



W5NC

Houston, Texas

Northwest Amateur Radio Society

A 501(c)(3) Organization
An ARRL Affiliated Club

NARS NEWS

JUNE 2025

Northwest Amateur Radio Society

P.O. Box 11483

Klein, TX 77391

w5nc.net



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President's Message

BY PAUL OWEN, N5NXS

GridTracker, Logging with QRZ, LoTW and More of NARS History

At the last meeting I let everyone know that in order for me to be President of the club, I need everyone to pitch in and do things for the club to benefit all members. You are the members that make the club what it is. When I need volunteers to help with Field Day, I don't just mean to be there. I need members to jump in the deep end and be willing to learn as they go. You will have support from the members that have been there and done it. I want to thank the following members for their answer to my call for help. For the GOTA Station: Mitchell, KJ5GZR and Bob, K9HOU (who is providing the radio, computer and antennas). For the SSB Station: David, WJ9O. For the CW Station: Marty, W5MF, who is providing the radio, computer and keys. I still need a lot of help, so look at the post under 2025 Field Day on groups.io for more information.

The meeting concluded by going over some of the things I do to log my contacts in QRZ and LoTW by using GridTracker when I'm working FT8. I explained how you go to the logging menu in GT and check which places you want the information to go. Then you enter your login name and password.

NARS History

In the beginning, NARS started putting on code and theory classes to make new Novices. At that time, you had 3 code tests - 5, 13 and 20 words per minute, to pass before getting a license (that arrived by snail mail). When the code requirement went away, the club taught theory classes for the Technician license.

The club was also very active in supporting public service events like MS150 Houston to Austin, Wings Over Houston, Buffalo Bayou Regatta, Houston Marathon & Half Marathon, We Are Houston 5K, SIRE (Self Improvement through Riding Education), Sunmart Texas Trails Run, Salvation Army Bell Ringers as well as other bike rides in the area.

We also had many members who would travel to far off places for a DXpedition like Nicaragua, Tobago, Malta, Yap Island, Isle of Skye, British Virgin Islands, San Andres Island and many others. Sadly, most of the NARS members that went on these are /SK but we do have some still here like Bob, N5ET, Paul, W5PF and Marty, W5MF. Next time you see these DX'ers, get them to talk about all the places they have been to. Marty, W5MF, has offered to show pictures from his trip to Nicaragua at a meeting.

To be continued...

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 Update](#).

Repeater update, Apr 2025

LBT Repeater (Downtown) - Is off the air.

Galleria Repeater – UHF machine is linked to ALLSTAR and the W5NC hub.

The VHF machine is operational as a standalone machine.

After some 39 years of operation from this site the repeater will be removed from this location on June 21.

The repeater team will try to install the 443.075 at the administration building as soon as they can.

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)

T9B01

What is a benefit of low SWR?

- A. All these choices are correct
- B. Less antenna wear
- C. Reduced television interference
- D. Reduced signal loss

General (Element 3)

G4A12

Which of the following is a common use of the dual VFO feature on a transceiver?

- A. To improve frequency accuracy by allowing variable frequency output (VFO) operation
- B. To permit full duplex operation – that is, transmitting and receiving at the same time
- C. To transmit on one frequency and listen on another
- D. To allow transmitting on two frequencies at once

Amateur Extra (Element 4)

E6B06

Which of the following is a common use of a Schottky diode?

- A. In oscillator circuits as the negative resistance element
- B. As a variable capacitance in an automatic frequency control circuit
- C. In power supplies as a constant voltage reference
- D. As a VHF/UHF mixer or detector

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 - 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

Radio Connects is 2025 ARRL Field Day Theme

'Radio Connects' is the new logo and theme for the 2025 Field Day coming up on June 28-29. This logo highlights the many ways that wireless technology connects people across distances near and far. Ham Radio provides a connection – both for practical communications and to form relationships with fellow radio amateurs.

"Local amateur radio clubs bridge generations. Contacts made across town or around the world allow cultural exchange, right over the air," said ARRL Public Relations and Outreach Manager Sierra Harrop, W5DX.

