



THE SIGNAL

Newsletter of the
Bella Vista area
Radio Club

*Arkansas' Largest
Amateur Radio Club*



- June meeting – Field Day station filtering
- Governor's Field Day proclamation
- Salute to BVRC's Volunteer Examiners
- Community Outreach Team –
Treat Trot / Summer Sizzler Race
- K5A Special Event Station
- BVRC W1AW/5 Operation
- Handling Messages Through
The National Traffic System
- EXPERIMENTER'S CORNER –
Restoring a
Sparton 1951 AM/FM Radio, Part 2
- SPACE RADIO: Voyager 1 & 2
- New Technician Question Pool Released
- DXCC DEN: Chad

JULY 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



*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 103.5

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 103.5

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, JULY 2, 2026 @ 7PM
ARKANSAS LAW ENFORCEMENT TRAINING ACADEMY
3424 S. DOWNUM ROAD
SPRINGDALE, AR

July Meeting Information

HAM 101 Workshop, 6pm preceding monthly meeting – BVRC Signal Editor Don Banta – K5DB will be conducting this month's workshop on the topic "The ARRL – What Is It? What Does It Do?". Don presents this workshop every 2-3 years for the newcomers that have become a part of the club, but may not know the full story behind the American Radio Relay League. If you are not a member of the ARRL but are interested in gaining more information about the national organization of hams in the U.S., be sure and attend this workshop.

BVRC July meeting, 7pm – A special treat is in store for club members for the July meeting as BVRC welcomes special guest speaker Dave Casler – KEØOG. Dave resides in Ridgeway, CO and has been a ham and ARRL member for over 40 years. He is also the author of the excellent "Ask Dave" column in each monthly issue of QST. Dave has a wealth of technical knowledge in all aspects of our hobby and for the July meeting will be spotlighting the topic "When You Have Nothing Tall – Mast Ideas".

Don't miss this great program with Dave!

BOARD MEMBERS

PRESIDENT

Jan Hagan - WB5JAN
wb5jan@arri.net

VICE PRESIDENT

Kathy Bromley - WQ5T
wq5t@arri.net

SECRETARY

Sharron Edmondson - KC5SKY
grannysharr@gmail.com

TREASURER

Marc Whittlesey - WØKYZ
almarc11@yahoo.com

TECHNICAL OFFICER

Tem Moore - N5KWL
temmoore@gmail.com

NSBVA TRUSTEE

Roger Dickey - KJ4QIS
dickeyr@gmail.com

BOARD MEMBER AT LARGE & PUBLIC INFORMATION OFFICER

Tom Northfell - W5XNA
w5xna@arri.net



APPOINTED OFFICERS

EDUCATION & ELMER 911 COMMITTEE

Chair: Vinson Carter - WV5C
vinsoncarter@gmail.com

NETS COMMITTEE

Chair: Stephen Ponder - N5ZE
stponder@gmail.com

MEMBERSHIP COMMITTEE

Chair: Tom Northfell - W5XNA
w5xna@arri.net

SOCIAL MEDIA & COMMUNITY OUTREACH COMMITTEE

Chair: Alex Smith - KI5EQK
ki5eqk@gmail.com

EMCOMM COMMITTEE

Chair: Drake Rush - KJ5MXM
drakerush1@hotmail.com

W5NX TRUSTEE CLUB STATION MGR.

Jay Bromley - W5JAY
jayw5jay@outlook.com

WEBMASTER

Roger Dickey - KJ5QIS
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

Time to get out of the house and enjoy the outdoors. Or, go on a road trip. Or, combine both and plan a portable operation with your favorite hobby while enjoying a nature-based adventure!

Of course, the easiest outdoor adventure to enjoy our hobby is to join your fellow BVRC members at Field Day. A day of “food, fellowship, frequencies and fun” can certainly reinvigorate your enjoyment of our amateur radio hobby. Newer amateurs can watch with fascination the vast technical prowess and operating skills of many of our club’s Elmers during this special day. Those farther along their path through amateur radio will undoubtedly learn something that will increase their skills and knowledge. Of course, everyone will enjoy the camaraderie our Field Day meals bring. All while enjoying a beautiful outdoor setting.



Perhaps after Field Day you will be inspired to enjoy more outdoor adventures with your amateur radio gear. If you have HF privileges, consider a Parks on the Air activation at one of our beautiful local POTA park locations. If you operate vhf/uhf and/or ten meters with your Technician class license, travel to a nearby mountain location like Mount Sequoyah in Fayetteville, or Eureka Springs, or even Mount Magazine and work the most distant repeater you can reach and log how far away you can make a contact with a fellow amateur through that repeater. Use your ten-meter rig to see if a DX contact is possible.

The point is to get out, enjoy nature, enjoy a road trip, and enjoy amateur radio in some of greatest beauty the Natural State has to offer! Get out there!

Also, on the following page is a proclamation from Governor Sarah Huckabee Sanders of Arkansas of which BVRC can be proud, that I obtained from her office.

The Governor's Proclamation of Amateur Radio Week in Arkansas during the last week of June 2026, corresponds to ARRL Field Day on June 27th and 28th.

I am very pleased with how the proclamation discusses amateur radio overall, amateur radio's impact in Arkansas, and specifically calls out BVRC.

The statewide and national attention BVRC has received is a direct reflection of what all our members do that makes BVRC a welcoming, supportive, and community-oriented club we can all be proud of.

73,
Jan – WB5JAN

STATE OF ARKANSAS
EXECUTIVE DEPARTMENT
PROCLAMATION

TO ALL TO WHOM THESE PRESENTS COME – GREETINGS:

WHEREAS: Amateur Radio operators have, for more than a century, fostered communication, friendship, and the exchange of ideas among people, communities, and nations;

WHEREAS: Amateur Radio operators provide countless hours of uncompensated public service, including communications support for charitable events, emergency response organizations, and local government agencies;

WHEREAS: Amateur Radio volunteers, including participants in the Skywarn program of the National Weather Service, play a vital role in emergency preparedness and severe weather reporting throughout the State of Arkansas;

WHEREAS: The American Radio Relay League (ARRL) and local organizations such as Bella Vista Radio Club continue to promote amateur radio education, readiness, and community service; and

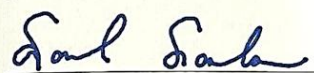
WHEREAS: The ARRL Amateur Radio Field Day exercise, to be held on June 27th, 2026, demonstrates the ability of amateur radio operators to provide self-supporting emergency communications when conventional infrastructure fails.

NOW, THEREFORE, I, SARAH HUCKABEE SANDERS, Governor of the State of Arkansas, by virtue of the authority vested in me by the laws of the State of Arkansas, do hereby proclaim the 27th of June 2026, as

"AMATEUR RADIO WEEK"

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Arkansas to be affixed this 3rd day of June, in the year of our Lord 2026.




