THE SIGNAL

Newsletter of the
Bella Vista area Radio Club

Arkansas' Largest Amateur Radio Club

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- 2026 Winter Technician License Class
- 2026 BVRC CW Academy
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February 2026

Monthly Meetings: 1st Thursdays @ 7 p.m.
Arkansas Law Enforcement Training Academy (ALETA)
3424 S. Downum Road, Springdale AR

(HAM 101 Workshop for Newcomers @ 6pm preceding meeting)

Club Calls: N5BVA / W5NX

(Repeater Nets) (Contesting, Operating, Special Events)

BVRC Twin Linked Repeaters:

Bella Vista: 147.255 +600 khz offset, pl 162.2

Springdale: 444.100 + 5 MHz offset, pl 162.2

Website: www.bellavistaradioclub.org

BELLA VISTA RADIO CLUB ARKANSAS

The Largest Amateur Radio Club In Arkansas!

Serving members in northwest Arkansas, southwest Missouri, & northeast Oklahoma

WEEKLY BVRC NETS

HAM 101 NET

Mondays @ 7 pm on the
WX5NAS Skywarn Link System

Bentonville – 146.865, -offset, pl 103.5
Springdale – 147.315, +offset, pl 97.4
Fayetteville – 147.315, +offset, pl 110.9
Huntsville – 443.625, +5 MHz, pl 97.4
Green Forest – 145.310, -offset, pl

LEGACY NET

Wednesdays @ 7 pm on the
BVRC Dual Linked Repeaters

N5BVA/Bella Vista
147.255, +offset, pl 162.2

N5BVA/Springdale
444.100, +5 MHz, pl 162.2

3830 ROUNDTABLE

Sunday Afternoons
4:00 pm during CST
4:30 pm during CDT

3.830 MHz

SOCIAL JUNCTION NET

Sundays @ 7 pm on the
WX5NAS Skywarn Link System

Bentonville – 146.865, -offset, pl 103.5
Springdale – 147.315, +offset, pl 97.4
Fayetteville – 147.315, +offset, pl 110.9
Huntsville – 443.625, +5 MHz, pl 97.4
Green Forest – 145.310, -offset, pl

SLOW SCAN TV NET

("The Slow Scan Show")

Fridays @ 7 pm on the
BVRC Dual Linked Repeaters

N5BVA/Bella Vista
147.255, +offset, pl 162.2

N5BVA/Springdale
444.100, +5 MHz, pl 162.2

NEXT BVRC MONTHLY MEETING

THURSDAY, FEBRUARY 5, 2026 @ 7PM
ARKANSAS LAW ENFORCEMENT TRAINING ACADEMY
3424 S. DOWNUM ROAD
SPRINGDALE, AR

February Meeting Information

HAM 101 Workshop, 6pm preceding monthly meeting – This month, the February workshop moderator will be BVRC's Michael Kemper – W5KMK. Michael's topic will be "Working the 'Dark Side' With FT8 – What you've been wanting to know but didn't dare ask your parents." Michael became interested in FT8 operation shortly after upgrading to General and Amateur Extra and has had very rewarding experiences with the mode. He will be sharing some of those experiences along with tips on how to be a successful FT8 operator. Be sure and join us for a very informative workshop!

BVRC February meeting, 7pm – The February program will feature BVRC past President, Membership chair, and Field Day Coordinator Tom Northfell - W5XNA. Tom will be in the program spotlight as he reviews BVRC's 2025 Field Day. Tom will be sharing all the highlights and statistics from what was another fun and successful FD operation.

SEE YOU THEN!

BOARD MEMBERS

President
Jan Hagan - WB5JAN
wb5jan@arrl.net

Vice President
Kathy Bromley - WQ5T
wq5t@arrl.net

Secretary
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almarc11@yahoo.com

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N5BVA Trustee
Roger Dickey - KJ4QIS
dickeyr@gmail.com

Member At Large & Public Information Officer
Tom Northfell - W5XNA
w5xna@arrl.net

APPOINTED OFFICERS

Education & Elmer 911 Committee
Chair: Vinson Carter - WV5C
vinsoncarter@gmail.com

Nets Committee
Chair: Dana Widboom - KI5TGY
dcwidboom@gmail.com

Membership Committee
Chair: Tom Northfell - W5XNA
w5xna@arrl.net

Social Media & Community Outreach Committee
Chair: Alex Smith - KI5EQK
ki5eqk@gmail.com

W5NX Trustee
Jay Bromley - W5JAY
jayw5jay@outlook.com

Webmaster
Roger Dickey - KJ4QIS
dickeyr@gmail.com

VE Testing Committee
Chair: Don Banta - K5DB
arsk5db@gmail.com

Newsletter Editor
Don Banta - K5DB
arsk5db@gmail.com

From the Desk of the President

BVRC Field Day at Metfield Skills Park in Bella Vista last June.

During our upcoming February, 2026 meeting, our outstanding BVRC Field Day Coordinator, Tom Northfell, W5XNA, will present a recap of our 2025 Field Day activities, including our total points standing as announced by the ARRL. This will be sure to be an interesting presentation for our club members and is sure to bring back many memories of our

Since that time, our club has had a growth of many new members, many of whom have not experienced a Field Day activity and may not be exactly sure what Field Day is all about. With that in mind, I thought it might be useful to our newer members as well as our seasoned veterans to read the definition below of what Field Day is from the ARRL itself.

I hope you enjoy Tom's presentation and I hope you get an idea of the size and scope of all that goes into making BVRC's Field Day operations as successful as they are each year!

73,
Jan - WB5JAN

ARRL Field Day is the single most popular on-the-air event held annually in the US and Canada. On the fourth weekend of June of each year, thousands of radio amateurs gather with their clubs, groups or simply with friends to operate from remote locations.

Field Day is a picnic, a campout, practice for emergencies, an informal contest and, most of all, FUN!

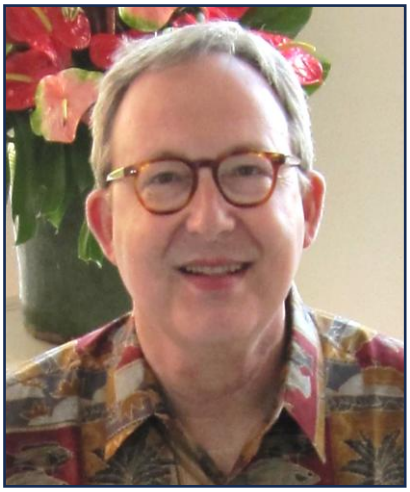
It is a time when many aspects of Amateur Radio come together to highlight our many roles. While some will treat it as a contest, other groups use the opportunity to practice their emergency response capabilities. It is an excellent opportunity to demonstrate Amateur Radio to the organizations that Amateur Radio might serve in an emergency, as well as the general public. For many clubs, ARRL Field Day is one of the highlights of their annual calendar.

The contest part is simply to contact as many other stations as possible and to learn to operate our radio gear in abnormal situations and less than optimal conditions.

We use these same skills when we help with events such as marathons and bike-a-thons; fund-raisers such as walk a-thons; celebrations such as parades; and exhibits at fairs, malls and museums — these are all large, preplanned, non-emergency activities.

Virtual Guest Speaker Kicks-Off 2026 With Outstanding Presentation

BVRC began its new year with a super program presented by Frank Howell – K4FMH from Ridgeland, MS. Frank is Professor Emeritus at Mississippi State University and Adjunct Professor at Emory University. He has been an SWL and antenna builder since he was 8 years old. Frank's favorite aspect of amateur radio is data and statistics collecting, so it's no surprise that his program contained a plethora of these items and was titled "HF Rigs – Price and Satisfaction Studies".



Frank Howell – K4FMH

The main theme of Frank's program was based on when a ham is in the market for a new radio, each radio model out there has different features and "bells and whistles", but one of the main components that a person should look for is the transmit composite noise generation of the unit.

Frank said receive improvements have been made over the past recent decades, but has there been progress in transmit purity? There are *distinctive differences among flagship transceivers* in transmit composite noise. Some rank no better than the same manufacturer's own mid-tier radios.

Some of Frank's material covered such things as the relationship between transmit composite noise and receive performance, the optimal transceivers on *both* transmit noise and receive performance, and at what price does better performance in both transmit and receive cost?

Franks program also included very interesting technical data along with impressive graphs that included transmit composite noise results of the major radio brands. Frank was kind enough to provide the club with his entire presentation of slides, which was e-mailed to the entire membership.

THANKS FRANK FOR A SUPERB PROGRAM, AND WE HOPE TO HAVE YOU BACK SOON!

For the inaugural HAM 101 Workshop for 2026, BVRC's 2023 Elmer of the Year, Jay Bromley – W5JAY, occupied the spotlight as January's moderator. Jay's topic for our newcomers (and veterans, too) was "Tips and Techniques on How to Get Better Performance Out of Your Station".

