

THE SIGNAL

Newsletter of the Bella Vista area Radio Club



**Arkansas' Largest
Amateur Radio Club**



July 2023

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

(HAM 101 Q&A Session for Newcomers @ 6pm preceding meeting)

Club Call: N5BVA

Website: www.bellavistaradioclub.org

Repeaters: 147.255 +offset, pl 162.2

444.100 +offset, pl 162.2

WEEKLY NETS:

BVRC 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

BVRC 3830 Roundtable

Sunday Afternoons

4 pm during CST

4:30 pm during CDT

3.830 MHz

BVRC HAM 101 Net

**Tuesdays @ 8 pm on the
WX5NAS Skywarn Link System:**

Bentonville – 146.865, -offset, pl 103.5

Fayetteville – 147.315, +offset, pl 97.4

Huntsville – 443.625, +offset, pl 97.4

Green Forest – 145.310, -offset, pl 103.5

NEXT BVRC MONTHLY MEETING

THURSDAY, JULY 6, 2023 @ 7PM
ARKANSAS LAW ENFORCEMENT TRAINING ACADEMY
3424 S. DOWNUM ROAD
SPRINGDALE, AR

July Meeting Info

Be sure to join us for our next very special BVRC club meeting on Thursday, **June 29th (note the new date)** at 7:00 pm when we will celebrate all the volunteer work that went into our Field Day event the previous week and where we celebrate all the members who participated in the Field Day events! We will also take the time to gather feedback on the event while it is fresh in our minds.

In addition, don't forget about our HAM 101 session at 6pm preceding the main meeting. This month, a live FT8 demonstration with a Q&A session on the FT8 mode will be the topic of discussion.

A decorative graphic at the bottom of the page features a blue background with a pattern of small white stars. A large, stylized white star with a blue outline is positioned on the left. A white, red, and white striped banner curves across the middle. Several large, blue stars with white outlines are scattered across the banner and background.

SEE YOU THEN!

BOARD MEMBERS

President

Jan Hagan – WB5JAN
ianhagan51@gmail.com

Vice President

Joe Hott – W5AEN
joe.hott@gmail.com

Secretary

Dana Hill – W5DGH
dana.hill1979@gmail.com

Treasurer

Mark Whittlesey - WØKYZ
almarc11@yahoo.com

Technical Officer

Tem Moore – N5KWL
temmoore@gmail.com

Trustee

Glenn Kilpatrick – WB5L
wb5l@arrl.net

Board Member At Large and Public Information Officer

Tom Northfell – W5XNA
w5xna@arrl.net



APPOINTED OFFICERS

VE Testing Committee

Chair: Don Cooper – KC7DC
don_c@hotmail.com

Elmer 911 Committee

Chair: Vinson Carter – WV5C
vinsoncarter@gmail.com

Nets Committee

Chair: Dana Widboom – KI5TGY
dcwidboom@yahoo.com

Membership Committee

Chair: Tom Northfell – W5XNA
w5xna@arrl.net

Social Media Committee

Chair: Rebecca Garrett – N5REB
rebdgarrett@gmail.com

Webmaster

Glenn Kilpatrick – WB5L
wb5l@arrl.net

Newsletter Editor

Don Banta – K5DB
arsk5db@gmail.com

June Meeting Features Live Mobile Station Display & Field Day Preparations

Instead of rain as experienced during the previous two BVRC monthly meetings, the June meeting graced club members with a mostly sunny sky and a rather warm early evening outdoor venue. The HAM 101 meeting convened in the front parking lot of our outstanding ALETA facility and a large crowd gathered to observe the different types of HF mobile station installations along with portable antennas, provided by Joe – W5AEN, Nick – WA5BDU, Robert – K5NZV, and Don – K5DB. Many newcomers also attended and had many questions answered and found the static display of the on-air mobile stations educational and informative. It was also great to see some of our experienced operators present.

The meeting then moved indoors for the 7pm monthly meeting, with a packed house. The regular meeting consisted of a short program on the American Radio Relay League and BVRC's club affiliation by Don – K5DB, followed by a super presentation on the club's preparations for the upcoming ARRL Field Day, along with the FD schedule and other related information by Field Day Chairman Tom – W5XNA.

Enjoy these photos from the BVRC HF mobile station exhibit and monthly meeting (*photos courtesy of K5XK and K5DB*):







From the Desk of the President



Bella Vista Radio Club

Volunteers are a key to our success!

All the members who have stepped up the past few weeks to take an active role in our upcoming Field Day activity have reminded me of just how much our club's success has been due to the giving spirit of so many of our members. Just think of all the ways our members volunteer to support the club's success.

Field Day alone is being directly supported by over twenty-five volunteers who have active roles in our Field Day operation. This, of course, is not counting the tremendous support of club members who are coming to enjoy and support our planned Field Day activities through Saturday and Sunday. The fun and fellowship of club members at our Saturday evening BBQ dinner will be enjoyable, but the dinner will also be special with the presence of so many of our members traveling throughout Northwest Arkansas to attend.

BVRC features a full calendar of activities throughout the year and each of these are fueled by the volunteer efforts of club members. Our VE testing team volunteers provide testing opportunities at two locations each month to support new amateurs and those upgrading their licenses. Several club members have volunteered to provide amateur radio license education classes and operating procedures training to support our members on their growth and journey through our amateur radio hobby.

Our Special Event portable station activities are supported by members who volunteer to both set up and operate N5BVA special events to communicate with amateurs across the country and around the world.

All these volunteer activities are supported by an active and involved Leadership Team of eighteen positions made up of Board of Directors and Committee Chairs. In fact, talking about super volunteers, a couple of members fill multiple leadership roles!

