



W5NC

Houston, Texas

Northwest Amateur Radio Society

A 501(c)(3) Organization

An ARRL Affiliated Club

NARS NEWS

AUGUST 2026

Northwest Amateur Radio Society

P.O. Box 11483

Spring, TX 77391

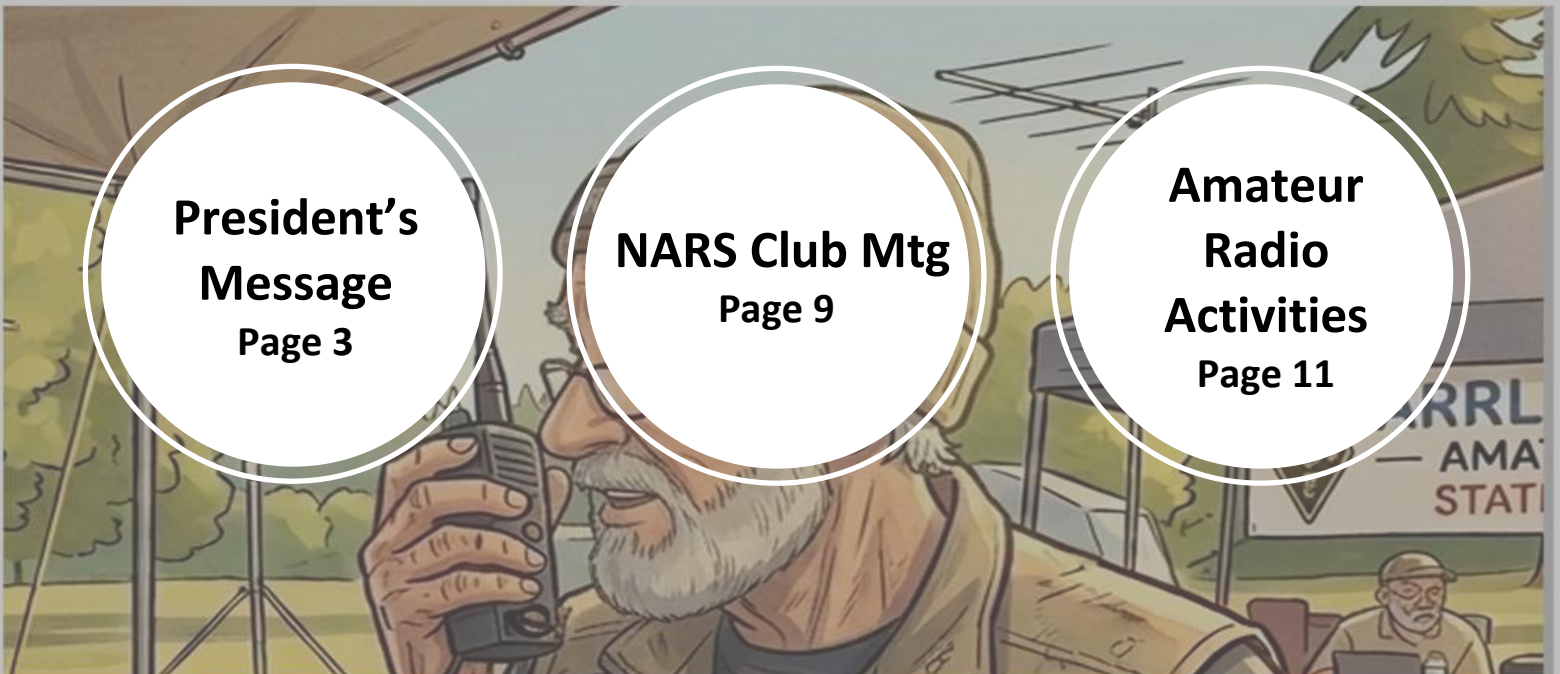
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President's Message

BY PAUL OWEN, N5NXS

The weather turned very hot at the end of July. I can't imagine August can be hotter. I know, I'm being optimistic in my outlook. Speaking of a change. We must say farewell to our Webmaster, Bill Buoy N5BIA. He has decided to call it quits after being the webmaster since Aug 2005. That's a long time in any job. He has been the keeper of the W5NC website and our move to groups.io in June 2022. Let's all say a big thank you for all the work he has done over the many years.

For now, Scott KA2EEU will take over for Bill until we can find another member to take the job. Please let the board know if you want to be considered for the Webmaster position. Scott was reviewing new financial vendors to streamline how New Members join and the way members are paying their renewal dues. Scott requested the board's approval to open an account with a new vendor so that he can show that they will pass 100% of the dues amount directly to the club.

