



W5NC

Houston, Texas

Northwest Amateur Radio Society

A 501(c)(3) Organization

An ARRL Affiliated Club

NARS NEWS

SEPTEMBER 2024

Northwest Amateur Radio Society

P.O. Box 11483

Klein, TX 77391

w5nc.club



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NARS News is published monthly by the Northwest Amateur Radio Society (NARS). Northwest Amateur Radio Society is a Special Services Club affiliated with the American Radio Relay League, ARRL Club No. 2120.

If you would like to contribute to the newsletter by publishing an article, adding calendar events, or any other contribution, please send all submissions before the end of the month to the newsletter editor:

Brandon Rogers (K5BLR), Newsletter Editor

k5blr@arri.net

President's Message

BY RON MATUSEK, WA6TQH

Elections coming up

If you are interested in running for a board position in our upcoming elections to be held in November please submit your name; call sign; and board position interested in to me ASAP. **Remember you can ONLY run for ONE POSITION!**

The Voting positions open are: President; Vice President; Secretary; Treasure: Director One; Director Two. The Non-Voting positions are appointments by the president.

Annual Banquet Plans

Rob Nixon has taken on the responsibility for locking in a location for our January awards banquet. If you have a favorite place in mind, send him a note.

September General Meeting

We are looking for subject matter for our general meetings. It would be helpful if we could have some volunteers to assist in putting these presentations together. Let's get some new presenters and subject content as opposed to same presenters every month. There are a lot of areas of interest from what I hear at luncheons so let's bring forth those ideas. Let's put talk into action!

Board Positions Currently Open

We have two positions open so if you are interested and have the time, please contact a board member.

1. Opening – "Public Information Officer" effective January 2024
 - a. See By-Laws for position description.
2. Opening – "Director" effective January 2024
 - a. See By-Laws for position description.

Weekly Net Operations

NARS has a lot on the menu going forward. Our repairs to the LBT Houston site were delayed by the availability of our climber who will remove the old antenna and install a new antenna. Stay up to date with our weekly VHF and DMR nets (info at w5nc.club) and be sure to attend our monthly NARS General meetings. The DMR net meets every week on Tuesdays at 7PM and the VHF net meets on Wednesdays at 8PM. Information is published prior to each weekly net regarding frequencies and various links into the nets.

Please be patient while the necessary repairs are made.

See you at our September General meeting!

Exam Practice

Are you new to the hobby and looking to pass your Technician exam? Are you preparing to level up your license by taking the next level exam? Check out the questions below to test your knowledge!

Technician (Element 2)

T5D02

What formula is used to calculate voltage in a circuit?

- A. A. $E = I - R$
- B. B. $E = I + R$
- C. C. $E = I / R$
- D. D. $E = I \times R$

General (Element 3)

G3A08

How can a geomagnetic storm affect HF propagation?

- A. Improve ground wave propagation
- B. Improve high-latitude HF propagation
- C. Degrade ground wave propagation
- D. Degrade high-latitude HF propagation

Amateur Extra (Element 4)

E6F01

What absorbs the energy from light falling on a photovoltaic cell?

- A. Holes
- B. Protons
- C. Photons
- D. Electrons

See the answers on [Page 19](#).

NARS Membership – Due Dates and More

DID YOU
KNOW



Did you know that you can find your membership expiration date on the club website? Simply click the “Membership Reports” link on the home page or visit this link: <http://www.w5nc.club/nars/index.php/2014-03-30-18-23-31/membership-reports/club-roster>. Find your name in the list and look at the “Expires” column of the table!

Amateur Radio News

An excerpt from the ARRL News

Amid wildfires and spotty cell service, Northstate residents turn to ham radios

In the Northstate region, where cell phone service is often unreliable, ham radios play a crucial role in maintaining communication, especially during disasters. Bob Frampton, Secretary of the Western Amateur Radio Repeater and Echolink Association Inc. (WARREA), highlights the importance of ham radios in areas like Redding, Red Bluff, and Chico, where cell service is spotty. During emergencies such as wildfires, ham radio operators provide vital information about evacuation routes and safety measures, bridging the communication gap for residents, particularly older adults who may miss online updates.

Ham radios offer a reliable alternative when traditional communication methods fail, ensuring that help can be summoned even in remote areas. The Humboldt Amateur Radio Club is actively promoting this technology by offering FCC certification classes via Zoom, starting September 9th, to encourage more people to become proficient in ham radio operations. This initiative underscores the ongoing relevance and necessity of ham radios in enhancing community safety and connectivity.



Did you know...

that the ARRL sends a weekly letter describing some of the current events, activities, and policies that are taking shape in the Amateur Radio world? The following is an excerpt from these letters in January. View all the ARRL letters at <http://www.arrl.org/arrlletter>

For more on this story, please [click here](#).

