The GARzette

The Official Newsletter of the Gwinnett Amateur Radio Society

May 2025 http://www.gars.org/ Volume 52, Issue 5

Inside

www.GARS.org

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TechFest
Gwinnett Amateur Radio Society

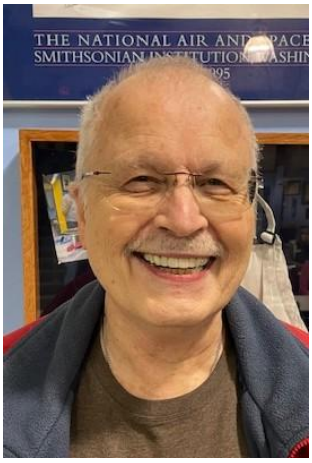
GARS January Exhibition of the Technical aspects of Amateur Radio
Held at the Gwinnett County Fairgrounds

The next TechFest is January 31, 2026

GARS Meeting: Low-Cost HF Rigs and Kits with Tom Crowley KT4XN
Tuesday May 13, 2025 at 7:00 PM

President's Message

From the President…



April had the GA QSO and ARES Deployment Day. Look for further information in another section of the GARzette along with a few of the pictures taken while we were at the Peachtree Ridge Park location. It was a good time and I was able to see an antenna launch with a compressed air launcher and see this one fly above the tree and fall straight down so the antenna can be pulled up – a sight to see in action. There were also stations set-up for the Georgia QSO session taking place in the afternoon. It was good to see how many GARS members were there to support the effort and many signed up to support the ARES group.

The ARES group is always looking for new members to help the ARES group prepare for situations where normal communications systems fail. ARES provides training and practice sessions so if an emergency arrives, ham radio can be the communication mechanism to support recovery.

In April, as with every month, the VE team does an exam session at the EAA 690 Hanger on the 3rd Sunday of the month. However, in April, the Sunday was also Easter Sunday. After trying to find someone to lead the exam session, we were all obligated to partake in family things – got to hide and find those eggs!

There are a couple of big GARS events coming up – the Memorial Day Parade and Field Day. Both are being spearheaded by Dallas N4DDM. The parade uses lots of volunteers to get the parade entries lined up in the right spots and coordinate communications with the organizers (like being ready to go, and time to go). I have helped for the last few years and intend to help again this year. It is a good time to visit with other GARS members, get an ARES event and we get breakfast too!

There was a planning meeting for Field Day and the minutes are included in this month's GARzette and lists the needs for a successful GARS Field Day operation. All are invited to take part in the event and be sure to let them know for the food planning. The June's meeting will be held at the Field Day site (Yellow River Park) and is our annual Ice Cream social and this year, Ed Henderson W4BSR will be providing a cook out before the meeting.

I have heard some do not share my enthusiasm for the "Old Radio" section of the GARzette. I got my first license when these types of equipment were being introduced. The articles show the beginnings of the radio development we all enjoy today. In these old radios you can see the individual parts that make them work and the solid engineering that went into making them. They are far different from the compact and solid-state machines we have today. While they are not home built, with their individual parts, diagnosing them is a lot easier and I admire engineering of their solid construction. If you ever twisted the dial of a Collins S-series transceiver, you know how quality felt. The history of the equipment exposes how our ham equipment has evolved into the brands we use today. Finally, if you don't find the articles interesting, enjoy the photos and skip over them and let us old timers enjoy how the earlier days of radio and equipment.

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.

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

- May 13 – Tom Crowley KT4XN – Low-Cost HF Rigs and Kits
  - Field Day Prep
- June 10 – Ice Cream Social – Yellow River Park
- July 15 – Operating Etiquette – VHF/HF, Rag Chew vs Contest – Various Speakers

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

- May 20 – Tom Crowley KT4XN – Low-Cost HF Rigs and Kits
- June 17 – Field Day Preps, Configure the Logging and Network PCs
- July 22 – Operating Etiquette – VHF/HF, Rag Chew vs Contest – Various Speakers

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GARS Meeting – May 11, 2025
Low-Cost HF Rigs and Kits by Tom Crowley

The talk will be about a number of low-cost HF kits from $100.00 and assembled transceivers up to $500.00. These radios over power from 5 watts up to 25 watts. VHF and UHF hand held radios from $18.00 to $40.00

GARS Workshop – May 18, 2025

This is a GARS workshop to answer any questions about your Amateur Radio projects and adventures, and any clarifications you have about Tom's Low-Cost presentation.

Feel free to bring any ham related questions you have, including equipment setup and usage. We typically have 5 or more Elmers at each Workshop.

GARS would like to thank Chuck Hardt WD9IAR for his Arduino presentation.

Plan Ahead for the June Ice Cream Social & Cookout

GARS' June 10th meeting is our annual Ice Cream Social at Yellow River Park, also the site of Field Day. This year we will be grilling burgers and dogs, so we'd like you to come early, bring a spouse or friend, and enjoy a summer cookout.

The grill will be going at 6:00, with the meeting and ice cream to follow. To know how many people to cook for, we need everyone to signup; and also bring drinks, sides, or supplies. Please go to our registration page at **Perfect Potluck** to signup and indicate what you'll bring. Here is the link: www.PerfectPotluck.com/INBS3411 or go to perfectpotluck.com and search for the event under coordinator name: Edwin Henderson. You can use the password "GARS" to log in.

GARS Happenings

20 Years ago in the May 2005 GARzette:


The GARZETTE

- The LST-325 military transport ship was making an east coast trip with ham radio onboard
- There is an article about the QCWA (Quarter Century Wireless Association) celebrating members with 50 years of service
- There was coffee and donuts at a GARS meeting – we still have coffee, but the donuts have gone the way of the dodo bird

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

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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.

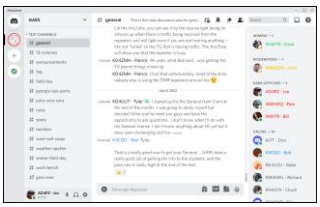
Out of almost 300 members, there are only five operators who serve as the NCS for the GARS net every Monday night. In no particular order, they are:

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

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. →



A New Ham's Journey to Amateur Extra – part 2

By Edwin Henderson W4BSR

It's amazing how much there is to learn as a new Ham. Not a week goes by that I don't read or watch something that I want to try out. Last month I was building an UNUN (unbalanced to unbalanced) device for my dipole antenna. I had tested it, and was ready to hook up some wires and try it out. Then out of nowhere, along came a six meter repeater in Buford!

I had the opportunity to climb a water tower and put up the antenna, and though some of you may have done some water tower climbing on a Saturday night in the country years ago. This was on the up and up. We mounted it to a steel railing, connected the line and the guys on the ground tested it out and got the radio on the air.