Sarah Huckabee Sanders, Governor

Attest:


Cole Jester, Secretary of State

June Meeting Features Program On Field Day Station Filters

Due to the remodeling of classrooms in the ALETA building where BVRC normally holds its monthly meetings, our outstanding hosts allowed the June meeting to be held in the classrooms of the brand new and awesome ADLEST building, adjacent to the ALETA building. A huge thanks to Gregg Harrison-K5GKH and Supervisor Clint Scrivner for affording the club the opportunity to meet in the new facility!

And, once again, it was a packed house. This month, BVRC members were treated to an excellent, interesting, and important program on "Field Day Intrastation Interference Prevention", which was presented by distinguished member Jon Williams-K5DVT. Jon plays an integral "behind the scenes" part of BVRC, as well as being the owner and maintainer of the NW Arkansas Skywarn Link System, of which two of the five BVRC weekly nets meet on.





Jon – K5DVT



Before Jon's presentation, Field Day Chair Tom Northfell-W5XNA shared an excellent review of this year's 2026 Field Day preparations, and the different duties and equipment needed for this year's event. This year promises to be the biggest and best BVRC Field Day ever. **THANKS TOM FOR THE GREAT JOB YOU EACH YEAR AS OUR FD CHAIR.**

To prevent intrastation interference during an event such as Field Day, the tool needed to accomplish this is a band-pass filter for each station. To simplify the understanding of band-pass filters, Jon illustrated there are 4 types of filters:

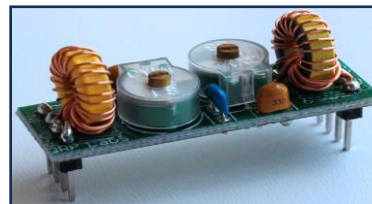
Low Pass – Blocks the high frequencies
Passes the low frequencies

High Pass – Block the low frequencies
Passes the high frequencies

Band Pass – Passes a broader "window" of frequencies
Rejects all other frequencies that are "out of band"

Band Stop – Blocks a broader "window" of frequencies
Passes all other frequencies

The main filter used at Field Day operating sites employing multi-transmitters is the band-pass filter.



Sample internal view of a band-pass filter

This year for the high bands (20, 15, 10 meters) – and a HUGE thanks for Stan Stockton-K5GO and Bill Kenamer-K5FUV – BVRC will incorporate not only band-pass filters for each of the 3 main stations on CW, phone, and digital, but will also combine the three stations' transmission lines through a triplexer. What this will do is enable all three stations to use the same antenna at the same time on different bands, hence eliminating intrastation interference totally. This is an astronomical plus for the club, and will contribute to a much more efficient and enjoyable Field Day for everyone operating. *Thanks Jon for another great program!* Also, a big thanks to Michael-W5KMK for his great job in June's HAM 101 Workshop where he discussed Part 2 of FT8 operation, where many of the more in-depth options and settings in the WSJT-X and JT Alert software were explored.



Announcing the Summer 2026 BVRC Technician License Class!

BVRC Membership Chair, Past President, and
ARRL Licensed Instructor, Tom-W5XNA
has announced the convening of the
2026 Summer BVRC Technician License Class:

CLASS DATES: Saturday, August 22 and Saturday, August 29, 2026

CLASS LOCATION: Elkins Public Library (Community Room)
160 Doolin Drive
Elkins, AR 72727

CLASS DURATION: 9:00 am – 3:00 pm, August 22
9:00 am – 4:30 pm, August 29
(exam session follows end of 2nd class)

***FOR FULL INFORMATION ON THE CLASS,
(HOW TO REGISTER, MATERIALS NEEDED, ETC.)***

CONTACT TOM-W5XNA AT
w5xna@arri.net

In Memoriam Clarence "Buster" Morrow AD5AM

1949 – 2026

Buster became a Silent Key on May 24 at the age of 77. He was a resident of Rogers. He was preceded in death by his wife, Linda-KD5ANL, in March of this year. Buster was a ham for 30 years, being first licensed in 1996. He was a regular check-in on the BVRC nets and the Arkansas Razorback Net. He will be missed. RIP Buster.



A SALUTE TO OUR VOLUNTEER EXAMINERS



Once a month (and extra exam sessions for our license classes), year after year, BVRC's team of Volunteer Examiners exert their time and effort to conduct license testing for exam candidates. They go about their VE duties without any accolades or recognition, nor do they seek any. They do it for the love of the hobby and the furtherance of the club. During this busy year of club activities, The Signal pauses to acknowledge and thank these awesome individuals:

BELLA VISTA VE TEAM

Team Lead: Robert Hill – K5NZV
 Scott Cook – N5SRC
 Jessie Costulis – KG5YJW
 Brandon Gage – W5BNL
 Tom Harris – W5BNR
 Joe Hott – W5AEN
 Dale Locander – W5DSL
 Cade Petersen – KC7MDT
 Mark Whittlesey – WØKYZ
 Ryan Wolfe – KEØCZQ
 Zack Wolfe - KEØCZP

Thank You!!!

SPRINGDALE VE TEAM

Team Lead: Don Banta – K5DB
 Jay Bromley – W5JAY
 Kathy Bromley – WQ5T
 Vinson Carter – WV5C
 Bill Cassidy – KJ5EKK
 David Gilbert – KB5SEZ
 Michael Kemper – W5KMK
 Tom Northfell – W5XNA
 Stephen Ponder – N5ZE
 Nate Stevens – KF5RPK
 Richard Thibodeaux – K5OTH
 Mark Whatley – K5XH

BVRC Community Outreach Team Maintains Busy Schedule With Treat Trot & Summer Sizzler Race Assistance

The BVRC Community Outreach Team continued their outstanding communication assistance service to NW Arkansas on Sunday, June 21, at the "Treat Trot and Summer Sizzler" race. The event was held at Hunt Elementary School in Springdale. The COT had to be early birds for this one, as the race began at 6:00 am.

Team leader Alex Smith – KI5EQK, new EmComm Coordinator Drake Rush – KJ5MXM, and all the Community Outreach Team, WE APPRECIATE YOU!



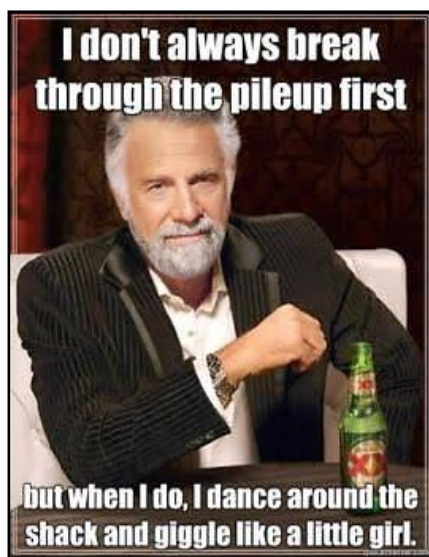
Alex – KI5EQK, Brad – KJ5CWR,
Bob – KB5YFH, and Drake – KJ5MXM



Racers press on during event



Team members from left to right: Alex Smith-KI5EQK, Brad Ponder-KJ5CWR, Steven Judd-Turtle, Indigo Johnson-KJ5OJB, Chris Johnson, KE4EIF, Bob Quinn-KB5YFH, Dan Hayes-KJ5HCO, and Terry Heimel – KJ5PPJ

LAUGHTER

CQ HOLLYWOOD?