Make your plans to connect with radio for ARRL Field Day. Use the Field Day site locator (<http://www.arrl.org/field-day>) to find a site near you, and clubs planning to host a site may list their event information there as well. Radio Connects merchandise is still available for order from the ARRL Store.



Dayton Hamvention is a wrap

Opening day, Friday, May 16 saw huge crowds coming through the gates for the 3-day event in Dayton, Ohio. The ARRL staff reported that their booths were packed with visitors and one booth saw constant traffic as hams had the opportunity to test their handhelds for spurious signal suppression. There were meet ups with book authors, including *Repeater Book*'s Garrett Dew, KD6KPC, and "Salty Walt" Hudson, K4OGO, who recently released his book *Salty Walt's Portable Antenna Sketchbook*.

The ARRL had a "soft launch" of the "Marconi" program, which encourages very active clubs to mentor less-active clubs on ways to build up both activities and membership. The ARRL Youth Rally saw some two dozen young people learning about parachuting with a ham radio handheld, going on a foxhunt and trying to make contacts via amateur satellites. More forums finished up the last day of activities as well as some young people making brief 2-meter contacts with skydiver Carlos Ortiz, K9OL, as he parachuted to the ground from an altitude of 14,000 feet.



ARRL Launches Dream Station Sweepstakes

ARRL has introduced a sweepstakes that gives members a chance to win an Icom Dream Station, which includes a limited edition IC-7760 HF/50 MHz transceiver, an IC-PW2 amplifier, and a microphone, all donated by Icom America.

The sweepstakes is running from January 3 to December 31, 2025 and is part of a year-long campaign to encourage new membership (and a fun way for current members to extend their support for ARRL). The winner will also receive a limited edition Seiko watch celebrating Icom's 60th anniversary.

Participation is open to full ARRL members in the US. Members will automatically earn sweepstakes entries when they 1) join or renew membership (earn 1 entry), 2) set up auto-renewal (earn 2 entries), 3) donate to the ARRL Diamond Club (1 entry earned for every \$50 donated). Members can earn up to six entries during the year-long campaign. For more information about the ARRL Sweepstakes and the official rules, visit www.arrl.org/dreamstation.



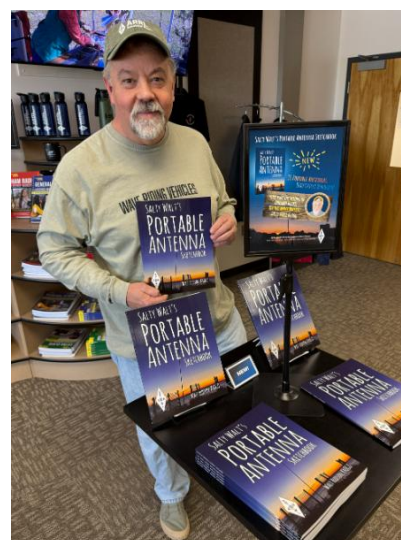
Between January 3 and December 31, 2025, full ARRL members in the US have a chance to win an Icom Dream Station.

New Book Release on Portable Antennas

ARRL announced the release of the Portable Antenna Sketchbook by Salty Walt, K4OGO, of the Coastal Waves & Wires YouTube channel. The book begins with the basics of setting up a quarter- or half-wave vertical, but then draws readers into more experimental designs like his own Coastal 20 or an end-fed vertical made with a Slinky. Each sketch provides wire lengths and practical attachment information.

In addition to his sketches, Walt offers portable construction and operating tips, and just enough about counterpoise wires and ground to get you making contacts in no time. Walt also pairs each antenna with a dining spot you can try, whether you're on Walmea Bay in Kauai, deep in the Big Easy's French Quarter, or on the long Atlantic stretch of Nags Head, North Carolina. According to Walt, it's a book for the 'true amateur,' the ham who gets out by the waves with a radio to see what they can make happen.

The book is now shipping and can be ordered from the ARRL online store or an ARRL publication dealer. Member price \$22.95, retail is \$25.95.