This past week I got an email from our old email reflector for the club. It seems we started with this new thing called the internet in the late 90's. We had a few members who had email addresses and then we started offering the NARS Newsletter via email. We started experimenting with different email reflectors, and in 2001 we went with qth.net. Then, in Jan 2002 it became nars@mailman.qth.net which is still around. A lot of old members are still on this old NARS reflector. This was a way the club members could hear all about what's happening in the club and around Houston. I have been cleaning up the list of members who have gone SK. It still has over 200 emails on it. I'm going to ask them to consider joining us on the Groups.io platform if they are in the NW Houston area.

My term will be ending this December and I am excited to see fresh leadership guide our club forward. I want to invite another member to bring their unique vision to the club, just as I did when I started in 2025. A few board members plan to stay on, but some of us, me included, will not run for another 2-year term. I will be asking the other board members to let you know if they intend to serve another 2-year term. I'll be naming a contact person shortly to coordinate interest and gather names for our open spots. Please join me in thanking the board members for their tireless efforts behind the scenes. The incredible amount of time, energy, and heart they put into this organization is the sole reason NARS remains such a worthwhile, thriving community to be a part of.

Some of the highlights from my term as President:

- Launching our very first Winter Field Day in early 2025, expanding our competitive operations. We missed out on our second one but because of this years winter weather the KFD decided to activate their EOC.
- Having a Field Day without a named FD coordinator for it. Nothing but teamwork made it happened and we had a great score anyway.
- Removed equipment from the Galleria repeater site after 39+ years at that location.
- Moved 146.66 to the new tower site provided by ESD 16. This site now has a few Amateur Radio repeaters on it due to the efforts of Rich, W5VEK and Mike Pate, K5MAP, who was a very early member of the NARS club.
- Planning and behind the scenes work done by Rich – W5VEK, Scott – KA2EEU, Bob – KC5T to install another UHF repeater at the downtown site later this year.

Thank you all and I look forward to supporting our next president and seeing NARS continue to grow!

Repeater Status and Weekly Net Operations

The NARS Repeater Team has a lot on the menu going forward, to get the latest Repeater Status check out [Northwest Amateur Radio Society - Repeater Status](#)

Repeater Update, May 2026

LBT Repeater (Downtown) - Is off the air. Plan is to put 443.075 sometime in the future.

Klein Repeater – Fully operational 444.375 (+100 CT) and is linked on ALLSTAR.

Gregson Repeater – 146.660 (-100Hz CT) is up and running. It's also linked to the 444.375 repeater and connected to both ALLSTAR and EchoLink.

EchoLink – W5NC-R

W5NC HUB (Node 59847) – Allstar is operational. Linked to DMR and EchoLink.

DMR Talk Group – NARS TG 3146211 (CC1, Slot 2 Brandmeister)

NARS TG can be found on:

Klein Repeater – DMR repeater (K5MAP) 440.300 (CC3, Slot1).

Richmond Repeater – DMR repeater (W5VOM) 443.750 (CC9, Slot 2).

Tomball Repeater – DMR repeater (N5BDJ) 145.230 (CC1, Slot 2) on Tue and Wed night nets.

Tomball Repeater – 145.230 (-82.5 CT) on Tue and Wed night nets. (AllStar 654060)

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, to 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, Spring, TX 77379](#)
Zoom Conference Call, Meeting ID: 2815436502, Passcode: 123456

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)

T7B11

Which of the following can eliminate distorted voice transmissions?

- A. Adding extra feedline to the antenna to lower SWR
- B. Turning the radio on and off to reset the computer-controlled circuitry
- C. Adding a clip-on ferrite “choke” to the microphone cable to prevent the transmitted signal from feeding back into the transmitter
- D. Turning the squelch control fully clockwise to prevent the transmitted signal from triggering the squelch circuit

General (Element 3)

G8B03

What is another term for the mixing of two RF signals?

- A. Heterodyning
- B. Synthesizing
- C. Frequency inversion
- D. Phase inversion

Amateur Extra (Element 4)

E7H12

Which of the following ensures that a crystal oscillator operates on the frequency specified by the crystal manufacturer?

- A. Provide the crystal with a specified parallel inductance
- B. Provide the crystal with a specified parallel capacitance
- C. Bias the crystal at a specified voltage
- D. Bias the crystal at a specified current

See the answers on [Page 18](#).

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 Northwest Amateur Radio Society - Membership 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

ARRL Campaign to Pass Amateur Radio Emergency Preparedness Act

ARRL has launched its nationwide grassroots campaign aimed at the passage of legislation that would grant Amateur Radio Operators the same rights to install antennas on their property as those enjoyed by users of TV antennas, wireless internet and flagpoles. The bipartisan bills – H.R.1094 and S. 459 are designed to prevent restrictive homeowner's associations (HOA) rules that currently prohibit or severely limit the installation of amateur radio antennas. "This legislation is about restoring equal rights to licensed Amateur Radio operators," said ARRL President Rick Roderick, K5UR. "These restrictions hinder not only the enjoyment of Amateur Radio, but also its vital role in emergency communication during disasters."

