



# The Blue Ridge Echo .. Echo .. Echo ..



*Official Transmitter of the Blue Ridge Amateur Radio Club - W4YK -*

## MEETING MINUTES FROM NOVEMBER, 2023

The November 7<sup>th</sup> meeting of the *Blue Ridge Amateur Radio Club (BRARC)* was held in person and streamed online via Zoom, and began at about 7:00pm with the Pledge of Allegiance.

### ATTENDANCE

26 Members attended (17 in person and 9 online), with no guests.

### TREASURER’S REPORT

October 1 – October 31, 2023

Balance as of 09/30/23		<b>\$ 6,012.71</b>
<b>Plus:</b> Deposits: Dues 2023	\$ <u>10.00</u>	
	Total Income	<b>\$ <u>10.00</u></b>
	Sub-Total	<b>\$ 6,022.71</b>
<b>Less:</b> Expenses: Liability Insurance – 1 year	\$ <u>200.00</u>	
	Total Expenses	<b>\$ <u>200.00</u></b>
	<b>BALANCE AS OF 10/31/23</b>	<b>\$ 5,822.71</b>

### BUSINESS

#### *2024 Officer Election*

The club elected officers for 2024 at this meeting. Per the By-Laws, the Steering Committee proposed the following slate of nominees: President – Bill Gunn [KB2GUN]; Vice-President – James Reed [KK4JFO]; Treasurer – Paul Nice [KQ4ALD]; Secretary – Steve Smith [KC5F]. There were no additional nominees from the floor, and it was moved, seconded and approved by acclamation to elect the slate of officers for 2024 as proposed. The officers elected will take office at the meeting in January. The officers will select two club members who, with them, will compose the Steering Committee, which “shall conduct the business of the Club and make policy and other decisions.” (See *BRARC Info/BRARC By-Laws* on the website for all the details!)

#### *Upcoming Events*

Blue Ridge ARC will be providing communications for this year’s **Hendersonville Christmas Parade** on Saturday, **December 2<sup>nd</sup>**. We are still looking for volunteers. Even if you are new,



# Blue Ridge Amateur Radio Club

we can use you. I will team you up with experienced people. We can also provide a radio to you if needed. We will be working on simplex using 146.550 and 146.580. We will meet at the Hendersonville High School Parking lot at 3:00pm. The parade itself kicks off at 6:00pm. This is a great way to provide a service to your community. Please contact Danny Rector at [rectordl@bellsouth.net](mailto:rectordl@bellsouth.net) if you can help.

The **BRARC Christmas Dinner** will be Tuesday, **December 5<sup>th</sup>** at **6:00pm** at the Golden Corral on US-64 in Hendersonville. We will have a section reserved, and we'll have our normal Zoom link running for those who want to watch us stuff our faces!

**Henderson County ARES/AUXCOMM** meets the 4<sup>th</sup> Monday each month at 6:30pm at the State Medical Assistance Team (SMAT) warehouse at 518 S Allen Rd, Flat Rock.

## *Meeting Minutes*

President Bill Gunn [KB2GUN] called the meeting to order at 7:00pm.

Members recited the Pledge of Allegiance.

The election of the BRARC Officers for 2024 was held, as noted above. 2023 Treasurer Susann Swan [K9FMZ] shared our new Treasurer Paul Nice's background as a CPA and hospital administrator who has worked with her to keep the books in order. Susann will be devoting her time to keeping new hams from our license sessions active and interested in the hobby.

The BRARC Christmas Dinner will be on Tuesday, **December 5<sup>th</sup>** at 6:00pm. Following discussion, the decision was made to hold it at the Golden Corral in Hendersonville.

Susann Swan [K9FMZ] gave the Treasurer's report for the month of October, 2023.

Zach Thompson [KM4BLG] shared that the scores for the September 9<sup>th</sup>/10<sup>th</sup> North Carolina Parks On The Air event are now available at <https://ncpota.org/>.