Ham radio operators to tune in event from Blennerhassett Island

The Parkersburg Amateur Radio Klub activated a Parks on the Air radio station on Blennerhassett Island on Saturday, September 7th, 2024. This event is significant as it marks the first time an amateur radio club will operate from the island, reflecting the club's history dating back to the 1940s. The activation is part of a broader initiative to promote emergency awareness and preparedness through international radio operations. The public is invited to view the operations and learn about obtaining a ham radio license.

Club members, including Corey Meadows and his father Bob, provided the necessary equipment for the activation. The event coincides with Ohio's statewide Parks on the Air activations, offering opportunities for various awards through activator, hunter, and park-to-park contacts. The club's president, Larry Dale, emphasized that Parks on the Air is not only about fun and competition but also about promoting emergency preparedness.

For more on this story, please [click here](#).

Local Radio Club provides emergency communication, connects radio enthusiasts

The Piedmont Amateur Radio Club (PARC) is a vibrant community of amateur radio enthusiasts who engage in a variety of activities, including satellite communication, digital modes, and moon

bounce. The club plays a significant role in emergency preparedness, operating an advanced Winlink system that allows for email communication over radio signals during crises. This capability is crucial for maintaining communication when traditional methods fail, ensuring that emergency services and the community can stay connected.

In addition to their technical pursuits, PARC members actively support local events such as the Spin for Kids bicycle event and collaborate with hospitals to conduct emergency communication tests. The club's diverse membership includes engineers, hobbyists, and other professionals, all united by their passion for amateur radio. Sustained through membership dues and donations, PARC continues to foster a sense of community and preparedness, highlighting the importance of amateur radio in both everyday activities and emergency situations.

Resilience Through Amateur Radio for National Preparedness Month

Amateur radio is an excellent tool for community resilience in times of crisis. The utility value of the critical communications it provides is enhanced by having well trained local [Amateur Radio Emergency Service® \(ARES®\)](#) groups and other teams. However, to maximize the value to yourself, your family, and your community; an operator must be prepared. September is National Preparedness Month. ARRL's partners at the Federal Emergency Management Agency (FEMA) are sharing tips to help you be prepared. They are centered around the theme of ["Start a Conversation"](#).

ARRL Director of Emergency Management Josh Johnston, KE5MHV, is starting the conversation with radio amateurs to help make sure you, your station, and your family are ready for whatever may come your way. "It's important that we take steps to ensure that not only are we ready to provide

assistance to our served agencies, but that we have a plan for our families as well," he said.

Over the month of September, ARRL will share best practices to help prepare you, your station, your family, and your local ARES® group to thrive in times of emergency. "There are times when hams may be activated to serve when all aspects of your life, your station, and your environment are under stress. That's not the time to start planning or to discover shortcomings," said Johnston.

Johnston encourages any radio amateur who is interested in participating in ARES® to check out the "Join ARES" [flyer](#), then reach out to their local ARRL Emergency Coordinator. If you don't know who that is, find your local [ARRL Affiliated Club](#), or reach out to your ARRL Section Manager or Section Emergency Coordinator, whose contact details you can find on page 16 of QST or on www.arrl.org/sections.

Find resources for ARES® at www.arrl.org/ares and tools to help plan your family's resilience at www.ready.gov.

Hams Respond as Hawaii Threatened by Three Major Storms

In late August, Hawaii's big island was threatened by three major tropical storms and amateur radio operators were prepared to assist as the threat grew more intense. Russell Roberts, KH6JRM, Public Information Officer, Hawaii County, ARRL Pacific Section, said that beginning August 23, storm watches and warnings were being issued for tropical storms Hone, Gilma, and Hector, all churning off the island's southern coast.

By August 31 and September 1, Hone had become a Category 1 hurricane with winds over 75 miles per hour (MPH), occasional gusts to 100 MPH and heavy rain. Gilma was next as a Category 1, but later intensified to a Category 3 hurricane, dropping 28 inches of rain which flooded roads, along with high

winds that brought down trees, power and communications lines.

“We had 3 Amateur Radio Emergency Service® (ARES®) operators on the net for about 24 hours beginning August 30 and they handled 41 contacts,” said Roberts. “Some repeaters were out of fuel, so we switched to HF to pass traffic and assess the damage.”

The storms never made landfall and while there were no fatalities or injuries, the damage was severe. Nearly 30,000 residents were affected. Power is still out for over 200 customers, cleanup and road repair are active.

“We were very fortunate,” said Roberts. “There was concern a fire warning would need to be issued for several parts of the island. But the approaching weather brought rain and lowered temperatures.”

This article was originally published by the ARRL [here](#).

Estate Planning for Hams (What happens to all your stuff?)

August is National Make-a-Will month. Some estimates show that nearly two-thirds of Americans don't have a plan. For some, it's procrastination. Others don't know where to start. “So many times we hear from the family of a Silent Key who are overwhelmed with what to do with a lifetime worth of amateur radio gear,” said ARRL Director of Development Kevin Beal, K8EAL. “Simply thinking through what needs to be done ahead of time can prevent the stress on our loved ones after we are gone.”

