

OFFICERS

Andrew Lawson, N2AL - President
 (Vacant) - VP
 Bob Loving, K9JU - Secretary
 David Andrews, N1ESK - Treasurer

Nets

SMARC Weekly Net.
 Thursday 1900 hrs
 146.655 & 443.075

KK4XA Morning Net
 M-F 0900 hrs
 146.655 & 443.075

Club Meetings

4th Monday Monthly*
 1900 hrs
 USW Union Hall
 339 Hall Road
 Alcoa, TN 37701
 *Excludes June and Dec

Typical Gatherings

Tech Lunch
 Thursdays @ 1130hrs.
 Windy City Grill
 2641 Hwy 411
 Maryville, TN

Eyeball Net (Breakfast)
 Friday's @ 0830hrs
 TC's Grill
 2514 Old Niles Ferry Road
 Maryville, TN

**Bob Wilson, KK4XA
 President Emeritus**

While the ice and snow may have kept the club from meeting in person in January, the frigid temperatures couldn't dampen the spirits when Bob "Bob Bob" Wilson, KK4XA, was bestowed the honor of President Emeritus by a vote of the members present on the Zoom meeting.



Bob Wilson, KK4XA
 SMARC President Emeritus

Bob's work is far from over. Bob will serve on the Repeater committee, as well as chair both the Training and Education and the Field Day 2024 committees. He will continue to assist the club officers with meeting and club planning in an advisory and honorary nature. The motion was *overwhelmingly* passed.

Doctor Bob Heil, K9EID Silent Key

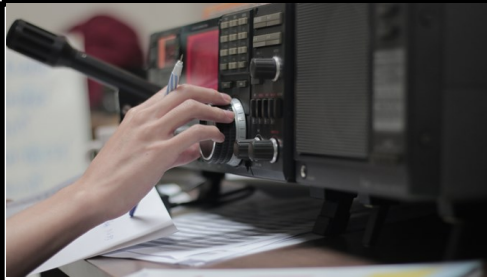
Audio pioneer, founder of Heil Sound, and passionate promoter of amateur radio, Doctor Robert (Bob) G. Heil, K9EID, passed away on February 28th, 2024, following a year long battle with cancer.



Bob was passionate about sound and spent his lifetime trying to improve the live sound experience. Many of his creations are enshrined in the Rock and Roll Hall of Fame, and live on in concert venues and sound studios around the world.

Bob was a co-creator of the popular YouTube show, Ham Nation.

Bob Heil was 83.



Contesting Roundup

MARCH

- Africa All Mode Int'l DX Contest: Mar 16 1200Z to Mar 17 1200Z
- North American SSB Sprint: Mar 24 0000Z-0400Z
- CQ WW WPX Contest, SSB: Mar 30 0000Z to Mar 31 2359Z

APRIL

- Solar Eclipse QSO Party: Apr 8 1400Z-2400Z
- Worked All Provinces of China DX Contest: Apr 20 0600Z to Apr 21 0559Z
- ARRL Rookie Roundup, SSB: Apr 21 1800Z-2359Z

MAY

- ARI Int'l DX Contest: May 4 1200Z to May 5 1159Z
- CQ WW WPX Contest, CW: May 25 0000Z to May 26 2359Z

Note: All dates and times listed are UTC, unless otherwise specified

For more Contests, QSO Parties and Sprints check out the [WATBNM Contest Calendar](https://www.contestcalendar.com/) at <https://www.contestcalendar.com/>

In the News...

POTA is Making Some Changes

Various reports online highlight major changes to the familiar park numbers and their prefixes.

In a move to bring things into alignment with ISO standards, prefixes will be changing to match, as will location codes. For example, US prefixes will change from the familiar "K" to "US" and Canadian prefixes will change from "VE" to "CA."

Read all of the changes they are working on at the Parks on the Air website:

<https://docs.pota.app/docs/changes.html>

First Amateur Radio Station on the Moon

JAXA, the Japan Aerospace Exploration Agency successfully landed the Smart Lander for Investigating Moon (SLIM) on January 19th, 2024.

Two probes were released, one of which contained an transmitter sending CW on 437.41MHz.

ARRL to Publish Gordon West Books

The ARRL has announced they will be the new publisher for Gordon West, WB6NOA. His license preparation books have been popular for more than 40 years.

According to the ARRL press release, West will continue to author the books along with his Technical Editor Eric Nichols, KL7AJ.

