbeing

Net Managers Corner

Monday Night 2 Meter “Want, Swap, Sell, and Information Net” Thursday Night 440 Buford Repeater 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 six operators who serve as the NCS for the GARS net every Monday night. GARS can always use more volunteers In no particular order, they are:

Ray – N4GYN David – KA4KKF Don – KM4BWT Joe – KR4LQL Chuck – KK4TKJ Ed – W4BSR

To volunteer to help as a NCS for the 440 Net contact Jim O’Brien KQ4RNA.

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](mailto:chuck@k4tkj.com)) to help support the effort that makes GARS the great club that it is. See you on the Nets!



GARS Stripers Get Together



Mark your calendars for **GARS night at the Gwinnett Stripers, Friday, August 21st, 7:05p.** The Stripers will be playing the Durham Bulls, the triple A affiliate of the Tampa Bay Rays. In addition to what will be a great baseball game, Friday night is Fireworks night at the stadium.

Ticket Price is: \$17.50ea

Great seats have been reserved in section 113 (first base side), rows B,C,D and E.

Note: Gwinnett Striper Stadium is a "cashless" facility. All concessions require credit cards or an apple pay type app on your phone. Tickets will be emailed to you about a week ahead of the game. You will have to follow the following steps to access your tickets:

1. Click the link sent to your email to accept the tickets.
2. You will then need to either create a MyStripers account or log into your existing account using the email the tickets were sent to.
3. Once successfully logged in – save the tickets to your wallet. Recommend you do step three from your phone.

Go to www.GARS.org to order tickets.

We look forward to seeing all of you at the ballpark.

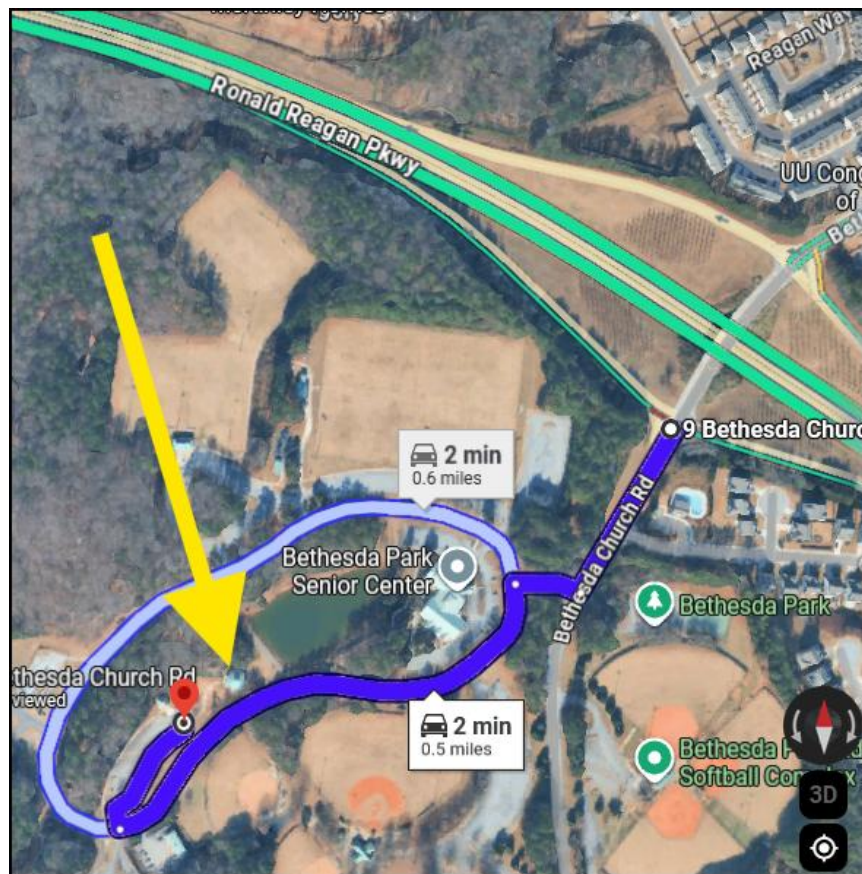


GARS Sundays in the Park

Second Sundays in the Park beginning in September

Several GARS members have asked about regular meetups outside of the usual Tuesday meetings and workshops. As a response, we have scheduled a monthly outing on the **Second Sunday** of every month in a local county park. This is an opportunity to get out, set up your field portable radios, make some contacts together and have good fellowship with your friends in the club. Park outings may rotate between a few centrally located Gwinnett County Parks until we land on one which will best suit everyone who wishes to attend. Park outings will begin around 1:00 on the Second Sunday of every month at or near a central pavilion. Sometimes we may find that the pavilion has been rented, so bring your lawn chair, portable power, and a folding table just in case. If you have a pop-up canopy to share with others, let us know you're attending. This is an informal event, so drop in, bring a snack or cooler, stay as long as you like, and relax with your club friends.

The first **Second Sunday in the Park** event will be September 13th at 1:00 PM in Bethesda Park located at 225 Bethesda Church Rd, Lawrenceville, GA 30044. Look for the pavilion next to the lake and between the Senior Center and the Aquatics Center.



A reminder will be sent out via our Groups.io email group prior to the event. Please reply if you have questions or a pop-up canopy available.

I hope to see you there!

Edwin W4BSR

Dave's Computer Tips – Getting Started on APRS

By Dave Bruse, W4DTR (with a little help from ChatGPT)

What Is APRS?

APRS, or the **Automatic Packet Reporting System**, is a digital communications system used by amateur radio operators to exchange information in real time. Although APRS is commonly associated with displaying the locations of mobile and portable stations on a map, it can also carry short messages, weather reports, telemetry, event information, repeater frequencies, bulletins, and emergency information.

Traditional APRS activity in North America generally takes place on **144.390 MHz**. Packets transmitted by individual stations may be repeated by digital repeaters called **digipeaters**. Other stations, called **IGates**, forward packets between the radio network and the Internet.

Get Started for About \$5

You do not need to buy a new radio, GPS receiver, antenna, modem, or other equipment to begin using APRS. You can get started with an existing smartphone and an inexpensive app.

Android users can purchase [APRSdroid](#), while iPhone users can purchase the similar [APRS TX](#) app. Both cost approximately **\$5** and can use your phone's GPS and Internet connection to report your position to the APRS network. Both [APRSdroid](#) and [APRS TX](#) supports messaging between APRS stations.

This is one of the easiest and least expensive ways for a newly licensed amateur radio operator to explore APRS. Because the apps communicate through the Internet rather than transmitting on 144.390 MHz, no additional radio equipment is required.