ARRL this week [held a webinar](#), hosted by Beal and Dino Papas, KLØS, to discuss the first steps of planning. “It is something that, unfortunately, doesn't get a lot of attention. The bottom-line up front is, ‘what happens to all our beloved ham gear when that inevitable day comes along that we

become a Silent Key?’... Unfortunately, that day may arrive unexpectedly – so we need to prepare ahead of time to make it as simple as possible for our families,” said Papas.

On the ARRLHQ YouTube channel, you can see a [replay of the 52-minute presentation](#), along with the question-and-answer section at the end.

“Your station is an asset, just like anything else you've built and put resources into. Deciding now what happens when you become a Silent Key can help solidify your legacy to ham radio,” said Beal. [The ARRL Legacy Circle](#) recognizes the generosity of individuals who have planned support for ARRL through wills, trusts, life insurance gifts, and other ways. The ARRL Legacy Circle ensures that ARRL and amateur radio will continue to thrive for generations to come.

This article was originally published by the ARRL [here](#).

ARRL Expands Publications Archive

ARRL® has expanded member access to its rich archive of publications. The [ARRL Periodicals Archive and Search](#) now includes content from two more popular ARRL magazines: QEX — A Forum for Communications Experimenters, which features technical articles and columns of interest to radio amateurs and communications professionals; and NCJ — the National Contest Journal, which covers information, scores, and advice from the world of competitive radiosport and the contributions of top contesters.

Before accessing the archive, members should ensure they are first logged in to the [ARRL website](#). Members may now view and download articles from across the extensively indexed archive of QEX from 1981 to 2011, and NCJ from 1973 to 2011. Members can access an index and view copies of articles from the huge ARRL periodicals archive.

The ARRL Periodicals Archive and Search was first introduced to members in 2008, providing PDF copies of articles from the QST magazine archive. Since then, thousands of members have enjoyed searching, viewing, and printing their favorite articles, projects, and more. The archive is populated with QST articles from 1915 to 2011.

While this archive includes access to downloading many older articles, the more recent and current issues of ARRL magazines continue to be available to members in a digital edition.

See www.arrl.org/magazines for more information. ARRL members have access to four digital edition magazines: QST, On the Air, QEX, and NCJ.

Access to the archive is an ARRL membership benefit and a service of the ARRL Technical Information Service (TIS). Not an ARRL member? Join today: www.arrl.org/join.

ARRL IT Security Incident - Report to Members

Sometime in early May 2024, ARRL's systems network was compromised by threat actors (TAs) using information they had purchased on the dark web. The TAs accessed headquarters on-site systems and most cloud-based systems. They used a wide variety of payloads affecting everything from desktops and laptops to Windows-based and Linux-based servers. Despite the wide variety of target configurations, the TAs seemed to have a payload that would host and execute encryption or deletion of network-based IT assets, as well as launch demands for a ransom payment, for every system.

This serious incident was an act of organized crime. The highly coordinated and executed attack took place during the early morning hours of May 15. That morning, as staff arrived, it was immediately apparent that ARRL had become the victim of an extensive and sophisticated ransomware attack. The FBI categorized the attack as "unique" as they had not seen this level of sophistication among the

many other attacks, they have experience with. Within 3 hours a crisis management team had been constructed of ARRL management, an outside vendor with extensive resources and experience in the ransomware recovery space, attorneys experienced with managing the legal aspects of the attack including interfacing with the authorities, and our insurance carrier. The authorities were contacted immediately as was the ARRL President.

The ransom demands by the TAs, in exchange for access to their decryption tools, were exorbitant. It was clear they didn't know, and didn't care, that they had attacked a small 501(c)(3) organization with limited resources. Their ransom demands were dramatically weakened by the fact that they did not have access to any compromising data. It was also clear that they believed ARRL had extensive insurance coverage that would cover a multi-million-dollar ransom payment. After days of tense negotiation and brinkmanship, ARRL agreed to pay a \$1 million ransom. That payment, along with the cost of restoration, has been largely covered by our insurance policy.

From the start of the incident, the ARRL board met weekly using a continuing special board meeting for full progress reports and to offer assistance. In the first few meetings there were significant details to cover, and the board was thoughtfully engaged, asked important questions, and was fully supportive of the team at HQ to keep the restoration efforts moving. Member updates were posted to [a single page on the website](#) and were posted across the internet in many forums and groups. ARRL worked closely with professionals deeply experienced in ransomware matters on every post. It is important to understand that the TAs had ARRL under a magnifying glass while we were negotiating. Based on the expert advice we were being given, we could not publicly communicate anything informative, useful, or potentially antagonistic to the TAs during this time frame.

Today, most systems have been restored or are waiting for interfaces to come back online to interconnect them. While we have been in restoration mode, we have also been working to simplify the infrastructure to the extent possible. We anticipate that it may take another month or two to complete restoration under the new infrastructure guidelines and new standards.