To ultimately get better performance out of your station, you must deal with the most important element of that station – *the antenna*.

Jay covered several areas of this subject including several different antenna types, SWR, ununs, baluns, dummy loads, and knowing how to properly *tune* an antenna.

Jay shared some great information on all these aspects which was well received by the almost standing-room-only crowd.

Jay, thanks for a great Workshop and we look forward to having you back!

Meet Your New BVRC Vice-President and Secretary!!!

BVRC Vice-President
Kathy Bromley – WQ5T (L)
and
BVRC Secretary
Sharron Edmondson – KC5SKY (R)

Bella Vista area Radio Club unanimously elected Kathy Bromley-WQ5T and Sharron Edmondson-KC5SKY as the club's new Vice-President and Secretary respectively during the business meeting at BVRC annual Christmas and Awards banquet on December 4, 2025.

We sincerely appreciate Kathy and Sharron stepping forward to fill the vacancies of these two BVRC Board positions. Not only will they add new perspectives to the Board and leadership team, but they are also highly qualified to meet the leadership standards that these offices involve. Here is a sampling of their resumés and past experiences:

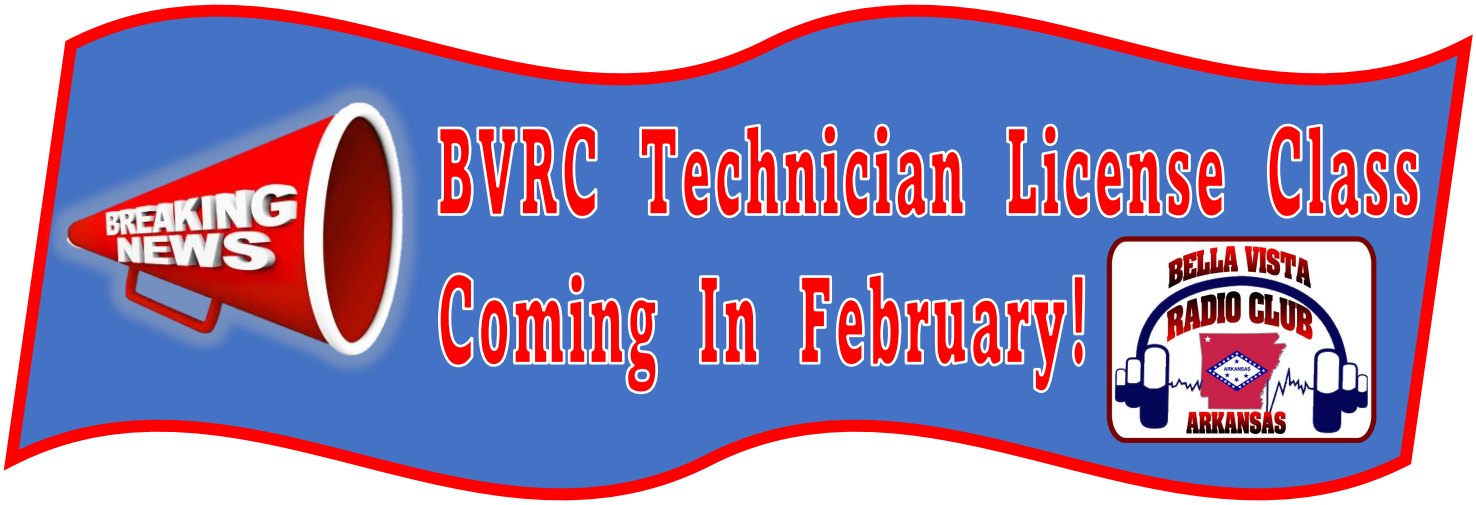
Kathy:

- Past Vice-President of the QRP Amateur Radio Club International where she served for 8 years
- Has been a been a BVRC member since 2018.
- Has been an active member in the club, serving in whatever capacity she has been needed when asked.
- Has assisted and participated in many BVRC Field Days and Special Events.
- Acquired her Technician, General, and Amateur Extra licenses, all in 2000
- Active member of, and has devoted many hours to, the Long Island CW Club
- Has acquired many operating awards including 8-band DXCC and Worked All States
- Has endeavored to help newcomers, especially YL members
- Is a retired Medical Technologist for 40 years, serving her last 12 years as a Chemistry Supervisor for the Veteran's Administration laboratory

Sharron:

- 1975 Graduate of Jay High School, Jay Oklahoma Honor Student
- 1977-1979 Graduate of NEO A&M Junior College Associate Degree, Dean's Roll Honor Student
- 1979-1980 Graduate of University of Arkansas, BAED-Bachelor Degree in Art Education and a Minor in Animal Science, Dean's Honor Roll Student
- 1982 Graduate of Northeastern Oklahoma University, MSED-Master Degree in Secondary Education, Dean's Honor Roll
- 1980-1986 Teacher Certified in Oklahoma where I taught Art at Jay High School for 5 years and 1 year at Oaks Mission School.
- Certified Firefighter for Maysville Volunteer Fire Fighter
- Certified EMT
- Certified Appraiser
- President of the Delaware County Cattlemen Association
- Board of Directors at the Bank of Gravette
- County Elected ASCS-Agriculture Stabilization Conservation Service Board Member
- First female in Oklahoma to receive the highest degree in the FFA-Future Farmers of America – The American Farmer Degree – in 1977. (President Jimmy Carter was present when she received this Degree .)

BVRC BESTOWS HEARTFELT THANKS AND APPRECIATION TO OUTGOING VICE-PRESIDENT JOE HOTT-W5AEN AND SECRETARY DANA HILL-W5DGH FOR THEIR 3 YEARS OF COMPETENT & DEDICATED SERVICE. WE WILL NEVER FORGET YOUR GREAT CONTRIBUTIONS TO THE CLUB.



Bella Vista area Radio Club is pleased to announce the winter 2026 amateur radio license class for the Technician license!

CLASS DATES: Saturday, February 7 and Saturday, & Sunday, February 14, 2026

CLASS LOCATION: Arkansas Law Enforcement Training Academy **(ALETA)**
3424 S. Downum Road
Springdale, AR 72762

CLASS SCHEDULE:

Feb. 7:	Feb. 14:
9:00am – 12:00pm	9:00am – 12:30pm
12:00pm – 12:30pm Lunch	12:30pm – 1:00pm Lunch
12:30pm – 3:00pm	1:00pm – 4:00pm

TESTING: A special Technician exam session will be given at the end of the Feb. 14 class.

INSTRUCTOR: Tom Northfell – W5XNA

Enrollment is now open!
To enroll in the class, click here.

BVRC CW ACADEMY STARTS APRIL 7 !

The 5th BVRC CW Academy will begin Monday, April 7, 2026! If you are interested in learning and adding Morse code to your amateur radio experience, if you enjoy a classroom atmosphere, and if you would like to join other beginning students in a fun and relaxed environment in learning the code, here is a "heads-up" for you to sign-up for the classes.

DESCRIPTION:

Event – Bella Vista area Radio Club CW Academy

Location – Arkansas Law Enforcement Training Academy (ALETA), Springdale

Instructor/Coach – Don Banta – K5DB

Class Schedule – Classes will be held every two weeks on Tuesday evenings. There will be 10 class sessions: April 7, April 21, May 5, May 19, June 2, June 16, June 30, July 7, July 21, and August 4. (A virtual class orientation will be held Monday, March 17.)

Homework – There will be homework assignments for each class.

Class Times – 6:30pm to 8:30pm

Class Objective – At the completion of the course, students will be able to send and receive all letters, numbers, most used punctuation marks, and prosigns at 5 words per minute. A handsome Certificate of Completion will be awarded to each student passing the final CW test and completing the course.

Equipment information – ***YOU DO NOT HAVE TO PURCHASE A KEY OR OSCILLATOR!*** *Keys and oscillators will be provided free of charge* on a loan-out basis for the duration of the class. Paper and pen are all you need to supply.

The class will consist of 8 students. There are four slots left.....sign-up today!

To sign-up – Contact Don at: arsk5db@gmail.com

BVRC HAMS LICENSED THIS YEAR, OR 3 YEARS PREVIOUS:

JOIN US FOR THE 2026 SSB ARRL ROOKIE ROUNDUP!!!

The ARRL Rookie Roundup is a contest aimed at amateurs who were first licensed in 2026, 2025, 2024, or 2023, to introduce them to HF operation. This fun-filled 6-hour event is held three times per year (April for SSB, August for RTTY, and December for CW).

The Rookie Roundup for SSB (microphone) this year is on Sunday afternoon, April 12, 2026, from 1800 – 2359 UTC (1pm – 6:59pm local time)

Rookie Roundup will be held at the BVRC W5NX Club Station at ALETA in Springdale.