The Capitol Records Tower, located in Hollywood, was built in 1956, and resembles a stack of records on a turntable.

For years, the red beacon atop the famous building has spelled-out the word "Hollywood" in Morse code.

CW buffs: Want to see it in action? – Click [here](#).

**BVRC VE REPORT
FROM DON BANTA – K5DB
BVRC VE COORDINATOR
MAY 2026**



CONGRATULATIONS!

Derek Hughes – KC5VW0 – New General!
Jerrold Haley – KJ5QEN – New Technician!
Susan Anders – KJ5QFQ – New Technician!
Katie Brinkley – KJ5QFR – New Technician!
Jessica Stevens – KJ5QGJ – New Technician!
Christian Westbrook – KJ5QMV – New Technician!

Next month's exam sessions

NOTE CHANGE OF VENUE FOR THE 2 PM SESSION & DATE CHANGE FOR 10 PM SESSION

- ***July 11, 2 pm – Coldwell Banker Building, 3113 N. Walton Blvd., Bentonville***
- ***July 18, 10 am – Shiloh Museum of Ozark History, 118 W. Johnson Ave., Springdale***

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/>



K5A Special Event Station Operation From BVRC Club Station A Resounding Success

Camaraderie, teamwork, and honing operational skills were on full display over the weekend of June 13 & 14, as BVRC newcomers to the great hobby of amateur radio and the club got their first taste of operating a special event station.

Every 5 years, BVRC sponsors K5A, a Special Event Station commemorating when Arkansas was admitted to the union on June 15, 1836. This year marked the 190-year milestone of that historic occasion.

Those who signed-up for the event were able to 'raise the bar' for themselves by sharpening their operating skills, learning how to use a computer logging program, discover new non-NATO/military phonetics that are used quite often on the HF bands ("America" instead of "Alpha", "Radio" instead of "Romeo", "Sugar" instead of "Sierra", "Germany" instead of "Golf", "Yokohama" instead of "Yankee", etc.), separating calls in pileups, smooth operating, getting accustomed to copying strange callsigns when a DX station would answer the proverbial "CQ", and many other techniques for this type of operation. And of course, everyone experienced the biggest factors of the event – FUN and EXCITEMENT.

The fun factor was on display during the entire weekend with the participants enjoying working with each other and having a lot of laughs along the way to 750 contacts!!!

And occasionally, hoots and hollers could be heard as the excitement factor manifested itself when a QSO was successfully completed with a DX station. Collectively, at the club station and our at-home operators worked 46 countries!

With all due respects to our older members present, it was a thrill to see so many young adults and teenagers participating in this event. All of the participants stated their pleasure and enjoyment of the experience and look forward to Field Day and other BVRC operating events.

And, a BIG thanks to all our at-home BVRC members who worked the station during the event!

Enjoy some of the photos of our great 2026 K5A BVRC club station team:



Indigo Johnson-KJ5OJB at the mic, with Jase Rogers-KJ5OJE, Canaan Johnson-KJ5EMJ and visitor Cirrus looking on and preparing to also operate during the event



Usually operating on CW, BVRC Vice-President Kathy Bromley-WQ5T racks-up some SSB QSOs



Jerry Biazo-W5JDB logs another QSO



Father-Son duo Shawn Rogers-KJ5MDW at the mic with son Jase-KJ5OJE handing the logging duties



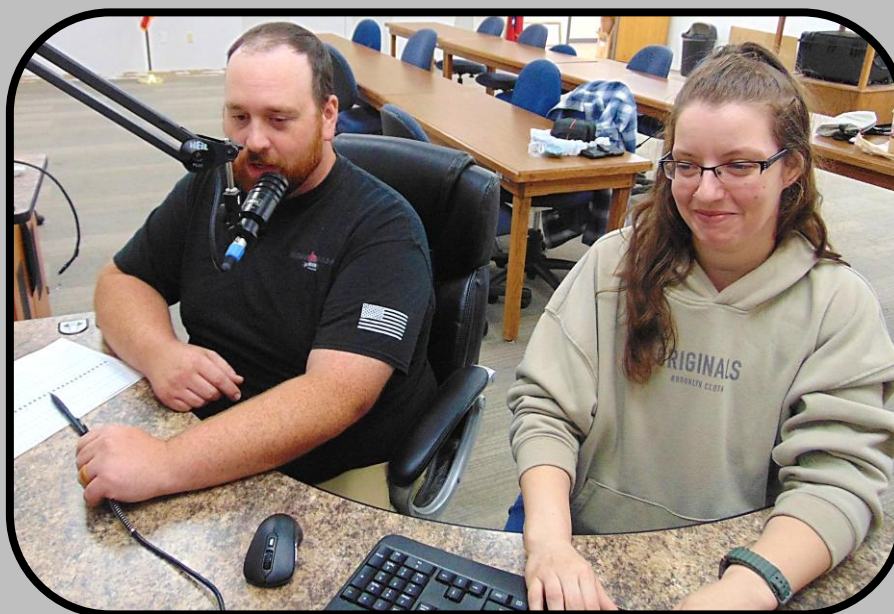
BVRC Club Station Manager Jay Bromley-W5JAY and BVRC President Jan Hagan-WB5JAN converse during the K5A event



Another Father/Son team was
Chris Johnson-KE4EIF with son
Canaan-KJ4EMJ logging...great job guys!



Ryan Biazo-K5HEX makes another
ham happy with a K5A contact



Along with the father/son teams, we had a great
husband/wife team, Brandon and Lanna Gage – W5BNL & N5ALG,
who did an outstanding job tallying those QSOs

Brent Hedrick-KJ5OIL with Don Banta-K5DB logging.
Brent recently acquired his Amateur Extra license and
did an exceptional job with his first time on SSB HF!



K5A HOME STATIONS

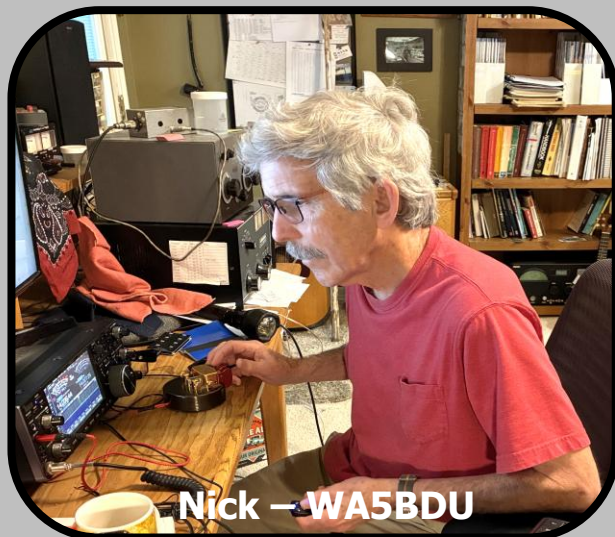
Along with our Saturday and Sunday club station operation, BVRC had several of our veteran operators assisting with the K5A Special Event Station activation from their home domicile stations. A **HUGE** thanks to these individuals for their outstanding operating! Here's some of them:



Robert – K5NZV



Michael – W5KMK



Nick – WA5BDU



Don – K5DB



K5A Statistics:
U.S. states: 50
Canadian provinces: 7
DX countries: 49
QSOs: 2,874



BVRC MEMBERS PARTICIPATE IN W1AW/5 OPERATION



BVRC members participated in the year-long and ongoing ARRL Worked-All-States 250 and Year of the Club event at the W5NX BVRC club station. The event was held on Saturday, June 20. It was an inspiration to watch these operators improve their accuracy, copying of signals, and logging. They operated the modes of SSB and FT8, accruing 527 QSOs for the day. GREAT JOB!