ARRL is calling on its members and all licensees of the US Amateur Radio Service to take action by sending letters to their congressional representatives. Through a dedicated online tool at [HOA page - Legislative](#), amateurs can easily generate and submit pre-drafted letters with a few clicks. Every letter matters!

SIDEBAR added to the ARRL website on 7/6/26 - Recently reported by Fred Johnson, K6FRD, he lives in an HOA-controlled neighborhood. He found a way to build an HF antenna without causing problems. "I decided to stop chasing radios and instead focus on building the best stealth antenna I could," he said. The result was a simple 145-foot horizontal loop made from 14 AWG THHN wire, mounted on stainless cup hooks around the top of my backyard fences about six feet above the ground. The wire is insulated from the hooks with short pieces of clear vinyl tubing and is fed with a 4:1 current balun and approximately 25 feet of RG-8X coax. "I also added ferrite chokes at both the antenna and radio ends of the feed line to help minimize common-mode current and noise," he added.

He's been able to make contacts on 10, 15, and 20 meters and has worked 39 states, 24 countries and stations throughout Japan, Hawaii, Samoa, Puerto Rico, the U.S. Virgin Islands, South America and across North America - all from his HOA backyard.

Current News...

the ARRL website posts recent news on current events, activities, and policies that are taking shape in the Amateur Radio world. The following is an excerpt from their News section.



New Technician Question Pool effective July 1

A new Element 2 Technician class question pool takes effect on July 1 for license examinations. VECs and Ves must have new test designs available for use at exam sessions effective that date.

The newly revised pool, released December 2025, and updated and re-released on Feb. 19, 2026, must be in use starting July 1. There are 409 questions in this pool, down slightly from 412 in the previous pool. The pool also includes three diagrams used for some of the questions. View all current question pools on the NCVEC website at www.ncvec.org.

“VE teams using paper exams must discard all older Technician tests and print new versions from ExamTools,” said ARRL VEC Manager Maria Somma, AB1FM. Those using the online ExamTools will see that it automatically switches to the new pool and exams on July 1.

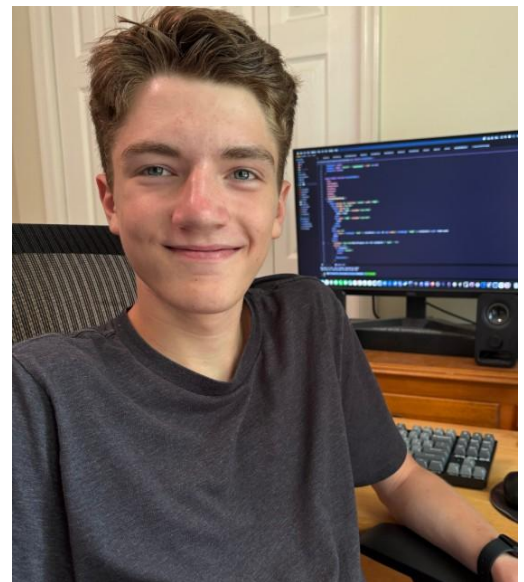
New editions of ARRL licensing publications for the 2026-2030 Technician pool, the 6th edition of *The ARRL Ham Radio License Manual*, the 9th edition of *ARRL Tech Q & A* and 11th edition of Gordon West’s Technician Class study guide are all available in the ARRL Store, for exams taken on or after July 1, 2026.

16-Year-Old ARRL Member Wins 2026 Student Coding Competition

The ARRL is pleased to announce that member Ben Leovy, KC3ZPQ, of Ellicott City, MD, has been named the winner of the 2026 ARRL Student Coding Competition. Leovy recently completed his sophomore year at Howard High School. He designed a mobile application to help users prepare for their amateur radio license examinations.

Leovy will receive a \$5,000 prize awarded by ARRL. His project was selected by a panel of judges based on usability, clarity, stability, and code quality. The judges also recognized his enthusiasm for software development and creativity by awarding him a new MacBook Neo to encourage his continued exploration of programming and technology.

The competition is another ARRL program intended to develop student interest in future education and careers in STEM/STEAM fields. The Student Coding Competition was launched in January 2026 as part of ARRL’s ongoing commitment to developing the next generation of radio amateurs. The competition encouraged ARRL Student members ages 21 and younger, who already have ham radio licenses, to combine their interests in amateur radio and software development.



Ben Leovy, KC3ZPQ, is the winner of the 2026 ARRL Student Coding Competition.