Danny Rector [NA4X] shared plans for the BRARC involvement in the 2023 Hendersonville Christmas Parade, which kicks off at 6:00pm on Saturday, December 2<sup>nd</sup>. This year there is a limit of 112 entries no longer than 70 feet each, with a November 22<sup>nd</sup> cutoff date for entry applications. This means we will have the lineup and Danny can make ham assignments well in advance. We need to be in place by 3:00pm. There are many different jobs for us to do, but you only need an HT on simplex to help. If you can't get there by 3:00pm, this year we will also have a few hams helping at the back end of the parade, who will only need to be in place by 6:30pm. The main lineup will be on Oakland and in the HHS parking lot. It will be a straight line with no merging in as we have had to do in the past. Danny will provide each volunteer with a flashlight. Each volunteer will also need a reflective safety vest.

Danny Rector [NA4X] told us that the deadline to submit comments to the FCC regarding their proposal for the 60m ham band has been extended to November 28<sup>th</sup>. Currently, US amateurs five discrete channels on a secondary basis at a maximum effective radiated power (ERP) of 100 watts ERP. The FCC wants comments on reducing the allocation to a contiguous 15 kHz from 5351.5 - 5366.5 kHz with a power limit of 15w EIRP (equivalent to 9.1w ERP). This was adopted by the 2015 World Radiocommunication Conference. The government argues that the WRC-15 proposals should be implemented as written. Amateurs would lose four of the discreet channels and have the maximum power reduced by more than 10 dB, from 100w ERP to 9.1w ERP. In 2017, ARRL petitioned the FCC to keep four of the current five 60-meter channels –



# Blue Ridge Amateur Radio Club

one would be within the new band – as well as the current limit of 100w ERP. Canada has already adopted this change. The FCC seeks comment on the proposed 15 kHz of contiguous spectrum, but also on whether the existing channels should remain allocated to amateur radio on a secondary basis, and whether the maximum power limitations should be reduced from 100 to 9.1 watts ERP. The FCC also requested comments on whether the power limitation should be expressed as EIRP as the WRC-15 recommends or as ERP as in the current rules. Instructions on how to comment are at <https://www.arrl.org/60-meter-band>.

## PRESENTATION

Zach Thompson [KM4BLG] provided our main program – “Introduction to WSPR”. WSPR is short for Weak Signal Propagation Reporter. It uses low-powered digital beacons which any ham can generate, with messages consisting of call sign, Maidenhead Grid locator and output power. The messages are sent over a 2-minute period in cycles starting on every even minute. They are decoded worldwide at weak signal levels at times even below the noise floor. Propagation beacons have been around for years as one-way transmissions, usually using CW. They provide a consistent “control variable” to gauge propagation conditions. But CW uses more bandwidth than WSPR, and can be decoded to only about -18 dBm where WSPR can be decoded to -29 dBm or less. (dBm is decibels above or below 1 milliwatt.) WSPR has the added benefit of error-correction, and provides numerical data for easy analysis.

WSPR can be used to check propagation conditions, to analyze your own antenna performance, and to test your transmitter and receiver performance. It’s also fun just to see where your signal is going! You need three things to use it: 1) A transmitter, receiver or both; 2) A controller with an accurate clock; 3) An antenna. You can even buy dedicated WSPR packages that take care of #1 and #2. For a controller, you can use the WSJT-X software package provided for free for multiple computer platforms by the creators. It’s what you may already use for FT8, etc.

WSPRnet is a website giving access to the worldwide database of WSPR reports. Stations receiving WSPR automatically upload what they have received, giving a real-time view of what the world hears. Zach showed us in real time a few of the ways the data can be analyzed and displayed, and showed several types of WSPR-specific hardware available to avoid tying up your home radio. (Contact Zach at [km4blg@gmail.com](mailto:km4blg@gmail.com) if you’d like a pdf copy of his presentation.)

## MEETING ENDED

The meeting adjourned at about 8:30 pm.

Minutes submitted respectfully by Steve Smith [KC5F].

## ITEMS FOR SALE

Icom IC-R7000 VHF/UHF receiver with new battery for \$250.

Kenwood TS-940S with the entire line, oscilloscope, external speaker and SWR meter. The radio just got realigned, new batteries and cap changes a month ago. \$1100 for the whole setup.