Adding Radio Equipment Later

After becoming familiar with APRS, you may decide to add radio capability. The simplest equipment choice is a mobile or handheld radio with APRS and GPS functions built in. These radios can determine your location, create an APRS packet, transmit it over the air, and often display nearby stations and messages.

An APRS station can also be assembled using separate components, including:

- A 2-meter FM transceiver
- A suitable antenna
- A GPS receiver or smartphone
- A Terminal Node Controller, or **TNC**
- A computer, smartphone, or dedicated APRS tracker

Software such as [Graywolf](#) can allow a computer and sound interface to function as a software TNC. This can be an economical way to experiment with radio-based APRS using equipment you already own.

APRS Websites and Smartphone Apps

The easiest way to observe APRS activity is to visit aprs.fi. Enter a call sign or location to see nearby stations, recent positions, movement tracks, weather reports, messages, and other information received through the APRS network.

Windows users should also look into [PinPoint APRS](#) (free software that allows you to visually track and communicate with people using amateur radio equipment. During an emergency, it can be used as a location aware tactical communications tool. It is mostly used as a tool for tracking people and assets on a map, although it is capable of so much more).

Android users can use [APRSdroid](#), while iPhone users can use [APRS TX](#). These apps provide an inexpensive introduction to APRS without requiring the immediate purchase of additional equipment.

APRS can be as simple as spending about \$5 on a smartphone app or as advanced as building a radio tracker, weather station, digipeater, or IGate. A smartphone app provides an easy starting point, allowing new operators to learn how APRS works before investing in additional radio equipment.

July General HamCram Results

The General HamCram was held on 7/25 & 7/26/2026. Special thanks to John Davis WB4QDX and Ralph Pickwick KJ4CNC for planning and running the exam session along with the Stewart family (Mario KR4CUK, Tee KR4GKY and Michael KR4CVF) for providing refreshments during the HamCram.

There were 14 upgrades to the General class and a new Technician during the HamCram.

The following are the new General class license holders:

- Michelle Adams – KR4LJE
- JOHN AGUIRRE – KQ4EJV
- Ernest L Bass Jr – KR4MGG
- Amy Bross – KR4HPB
- John Cooper – KR4ALD
- Joseph C Iannazzone – KR4LQL
- Jane D Kim – KR4NZH
- Mary A Kosier – KR4JIJ
- GEORGE LIEB – K4NSB
- DIETRUA K PATTILLO – KR4CSY
- JASON L PATTILLO – KR4CTH
- Roy W Rickert – KQ4DRH
- KIMBERLY A WALKER – KQ4VVM
- Suzanne L Wilbanks – KR4JZK

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

KJ4CNC – Ralph Pickwick
 WB4QDX – JOHN DAVIS
 W4DTR – DAVID BRUSE
 K4CQO – ROBERT HOFFMANN
 KK4TKJ – CHARLES MC CORD
 NG4H – WILLIAM BEGUHN
 W4VNA – Lynn Hatker
 WR1TR – WILLIAM HAWKINS
 WS3V – WILLIAM RUDD
 KM4SWL – RICHARD KITZ

The following is the new Technician class license holder:

- William D Wilbanks – KR4NYS

The Basics by Bob Schmid, WA9FBO

Radiation Resistance

de: Bob Schmid, WA9FBO



Let's say you're transmitting on HF, sending 100 W of RF power to an antenna. What happens to that power?

It turns into two things: radio waves and heat.

The portion of the power that turns into radio waves is called *radiated power*. If a resistor were dissipating that same amount of power, its resistance would be equal to the antenna's *radiation resistance* (R_R).

The rest of the power is dissipated as heat in the wire and any nearby materials that absorb the waves, such as foliage and buildings. If a resistor were dissipating that same amount of power, its resistance would be equal to the antenna's *heat loss resistance* (R_{LOSS}).

R_R and R_{LOSS} are treated as being in series, and their sum is the antenna system's *total resistance* (R_T).

Why are we interested in these resistances?

They give us the antenna's *efficiency* (η). It's the ratio of radiated power to total input power, which is the same as the ratio of radiation resistance to total resistance:

$$\eta = (I^2 \cdot R_R) / (I^2 \cdot R_T) \cdot 100\%$$

$$\eta = (R_R / R_T) \cdot 100\%$$

Take a full-size HF half-wave dipole. In this case the power lost as heat in the antenna is just a few percent of the total power supplied to the antenna. That's because the resistance of thick copper wire, say #14 AWG, is very low compared with the antenna's radiation resistance (if the antenna is reasonably clear of surrounding objects and not too close to the ground). If such a dipole has a radiation resistance of 70 Ω and a total resistance of 75 Ω , its efficiency is $(70 / 75) \times 100\% = 93.3\%$.

It's efficient since nearly all the resistance is radiation resistance. And radiation resistance is largely a fixed characteristic – for this type of antenna, Maxwell's equations tell us it's about 73 ohms.

Compared with this antenna, an antenna with less radiation resistance or more loss resistance is less efficient.

For example, a $\frac{1}{4}$ wavelength ground-mounted vertical antenna without a radial wire ground system is inefficient. Current flows directly through the soil, and

the soil's resistance adds to R_{LOSS} . A ground system improves efficiency by lowering the resistance of the return current path. This antenna's theoretical R_R is about 36.5 ohms.

A small magnetic loop antenna may have a R_R of 10 ohms or less.

Is efficiency always the highest priority?

No. If some other characteristic is more important, we have to compromise.



FIGURE 1 - BASE-LOADED MOBILE WHIP

We can build an "electrically short" (less than $\frac{1}{4}$ wavelength) antenna that is easier to deploy or easier to locate in a limited space, such as on a vehicle (Fig. 1). We trade efficiency for compactness because a short antenna's limited current distribution and high reactive energy storage lowers R_R . And, the resistance of the loading coil adds to R_{LOSS} .

We can build an antenna that has multiple closely-spaced elements for gain and directionality, such as a Yagi (Fig. 2). We trade efficiency for a more desirable radiation pattern.

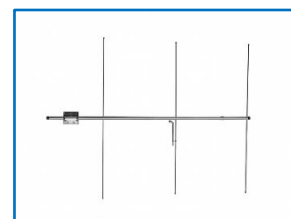


FIGURE 2 - 3-ELEMENT

We can build a broadband antenna, such as a log periodic (Fig. 3). We trade efficiency at specific frequencies for usability over a range.

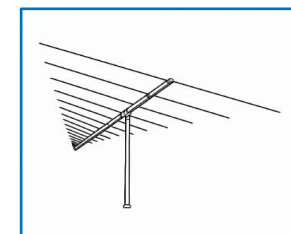


FIGURE 3 - LOG PERIODIC

In these last two cases, the loss in efficiency comes from the cancellation that occurs from the coupling between elements, the energy that is stored instead of being radiated, and loss from the matching network.

