



**W5NC**

Houston, Texas

Northwest Amateur Radio Society

A 501(c)(3) Organization

An ARRL Affiliated Club

# NARS NEWS

**JANUARY 2026**

Northwest Amateur Radio Society

P.O. Box 11483

Klein, TX 77391

[w5nc.net](http://w5nc.net)

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# President's Message

BY PAUL OWEN, N5NXS

## Show and Tell and WFD

I hope everyone enjoyed the K5ZTY/SK Show and Tell meeting in December. We had four members that presented their projects to the members in attendance. Craig Veto, W5VEK, Mark Tyler, K5GQ, Paul Owen, N5NXS, Scott Seifert, KA2EEU. See the club meeting article for more information. You should know we have a lot of very talented hams in the club so, reach out and ask for their help in doing something for yourself or the club.

At the meeting we also had to choose from 5 candidates that were nominated for "Ham of the Year". The award would have been presented by last year's recipient Michael Lizzio, WA2TOP, but he will be unable to attend so Marty Fitzgerald, W5MF, will present in his place. This will be the highlight of the annual NARS January Banquet, being held at Valley Ranch BBQ. It will be on the usual third Friday, January 16<sup>th</sup>. Please remember that we will not be meeting at the Administration Building in January.

## Winter Field Day

I hope everyone will consider working on the club's Winter Field Day event. If you are new to Amateur Radio, you just got a new technician license or an upgrade to General, this is where you'll want to be. We will set up radios in the Radio and EOC rooms to operate K5VFD. There will be a CW, SSB and Digital station setup to use. Come here to get over that mike fright, listen to experienced CW operators and maybe try to learn that digital radio is more than FT8/FT4. Last year we got to use a program called VaraAC to make contacts, using keyboard to keyboard to make the contest exchange. See the WFD flyer page **XX**. Our site is on the WFD map with public times listed. I will need club members to help with handling visitors as they arrive and show them around.

Setup for the operation will begin right after breakfast at the Broken Yoke. We will set up the EFHW antenna from the ham tower to the support pole. I need club members to volunteer to provide 2 radios and some computers. The club radio will serve as the digital station and be set up in the EOC room, along with the SSB. The CW station will be set up in the Radio room. We need Club members to put up signs and help any visitors who want to operate a station or to answer questions about Amateur Radio in general. Our VE Team will be testing on Saturday morning. I will have Amateur Radio handouts and a sheet with our VE Testing dates and where they can go to see the ARRL "Find an Amateur Radio License Exam Session".

It can only happen if you volunteer to help. If you see a crowd forming to operate, then step in by making a list. Make sure to say if you only want to observe or would like to try your hand at making contacts.

## 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, August 2025*

**LBT Repeater (Downtown)** - Is off the air (standby).

**Klein Repeater** – Fully operational with UHF linked to ALLSTAR.

**W5NC HUB (Node 59847)** – Allstar and Echo links are operational. DMR repeater (K5MAP) is connected.

## 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, Klein, 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)**

#### **T1A03**

What do the FCC rules state regarding the use of a phonetic alphabet for station identification in the Amateur Radio Service?

- A. It is required when transmitting emergency messages
- B. It is encouraged
- C. It is required when in contact with foreign stations
- D. All these choices are correct

### **General (Element 3)**

#### **G1E02**

When may a 10-meter repeater retransmit the 2-meter signal from a station that has a Technician class control operator?

- A. Under no circumstances
- B. Only if the station on 10-meters is operating under a Special Temporary Authorization allowing such retransmission
- C. Only during an FCC-declared general state of communications emergency
- D. Only if the 10-meter repeater control operator holds at least a General class license

### **Amateur Extra (Element 4)**

#### **E2B08**

What technique allows commercial analog TV receivers to be used for fast-scan TV operations on the 70-centimeter band?

- A. Transmitting on channels shared with cable TV
- B. Using converted satellite TV dishes
- C. Transmitting on the abandoned TV channel 2
- D. Using USB and demodulating the signal with a computer sound card

See the answers on [Page 20](#).

## 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!

## \$25k At Stake in Student Coding Competition

Pre-registration is open for a Student Coding Competition, a new national challenge sponsored by ARRL. The project is designed to engage young radio amateurs in shaping the future of amateur radio through software development. Open to ARRL-member amateur radio operators age 21 and younger, the competition invites students to design a mobile app that supports ARRL and the amateur radio community. Cash awards totalling up to \$25,000 will be presented to one or more winning entries.