Since 2024, ARRL Student Membership has been free for full-time students ages 21 and younger. This no-cost membership opportunity makes it easier for students to become involved in amateur radio and access ARRL resources while they explore radio, technology, and STEM-related learning opportunities.

ARRL Audio News

Listen to [ARRL Audio News](#), available every week. 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 thru podcast host Blubrry.com, iTunes, and Apple Podcasts -- [On the Air](#) | [ARRL Audio News](#).



Locally, the Spring repeater KA2EEU, on 444.350, broadcasts the Amateur Radio Newsline on Sunday at 4 pm and it broadcasts ARRL Audio News at 7pm on Monday. The NARS repeater, W5NC, on 444.375, broadcasts the Amateur Radio Newsline on Saturday at 10am.

How to Become a Volunteer Examiner

If you're interested in becoming an ARRL Volunteer Examiner it's easy and free. There are three steps to becoming a VE –

1. Review the [Volunteer Examiner Manual](#), paying special attention to Chapter 2. Also review the published manual [Supplemental Information](#)
2. Complete and sign the [ARRL Application / Open-Book Review](#) (40 questions).
3. E-mail, fax or mail forms to – ARRL VEC, 225 Main St, Newington, CT 06111 USA. You can also fax to 800-594-0339 or <mailto:VEC@arrl.org>

Once you are accredited, you'll receive a laminated VE badge to wear at exam sessions and a certificate suitable for framing. You don't have to be an ARRL member to be a VE, but you must include with your application a copy of your accreditation certification if you aren't an ARRL member.

VE sessions can be paper-based or computer-based (either in-person or remote sessions). Monthly NARS VE sessions are in-person computer based, using ExamTools software. To grade these computer-based exams a VE must go through a short training course on the ExamTool's website. Once completed they will qualify to grade ExamTools based exams.

At VE sessions, VE's may be asked to help with checking in examinees so knowing what IDs are accepted and how payment can be made is important. The current VEC Exam fees are \$15 for adults and youth under 18 pay \$5. If the examinee fails the exam and wants to re-take it during the session they must pay another fee.



NARS Monthly Club Meeting

Unmanned Aerial Vehicles (UAV) by Crystal Schiffflauer-Bowles

Crystal is a GIS Consulting Manager & Specialist, and an FAA Remote Pilot since Oct 2018, working for Black & Veatch, an engineering and consulting firm with a vast inventory of UAVs, or drones, used in their business.

The speaker began with an overview of what is required to become a drone pilot, both recreational and commercial. For recreational use, you must register the drone and take a TRUST test and carry proof, always follow the flying rules and respect the airspace. For commercial use you must have an FAA Part 107 certificate and pass a UAG test. Insurance is recommended for both the drone and pilot.

The speaker explained the different projects her company has used drones for, from assisting with 3D modelling to creating topographical maps to doing safety checks on company assets and providing linear, area and volume measurements of an area. She gave examples of some of these uses and explained that 1 hour of flight time can provide a wealth of information for their customers.

She explained that in preparation for any type of flight, whether for commercial or recreational use, the pilot must become familiar with the area that their drone will fly, and using Google satellite photos helps with that.

In the illustration shown, they were able to help a customer find a safe haul route for their trucks at a big construction site with many obstacles. She explained that using drones can provide cost savings to customers by catching construction quality issues early, reducing survey budgets and providing time efficiencies.



Next Club Meeting

Our next General Meeting will be held on August 21, 2026, at the ESD 16 Admin Building – 18606 Stuebner-Airline Rd, Spring, TX 77379. The presentation will be by Ed Fong from The Antenna Factory. We hope to see everyone there.

New Radio for New Hams: Jumpstart Program



Through a partnership with GigaParts, this program is designed to lower the barrier to entry into amateur radio by providing new hams with a high quality radio for **only \$17.99 (plus tax and shipping)**. The radio is supplied with an antenna, desktop cradle charger, battery, and belt clip. Effective February 28, 2025, new hams will be entitled to a **70% discount** on the Explorer QRZ-1 VHF/UHF handheld transceiver, as well as a variety of accessories.

The eligible ham must have a QRZ account and be able to log in and apply for the program. Certain types of identification, including a photo ID, will be required. This information is not shared or exchanged with any party and is used only to validate eligibility under this program.

This program is available exclusively to USA licensed amateur radio operators who obtained their first license from the FCC within the last 6 months. The Jumpstart program may be changed or terminated without notice based on availability and corporate sponsors.

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

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.

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.



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 learning new aspects of the amateur radio hobby. This article with photos is taken from the February 2026 issue of QST.

Understanding the FCC Exposure Rules for Handheld Radios

By extrapolating from the SAR exposure limits of commercial radios, hams can adjust their operations to keep RF exposure in line with regulations.