It is our club's volunteer spirit and positive "can do" attitude that drives our success. If you have not had the opportunity to volunteer for a club activity or event yet, I invite you to step forward when the next call comes out to support your club. Believe me, you will get as much as you give out of the experience!

Thank you to all our BVRC member volunteers for making our club what it is.

73,

Jan

WB5JAN



**THE LARGEST AMATEUR RADIO
CLUB IN ARKANSAS!**



You're a part of it! Thanks for your support! Get involved in club activities!



BVRC Members:



**Celebrate
Bella Vista area Radio Club's
30th Birthday With A
Commemorative Club Mug!**



Embroidered Memories, official supplier of BVRC accessories (owned and operated by club members John and Kim – W5HB & KD5TVX), has just released the Bella Vista area Radio Club commemorative mug. The mug includes the club's N5BVA commemorative QSL card on both sides, with your callsign opposite the handle.

The mug price is \$15.00, not including s&h.

(Can be delivered to club meeting.)

A great piece of memorabilia for years to come!

To order your mug, click [here](#) .

2023 BVRC Technician Class This Month! July 22 & 29, 2023

BVRC Past President and current Public Information Officer / Membership Coordinator Tom Northfell – W5XNA will be the instructor for the 2023 BVRC Technician radio license class on two consecutive Saturdays, July 22nd and 29th. Be sure and tell all your family and friends that you think would be interested in obtaining their entry level FCC amateur license! **Registration for the class will begin July 1.**

Here are the current details:

Dates and times: Saturday, July 22 and Saturday July 29, 9am – 3pm

Testing: There will be a VE test session immediately following the conclusion of the July 29 class at 4pm.

(Test fee is \$15.00; \$5.00 for persons 17 years of age or younger.)

Location: Arkansas Law Enforcement Training Academy
3242 S. Downum Road
Springdale, AR 72764

License Manual: Technician Class Manual
2022/2026 Element 2 by
Gordon West – WB6NOA
Regular price: \$29.95

(A 10-20% discount will apply per the # of enrollees for the class.)

Free Class: Although there will be a fee for the manual and the license exam, the class is free!

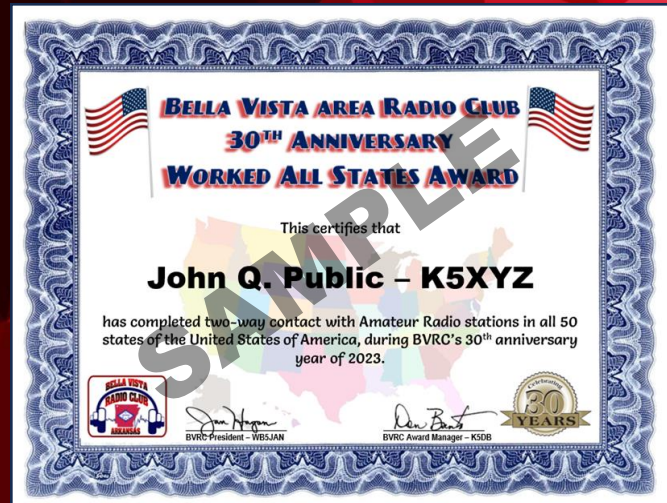
Information: If you need more information, contact

Tom at: w5xna@arrl.net



Spread the word to interested persons you might know to begin their ham radio adventure!

BVRC Announces 30TH ANNIVERSARY WORKED ALL STATES AWARD



Effective immediately, BVRC General class licensee and above can have a lot of HF enjoyment for the remainder of 2023, by working all 50 United States and achieving the BVRC 30th Anniversary Worked All States award!

All contacts made during calendar year 2023 count toward this award. A special bulletin e-mail was recently sent to all BVRC members announcing this fun event and containing the rules to achieve the award. However, you do NOT have to be BVRC member to pursue the award. Any General licensee or above is welcome to apply. If you possibly missed the e-mail, or would like a copy of the requirements/rules for the award to share with other NWA hams, send an e-mail to Don-K5DB at: arsk5db@gmail.com, and he will be happy to send you a .pdf file of the rules.

Get in there and work those 50 states and have fun!

W1AW — SENDING CODE PRACTICE AND BULLETINS FOR OVER 60 YEARS



For decades, the ARRL Hiram Percy Maxim Memorial Station W1AW has sent ARRL bulletins and over the air code practice. The transmissions are simultaneously sent on 160-, 80-, 40-, 20-, 17-, 15-, 10-, 6-, and 2-meters. At left is a photo of the massive transmitter bank at W1AW that accomplishes this weekday feat. CW code practice and CW, Phone, and Digital bulletin schedules are available in each issue of QST (for the July issue, page 93). All ARRL members can have the gratification of knowing that a portion of their membership dues go toward this awesome service provided to all radio amateurs from ARRL HQ in Newington, CT.