The competition officially begins January 1, 2026 when complete rules and application specifications will be released. Entries must follow the published requirements and submissions are due by March 31, 2026. Entries will be judged on how well they meet the specifications, user interface design and usability, code quality and stability, and the inclusion of extra features. More information can be found at [Student Coding Competition](#).

## 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.

## FCC Extends Renewal Filing Deadline

ARRL reports that the FCC has extended the filing deadline to March 5, 2026, for amateur radio licenses that otherwise were due to expire from October 1, 2025 to March 5, 2026. The announcement is included in an FCC Public Notice (DA-25-943) released on Monday, November 17, 2025.

The news follows the recent reopening of the federal government on November 13, following a lengthy 43-day shutdown. Since reopening, many federal agencies, including the FCC have resumed activities, though reducing backlogs and rebounding to full operations may take some time. This includes significant delays in filing amateur radio license applications.

## Changes to 60-Meter Band and Updates 420 MHz

On Dec. 9, 2025 the FCC adopted a new amateur radio spectrum allocation in the 60-meter band that was approved for world-wide use on a secondary basis in the WRC-15 (World Radiocommunication Conference 2015) *Final Acts*. They will also allow amateur operations on four existing 60-meter channels outside the international allocation with a full 100 watts. Specifically, 5351.5 – 5366.5 kHz band was allocated to the amateur service on a secondary basis with a permitted power of 9.15 watts ERP. The four channels – 5332, 5348, 5373 and 5405 kHz were also authorized by the Commission on a secondary basis with a permitted power of 100 watts ERP. The 60-meter allocation is available to amateurs holding a General class or above license. The maximum permissible signal bandwidth is 2.8 kHz. Amateurs are cautioned they must avoid interfering with non-amateur stations using this spectrum.

In the same Report, the FCC updated 420 – 450 MHz coordination and contact information for geographic areas where the peak envelope power (PEP) of amateur stations operating is generally limited to 50 watts. There was no substantive change to the areas covered by the power limitation.

### New Rules for 60M Operations

US Amateurs currently have 5 channels that are 2.8 KHz wide:

- Ch. 1 - 5330.5
- Ch. 2 - 5346.5
- Ch. 3 - 5357
- Ch. 4 - 5371.5
- Ch. 5 - 5430.5

US amateurs can operate on any of these channels with a maximum of 100 W (into a dipole antenna). If we use a gain antenna i.e. phased verticals, we must reduce power accordingly.

When the rule goes into effect we will have 4 channels:

- Ch. 1 - 5330.5
- Ch. 2 - 5346.5
- Ch. 4 - 5371.5
- Ch. 5 - 5430.5

US Amateurs can operate on any of these channels with a maximum of 100 W (into a dipole antenna). If we use a gain antenna i.e. phased verticals, we must reduce power accordingly.

The 5357 channel has been eliminated. However, we get a 15 KHz "band" that is not channelized and our power is limited to 9.5 W on any frequency in that "band".

- ✓ The new "band" extends from 5351.5-5366.5 KHz. I understand that this "band" is allocated on an international basis.
- ✓ Note: You can still operate on 5357 KHz but since it falls within the new "band" you are limited to 9.5 W.
- ✓ For Those Interested in FT8, what may happen is we will be able to operate at 100 W FT8 operation. There will be a default channel for FT8 on one of the other 4 remaining channels. This will not be a FCC rule but a ARRL band plan rule.

## 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

## December Show & Tell

The presentation during the meeting centered on NARS members presenting any ham-related projects they worked on during the year.



Four members presented as follows:

Craig Veteto, W5CEV, showed the group his electronic Fox transmitter he built for VHF/UHF, and a Raspberry Pi configured to run ADS-B, UAT, APRS iGate, and APRS digipeater.

Mark Tyler, K5GQ, showed his Virtual Band Adapter that runs on a phone or computer. It uses the internet to provide a Virtual CW Band where you pick a channel to start a CW contact or practice sending and see what your CW decoded looks like. It helps you learn to leave space between words and correctly space the letters between the words. I have chatted with ham from Australia, China, Europe and other countries. You do not need to have a ham license to participate. The cost of the Vband Adapter start at \$25. Vail adapter <https://vailadapter.com/> The link to Vband is <https://hamradio.solutions/vband/>



Paul Owen, N5NXS, showed off his new 17 meter dipole antenna and how he got 80 meters working on his vertical antenna.