If you presently do not have HF privileges and/or do not have an HF station, you can still operate from the station – as there will be an Elmer/Control Operator present – and enjoy, experience, and learn the fun world of HF! You will also learn the fun of logging contacts.

(The control operator will be there as a Coach for you, but they are <u>not</u> allowed to operate or log. – <u>YOU</u> will do the logging and operating!)

You will be operating with other rookies in the Multi-Operator category. If your team turns-in a good score you could win a handsome certificate with *<u>your</u>* callsign:

If you were first licensed any of the years 2023-2026 – *no matter which class of license you hold* – you are eligible to participate! Several new BVRC hams have already signed up for this fun event, along with some of last year's participants! Join them!

All participating rookies will receive a handsome BVRC participation certificate suitable for printing and framing.

If you would like some real ham radio HF experience and have loads of fun, get on the sign-up list today! To sign-up, send an e-mail stating you wish to participate to:

Don Banta – K5DB
arsk5db@gmail.com

See you April 12!

Throughout eastern Oklahoma and northwestern Arkansas, trained and dedicated individuals monitor the skies around their communities during severe weather events. These storm spotters provide first-hand severe weather reports to their local officials, and to the National Weather Service in Tulsa, which are used to make critical warning decisions.

Being a storm spotter not only means dedication but also training. Each winter and spring the Tulsa office of the National Weather Service trains members of police & fire departments, emergency management officials, and amateur radio operators on spotting techniques. Typically, the training is coordinated by a local group (such as an emergency management agency) and a NWS meteorologist serves as the guest instructor. The goal of the training is not just to recognize tornadoes, but to have some understanding of storm structure, which in turn better prepares the spotter for the extreme and unusual circumstances. Other topics covered include an update on the latest NWS technology and procedures, ideas for organizing/coordinating spotter groups, severe weather reporting, and important safety considerations.

If you are interested in attending a live, in-person class or enrolling in a virtual on-line class, go to the NWS Tulsa Storm Spotting page using this link:

https://www.weather.gov/tsa/spotter_training

The classes are free and open to the public.

As of press time, there is one class scheduled at the Washinton County Emergency Operations Center in Fayetteville, February 9 at 6:30 pm. Keep monitoring the above link for any additional in-person classes in our area, as well as virtual classes scheduled for March and early April.

If you need additional information, contact Ed Calianese at the National Weather Service office in Tulsa: ed.calianese@noaa.gov.

BVRC 2026 Winter General License Class Reaps Successful Results

The first BVRC General license class in a couple of years convened with two Saturday classes being held on January 3rd and 10th. The previous instructor for the General class was Glenn Kilpatrick – WB5L. Due to family issues, Glenn moved out of the NW Arkansas area which left a void for this class.

However, we are blessed with an awesome and competent membership. Glenn's position has been awesomely refilled as BVRC 2025 Ham of the Year, Stephen Ponder – N5ZE, stepped forward and volunteered to continue carrying Glenn's torch and what a stellar job he did.

◄ The class yielded 9 new General licensees, with one of the class attendees also passing the Amateur Extra exam!

A big congratulations to all who passed their exam. (See the list of the General class graduates on page 25 of this issue of The Signal.) Now get on those HF bands and go work 'em!

The youngest member of the General class was 12-year-old Jack Hudson-KJ5NKF from Tulsa, OK. Jack is the grandson of Jay & Kathy Bromley, W5JAY and WQ5T. They brought Jack over especially to attend the class. After passing the test, Jack asked if he could make a QSO with his new license as KJ5NKF/AG. Jack had a ball making a few QSOS on 20-meters. Way to go, Jack! ►

BVRC Members.....

The ARRL VEC is ready to serve you!

Bella Vista area Radio Club has two outstanding VE (Volunteer Examiner) teams that conduct amateur radio exam sessions each month in Bella Vista and Springdale. The teams are ARRL and ExamTools certified and work with the ARRL Volunteer Examiner Coordinator department at ARRL headquarters in Newington, CT.

However, many hams are unaware that ARRL VEC does much more than process and forward licensing documentation to the FCC. ARRL VEC has over 40 years of service to radio amateurs, operating as a knowledgeable information source for a wide range of licensing matters. Here are the great services that you can avail yourself of from ARRL VEC:

- **Examinees:** visit www.arrl.org/licensing-education-training
  (The Learning Center can help you in studying for your next license exam)
- **License Class Certificates:** visit www.arrl.org/license-certificates
  Now you can proudly display your accomplishment with your own License Class Certificate. A distinctive certificate is available from the ARRL VEC Department. This certificate acknowledges the success of newly licensed operators as well as those who succeeded long ago.

  The certificate is only available to holders of FCC-issued USA Amateur Radio licenses granted in accordance with Part 97 of the FCC rules.
  The 8-1/2 x 11-inch certificate is suitable for framing.
  Available for Technician, General, Advanced, or Extra class licensees.
  Certificate price (includes postage): ARRL Members-$12, Non-Members-$15.
  (Editor's note: These make GREAT gifts for birthday, Christmas, anniversary, etc.)
- **Vanity Call signs:** visit www.arrl.org/vanity-call-signs
- **Volunteer Examiners**: visit www.arrl.org/volunteer-examiners
- **VE Resources:** visit www.arrl.org/resources-for-ves

ARRL VEC
Email: vec@arrl.org
Direct Line Phone: 860-594-0300

Welcome New BVRC Members!

Keith Newman – K5YCM – Kingston, OK

Brandon Richter – KJ5NOB – Tontitown

Justin Redman – KJ5NVW – Bella Vista

Robert Riggle – KJ5NVY – Rogers

John McWilliams – KJ5NWM – Rogers

Dale Steffens – KJ5NWH – Rogers

Robert Presley – KFØWAX – Noel, MO

Mikey Wyatt – KJ5NWP – Fayetteville

Blake Smreker – KJ5NXT – Gentry

Zach Unruh – Call Pending – Bella Vista

EXPERIMENTER'S CORNER

By Dr. Bill Durham – KG5ZCI

Over the last several months I have been asked to repair some antenna tuners. Antenna tuners, in general, are very simple and can be frustrating to repair because of the simplicity. You look at all the components, maybe 10, and everything looks good. In a very notable case, the problem was simply a dirty switch. I say notable because there was a YouTube video on this very problem and the author gave up on the repair but not the video. In another case the meter movement was damaged.

While doing the repairs it occurred to me that a new toy would be handy. A power meter with a sample and hold feature, i.e., one that held the transient measurement long enough to see. Most transceivers and tuners rely on bar graph displays or meters. In these cases, the measured value only lasts as long as the signal, including some settling time.

A brief search of the web revealed the Surecom SW-102HF.

A simple power meter that retained the last transient reading. It also displayed the reverse power and the SWR. It is powered by an internal rechargeable (USB) battery, is about 3 x 3 x2" and is illustrated below left:

A simple power meter that retained the last transient reading. It also displayed the reverse power and the SWR. It is powered by an internal rechargeable (USB) battery, is about 3 x 3 x2" and is illustrated below.

The instructions for the device are not very good but there is also not much in the way of controls. There is no frequency tuning since the device sees only the signal provided by the transmitter. The range is 1.5 – 70 MHz.

How well does it work? My primary interest was power measurement and it appears to perform that very well. I tested it with an ICOM 746 and ICOM 7300. I set the rigs to CW mode at 5-10 wpm. One press of the CW key gave a very reproducible reading which in agreement with the rigs power meter. The default sample and hold feature was great. The readings at faster wpm (shorter pulses) appeared a bit lower.

The SWR with the Surecom in series with a 50 ohm dummy load and the ICOM 7300 at 40 watts was 1.0 just as expected. When I connected it to my 20 M dipole (14.065 MHz) in place of the dummy load, the SureCom showed an SWR of 2.2. The ICOM showed a little over 2 but close to 2.3 at 70 Watts. My MFJ Antenna Analyzer indicated an SWR around 1.7. I have a pretty good idea which of these measurements the locals will believe. However, I will look into this issue a bit further.

Bottom line: I like the device and expect to use it frequently. I have a couple of Heathkit HW-101's with analog power meters. Both are in need of repair.

Current price on Amazon is $55.

See you next month.

In two years, Bella Vista area Radio Club will celebrate its 35th anniversary. BVRC began as a small coffee klatch in Bella Vista in 1993. Few would have thought that it would one day be recognized as the largest amateur radio club in Arkansas. Initially organized as the Bella Vista Repeater Group, its initial focus was serving Benton County with a reliable wide area 2-meter repeater.

From its humble beginnings, how did this group evolve into the sizable and vibrant club of today? There are numerous reasons in answering that question.

Successful amateur radio clubs are vital to the future of the hobby, serving as hubs for recruitment, education, emergency communication, and community engagement. They thrive when they prioritize fun, inclusivity, and active participation, creating environments where members feel welcomed and motivated to contribute. A key indicator of a healthy club is its ability to attract and retain members through enjoyable and meaningful activities. Doesn't this sound like BVRC?