Antenna design is a balancing act of compromises. Each parameter – physical size, efficiency, bandwidth, feed impedance – affects the others, so no single design is perfect for every situation.

What Did Yagi Do?

The idea behind amateur radio's most familiar directional antenna

With its long boom and row of metal elements, the Yagi antenna is familiar to many hams. But the Yagi wasn't born as a ham antenna, and it wasn't created by accident. It came from a very specific question asked nearly a century ago: How do you push radio energy in one direction without complexity?

Two names, one idea

The antenna commonly called a "Yagi" is more accurately the **Yagi-Uda antenna**, named for Hidetsugu Yagi and Shintaro Uda, who developed it in the mid-1920s at Tohoku Imperial University in Japan.

Uda carried out much of the experimental work, carefully measuring how nearby metal elements affected radiation. Yagi, the senior researcher, published the results in English. That proved to be a crucial detail at the time. The design was quickly adopted in Europe and the United States, particularly for early radar systems, while Japan initially showed less interest.

The problem they were solving

Early radio systems faced two stubborn limitations: weak signals and antennas that radiated in every direction, whether that was useful or not. Directional antennas existed, but they were often large, complex, or impractical.

Yagi and Uda were looking for an antenna that could shape radiation without elaborate feed networks or massive structures. They suspected that nearby metal might be doing more work than anyone expected. Their elegant answer: **You don't need to feed every element.**

"Unconnected" metal

A Yagi antenna (Fig. 1) has only one driven element—the one connected to the feedline. The other elements aren't wired to anything at all. These are called **parasitic elements**, and they work by borrowing energy from the electromagnetic field around them.

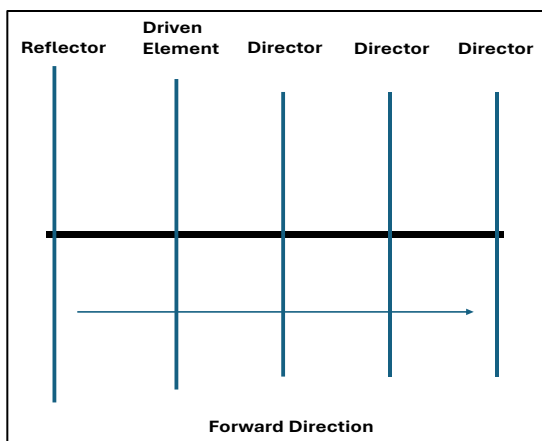


Figure 4 - The Yagi-Uda antenna uses one driven element and nearby parasitic elements. Small differences in length and spacing cause energy to add in one direction and cancel in others.

When RF flows in the driven element, it creates a changing electromagnetic field. Nearby conductors respond by developing currents of their own. Those currents don't just sit there—they re-radiate energy.

Here's the clever part: If a parasitic element is made slightly longer than the driven element, its re-radiated energy lags in phase. That element becomes a **reflector**, pushing energy away from itself. If an element is made slightly shorter, its radiation leads in phase, pulling energy forward. These are the **directors**.

Length, however, is only part of the story. Spacing between elements matters just as much. Spacing controls how strongly the elements couple to one another through the electromagnetic field. Place them too close together, and the antenna can become difficult to match and unpredictable. Spread them too far apart, and the parasitic elements stop

doing much at all.

This is why two Yagis with identical element lengths—but different spacing—can behave very differently, even when their SWR looks perfectly acceptable. The feedpoint may be happy while the radiation pattern suffers.

Nothing mystical is happening. No energy is created. The antenna is deliberately arranging interference so radiation adds in one direction and cancels in others. **The pattern depends on the interaction between elements**, not on any single element.

What “gain” really means

A Yagi does not amplify RF. It does not focus energy like a lens. What it does is waste less energy.

Energy that would have gone backward or sideways is redirected forward. The narrower the beam, the higher the apparent gain. The tradeoff is reduced coverage in other directions, and that tradeoff is exactly why it works so well.

Why hams embraced the Yagi

For hams, the Yagi checked all the right boxes:

- One feedpoint
- No phasing harness
- Predictable behavior
- Scales easily from HF to UHF
- Built from simple materials

It also rewards understanding. Small changes in layout produce visible changes in performance. When you rotate a Yagi, you really do see the signals rise and fall.

A 100-year-old idea that still works

There are newer antennas and more complex designs, yet the Yagi remains everywhere—from contest stations to modest rooftops. That’s not nostalgia. It’s good engineering.

The Yagi–Uda antenna endures because it solved a hard problem by using physics instead of complexity.

Why Adding Directors Eventually Stops Helping

Does adding more directors always increase gain? In practice, the improvement quickly diminishes. Each additional director couples less energy than the one before it, and eventually the added complexity produces very little forward gain.

Beyond a certain point, extra elements mainly narrow the beam and increase sensitivity to construction errors. That’s why many successful Yagi designs stop at a modest number of directors—they’re balancing performance against predictability. More metal doesn’t automatically mean more signal.

Why SWR Can Look Fine Even When the Pattern Is Bad

One confusing aspect of directional antennas is that a Yagi can show an excellent SWR and still perform poorly. SWR only tells you how well power is transferred from the feedline into the driven element. It says nothing about *where* that power ultimately goes.

A Yagi depends on interaction between elements, so changes in spacing, nearby objects, or construction details can distort the radiation pattern without significantly affecting the feedpoint match. In other words, the antenna may be efficiently fed but inefficiently aimed.

That’s why Yagi design is more about geometry and interaction than resonance.

Ten-Tec Corsair and Corsair II

Vintage Amateur Radio

de Bill Shadid, W9MXQ



In the late 1970's, a small company in Sevierville, Tennessee, took shape and began manufacturing ham radio equipment, military and commercial radio apparatus, and electronic equipment enclosures.

Over the years, Ten-Tec enjoyed a solid following of customers. In particular, they were well known for their expertise in making some of the best performing Morse Code (CW) radios available to the amateur radio operator. While Ten-Tec made several lines of equipment, they seemed to excel in their Omni, related Paragon, Corsair, and Orion series of equipment. That tradition continues to this day with their Omni VII Plus Transceiver. The Omni VII Plus is available in limited supply and are often heard on the amateur radio bands.

This installment will focus on two models of transceiver that seemed to replace early Omni models – but after that time, Ten-Tec returned to the Omni brand, and, if you will, orphaned the Corsair name. We will focus on the Ten-Tec 560 Corsair and the Ten-Tec 561 Corsair II HF transceivers. These radios covered the 160 through 10-meter bands, including the WARC Bands. They did not include the later 60-meter band¹.