Next Gen DXing Videos Available

The ARRL has published an 8-video series about the Next Generation of DXing. The videos were captured during an all-day seminar at the 76th International DX Convention held April 11-13, 2025 in Visalia, California. A panel of experts covered everything from financing and planning a DXpedition to getting permits, arranging logistics, planning out equipment, managing both remote and local operators, dealing with problems, and much more. The latest technology being used in DXpeditions was explained in detail, including the Radio in a Box (RIB), Starlink, software-defined radios, and the latest digital modes such as FT-8 SuperFox. This content is available on the ARRLHQ YouTube channel as a [Playlist](#).

Session 1 – Mission Planning – talks about planning a DXpedition.

Session 2 – Search for Solutions – discusses hardware and process solutions.

Session 3 – Team Building – goes into detail about how to build your team for a DXpedition.

Session 4 – Data Networks for Ham Radio – covers the vital components of local networks and internet connectivity for activations.

Session 5 – Radio Systems Design – covers the RF hardware used in DXpeditions, including the RIB and the Mother of all Switches (MOAS).

Session 6 – Managing the User Experience – goes over how to make things work for your operators (both local and remote) and your DXers.

Session 7 – Station Integration and Test – shows you how to put it all together, and (perhaps more importantly) how to test it – really test it – before the activation hits the air.

Session 8 – Scheduling and Execution – is all about getting it done. The best laid plans are worthless if they aren't executed. This video shows you how to make it all work.

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 a 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 email to 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 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 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.



Next Club Meeting

Our next General Meeting will be held on June 20, 2025, at the HCESD 16 Admin Building – 18606 Stuebner Airline Rd, Spring, TX 77379. Last meeting before Field Day! 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 is taken from the August 2024 issue of QST.

Digital Oscilloscope Specifications by Paul Danzer, N1II

While digital oscilloscopes have been around since the early 1980s, it is only in the last 10 – 15 years that we have seen a major shift away from analog oscilloscopes. Along with this technology change, a new set of performance terms are required because digital oscilloscopes use sampled data. Therefore, we need to know how often the samples are taken, how accurate (in amplitude) the samples are, and how much memory is needed to store the data samples. A reminder of time units used in this article is shown in Table 1.

Table 1 Time Units		
Abbreviation	Unit	Measurement
ms	millisecond	10 ⁻³ seconds
μs	microsecond	10 ⁻⁶ seconds
ns	nanosecond	10 ⁻⁹ seconds
ps	picosecond	10 ⁻¹² seconds

Key Performance Numbers

Bandwidth is often the first specification looked at. This is the frequency where the displayed gain drops 3 dB, or about 30%, for a single frequency sine wave. All repetitive complex waveforms consist of a number of harmonically related sine waves. For example, a symmetrical square wave of frequency F_1 consists of the addition of several odd numbers of sine waves (F_3 , F_5 , F_7 , etc.), as shown in Figure 1. Each term has its own multiplying coefficient. Each waveform set in Figure 1 shows how progressively adding appropriately scaled odd harmonics together ultimately makes a more ideal-looking square wave.

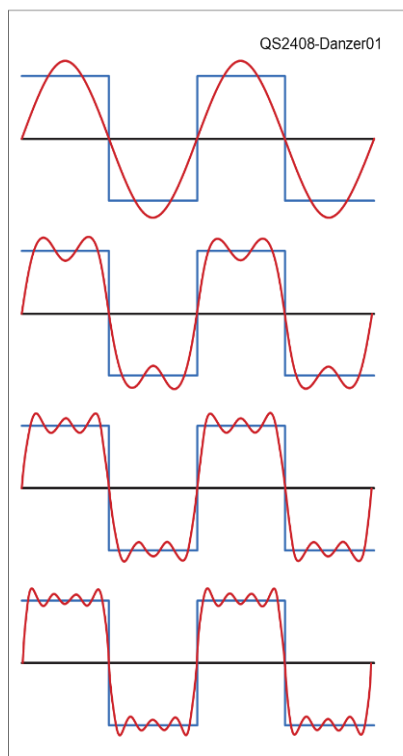
The generally accepted bandwidth rule is that an oscilloscope should have a single sine wave frequency bandwidth of five times the frequency of the highest waveform component. This rule limits the rise time error to approximately 2%. Again, keep in mind that you need to have a frequency response that includes the harmonics needed to comprise any complex waveform. Otherwise, the viewed waveform may be distorted. The analog input circuitry on some oscilloscopes is designed to emphasize the harmonics. Additionally, digital oscilloscopes often use digital signal processing to flatten and extend the frequency response so that you can often relax the five-time rule a little.