BVRC's membership and retention rates are excellent for these reasons. The club organizes several operating activities throughout each year that possess the "Three E's": education, entertainment, and enjoyment. Another vital element in welcoming new members and membership retention is the club's conducting of Technician and General license classes which are free and include a license exam session immediately following the conclusion of the course.

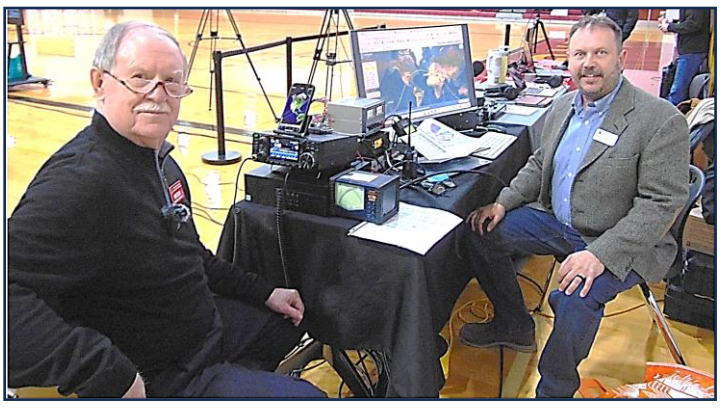
This enables class attendees to take the test while the material is still fresh on their mind and is one of the key factors in BVRC's license classes' successful passing rate. BVRC has 24 VEs (Volunteer Examiners) who comprise two testing teams that hold monthly examination sessions in Bella Vista and Springdale. The VEs also provide special exam sessions when needed as in the case of the license classes the club sponsors.

One of the foundational principles of a successful club such as BVRC is *having fun*. Members are more likely to return if meetings are engaging and include light-hearted elements, rather than being long, boring, and overly serious. Keeping business meetings short and focused allows more time for enjoyable programs while fostering a warm and welcoming atmosphere that encourages both new and existing members to participate.

Another critical factor is offering programs that meet the diverse interests of members. BVRC actively listens to our members by soliciting feedback and inviting ideas for guest speakers and activities. This ensures that the club's offerings are relevant and engaging. Successful clubs like BVRC provide a wide variety of programs such as hands-on workshops for newcomers to the hobby, radio demonstrations, antenna design sessions, and forums on such topics as amateur radio digital software and related apps. This diversity ensures there is something for everyone, from beginners to seasoned operators. If you're a regular attender of BVRC's monthly meetings, you are aware of the abundance of different topics and programs that are conducted each month in our HAM 101 Workshops and main meetings.

Effective communication is also essential. A well-produced newsletter serves as a vital tool for promoting events, reporting on club activities, and recognizing volunteers. It acts as a tangible connection between members and the club, especially when some members are unable to regularly attend meetings. Similarly, maintaining a professional website and using social media platforms can significantly enhance visibility and outreach. BVRC is pleased to possess all these robust and informative tools.

Tapping into the talents of members is another hallmark of success. Clubs are built on volunteerism, and recognizing contributions – through public thanks, awards, or media releases – helps sustain motivation and prevent burnout. BVRC is blessed with an abundance of members with specialized knowledge in areas such as electronics, antennas, operating, technical support, writing, and event planning, which enable the club to leverage these strengths effectively.



Staying active through regular operating events is crucial. Activities such as fox hunts, assisting public entities, and special event operations not only

provide fun but also showcase amateur radio to the public and attract new members. These events cultivate camaraderie and demonstrate the practical value of the hobby in real-world scenarios. Our club organizes a diverse range of events that foster community service, promote operating skill development, and celebrate the hobby's rich traditions. These gatherings serve both new and experienced operators, offering opportunities for learning, fellowship, and practical application of amateur radio principles. One of the most prominent events is Field Day, a 24-hour exercise conducted annually to simulate emergency communications using portable power sources and temporary station setups. Field Day is a cornerstone of club activities, emphasizing preparedness and real-world operational readiness.

In addition to Field Day, Special Event Stations are another of our club's main features. Special event activations are a popular way to celebrate historical milestones and global, regional, and local themes. They also combine member camaraderie with the elements of setting up portable stations and improving operating skills.

For example, in recent years BVRC has conducted Special Event Stations from Mt. Magazine-the highest point in Arkansas, worked in conjunction with the Amateur Radio Club of the University of Arkansas to conduct a contact with the International Space Station, commemorated the club's 25th and 30th anniversaries, commemorated the 80th and 85th anniversaries of Arkansas Statehood, the 300th anniversary of the founding of Little Rock, the 50th anniversary of the flight of Apollo 11, the 150th anniversary of the Civil War battles of Pea Ridge and Prairie Grove, activations of several National Park units during National Parks On The Air in 2016 commemorating the 100th anniversary of the National Park Service, the activation of several POTA (Parks On The Air) parks, and N5T Train Mobile. The club is always looking for historical events with which to conduct Special Event Stations.

The use of radio communication itself strengthens club cohesion. Weekly nets allow members to stay connected between meetings, discuss club business, share technical tips, and promote upcoming events. This ongoing interaction helps maintain momentum and keeps the club's spirit alive. BVRC also shines in this department with its whopping five weekly nets, plus the annual Santa Net in December for our members' children, grandchildren, nieces, nephews, etc.

Also, and very important, successful clubs are inclusive and welcoming to newcomers. Assigning new members small, manageable tasks – such as assisting with a demonstration or helping at an event – helps them feel integrated quickly. This is one of BVRC's paramount objectives.

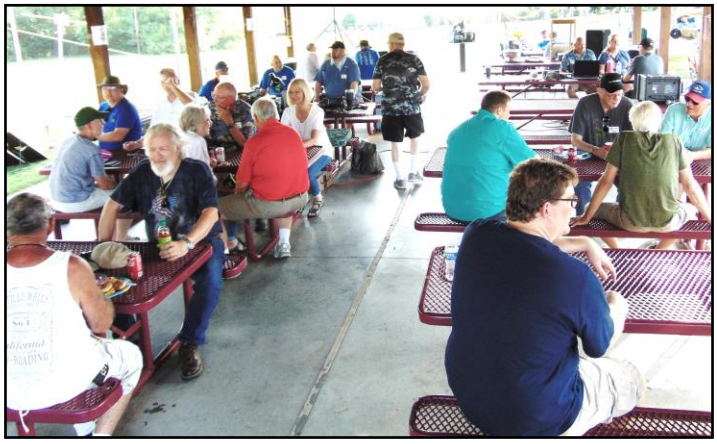
In addition, a very exciting and significant asset of a successful club is the presence of a club station. A permanently located club station accessible to members is a huge boon, especially for new hams who may not have their own equipment or antennas. BVRC's W5NX Club Station has been under construction for the past several months and is very close to nearing completion and becoming operational. There are already several events planned for the station in 2026.

BVRC is here for all our members, and is devoted to build skills, strengthen community ties, and promote the values of preparedness, innovation, and international goodwill through amateur radio. Whether through emergency drills, educational workshops, or festive celebrations, these events ensure the continued vibrancy of the amateur radio community.

Ultimately, the most successful amateur radio clubs such as BVRC are those that combine strong leadership, diverse programming, active outreach, and a culture of mutual support and recognition. Consequently, BVRC is not just an administrative body but an energetic community where the joy of amateur radio is shared and sustained across generations.

BVRC is proud to be able to check all these boxes, which has resulted in it being an *ARRL Special Service Club*, the highest accolade for amateur radio clubs in the U.S.

Yes, BVRC has top-notch Board members, Appointed Officers, and Leadership Team who perform a stellar job in leading, guiding, and directing the club. *But the main reason for its phenomenal successes and advancements is due to its WONDERFUL MEMBERS who are excited about amateur radio and combining their knowledge and efforts with other kindred spirits in our club.*

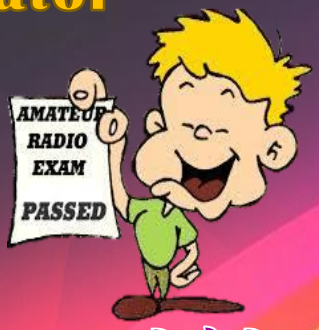


Finally (and speaking of our members), we have many active members in the club who take part in the different events and activities the club convenes.

However, there are members who faithfully renew their membership each year but tend to shy away from those activities. To this latter group, we heartily invite you to become more active with us! Remember, YOU are part of the BVRC family, we appreciate you, and you're welcome any time! Join-in on the next club event or meeting.....or both!


BELLA VISTA
RADIO CLUB
ARKANSAS
ARKANSAS
ARKANSAS' LARGEST
AMATEUR RADIO
CLUB
You're a part of it !
Thanks for your support !
Get involved with
Club meetings and events !