Left to Right – Ten-Tec Model 961 AC Power Supply/Speaker, Model 561 Corsair II Transceiver, and Model 263G Remote VFO.
Also see Ten-Tec 705 Desk Microphone

W9MXQ Photo



Model Comparison Pictures

Top Picture: Ten-Tec Model 560 Corsair HF Transceiver

Bottom Picture: Ten-Tec Model 561 Corsair II HF Transceiver

Top: Ten-Tec

Bottom: W9MXQ

The Corsair was produced from 1982 to 1985 while the Corsair II was produced from 1986 to 1989. The replacement for the series was the Omni V HF Transceiver.

While the two versions of the Corsair appear to be nearly identical (other than panel and cabinet color), there are substantial technical upgrades to the later Corsair II product. These upgrades and additions to the Corsair II were²:

- **Frequency Counter:**

- The Counter Logic Board and LED Display Driver board are substantially different. The Corsair II manual has the correct new schematics, but the text is substantially incorrect by still describing the original Corsair circuitry.

- **9 Mhz I-F Filtering:**

- The stock Corsair stock 9 MHz filter is a 4-pole, 2.4 kHz unit while the Corsair II stock 9 MHz filter is an 8-pole, 2.4 kHz unit. The Corsair II also includes a 2-pole roofing filter on the mixer board before the 2.4 kHz filter. Many original Corsair owners upgraded their 2.4 kHz filter to an 8-pole unit.

- **Audio Bandpass Filter:**
 - The Corsair II introduced a variable audio bandpass filter. The control knob for that filter replaced the orange dot Ten-Tec insignia on the original Corsair.
- **CW Keyer:**
 - The Corsair II introduced an internal CW keyer, with a single memory.
- **Noise Blanker:**
 - The Corsair II added a Noise Blanker Width control to the Noise Blanker circuit included in the original Corsair.
- **RF Mixer:**
 - The original Corsair used 4 discrete Schottky diodes in the Mixer while the Corsair II used 4 monolithic Schottky diodes in the Mixer circuit.
- **Spot Control:**
 - The original Corsair spot button turns on a sine wave oscillator to inject an audible sidetone (nominally 750 Hz) that's mixed with the receiver audio so the target received signal can be tuned to have the same tone as the sidetone to accomplish zero beat.
 - The Corsair II spot button shifts the receive frequency downward by an offset equal to the sidetone frequency (nominally 750 Hz) so the target received signal can be tuned for null to accomplish zero beat.

You can see that a lot of performance attention was paid to the Corsair product line upon the release of the second version (Corsair II). As a user of the Corsair radios, I can say that one issue that was never corrected was an unfortunate error in the sideband selection for 17-meters. Unlike some radios, sideband selection was “standard” or “opposite,” That is to say that it was generally assumed that Lower Sideband (LSB) was used on 160-40 meters and Upper Sideband (USB) was used on 20-10 meters on the HF bands. 30 meters did not (and still does not) allow phone operation – so sideband selection was not an issue. For some strange reason, with both Corsair models, LSB was selected as standard for 17-meters. That was certainly not the conventional thinking. So, when operating SSB on 17 meters with either version of the Corsair, one must select “opposite” sideband. Perhaps because the radio was so well known for its CW mode, many reviewers of the radio never mention this error in design.

Some important performance parameters with both Corsair models are:

- RF Power Input: 200 watts
- RF Power Output: 85 to 100-watts. The ARRL Review of the Corsair II³ showed a power output of 92 watts on 160-meters progressing upward to 102-watts on 10-meters. That is the opposite of most radios where the highest power is on the lower frequencies. My own Corsair II seems to be at a fairly consistent 90-watts output across the HF spectrum.
- Receiver sensitivity experienced in the ARRL Review³ was 0.25uV for 10dB Signal plus Noise / Noise – pretty much a standard kept by well-designed radios of the day. In the real world of operating this radio, the background noise is very low and seems to be missing the assorted noises of digital frequency generation of the day. Why, you ask? One of Ten-Tec's touted features was its conventional, analog, i-f design using convention frequency conversion and a permeably tuned variable frequency control (PTO). The PTO in both Corsair models is identical – and silky smooth in its mechanical response to the user.
- Receiver Incremental Tuning (RIT) is selectable for both models and is available in two ranges. Those are +/- 1.5 kHz or +/- 4.0 kHz. Those selectable ranges are available for the receiver alone,

the transmitter alone, or receive and transmit together. (Or it can be turned off – but turning off the RIT does not clear its selection. Remember, this is not a digital transceiver – so RIT settings on handled via potentiometer. So, there is no digital register than can merely be erased – the user must return the potentiometer to its zero position.)

- In tests run by the ARRL and shown in the QST Review³, the Corsair II met and exceeded FCC requirements for spectral purity.
- As you would expect if you knew Ten-Tec's reputation, their transceivers were exemplary in the CW mode with outstanding QSK (full break-in) operation on that mode. There is no relay noise – in fact, no noise at all – while keying. The user can hear the band clearly between each character when sending CW. Zero perceived delay between transmit and receive. To this day, they are the game to beat in this field. (Ten-Tec has equals, today, but remember that we were talking QSK CW performance designed and implemented in the early 1970's – one would expect that some have caught up by now – 50 years on!! (And, I might add, that some prominent and expensive transceivers of today still cannot match Ten-Tec's CW performance for full break-in operation⁴.)
- The Speech Processor is a mixed blessing. First of all, the Corsair II model (where I have spent most of my time) seems to attract numerous unsolicited "great audio" reports. That was NOT true when I used the Speech Processor. Mind you, no one told me that I was distorted or broad (signal bandwidth) but provided numerous, "turn off that processor, you sound like a contester." So, was that a compliment or a criticism? I do know that without the Speech Processor turned on, running a barefoot 90-watts, I worked any POTA station I called in one call, pileup or not. So, seemingly good basic and solid audio from this radio without the need for processing. I do use my Vintage Radios in contests from time to time – so when I do, perhaps there will be an update on that "contester audio" comment.

The Corsair models as well as the Omni models (through the Omni VI+) seem to have shared the same 12 VDC Power Amplifier. In operation these radios provide protection for the final amplifier transistors by limiting the amount of current fed through them. The Ten-Tec Model 961 AC Power Supply was designed with an EXTREMELY sensitive current cut-off whereby the power would be cut long before over current – due to antenna mismatch, or other cause – can go on for any significant time. This circuitry was far faster than any fuse or standard circuit breaker. When not using a 260 AC Power Supply/Speaker (physically color matches the original Corsair Transceiver), or the later 960, 961, or 962 AC Power Supply/Speaker units, attention must be paid to the radio's need for an extremely fast response for high current draw. For that, Ten-Tec marketed their Model 1140 Circuit Breaker. This breaker was specially designed to Ten-Tec's specifications. These are rare or even unobtainable, today. My advice is to secure a Ten-Tec AC Power Supply if you run a Corsair, Corsair II, or any of the Omni models⁵.