Marty, N4AMW. [woodmarty@rocketmail.com](mailto:woodmarty@rocketmail.com)

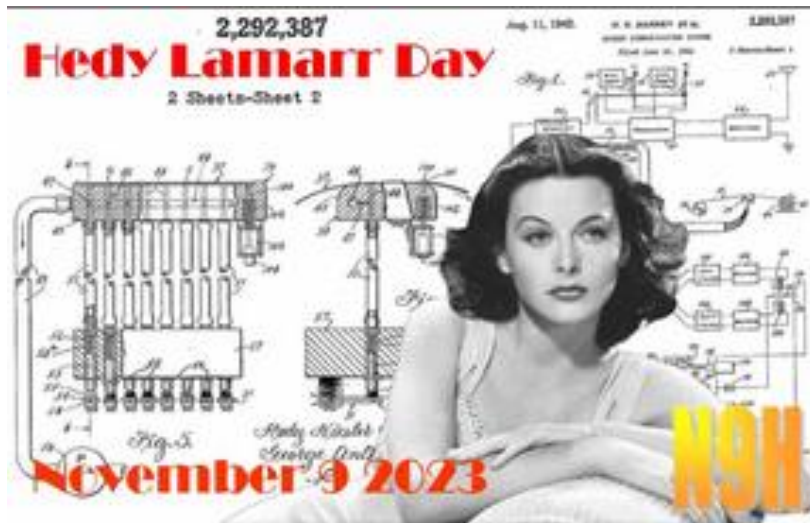


## THIRD SATURDAY TESTING SESSIONS

Susann Swan [K9FMZ] shared that club member George Bond, KF4YFK, passed his Extra Class exam at our club breakfast VE session in October. George has since then received his new call sign, KZ4BN.

## HEDY LAMARR AND FREQUENCY HOPPING

(from an article sent by Susann Swan)



**Hedy Lamarr**, was a Hollywood actress in the 1940s as well as an inventor who holds the patent for frequency hopping, which is used in wireless communications today like WiFi and Bluetooth. She was inducted into the National Inventors Hall of Fame posthumously in 2014.

Hedy Lamarr (movie actress) and George Antheil (composer and pianist) worked together to develop a wireless

communication system that stopped enemies from jamming signals that controlled the Allies' torpedoes in WWII. Their joint invention used a mechanism akin to piano player rolls to synchronize the progression between the 88 frequencies. The invention was dubbed frequency hopping because the system caused radio waves from the transmitter and receiver to switch to a new frequency simultaneously.

**Frequency hopping** is the most basic version of a radio transmission technique known today as the spread-spectrum technique, which refers to any method that broadens a signal's frequency band. Radio stations typically broadcast on a single carrier frequency, making eavesdropping simple: you tune your radio to the correct frequency and receive the programming.

Frequency hopping prevents transmission interception and decipherment by shifting the carrier frequency in a predetermined, usually pseudorandom manner – that is, in a way that appears random but is produced by a deterministic algorithm. The message can be picked up by a receiver hopping around in time with the transmitter.

**Hedy Lamarr Day** was celebrated on November 9<sup>th</sup> with a 4-hour digital and HF net. Details and more at: <https://www.roc-ham.net/hedy-lamarr-2023/>



## CALENDAR OF UPCOMING EVENTS

Date	Description
Sat, November 18	<b>Informal Breakfast Get-Together</b> – 9am, Ingles 625 Spartanburg Hwy.
Sat, November 18	<b>License Exams</b> – 9am by reservation, Ingles 625 Spartanburg Hwy.
Mon, November 27	<b>Henderson County ARES/AUXCOMM</b> – 6:30pm. Mountain Area Healthcare Preparedness Coalition warehouse at 518 S Allen Rd, Flat Rock.
Thu, November 30	<b>BRARC Steering Committee Meeting</b> – 7pm via Zoom. (5 <sup>th</sup> Thursday because the 4 <sup>th</sup> Thursday is Thanksgiving)
Sat, December 2	<b>Christmas Parade</b> – 6pm, with operators in place at 3pm for positioning units.
Tue, December 5	<b>Christmas Dinner</b> – 6pm at Golden Corral. (In place of our regular meeting.)
Sat, December 16	<b>Informal Breakfast Get-Together</b> – 9am, Ingles 625 Spartanburg Hwy.
Sat, December 16	<b>License Exams</b> – 9am by reservation, Ingles 625 Spartanburg Hwy.
<i>No December ARES Meeting</i>	<b>Henderson County ARES/AUXCOMM</b> – 6:30pm. Mountain Area Healthcare Preparedness Coalition warehouse at 518 S Allen Rd, Flat Rock.
Thu, December 28	<b>BRARC Steering Committee Meeting</b> – 7pm via Zoom. (5 <sup>th</sup> Thursday because the 4 <sup>th</sup> Thursday is Thanksgiving)
Tue, January 2	<b>BRARC Meeting</b> - In person in Jackson Park. In addition, you can still attend virtually. <b>Latest instructions to login are on the BRARC website.</b>