BVRC VE REPORT
From Don Banta – K5DB
BVRC VE Coordinator
January 2026



Congratulations!

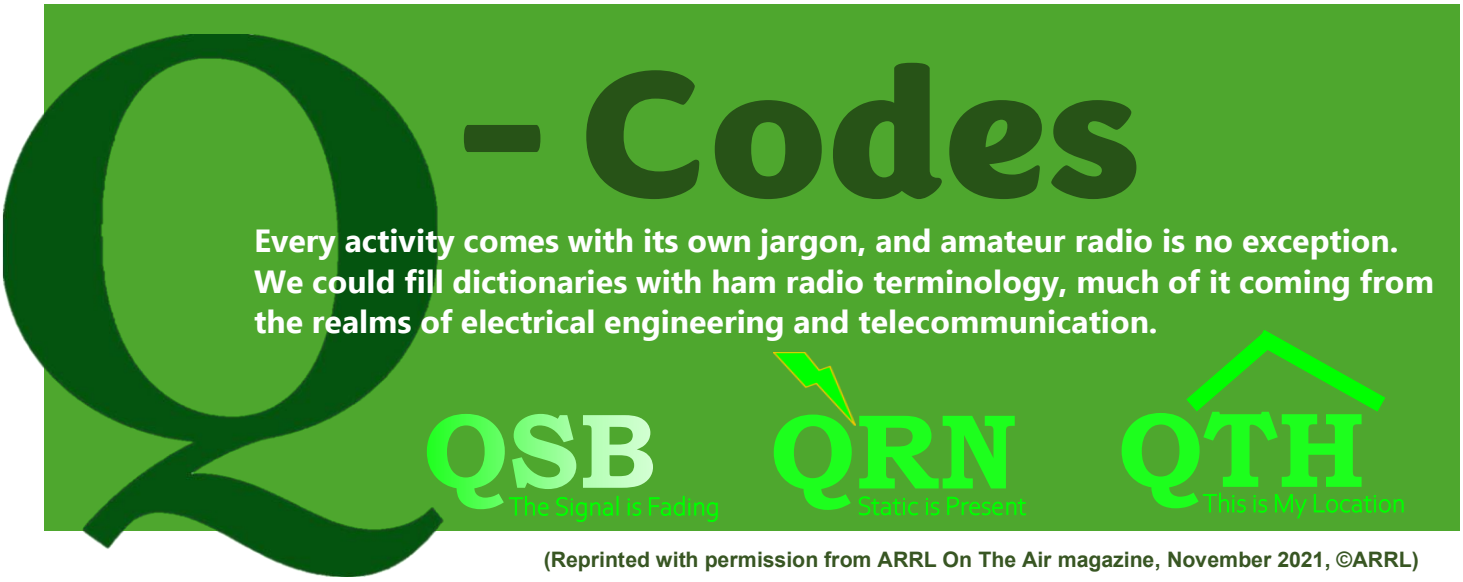
Robert Presley – KFØWAX – New Technician!
Justin Redman – KJ5NVW – New Technician!
Robert Riggle – KJ5NVY – New Technician!
Dale Steffens – KJ5NWH – New Technician!
John McWilliams – KJ5NWM – New Technician and General!
Brandon Richter – KJ5NOB – New General!
Jerry Biazo – W5JDB – New General!
Lanna Gage – N5ALG – New General!
Jack Hudson – KJ5NKF – New General!
Thomas King – KK6IZK – New General!
Brad Ponder – KJ5CWR – New General!
Drake Rush – KJ5MXM – New General!
Greg Merrell – K5TJY – New General and Amateur Extra!

Next month's exam sessions:

- ***February 14, 10 am – Shiloh Museum, 118 W. Johnson Ave, Springdale***
- ***February 14, 2 pm – Bella Vista Public Library, 11 Dickens Place, Bella Vista***

**If you wish to test, you must register for an exam session.
To register, and for additional instructions,
go to the TESTING tab on the BVRC website:**

https://bellavistaradioclub.org/testing/



Among the strangest verbiage in ham radio – at least to newcomers – are Q-*codes*, also known as Q-signals. The British invented Q-codes in 1909 to make radio telegraphy more efficient and easier to understand, especially under difficult conditions, and to provide a way to make basic communication possible between people who didn't speak a common language. They used them as a "CW shorthand" of sorts.

What is the Q-Code?

The Q-code is a standardized collection of 3-letter codes, all of which start with the letter Q. To distinguish the use of a Q-code transmitted as a question from the same Q-code transmitted as a statement, operators either prefixed it with the military network question marker "INT" (interrogatory) or suffixed it with the standard Morse code question mark.

Q-codes came into use at a time when all communication – ham radio and otherwise – used Morse code. However, the continued to be used even after voice communication came into being. Numerous hams today have the opinion that Q-signals were originally created for CW use and are not to be used on phone (SSB). – Nothing could be farther from the truth.

Q-signals today are in use, and very much so, on phone mode. Of course, there are Q-signals that apply *specifically* for CW operation only and are not applicable for voice mode.

However, over the decades several of the original codes have migrated into phone operations and are widely used today, such as: QRZ(ed), QSB, QSL, QSO, QSY, QRM, QRN, QTH, and others.

A very interesting item to note here: Have you ever noticed that NO ham radio call signs anywhere in the world begin with the letter Q ? This was done intentionally to avoid confusion with Q-codes on the air.

By using Q-codes, it's possible to communicate more meaning with just three letters than you can impart in a complete sentence. For example, an operator could send (or say) to you, "I'm sorry, I'm not copying you because there's a station too close to our frequency, and they are splattering and causing interference." But what if conditions are so poor that you miss a lot of that sentence? Or, what if they are a DX station and do not speak English very well or at all?

Instead, they could simply send or say "QRM". That's the amateur radio Q-signal meaning, "I have interference."

More than likely, you'll hear those three letters, even under difficult receiving conditions. And even if they don't speak English but they are familiar with Q-signals and use them, you'll still understand what they are conveying to you over the air.

Q-Code Evolution

As already mentioned, Q-codes (or signals) were never intended to be used for voice communication, but that didn't stop amateurs. In fact, hams developed their own set of Q-signals, based largely on the versions used by other services. (See table on next page, "Amateur Radio Q-codes") Most were used between stations relaying messages. Just like the original custom, an amateur radio Q-code can be sent as a question or a statement.

Over time, many of the amateur Q-signals fell out of common use, or their meanings changed from those shown in the table. Even so, there are about 13 Q-codes you will still encounter frequently today (12 of which are regularly used on SSB as well as CW). Here is a list of common codes, with their modern-day meanings. . .

QRM – Interference from other signals as in, "I have a lot of QRM (QRMary) at my end."

QRN – Interference due to noise such as static crashes from lightning. (QRNancy)

QSY – Changing frequency, as in, "Let's QSY to 7.150 MHz. Or, notifying another station that is causing interference, "The frequency is in use. Please QSY."

QTH – Location, as in, "My QTH is Bella Vista, Arkansas."

QSL – Affirmative, Roger, I understand. Also a hard copy postcard or electronic confirmation that confirms a QSO.

QSO – An on-air conversation or contact.

QRP – Operating with 5 watts of power or less.

QRO – Operating with high power, usually more than 100 watts.

QRT – Going off the air; shutting down the station.

QRS – A request us in CW to send code slower, as in, "PSE QRS".

QRZ(ed) – "Is someone calling me?" "Who else would like to call me?" This Q-signal is used a lot in contesting, to invite a new contact after immediately finishing a previous one. Example: "QSL and good luck in the contest. W5NX QRZed." (Note that on phone it is always advisable to say "Zed" instead of just the letter Z. It is easier to distinguish Z in this manner, thus preventing the letter from being misunderstood as a C or T.)

QSB – Fading, as in, "Could you repeat your question, please? There's a lot of QSB on the band today."

QRX – Stand by, as in, "I'll be QRX for a few minutes and I'll be right back.