**Bella Vista area Radio Club
30th Anniversary Calendar of
Educational & Operating Events 2023
(Mark your calendar and join in!)**

July 22 & 29:

Technician license class, ALETA in Springdale
(Tom, W5XNA – Instructor)
Information in this issue of *The Signal*

August 19:

3rd Annual BVRC CW Roundup
Information will be in the August issue of *The Signal*

October 14:

N5BVA 30th ANNIVERSARY SPECIAL EVENT STATION #2
Two station portable operation from Park Springs Park – Bentonville.
More info in future issues of *The Signal*

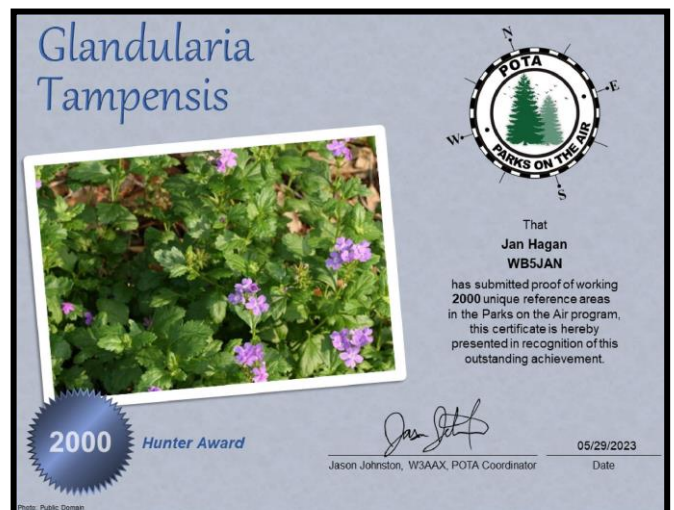
December 7:

BVRC Annual Christmas and Awards Banquet
ALETA facility, Springdale



**BVRC President is
Recipient of
POTA
2000 Parks Award!**

Kudos and a HUGE congratulations to our President, Jan Hagan – WB5JAN, for working and confirming TWO THOUSAND parks in the Parks on the Air program. We applaud him for this phenomenal feat!



BVRC VE REPORT
FROM DON COOPER – KC7DC
BVRC VE COORDINATOR
JUNE 10, 2023



Congratulations!

MIKE CALVI – KF5RUO
BENTONVILLE
NEW AMATEUR EXTRA!

MICHAEL KEMPER – W5KMK
ELKINS
NEW AMATEUR EXTRA!

Test sessions are conducted each 2nd Saturday of the month:

- 10 am at Shiloh Museum, 118 W. Johnson Ave, Springdale and***
- 2 pm at Bella Vista Fire Station #1, 103 NE Towncenter, Bella Vista***

***Help promote the availability of the Club's monthly test sessions.
Tell your friends and acquaintances!***

Welcome New BVRC Members!



Mark Cavanaugh – KJ5BBU - Centerton

BVRC ROOKIES PLACE HIGH IN 2023 ARRL SSB ROOKIE ROUNDUP

19 BVRC member rookies participated in last April's 2023 ARRL SSB Rookie Roundup, and all did a stellar job. BVRC is blessed to have such a group of quick learner's and very good HF operators! This event was a great warm-up for them for 2023 Field Day, and we hope to see them at the mic and demonstrating their talents for FD 2023. There were also three standouts from this year's Rookie Roundup: Dennis Tune – W9DCT placed first in the 5th call district and third in the nation. Rebecca Garrett – N5REB and Isabelle Harrison – KI5ZXG placed first in the nation in the multi-operator category with club call W5YO. We congratulate these operators – and all our BVRC rookies – on a job well done!



Isabelle – KI5ZXG is presented her 2023 ARRL RR SSB Multi-Op award by great uncle Gregg – K5GKH



Rebecca – N5REB proudly displays her 2023 ARRL RR SSB Multi-Op award



Dennis – W9DCT in his top-notch shack, with his Single-Op 2023 RR SSB award



ANNOUNCING THE ANNUAL BVRC CW ROUNDUP



Date: Saturday, August 19, 2023

Time Period: 0000 – 0130 UTC (7pm – 8:00pm local time)

Frequency: 3.540 – 3.560 MHz

Operating classes: **CLASS A** – BVRC member – Experienced CW operator
CLASS B – Newcomer or newer CW operator (BVRC member or non-member)
CLASS C – Non-BVRC member – Experienced CW operator
CLASS D – Listeners who copy and log only, with the use of FL Digi, code readers, etc.

CQing: Send “CQ CWR CQ CWR”

Exchange: Signal report (including operating class) / QTH (your location) / name

Example: If you are a newer CW operator and you are in QSO with K5XYZ whose signal is readable, their signal strength is registering a ‘7’ on your S-meter and their signal tone is good, your callsign is W5ABC, you live in Bentonville, and your name is Albert, you would send something like:

K5XYZ DE W5ABC BT (break)

RST IS 579 B 579 B BT

QTH IS BENTONVILLE, AR BENTONVILLE, AR BT

NAME IS ALBERT ALBERT BT

HW CPY? (How did you copy my transmission?)

K5XYZ DE W5ABC K (Over)

The other station would then reply with their information using the same format. After the exchanges are completed, short informal remarks can be made during the QSO, after which the contact would end with something along the lines of:

TNX FER QSO (thanks for the QSO)

GL ES 73 (Good luck and best wishes)

K5XYZ DE W5ABC SK (end of contact)

Description of event: This 1-hour event is not a contest. Rather, it is a friendly gathering of our area newcomer CW operators, returners to the mode of CW, and listeners. It is also intended to enable our veteran CW operators to participate and enjoy helping the newcomers in making CW contacts. There are no points scored, and no results or standings posted. You do NOT have to be a member of BVRC to participate. A handsome certificate will be sent via e-mail attachment to each participant that submits a log entry from the event.

Send logs no later than Saturday, Aug. 26, to Don Banta – K5DB:

Regular mail log: Don Banta
 3407 Diana St.
 Springdale, AR 72764

Electronic log: arsk5db@gmail.com
 Attach file: [call].log

REMEMBERING THE FAST SCAN TELEVISION DAYS

BY MIKE SCHROEDER – NØALJ

Time has flown by on my Ham Radio journey since I got licensed back in 1979. One of the most exciting times for me, in the hobby, was working 70 CM fast scan television contacts, or ATV (short for Amateur Television). It was the early 1990's and I was living in the country outside of Bentonville with a 50' Rohn tower. I made my very first contact with Ron-WØTQR of Joplin, Missouri, at a distance of 60 miles to the North!