Scott Seifert, KA3EEU, showed how you can play "Amateur Radio Newsline" 24/7 by connecting to AllStar.

AllStar node 516228 for the most recent Amateur Radio Newsline or AllStar node 516229 for the most recent ARRL Audio News

It automatically disconnects when finished  
When you do it from a repeater, it drops the carrier in between each story.  
You can do this with any software or hardware that connects to Allstar.

Upcoming club events discussed at this meeting – the January meeting will be part of the annual banquet being held at Valley Ranch BBQ. Winter Field Day is planned in Jan also. Though it is not an endorsed ARRL event, participating in Winter Field Day is good practice for the annual ARRL Field Day in June.

## Next Club Meeting

Our next General Meeting will be held on January 16, 2026, at Valley Ranch BBQ – 22548 State Hwy 249, Houston TX 77070. Banquet night! Time to eat is set aside from 6-7pm with the program starting about 7 pm. We hope to see everyone there.

# Amateur Radio

## Winter Field Day

### January 24<sup>th</sup> and 25<sup>th</sup> 2026

CQ, CQ, CQ...

We invite the public to join us as we participate in Winter Field Day.  
Come experience amateur radio!

Learn more about this amazing hobby

See operators make world wide contacts

Ask questions and see how what it takes to set up a radio and external antenna.

Listen to operators use Morse code, digital signals, and voice to exchange information.

Pick up the microphone and make contacts yourself.

Learn why ham radio is still considered the last means of communication "when all else fails"



Northwest Amateur Radio Society  
Publiciswelcomedtocomeforavist.  
There will be three HF radios -  
CW, Digital and SSB (Voice)

Please call 832-474-7100 Paul N5NXS  
or email n5nxs@flash.net if you want  
to come out to the site at  
ESD16 Administration Building  
18606 Steubner Airline Road  
Klein, TX

24th 10am to 4pm  
25th 10am to 4pm



For more information visit  
[www.winterfieldday.org](http://www.winterfieldday.org)



## 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 October 2025 issue of QST.

### A 160/80-Meter Trap Vertical by Bill Wortman, N6MW

*Consider building this two-band, no switch antenna for your next contest or DX opportunity.*

In this article, I describe how I developed a dual low-band vertical trap antenna. It uses a fiberglass Spiderbeam mast and a combination of conventional design elements, in addition to construction features that combine modest cost with effective performance. It needs no real-time tuning or switching at the antenna base, and within CW bandwidth needs, it needs no tuner. I primarily intended to use it for CW, but it can be modified a bit for 80-meter phone, or it can be matched with a tuner on that band. If you wish to duplicate this antenna, you will need only readily available components.

#### Help from the Community

This project originated with my request to the Contesting.com Topband forum. I wanted other hams' thoughts on a transportable and easy-to-install antenna for 160 meters that might be used for personal DX or DXpeditions, or one that could be made available to hams in locations that are rarely on 160 meters. From their suggestions (and filtered by my personal preferences), I decided to use a Spiderbeam 60-foot fiberglass mast-based vertical with T-style top loading (see page 11.26 in the 25<sup>th</sup> edition of *The ARRL Antenna Book*) and two elevated radials. I later enhanced it for 80-meter capability by using a trap at the top of the mast to isolate the T wires on that band. So, it also has features of the venerable Battle Creek Special featured in the fourth edition of John Devoldere's, ON4UN, *Low-Band DXing*.

#### Special Components

The trap is a coaxial type (based on Figure 12.29 in the 25<sup>th</sup> Edition of *The ARRL Antenna Book*, which is the same as Figure 4 in Al Buston's, W8NX, “Two New Multiband Trap Dipoles” in the August 1994 issue of QST). That is, it doesn't use the effective inductance increase with a second current path through the coiled coaxial braid. It is resonant near 3.4 MHz. I chose low Z because the length of the required sloping top-loading wires (two as a T to reduce those signals going straight up) allows me to adjust them from the