Another rule states that rise time = $0.35/\text{bandwidth}$. As an example, a 100 MHz oscilloscope would have a 3.5 ns rise time. A higher bandwidth means more energy is included in the sine wave harmonics. However, because the Total Rise Time =

$\sqrt{(\text{oscilloscope rise time}^2 + \text{signal rise time}^2)}$, the observed rise time may be modified by the oscilloscope specification. For example, selecting a 100 MHz bandwidth oscilloscope to observe a TTL output with a rise time of 2 ns will result in an observed rise time of approximately 4 ns.

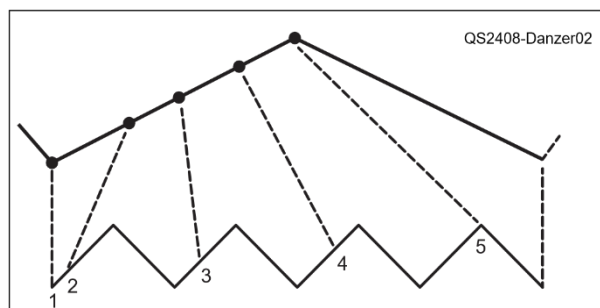
Impact of Memory

Several parameters related to memory size provide another measure of an oscilloscope's capabilities. The input waveform is converted into a set of samples, or *sample points*. One or more sample points may be combined to make up a waveform point. A *waveform record* consists of a set of these waveform points, and the number of samples used to create a record is called the *record length*. When samples are stored in sequence, the sample rate shows how long it takes to make a record length limited by memory size.



◀ **Figure 1** — Constructing a square wave from a sine wave and its odd harmonics.

▶ **Figure 2** — For a repetitive waveform, a low sample capability may be compensated with a longer acquisition time.



An oscilloscope's sample rate is determined by its hardware. If a complex signal requires a sample rate higher than the hardware allows, signal processing can generate interim artificial samples by interpolation. Interpolation is typically used to reconstruct the waveform for viewing, but not to create samples in the acquired record. This makes the displayed voltage input look more realistic. However, these generated samples usually are not stored and so do not use up any memory (usually specified in mega points, or Mpts).

Figure 2 illustrates a technique called equivalent time (ET) sampling, which is sometimes used to improve

display accuracy or to compensate for an A/D that, for whatever reason, cannot sample fast enough. The bottom trace is a set of triangular waves. When samples cannot be taken often enough, a new copy of the repetitive wave is generated by taking a sample from one wave, a second sample next to it from the next wave, etc. This tends to "fill in the gaps" for display purposes. The penalty is time. If you need 20 samples to build up the synthesized wave, you must wait until 20 of the original waves come through, thus costing the process time to build up the synthesized wave.

In modern oscilloscopes, the sample memory almost always exceeds the display resolution — so various techniques are used to combine multiple adjacent waveform samples into each display point. The most common is to create an intensity graded "cloud" of all of the sample points contributing to each display pixel column, thus emulating the intensity grading of the old phosphor-based analog oscilloscope displays.

Although often not explicitly stated, the memory available may or may not be per channel. Some oscilloscopes share or split the memory or sample rate among multiple channels. However, many maintain the same available memory regardless of the number of channels used. For example, an oscilloscope with a 10GS/s sample rate and a 46 M memory can store only 46 ms of a waveform. Any waveform longer than this cannot be stored in its entirety. In these cases, the waveform sample rate is typically decimated. The oscilloscope usually samples at full rate. Then, the user-selected horizontal scale and record length will

dictate the amount of sample decimation used to create the stored waveform record (use 1 of 2, 1 of 4, 1 of 10, etc.).