I was using the KLM 440-10X 70-cm antenna fed with Beldon 9913 coax using N-connectors. We used the nationwide 2 meter ATV FM voice frequency of 144.340 MHz to coordinate our contacts. For sources of video, I had a black and white vidicon camera and a VCR to play videotapes. My ATV transceiver was the 1-watt TC70-1 from PC Electronics fed into a Mirage D26N 50-watt amplifier. I had a small 12 VDC fan setting on top of the D26N heatsink to keep it cool. The live AM TV signal was displayed on any television set, and I had a mini

black and white TV for my shack that operated off 12 VDC. I was bitten by the ATV bug! My second contact was with Elmo-K5YWL from Harrison, Arkansas at a distance of over 40 miles to the East! Activity grew in SW Missouri and WØTQR put up an ATV repeater in Joplin, Missouri which made it easier to work everybody. Jack-WØTTF also would join us from the west over in Pittsburg, Kansas on the repeater along with WBØOYU of Joplin.

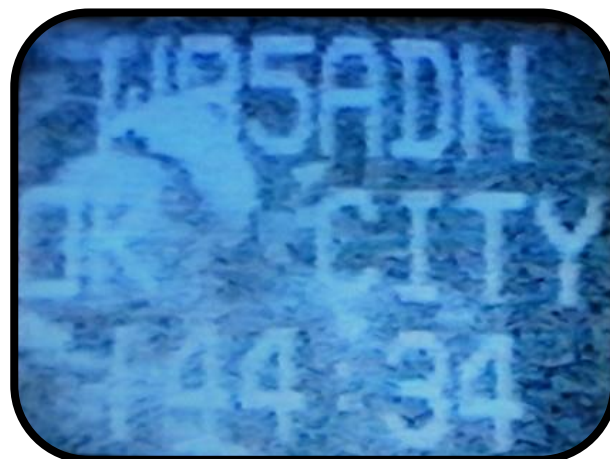
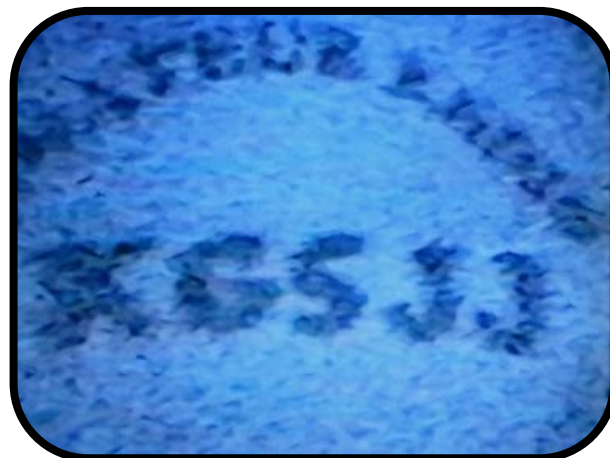
Next came antenna improvements. I changed over to a 12-ft long MBM88 "The DX'er" 88 Element Jay Beam made by Spectrum International. It was mounted horizontal on a rotator and fed with Beldon 9913 coax. This greatly expanded my ATV contact range! I also purchased an Elktronics VDG-1 video ID generator board to add another source of video for contacts and

to be able to switch in a quick ID. There were band openings up north to Kansas City at times, where I discovered the Kansas City ATV Repeater and worked several guys on it including WVØJ, KDØFW, and WAØNKE of Kansas City. I also worked KFØFQ simplex in the Lake Of The Ozarks area of central Missouri and caught a few KDØFW ATV balloon flights launched from the Kansas City Area that I got to see. I discovered a hotbed of ATV contacts from N.E. Oklahoma where I worked several stations simplex as band openings were frequent into Oklahoma. These included AB5JS in Pryor, K5ZCJ in Broken Arrow, W5DS in Crescent, WD5GLW and WD5BKV in Tulsa, and WB5ADN in Oklahoma City. Local Arkansas ATV simplex included KCØDX of Rogers and KG5JJ of Springdale.

During the pinnacle of ATV activity, Wayne Green's wonderful and technical "73 Magazine" had a regular ATV column each month. Twice it featured record breaking ATV contacts made by Elmo-K5YWL, who was able to make a 540 mile contacts with WA8ZAH of Cincinnati, Ohio, and a 628 mile contact with K8AEH of Reynoldsburg, Ohio! You could also subscribe at that time to "Amateur Television Quarterly" magazine to get lots of good information on operational activity and projects to build. But sadly, activity died over the years and today manufacturers of ATV transceivers, such as PC Electronics and AEA, are no longer in business. ATV was one of my biggest projects in this great hobby and I wrote this article to help me remember all the fun times I had.

I have included some ATV photo memories for you in this article.

73 – Mike, NØALJ



Work the World on 10-Meters!

The Cushcraft AR-10 "Ringo" 10-Meter Vertical Monopole Antenna

By Randy Marion - NMØG

Get on the air quickly and effectively with this low-cost, easy-to-install *vertical monopole* antenna that provides omnidirectional 360-degree global coverage with 3.0 dBi gain.