Upcoming Hamfests

DATE	NAME	CITY, STATE
3/16	Sevier County 2024 Hamfest	Sevierville, TN
4/20	Greeneville TN Hamfest	Greeneville, TN
4/27	Short Mountain Repeater Club	Murfreesboro, TN
5/16-5/19	Dayton Hamvention 2024, ARRL National Convention	Xenia, OH
6/15	Knoxville Hamfest and Electronics Convention, ARRL Delta Division Conference	Knoxville, TN
8/17-/18	Huntsville Hamfest	Huntsville, AL
9/7	Greater Louisville Hamfest	Shephersville, KY

2024



H A M F E S T

Sevier County Fairgrounds 754 Old Knoxville Hwy. Sevierville TN. 17 Arces Of Boneyard Exhibit Hall & Red Barn Building
 Food Vendors & Chicken Bogg By Bud VE Testing ARRL
 Go Bag Display & Information Free Radio Programming
 Rain - Shine - Cold - Warm We Will Be There
 Get All Info At seviercountyars.com
 This One Is Dedicated To Mick Emery KE0GBR



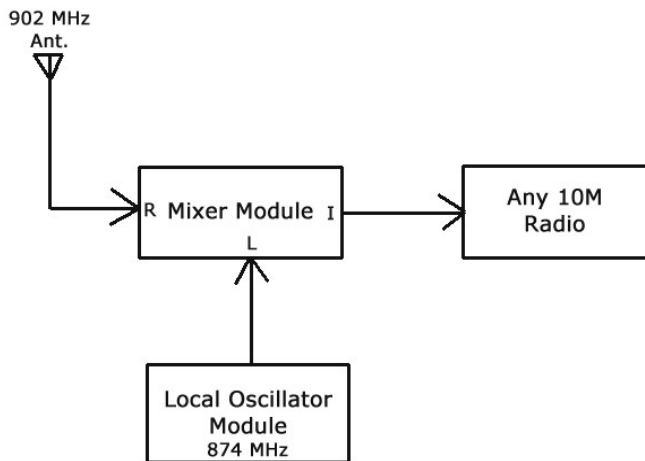

VHF, UHF and Microwave Musings, by NOEDV



Scott NOEDV

Is it time for a new challenge in your amateur radio career? This month I will be discussing one of my favorite bands, 902 MHz! It is a band that is sandwiched between 440 MHz and 1296 MHz. It shares properties of both but has little, if any, commercial transceivers for amateurs to buy. So, what does this mean? It means you get to do what amateurs in the distant past had to do: BUILD their own equipment!

Don't panic yet! A starting step using commercially available components is one way to try your hand at 902 MHz. I will explore the building of an extremely



simple solution that will allow you to listen in on the band. Fortunately, there is a beacon currently operating 24/7 about 35 miles South of Maryville.

First, I will start with talking about basic receivers in general. Most modern receivers are of the superheterodyne type. That is, they take an RF frequency and convert it to an IF frequency. The next thing they do is convert the IF signal to audio and send it out to the speaker. A lot of circuitry is used to accomplish this, but if we only concern ourselves with a block diagram, our task here will be dead simple.

The mixer module we'll be using can be purchased from Mini-Circuits. The module we'll be using is their ZX05-10L-S+ Frequency Mixer that can be purchased at [Level 4, Double Balanced Mixer, RF/LO Freq 10 - 1000 MHz | ZX05-10L-S+ | Mini-Circuits \(minicircuits.com\)](https://www.minicircuits.com/Level4_Double_Balanced_Mixer_RF/LO_Freq_10-1000_MHz_ZX05-10L-S+) for \$48.00 plus tax and shipping.

The Local Oscillator module is VERY versatile. It can be purchased from Q5 Signal for \$99.00. This board is a modern PLL based wideband synthesizer and can be programmed with solder bridges on the PC board to allow it to be used to convert signals from 144-5760 MHz down to 28 MHz so you can listen on any ordinary 10M radio. It is available at [digiLO \(q5signal.com\)](https://www.q5signal.com/digiLO)

The mixer module I selected for this experiment is designed for RF frequencies from 144-1000 MHz. Mini-Circuits has other mixer modules that can be selected to work up to 10 GHz and beyond! It really is plug and play! I would be more than willing to help folks get a simple system like this up and running.

This particular project is ripe for experimentation. It is perfect for people that may only have an HF radio (or 10M only radio) but they would like to explore 2M, 222 MHz, 432 MHz and 902 MHz (SSB/CW weak signal work).

There are two PREMIERE conferences coming up in 2024...

The Central States VHF Society (geared toward 6M-432 MHz, but some microwave too) has their annual conference in Cedar Rapids, IA in July. Head on up to escape the East Tennessee heat!

www.csvhfs.org

The Microwave Update conference (generally 902 MHz to light) is in October up in beautiful Vancouver, BC. If you're even remotely interested in the Vancouver conference, make sure your passport is up to date. If you don't have one, I suggest you start getting one now!

www.microwaveupdate.org

CU in Cedar Rapids and/or Vancouver?

Scott NOEDV

GET MORE FROM AMATEUR RADIO

When you join ARRL, you'll have access to information, learning, programs, & services to help you get and stay on the air.

Join today by visiting arrl.org/membership or call 1-860-594-0200

SMARC is an ARRL affiliated club.

ARRL Membership
Get the tools and resources you need to do more with your Amateur Radio license.
Learning Services Community Leadership

The World of DX Spring 2024

Hello again fellow SMARC members. Welcome back to the fascinating world of DX.