During 2026, each of the 50 states will be on the air with ARRL HQ's club call W1AW/portable to commemorate these events, activate the call sign for anyone wanting to acquire the W1AW/portable endorsement for the WAS-250 award, and observe the U.S. semiquincentennial. Each state will be on the air making the call available for two 1-week periods, the first week during the first half of the year and the second week during the second half. For the first week and aside from the BVRC operation, a total of 20 hams from all over Arkansas activated the call sign from their home domicile stations.

Arkansas' next operational week for W1AW/5 will be October 21 – October 27. BVRC Club Station W5NX will once again host a W1AW/5 event during this period on Saturday, October 24. Be sure and make plans to join us for some big pileups! Here are photos of the W1AW/5 operators:



Brad – KJ5CWR

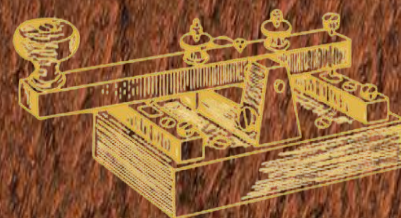


Ryan – K5HEX



Carla – KI5KTE

Handling Messages Through the National Traffic System



By Don – K5DB

During one of the recent BVRC repeater nets, as I was sitting and monitoring the net and listening to stations check-in, some of the members would check-in with their callsign and tag their check-in with the phrase, “No traffic.”

This is a perfectly acceptable format when checking-in if one wishes to state they have no traffic or, in other words, nothing to bring before the net in the form of announcements or formal traffic.

While I listened to the check-ins, something occurred to me.

It has been quite a while since I’ve heard the scenario present itself, but the thought came to mind:

What if – during a BVRC net – a station checked-in WITH formal traffic? What would happen? Then, three questions came to mind:

- Would the Net Control Station know how to handle the incoming traffic?
- Would the station bringing the formal traffic to the net be aware of the correct format and protocol, and then passing that traffic to another net member?
- If the traffic were passed to another net member, would the receiving station know the correct procedure of either relaying the message to another station on another net if needed, or delivering the traffic to the message’s destination themselves?

These questions are answered very easily and to do so, let me begin with a short personal history from when I was 15 years old in 1970:

Those were the heydays of the National Traffic System. The NTS was a first-class, sophisticated, and well-organized system (and still is). Local nets, state nets, and regional nets passed all types of messages through the NTS with accuracy and efficiency. The NTS was a vital part of amateur radio in those days, being just as significant as the passing of Western Union telegrams, due to (of course) the absence of personal computers, the internet, social media, news outlets, e-mail, texting, etc.

Traffic nets – both on phone and CW – abounded on the HF bands daily. Arkansas had an excellent daily CW traffic net that was called OZK. Today, the Arkansas Razorback Net still maintains its over 60 years of history in convening the net and being prepared to pass any formal traffic 7 days a week.

I've basically been a contester and DXer all my amateur radio life, but after passing my General license exam and getting on the HF bands, traffic handling also caught my attention and for several years I became heavily involved with serving the public while having a fun and rewarding time doing so, in participating in the National Traffic System.



Figure 1

For going above and beyond the norm in handling traffic, the ARRL Arkansas Section Manager would award stations for exemplary performance in handling large amounts of traffic (messages) each month. This traffic handling award was called the Brass Pounders' League. Figure 1 shows one of my BPL awards in 1972 from those days.

Of course, with the advent of the computer and cellphone age, message handling has exponentially diminished, but don't kid yourself.....the National Traffic System still exists and is alive and well; it just doesn't handle the amount of formal traffic that it used to.

BUT – Let a natural disaster or emergency occur with the electric grid going down and communication lines going out, and the NTS still plays a vital role in communication assistance with health and welfare, location, supplies needed, meeting, and other types of message traffic.

Messages are passed in the form of a plain text message known as a *radiogram*. Each radiogram is relayed, possibly through one or more other amateur radio operators, to a radio operator who volunteers to deliver the radiogram content to its destination.

Within the United States, amateur radio operators can send and deliver radiograms on behalf of any member of the general public. A very interesting factor about radiograms and the National Traffic System, is that *this is one type of "third-party traffic" that is specifically permitted by FCC rules.*

That was a very abridged history of the National Traffic System.....

I would wager the bulk of BVRC members are basically unaware and have no clue as to the official format of NTS messages, or how to send and receive them. Wouldn't you like to add this information to your amateur radio knowledge in the event that one day you were called upon to handle a piece of formal traffic?

So, to answer the first of the three previous questions pertaining to how the NCS (Net Control Station) would handle incoming formal traffic, the NCS would simply pose the question to the entire net, "Is there any station that can handle traffic for [SPECIFIC STATION OR GEOGRAPHICAL LOCATION]?" If there would be a station on the net near the destination of the message, they would give their call sign and advise the NCS they could accept the traffic.

Or, if the message were going a specific ham operator who was present on the net, the NCS would direct the message carrier to call that station and pass their traffic. If the ham recipient were not present during that particular net session, the NCS could ask if any other station could accept the traffic and deliver it to the ham recipient. If no net station responded to either scenario, the NCS would advise the message carrier to either deliver the message themselves [by phone, text, or e-mail], or wait until the next opportunity to relay the message on another net, provided the message is not of an emergency nature.

To answer questions 2 and 3, this is where the Radiogram comes in. So, let's take an in-depth look at it and discuss each part of the Radiogram. Each section is numbered with the definition/explanation following the below image:

1-Message Number

2-Precedence

3-Handling Instructions (HX)

4-Originating Station

5-Check

6-Originating Location

7-Originating Time & Date
(Time is optional)

10-Message Text Area

9-Addressee Telephone # [or email address, or both]

8-Addressee Name and Address block

11-Signature of sender - - - goes anywhere in this area immediately following the end of the message

1 – Number: The message number is selected by the station originating the message and it must be on all messages. It stays with the message all the way to the point of delivery. The delivering station may need to reply to the station of origin and refer to this number. Use number digits only, no letters, leading zeros, or dashes. Numbers are usually begun with 1 at the start of a year or month at the choosing of the originating station

2- Message Precedence: Letter(s) used to indicate the precedence of the message, and must be on all messages. The letters used for Precedences are:

EMERGENCY: *Emergency is always spelled out in the preamble.* Communication means other than Amateur Radio should be included in the delivery options. Emergency messages have immediate urgency. They should take priority over any other activity and should be passed by the best means available with the cooperation of all stations. An emergency message is any message having life and death urgency to any person or group of persons, which is transmitted by Amateur Radio in the absence of regular commercial facilities. This includes official messages of

welfare agencies during emergencies requesting supplies, materials, or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be very rare. On CW or RTTY, this designation will always be spelled out. When in doubt, do not use it.