Most ARRL member benefits remained operational during the attack. One that wasn't was Logbook of The World (LoTW), which is one of our most popular member benefits. LoTW data was not impacted by the attack and once the environment was ready to again permit public access to ARRL network-based servers, we returned LoTW into service. The fact that LoTW took less than 4 days to get through a backlog that at times exceeded over 60,000 logs was outstanding.

The board at the ARRL Second Board Meeting in July voted to approve a new committee, the Information Technology Advisory Committee. This will be comprised of ARRL staff, board members with demonstrated experience in IT, and additional members from the IT industry who are currently employed as subject matter experts in a few areas. They will help analyze and advise on future steps to take with ARRL IT within the financial means available to the organization.

We thank you for your patience as we navigated our way through this. The emails of moral support and offers of IT expertise were well received by the team. Although we are not entirely out of the woods yet and are still working to restore minor servers that serve internal needs (such as various email services like bulk mail and some internal reflectors), we are happy with the progress that has been made and for the incredible dedication of staff and consultants who continue to work together to bring this incident to a successful conclusion.

ARRL Urges Protecting the Amateur Radio 902-928 MHz Band

The Federal Communications Commission (FCC) accepted for public comment a [Petition for Rulemaking filed by NextNav Inc.](#), a licensee in the 900-MHz Location and Monitoring Service (LMS), to completely reconfigure the 902-928 MHz band and replace the LMS with high-powered 5G cellular and related location services.

The FCC [Notice requested comment](#) on the effects that NextNav's proposals would have on amateur radio operations in the band. [ARRL® The National Association for Amateur Radio®](#) is preparing comments urging protection of existing and future amateur uses in this band and urges all amateurs to file their own comments describing their activities in this band and the expected effect of the proposed changes. [Click here for a guide to filing comments.](#)

NextNav currently holds licenses in the 900-MHz band that authorize it to provide services limited to determining the location and status of mobile radio units. NextNav ties its request to provide high-power broadband, cellular and location services to the vulnerabilities of the current satellite-based GPS system and argues that implementation of its proposal would complement GPS by providing an alternative nationwide terrestrial location system in addition to cellular and broadband services. Under its proposal, NextNav would be designated the sole nationwide licensee for this spectrum in exchange for its more limited licenses.

The new nationwide license would authorize NextNav to provide much higher-powered traditional broadband and 5G cellular services as well as the related location service occupying 15 of the total 26 megahertz available in the band. The reconfiguration proposed by NextNav would create a 5-megahertz-wide uplink subband at 902-907 MHz paired with a 10-megahertz downlink subband at 918-928 MHz. The 5-megahertz uplink subband

would be limited to use by mobiles with a maximum of 3 watts ERP. On the 10-megahertz downlink subband, up to 2000 watts ERP would be permitted in rural areas and 1000 watts ERP in urban and suburban areas, radiating from tower structures that could reach 1000 or more feet above average terrain. These configurations reflect the FCC's rules for standard cellular configurations that have been adopted to govern a number of other bands used for similar 5G and like services.

Although uses by the Amateur Radio Service in this band are secondary to LMS, NextNav is proposing substantial technical and use changes that would completely alter the foundation upon which the current rules and spectrum sharing arrangements rely and undercut shared use of the band by amateurs as well as a variety of other users. In addition, NextNav proposes deletion of a specific interference provision in the Commission's rules that was adopted to encourage and protect continued sharing with amateurs and other secondary users.

NextNav, in its petition, argues without evidence that the changes that it proposes to the 902-928 MHz band "will not impede amateur operations." In an [8-page description](#) of NextNav's proposal released by the FCC's Wireless Telecommunications Bureau, the FCC staff asks a series of questions that would clarify the proposal and help the Commission ascertain the likely effect of the proposed changes on existing users if the requested changes were adopted. Comment was specifically requested on

the extent of amateur operations in the band, the potential impact of the proposed changes, any other spectrum options that may exist, and the costs for relocations if other options exist.

ARRL is preparing comments urging protection of existing and future amateur uses in this band. ARRL urges all amateurs to study the proposal and file their own comments describing their activities in this band and the expected effect of the proposed changes. The filing deadline is September 5, 2024. Replies to comments are due by September 20, 2024. [Click here for a guide to filing comments.](#)

ARRL Podcasts Schedule

Practice Morse Code with W1AW

The podcast takes a field trip to W1AW, ARRL's Hiram Percy Maxim Memorial Station

[Click here](#) to access the podcast episode.

ARRL Audio News

Listen to [ARRL Audio News](#), available every Friday. ARRL Audio News is a summary of the week's top news stories in the world of amateur radio and ARRL, along with interviews and other features.



The On the Air podcast and ARRL Audio News are available on blubrry, iTunes, and Apple Podcasts - [On the Air](#) | [ARRL Audio News](#).

NARS Monthly Club Meeting

August General Meeting

The Northwest Amateur Radio Club (NARS) met for the August General Meeting at the HCESD 16 Admin Building. Ron Matusek gave an overview of his experience installing his emergency power plan, including converting a portable generator to run on natural gas and connecting the generator to home natural gas service. Ron described the costs, risks, and benefits of this approach to back up power and contrasted the installation with that of a whole-house standby generator.