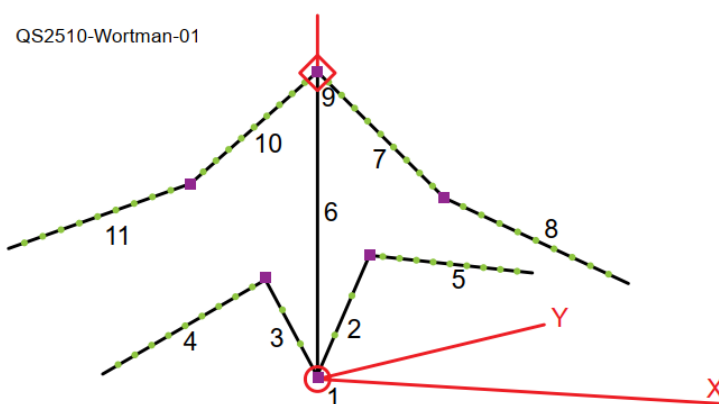
The antenna and support poles for the elevated radials.

ground. The trap's 160-meter inductive impedance for high-Z mode would have made the **T** top sections too short for such adjustments.

The radial field consists of two elevated radials (as seen in Rudy Severns', N6LF, "An Experimental Look at Ground Systems for HF Verticals" in the March 2010 issue of QST) in opposite directions, in the gull-wing configuration. With some planning, it is possible to provide one elevated support for each of the radials near the mast by using two of the guy ropes that also hold up the mast.

## EZNEC Model Analysis

I proceeded with the idea that this 160-meter antenna would be short compared to a quarter wave with a low radiation resistance and narrow bandwidth. I used RG-58 coax for the trap and did some *EZNEC* experimentation, and I came to a set of nominal dimensions (at reactance  $X=0$ ) that could allow resonance in both bands. The final measured 80- and 160-meter unmatched impedances taken at the antenna were near 20 ohms at resonances of 1.88 and 3.54 MHz, in modest contradiction to *EZNEC* expectations. You can move the 80-meter resonance by adjusting the radial lengths, and you can move the 160-meter resonance by adjusting the top

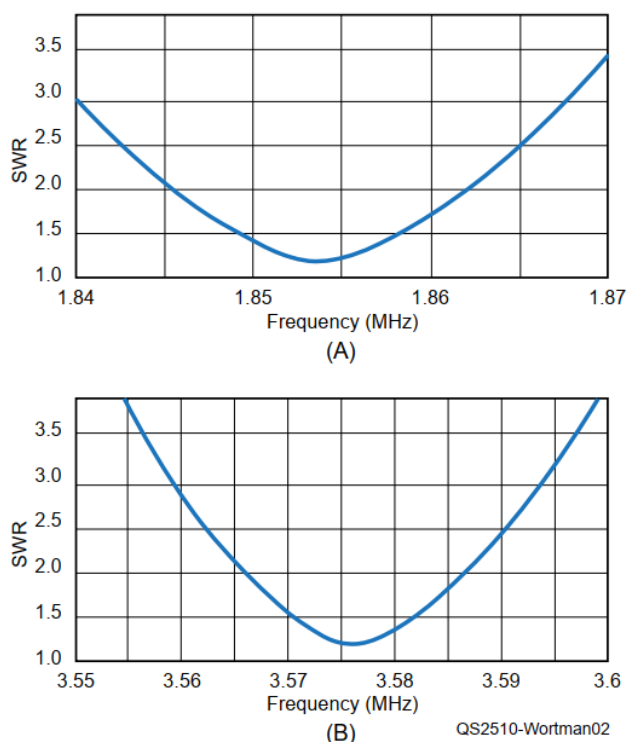


**Figure 1** — The *EZNEC* model of the antenna elements, redrawn for clarity.

wires. The 20 ohm feed-point resistance on 160 meters may be higher than expected due to ground losses not included in the model.

My plan was to match the 160-meter band to 50 ohms with a "hairpin match" (as discussed in my feature, "The Hairpin Match," in the June 2013 issue of QST) using a coil shunted across the input. This is simple and requires no high voltage- and current-rated capacitor. However, it required me to carefully tune the lengths of the top wires (shorten from resonance) to get the needed mildly capacitive reactance in the unmatched antenna on 160 meters.

Runs of *EZNEC*, including the trap and hairpin match, suggested the seemingly miraculous possibility that a single value of the hairpin coil would work for both bands, meaning no required coil changes or other switches for a band change. This is perhaps not so remarkable when you realize that 80 meters shouldn't need a coil, and the reactance of the coil that matches 160 meters is doubled on 80 meters. It is thus high



**Figure 2** — *NEC* optimized SWR plots, redrawn for clarity.

enough that having it across the feed point has little effect on that match.