PRIORITY (P): Use abbreviation P on CW or RTTY. This classification is for:

- a) important messages having a specific time limit,
- b) official messages not covered in the emergency category,
- c) press dispatches and emergency related traffic not of the utmost urgency,
- d) notice of death or injury in a disaster area, personal or official.

WELFARE (W): This classification, abbreviated as W on CW or RTTY, refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry).

CERTIFIED (C): A certified message must be delivered within 48 hours of the time the message was drafted and tendered for origination. This is represented by the date and time of origin in the message header. The certified message must meet certain criteria regarding address data and message content.

ROUTINE (R): **Most traffic in normal times will bear this designation.** In disaster situations, traffic labeled Routine (R on CW or RTTY) should be handled last, or not at all when circuits are busy with higher precedence traffic.

Additional notes on precedences:

These precedences are not meant to prohibit handling lower-level traffic until all higher levels are passed. Common sense dictates handling higher precedence traffic before lower when possible and/or outlets are available.

EXERCISE MESSAGES: Messages in the ARRL format passed for test and exercise purposes may be given a precedence preceded by the word "TEST", as in "TEST R", "TEST P", "TEST W", or "TEST EMERGENCY". It is customary to indicate within the text of such messages the words "TEST MESSAGE", or "EXERCISE". Using "EXERCISE" as the first and last groups of the text helps alert listeners to the nature of the content to avoid undue alarm. In some exercises, the life of the message may be terminated when the exercise period is terminated, i.e., any such messages are not handled after the exercise. Consult with the ARES/RACES/NTS group conducting the test to determine if such messages should be filed, handled, and delivered afterwards to permit a full evaluation of the exercise.

SERVICE MESSAGES: The precedence of an SVC message should be the same as that of the message being serviced. SVC ahead of a message number indicates a service message sent between stations relative to message handling, or delivery. Since they affect timely delivery, they are handled before routine messages. SVC is not a precedence.

3- Handling Instructions: These are optional. **Do not use handling instructions unless a particular need is present.** However, handling instructions can be useful and are used to instruct the relaying and/or delivering operator to handle the message according to the codes below. If used, handling instructions must stay with the message to the point of delivery:

- HXA – Delivery by email and/or text message preferred.
- HXB – (Followed by number.) Cancel message if not delivered within [...] hours of filing time; service originating station.
- HXC – Delivering station report date and time of delivery (TOD) to originating station. If received directly on the air by the addressee, then the addressee is responsible for the reply.
- HXD – All stations handling this message report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered report date, time, and method of delivery. During disasters or periods of high demand on circuit capacity, avoid using this instruction.
- HXE – Delivering station get reply from addressee, originate message back. If received directly on the air by the addressee, then the addressee is responsible for the reply.
- HXF – (Followed by a number.) Hold delivery until [date].
- HXG – Indicates that delivery by mail or landline toll call is not required. If the delivering station determines that completing the delivery would incur tolls or other expenses, they must cancel the message and send a service message to the originating station to report the cancellation.
- HXI – Please deliver as a radiogram-ICS-213 message.
- HXR – Please confirm that the addressee has read the message and reply to originator.
Reserved for Emergency, Priority and Certified precedence messages.
- HXT – Special traffic test message, ID _____.

4- Station of Origin: The call sign of the amateur station originating (creating) the message for first introduction into the amateur system is the station of origin and must be on all messages. This call sign must stay with the message to the point of delivery. Service messages go to this station.

5- Check: The check is the number of word "groups" in the text of the message and must be used on all messages. This number is used by operators to verify that the text has been copied with the correct number of groups.

6- Place of Origin: The PLACE OF ORIGIN is the location (city and state) of the party for whom the message is created, not necessarily the location of the station of origin.

7- Time, Month, and Day Fields: "TIME FILED" is used only when filing time has some importance relative to the precedence, handling instructions, or meaning in the text. TIME FILED is the time when the message is created by the station of origin. The time figures are in the 24-hour format followed by the letter "Z" to denote UTC time, or local time, as in "0215Z" or "2215CDT". Because NTS is an international system covering many time zones, UTC is the preferred time format, although it is acceptable to specify local time as "L", as in 2215L for messages intended to remain within a state or local area.

UTC (Z) date and time is customary on ARRL messages (an unmarked time is assumed to be UTC). To avoid ambiguity, mark the time with a Z, time zone designator, or L. Time and date must agree, that is be related to the same time zone.

The TIME FIELD is normally omitted on routine traffic having no special time concerns. If used, the filing time must stay with the message to the point of delivery.

MONTH must be used on all messages. (If TIME FILED is used, this date must agree with that time.) This entry is the month in which the message is created and is written in the preamble as the three-letter abbreviation: The month/day is assumed to be UTC unless marked otherwise by a time.

The DAY FILED is the day of the month on which the message was originated and must be used on all messages. (If TIME FILED is used, the date and time must agree). That is, the new radio day starts at 0001 UTC. For example, a message originated on December 10 at 8:00 EST might have a time and date of 0101 UTC DEC 11. The day is written in figures only, no leading zeros.

8-Message recipient's name and address: This can also include the recipient's e-mail address.

9-Message recipient's telephone # (or email address, or both)

10-Message text: The text contains the actual message information authorized by the person from whom the message originated. Note that the amateur does not originate messages for another person without permission from that person! The text is entered in the message area of the message form. (When transmitting a message, the text is separated from the preceding address, and the signature to follow, by the use of the word "BREAK" on voice, the prosign <BT> on CW, to allow the receiving operator to know its beginning and end. BREAK or <BT> are not counted as groups.) The text is divided into word "groups", five or ten to a line for easy counting, and is usually limited to 25 words or less.

11-Message sender's signature: The signature of the message is the name of the person for whom the message is created (not necessarily the station of origin), and any other information that person wishes to include (such as address, telephone number, title, etc.). The Place-of-Origin given in the Preamble is the location of this individual.

Words like "love" and "regards", often associated with signatures in formal letters, are put in the text section in amateur messages.

Amateur call signs, titles, QCWA or OOTC numbers, etc., are in the signature and follow the name on the same line.

Addresses for the signing party are optionally included (upon request) on subsequent lines, exactly as done in the address section, but are included only if important to the originator, message purpose, or replying. Since most addressees know the party from whom messages originate, most messages in daily NTS service have simple one-line signatures.

Messages for served agencies, particularly during disasters, generally require an authorizing signature in full. Messages without same may be refused. It is important for originating stations to get full information about persons for whom messages are originated in order to be able to re-contact them should a problem arise in the delivery of their message, or if a reply is received.