Ron's presentation can be found on the club website or by [clicking here](#).

Next Club Meeting

Our next General Meeting will be held on September 20, 2024 at the HCESD 16 Admin Building – 18606 Stuebner Airline Rd, Spring, TX 77379. We hope to see everyone there!

NARS General Club Meetings

NARS holds monthly club meetings where a variety of topics are presented from a number of guests. Come learn anything from antenna design, phasing, emergency response, and more!

Who: All club members, friends, or anyone interested in the Amateur Radio hobby

When: The Third Friday of the Month at 7:30pm

Where: HCESD 16 Admin, [18606 Stuebner Airline Rd, Klein, TX 77379](#)
Zoom Conference Call, Meeting ID: 2815436502, Passcode: 123456

NARS Name Badges: Get Yours Today!

Cindy (KM4YGG) and Art (KM4YGH) Grant are offering the club a deal for the NARS club on getting membership name badges. Each badge costs \$10 and can be delivered at the next NARS meeting (if ordered two weeks or more before the next meeting).

To order, go to <https://badgesunlimitedllc.com/#!/4-2-NARS-CLUB-MEMBERS-ONLY/p/104217140/category=13635038> and pay the fees using the checkout capability on the website.



New Radio for New Hams: Jumpstart Program



QRZ, RT Systems and GigaParts have teamed up to offer a sustainable program that is available, while supplies last, to amateur radio operators licensed in the USA for 6 months or less. The program offers a coupon code to the new ham that gives them a QRZ-1 radio, programming cable, RT Systems programming software, New Ham Welcome Kit, and a QRZ membership for only **\$21.99 (+tax & + S&H)**.

What's Included:

- Explorer QRZ-1 Handheld Radio
- Programming cable
- RT Systems Programming Software
- Premium QRZ Subscription

How it Works:

1. Apply at <https://www.qrz.com/jumpstart>
2. Receive your unique discount code from QRZ via email
3. Add a QRZ-1 to your cart.
4. Add any accessories you may want to purchase.
5. At checkout, enter your unique discount code

Amateur Radio Activities

The “Amateur Radio Activities” feature of NARS News highlights various activities related to ham radio. Each issue provides a quick overview for those who may be interested in the learning new aspects of the amateur radio hobby.

Exploring SDR Receivers

Amateur radio enthusiasts have always been at the forefront of technological innovation, and one of the most exciting advancements in recent years is the advent of Software-Defined Radio (SDR) receivers. These versatile devices have transformed the way hobbyists interact with the radio spectrum, offering unparalleled flexibility and performance. For those just starting out, selecting the right SDR receiver can be a bit daunting, given the range of options available. To help you get started, we’ve compiled a list of some of the best SDR receivers for beginners, each offering a unique blend of features and affordability.

What Makes SDRs Special?

Before diving into specific models, let’s explore what sets SDR receivers apart from traditional hardware radios. Unlike conventional radios, which rely on analog circuits to process signals, SDRs use software to handle many of these tasks. This means that the same hardware can be used for a wide range of frequencies and modes, simply by updating the software. This flexibility makes SDRs ideal for experimenting and learning about different aspects of amateur radio.

Getting Started with SDR

When choosing an SDR receiver, it’s important to consider what aspects of amateur radio interest you the most. For casual experimentation and learning, some SDRs offer an affordable entry point. If you’re looking for a more integrated solution with advanced features, an SDR on the higher end might be worth the investment.

Regardless of the model you choose, getting started with SDR will open up a world of possibilities in amateur radio. With the right equipment and a bit of curiosity, you’ll be well on your way to exploring new frequencies, experimenting with different modes, and enjoying the diverse and dynamic world of amateur radio.

Top SDR Receivers for Beginners

RTL-SDR Blog V3

The RTL-SDR Blog V3 is one of the most popular entry-level SDR receivers available. Originally designed as a low-cost DVB-T TV tuner, it has been adapted for use as an SDR receiver and has gained a loyal following in the amateur radio community.

Features

- Frequency Range: 500 kHz to 1.7 GHz
- Resolution: 8-bit
- Price: Around \$30-40



The RTL-SDR Blog V3 offers a wide frequency range, which is perfect for exploring various bands, from HF to UHF. Its low price makes it an attractive option for those just starting out. While it doesn't offer the highest resolution or the best performance compared to more expensive models, its cost-effectiveness and versatility make it a great entry point into the world of SDR.

Hermes-Lite 2

For those seeking a balance between advanced capabilities and affordability, the Hermes-Lite 2 is a noteworthy option. This compact SDR transceiver provides a high-performance experience at a relatively low cost.

Features

- Frequency Range: 100 kHz to 54 MHz
- Resolution: 16-bit
- Price: Around \$500



The Hermes-Lite 2 is known for its excellent dynamic range and low noise, making it a great choice for serious experimentation. Its open-source software, including the popular PowerSDR, offers a customizable and feature-rich experience. The Hermes-Lite 2's compact size and solid performance make it an attractive option for those who want to delve into HF bands with a device that offers both power and portability.