Now I am often accused by my wife Stacy, of being a little ADD, and having a new repeater, I knew I needed to put it to use, so the dipole project screeched to a halt in the middle of the road.

I've only been a General since last summer, so I hadn't tried to use the 6M Band yet, but I had some ideas. I knew the repeater antenna was vertical, so I set out to get a 6M in the air somewhere behind my house. I wanted to make it a vertical to maximize the possibility of connecting with the repeater 25 miles north of me. (It's a stretch and the range hasn't been fully mapped out yet.)

I did some reading, and decided on a ground plane antenna. Ground planes have been effective for me on the 2M and 70cm bands, so it was a good place to start. I like the Shark sticks for portable use, but only with a sufficient number of radials stretched out or a large piece of window screen (Magic Carpet). I haven't had much luck with them up on a mast as the efficiency goes down as they get farther from the radials. This put me on a search for a way to turn the Shark stick into a proper ground plane antenna. First issue solved: I found that Chameleon sells a ground plane kit consisting of an aluminum donut and six 4-foot stainless steel radials. It's pretty straight-forward, as the donut piece has 3/8"-24 threads top and bottom just like the Shark stick. This leads to the second issue- isolating the ground plane from the mast. Luckily, Chameleon has that figured out too. To make it work, there is an isolating piece. They call it a blank adapter. The bottom half is isolated from the upper and the SO-239 is on the side. A simple 90 degree mast adapter with U-bolts and a few minutes time, and everything was assembled. I started out with a painter's pole setup and 4 foot of grey PVC conduit; maybe 25 feet up. I connected it to my coax going into the house, and started transmitting. The SWR was pretty good at 1.7:1, so I didn't worry about fine tuning the antenna mast length. I got back a repeater tail after releasing the key, but it was static on my end. Since 6M is so short, I think I am falling victim to trees, houses, and the like. It looks like I'll be climbing again to get higher. I think I can get it up about 45 feet at the peak of the roof where my VHF/UHF is mounted. Time to get out the ladder again, and here we go!

GARS ARES Deployment and GA QSO

Pictures provided by Richard Kitz KM4SWL

GARS attended and watched the ARES practice deployment that was held at Peachtree Ridge Park. GARS and Gwinnett ARES did a combined Georgia QSO Party and ARES Deployment Day event at Peachtree Ridge Park on April 12th.

It was a training event and Gwinnett ARES set up its communications trailer, including antennas for local comms, their portable UHF repeater, and HF antennas for the GA QSO Party. The Georgia QSO Party, had 3 station captains setup under the canopy in the park.

The Basics

CW WPM

de: Bob Schmid, WA9FBO

Since Morse characters vary so much in length, how do we determine the speed of CW in words per minute, such as 5, 13, or 20 WPM? What's a "word"? If we program a microprocessor to send CW, how many milliseconds in duration is each dit, dah, the *intra*character space between them, the *inter*character space between characters, and the interword space?

We break the characters into "elements". A dit is one element and a dah is three elements. An intracharacter space is one element and an intercharacter space is three elements. An interword space is seven elements.

By international agreement, Morse code speed is defined by the word "PARIS". The calculation works this way:

```
P = di_dah_dah_dit___  = 1+1+3+1+3+1+1+3 = 14 elements
A = di_dah___          = 1+1+3+3         =  8 elements
R = di_dah_dit___      = 1+1+3+1+1+3     = 10 elements
I = di_dit___          = 1+1+1+3         =  6 elements
S = di_di_dit_______   = 1+1+1+1+1+7     = 12 elements
```

The word PARIS has exactly 50 elements.

Sending PARIS 5 times in one minute (5 WPM) means sending 250 elements per minute. The duration of each element is:

(60 sec/min) / (250 elements/min) = 240 ms/element

Sending PARIS 13 times in one minute (13 WPM) means sending 650 elements/minute, or an element time of 92.3 ms. At 20 WPM, the element time is 60 ms.

Electrons

de: Bob Schmid, WA9FBO

Which came first, wireless telegraphy or the discovery of the electron?

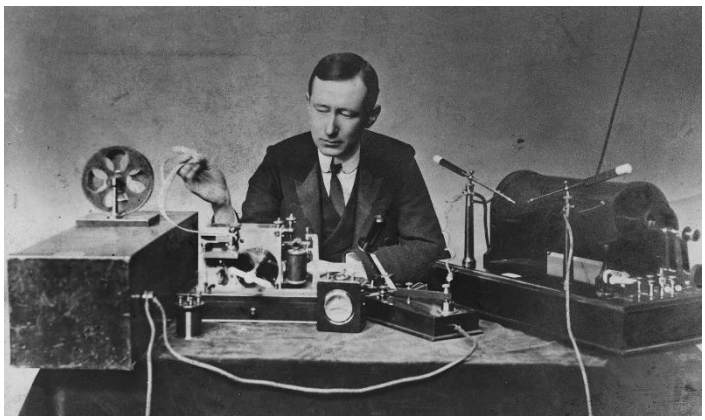


FIGURE 1 - MARCONI WITH 1890S RECEIVER & TRANSMITTER

Heinrich Hertz had demonstrated electromagnetic waves in the late 1880s. In 1895 **Guglielmo Marconi** began building practical wireless telegraphy systems (Fig. 1). In 1897 British physicist **J.J. Thomson** discovered the electron and described it as a tiny, negatively charged particle inside atoms. That means early radio pioneers like Hertz and Marconi had no knowledge of the electron, one of the most fundamental building blocks of electricity. They were building receivers, transmitters, and antennas—and experimenting with spark gaps, waves, resonance, and magnetism—before they knew what carried the current. They treated current as a fluid or a mysterious force.

In the 1890s people were still debating whether atoms were real. We now know that electrons are only

1/1800 the mass of a proton. How did Thomson find such a tiny, basically invisible part of an atom and then prove it carried electric current?

From the 1850s through the 1870s, scientists experimented with partially evacuated glass tubes containing metal electrodes. When a high voltage was applied across the electrodes, the low-pressure gas inside the tube would glow, producing colorful discharges that varied with the type of gas used.

The negative electrode was called the **cathode**, and the positive electrode was called the **anode**—terms introduced by **Michael Faraday**. High voltage seemed to cause some kind of "ray" to shoot out of the cathode and travel through the gas toward the anode at the opposite end of the tube. Since the rays appeared to originate from the cathode, they were called **cathode rays**.

Some thought these rays were a new form of light. Others thought they were some kind of invisible fluid.