Amateur Radio Q-Codes

Code	When Sent as a Question	When sent as an Answer or Statement
QNI	May I join the net?	You may check in ...
QNU	Does the net have traffic for me?	The net has traffic for you; please stand by
QNX	May I be excused from the net?	You are excused
QRA	What is the call sign of your station?	The call sign of my station is ...
QRG	Will you tell me my exact frequency?	Your exact frequency (or that of ...) is ... kHz (or MHz).
QRL	Are you busy?	I am busy. Please do not interfere.
QRM	Do you have interference?	I have (human-made) interference
QRN	Are you troubled by (natural) static?	I am troubled by (natural) static
QRO	Shall I increase power?	Increase power
QRP	Shall I decrease power?	Decrease power
QRQ	Shall I send faster?	Send faster
QRS	Shall I send more slowly?	Send more slowly.
QRT	Shall I cease operation?	I am ceasing operation.
QRU	Have you anything for me?	I have ... messages for you.
QRV	Are you ready?	I am ready.
QRX	Shall I stand by?	Please stand by.
QRZ	Who is calling me?	You are being called by ...
QSB	Are my signals fading?	Your signals are fading.
QSK	Can you hear me between your signals?	I can hear you between my signals.
QSL	Can you acknowledge receipt?	I acknowledge receipt.
QSO	Can you communicate with ...?	I can communicate with ...
QST	Should I repeat the message to all amateurs I contact?	Here follows a message to all amateurs.
QSU	Shall I send or reply on this frequency?	Send or reply on this frequency.
QSY	Shall I change to another frequency?	Change to another frequency.
QTC	How many telegrams (messages) have you to send?	I have ... telegrams (messages) for you (or for ...).
QTH	What is your position?	My position is ...

If you would like a more extensive list of Q-signals, here are some websites where they can be found:

https://www.sckans.edu/~sireland/radio/q_signals.html

https://hamradioacademy.com/resources/q-signals-q-codes/

Good luck in learning the more common Q-codes in this article and others that are used. They will be a big advantage for you.

Attention all newly licensed amateurs in the Bella Vista area Radio Club!

HAM 101 WORKSHOP

Each month before BVRC's regular monthly meeting at 7:00 pm, we offer a unique benefit for all new hams –

The HAM 101 Workshop

HAM 101 Workshop is a special meeting that convenes at 6:00 pm, one hour before the regular monthly meeting, <u>just for you</u>. Each month, one of our veteran hams moderates the meeting with an 'amateur radio newcomer' type topic, followed by a Q&A session on any and all topics of amateur radio. It is a fun and educational time of discussion, learning, fellowship, and fun. If you're new to our hobby, these meetings are geared for *you*. Be ready to ask questions and we'll see you there!

TIME: 6pm, before each regular BVRC monthly meeting at 7

PLACE: Arkansas Law Enforcement Training Academy (ALETA)
3424 S. Downum Road
Springdale, AR

FIELD DAY 2026

Coming Soon

Thanksgiving, Christmas, and New Year's have once again passed, with lasting memories of get-togethers with family and friends.

The Winter Solstice has also come and gone. What does that mean to the ham operator? It means the days are once again getting longer and nights shorter. And yes, we may still have to endure a few last shots of "'ol man winter", but *IT'S TIME TO PREPARE*.

Prepare for what? For the biggest event in amateur radio. Yes, before you know it, it will be here: FIELD DAY 2026. In only about 5 months, "CQ FIELD DAY" will once again fill the airwaves, June 27-28.

MARK YOUR CALENDAR NOW FOR AN EXCITING 2026 FIELD DAY ADVENTURE WITH THE BELLA VISTA area RADIO CLUB!

Start thinking now about how you would like to be a part of this awesome event. Would you like to help with site set-up (exciting!) or take-down? Bring a special dish for the Field Day feast? Radios, antennas, power sources, accessories, food, drinks, etc. are all part of the plan that you can help with. Do you plan to operate SSB? CW? Digital?

Remember, this is the largest amateur radio event in the United States and Canada, and it only happens once a year.

So plan on coming and staying for a good length of time. With the station activity, fellowshipping with other club members, operating, and just enjoying the "World of Field Day", the time will fly and you'll have a ball!

BVRC FIELD DAY LICENSE TESTING!

The BVRC Volunteer Examiner Team will be on hand to conduct a special Field Day VE test session for all those wishing to test for their first ham license or license upgrade. The test session will be held at 2 pm on Saturday, June 27!

If you plan to participate this year and would like to lend a helping hand when Field Day weekend rolls around, watch for upcoming coordinating plans on the BVRC website, Facebook page, and *THE SIGNAL* as the fourth weekend in June draws near.

PREPARE NOW !
FIELD DAY COMETH !

The BVRC Club Station Task Force Team met at the ALETA complex on Saturday, January 3, 2026. The team has conducted several meetings over the course of the new club station construction. This was a very important assemblage, as several topics were discussed as to the formulation and implementation of how the station will be managed and operated, as well as the tremendous excitement of the realization that W5NX would go operational today!

President Jan-WB5JAN did a stellar job in designing a document covering club station policies, procedures, and protocol for advice and consent from the task force members. The discussion was excellent and a completed product of this document will soon be finalized, which at that time will be published here in The Signal and on the BVRC website for members to familiarize themselves with.

When the final product is completed, the club will have excellent guidelines to follow, resulting in an excellent structure enabling BVRC members to realize full utilization and enjoyment out of the station.

Also on this day, the final stages of club station construction continued as team lead Chuck – KM5G scaled the tower once again to complete final feedline and cabling connections to the antenna, antenna switch box, and rotator. All of this was accomplished in a chilly 45°. – Thanks so much Chuck.

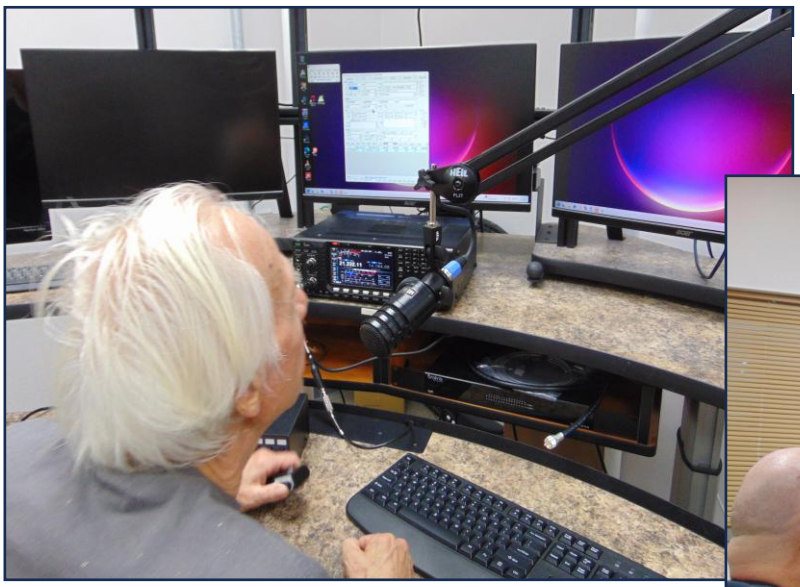
There still remained one bugaboo with the coaxial feedlines: It was discovered a couple of weeks previous that the PL-259 connectors' center conductors were too short to make a quality connection when mated to the barrel connectors. After a semi-intense search for a correct connector, the quest ended with an excellent connector from Times Microwave.

The W5NX club station has incorporated LMR-600 coax. For those unfamiliar with this type of coax, the diameter is .590 inches, with the dielectric layer .455 inches thick. The dielectric material used is foam polyethylene, which contributes to the cable's low loss characteristics. LMR-600 is some of the largest coax made. It was determined that due to the length of the coax run – almost 250 feet for each antenna – LMR-600 was needed to prevent excessive signal loss, and this will, without a doubt, result in the best signal emitting scenario for the station.

Chuck-KM5G, Jay-W5JAY, and Don-K5DB returned to the station Sunday afternoon, January 4, to effect repairs by cutting-off the substandard connectors and installing the better grade connectors.

The first transmitting tests were then conducted. The tests revealed a 1:1 SWR in the phone segment of all 4 bands the antenna operates on, with the digital and CW segments of each band generally yielding around a 1.3:1 SWR. A HUGE "THANKS!" TO STAN-K5GO IN CONSTRUCTING THIS ANTENNA TO BE SO WELL RESONANT!!!!!!

At 4:15pm local time, Chuck went to the 20-meter phone band and found a station activating a POTA park in Wisconsin. The Wisconsin station gave a 58 report and said Chuck's audio quality was great. – Great results with the antenna "looking the wrong way". Chuck then moved to 15-meter phone and called a Canadian station in Ontario who also gave a 58 report and who also remarked on the excellent audio quality of our signal. Jay-W5JAY then assumed the operator position for FT8 testing. As with the phone QSOs, Jay made several digital contacts with very good signal reports. (CW testing will be conducted in the near future.) Woo-hoo! Excellent results! This is indicative that W5NX has a bright future ahead! STAY TUNED FOR THE ANNOUNCEMENT OF W5NX BEING FULLY OPERATIONAL!



◄ Chuck-KM5G works VE3XYY on 15 meters phone

Jay-W5JAY makes a few FT8 "test" QSOs ►

In recent years, BVRC has had many members upgrade their license to General or Amateur Extra, followed by their pursuance in getting on the HF bands. Usually, their first antenna of choice for HF operation has been either the End Fed Half Wave or Dipole antenna, generally using 14-gauge wire.