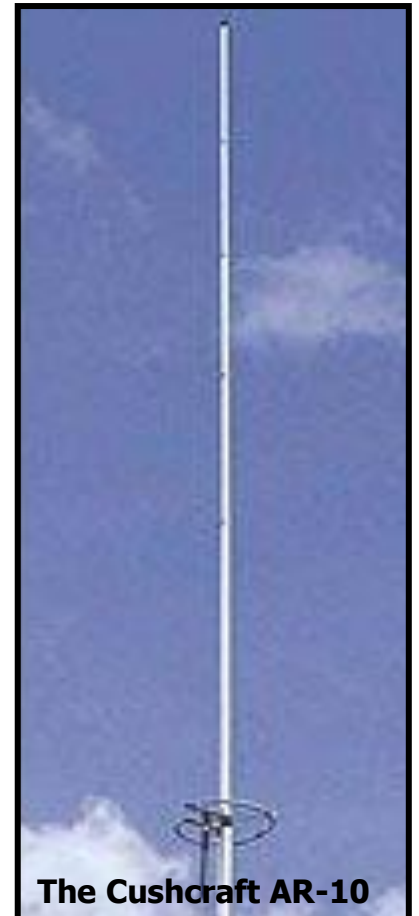
The Cushcraft AR-10 Ringo is a 1/2 wavelength antenna and includes built-in lightning protection. Since radials are not needed, you can even use the AR-10 Ringo indoors. With its low 16-degree radiation angle and 1 kW power handling ability, this economical antenna will allow you to "work-the-world" on 10-meters.

Why a dedicated 10-meter antenna?

We are currently in Solar Cycle 25 which began in December 2019 and is expected to continue rising until about 2030. More sunspots result in greater ionizing radiation that produces a more densely populated ionosphere, generally improving radio frequency (RF) skip propagation. During this time the higher HF bands (10m – 17m) will be most effective for skip propagation during the years near solar maximum.

If you already have a 10-meter antenna or a beam

A dedicated antenna for 10-meters can be easily installed and can improve your operating and station efficiency by allowing you to both receive and transmit power equally, 360 degrees, in all directions around the world. If you already have a beam antenna that includes 10-meters, an omnidirectional dedicated antenna can help



The Cushcraft AR-10

you spot activity around the world, and you can point your beam in the direction you desire.

New to the hobby or recently licensed

Perhaps you are newer to the ham radio hobby and just recently licensed, or maybe you've been out of the hobby for a while and are interested in getting active especially during the current solar cycle. Or if you're setting up a newer station, it is very easy to set up the AR-10 antenna to check out what's available on the higher bands. Plus, sometimes you can transmit a very long distance with just a few watts on 10-meters so your investment in hardware can be very low.

The Cushcraft AR-10 "Ringo" 10-Meter Vertical Monopole

What is an End-Fed, Half-Wave, Vertical Monopole?

Simple Answer: *It is a half-wave, end-fed, vertical dipole.* In the case of the AR-10 it is a 'dipole' made from aluminum poles instead of wire. It's about 17.6 feet high and fed from the bottom end through an ingenious ring matching circuit that is used on multiple high frequency antennas (10, 6, 2, etc.).

Example of a vertical monopole:

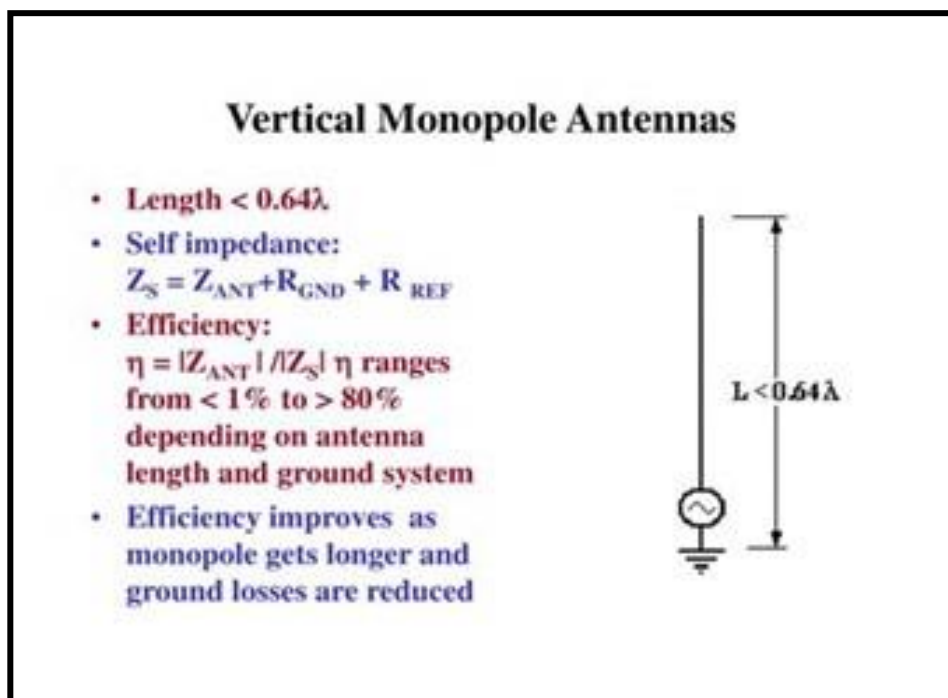


Diagram 1

Antenna Physics Part-1

Standard Horizontal 1/2 wave center-fed dipole and its radiation pattern:

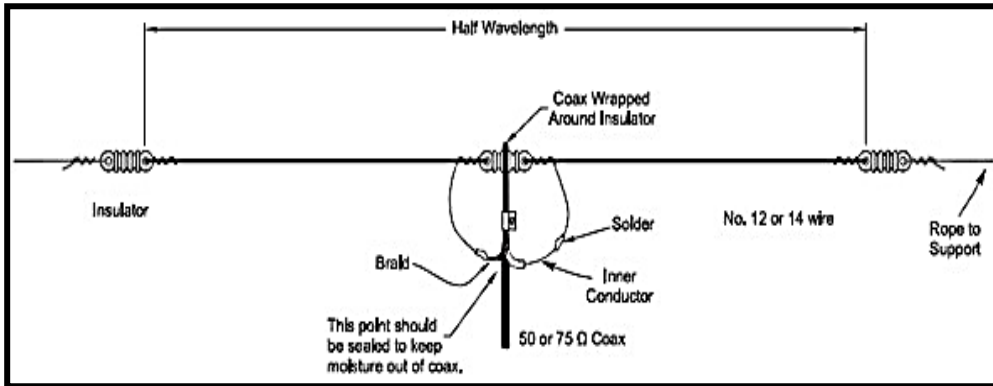


Diagram 2

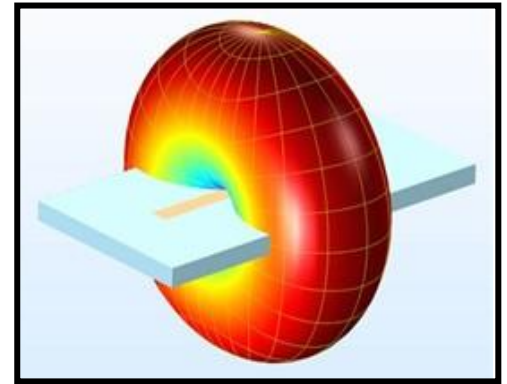


Diagram 3

Radiation Pattern for standard horizontal dipoles

If you have a horizontal dipole the radiation pattern looks like a doughnut with little radiation along the axis of the wire. The pattern is broadside to the wire except on the top and bottom where it is firing straight up or straight down.

Note that in this case some amount of RF energy is going downward, and some is going skyward which can affect tuning and losses.

Radiation pattern for a vertical end-fed 'dipole'; a Vertical Monopole:

Notice below that the null along the antenna axis of the vertical monopole points skyward and that most of the power is transmitted outward omnidirectionally at a low angle.

This antenna is now electrically an end-fed half-wave that is called a Vertical Monopole to differentiate it from the EFHW and dipole wire antennas. The Cushcraft AR-10 antenna is a vertical monopole designed for 10-meters that exhibits an omnidirectional, 360-degree, low-angle radiation pattern.

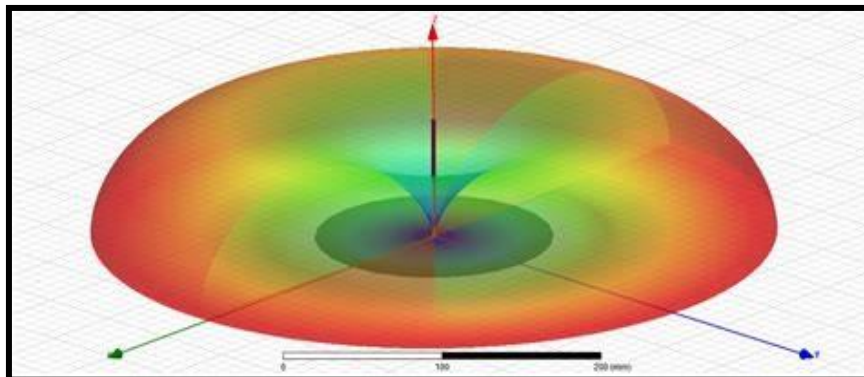


Diagram 4

Setting up the Cushcraft 10-Meter Ringo

Step-1: Unboxing the parts

The below picture shows the box of parts as received from DX Engineering. The shipment was complete with no damage and included a couple of extra parts like nuts, washers, etc.



AR-10 arrives in its shipping container



Tuning ring, view 1

Step-2: Assembling the Ring

I personally think this design is ingenious and it is one of the reasons I choose it.

Notes:

- 1) The ring creates the matching network needed at the bottom feed end to transform the 50 ohm coax to the monopole's impedance.
- 2) Look closely at this design. You'll note that one end of the ring is connected to the ground on the mounting pole via a bracket. Also, the other end of the ring is connected to the base of the radiating pole via a bracket. That gives you a capacitive and inductive tuning connection.

3) During assembly the tuning rod is connected to a specific position and then the antenna is tuned by changing its length. Cushcraft includes the specifications for varying the antenna length and in my case I set it at 190 inches which tuned it to 28.6 Mhz.



Tuning ring, view 2

“You can tune one of these antennas to cover any 800 kHz of the 10 meter band from 28 to 29.7 MHz with a maximum 2:1 SWR.”

- DX Engineering.com

Installing the Cushcraft AR-10 for 10-Meters

Installing the AR-10 is very simple. All it needs is a pole to support it and it can be installed in various configurations. Since it needs no radials, it can be used in a lot of configurations including indoors following proper safety guidelines for EMI, RFI and RF-Exposure.

My Installation

On the following page, you will my installation of the AR-10 on top of a 33 ft. push up pole that I was using for other antennas also. The pole sits on a deck that is about 14 ft. high, plus the 33 ft. pole, plus the height of the antenna which is almost 18 ft puts the top of the antenna at about 65 ft. which is well more than a wavelength from the ground.



AR-10 installation at QTH of NMØG

Coax: "What should I use?"

There are many versions of coax and many opinions on what to use in what circumstance.

Rule #1: Do Not Shop for coax, especially if you're thinking about price and how to save money.

Rule #2: Always purchase your coax from known reliable suppliers. I personally shop for coax primarily at two vendors: DXEngineering.com and TheWireman.com. I've been working with The Wireman since the 1980's and I know I'll get quality from these vendors.