FIGURE 2 - CROOKES TUBE

In the 1870s and 1880s, **William Crookes**, using tubes with much better vacuums (Fig. 2), showed that the mysterious rays traveled in straight lines from the cathode. When an object was placed in their path, it cast a sharp shadow—evidence that the rays weren't just light, but directional and carrying momentum. A tiny paddle wheel spun when struck, suggesting the rays had mass as well. In a better vacuum with less residual gas to glow, the rays themselves became more visible by their effects. When the end of the tube was coated with fluorescent material, it glowed where the rays hit, showing energy transfer. The rays didn't necessarily strike the anode; in many cases, they passed it entirely and hit the back wall of the tube, where the strongest fluorescence was often seen.

Crookes suspected that cathode rays were made of particles, but it wasn't yet proven.

In 1897, J.J. Thomson applied magnetic and electric fields to deflect the rays and found that the rays bent toward a positive plate, showing they had a negative charge. The amount of deflection showed their mass-to-charge ratio was far too small for any known atom, so the rays had to be made of particles smaller than atoms. We call them electrons—a name proposed earlier by Irish physicist **George Johnstone Stoney** for a unit of electric charge, later adopted for the particles Thomson had discovered. At first, many scientists were skeptical; it took several years for the electron to be widely accepted as a real, universal subatomic particle.

Today we remember that old TV sets and oscilloscopes used cathode ray tubes. The glowing dot on the screen was a focused stream of electrons hitting phosphor. It's the same basic physics as Crookes and Thomson's tubes, but with better aiming.

Hallicrafters HT-44 HF Transmitter - Extra

Vintage Amateur Radio

de Bill Shadid, W9MXQ

Last month, we did a more detailed analysis of the Hallicrafters SX-117[1] than had been done in an earlier installment that included the entire SX-117/HT-44 Station[2] – that is, the original "Hallicrafters Twins," as they are known. Moving from there we need to do a more in-depth review of the matching HT-44 HF Transmitter. While very experienced, since the 1930's, in making transmitters, this was Hallicrafters' first move into a transmitter capable of operating in transceive partnership with a matching receiver. That receiver, of course, was the SX-117.

In designing a product line, such as these "Twins," it becomes necessary to design matching VFO and heterodyne oscillators that match perfectly between Receiver and Transmitter. Collins Radio Company, whose S-Line/KWM-2 radios were the target competition, did just that with identical VFO and heterodyne oscillators in the related receivers, transmitters, and transceivers. Hallicrafters, at this point in time – about 1963 – was not prepared to do this in quite in the same way. While the HT-44 had a transmitter type VFO, the equivalent VFO in the SX-117 was quite different – and therefore had to be made compatible.

To start, here is a picture of the HT-44 Transmitter. It takes a careful eye to see the slight differences in this front panel as compared to that of the matching SX-117 Receiver from last month.

Hallicrafters HT-44 HF Transmitter

W9MXQ Collection

The very subtle difference in the HT-44 Front Panel (as compared to the SX-117) is the lower left and lower right controls (OPERATION and DRIVER TUNING controls, respectively, are offset outward buy 0.250 inches. As a former Material Management professional, I would assume that back in 1963 that Hallicrafters design engineering, manufacturing engineering, and materials control had some serious conversations about that necessity. Many trim parts were common between these units (and others in the line) but not these two front panels.

The HT-44 was a well-designed transmitter with 200 watts input on SSB (PEP), CW, and AM (PEP). Power output was specified as 100 to 130 watts PEP on SSB, 100 watts DC on CW, and 25 to 30 watts carrier on AM (100 watts PEP output). AND, unlike many of its direct competitors, AM on the HT-44 was double sideband (DSB) with carrier, not SSB with carrier. While being like its competition in the lack of high-level AM modulation, the HT-44 could give a good accounting itself on the mode.

The HT-44 used a pair of 6DQ5 Pentodes in the final amplifier. These tubes were considered television sweep tubes by RCA in their Receiving Tube Manuals, but they worked well in this transmitter application. And, they had a standard octal socket. That was easier to use and access than the Compactron sockets used my many other television horizontal-sweep tubes. As to durability, my HT-44 has its original Hallicrafters branded 6DQ5 tubes installed and still putting out full power – even on ten-meters.

The Compactron base sweep tubes were first introduced by General Electric in 1961, according to an article on the tube type on Wikipedia. The matching Compactron socket accommodated the special base for these tubes that mimicked the through the glass pins used on miniature vacuum tubes of the day.

Picture – Wikipedia

The Octal base tube (like on the 6DQ5) was like this illustration (these are not 6DQ5's but the look is similar). Note the extra production step of soldering the wires from the glass envelope into the plug pins. Not to be forgotten is the additional cost of the plug itself. However, also look at the superior mechanical isolation of the connector from the glass envelope.

Picture – W9MXQ

The release date of the HT-44 is generally thought to be in 1962 – but it seems also correct that initial units had issues in transceive with the SX-117 Receiver[1]. Early advertising for the SX-117 Receiver – supposedly introduced at the same time – was absent any message about the HT-44. As it turned out, the issues encountered with pairing the two radios was not with the HT-44 Transmitter but with the already announced SX-117 Receiver. This was covered last month in the review of that Receiver. Not to repeat the issues but essentially, they dealt with VFO Stability when using the Receiver to control Transmitter frequency. Also, there a correctable issue with complete receiver cut-off when transmitting. That second issue – receiver cut-off – would presumably be an issue with using the SX-117 together with the HT-44 and also when using the SX-117 alone with some other – perhaps non-Hallicrafters - transmitter. Details of SX-117 modifications are in the HT-44 manual. To my knowledge, they never appeared in the SX-117 documentation.