Figure 1 is an *EZNEC* model illustrating the general geometry; the short model wire 9 has the trap, and wire 1 has the hairpin. Figure 2 is the modeled standing wave ratio (SWR) showing that, when hairpin matching inductance is included, it is possible to match both bands with switching or tuning.

Based on my experience with translating *EZNEC* results into real antennas, each model is only a general guide, especially for wires near the ground. However, they are useful for predicting impedance changes due to changes in wire lengths. With the aid of an antenna analyzer, wire pruning will be necessary because of local environmental effects.

### The Physical Reality; Some Problems

Armed with the *EZNEC* model information, I cut long lengths of pre-trimmed wires and placed the trap on the top segment of the mast. I telescoped the mast to its full height and guyed it with the recommended two sets of Dacron rope.

My plan was to tune the antenna at 80 meters by adjusting the lengths of the radials. After that, I was going to adjust the two top loading **T** wire lengths together to tune for 160 meters; the top wires do not affect the 80-meter adjustment due to the trap.

This was when the first problem arose. The trap, mounted on a light tube, weighs only 6 ounces. But, after trying different guying heights and even three sets of guys, I realized that it was too heavy to be placed on the top because it was causing the upper section of the mast to bend. I went back to *EZNEC* to see what might happen if I placed the trap about 5 feet down from the top of the mast (next to the segment that is second from the top and tapers to 1/16 of an inch). It appeared to be possible based on the model. So, I re-mounted the trap at the 55-foot level while leaving the highest mast segment in place. After that, I had no problem using the two sets of guys.

I tuned for 80 meters by adjusting the radial lengths, using *EZNEC* as a guide and checking with the analyzer. This method works well; a nominal impedance match is attainable with no additional components.

For 160-meter tuning, only the top load **T** wire lengths were adjustable without affecting 80 meters, as the radial lengths were already established. After the adjustment, I found an unmatched input impedance of about 20 ohms in my frequency range of interest.



**Figure 3** — The trap, which is resonant near 80 meters. The aluminum tube has no effect on the trap.

I added the hairpin matching coil and adjusted the coil tap and top wire lengths for a reasonable SWR, which I measured via the analyzer at the antenna input. The prior match to 80 meters did not change.



**Figure 4** — The hairpin coil, feed point, and start of the radials. Note that the coil form can also serve as a rain gauge unless drain holes are used.

I encountered another problem - this time, with the 160-meter match. When the long coaxial feed line was connected and run back to my shack, the 80-meter match was similar, but the SWR and impedance for 160 meters bore no relation to that seen at the antenna. There was no resonance even remotely close to 1.8 MHz.

The integrity of the analyzer and cables was okay. It turned out that the longer the cable, the worse the SWR difference. It dawned on me that there may be high levels of common-mode current (CMC) on the outside of the feed coaxial braid, as it did not have a choke. It became obvious that this 160-meter antenna was really an off-center-fed device, and those are famous for needing a good choke to prevent CMC. I coiled 75 feet of spare coax and

placed it near the antenna's feed point to provide a choke reactance of more than 1000 ohms at 160 meters. I repeated the in-shack measurements, and the results were much better. However, they still weren't perfect, and there was a modest frequency offset in the SWR minimum at the ends of the cable run. The offset was significant enough that I needed to adjust the wire lengths and the coil tap while looking at the SWR in the shack.

## The Finer Details

The coaxial trap (see Figure 3) has a capacitance of about 260 pF and an inductance of about 8  $\mu$ H. It uses 107 inches of RG-58 in an approximately 4.75-inch-diameter coil of roughly seven turns. It is resonant at about 3.4 MHz. The aluminum rod, which I originally selected to fit over the smallest segment of the fiberglass mast, was actually not used for that purpose, but it provides a connection point for the top wires; solid #18 AWG copper-clad steel was used for those wires. The choice of wire was based on economy, strength, weight, and lack of insulation for fold-back tuning. You can see the trap near the top of the mast in the lead photo.