## CLUB CALENDAR

The BRARC Club Calendar is on the BRARC website at <http://radioclub.org/> “Club Calendar”.

## AREA HAM RADIO NETS

<b>FM NETS - 2 METERS</b>		
BRARC Net (W4YK)	146.640 MHz / T91.5 H'ville	Sunday 8:00pm
Slow Scan TV Net	146.640 MHz / T91.5 H'ville	Sunday 7:00pm
Henderson County ARES Net	146.640 MHz / T91.5 H'ville	Wednesday 9:00pm
Anderson Radio Club Net	146.790 MHz Pickens SC	Daily 8:30pm
Blue Ridge Traffic (SC)	146.610 MHz Caesars Head SC	Daily 9:00pm
Good Morning Net	146.910 MHz Asheville	M-W-F 9:00am
WCARS Information Net	146.910 MHz/ T91.5 Asheville	Monday 9:00pm
WCARS Simplex Net	147.525 MHz	Tuesday 8:30pm
Buncombe ARES Net	146.910 MHz / T91.5 Asheville	Wednesday 9:00pm
Transylvania ARC Net	147.135 MHz Brevard	Thursday 8:00pm
6600 Net	145.190 MHz Mt Mitchell	Saturday 9:00pm
Slow Scan TV Net	146.790 MHz (no tone)	Saturday 9:15pm
Oasis Shrine Net	145.190 MHz Mt Mitchell	Sunday 9:00pm
<b>FM NETS - 6 METERS</b>		
6 Meter Net	53.130 MHz / T100 H'ville	Friday 9:00pm



# Blue Ridge Amateur Radio Club

<b>HF NETS</b>		
NC Morning Net	3.927 MHz	Daily 7:45am
SATERN Net	14.265 MHz	Daily 10:00am
NC Evening Net	3.923 MHz	Daily 6:30pm
Tarheel ARES Net	3.923 MHz	Daily 7:30pm
K4UUQ Morning Net	7.228 MHz	M-Sa 7:00am/Sun 8:00
80 Meter Simplex Net	3.843 MHz	Thursday 9:30pm
Get Up and Go Net	28.350/28.360 MHz	Sunday 9:00pm

<b>DIGITAL MOBILE RADIO NETS</b>		
WNC Local DMR Net	WNC Local Talk Group (UHF)	Monday 7:30pm
High Country DMR Net	PRN Local Talk Group	Tuesday 8:00pm
WNC Net	WNC System Fusion YS24157	Wednesday 9:00pm
WNC DMR Net	WNC Talk Group (VHF/UHF)	Thursday 8:30pm

## BLUE RIDGE AMATEUR RADIO CLUB OFFICERS

<b>Title</b>	<b>Name</b>	<b>Call Sign</b>	<b>Phone</b>	<b>Email</b>
PRESIDENT	Bill Gunn	KB2GUN	704-934-1950	<a href="mailto:kb2gunb@yahoo.com">kb2gunb@yahoo.com</a>
VICE-PRESIDENT	James Reed	KK4JFO	828-698-3609	<a href="mailto:jshreed@bellsouth.net">jshreed@bellsouth.net</a>
TREASURER	Susann Swan	K9FMZ	828-747-2250	<a href="mailto:susann93@use.startmail.com">susann93@use.startmail.com</a>
SECRETARY	Steve Smith	KC5F	828-489-6637	<a href="mailto:kc5f@arrl.net">kc5f@arrl.net</a>