Icom IC-7300

For those looking for an SDR receiver with more advanced features, the Icom IC-7300 is an excellent choice. This all-in-one transceiver combines traditional radio functionality with SDR capabilities, offering a seamless experience for both beginners and seasoned operators.

Features

- Frequency Range: 0.030 to 75 MHz
- Resolution: 16-bit
- Price: Around \$1,300



The IC-7300 boasts a touchscreen interface and built-in DSP, making it user-friendly and highly capable. It covers HF and 6 meters, and its built-in features, such as the waterfall display and advanced filtering, provide a comprehensive operating experience. While it is more expensive than entry-level SDRs, its quality and functionality justify the investment for those serious about diving deeper into amateur radio.

Elad FDM-S2

The Elad FDM-S2 is another powerful SDR receiver that caters to those who want a more advanced device but still appreciate user-friendly features. It's a standalone receiver that offers exceptional performance and flexibility.

Features

- Frequency Range: 9 kHz to 30 MHz
- Resolution: 16-bit
- Price: Around \$900

With its broad frequency coverage and high-resolution output, the Elad FDM-S2 is ideal for those looking to experiment with a wide range of bands and modes. It also includes a comprehensive suite of software tools for advanced signal processing and analysis, making it a strong choice for enthusiasts who want to explore the full capabilities of SDR technology.



FlexRadio FLEX-6400

FlexRadio's FLEX-6400 is a powerful SDR transceiver that strikes a balance between advanced features and affordability. It's a solid choice for those who want to explore high-performance SDR capabilities.

Features

- Frequency Range: 1.8 to 54 MHz
- Resolution: 16-bit
- Price: Around \$2,000



The FLEX-6400 offers a range of features typically found in higher-end models, including a built-in touchscreen, advanced DSP, and a wide range of software compatibility. It provides excellent performance across HF and 6 meters, with a focus on ease of use and high-quality signal processing. The FlexRadio ecosystem also benefits from a strong community and extensive software support, making it a great option for those looking to explore more advanced SDR capabilities while enjoying excellent support and resources.

The Sky's The Limit

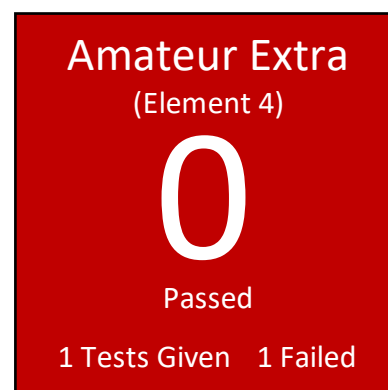
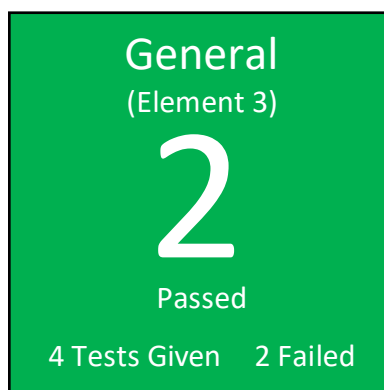
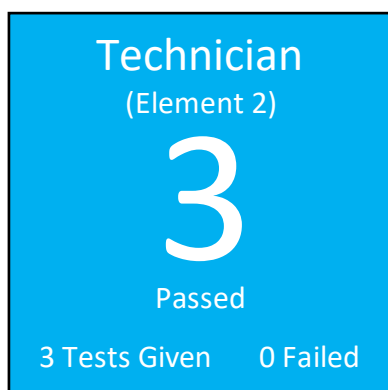
While we've highlighted several SDRs here, this list is certainly not exhaustive and there are many other units available. Leverage your best internet searching skills to find the SDR for you and ask questions on the club Groups.io to get advice from the club's Elmers!

VE Sessions and Results

PROVIDED BY SHEREE HORTON, WM5N

Attendees

On Saturday August 17, 2024, a VE Test Session was held at HCESD 16 Admin, 18606 Stuebner Airline Rd, Klein, TX 77379. During the testing session, 4 candidates took 8 tests.



Congratulations!

Congratulations to the following for passing their new license exams¹:

- Florin Moza – new Technician
- Greg L Vaughn – new Technician
- Jared Wiese - new General

Congratulations to the following for passing their upgrade exams:

- Cecil S Powers KG5PSH – upgrade to General

Pre-registration for Testing Sessions

To pre-register for an upcoming testing session, you can use one of the following links:

HamStudy.org page link: <https://hamstudy.org/sessions/arrl/77070/inperson>

The next session will be September 21, 2024 at the HCESD 16 Admin Building. Please visit www.w5nc.club for the announcement.

¹ Successful candidates will only receive their **NEW** licenses if they pay the \$35 fee to the FCC within 10 days of receipt of their notification emails. They will have to request the ARRL VEC to resubmit their paperwork if they miss the 10-day deadline. They do **NOT** have to retest.