The bottom sections of the form are for record-keeping purposes denoting when the message was sent and received.

Punctuation:

X – The letter "X" is used to denote a period. The letter "X" is never used as the last group of the text. The "X" is a separate group and is counted for the check. In a radiogram transmitted by voice, the character is read using the phonetic "X-ray."

R – The letter "R" is used in place of a decimal in mixed figure groups, as in 7013R5 (7013.5), or 146R670 (146.670). Since the "R" is part of the group, it does not qualify as a separate group for the check. (The inclusion of the "R" makes the group a "mixed group" for transmission on voice.)

Other punctuation – OTHER PUNCTUATION is spelled out (in order to avoid confusion with prosigns used in the transmission of the message) as in "QUERY" for a question, "DASH" to separate special number or mixed groups, "EXCLAMATION", "COMMA", etc. (Hyphens are not used in telephone number groups or anywhere else in the text.) Such punctuation words are separate groups and are counted for the check.

When a radiogram is correctly composed with a message to be entered into the National Traffic System, it should look something like this:

THE AMERICAN RADIO RELAY LEAGUE							
RADIOGRAM							
VIA AMATEUR RADIO							
NUMBER 1	PRECEDENCE R	MX G	STATION OF ORIGIN K4IWW	CHECK 12	PLACE OF ORIGIN CARY NC	TIME FILED	DATE DEC 20
TO JOHN Q PUBLIC 1234 MAPLE AVE ANYTOWN NC 27000					THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION _____ PHONE _____ NAME _____ STREET ADDRESS _____ CITY AND STATE _____		
TELEPHONE NUMBER 919 555 1234							
ARRIVE	7PM	DEC	24	X			
LOOKING	FORWARD	TO	SEEING	YOU			
X	LOVE						
BETTY M PUBLIC							
REC'D	FROM	DATE	TIME	SENT	TO	DATE	TIME
THIS MESSAGE WAS RECEIVED FROM THE AMERICAN RADIO RELAY LEAGUE, INC., 5000 WILSON AVENUE, SUITE 100, WILSON, NC 27157. THE RADIOGRAM WAS RECEIVED BY THE AMERICAN RADIO RELAY LEAGUE, INC. AND IS BEING FORWARDED TO THE ADDRESSEE. THE RADIOGRAM WAS RECEIVED BY THE AMERICAN RADIO RELAY LEAGUE, INC. AND IS BEING FORWARDED TO THE ADDRESSEE. THE RADIOGRAM WAS RECEIVED BY THE AMERICAN RADIO RELAY LEAGUE, INC. AND IS BEING FORWARDED TO THE ADDRESSEE.				THE AMERICAN RADIO RELAY LEAGUE, INC., 5000 WILSON AVENUE, SUITE 100, WILSON, NC 27157. THE RADIOGRAM WAS RECEIVED BY THE AMERICAN RADIO RELAY LEAGUE, INC. AND IS BEING FORWARDED TO THE ADDRESSEE. THE RADIOGRAM WAS RECEIVED BY THE AMERICAN RADIO RELAY LEAGUE, INC. AND IS BEING FORWARDED TO THE ADDRESSEE. THE RADIOGRAM WAS RECEIVED BY THE AMERICAN RADIO RELAY LEAGUE, INC. AND IS BEING FORWARDED TO THE ADDRESSEE.			
Form: Copyright 1995, American Radio Relay League. Used with permission							

There is one last item concerning the composing of a radiogram that is very important and very handy – **THE ARRL NUMBERED RADIOGRAM CODE.**

Just as Q-Signals are used on phone and CW to state a phrase with a minimal amount of characters being sent, radiograms incorporate numbered codes to also convey a statement with a less time being consumed.

For commonly sent messages, and for efficiency during times of radio congestion, the ARRL Numbered Radiogram brevity code may be employed. This assigns full sentences to each of 94 different message code numbers, which are spelled out in the message and preceded by the procedure word "ARL".

For example, "ARL FORTY SIX" is the brevity code for "Happy birthday". It is used in the passing or relaying of the message, *but* upon actual delivery to the recipient it is expanded to the full phrase, "Greetings on your birthday and best wishes for many more to come." For purposes of the word count in the Check, "ARL FORTY SIX" is three words, and is never written down as "ARL 46".

To download the ARRL NUMBERED RADIOGRAM LIST, go to this website, then click the "Download PDF" link: <https://nts2.arrl.org/numbered-texts/>.

(ARL doesn't stand for anything in particular and is not an acronym. It is simply ARRL's identifier for a numbered statement or phrase.)

Well, you should now be familiar with how to handle a formal piece of traffic should the need to originate, relay, or deliver a radiogram from the National Traffic System ever present itself to you. Actually, whether net members are or are not members of ARES or RACES, if they participate in nets quite often, they should all familiarize themselves with these guidelines to possess the ability and knowledge to handle formal traffic whenever it is presented to the net.

You might want to save the pages of this article along with the ARRL numbered messages to your hard drive for future reference material.

73 and have fun in serving your community from time to time, through the handling of formal traffic!



WELCOME New BVRC Members!

Amy Calvi – KJ5QPT – Bentonville
Raymond Barsaloux – N4BAY – Pea Ridge
Aron Tkachuk – KJ5PEJ – Fayetteville
Jerrold Haley – KJ5QEN – Bella Vista
Susan Anders – KJ5QFQ – Berryville
Katie Brinkley – KJ5QFR – Rogers
Jessica Stevens – KJ5QGJ – Fayetteville
Sam Heldenbrand – KFØUPK – Springdale
Christian Westbrook – KJ5QMV – Prairie Grove
Jeff Brantley – Austin, TX

BVRC CLUB ACCESSORIES

from Embroidered Memories

SHOW YOU'RE A PROUD BVRC MEMBER WITH:

- Key Rings
- License Plates
- Name Badges
- Ceramic Mugs
- Mouse pads
- Luggage Tags
- Custom Hats w/Callsign



To order your personalized
BVRC product, click [here](#)

EXPERIMENTER'S CORNER



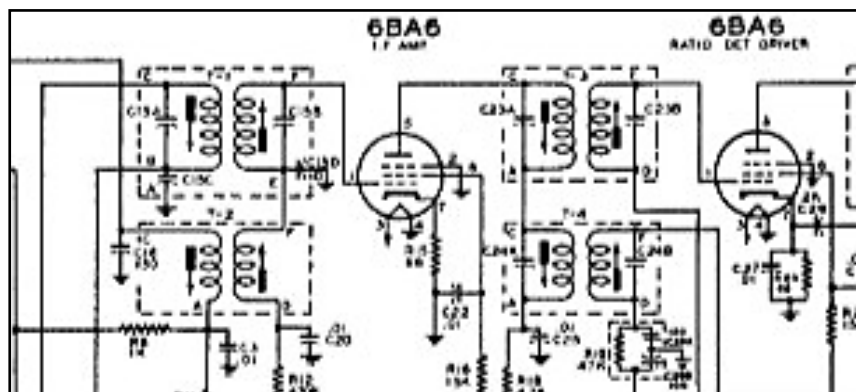
By Dr. Bill Durham
KG5ZCI

THIS MONTH'S TOPIC: SPARTON RADIO FM REPAIR -

The Rest of the Story

In last month's article I finished the AM section of the Sparton radio, but the FM section still did not work. After months of investigation, it was clear that beyond the usual old parts, the second IF transformer was the cause of the complete failure of the radio. Arcing in the transformer due to Silver Metal disease and associated damage left two resistors open and one capacitor shorted. However, there was some good news. The IF sections of the radio are in parallel and share the same tube amplifiers. The only difference is the IF transformers. I found a likely candidate in my parts bins and soldered it in. The AM section came to life, but the FM section did not. This was no surprise since my choice of a replacement focused only on supplying the tube bias voltages and not tuning.