Gregory Lapin, PhD, PE, N9GL

Much effort has gone into helping amateurs determine safe exposure distances for HF radios. Along with myriad tools and information, an easy-to-use calculator is available on the ARRL website (www.arrl.org/rf-exposure-calculator). However, determining RF exposure from handheld radios presents a different challenge that is less easily addressed. Under FCC regulations, any exposure from a source between 100 kHz and 6 GHz that is less than 20 centimeters (about 8 inches) from any part of the body must comply with localized specific absorption rate (SAR) limits (see Figure 1). SAR is the truest measure of RF exposure, corresponding to the rate of energy absorption in human tissue. Other methods of determining exposure are estimates and are usually expressed as incident RF power density or, for lower frequencies, as incident electric and magnetic field strengths. Although determining human internal exposure from incident fields is less accurate, it is a more practical prediction method, as field strength is relatively easy to measure and more easily modeled. SAR, by contrast, is extremely difficult to measure or model.



Figure 1 — Most amateur radio operators hold their handheld transceivers about 2 – 4 inches in front of their mouths for best transmission clarity; however, per FCC regulations, any RF exposure from a source between 100 kHz and 6 GHz that is less than approximately 8 inches from any part of the body must comply with localized SAR limits.

How Is SAR Tested?

The most common method for measuring SAR involves a probe making measurements in every 1 gram of tissue (a cube that is approximately 1 centimeter on each side). Of course, inserting probes into human beings is not practical, so SAR measurements are typically made in “phantoms” made of materials that mimic the electromagnetic properties of tissue. Computer modeling of SAR is possible but highly complex, as the model must account for the electromagnetic properties and spatial distribution of all types of tissue found in the body. Manufacturers whose products require FCC certification spend a lot of money testing SAR, and given the expense and complexity, this testing is not feasible for the radio amateur.

In the US, cell phones and commercial handheld radios are tested for SAR, but amateur radio transmitters, with the exception of certain commercially manufactured external power amplifiers, are not included in

these requirements. Testing is intended to confirm that the transmitter conforms with FCC regulations for power output, spurious emissions, and human exposure; however, amateur radio operators have the right to use modified equipment, which would annul any certification. For instance, when you buy an amateur handheld radio, you can easily change the antenna, which is likely to change the parameters of exposure. As a result, the FCC determined that transmitters intended for radio amateurs do not need certification, but they are still required to comply with all FCC regulations, including RF exposure to the licensed operators and the people around them.

Duty Cycle

Human RF exposure is assessed as a time-averaged value. The FCC limits for amateurs are based on the time average of the instantaneous exposures over a 6-minute period. Thus, if a radio's instantaneous exposure is double the FCC limit but transmission occurs for less than 3 minutes over any 6-minute period, the time-averaged exposure complies with the FCC limits. SAR measurements of handheld radios for FCC certification are typically based on a 50% transmit cycle, with the expectation that a person using a handheld radio generally talks for half the time and listens for half the time. However, if the amount of time talking is decreased appropriately, virtually any transmitter can be used in compliance with FCC exposure regulations. FCC exposure regulations give licensed radio amateurs a lot of control over their own exposure. Even if a given handheld radio exceeds the SAR limits extrapolated from commercial radios, the knowledgeable amateur operator can tailor the times that transmissions take place so that the 6-minute time averaged SAR is less than the FCC limit.

Determining Handheld RF Exposure

You can make reasonable estimates of SAR exposure by extrapolating from tested commercial handheld radios to the exposure of untested amateur handheld radios. The test results for many commercial handhelds are summarized in Tell's *QEX* article. If you know the SAR exposure from a commercial handheld radio that is similar to your amateur handheld, then that value can be used. For instance, if the FCC database contains exposure results for a commercial radio made by a given corporation, there is a good chance that the results would be proportional for that corporation's amateur handheld operated at a nearby frequency.

If the results for a comparable commercial radio aren't known, the safest calculation is based on the worst case in the database. In Figure 2 of Tell, SAR results from several radios are plotted as normalized values, with units of W/kg/W (see Figure 2). SAR is measured in W/kg and the normalization is for 1 W of transmitted power at a 50% duty cycle. These values can then be extrapolated to the wattage produced by a particular radio. Table 1 summarizes the reference values that can be used for each band.

Figure 2 — This graph, from Figure 2 in Ric Tell's, K5UJU, July/August 2021 QEX article, "Amateur Portable Radios (Handheld Transceivers): Exposure Considerations Based on SAR," depicts the local 1-gram averaged SAR produced by commercial handheld radios in the FCC's equipment authorization database that operate near or within amateur radio bands. The SAR estimates assume a 50% duty cycle at 1 W.