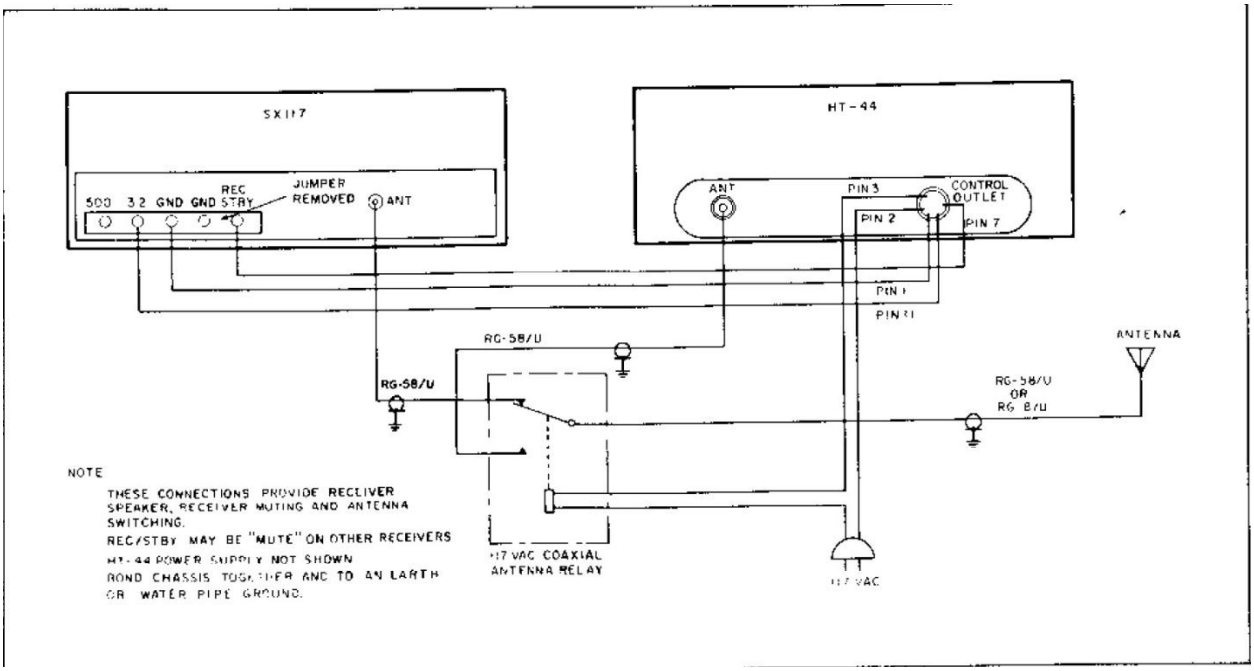
The HT-44 Transmitter was a very late transmitter for its time that used the phasing method of generating single sideband (SSB) signals. This article is not a comparison of the various methods available to generate SSB – many well written articles appear on the internet on this subject. Suffice it to say that the phasing method has some advantages in cost and also in the fact that AM signals were DSB with carrier – not SSB with carrier. While this low level of AM modulation is not up to the standards of plate modulated AM signals of the day, it was at least true to form in that both sidebands appeared in the signal output. Remember, in the early to mid-1960's when the HT-44 was marketed, SSB was a

major part of ham radio. However, AM signals were still plentiful, if not in the majority. So, AM performance was a factor for many in buying a radio.

Phasing tended to be a bit broader in bandwidth than their crystal filter generated signals. This was reality but not a given for the circuit as a general statement. The wider bandwidth today provides a somewhat more pleasing signal that often generates compliments on the air of “great audio.” Actually, many crystal filter generated SSB signals of the day could be similar in that they were using 2.7 or even 3.0 kHz filters – compared to later use of narrower 2.1 or 2.5 kHz filters.

Phasing SSB generation tended to be a bit unstable and as such most transmitters of the time had a Carrier Balance control on the front panel used occasionally to “null out” or “minimize” carrier present. One would reduce microphone gain to zero, go into transmit, and watch the RF output meter while adjusting Carrier Balance for zero, or minimum, signal level. This was often two controls that were alternatively adjusted to minimize carrier. If you were using an old Hallicrafters HT-37 Transmitter, one of the Central Electronics transmitters, Gonset GSB-101 Transmitter, or others, the adjustment would be made between, or even during, QSO’s. The HT-44 changed all of that. Hallicrafters had conquered the stability issues with Phasing SSB Generation and actually had the carrier balance

Unlike the SX-117 Operations Manual, the HT-44 Operations Manual clearly called out the specific interconnection between the two units. Perhaps in a reverse of attitude on the subject, Hallicrafters did not include specific installation instructions with any receiver other than the SX-117. Perhaps that was tied to the ability of the HT-44 to be setup to transceiver with the SX-117 – something not possible with a different receiver. To be sure, however, many SX-117 and HT-44 Receivers and Transmitters were operated as separate units with other Hallicrafters as well as those from different manufacturers. Please, see the diagram, below for interconnection details.



Interconnection Diagram – Hallicrafters SX-117 Receiver and HT-44 Transmitter

Hallicrafters HT-44 Operations Manual

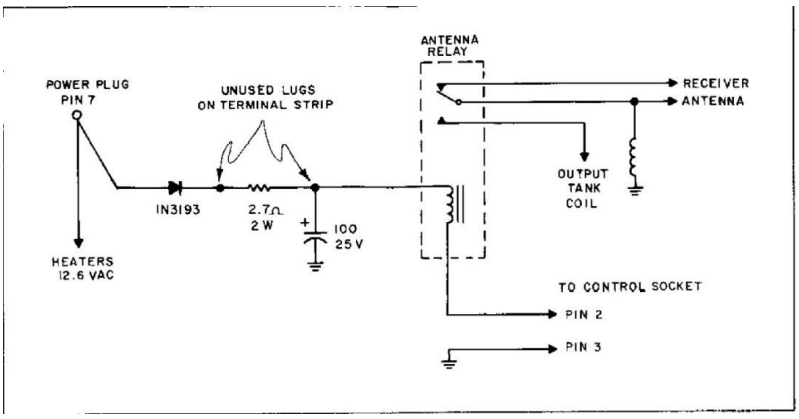
In addition, there was a separate Interconnection Diagram for including the matching Hallicrafters HT-45 Linear Amplifier in the setup. Also, radios like the Collins 32S-1 and 32S-3 Transmitters from this period included an internal transmit/receive switching relay. The HT-44 Transmitter did not – and you will see in the above diagram that an external relay is recommend for such duty. Actually, while never

a part of the HT-44 as it came from the factory, Hallicrafters did provide instructions (but not a kit of parts) for a field retrofit of an internal antenna switching relay in the HT-44.

The addition of the internal transmit/receive relay was covered on pages 29 and 30 of the HT-44 Operations Manual. It is shown on the next page. But one note is that the relay and the components are mounted within the confines of the tank circuit compartment on the underside of the transmitter – basically just under the final amplifier tubes. Be aware that the diode shown must work in the presence of an RF field. I was not so lucky in my first attempt but when later finding and using the recommended RCA 1N3193 diode the problems vanished. Also, the recommended Potter and Brumfield (P&B) KT11D Relay, 12 VDC coil, may be hard to find. Friends have used an equivalent to this so called "Postage Stamp Relay" from Radio Shack™ and elsewhere.

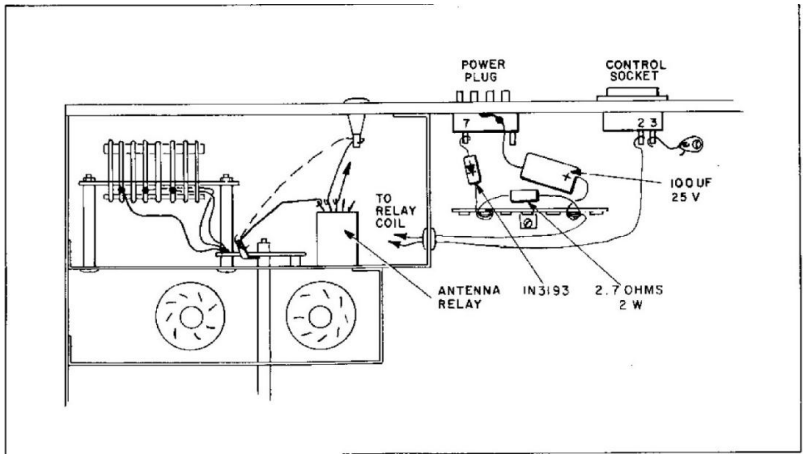
This was a popular modification on the HT-44, so it is a good idea to look for an installation done by a previous owner if you find and acquire one of these transmitters. If you find it installed, confirm good operation of the relay, the diode, and the electrolytic capacitor.