After discovering the arcing, it was clear that the IF transformer was defective and needed to be replaced but finding a replacement part was not likely so the fate of the radio was grim. I don't give up very easily, so I looked around on E-bay and other places on the web and was surprised to see a complete absence of 10.6 MHz IF transformers. At that point it was clear that the only option was to rebuild the defective IF transformer.

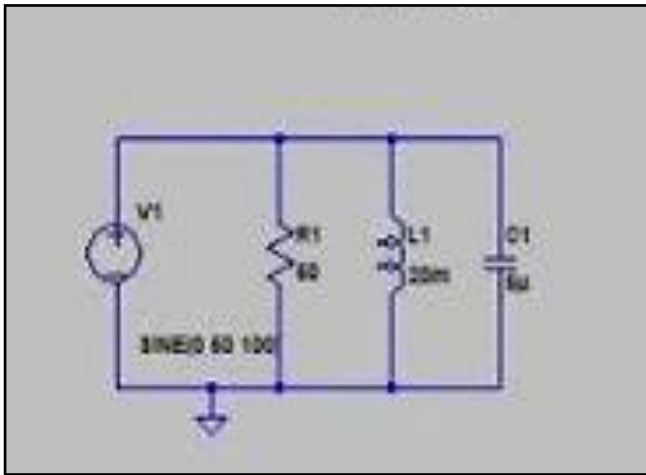


The rebuilding was a learning experience to say the least. The original transformer had two separate windings composed of 30 turns of 32-gauge wire separated by about one half an inch. The windings were not simply close wound. Each turn was separated by one wire diameter. This strategy was aimed at minimizing parasitic capacitance between the turns.

I stripped the original core and cleaned up the residual varnish. Next, I wound two coils using wire wrap wire which is insulated and 30 gauge. The insulation provided the correct spacing between the windings, 30 turns each, separated by 0.5". Several years back, I fished a coil winder out of a garbage pile and with a few additions it worked very well for this job.

I glued the wire ends down fully expecting to have to remove some turns. I measured the inductance and found 6.6 and 4.7 uH. The threaded cores provided all of the tuning I would need.





Now I fell down the rabbit hole. I added a 34 pF capacitor to one coil and tried to measure the resonance frequency with a frequency generator and an oscilloscope. The generated was connected to the side with no capacitor and the scope to the other coil. This should have provided some isolation for the LC circuit. The measuring appeared to go as expected with a nice sharp peak at about 8.3 MHz. This was not the desired frequency, but it was resonance. Tuning the coils did not help. I suspected the measuring scheme had a problem somewhere so I made a few other mockups. I even tried one off the web illustrating a simulation with LTSpice (a popular simulator for circuit design).

I was running out of options. I measured the frequency with 4 different meters, and the inductance and capacitance measurements were always checked against standard components.

All along the little gray cells in my head (a description inspired by Hercule Poirot, an Agatha Christi detective) were whispering to me that the scope probe was contributing some capacitance. So, I listened, and disconnected the capacitor from the circuit but left the scope probe attached. Then I measured the capacitance through the scope cable, from the BNC to the capacitor. I was surprised to get 95 pF, but it agreed well with the resonance frequencies that I was seeing. Obviously, the measurement was upsetting the circuit, so I abandoned attempts to measure the resonance frequency and went with a calculation. I tuned the two coils to 5 uH and added two 46 pF capacitors (the calculated capacitance for 10.6 MHz), one to each coil. I put the transformer back into the radio and felt the good feeling of success when I tuned in several FM stations using a set of rabbit ears. The signal was strong and remarkably clear despite the metal roof on the shop.

Perseverance pays off!





SPACE RADIO: VOYAGER 1 & 2

Some Mind-Boggling Facts

14 years ago, space probes Voyager 1 & Voyager 2 left the solar system. Their primary missions were the exploration of

Jupiter and Saturn. They discovered active volcanoes on Jupiter's moon Io as well as the intricacies of Saturn's rings. Although pictures from Voyager 2 of Uranus were somewhat disappointing, Neptune's pictures were fantastic. Voyager 1 was launched on Sept. 5, 1977, and Voyager 2 was launched on Aug. 20, 1977. Both have now passed the heliosphere (the outermost atmospheric layer of the Sun), and are now traveling through interstellar space.

As of this year, Voyager 1 is almost 16 billion miles from Earth, and Voyager 2 has traveled about 13.5 billion miles distance. Both spacecraft are traveling at about 38,000 mph.

Although being used very conservatively to save battery power, amazingly the radios and some of the electronics on each spacecraft **are still operating!** A round-trip transmission traveling at the speed of light to and from the spacecrafts now takes about 46 hours.

Both spacecraft's transmitters operate at 23 watts forward output power, but by the time the signal reaches Earth it has faded to approximately one-tenth of a billion-trillionth of a watt, which is less than 1 attowatt, or -160 dBm. To capture such a feeble signal, NASA's Deep Space Network (DSN) uses massive 230- and 112-foot parabolic dish antennas located in California, Australia, and Spain. These stations can isolate the Voyager signal from background noise, allowing for communication at a data rate of only 160 bits per second, which is roughly equivalent to dial-up internet speeds.

An upcoming milestone will occur in November of this year, when Voyager 1 will become the first human-made object to reach a distance of one light-day (approximately 16.1 billion miles) from Earth, at which point communication delays will exceed 48 hours.

Let's all look forward to the time when Voyager 2 reaches the first star.....about 40,000 years from now.

ELMER 911



Vinson Carter – WV5C, is BVRC's ELMER 911 Coordinator and does a stellar job in his position. THANKS VINSON!

BVRC has many experienced operators that participate in the ELMER 911 Program to assist new (and sometimes veteran) hams with questions and issues they might have.

These volunteer Elmers (mentors) span years of experience in ham radio from antennas to technical issues to emergency communications, and more. Many of them are at the monthly BVRC meetings in Springdale where you can discuss with them any topic that you are needing help with, in person. They are also on the weekly BVRC HAM 101 Net on the NW Arkansas Skywarn Link System on Monday evenings.

However, if something crops-up and you need help fairly quickly, you can obtain assistance via the BVRC website ELMER 911 tab, 24/7:

<https://bellavistaradioclub.org/elmer-911/>

Here, you can complete and submit an online form, and shortly thereafter you will receive a response via e-mail with help and advice.