The coax I used was RG8 LOW LOSS "SUPER 8"; TheWireman.com, part #106

I chose this coax for its quality and the very low loss because I'll be using this antenna across the entire 10-meter band. Since the antenna is tuned to the middle of the band, 28.6 Mhz, when you use a tuner to work other frequencies the SWR of the radiator can go very high, BETWEEN the COAX and the ANTENNA.

But, in some cases that is OK and, in this case, almost all the power from the radio will be transmitted out of the antenna into space. In a future article we'll discuss the science and myths behind SWR and what happens to reflected power.

What about a Common Mode Choke?

Coax cables that run from your shack to your antenna are antennas themselves. The outside of the coax shield is a long wire antenna that picks up RF and noise, etc., that feeds directly on to the cabinet of your equipment. For now, the simple rule is you should have one grounded common-mode-choke on every antenna feedline at the entrance to your station to block noise and common mode currents coming in on the shield.

Conclusion

“Cushcraft AR10 10-Meter Ringo Vertical Antennas are patterned after the original W1BX FM Ringos. If you want a combination of compact size, wide bandwidth, and a low radiation angle, then these economical antennas are for you! Since radials are not needed, you can even use AR10 Ringos indoors.”

– Dxengineering.com

This makes the AR-10 a very effective antenna for any Ham Radio Station that will allow you to take advantage of the current Solar Cycle and “Work the World” on 10-meters!!!

Specifications:

OHMS/Impedance: 50 OHMS

VP/VF (velocity of propagation/factor): 0.82

VOLTS/RMS: 4000

LOSS IN DB PER 100FT(APPROXIMATELY)

@ 30 MHz (HF)--- .08

@50 MHz----1.1

@150 MHz (2 METERS)---1.8

@440 MHz--- 3.0

@900 MHz---4.8

POWER HANDLING CAPABILITY: FULL LEGAL POWER IN A MATCHED SYSTEM, WHICH IS 1:1 SWR

73!

Randy – NMØG

NMØG@arrl.net

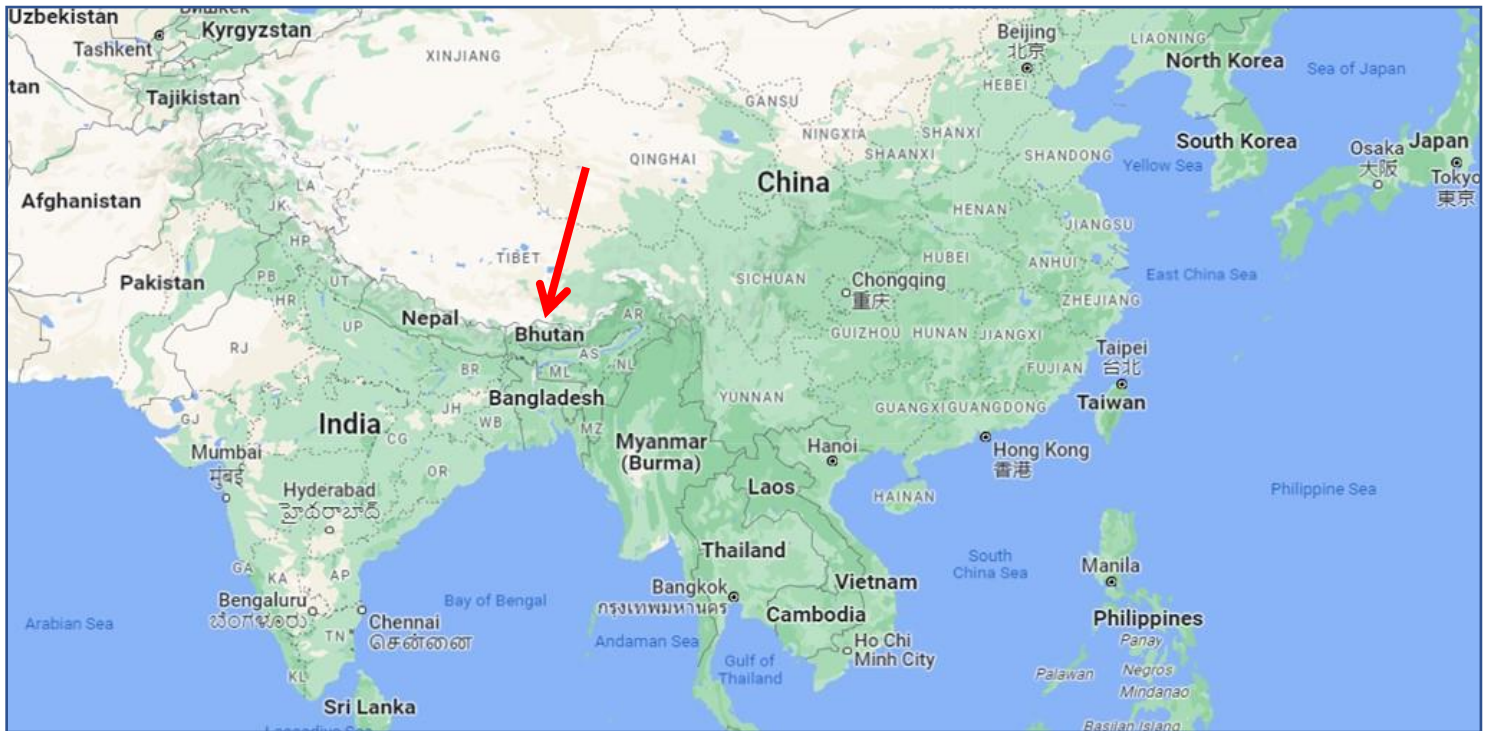
THE DXCC DEN



By Don – K5DB

This month's featured country:
Bhutan
Callsign prefix: A5

Bhutan (boo-tän) is a landlocked country in south Asia. It is situated in the eastern Himalayas, between China to the north and India to the south. A mountainous country, Bhutan is known locally as "Land of the Thunder Dragon", a name reflecting the cultural heritage of the country. The capital and largest city is Thimphu, holding close to 1/7th of the population.