The following final dimensions are about 5 percent short of *EZNEC* predictions. The vertical wire is about 55 feet and attached to the mast with cable ties. The two top loading T wires slope down at approximately 45 degrees, with lengths of about 60 feet. The radials are about 75 feet long, and they slope up from the base to the first support at about 45 degrees. They are nearly horizontal out to the end support at approximately 12 feet. The hairpin coil (see Figure 4) is solid copper wire, and it's tapped at about six turns with about 1/2" spacing on a 4-inch diameter lightweight form, giving it an inductance of 3  $\mu$ H. For the antenna, matched in its final configuration (coil tap optimized for 160 meters), there is a minimum SWR of 2 at 3.53 MHz and 1.8 at 1.86 MHz. In the shack (connected by 200 feet of RG-8 coax), where I did the final tuning, I measured an SWR of 1.6 at 3.53 MHz and 1 at 1.83 MHz, in addition to an SWR of less than 2 at a bandwidth of 20 kHz on 160 meters and 40 kHz on 80 meters. The apparent residual CMC frequency offset (antenna versus shack) was still noticeable, but manageable.

I strapped the bottom segment of the mast to a 6 foot long 2x6 board mounted in concrete, making the telescoping task fairly easy. I left on the smallest top segment of the fiberglass mast, although it does not get used. This prevents birds from landing on the mast.

## Performance

I have tested this antenna on the air by trying to work DX and by using the Reverse Beacon Network (comparing with prior antenna results). It seems to work well on both bands, but its performance probably falls a bit short of my previous 160-meter antenna. That antenna was similar; its height was about the same, but it had an aluminum mast, three sloping top load wires, longer radials, and no trap. I used this 160/80-meter trap vertical with 500 W during the CW portion of an ARRL International DX Contest. I focused my efforts on 160 meters and worked 21 countries, and then I worked 30 countries on 80 meters with rather limited effort. It seems that while this antenna can be used competitively, it does not quite live up to the higher-end stations.

While this is not the simplest antenna to reproduce because you'll need to tune it depending on your local environment, it should be doable for those who have enough space and an antenna analyzer.

## A Note from the Editor

This antenna is a proven design that can be built and used as described. The article does not address loss in the trap, which may be considerable on the low end of the 80-meter band. Experimenters are encouraged to explore the advantages of using a higher Q trap or a coaxial trap in the high-Z configuration. Experimenters can also move the trap resonant frequency a bit lower, especially if they plan to use the lowest frequencies on 80 meters. Such changes will require adjustment to some of the wire lengths. NEC simulations can give insight into these effects. Visit [www.arrl.org/qst-in-depth](http://www.arrl.org/qst-in-depth) for article updates. NEC files, additional photos, and ways to determine and reduce trap losses. – John Stanley, K4ERO

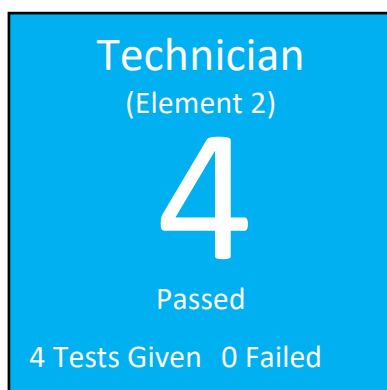
*About the author – Bill Wortman, N6MW, is a physicist with a PhD from Texas A&M University and an undergraduate degree in engineering from the Ohio State University. Bill has been licensed since 1957 and holds an Amateur Extra class license. His radio interests include DXing, 6-meter propagation, contests and antenna experimentation. He can be reached at [n6mw@arrl.net](mailto:n6mw@arrl.net).*

## VE Sessions and Results

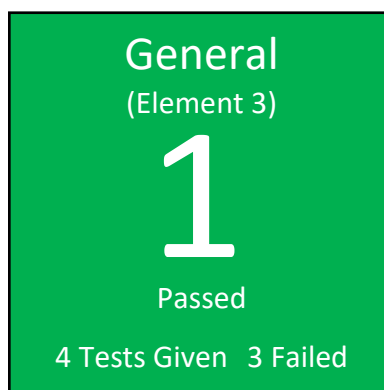
PROVIDED BY SYNOMEN HEBERT, KG5IRS

### Attendees

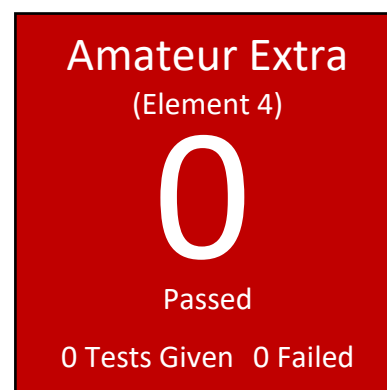
On Saturday, Dec. 20, 2025, a VE Test Session was held at HCESD 16 Admin, 18606 Stuebner Airline Rd, Klein, TX 77379 in conjunction with Field Day. During the testing session, 5 candidates took 8 tests.