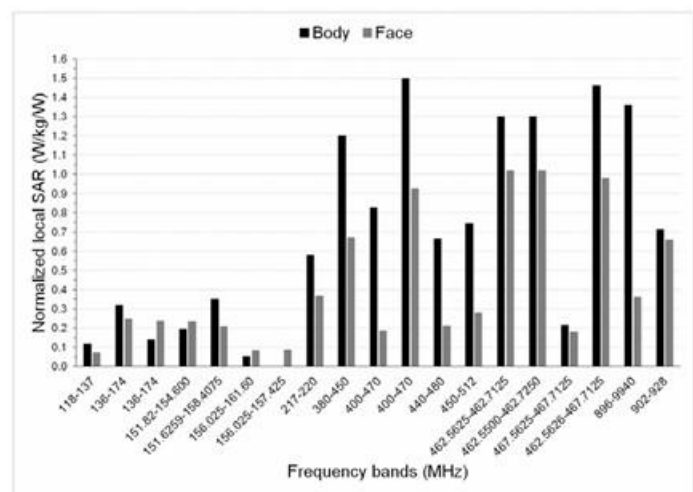


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The most common value to use, which may be conservative but ensures that you do not exceed FCC limits, is the high SAR. If you have a radio from a manufacturer that does not have entries in the FCC database, you can use the normalized high SAR values of 0.35 W/kg/W on 2 meters; 0.59 W/kg/W on 1.25 meters; 1.50 W/kg/W on 70 centimeters, and 1.35 W/kg/W on 33 centimeters. If, for example, your radio transmits 10 W on these bands, your extrapolated SAR exposure would be 3.5 W/kg on 2 meters; 5.9 W/kg on 1.25 meters; 15.0 W/kg on 70 centimeters, and 13.5 W/kg on 33 centimeters. Because the FCC local SAR exposure limit for a licensed amateur radio operator is 8 W/kg, operating with a 50% duty cycle would conform to that limit on 2 meters and 1.25 meters, but it would exceed the exposure limit on 70 centimeters and 33 centimeters.

Table 1 — SAR Reference Values					
Amateur Band	Number of Reference Radios	Low SAR (W/kg/W)	High SAR (W/kg/W)	Mean SAR (W/kg/W)	Median SAR (W/kg/W)
2 m	6	0.05	0.35	0.19	0.17
1.25 m	1	0.59	0.59	0.59	0.59
70 cm	9	0.21	1.50	1.02	1.20
33 cm	2	0.71	1.35	1.03	1.03

Controlling Your Exposure

There are three general actions that you can take to ensure that you're keeping exposure levels below the FCC limit:

- 1. Lower your power.** Most handheld radios can be programmed to transmit different power levels. Some give a choice of two power levels (Hi and Lo) or three levels (Hi, Med, and Lo). The power outputs associated with those levels vary by manufacturer and radio model, but using the handheld radio at lower power levels is one way to operate within the exposure limits.
- 2. Move away from the transmitter.** You can also use your handheld radio farther away from you. One way is to place the radio more than 20 centimeters, or 8 inches, from any part of your body, holding it farther away or placing it on a nearby table; you can operate it from even farther away with a remote speaker-mic. Another way of distancing yourself from the source of exposure is to replace the handheld's antenna with a transmission line to a stand-alone antenna more than 20 centimeters away. You can still hold the radio in your hand, but your exposure will be from the antenna, which is now farther away. In both cases, you can calculate exposures using incident fields, such as what is done by the ARRL Exposure Calculator.
- 3. Limit your talking time.** You can limit your exposure by reducing the duty cycle of your transmission. The SAR values listed in the FCC database are based on a 50% duty cycle, or 3 minutes of talking over a 6-minute period. Your talking time does not have to be consecutive — it is the sum of all the time that you talk during any 6-minute period.

To calculate the maximum amount of time that you can talk over 6 minutes, start with the tested SAR limit that you are using either from Table 1 or from the values reported to the FCC from a similar radio — multiplied by the power you will be transmitting and multiplied by 2 to account for the 50% duty cycle used to obtain that tested SAR value. Divide that value into the local SAR limit (8 W/kg) and multiply that fraction by 6 to give you the maximum number of minutes that you can transmit in a 6-minute period.

$$M = \frac{8}{S \times P \times 2} \times 6$$

where

M = Maximum transmit time (minutes)

S = Tested SAR (W/kg/W)

P = Power (W)

Using a 10 W radio as an example, you could talk on 2 meters for the entire 6 minutes without exceeding the exposure limit; on 1.25 meters, you could talk 68% of the time, or for 4 minutes out of every 6 minutes; on 70 centimeters, you could talk no more than 27% of the time, or 1.6 minutes out of every 6 minutes, and on 33 centimeters, you could talk no more than 30% of the time, or 1.8 minutes out of every 6 minutes. Time limits for 5, 10, 15, and 20 W for each of these bands are shown in Table 2. With the recent availability of low-cost amateur handheld radios with increased power output levels, the question of excessive exposure has been raised. But by using the existing SAR test results for similar commercial radios, a reasonable estimate can be made about the resulting exposure from these radios. Even for radios that exceed FCC SAR limits, modifications to operating procedures can keep your exposure levels within acceptable limits.