Since this could be handy in similar installations for other transmitters, I am showing the illustrations from the HT-44 Operations Manual in this article (below). I am also showing the installation in my own HT-44 Transmitter via an internal picture from that radio. I have added this same circuit to several Hallicrafters HT-32 series and HT-37 Transmitters over the years. Also note that the HT-44 has a pre-punched set of holes to mount an SO-239 connector for RF Output – to replace the standard phono socket from the factory. It is a shame that Collins with the 32S-1/32S-3 Transmitters and Heathkit with the SB-400/SB-401 Transmitters did not provide for the addition of an SO-239.



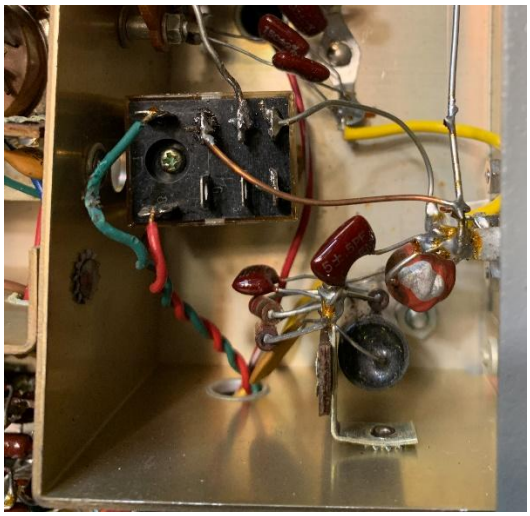
Partial Schematic. Showing Relay Installation

Hallicrafters HT-44 Operations Manual



Partial View of HT-44. Showing Relay Installation

Hallicrafters HT-44 Operations Manual

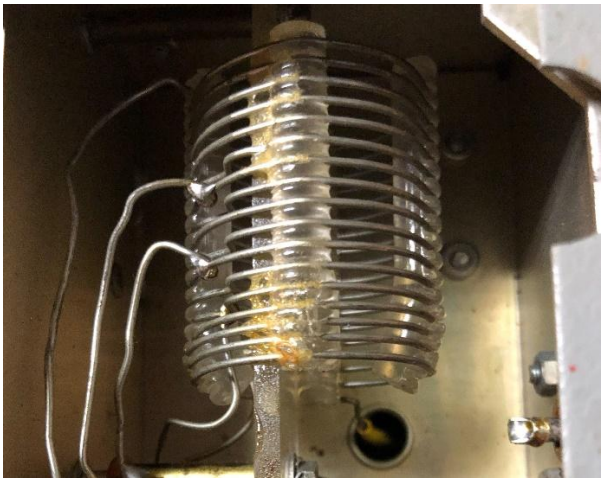


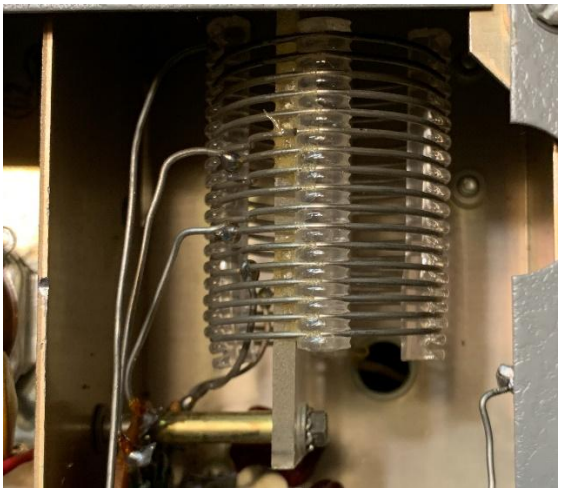
You can see the relay installed in this picture at the left – just above left-center. The power for activating the relay on transmit come from outside the RF Tank Coil Compartment. Lead dress is not critical but keep lines short and separated from items nearby. Do not mount the diode, resistor, or the electrolytic capacitor inside the RF Tank Coil compartment. This is as indicated in the line drawing illustration from the sketch just above.

In my installation, that relay is mounted by its plastic cover, upside down, to the chassis with Cyanoacrylate Adhesive (Super Glue™).

W9MXQ

While you are looking inside that RF compartment where the internal transmit/receive relay is added, take a look at the tank coil. An area of some concern in these transmitters related to them being as much as 60 years old at the time of writing this article. That same RF compartment contains the tank coil for the final amplifier. It seems easy to find HT-44 Transmitters with the coil assembly distorted from softening plastic insulation. See below some illustrations showing a coil that has seen no distortion and one that has . . .





W9DYQ **W9MXQ**

In the left picture, see the distortion toward the bottom of the Tank coil – absent in the picture on the right in an HT-44 that is as delivered. W9MXQ and W9DYQ have three HT-44 Transmitters between us with both of W9DYQ's transmitters showing similar heat related distortion. So far, W9DYQ has not noticed operating issues due to the distortion. Some conjecture from us both is shown further down in the text.

At this place in time, it is difficult to tell for sure what happened to cause the distortion of the plastic of the tank coil. Does it mean that the area inside that compartment became too warm, did RF heat the plastic form, or was it perhaps an SWR related that caused the coil to become warm? W9DYQ and I have mulled this topic over the years, and it is our opinion that the HT-44 final amplifier pi-network,

being very narrow in tuning range, was perhaps subjected to higher than ideal SWR conditions – which caused the heating. Also, the very simple metering circuit that was merely “Output Power.” Tune for Maximum RF Output – what could be easier? If neutralization was off, the peak RF output might be far removed from the plate current dip – causing excessive heating of the coil and also damage to the final amplifier tubes. Like so many things in old radios – some things just have an unknown history.