Along with the installation of these antennas, however, some members have experienced the aggravating occurrence of their antennas breaking in excessively high winds (40+ mph). This problem tends to occur more with the dipoles, especially when the antenna experiences the natural stress of suspending it between trees, as opposed to an Inverted-L or Inverted-V configuration.

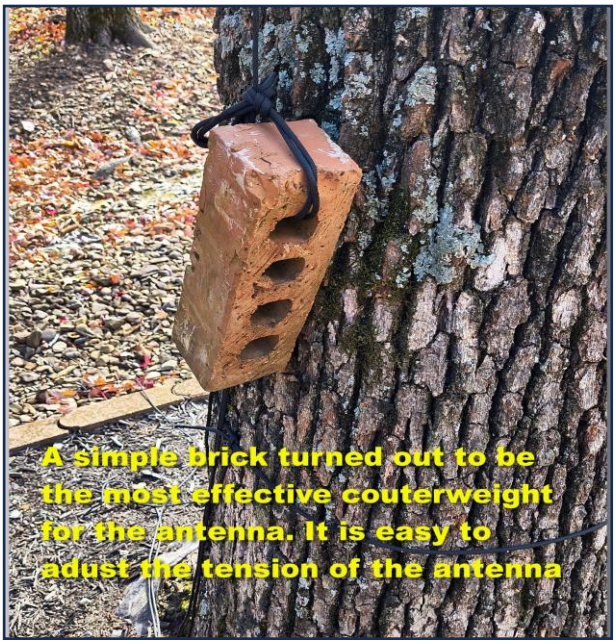
When suspending the antenna between two trees, if high wind causes the trees to sway in the opposite direction of each other, this significantly increases the stress on the antenna and can cause the suspension ropes, or the antenna legs themselves to snap.

Several members have now redressed and remedied this problem by one of two methods: 1) inserting a spring as a “shock absorber or stretcher” between the end insulator and support rope on each leg of a dipole, or 2) using a counterweight system in the application for an End Fed, which keeps a steady torque on the antenna and can be adjusted as needed.

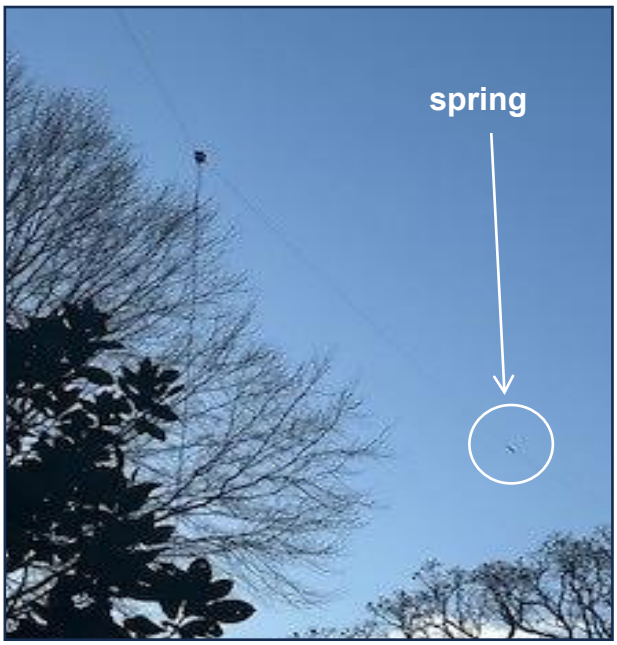
(For those interested in using springs, a good source is Tractor Supply which stocks a 16” spring that will be flexible enough to absorb the stretching strain on the antenna, while still being strong enough to prevent damage to the spring.)

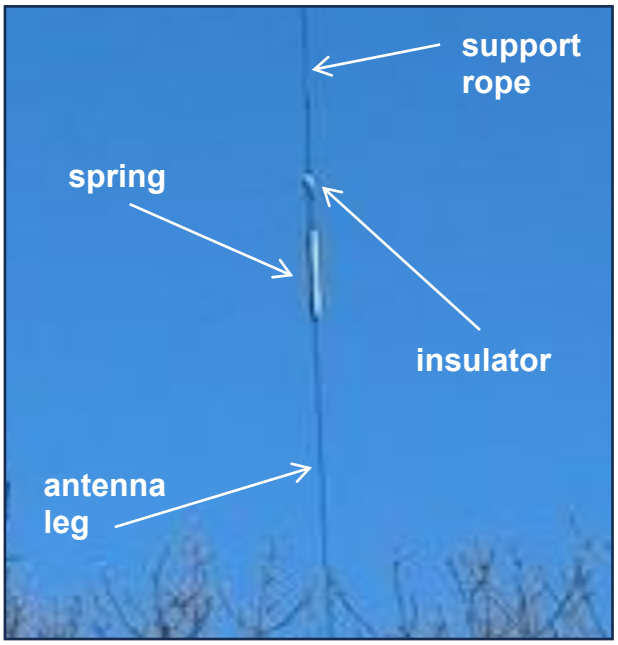
The following page shows photos of these two options to prevent wire antenna breakage by Sharron-KC5SKY using springs on her Windom dipole, and Jan-WB5JAN using the counterweight system on his End Fed Half Wave:

WB5JAN:



KC5SKY:



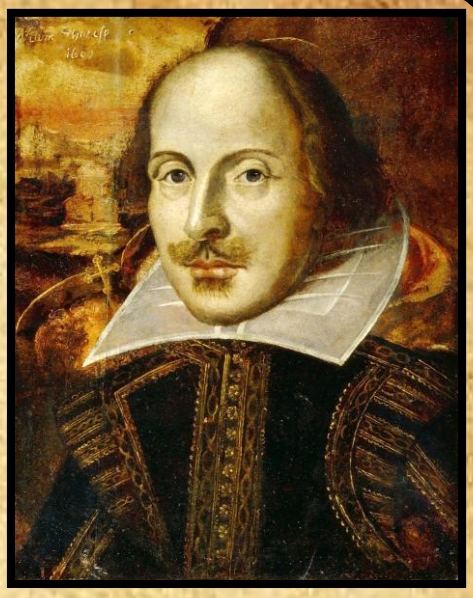


LAUGHTER


So I bought a new transceiver and she asked...
"Are you going to sell any of your old ones?"


DUCT TAPE
IT FIXES EVERYTHING!


JOIN THE RESISTANCE
OHMMMMM...



You don't have to write like William "Bill" Shakespeare in order to write an article for The Signal. --- In fact, we prefer articles without the words "thy", "whilst", "tis" and "oft".

Working on a new kit or homebrew project? Have you recently received a rare or interesting QSL card to share? Received a new radio award? Or do you just have a neat photo (ham radio related) or some comments to share with other BVRC members? Maybe you have acquired a new piece of equipment, or constructed a new antenna? Taken a trip focused around ham radio to share an amateur radio related experience? *Why not write an article for The Signal?*

The article can be short or long, simple or elaborate. Please include pictures! We're always looking for material for the BVRC newsletter, and feedback from our readers goes a long way toward keeping the newsletter interesting! So why not give it try? Write an article and send it to the newsletter editor, and we'll get it in there! It's fun, and at the same time your contribution helps support BVRC and our hobby! Articles can be submitted electronically or on paper, whichever you prefer. As *The Signal* editor, I ***particularly*** look forward to putting a new issue together when I have material submitted by our club members. Hope to hear from you soon & 73! (Send it in!)

Submit your material to:
Via e-mail: arsk5db@gmail.com
Via regular mail: Don Banta, K5DB
3407 Diana St.
Springdale, AR 72764

For January and February 2026, we are deviating away from spotlighting different DX entities and instead featuring two articles for January and February that we hope will provide information for avid BVRC DX enthusiasts. Last month we discussed how international callsigns are formatted and assigned. This month we're going to explore one of the more difficult aspects of DXing: Working DX on the 80-meter band.

Acquiring DXCC is relatively easy on the higher HF bands of 20, 17, 15, 12, and 10 meters. For the lower bands, DXing on 40 meters is a little more challenging but very possible. However, if you want a real challenge while also enjoying the accomplishment of acquiring DXCC on a tough band, give 80 meters a try. Although 80 (and also 160 meters) is much more challenging than the higher bands, it is very possible to garner DXCC on this toughest of the five main bands (80, 40, 20, 15, and 10 meters).