Table 2 — Maximum Talk Time per 6-Minute Period				
Band	5 W	10 W	15 W	20 W
2 m	Unlimited	Unlimited	4.6 minutes	3.4 minutes
1.25 m	Unlimited	4.0 minutes	2.7 minutes	2.0 minutes
70 cm	3.2 minutes	1.6 minutes	1.1 minutes	0.8 minutes
33 cm	3.6 minutes	1.8 minutes	1.2 minutes	0.9 minutes

I would like to thank Phil Dolbow, WG5D, for initiating investigation into this topic; Kevin Graf, of the FCC Office of Engineering and Technology, for reviewing this article, and the members of the ARRL RF Safety Committee for discussing this topic and reviewing this article.

About the author – Gregory Lapin, N9GL, has been a radio amateur for 56 years, earning his license as a Boy Scout. He received his PhD in electrical engineering, specializing in biomedical imaging techniques, from Northwestern University. He is currently the editor of The ARRL Handbook. His other radio interests include propagation effects, software defined radio, and hiking through parks to operate POTA and SOTA. Greg can be reached at n9gl@comcast.net.

VE Sessions and Results

PROVIDED BY SYNOMEN HEBERT, KG5IRS

Attendees

On Saturday, July 18, 2026, a VE Test Session was held at HCESD 16 Admin, 18606 Stuebner Airline Rd, Spring, TX 77379. During the testing session, 6 candidates took 8 tests.

Technician
(Element 2)

0

Passed

0 Tests Given 0 Failed

General
(Element 3)

2

Passed

2 Tests Given 0 Failed

Amateur Extra
(Element 4)

0

Passed

0 Tests Given 0 Failed

Congratulations!

Congratulations to the following for passing their license exams¹:

- Ricardo Arrazate – passed General
- Ronald Maier – passed General

Pre-registration for Testing Sessions

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

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

The next session will be August 29, 2026 at the HCESD 16 Admin Building. Please visit [Northwest Amateur Radio Society - License Exams](#) 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:

- Brett Hebert KG5IQU – session manager
- Synomen Hebert KG5IRS
- Kyle Vann K5KNV
- August J. Canik KI5YPD
- Paul Owen N5NXS
- Vicki Owen AC5EW
- Brynn Hebert KG5KRV
- Logan Hebert KG5LLM
- Jason Springs KR1BBT
- Mark Tyler K5GQ

VE Session Guidelines

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

Wear a mask 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:

Brett or Synomen Hebert – vec@w5nc.net

Volunteering and Becoming a Volunteer Examiner

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

New & Renewing Club Members

New Club Members

- James Harris KI5ZFB
- Rex Smith KJ5QWX

Renewing Club Members

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

- | | |
|-------------------------|-----------------------------|
| • Neal Naumann N5EN | • Glenn Reeves KJ5WGR |
| • Carl Kotila WD5JRD | • Alexander McCauley KJ5JBO |
| • Darrell Kirk KC5JAR | • Rick McCauley NB3V |
| • Catrina Zapata KJ5JQV | • Susan McCauley KJ5JBF |
| • Synomen Hebert KG5IRS | • Mitchell Boughter KJ5GZR |
| • Brynn Hebert KG5KRV | • Chris McGrail KJ5EWS |
| • Logan Hebert KG5LLM | • Jason Springs KR1BBT |
| • Brett Hebert KG5IQU | |

Training and Education

NARS

NARS Meeting Presentations - [Northwest Amateur Radio Society - Meeting 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](http://HamStudy.org) - 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](http://eHam.net)

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. Use our partnership code, **NARS**, to get 10% off when you enroll.

HamTestOnline - Study for your Ham Radio License Exam!

NARS Club Documents and Minutes

Did you know that you can find all of the club's public documents, including board meeting minutes, financial statements, and newsletters on the Northwest Amateur Radio Society - Home website?