The opening picture in this article shows the equipment as a collector would keep it with all Ten-Tec items. Actually, my own operation at W9MXQ is a bit different:



I do not use the Ten-Tec 705 Desk Microphone. I feel the unamplified Astatic D-104 is much superior with my voice. Also, I do not use the internal electronic keyer and instead use the Unified Microsystems XT-4 MK2 Memory Keyer⁶. You can see it being controlled by a Bencher BY-1 Key⁷ and a Nye-Viking Speed-X Straight Key. The output of the XT-4 MK2 and the Speed-X Straight Key⁸ are fed via a “Y” Adapter into the back panel KEY Jack of the Corsair II. (The KEY Jack is separate from the KEYS PADDLE connector used to access the Corsair II’s internal electronic keyer.) Also, I find that many Vintage Radios used on today’s bands can use the assistance of an external Digital Signal Processing (DSP) unit. Shown here is the MFJ-784B Tunable DSP Filter⁹. While the MFJ-784B can provide for bandwidth control and notch filtering, its noise reduction feature in the presence of high atmospheric noise is the most useful from my point of view.

One major feature of the Ten-Tec Corsair II complete station is the Ten-Tec Model 263G Remote VFO. A note here is that the Remote VFO for the Corsair and Corsair II were identical – except that the original Corsair was a gray color which changed more to a beige color in the Corsair II. The original Corsair Remote VFO was the Model 263 whereas the Corsair II Remote VFO was the Model 263G. It is important to understand that difference if you are looking for the Remote VFO for either Corsair as over time the use of the “G” in the model number just got dropped. If you are looking for one, be sure you know the color of the one you are buying. The same is true of the original power supply, the Model 260. Initially, that supply was called the 260G for the Corsair II. Soon afterward, the 260G was replaced by the definitely matching Model 961 – like the one pictured in this article. So, the actual 260G is quite rare.

The 263G Remote VFO is a really handy device – especially if you often operate split in working DX.



Ten-Tec Model 263G Remote VFO

Ten-Tec Wiki

The Ten-Tec Model 263G Remote VFO is equipped to allow up to four crystal controlled frequencies – allowing crystal control of the Corsair II Transceiver. Note the rotary switch in the lower right hand corner of the panel showing the selection of crystals or VFO.

Most important is to know that this Remote VFO can allow the operator to listen on the frequency on the radio dial, and on the Remote VFO dial at the same time. The knob in the lower middle of the panel allows a mixing of the two frequencies with intensity all to the “A” (Transceiver) when turned completely CCW or all “B” (Remote) when turned completely CW. If that knob is pointing straight up, intensity will be balanced between the two VFO’s with both audible on the speaker on in the headphones. So, if you have the radio set to listen to the DX station on VFO A (Transceiver), you can hear those working him split on your VFO B (Remote) transmit frequency. Setting the Remote VFO then to handle transmit, you would be transmitting right where the DX station last listened to a caller.

It goes perhaps without saying that the A-B knob that blends the two receive signals can be at varying degrees between fully CCW, at the center, or fully CW. Making those intermediate adjustments – for instance half way between CCW and center – will net signal levers more or less favoring one frequency or another. Remember that the position of the TB button (that is, which VFO is being used for transmitting) always determines transmit frequency. The setting of the A-B knob has no impact on transmit frequency.

The 263G Remote VFO indicates its own frequency on the Transceiver when engaged. It has its own screen to show in what 50 kHz segment it is running. It has separate scales for different frequency ranges.

I have always been rather amazed at how similar the outer cabinetry is designed on some Ten-Tec equipment when compared to R. L. Drake equipment in the “5,” “7,” and “75” lines of product (Drake’s last Amateur Radio focused product lines). I touched on this subject in an article covering the later Ten-Tec Omni series radios written in the recent past. The fascination with this apparent cooperative design is based on things I have seen in my manufacturing career. The Ten-Tec products using this cabinetry design seemed not to have a long parallel life with the similar Drake equipment. Almost as if it was an, “okay, I am done with it now, so you can use it,” agreement. Of course, that is my opinion, based only on personal observation.

The original Corsair, as noted earlier, was introduced in 1982. That was about the time that the last of the Drake TR5 and TR7A were being produced. I only mention that point because of a similarity with the Corsair, Corsair II, Omni V, Omni VI, and Omni VI+ radio cabinetry with that of the Drake radios of the period. One of the core businesses of the Ten-Tec at that time (and maybe still) was injection molding and custom radio/electronic cabinetry. The cabinet design for the Corsair and Omni radios shown is exactly the same unique design used on the Drake TR5, TR7, TR7A, and all the accessories for the “7” and “75” line of Drake like of equipment. Check the following pictures showing the similarity – differing only in size.



Top is Drake TR7A Transceiver – Bottom is Ten-Tec Corsair II Transceiver

W9MXQ Photo

Note the extruded aluminum front panel with clear plastic insert along the top third of both panels and the silk screened, painted aluminum insert panel on the lower main panel. The same design appears on both radios. To be sure, the cabinet (behind the front panel) was a clamshell (top and bottom) design on the Ten-Tec and a “wrapper” design for the top and sides on the Drake.

Now I will remove the side panel strips and let’s take an end (or side) view of the front panel with those strips gone:



**Left Side View – End Strip Removed
Drake TR7A Transceiver
W9MXQ Photo**



**Left Side View – End Strip Removed
Ten-Tec Corsair II Transceiver
W9MXQ Photo**

Check the aluminum panel – visible on both products. There are small offset differences (top and bottom inserts) between the two. You can see that the Ten-Tec panel has a large proportion as part of the top insert compared to the Drake.

Also visible in these views is the way the covers enclose the electronics. On the left you can see enough of the top and sides wrap-around single wrapper (that is exactly what Drake called it, the “Wrapper”). On the right you can see the front to back line denoting the seem between the top and bottom half of the clam shell cabinet over the top and bottom of the radio. Internally the Corsair and Corsair II used individual boards with connectors between them. That was unlike the motherboard and plug-in boards in the Drake TR7 series – but identical to the individual boards with connectors between them system in Drake’s later (in spite of its number) TR5. One very positive note about Ten-Tec’s connection system between boards – they used small connectors that after all these years have not been a problem. Drake should have been so lucky with its choice of connectors to mate the individual boards to the motherboard!



W9MXQ Photo

Here is a picture of the End Caps (Drake to the left and Ten-Tec to the right). The Drake End Cap attached with small sheet metal screws into slots in the front panel extrusion. Ten-Tec has tabs molded into the End Cap and those tabs slid in behind the front panel and were compressed, that is, held in place, by screws holding the front panel in place on the front of the chassis.