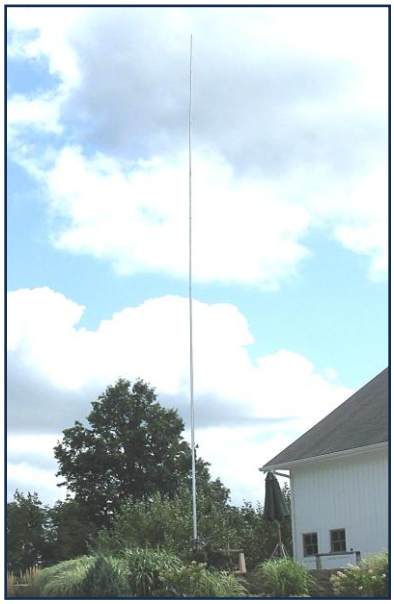
Of course the old adage, "Your radio is only as good as your antenna" can definitely be applied to 80-meters. Without a decent performing antenna to work long distances on 80, you're probably going to be disgruntled and disappointed. When it comes to an antenna for 80, you can "get in the game" with relatively low funds for a decent antenna, although it is also true if you really want to sink a lot of money into a low-band antenna system, you can also increase your station performance which also will increase your DXing potential on this LF band.

Because the antenna will be the key player in how successful you are in working DX on 80, let's explore some of the more popular antennas used by seasoned DXers...

Again, working DX on the 80-meter band is achievable with the right equipment and operating conditions, though it presents challenges compared to higher bands. The band is primarily known for ground wave propagation, making it ideal for local contacts, but DX is possible under favorable conditions such as grey line propagation (see Signal issue for May 2022, page 19) and during periods of increased solar activity.

Efficient antennas are crucial for DX on 80 meters. Full-size dipoles, inverted Vs, or full-wave loops are recommended for optimal performance. For example, a full-wave loop with loading coils in each corner can be tuned to resonate on 80 meters and even work on harmonics like 30 meters.

Despite the challenges, DX on 80 meters is not impossible. The band offers a narrow window for SSB DX, typically between 3.785 MHz and 3.800 MHz, where operators often practice courtesy and cooperation to manage congestion. With modest equipment and good operating practices, it is possible to work stations around the globe, though success depends heavily on propagation, antenna efficiency, and timing. Also, if you're really serious about working DX on 80 and you haven't done so, although it's not critically necessary, you might consider upgrading to the Amateur Extra license, as DX stations operate quite often in the US Extra sub-bands of 80 meters. Also, adding an amplifier to your station will help with 80-meter DXing.



80-meter vertical antenna

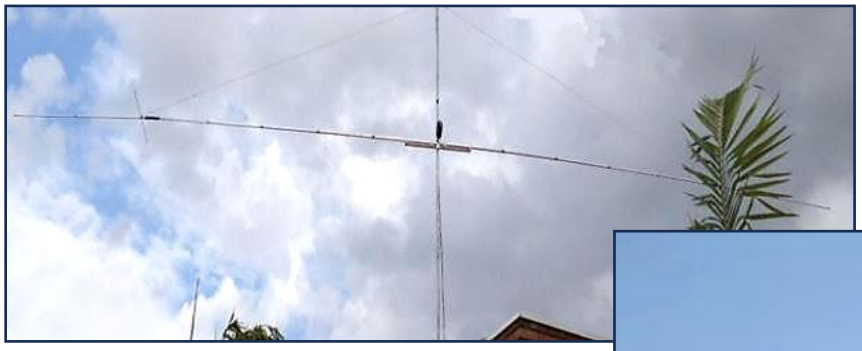
Now, about those antennas. – For those who have limited space where an End Fed Half Wave or Dipole antenna is not feasible, you can always consider a vertical.

The height of an 80-meter full-size vertical antenna is typically a quarter-wavelength, which is approximately 66 to 68 feet. For example, the ZeroFive Antenna's 80M full size vertical is adjustable from 60 to 66 feet, while the DX Engineering 80 Meter Full Size Quarter Wave Vertical Antenna is 68 feet tall.

Some designs, such as the 10-80 meter freestanding ground plane vertical antenna from ZeroFive Antennas and DX Engineering, are 41 feet in height with a total height of 43 feet. Keep in mind you'll need some ground space for the radial field for these types of ground-mount antennas.

If you have room on your property or do not reside in a POA/HOA neighborhood, you can opt for the very popular low band antennas: wire dipole, end fed half wave, and rotatable dipole, although a commercial rotatable dipole can be pricey.

These horizontally polarized antennas can enable you to get very good results in working DX on 80-meters. Also remember with dipoles and EFHWs: the higher, the better. For *optimum performance*, these types of antennas need to be at least 40 feet above ground. If this is not possible, lower elevations can be used but the antenna's performance will be somewhat compromised.



◄ 80-meter rotatable dipole short version with capacitive crosshats

80-meter rotatable dipole full length quarter wave ►

80-meter half wave dipole, 134 feet tip to tip, 70 feet above ground

Dipole antennas offer several advantages across various applications. They are simple to design and construct, making them cost-effective and easy to manufacture and install.

They are efficient at their resonant frequency, maximizing signal strength and clarity.

They provide omnidirectional coverage, meaning they can transmit and receive signals from all directions, which is beneficial for general broadcasting and wide-area communication. Their radiation pattern is typically donut-shaped, with maximum radiation perpendicular to the antenna's axis, enhancing performance in many scenarios.

Additionally, dipole antennas can receive balanced signals, which helps reduce interference and improves reception quality. Their design allows for flexible installation configurations, such as horizontal, inverted-V, or drooping setups, and they can be mounted in various locations including trees, rooftops, or attics without requiring a ground plane.

The 80-meter end fed half wave (EFHW) antenna is a popular multiband HF antenna design that operates on the fundamental half-wavelength resonance of 80 meters and its harmonics, covering bands such as 40m, 20m, 15m, 12m, and 10m without the need for traps or tuners on most frequencies.

The full-length EFHW antenna for 80 meters is approximately 132 feet.

80-meter end fed half wave

The antenna requires a high-impedance matching network at the feed point, typically a 49:1, 64:1, or 9:1 balun using a ferrite toroid core, to transform the high feedpoint impedance (several thousand ohms) down to 50 ohms for compatibility with standard coaxial cable.

The EFHW antenna does not require a counterpoise or radials, as common-mode currents are minimized due to the high feedpoint impedance, although some operators use a counterpoise wire or a common-mode choke to reduce noise and RF in the shack. The coaxial cable itself can serve as a counterpoise, but this may increase noise pickup unless a choke is used. Installation is simple, with options for inverted-V, sloper, or vertical configurations, and the antenna can be quickly deployed and stored, making it ideal for emergency communications and/or portable operations.

If you have a deep pocketbook, lots of space, and want a top performing low band antenna, you can go the phased array route for transmitting and a Beverage receiving antenna. (Beverages are generally in the neighborhood of 800 feet long and are around 5 feet above ground. Phased arrays consist of 4 verticals with a phasing unit and LOTS of radials.) We will not go into the characteristics of this type of antenna in this article, but have included photos of this type of low band antenna system:

Phased array

Low band Beverage receiving antenna

We've briefly explored the more popularly used antennas for 80 meters, so as we conclude our discussion on 80 meter DXing, let's take a quick look at the band itself:

The nominal "80 meter" band begins at 3.5 MHz and goes up to 4.0 MHz. The upper part of the band, mostly used for voice, is often referred to as 75 meters. The wavelengths in that section are between 80–75 meters (adjacent to or overlapping a shortwave broadcast band called by the same name: "75 m").

Because high absorption in the ionosphere's Sun-activated D layer persists until nightfall, 80 meters is usually only good for local communications during the day, and hardly ever good for communications over intercontinental distances during daylight hours. But it is the most popular band for regional communications nets from the late afternoon through the night time hours. At night, 80 is usually reliable for short- to medium-distance contacts, with average distances ranging from local contacts within 200 miles out to a distance of 1,000 miles or more at night – even worldwide – depending on atmospheric and ionospheric conditions.

However, 80 meters can sometimes be plagued with noise: The same ionospheric refraction that makes long-distance shortwave propagation possible also traps terrestrial noise under the ionosphere, preventing it from dissipating into space, which quiets down radio bands at higher frequencies, above 20 MHz. The 80-meter rural noise floor is mostly determined by noise produced by distant tropical thunderstorms and cumulative regional sources of human-made static. The urban and suburban 80-meter noise floor is typically set by the amount of noise generated locally, from electrical machinery and household electronics, and is generally 10–20 dB stronger than typical rural noise.

On 80 meters, especially during late spring, summer, and early autumn, nearly all areas of the world are subject to weather-induced noise from regionally local thunderstorms, and combined distant lightning strikes from tropical thunderstorms that perpetually supply a worldwide continuous source of radio static.

As the maximum usable frequency for long-distance communication seldom dips below 3.5 MHz anywhere on the planet, the main propagation barrier to long-distance communication is heavy D-layer absorption during the daytime, ensuring that DX paths on 80 meters must be largely, although not entirely, in darkness. At times, there is pronounced dark-side grey line propagation, which is most useful on polar routes, away from equatorial thunderstorm activity.

80 meters, with its pros and cons, can still be an exciting band to work DX on. If you haven't tried it (and you have license privileges for it) give it a test drive. It does take effort, but the rewards are well worth it.

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