Usually, parameters are stated assuming the sampling rate is sufficient to display the waveform with a smooth curve. Some specifications do state that interpolation is used and the smoothing function is given. There are limits to the sampling rate that can be used. First, there is the familiar Nyquist rule, whereby a repetitive waveform must be sampled at least twice the frequency of the waveform. Because only two samples per waveform are available, you must wait the time necessary while a large number of waveforms are sampled before the smooth input waveform can be assembled. If only two samples per waveform are taken, a *brick wall filter* must be applied to the result. If not, spurious results, called *aliasing*, will be generated. The net result of this two-sample requirement may limit the maximum horizontal sweep time.

Vertical Channel Characteristics

The primary input element is the analog-to-digital converter (ADC). Those used in most oscilloscopes are either 8-bit (2^8 or 256) digitizing levels, or 12-bit (2^{12} or 4096) levels. The quantization error for an 8-bit ADC is $V_{in}/256$, and for a 12-bit ADC it is $V_{in}/4096$. For the specified sampling rate and a two-channel oscilloscope, if both channels cannot be sampled simultaneously, the effective sampling rate is actually half of the specified value. Again, not all scopes split the sample rate when additional channels are enabled, as many have multiple digitizers to avoid this issue. Finally, current sample rates are fast enough that techniques such as ET sampling are typically not required, even for high-frequency signals — a huge improvement from just a few years ago.

Preceding the oscilloscope ADCs are the probes. Though not generally specified, they are assumed to be compatible with the bandwidth limits of the oscilloscope. It is extremely important to compensate the 10X probes, as the effects of improper compensation can show up at frequencies as low as 10 – 20 kHz. Most, if not all, current digital oscilloscopes have a test port for compensation. The actual compensation adjustment location is usually in the probe itself, or in the shell around the BNC connector.

The analog circuitry between the probe input jack and the ADC may be a source of several types of error. Manufacturers supply error information in several ways. The most common specified value is *gain accuracy*. This is usually given in a percentage, and it often depends on the vertical gain setting, which may include an input attenuator. It may be given as a single number, such as 3% with no explanation, or as a number within a range, such as 2% if the vertical range is set from 5 mV/cm to 1 V/cm, and 3% if the vertical range is set from 1 V/cm to 10 V/cm. The vertical setting (voltage per centimeter) may also be given as a single range, such as 3 mV – 30 V. Alternately, it may be given as “selectable” from 3 mV – 300 mV, 300 mV – 3 V, and so on.

Another value that may or may not be specified is dc offset. This front-end error is the difference between where the oscilloscope shows you a waveform vertical location and the actual location. For example, if the probe is connected to ground (0 V) and the oscilloscope face shows a value of 3 mV, this is the dc offset.

The front-end numbers, when supplied as a single number, can be very misleading. Suppose the full-scale reading of a waveform is 20, and the vertical accuracy is 2%. If the actual value is half the full scale of 10, then the accuracy can be 4% depending on how the manufacturer decided to publish it. The front-end errors can be fixed, not dependent on actual signal input, dependent on actual input, dependent on

oscilloscope control settings, or partially all of these. Thus, to compare the specific performance of an oscilloscope, the conditions of the error specified must be known.

Triggers Can Be Important

In analog oscilloscopes, the trigger is what kicked off the sweep. In digital oscilloscopes, the oscilloscope is acquiring all of the time, and the trigger is used as a kind of bookmark to decide what samples to keep and display. This makes it easy to see both pre- and post-trigger activity. Also, depending on the type of information to be displayed, trigger jitter may be very important. Most oscilloscope specifications provide the names of the various trigger modes available. These are often the same trigger capabilities that were available in analog oscilloscopes, but with new names.

The primary trigger need for low jitter applies to repetitive waveforms, where each occurrence of the waveform is superimposed on the screen of previous waveform(s). The result of too much jitter can be a smeared and fuzzy horizontal waveform.