Location of Bhutan

Buddhism, the major religion and spiritual belief, was first introduced to Bhutan in the 7th century AD. The Tibetan king Songtsän Gampo, a Buddhist convert, extended the Tibetan Empire into Sikkim and Bhutan. He ordered the construction of two Buddhist temples, Bumthang in central Bhutan and at Kyichu in the Paro Valley. Stone tools, weapons, elephants, and remnants of large stone structures provide evidence that Bhutan was inhabited as early as 2000 BC, although there are no existing records from that time.

Bhutan joined the United Nations in 1971. It has since expanded relations with 55 countries. While dependent on the Indian military, Bhutan maintains its own military units. Bhutan is a constitutional monarchy with a parliamentary form of government. Bhutan's currency is the ngultrum, whose value is fixed to the Indian rupee. The Indian rupee is also accepted as legal tender in the country. Though Bhutan's economy is one of the world's smallest, it has grown rapidly in recent years.

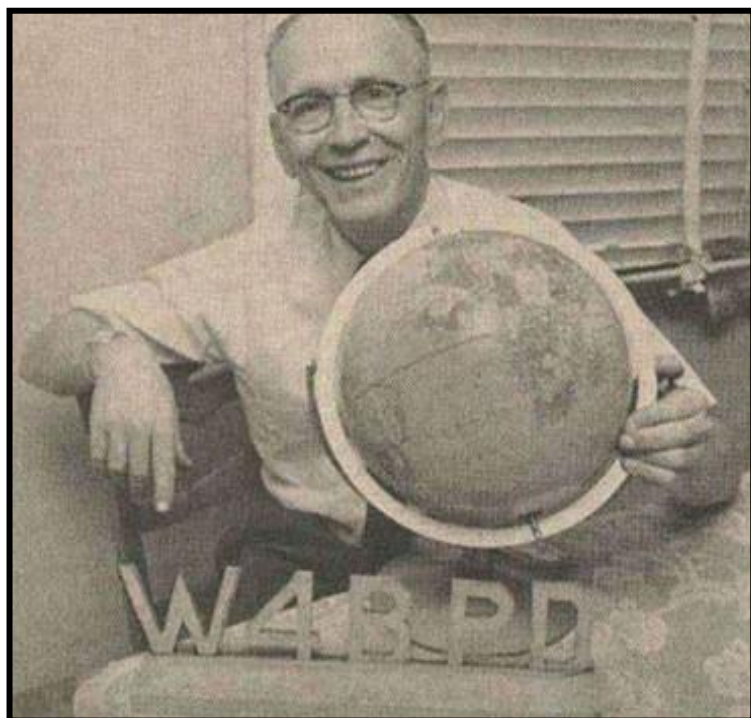
When it comes to amateur radio, Bhutan is fairly rare. It's native ham population is only around 80-100, and they are not very active. Currently, it ranks #94 on the DXCC Most Wanted list.

AC5PN – N. Chhawna, was the first Bhutanese to go on the air in 1955. He was followed 7 years later by a group sponsored by the Amateur Radio Society of India.



AC5PN

Over the decades since that time, operation from Bhutan has mostly been sparse. However, Gus Browning – W4BPD did make it fairly available from July 1963 through early 1964 operating with the approved callsign of AC5A. (The “C” in the old Bhutan prefix has now been removed as “AC” in modern times is now a callsign prefix of the U.S. Thus, the current prefix for Bhutan is now “A5”.)



Gus Browning – W4BPD

There have also been short, limited DXpeditions in the past but not very many, making Bhutan a still sought after DX entity.

The most recent opportunity to work the country occurred in 2018 when Zorro – JH1AJT, Martti – OH2BH, Franz – DJ9ZB, Jin – JF1IST, and Champ – E21EIC coordinated a small DXpedition team using the callsign A5A.

The most recent large and very successful DXpedition took place 23 years ago in 2000 with the A52A DXpedition headed-up by Glenn Johnson – WØGJ and Bob Allphin – K4UEE. The team was comprised of members from the U.S., Belgium, Singapore, Russia, Japan, and Finland.



A52A DXpedition Team in 2000

Bhutan restricts output power in amateur radio to 100 watts, so no amplifiers were used during this operation. Yet they had a goal to remove Bhutan from near the top of the Most Wanted List and to give an ATNO (All Time New One) to as many hams worldwide as possible. Even with this power limitation, the team made over 82,000 QSOs, and at that time, the second highest DXpedition in history and the highest for a low power operation. WOW.....

If you would like to see an excellently produced video on the A52A operation, as well as an excellent view of the country, its history, and its lifestyle, click [here](#).



MONTHLY PROGRAMS NEEDED

Would you be interested in presenting a program for an upcoming monthly meeting on a radio related topic?

Or, do you have an amateur radio acquaintance with someone who would like to present a program at one of our future monthly meetings?

Or would you like to help arrange and coordinate our monthly programs?

If so, please contact:

Jan-WB5JAN: janhagan51@gmail.com, Joe – W5AEN: joe.hott@gmail.com,
or Don – K5DB: arsk5db@gmail.com

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