Thanks and Gratitude

Thanks to the Exam VE's in attendance:

- Synomen Hebert, KG5IRS – assistant session manager
- Robert Ewers, K9HOU

Volunteering and Becoming a Volunteer Examiner

Anyone who wants to observe and/or participate in a session is always welcome. Please let Sheree Horton know if you want to learn more about becoming a volunteer examiner.

VE Session Guidelines

If you have a temperature or feel ill – DO NOT attend.

Wear masks if you are not fully vaccinated or feel the need to wear them.

Please send an email to either of the following if you plan on attending the test session:

Sheree Horton - wm5n@arri.net or vec@w5nc.net

New & Renewing Club Members

New Club Members

Welcome to the following new members of NARS!

- Kristen Emler, KK7UNG
- Charles Hall, KJ5HAW

Renewing Club Members

Thank you to all the members who renewed their NARS membership this past month:

- Charles Davis, KB5BAM
- David Holden, WJ9O
- Carl Kotila, WD5JRD
- Dave Lalor, WA5OUW

NARS Club Documents and Minutes

DID YOU
KNOW



Did you know that you can find all of the club's public documents, including board meeting minutes, financial statements, and newsletters on the [club website](http://www.w5nc.club/doc_repos/) at http://www.w5nc.club/doc_repos/?

Training and Education

NARS

NARS Meeting Presentations - <http://w5nc.club/nars/index.php/club-info/technical-presentations>

ARRL

ARRL Online Course Catalog - <http://www.arrl.org/online-course-catalog>

ARRL Emergency Communications Training -
<http://www.arrl.org/emergency-communications-training>

ARRL Webinars - <http://www.arrl.org/ARRL-Learning-Network#schedule>

Exam Review for Ham Radio - <http://www.arrl.org/examreview>

Find an Amateur Radio License Class -
<http://www.arrl.org/find-an-amateur-radio-license-class>



Free Study Guides

A [study guide](#) for Technician license preparation, Dan Romanchik, KB6NU

A [study guide](#) for Technician license preparation on the Inland Empire VHF Radio Club website, Jack Tiley, AD7FO (Click on "Training Links" and go to the Technician training link)

Online Video/Audio Courses

[Online Technician license exam self-study course](#), Fred Benson, NC4FB - The purpose of the resources developed for this course is to provide candidates in geographical areas that do not provide classes and candidates who cannot attend a class with the means to prepare for the Technician license exam. The materials cover all questions in the question pool with explanations, sub element tests, and sample license exams. Help is available upon request via email.

Benson also offers a ["kid friendly" self-study course](#) and a self-study program especially designed for [emergency services personnel](#).

"The Ham Whisperer" [Video Course](#), Andy Vallenga, KE4GKP – This course is based on the FCC question pool sequence to assist with Technician license preparation.

A [Self-Study Video Course](#), Dave Casler, KE0OG – This course provides a guided self-study [video course](#) based on ARRL's Ham Radio License Manual curriculum.

[Online Technician License Preparation Course](#) – Chris Johnson, N1IR

Study Tools

[HamStudy.org: Cutting edge amateur radio study tools](#) - Free ham radio flash cards, practice tests, and question pools as well as introduction to ham radio and explanations for questions.

[HamTestOnline](#) – Study Tips for the Ham Radio License Exams

[HamExam.org](#) - Free Amateur Radio Practice Tests with Flash Cards

[eHam.net Ham Radio Practice Exams](#)

Paid Resources

[W5YI Group](#) - Your Resource for Ham Radio and Commercial Radio Licensing

[HamRadioPrep](#) - Enroll in Ham Radio Prep, the industry's #1 online test prep and training program, and pass your FCC Amateur Radio License exam on the first try - or your money back.

[HamTestOnline](#) - Study for your Ham Radio License Exam!

Exam Practice Answers

Technician: T5D02 – D. $E = I \times R$

General: G3A08 – D. Degrade high-latitude HF propagation

Amateur Extra: E6F01 – D. Electrons

Of Interest to the Club

Houston Local Traffic Net

The Houston Local Traffic Net (HLTN) was formed July 14, 2020 in preparation for ARRL Field Day 2020. Originally called the Fort Bend County Traffic Net, the HLTN has been in continuous operation since then.

The nets ran on Monday nights for one hour with training sessions during the net. Because of the volume and interest in the Traffic Net, on April 15, 2021 an additional session was added on Thursday nights for 30 minutes and in 2020 the time was increased for up to an hour to also accommodate training.

The Houston Local Traffic Net currently meets from 6:30pm – 7:30pm twice a week handling National Traffic System (NTS) traffic (Radiograms) into and around the Houston Metro area and also includes, time permitted, traffic handling/training.

Monday's net: 146.940 (-) PL 167.9

Thursday's Net: 147.000 (+) PL 103.5

Backup repeater for both: 147.190 PL 123.0

A complete schedule of Area Traffic Nets is located on the HLTN.org 'Nets' web tab with the times and frequencies. Visitors are welcome and encouraged to check-in to listen and learn this important Amateur Radio skill.