Jitter specifications vary between manufacturers. Some supply a full-page, hard-copy equivalent, some specify a single time measurement, and some provide no specification at all. The trigger jitter is also important when the digital oscilloscope uses a sampling technique, as discussed around Figure 2. Here, when short samples (in ns or ps) are used, jitter in the same order of magnitude will result in distortion of the final composition of the trace.

Stable trigger generation is also when used with an offset selection. If, for example, there is a 500 μ s long waveform containing a 30 ns section to be examined, the trigger starting the long waveform must have a jitter of less than the section you wish to examine. In this case, a fraction of an ns jitter (perhaps 6 – 10 ps) is needed to allow the 30 ns section to be clearly seen

Other Specifications

Although not numerical specifications, the following could be of interest if comparing several oscilloscopes for possible purchase:

Basic Math: Most often included are basic math functions, which use inputs from two channels. These functions include addition, subtraction, multiplication, and division. Operations are performed on a point-by-point basis, and the results are plotted as a new waveform.

Other Math: This list can be quite extensive and often includes automatic measurement. On a single waveform frequency, period, pulse width, average amplitude, rise time, average, mean, rms, and many others are included in the oscilloscopes. One oscilloscope advertisement lists 30 such operations. Of particular interest is the fast Fourier transform function, which permits viewing the signal in the frequency domain.

Further Capabilities

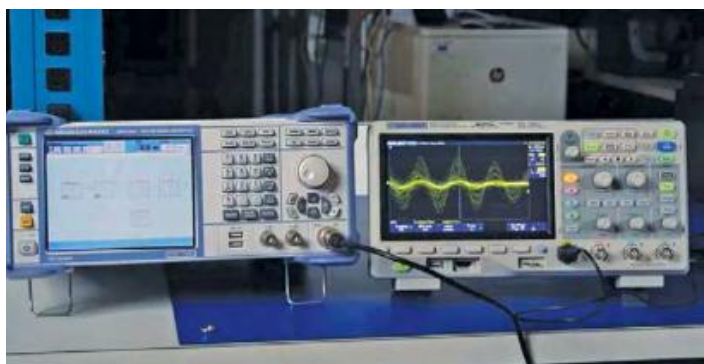
Because the digital oscilloscope includes memory and a processor, other features are often included. These may consist of a frequency counter and/or a frequency generator. An arbitrary waveform that fits in the memory depth can be stored and repetitively put out as a fixed waveform. The input or output of some of these auxiliary functions is often the input jack or connector for an external oscilloscope trigger input.

Source of Material

Five different digital oscilloscopes were purchased and initially functionally tested for descriptions in the November and December 2023 QST Product Reviews. Attempts to provide a one-to-one numerical comparison of capabilities were not successful, for the reasons stated previously: the specifications given were often not complete enough, so there was no assurance that the numbers were given under similar conditions. Several manufacturers have tutorials that include definitions. Others have tutorials on how some of the specification numbers were measured, especially the range over which the given numbers are valid.

Acknowledgments

While retaining responsibility for all of the contents of this article, I want to thank both Alan Wolke, W2AEW, and Phil Salas, AD5X, for their contributions and suggestions.



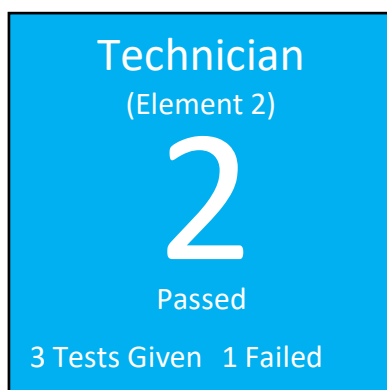
About the author - Paul Danzer, N1II, an electronics engineer, started out as a teenage radio amateur in 1953. He spent 33 years working in the defense industry on radars and digital equipment and was awarded 11 patents. After leaving these positions, he edited several ARRL books and wrote several articles for QST. You can reach Paul at n1ii@arrl.net