Years down the line, the complex molding of the Ten-Tec system comes back to haunt the user. The Drake End Cap can actually be closely duplicated with sheet plastic and drilled holes – not so with the Ten-Tec. In fact, third party end caps for the Drake cabinetry are readily available.



W9MXQ Photo

To the left you can see the assembled End Cap on the left side of the Corsair II Transceiver. Remember the tabs on the Ten-Tec End Cap in the above picture. Those Tabs slide behind the screws you can see at the top left corner and lower left corner of the Corsair Front Panel. Older Ten-Tec gear will often have one of both of those tabs broken off from misuse at some time in their past. As far as I know, Ten-Tec is the only source for these End Caps – and they no longer supply them.

Ten-Tec, for many, has always been an acquired taste. They have always been above board with top performance, especially on CW. In my opinion, much of the time their packaging quality (but not necessarily design) left something to be desired. My focus here is on things like the quality of potentiometers, switches, and capacitors. Also, wide variance in the quality of components in the same radio. Case in point is in the Corsair and Corsair II where the PTO drive mechanism is smooth as silk, but the AF Gain pot seems at the same time to have been akin to something you would expect to find in a Cracker Jack™ box. I have to be careful here because I am reviewing a 50 year old radio that has had numerous users handling that very control. Truth is, however, that the AF Gain pot on my Drake equipment – generally older than the Ten-Tec equipment that I have used – is not that way. True also is the excellent performance of such hardware on Hallicrafters, Collins, National, and Swan that I use.

At the same time, the electronics and its design seems first rate. Attention to those details was excellent. That is ignoring rather odd occurrences where, as discussed earlier, normal side band on the Corsair was wrong (LSB instead of USB). The fact that this error stayed on in the Corsair II seems odd. A lot of engineering improvements went into the Corsair II – did Ten-Tec actually not know of this error?

The last of such things was their Argonaut VI product. An excellent design, all mode, very compact little QRP (10 watts, maximum) transceiver that covered 160-10 meters – or did it? It omitted 12 meters. (It also omitted 60-meters – but that is more understandable – even though by that time, everyone else included it.)

Well, we leave this product on a positive note – I thoroughly enjoyed getting this Ten-Tec Corsair II, Power Supply, and Remote VFO working and for now it has an honored place my collection of radios that made our hobby what it is, today.

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

A special note of thanks to my proofreader, Bob Bailey, W9DYQ. Bob is a lot more than a proofreader as he nearly always adds commentary that makes it into the article. The Corsair II Transceiver in this article was used by Bob for some period of time. Bob is a very nearly 100%, CW operator.

Credits and Comments:

¹ There is no known way to modify the Corsair or Corsair II for 60-meters.

² Reference Location: <http://corsair.wikidot.com/start>. This is a very complete site to locate information related to the Ten-Tec Corsair and Corsair II HF Transceivers.

³ **QST Magazine**, August 1987, page 32.

⁴ The prowess of the Ten-Tec QSK operation is perhaps the choice of some CW operators. And, may I add, more power to them for their exemplary skills. I also know many operators who use semi-break-in CW Transmit/Receive Switching and are perfectly happy with that performance. Some modern transceivers use relatively fast semi-break-in and call it QSK.

⁵ Ten-Tec users have reported that they have found a particular circuit breaker, not sold by Ten-Tec, to be useable in this application. I cannot verify the accuracy of the statement but the one being sourced is from Amazon under this link:

https://www.amazon.com/gp/product/B07H9483K4/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&th=1

The description is: “T Tocas AC/DC Single Pole Magnetic Circuit Breaker Toggle Single Pole Circuit Breakers 20A 415Vac 80 Vdc”

⁶ Unified Microsystems can be found at <https://www.unifiedmicro.com/> for product details. Products are sold at: Ham Radio Outlet <https://www.hamradio.com/> and at: DX Engineering <https://www.dxengineering.com/>.

⁷ The Bencher BY-1 is shown at:

<https://vibroplex.com/contents/en-us/d67.html>.

They are available at the same URL or at: Ham Radio Outlet <https://www.hamradio.com/> and at: DX Engineering <https://www.dxengineering.com/>.

⁸ Unfortunately, the Speed-X Straight Key shown is no longer sold new to my knowledge. For details on Nye-Viking Straight Keys, check ham radio classified sites or eBay.

⁹ The MFJ-784B Tunable DSP Filter is available direct from MFJ Enterprises via their website at:

https://mfjenterprises.com/products/mfj-784b?_pos=2&_sid=86b1cf31f&_ss=r

or from most ham radio dealers, such as: Ham Radio Outlet at: <https://www.hamradio.com/>.

© **W9MXQ**

GARS Open Positions – Help Wanted

These are some of the positions that are available. If you have a background in any of these positions or want to learn them, they are available for you to fill.

- ❖ Marketing Chair
- ❖ Activities Chair – includes the following types of activities that can be sponsored by GARS
 1. Fox Hunt
 2. GARS Operating Contests
 3. Winter Field Day
 4. GARS Hamfest Volunteers
- ❖ Non-Chair Activities needed:
 1. “X” discussion handler
 2. Holiday Party activities
 3. GARS QSL card handler

In order to offer your help with any of these, send an email to president@gars.org or contact the President (Bob K4CQO) at one of our meetings.

Marketing Chair Information

The Gwinnett Amateur Radio Society (GARS) is seeking a volunteer to serve as Marketing Committee Chairman. This position is responsible for helping promote the club, its activities, and the benefits of amateur radio to current and prospective members.

Responsibilities include developing and coordinating marketing efforts for club events, membership recruitment, and special activities; assisting with social media and website promotion; and working closely with the Public Information Officer (PIO) to ensure consistent messaging and outreach.

The ideal candidate should have good communication skills, enjoy working with others, and have an interest in helping GARS grow and thrive. No professional marketing experience is required – just enthusiasm, creativity, and a willingness to help.