Exam Practice Answers

Technician: T7B11 – C. Adding a clip-on ferrite “choke” to the microphone cable to prevent the transmitted signal from feeding back into the transmitter

General: G8B03 – A. Heterodyning

Amateur Extra: E7H12 – B. Provide the crystal with a specified parallel capacitance

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

W1AW Schedule

Cent	UTC	Mon	Tue	Wed	Thu	Fri
8 am	1300z		Fast Code	Slow Code	Fast Code	Slow Code
9 am to 2:45 pm	1400z to 1945z	Visiting Operator Time				
3 pm	2000z	Fast Code	Slow Code	Fast Code	Slow Code	Fast Code
4 pm	2100z	Code Bulletin				
5 pm	2200z	Digital Bulletin				
6 pm	2300z	Slow Code	Fast Code	Slow Code	Fast Code	Slow Code
7 pm	0000z	Code Bulletin				
8 pm	0100z	Digital Bulletin				
8:45 pm	0145z	Voice Bulletin				
9 pm	0200z	Fast Code	Slow Code	Fast Code	Slow Code	Fast Code
10 pm	0300z	Code Bulletin				

Morse code transmissions on 1.8025, 3.5815, 7.0475, 14.0475, 18.0975, 21.0675, 28.0675, 50.350, 147.555 MHz

Slow code = practice sent at 5, 7 ½, 10, 13, and 15 wpm

Fast code = practice sent at 35, 30, 25, 20, 15, 13, and 10 wpm

Code bulletins are sent at 18 wpm

Voice transmissions on 1.855, 3.99, 7.29, 14.29, 18.16, 21.39, 28.59, 50.350 and 147.555 MHz.

Digital transmissions on 3.5975, 7.095, 14.095, 18.1025, 21.095, 28.095, 50.350 and 147.555 MHz. Bulletins sent using 45.45-baud Baudot, PSK31 in BPSK mode and MFSK16 on a daily revolving schedule. For more information, visit W1AW at www.arrl.org/w1aw

Calendar

Club Activities and Events

NARS General Meeting – August 21, 2026 – HCESD 16 Admin – [18606 Stuebner Airline Rd, Spring, TX 77379](#)

VE Test Session –August 29, 2026 – [18606 Stuebner Airline Rd, Spring, 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

Wed 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

Hamfests and Conventions

August 7-8 | Shreveport-Bossier Hamfest, ARRL Delta Division Convention, State Fairgrounds, 3206 Pershing Blvd, Shreveport, LA

August 21-23 | Huntsville Hamfest, ARRL National Convention, Von Braun Center, 700 Monroe Street, Huntsville, AL

Sept 4-5 | Slidell EOC Hamfest, Slidell City Auditorium, 2056 2nd St, Slidell, LA

Nov 13-14 | CRHRC Hamfest & Raffle Drawing, Columbus Club Hall, 1458 County Rd 406, El Campo, TX

Contests and Radiosport

ARRL Contest Corral

August 2026 - [August 2026 Corral.pdf](#)

For the 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>.

For a list of Special Event Stations, please see <https://www.arrl.org/special-event-stations>

Did you know...

NARS has a social media presence! Thanks to Sam Labarbera, K5FM, 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.

NARS Club Officers and Information

Board Officers with Voting Privileges

President: Paul Owen, N5NXS, officers@w5nc.net

Vice President: Kyle Vann, K5KNV, officers@w5nc.net

Treasurer: Tom Hoherd, KK5YU, treasurer@w5nc.net

Secretary: Brandon Rogers, K5BLR, officers@w5nc.net

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

Director: Jorge Gutierrez, WK5J, officers@w5nc.net

Committee Team Members

Administrative Secretary: Neal Naumann, N5EN

Social Media Liaison: Sam Labarbera, K5FM

Newsletter Editor: Vicki Owen, AC5EW

Public Information Officer: TBD

VE Team Lead: Brett Hebert, KG5IQU

Repeater Team Lead: Rich Jones, W5VEK

Lead Net Control Operator: David Holden, WJ9O

Webmaster: webmaster@w5nc.net

Trustee: Paul Owen, N5NXS

Club Nets

The Weekly Tuesday Evening Net - Every Tuesday at 7:00 pm. Join us on one of the W5NC DMR access points:

- Hotspot: Brandmeister NARS Talk Group 3146211 CC 1 Slot 2
- Klein: 440.3000 DMR Repeater CC3 Slot 1
- Droidstar/Dudestar Apps: CC1 Slot 2

The Weekly Wednesday Evening Net - Every Wednesday at 8:00 pm. Join us on one of the W5NC Analog access points:

- NARS Analog Access
- Gregson: VHF Analog Repeater 146.660 Tone 100
- Klein: UHF Analog Repeater 444.375 Tone 100
- Access points:
 - ALLSTAR: 59847
 - Echolink: W5NC-R

David WJ9O will be filling in for Mike WA2TOP due to his medical issues. We hope to see him back soon. Till then, be on the lookout for a weekly message from David WJ9O on w5nc.groups.io/g/main for more information.

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 Northwest Amateur Radio Society - W5NC Groups Email Reflector