Technician  
(Element 2)  
**4**  
Passed  
4 Tests Given 0 Failed



General  
(Element 3)  
**1**  
Passed  
4 Tests Given 3 Failed



Amateur Extra  
(Element 4)  
**0**  
Passed  
0 Tests Given 0 Failed

### Congratulations!

Congratulations to the following for passing their license exams<sup>1</sup>:

- Catrina Zapata – passed General
- Patrick R. Garrison – new Technician
- David Mack – new Technician
- Ashwin L. Parambath – new Technician
- James R. Smallman – new Technician

### 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/arrrl/77070/inperson>

The next session will be January 24, 2026 at the HCESD 16 Admin Building. Please visit [Northwest Amateur Radio Society - License Exams](#) for the announcement.

<sup>1</sup> 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
- Dale Schmirler KN5DS
- Kyle Vann K5KNV
- Craig Veteto W5CEV
- A. John Canik KI5YPD
- Brynn Hebert KG5KRV
- Logan Hebert KG5LLM

### 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](mailto: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

- Tracy Shillock, N5LUY

## Renewing Club Members

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

- Paul Pacior, KA5PUD
- Nora Stovall, KB5FYJ
- Paul Protas, WA5ABR
- Daniel Beights, KJ5DWS
- Fernando Teston, N5FTE

# 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](#) - 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!

## 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:** T1A03 – B. It is encouraged

**General:** G1E02 – D. Only if the 10-meter repeater control operator holds at least a General class license

**Amateur Extra:** E2B08 – A. Transmitting on channels shared with cable TV

## 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

CENT	UTC	MON	TUE	WED	THU	FRI
8 AM	1300		FAST CODE	SLOW CODE	FAST CODE	SLOW CODE
9 AM-2 <sup>45</sup> PM	1400-1945	VISITING OPERATOR TIME				
3 PM	2000	FAST CODE	SLOW CODE	FAST CODE	SLOW CODE	FAST CODE
4 PM	2100	CODE BULLETIN				
5 PM	2200	DIGITAL BULLETIN				
6 PM	2300	SLOW CODE	FAST CODE	SLOW CODE	FAST CODE	SLOW CODE
7 PM	0000	CODE BULLETIN				
8 PM	0100	DIGITAL BULLETIN				
8 <sup>45</sup> PM	0145	VOICE BULLETIN				
9 PM	0200	FAST CODE	SLOW CODE	FAST CODE	SLOW CODE	FAST CODE
10 PM	0300	CODE BULLETIN				

### W1AW Schedule

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](http://www.arrl.org/w1aw)

# Calendar

## Club Activities and Events

NARS General Meeting/Dinner – January 16, 2026 – Valley Ranch BBQ, 22548 State Hwy 249, Houston TX 77070

VE Test Session –January 24, 2026 – [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

### 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

February 13-15, 2026 | Orlando HamCation & SE Division Convention, Orlando, FL

February 20-21 | Greater Houston Hamfest & ARRL State Convention, Ft Bend County Fairgrounds, Rosenberg, TX

February 27-28 | Orange Tx Hamfest 2026, Orange County Convention & Expo Ctr, Orange, Tx

## Contests and Radiosport

*ARRL Contest Corral*

**January 2026 -**

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>.

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](mailto:officers@w5nc.net)

Vice President: Kyle Vann, K5KNV, [officers@w5nc.net](mailto:officers@w5nc.net)

Treasurer: Tom Hoherd, KK5YU, [treasurer@w5nc.net](mailto:treasurer@w5nc.net)

Secretary: Brandon Rogers, K5BLR, [officers@w5nc.net](mailto:officers@w5nc.net)

Director: Rich Jones, W5VEK, [officers@w5nc.net](mailto:officers@w5nc.net)

Director: Jorge Gutierrez, WK5J, [officers@w5nc.net](mailto: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: Mike Lizzio, WA2TOP

Webmaster: Bill Buoy, N5BIA, [webmaster@w5nc.net](mailto: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
- Klein: UHF Analog Repeater 444.3750 Tone 100
- Access points:
  - ALLSTAR: 59847
  - Echolink: W5NC-R

Please be on the lookout for a weekly message from Mike WA2TOP on [w5nc.groups.io/g/main](https://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](#)