GARS Membership Pricing

New Membership: (Licensed Adults and Seniors who have never been a GARS member)	First Year Free	Youth Membership: (Licensed Youth ≤ 21) (Proof of age required)	Free (until age 22)
Adult Membership:	\$30 / 1-Year \$50 / 2-Years (\$10 savings) \$60 / 3-Years (\$30 savings) \$350 / Lifetime (One-Time Fee)	Senior Membership: (Age 65+) (Proof of age required)	\$15 / 1-Year \$25 / 2-Years (\$5 savings) \$30 / 3-Years (\$15 savings) \$150 / Lifetime (One-Time Fee)
Join Link: https://gars.org/join Renew Link: https://gars.org/renew			



GARS Membership

New Members in July

Gary Altman (K4NNK)
David Hosie (KJ4NUB)
Gaylynn Tollison (KF4OTA)
Joseph Tollison (KQ4YBT)
Amy Woodrick (KE4IKF)

New Members: 5

**Total Members as of
July 31, 2026
369**

Join GARS members for our:

- weekly lunch bunch at 11:00 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

Michelle Adams (KR4LJE)
Kyle Albritton (W4KDA)
Emory Albritton
Mike Bales (KN4MJW)
Jim Barrett (K4PDY)
Franco Bocalon (KQ4SAX)
Philip Graham (N4PRG)
Paul Hachey (KC4YRV)
Jared Hawkins (KM4SSI)
Conor Huneycutt (KN4VNU)
Leonard Johns (KQ4OSW)
Jason Johnson (KN6PIN)
Lehman Johnson (N4WYE)
Gary Jones (W4HX)
Robert Keeney (KN8RG)
Deon King (KR4CUN)
Samuel McClure (KM4AAO)
Todd McCollum (KR4LKK)
Lige Sims (AB4OK)
Robert Sloan (WA4DD)
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](mailto:Email@gars.org) (<https://gars.org/contact/>) with any changes to your Membership information.

Membership Chair: Dave Bruse, W4DTR

Committee Members: Pam Brown KJ4RYV, John Aguirre KQ4EJV, Tee Stewart KR4GKY

ARRL MEMBERSHIP

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

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.





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://gars.org/x>



Join GARS on YouTube:

<https://gars.org/youtube>

GARS Mail Address:

GARS
P.O. Box 492531
Lawrenceville, GA 30049
<https://gars.org>

Officers



Bob Hoffmann, President K4CQO



Glen Wendt, Vice President W3WWT



Ralph Pickwick, Treasurer KJ4CNC



Michael Stewart, Secretary KR4CVF



Kevin Scott, Program Manager K4GTR

Managers and Committee Chairs



Dave Bruse, VE Team Leader, Membership Chair W4DTR



David Adcock, Webmaster KA4KKF



Ralph Pickwick, Education Chair KJ4CNC



Earl Whatley, Apparel Manager & Dacula Parade Co-Chair AF4FG



Michael Stewart, Activities – Dacula Parade Co-Chair KR4CVF



Mario Stewart, Public Information Officer KR4CUK



Bob Hoffmann, GARzette Editor K4CQO



Eddie Foust, Repeater Chair K4AIH



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



Edwin Henderson, Multimedia Chair W4BSR



Dallas Mellichamp, Georgia QSO Chair N4DDM



Neil Derryberry, Elmer Manager & IT Chair WD4NET



Edwin Henderson, TechFest Chair W4BSR



Anita Morris, Health and Wellbeing KG4AJX



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

GARS General Meeting Minutes July 14, 2026

Attendees

Vice President - Glen Wendt, W3WWT
Secretary - Michael Stewart, KR4CVF
Program Manager - Kevin Scott, K4GTR

Agenda

Opening Time: 7:00pm
Membership Report: 369 as of (7/31/26)

Programs: Meshtastic Ed Labra

Ed provided a detailed presentation remotely

Notes

Strippers on 8/21

Workshop Minutes - July 21st, 2026

Attendance: 29

Workshop: Meshtastic Workshop

Presenter: Ed Labra KQ4WEB

Brief Summary: This Workshop followed the GARS presentation of the same title

A record 29 folks attended this hands-on Meshtastic Workshop... Ed also touched on Meshcore since both networks share most of the same hardware. Note: Mark Bell N7GRB will cover Meshcore in August.

Ed covered where to get the Meshtastic hardware, where and how to download and install the software. Then he provided 1-on-1 assistance to a handful of our members.

Dave W4DTR brought in his Power Pole kit and demonstrated how and why we use Power Pole connectors. We also discussed knock-off Power Pole connectors. Plus, there were cookies, sodas, and coffee.

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, please let us know in advance so we can gather the necessary tools and test equipment.

73 Dallas N4DDM
Workshop Chair

GARS Calendar Events

GARS Events Calendar for 2026		GARS Recurring Calendar
TechFest Winter Field Day Dog Show Fundraiser Spring Technician HamCram Georgia QSO Party North metro area Fox Hunt Memorial Day Parade ARC/KARC Hamfest Field Day Summer General HamCram Fall Technician HamCram JOTA Stone Mt. Hamfest Holiday Party	February 21 2026 January 24-25 2026 March 25-29, 2026 April 11&12 2026 April 11-12 2026 April 2026 May 25 2026 June 2027 June 27-28 2026 July 25-26 2026 October 2026 October 2026 October 30-31 2026 December 2026	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 Thursday at 7:30 pm: GARS 440 Net on the GARS 442.325 MHz or 442.100 repeater - Every Friday at 11:30 am, GARS Lunch at Chili's - Every Saturday at 8:00 am GARS Breakfast at Cracker Barrel

GARS Calendar for August 2026 for more information go to gars.org

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1 8:00 AM Breakfast at Cracker Barrel
2	3 7:30 PM 2M Net	4 7:00 PM Exec Meeting	5	6 7:30 PM 440 Net	7 11:30 AM Lunch at Chili's	8 8:00 AM Breakfast at Cracker Barrel
9	10 7:30 PM 2M Net	11 7:00 PM Meeting EAA 690 Hangar	12	13 7:30 PM 440 Net	14 11:30 AM Lunch at Chili's	15 8:00 AM Breakfast at Cracker Barrel
16 3:00 PM Ham Radio Exams, EAA 690 Hangar	17 7:30 PM 2M Net	18 7:00 PM Workshop Meeting EAA 690 Hangar	19	20 7:30 PM 440 Net	21 11:30 AM Lunch at Chili's	22 8:00 AM Breakfast at Cracker Barrel
23	24 7:30 PM 2M Net	25	26	27 7:30 PM 440 Net	28 11:30 AM Lunch at Chili's	29 8:00 AM Breakfast at Cracker Barrel
30	31 7:30 PM 2M Net					



Events – ARRL Contests / Hamfests

ARRL CONTESTING INFO

From ARRL Contest Calendar

> For more information click the links <

January 2026

- 1 [Straight Key Night](#)
- 3 [Kids Day](#)
- 3-4 [RTTY Roundup](#)
- 17-19 [January VHF](#)

February 2026

- 9-13 [School Club Roundup](#)
- 21-22 [International DX – CW](#)

March 2026

- 7-8 [International DX– Phone](#)

April 2026

- 19 [Rookie Roundup – Phone](#)

May 2026 (no ARRL Contests)

June 2026

- 6-7 [International Digital Contest](#)
- 13-15 [June VHF](#)
- 20 [Kids Day](#)
- 27-28 [Field Day](#)

July 2026

- 11-12 [IARU HF World Championship](#)