I must add that there work around was a way to read plate current on the HT-44 Transmitter – and also plate voltage – using the same process used to determine bias current in the amplifier tubes. Those of you familiar with vacuum tube amplifiers such as used in transmitters of this design must have wondered in the above paragraph about a total lack of ability to read plate current – and you would be correct! To set the required 100 mA bias on the tubes, one must access two terminal points inside accessory PS-150-120 AC Power Supply/Speaker Console. There are two terminals there that are on either end of a resistor in series with the plate voltage supply. The resistor provides for the reading of plate current by measuring voltage across the resistor – a 10-ohm, 1 watt resistor. In this arrangement, a voltmeter reads DC current of 100 mA per volt on the meter’s scale. So, the bias potentiometer on the back panel of the PS-150-120 Power Supply/Speaker Console is set so that the meter that is attached across the resistor reads 1 volt DC – meaning a reading of 100 mA. It them would be just as appropriate to have a meter across that resistor that reads 0-5 volts, which would mean 0 to 500 mA. If neutralization is correct on the final amplifier, the meter should show a pronounced dip at about 3.5 to 4 volts DC (meaning 350 to 400 mA). The exact reading would depend on how much the voltage drops under load. The two terminals inside the PS-150-120 are red and blue – the positive voltage probe goes to the red terminal and the negative voltage probe goes to the blue terminal. Either of those terminals to ground with a voltmeter would indicate the plate voltage. That would ideally be a voltmeter capable of reading the specification 575 volts from the plate supply, plus about 50% more (minimum) for range safety on the meter – a 900 or 1000 VDC range would be about right. That said, no common voltmeter has leads that are safe for that voltage – so be sure that you know what you are doing. This is not a place for that $9.00 DVM you found at Harbor Freight™ or, perhaps worse, at a hamfest. So, here is my standard warning:

HIGH VOLTAGE WILL KILL YOU!! LIKE IN DEAD!! NO RETURN!!

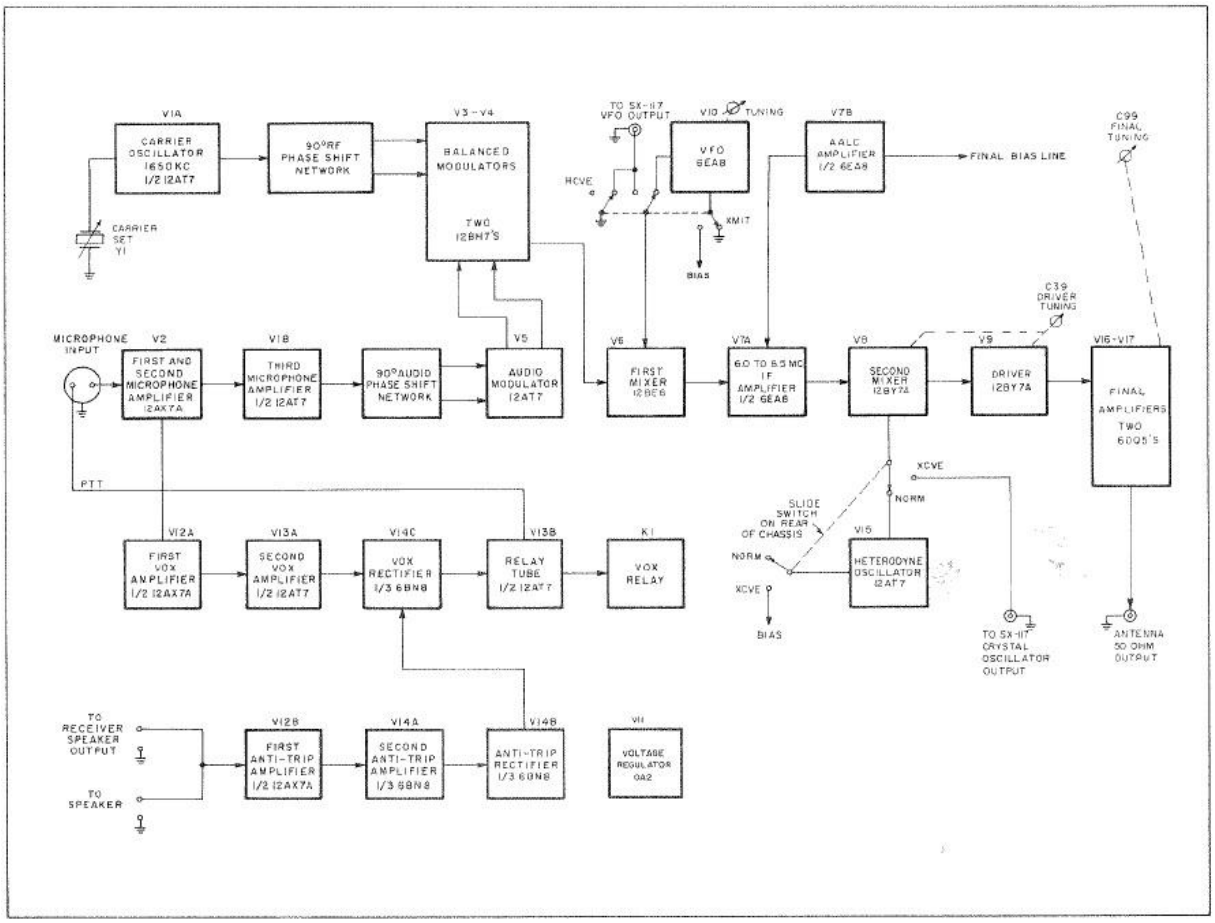
DO NOT PASS GO AND DO NOT COLLECT $200!!

A nice feature of the HT-44 Transmitter when used with the SX-117 Receiver when connected for potential transceive operation was a switch on the back of the transmitter that allowed the heterodyne crystals in the receiver to be used in the transmitter. This worked in transceive or separate receiver/transmitter operation. This was not, at the same time, unique to Hallicrafters. Collins S-Line and Heathkit SB-Line radios had the same feature.

Bob, W9DYQ, my partner in radio collection, is the current holder of that call. His father, Ted, now a SK, is the original W9DYQ. Ted and I both have the Hallicrafters Twins (SX-117 and HT-44) plus the HT-45 Linear Amplifier. Actually, Ted’s “HT-45” was the earlier version – see further along in the article. We built an outboard voltmeter and ammeter set in a custom designed cabinet that we designed, built, and named the Monitor Console. Both Ted’s and mine still exist – one in Bob’s shack and one in mine. One caution here, however. The use of that metering method has some risk. The 10-ohm, 1 watt,

metering resistor can also be thought of as a fuse link in the high voltage circuit. If it would open, very high current would pass through the voltmeter. Hindsight being 20-20, perhaps we never should have thought of that as a permanent installation. That said, most ammeters in radios have similar risk – just be careful and make sure that voltage never reaches you in a component failure[4].

Hallicrafters continued their use of a feature they called “AALC.” This is an abbreviation for “Amplified Automatic Level Control.” All of us are familiar today with Automatic Level Control (ALC) as a function of feeding a voltage back to the final amplifier of the radio to reduce power as the amplifier approaches saturation and begins to produce distortion in the output signal. Today we go so far as to feed ALC voltage back from a linear amplifier to cut back drive as the external amplifier reaches saturation. Hallicrafters, and perhaps others at the time, amplified this signal (hence the term, “Amplified” Automatic Level Control, or AALC) to allow a small amount of compression in the process that resulted in a higher average power output. In the block diagram, below, you can see this AALC amplifier as a function of V7B, a 6EA8 tube that offers a DC cutoff voltage to the final amplifiers (V16 and V17). This circuitry predates today’s speech processors.