VE Sessions and Results

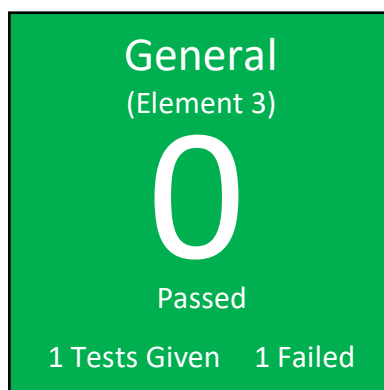
PROVIDED BY SYNOMEN HEBERT, KG5IRS

Attendees

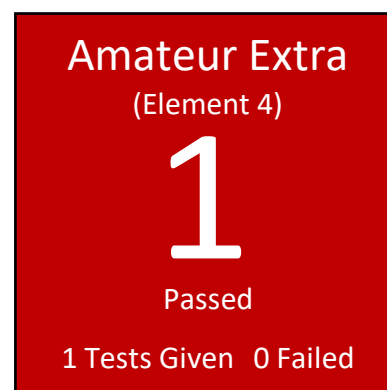
On Saturday, May 17, 2025, a VE Test Session was held at HCESD 16 Admin, 18606 Stuebner Airline Rd, Klein, TX 77379. During the testing session, 3 candidates took 5 tests.



Technician
(Element 2)
2
Passed
3 Tests Given 1 Failed



General
(Element 3)
0
Passed
1 Tests Given 1 Failed



Amateur Extra
(Element 4)
1
Passed
1 Tests Given 0 Failed

Congratulations!

Congratulations to the following for passing their new license exams¹:

- Jason A. Gerber – new Technician
- Evan Tew – new Technician
- Nicholas R. Tew – passed Extra test

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 June 28, 2025 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
- Paul Owen N5NXS
- Dale Schmirler KN5DS
- Craig Veteto W5CEV
- Kyle Vann K5KNV
- Logan Hebert KG5LLM
- Brynn Hebert KG5KRV

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.

Special VE Session and Results by Sheree Horton, WM5N

On Saturday, May 10, 2025 a special VE session was held at First United Methodist Church, Humble, Tx for the Event HAM-IN-A-DAY workshop for Boy Scouts. During the test session 15 candidates took 24 tests.

Element 2 tests given – 23; 7 passed, 16 failed

Element 3 tests given – 1; 0 passed, 1 failed

Element 4 tests given – 0; 0 passed, 0 failed

Congratulations to the following new Technicians –

- | | |
|-----------------------|---------------------|
| • Elliot R Bahler | • Emma N Johnston |
| • Gabriel Featherston | • Diana Featherston |
| • Ruby K Sticker | • Michael Schwegel |
| • Robert Featherston | |

Thanks to those VE's attending –

- Sheree Horton, WM5N, Session Manager
- Vicki Owen, AC5EW
- Paul Owen, N5NXS
- Ed Messman, KT5EM (remote grading)
- Harald Dietrich, KJ5BFF (remote grading)

Special thanks to Scott deMasi, KC5NKG (ARES District 14 NE EC) and his VEs and helpers for inviting us to conduct ARRL amateur radio license testing for their HAM-IN-A-DAY workshop.

New & Renewing Club Members

New Club Members

Welcome to the following new members of NARS!

- Ryan Fisher, K0GSD

Renewing Club Members

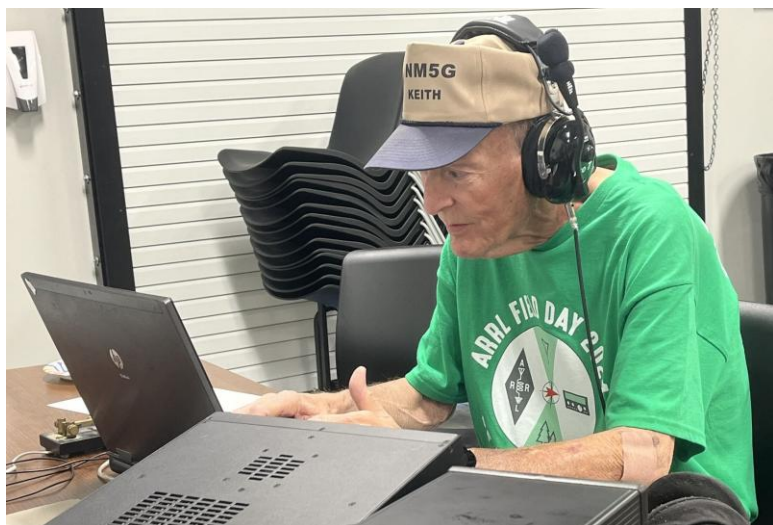
Thank you to all the members who renewed their NARS membership this past month:

- Brandy Lang, WE9L
- Synomen Hebert, KG5IRS
- Brett Hebert, KG5IQU
- Brynn Hebert, KG5KRV
- Logan Hebert, KG5LLM
- James Wheeler, AA5JW

Club Member Keith Dutson, NM5G/SK

By Paul Owen, N5NXS

Last month we lost one of the good ones. Keith passed away on May 13, 2025. He has been a member with NARS for a long time starting about 1994. He was always helping NARS out whether it was code classes, public service events, attending and being Field Day coordinator, VE Team Leader, Editor of NARS News, Secretary, Treasurer, Director position, VP and President of the club in 2011 and 2016. Keith has served in more club positions than any other member since the club was formed. Keith is also a Life Member of ARRL. I have worked at many events with Keith over the years. He served as my backup net control at the Houston Marathon for 4 years and served with him many VE Teams. I also heard how he would bake delicious pastries for the overnight crew at Field Day. He was coordinator of many of the SIRE and Buffalo Bayou Regatta events. He also went on many DXpeditions with NARS and TDXS members all over the world. Keith was a very good CW operator and would work in many DX contests. The last time he came out was during Winter Field Day to work on some CW contacts for the team. He will be truly missed! DitDit



Keith Dutson, NM5G, working the CW station during the 2024 NARS Field Day

Training and Education

NARS

NARS Meeting Presentations - <https://w5nc.net/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!

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: T9B01 – D. Reduced signal loss

General: G4A12 – C. To transmit on one frequency and listen on another

Amateur Extra: E6B06 – D. As a VHF/UHF mixer or detector

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 ⁴⁵ 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 ⁴⁵ 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

Calendar

Club Activities and Events

NARS General Meeting – June 20, 2025 - HCESD 16 Admin – [18606 Stuebner Airline Rd, Klein, TX 77379](#)

VE Test Session – June 28, 2025 – [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.

2025 Field Day – June 28-29, 2025

Celebration of Life for Keith Dutson, NM5G/SK – Jul 5, 2025 10am – 1pm, 24417 Deep Meadow Dr, Tomball, TX

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

July 12 | Tidelands Texas City Hamfest at Doyle Convention Center, Texas City, TX

August 9, 2025 | Shreveport-Bossier Hamfest at La State Fair Bldg, 3206 Pershing Ave, Shreveport, LA

August 16-17 | Huntsville Hamfest 2025 at Von Braun Center South, Huntsville, AL

Contests and Radiosport

ARRL Contest Corral

June 2025 - <https://www.arrl.org/files/file/Contest%20Corral/2025/June%202025%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>.

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

Area Event Alert

The South East Texas Amateur Club will host a Hidden Transmitter Hunt – Mobile on July 19 at 10 am. The area will be the Northwest Quadrant of the Inner Loop, boundaries will be I-45 North, I-10 West and Loop 610 NW, approx. ¼ of the inner city. The fox will be a mobile set on low power and transmitting at set intervals. The hunters will attempt to locate the Fox via RDF techniques. For those of you with Doppler or other high-tech RDF, you are invited to come practice, but you will be exempted from the prizes. The Fox will begin transmitting at 10 am, July 19 on 146.56 and we will have 1st, 2nd and 3rd place prizes. For more information contact Anthony at ke5gip@arrl.net.

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 Liaison: TBD

ARRL/VEC Liaison: Brett Hebert, KG5IQU

Repeater Team Lead: Rich Jones, W5VEK

Lead Net Control Operator: Mike Lizzio, WA2TOP

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 [Northwest Amateur Radio Society - W5NC Email Reflector](#)

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 for more information.