Be sure and avail yourself to this valuable service when/if you need it. The Elmers are here for you. They know what it's like to be in a quandary and unsure of what to do when you're new to the hobby. They are here to help you, just as their Elmer helped them.

Elmer 911 is a unique feature and service of BVRC to its members.

If you're unsure about something, get some help! ELMER 911 !



NCVEC Releases 2026 – 2030 Technician Class Question Pool

The National Conference of Volunteer Examiner Coordinators ([NCVEC](#)) Question Pool Committee has released the [2026 – 2030 Technician Class FCC Element 2 Question Pool & Syllabus](#) into the public domain. It is available as a Word document or PDF. The graphic required for the new Technician question pool is available within the documents, or separately as PDF or JPG files.

**The new question pool is effective
July 1, 2026 – June 30, 2030**

The NCVEC updates each question pool for all license classes on a four-year rotation, with releases staggered so that only one pool changes annually.

If you are planning on taking the Technician exam in 2026, be advised if you're using the current question pool you will need to take the exam before June 30, 2026. (BVRC will conduct an exam session at the BVRC Field Day event on June 27 at 2:00 pm, should you wish to take the Technician exam before July 1.) Otherwise, if you take the exam on July 1 or after, you will have studied the current question pool but will be faced with the new questions from the new 2026-2030 pool. This could cause problems for you when taking the exam. If you plan to test after July 1, you will need to study the questions in the new question pool.



If you have just acquired your General and /or Amateur Extra radio license, welcome to the world of HF! You possibly have a thousand questions on what to do and where to go from here. Of course, hands-on learning is the best way to acquire knowledge, and any of our veteran BVRC ops will be happy to help you in your endeavor to get on the air and comfortably operate with your new HF privileges with our HAM 101 weekly nets, the ELMER 911 program, the BVRC website, and BVRC Facebook page.

In the meantime, the ARRL has an excellent book by Steve Ford – WB8IMY that you will invariably find useful: *YOUR FIRST AMATEUR RADIO HF STATION*.

In this publication, you will find many excellent starting points for such areas as:

- What kind of antenna should I use?
- What radio should I buy?
- Do I need an amplifier?
- What about a computer?
- What types of accessories do I need?
- Electricity – good and bad.

You can order your copy direct from ARRL by clicking [here](#). The price is \$22.95, but if you're an ARRL member, your price is \$19.95.

ATTENTION ALL NEWCOMERS TO AMATEUR RADIO AND 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, just for you. Each month, one of our veteran members moderates the meeting with a fundamental ham topic, followed by a Q&A session on any and all topics of amateur radio. It is a great time of discussion, learning, fellowship, and fun. If you're new to the hobby, these meetings are geared for you (veteran ops always welcome, too). Bring your 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



This month's featured country: Chad



Chad, officially the Republic of Chad, is a landlocked country in Central Africa. It is bordered by Libya to the north, Sudan to the east, the Central African Republic to the south, Cameroon to the southwest, Nigeria to the southwest, and Niger to the west. Chad has a population of 19 million, of which 1.6 million live in the capital and largest city of N'Djamena. With a total area of around 500,000 square miles, Chad is the fifth-largest country in Africa and the twentieth largest nation by area.

Chad's official languages are French and Arabic, with French being the main language of government and education. It is home to over 200 ethnic and linguistic groups. Islam (55.1%) and Christianity (41.1%) are the main religions practiced in Chad. The United Nations' Human Development Index ranks Chad as the seventh poorest country in the world, with 80% of the population living below the poverty line. Access to clean water is often a problem in Chad.

Chad's sole World Heritage Site, the Lakes of Ounianga is a series of 18 lakes in the Sahara. The total area spanned by the lakes is around 7.5 square miles. They are located in a hot desert and are supplied by underground fossil water. The names of the lakes are copied from a nearby native village called Ounianga. The lake waters are usually saline due to high rates of evaporation, and the lakes have pretty low current levels as they receive only .07 inches of rainfall per year.

Chad is home to six terrestrial ecoregions which include 3 savanna regions, steppe and woodlands and the Sahara Desert. The region's tall grasses and extensive marshes make it favorable for birds



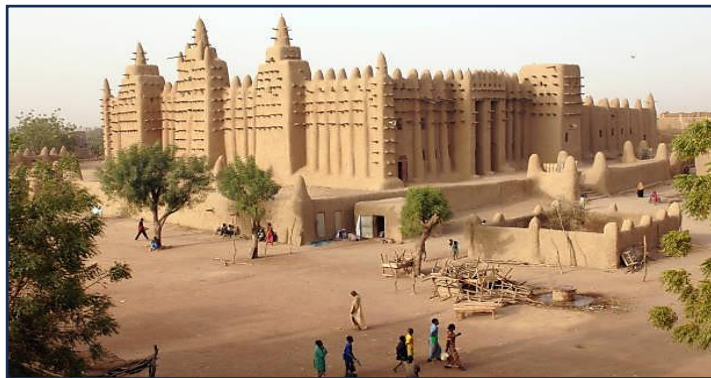
The Lakes of Ounianga

Chad's major rivers—the Chari, Logone and their tributaries—flow through the southern savannas from the southeast into Lake Chad. Once the fourth-largest lake in Africa in the 1960s with an area of roughly 10,000 square miles, Lake Chad has shrunk by approximately 90–95% over the last half-century. This drastic reduction is attributed to a combination of climate change (including shifted rainfall patterns and severe droughts in the Sahel) and human activities such as unsustainable irrigation, deforestation, and excessive water diversion for agriculture.



Portion of the capital city, N'Djamena

In the world of amateur radio, Chad operates under ITU Region 1, with the assigned call sign prefix of TT. The national telecommunications regulator is ARCEP (Agence de Régulation des Communications Électroniques et des Postes) located in N'Djamena. There are currently 62 native Chadian amateur operators, but activity is sparse. Thus, to have a good chance of making your first QSO with Chad has had to rely on DXpedition teams or solo visitor operations to the country.



Timbuktu Mosque



Arch of Aloba near Ennedi



Tour stop near Ennedi in the Sahara Desert



Tour meal break in the Sahara

Chad is currently ranked #110 on the Club Log Most Wanted List, making it still semi-rare on the bands.

Since 2000, there have been only a few notable DX operations in Chad: TT8DX in 2002, TT8KO which was operated by Bouvet Island DXpedition leader Ken-LA7GIA in 2018 whose operation was interrupted by Chad's national security police, requiring a personal equipment inspection by the police chief before the station was allowed to resume, and the Italian DXpedition team in 2024 that activated the three callsigns of TT8RR, TT8TT, and TT8XX.

Recently, Darek-TJ1GD, who resides in Cameroon, has been active from Chad's capital city of N'Djamena as TTIGD. I have worked him on several bands already, so he still might be on the air at the time of this newsletter release. Keep an eye out for him on the spotting websites if you haven't worked Chad as yet. It will be a dandy addition to your DXCC countries list.



My TT8RR QSL from 2024

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