Hallicrafters HT-44 Transmitter Block Diagram

Hallicrafters HT-44 Operations and Service Manual

Like most all setups of the day, the HT-44 Transmitter offered VOX and PTT operation on Phone (SSB and AM) and semi-break-in with adjustable delay for all modes using VOX. (“Semi-break-in” refers to closing the key to enter transmit with the “delay” determining how long the radio stays in transmit after the key is opened.) Like many radios of the day, one had to remember that to tune the transmitter the radio had to be in CW mode (a position on the FUNCTION front panel switch). Close the key to allow a carrier to be produced for tuning. The CW jack on the rear panel was normally closed so if a key was

installed it had to be closed for the transmitter to function. With no key inserted, the radio will immediately go into transmit when that mode is selected.

I do not want to bore you, but since this is a part of a system, I am repeating the picture of the HT-44, with its partners the SX-117 Receiver and HT-45 Linear Amplifier – with their matching accessories. This picture appeared last month with the SX-117 Receiver.

The "Hallicrafters Twins"

Left to Right

HT-45 Linear Amplifier, HT-44 Transmitter, SX-117 Receiver

Shown with all available home station accessories of the day.

W9MXQ Collection

By the way, for you fellow Hallicrafters aficionados who read these articles, I have a little test for you. Can anyone tell me what is missing in the above picture? Hint: It is not a product – it is a trim item. It is a trim item that seems missing 90% of the time when the product is seen. Send your answer to W9MXQ@TWC.com. This picture – with the missing trim item – is the basis for my QSL Card. This station, setup as you see it, above, is in operation as I write this article.

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. Bob and I both own numerous pieces of our mutual favorite in ham radio, Hallicrafters. Many comments herein are subject to opinions that W9DYQ and I hold in this very interesting manufacturer. Hallicrafters was, after all, in Illinois, the state where we both were raised. A complete SX-117, HT-44, and HT-45 Station, with all accessories, are among the oldest members of my collection. I was fortunate to have been friends with one of the engineers at Hallicrafters who was involved in the design of the product line (long an SK, now). Bob, W9DYQ, has two of the "Hallicrafters Twins," as we call them. One of Bob's Hallicrafters Twins stations has the predecessor to the HT-45 Linear Amplifier, the Radio Industries "Loudenboomer." (Bob inherited that set, mentioned earlier from his father.) Technically, the Hallicrafters and Radio Industries versions differ only in cabinetry and the way grounding is handled on the 3-400z amplifier tube[4].

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

Credits and Comments:

[1] Reviewed in the previous month's article. See https://www.ozaukeeradioclub.org/index.php/newsletters and look for the 2022 Archive.

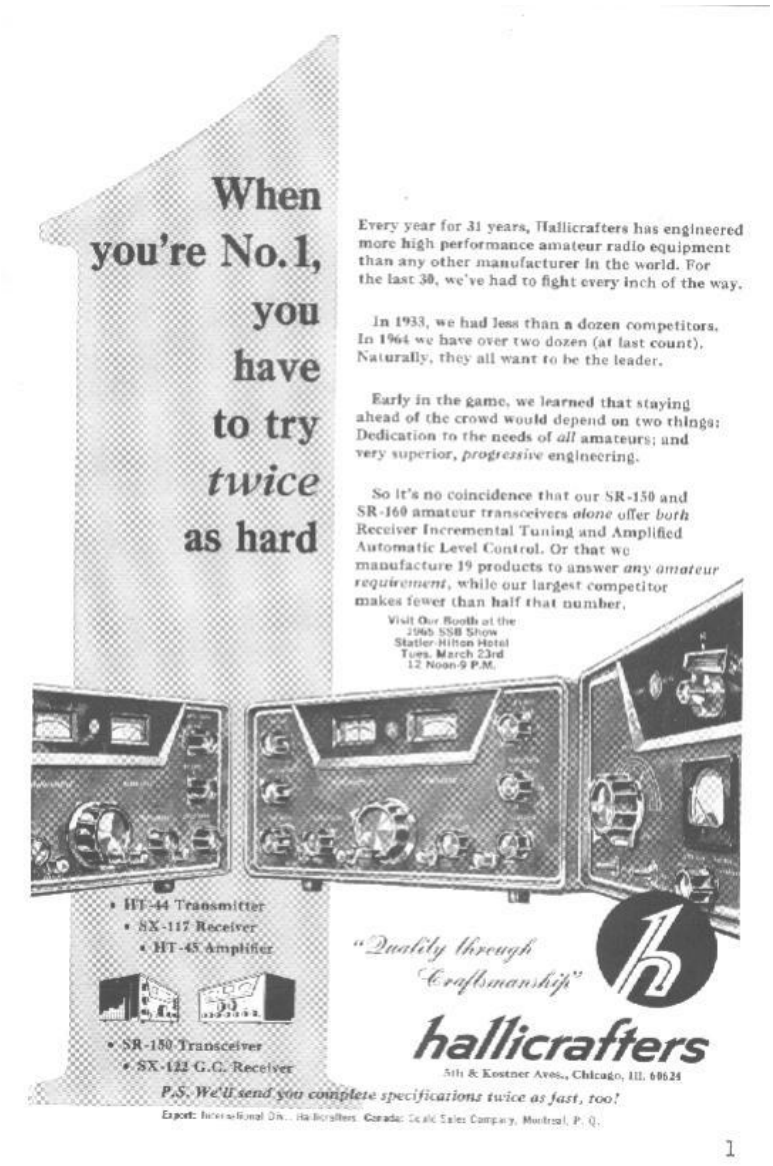
[2] A less detailed overall review of the SX-117 and HT-44, together, appeared in the March 2018 edition of this

Newsletter. See https://www.ozaukeeradioclub.org/index.php/newsletters and look for the 2018 Archive.

[3] When choosing a meter for this kind of circuit, be very careful. Back when Ted, then W9DYQ, and I made the Monitor Console, we picked matching surplus, metal housing Phaostron meters. They looked great!! But there was a flaw in our application. Their original use had been in an application requiring that the metal cabinet of the meter be at ground – or, that the housing was connected to the negative terminal on the meter. Had we not gotten into the meter and corrected that internal jumper, the meter, and the associated Monitor cabinet, would have been at the same potential as the plate voltage!!