Direct any questions, via phone or email, about the Houston Local Traffic Net, Radiograms, and Traffic handling to: Sheree Horton WM5N, ARRL South Texas Section Traffic Manager

GHSN monthly Simplex Propagation Net

Beginning January 2022, the [Greater Houston Simplex Network](#) will return to its regular schedule of the 4th Thursday evening of the month, with 6:15pm for the Zoom meeting and 7:00pm for the beginning of the net. Simplex frequencies are 146.540 MHz.

I would also like to restart the relay nets for the 2nd week of each month, so I need volunteer(s) to help out as Net Control Operator. I am just swamped with developing our cool new propagation application. Please contact me if you can help with this. The script is fully developed, and can be found on [the website](#).
Contact Mark - N5PRD@yahoo.com

Calendar

Club Activities and Events

NARS General Meeting – September 20, 2024 - HCESD 16 Admin – [18606 Stuebner Airline Rd, Klein, TX 77379](#)

VE Test Session – September 21, 2024 – [18606 Stuebner Airline Rd, Klein, TX 77379](#) - Check-in will start at 8:30am with testing lasting from 9:00am - 11:00am. All testing activities will be completed by noon.

The full NARS calendar can be viewed at: <https://w5nc.groups.io/g/main/calendar>

Social Events

Lunch Break – North

Take a break with fellow radio operators and enjoy a lunch together!

Locations are announced weekly on the NARS email reflector!

Lunch Break – Medical Center

Near the Medical Center and want to take a break with fellow radio operators and enjoy a lunch together?

Watch the NARS email reflector for details!

Saturday Breakfast

Saturdays at 7 am Broken Yolk Café, 16803 Stuebner Airline Road, Spring, TX 77379

Monday Lunch (Taildraggers Lunch)

Mondays at 11 am; Aviator's Grill at Hooks Airport Terminal

Did you know...

NARS has a social media presence! Thanks to Sam Labarbera, N6HB, we have a Facebook page for those who would like to follow us there. Visit the [W5NC Facebook page](#) and join! It is open to ham radio operators, so there is a short quiz to qualify new members.

Hamfests and Conventions

September 28 | [Red Rivers Radio Amateurs Hamfest](#), ARRL Dakota Division Convention, West Fargo, North Dakota

October 18 - 20 | [Pacificon](#), ARRL Pacific Division Convention, San Ramon, California

Contests and Radiosport

ARRL Contest Corral

September 2024 - <https://www.arrl.org/files/file/Contest%20Corral/2024/September%202024%20Corral.pdf>

October 2024 - <https://www.arrl.org/files/file/Contest%20Corral/2024/October%202024%20Corral.pdf>

For a calendar of ARRL contests, please see <http://www.arrl.org/contest-calendar>.

For resources and results for all ARRL contests, please see <https://contests.arrl.org>.

NARS Club Officers and Information

Board Officers with Voting Privileges

President: Ron Matussek, WA6TQH, 713-825-9606, officers@w5nc.net

Vice President: Paul Kent, KI5FJS, officers@w5nc.net

Treasurer: Tom Hoherd, KK5YU, 713-828-8630, treasurer@w5nc.net

Secretary: Brandon Rogers, K5BLR, 713-294-6630, officers@w5nc.net

Director: Rich Jones, W5VEK, officers@w5nc.net

Director: TBN

Board Non-Voting Associate Members

Administrative Secretary: Neal Naumann, N5EN

Social Media Liaison: Sam Labarbera, N6HB

Newsletter Editor: Brandon Rogers, K5BLR

Public Information Liaison: TBN

ARRL/VEC Liaison: Sheree Horton, WM5N

Repeater Team Lead: Rich Jones, W5VEK

Webmaster: Bill Buoy, N5BIA, webmaster@w5nc.net

Trustee: Paul Owen, N5NXS

Did you know...

that NARS has a messaging service, called Groups.io, that allows you to connect with a giant group of experts, club members, and resources. Get more information on our club website at <http://w5nc.club/nars/index.php/social-media/email-reflector-groups>

Club Nets

DMR Weekly Net – Every Tuesday at 7pm. Tune in on Talkgroup 3146211 for information on configuring codeplugs, see the DMR pages on the Club website (<http://w5nc.clubs>) or contact a club Elmer.

The Weekly Wednesday Evening Net - Every Wednesday at 8:00 pm. Join us on one of the W5NC repeaters: 146.660 MHz, -600kHz offset, PL 100.0 - wide area centered on downtown Houston and/or 444.375, + 5 MHz offset, PL 100 best in the Spring / Klein area. You can also join from anywhere in the world by connecting to EchoLink node W5NC-R or via Allstar (node #59847).

Repeaters

For information on NARS-managed repeaters, please see the club website at <http://w5nc.club/nars/index.php/repeaters/nars-repeaters>