August 2026

- 1-2 [222 MHz and Up Distance Contest](#)
- 15-17 [10 GHz & Up – Round 1](#)
- 8-9 [EME - 2.3 GHz & Up](#)
- 16 [Rookie Roundup – RTTY](#)

September 2026

- 12-14 [September VHF](#)
- 5-6 [EME - 2.3 GHz & Up](#)
- 19-21 [10 GHz & Up - Round 2](#)

October 2026

- TBD [Collegiate QSO Party](#)
- 31-Nov 1 [EME - 50 to 1296 MHz](#)
- 19-23 [School Club Roundup](#)

November 2026

- 7-9 [Nov Sweepstakes–CW](#)
- 28-29 [EME - 50 to 1296 MHz](#)
- 21-23 [Nov Sweepstakes–Phone](#)

December 2026

- 4-6 [160 Meter](#)
- 12-13 [10 Meter](#)
- 20 [Rookie Roundup–CW](#)

For more information:

<http://www.arrl.org/contest-calendar>

HAMFEST CALENDAR

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

08/22/2026 - 08/23/2026 [Huntsville Hamfest, ARRL Nation Convention](#)

Location: Huntsville, AL

Type: ARRL Convention

Sponsor: Huntsville Hamfest, Inc.

Website: <http://hamfest.org>

08/22/2026 - [TarcFest](#)

Location: Tampa, FL

Type: ARRL Hamfest

Sponsor: Tampa Amateur Radio Club

Website: <http://www.hamclub.org>

09/19/2026 - [Gadsden Hamfest 2026](#)

Location: Gadsden, AL

Type: ARRL Hamfest

Sponsor: Gadsden Amateur Radio Club

Website: <http://k4jmc.com>

10/05/2026 - [RV Radio Network Fall Rally](#)

Location: Milton, FL

Type: ARRL Convention

Sponsor: RV Radio Network.

10/09/2026 - 10/10/2026 - [Melbourne Hamfest](#)

Location: Melbourne, FL

Type: ARRL Hamfest

Sponsor: Platinum Coast Amateur Radio Club

Website: <http://hamfest@pcars.org>

10/10/2026 - [NOARC Annual Hamfest](#)

Location: Crestview, FL

Type: ARRL Hamfest

Sponsor: North Okaloosa Amateur Radio Club

Website: <https://w4aaz.org/noarc/>

10/25/2026 - [Wiregrass ARC - Fall Tailgate](#)

Location: Headland, AL

Type: ARRL Hamfest

Sponsor: Wiregrass Amateur Radio Club

Website: <http://w4dhn.org>

10/30 - 10/31/2026 [Stone Mountain Hamfest, ARRL GA Convention](#)

Location: Lawrenceville, GA

Type: ARRL Convention

Sponsor: Alford Memorial Radio Club

Website: <http://stonemountainhamfest.com>

11/07/2026 - [Amateur Radio Festival and Tailgate](#)

Location: Trenton, FL

Type: ARRL Hamfest

Sponsor: Dixie Amateur Radio Klub

Website: <https://www.qsl.net/w4dak/>

11/07/2026 - [EPARS Fall Hamfest](#)

Location: Dade City, FL

Type: ARRL Hamfest

Sponsor: East Pasco Amateur Radio Society

Website: <http://k4ex.org>

For more information: [www.arrl.org/hamfests-and-conventions-](http://www.arrl.org/hamfests-and-conventions-calendar)

[calendar](#). When searching by division, use Southeastern: GA, AL, FL
Delta: TN Roanoke: NC, SC



GARS Ham Radio Exams & Results

Upcoming GARS Ham Radio Exams

GARS Exam Sessions are held the 3rd Sunday of the month – Exam fee: \$14.00 cash

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

NOTE: Our exam team only conducts electronic exams on a tablet using HamStudy and ExamTools at our exam sessions, and we supply everything.

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 2026 Results

The GARS VE Team exam session results from July 19th:

2 new Generals:

- Stewart T Ewing – KR4NDI
- Derek J Nelson – KR4NXW who passed both Technician and General exams

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

W4DTR - Dave Bruse

KM4SWL – Richard Kitz

WS3V - Bill Rudd

NG4H – Bill Beguhn

K4CQO – Bob Hoffmann

KC4EG - Elmer Gappi

W4VNA – Lynn Hatler

WR1TR – Bill Hawkins

WB2OGY – Steve Back

Thanks & 73, Bob Hoffmann (Co-Team Lead)

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.



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.



GARS Supporters

Serving You From Coast to Coast and Around the World



Order Toll-Free From a Location Near You
Or Take Advantage of Secure 24-Hour Ordering:
<http://www.hamradio.com>

VISA MASTERCARD DISCOVER AMERICAN EXPRESS

If your closest 800 number is busy, please call one of our other numbers.
Phone Hours: 9:30 am to 5:30 pm Monday – Saturday
All Stores Open 10am - 5:30pm Monday - Saturday
24-Hour FAX Order Lines at all Store Locations

Ham Radio Outlet App available at:
Available at amazon App Store GET IT ON Google Play

ATLANTA, GA 30340
6071 Buford Hwy, Doraville
1 mile north of I-285
(770) 263-0700
(800) 444-7927
24 Hour FAX (770) 263-9548
Email: atlanta@hamradio.com

Toll Free Numbers:
Northeast (800) 644-4476
West (800) 534-6046
Southeast (800) 444-7927
Mountain (800) 444-9476
Mid-Atlantic (800) 444-4799
New England (800) 444-0047




Dr. Erin Pickwick
www.GraysonHeritageDental.com

2023 Highway 20, Suite 203
Grayson, GA 30017
(678) 226-4466

- Restorative: crowns & bridges • Cosmetic bonding & veneers
- Implants: placement & restoration • Root canals • Extractions
- Clear tray aligners • Very Affordable Membership Plans



Quarter Century Wireless Association, Inc.

Founded - December 5, 1947
Quarter Century Wireless Association Inc.
W2MM - W2CVF



Peach State
Chapter 49 - Atlanta, GA
Chartered April 29, 1970

Mugs provided by Will Carson KZ4HV -- \$9.99 for 11 oz, \$11.99 for 15 oz.



Size Comparison
11 oz. 15 oz.

Contact will.c.carson@gmail.com

In order to have your ad included, contact editor@gars.org. Current ad prices per year are:

Business Card	\$50
1/4 page	\$125
1/2 page	\$150
Full page	\$200

For swap items, post and see items on GARS groups.io (<https://groups.io/g/GARS>).

Ready to take your Ham Radio Exam?

Go to <https://GARS.org/exams/> to learn more, and to register for an upcoming exam session.

Have an idea for entry into the GARzette?

Send the article to editor@gars.org and be published in next month's GARzette.