[4] A complete article on the Hallicrafters HT-45 Linear Amplifier and its predecessor, the Radio Industries Loudenboomer Linear Amplifier appeared under my name in the April 2018 issue of this Newsletter. See https://www.ozaukeeradioclub.org/index.php/newsletters and look for the 2018 Archive. Hallicrafters purchase Radio Industries, Inc., and rebranded the Radio Industries "Loudenboomer" amplifier into the HT-45. Both products existed for a time in the marketplace. And, for reference, Hallicrafters used the "Loudenboomer" callout on the front of the HT-45.

© ***W9MXQ***



Hallicrafters Print Advertisement from 1965

SX-117, HT-44, HT-45 Station

GARS Membership

New Members in April

Joey Gibson (KR4DDH)
Deon King (KR4CUN)
Nasser Nasab (KR4CKV)
Dietrua Pattillo (KR4CSY)
Jason Pattillo (KR4CTH)
Dietrua Pattillo (KR4CSY)
Jayden Proctor (KO4HJF)
Frank Settle (KR4CIV)
Susan Settle
Mario Stewart (KR4CUK)
Michael Stewart (KR4CVF)

New Members: 11

Total Members as of May 1, 2025
350

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 May

Vincent Bazain (KA4WAY)
Bill Bentley (KJ4MXM)
Caryn Brant
Maggie Colley (KM4PTW)
Matt Collins (N4KRI)
Tom Crowley (KT4XN)
Donnie Foster (KQ4VNU)
Steve Garrison (N4TTY)
Bob Gerzoff (WK2Y)
Joey Gibson (KR4DDH)
David Griscavage (W3GZS)
Bill Hawkins (WR1TR)
Harry Heath (KO4FGK)
Erick Kobres (K0BRE)
Sachiko Londono
Frederick Love (KK4VEP)
Brandon Massengill (W4HDX)
David Mattison (KD4PCK)
Dallas Mellichamp (N4DDM)
Anita Morris (KG4AJX)
Douglas Papciak (KI4VDU)
Dietrua Pattillo (KR4CSY)
Dietrua Pattillo (KR4CSY)
Robert Prisant (KN4GZG)
Ade Shamblin (KJ4CUY)
Nathan Smith (NF4L)
Larry Thill (W4LJT)
Timothy Yehl (KQ4UGH)

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

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

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

GARS on Social Media

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

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

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

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

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

GARS Mail Address:

GARS
P.O. Box 492531
Lawrenceville, GA 30049

Officers

 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 and 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

GARS – MEETING 4/8/2025

Opening Meeting: Meeting open by President Bob Hoffman K4CQO at 7:06 PM /1906 hrs. where he acknowledge our new ham, announced safety procedures and exits. He proceeded to have each member and guest present to introduce themselves.

Birthday Acknowledge: All having birthday during the month.

Treasurer Report: Reported by Glenn Wendt W3WWT.

Membership Report: 336 as of 4/1/2025. Approx. 50 members at meeting

Programs: Chuck Hardt WD9IAR presented Intro to Arduino Micro controller.

Education: Ralph Pickwick KJ4CNC Education Chairperson. Ham Cram 18 passed out of 22 taking the class and exam.

Upcoming Events: Memorial Day Parade May 26 and Field Day June 21-22.

New Business: 6 meter repeater up and running. QSO party April 12 Chairperson Dallas Mellichamp with ARES was a success with ARES adding 12 new members.

Closing: Approx. 8:40 PM or 2040hrs.

Workshop Minutes – April 15, 2025

Attendance: 14

Workshop Topic: Various Topics

Presenter: None

Brief Summary: This Workshop did not follow the GARS presentation so we filled the time with

- Setting up some of the Field Day logging PCs
- Discussion of holding a Field Day Zoom meeting on the 5th Tuesday
- Programming radios with Chirp
- Discussions of NIFOG (National Interoperability Field Operation Guide)
- 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.

Field Day Meeting Minutes

April 29th, 2025

Attendance: Not taken

Field Day Topic: Various Topics

Presenter: Dallas N4DDM, Field Day Chair 2025

Brief Summary: This Field Day Zoom Meeting was to kick off the selection of key positions. Some of the items were follow-up items filled in after the Zoom meeting.

- Dallas N4DDM has stepped up to be our Field Day Chairman
- Kevin W4KIB will be our Antenna Captain (Needs Volunteers/Helpers)
- Jeff AB4HF stepped up to be our Safety Officer (100 Points)
- Ralph stepped up to do the Solar Battery contacts (100 Points)
- Harold KI4FPR will bring the GARS Trailer
- Pam KJ4RYB Hospitality Greeter at the ARRL Table (Supplies are in the GARS Trailer)
- Kevin K4GTR will lead the networking of the PCs and the Remote Receive Antenna cables
- Mark N7GRB to capture the ARRL Message (100 Points)
- Ed W4BSR stepped up to cook BBQ for our Saturday Main Meal
    - We need a cook for Sunday
- We need a Bonus Point Captain so we can get the most points
- Bill WR1TR is to bring and set up the 6m/10m Hex Beam antennas

Station Captains - Many are OPEN

- VHF/UHF(Free Transmitter) - Kevin K4GTR
- Satellite - (Free Transmitter) Open (100 Points)
- 10m/75m SSB - Glen W3WWT
- 40m SSB - Dallas N4DDM
- 80m/15m Digi - Open
- 40m Digi - Open
- 20m Digi - Open
- CW - Open
- 20m SSB - Open
- 15m SSB - Open

Expect to hear more about Field Day on Groups.io, nets, and meetings.

Everybody is encouraged to download and read the 2025 Field Day Rules and let me know what positions, duties you want to do.

Don't forget we will be doing Field Day at the Yellow River Park and have our June "Ice Cream Social" meeting there.

73 Dallas N4DDM
Field Day Chair

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]

05/10/2025 - EPARS Hamfest
Location: Dade City, FL
Type: ARRL Hamfest
Sponsor: East Pasco Amateur Radio Society
Website: http://eparsonline.org

05/10/2025 - Forsyth Georgia Tailgate & Swap Meet
Location: Forsyth, GA
Type: ARRL Hamfest
Sponsor: Put on for Amateurs by Amateurs
Website: http://barnesvillega.net

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

05/17/2025 - Mobile Amateur Radio Club Hamfest
Location: Mobile, AL
Type: ARRL Hamfest
Sponsor: Mobile Amateur Radio Club
Website: http://w4iax.com/hamfest.htm

07/18/2025 - 07/19/2025 - Milton Ham Fest
Location: Milton, FL
Type: ARRL Hamfest
Sponsor: Milton Amateur Radio Club
Website: http://miltonarc.org

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

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	July 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 May 2025

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

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

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.

April 2025 Results

The GARS VE Team exam session on April 20th was cancelled due to its schedule being on the Easter holiday.
GARS VE Team exams will resume in May 18th.

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