Bob K9JU

In the very first World of DX column, I explained some of the facets and terms used in DX. The second column outlined some ways you can get started in this popular facet of the hobby. In this column, I will give some tips on working DX stations that are not in a contest.

Once again, let's assume that you are running a "barefoot" (no amplifier) setup with a transceiver with 100-Watts of RF output power and a "not so special" antenna. Also, you might be watching one of the numerous DX spotting networks like DX Summit, <http://dxsummit.fi/#/>, or DX Heat, <https://dxheat.com/>. Maybe you and one or more of your buddies are looking for a DX station and are communicating over a local repeater or a simplex frequency. The more modern method is texting each other or a group with your Smartphone.

Here are three scenarios that may occur and what you might do.

1) As mentioned in the second issue of this column, you can tune the band and find a strong signal with an operator who sounds lonely as there are no callers. OK, call the station. Don't get discouraged if it takes more than one call as you should eventually make a contact.

2) You see a station on the spotting network and tune to the frequency. The signal is strong with very few callers. Again, you call but the operator doesn't an-

swer your first call. Keep at it and you should eventually work the station.

3) You find another station on the spotting network with a prefix that is not the usual ones you have heard on the bands. When you tune to it, it sounds like semi-organized chaos. The DX station does a standby for callers and it appears the entire world ends up on his frequency. This is what is affectionately known as a "pileup," similar to a pileup on the freeway only with much less harm to the participants. Here is where some finesse comes into the game.

Finesse, huh? What does that mean? It means a lot if you want to succeed in DXing. Here are some tips.

1) On SSB your best option is to "drag your feet." Yes, wait a second or two before throwing your callsign into the "ether." [A century or so ago, the "ether" was believed to be the medium for RF and light transmission. Sound traveled in air (the medium for sound) therefore, there had to be a medium for RF and light.. The "ether" was never found.]

2) If the DX operator says, "please QRX 5," ("standby for 5-minutes") it means it is probably time the operator is in need of taking a potty break. Stay on the frequency and listen. When the operator returns with, "CQ from 'XYZ'," pounce with no hesitation. A lot of pileups dissipate during the QRX period and slowly build upon the return of the DX operator. This technique works for any of the modes of communication in the amateur radio bands.

3) There are not many CW operators in the new generation of hams. However, I will mention this technique although the success rate may not apply to SSB. The DX station does a standby for callers. The frequency is a jumble of audio tones near your favorite CW listening tone. DO NOT call directly on the DX operating frequency as many will do. Use the "delta-TX" function or "split" mode to move your transmit fre-

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Smoky Signals

(Continued from page 4)

quency a few hundred Hertz above or below the DX. Sometimes waiting a second or two before transmitting and being off of the DX frequency will work even better. There are times the DX is not familiar with controlling a pileup and a seemingly long time transpires before the DX sheepishly calls a station. The chances of working the DX are better if you persist and transmit your call, move your transmit frequency a little bit and repeat as necessary. There have been times when I've spent an "eternity" transmitting, moving frequency either to above or to below the DX frequency before making the contact.

On SSB, if you are a female operator, you have an advantage. If you are a male operator, particularly one with a deep, low pitch voice, well, you are at a definite disadvantage. Why? The higher frequencies of the voice have "articulation" that conveys the information; the lower tones of the voice can be considered the "carrier" which provides no information other than its presence.

Bob Heil of audio fame gave a presentation many years ago on microphones and frequency shaping. An experiment was run with two identical radios and two identical antennas. One radio used the standard out-of-the-box handheld microphone supplied with the radio and the other had a microphone with circuitry to emphasize the higher frequencies, the frequencies of articulation. Both stations simultaneously called the same DX station. In 9 times out of 10, the radio with the special microphone won the contest. When asked why the DX operator picked that station over the other, the answer was, "I can understand the caller."

Short of purchasing a special communications microphone from Heil or another source, a lot of the modern transceivers will have built-in equalization. For normal chit-chats on the band, a flat response is fine.

If you have a low pitched voice, it may be wise to cut the lows to be more understandable in noisy conditions. For DX, regardless of your voice characteristics, cut the lows and boost the highs.

These suggestions are from my experiences and may or may not be the same as those other club members or operators have used in their quests. I would like to hear from others about their "bag of tricks" for inclusion in a future column. Credit will be given.

Above all, please do not transmit when the DX station is transmitting. For one thing, you won't be heard because the DX is transmitting. Do not transmit when another station is in contact with the DX. This is discourteous and prolongs the contact with the other station because the DX will request repeats of the required information. Plus, you may become known as a "LID," an expression as old as ham radio and means you are a poor operator.

One more thing to say and please take this to heart: The majority of the time spent DXing should be allocated to listening. Don't jump into a pileup without first attempting to figure out who is the DX station, are there any special instructions from that station and, generally, what is going on with respect to this particular DX station. But most of all, never call a DX station if you cannot copy, hear or decode the station.

When operating SSB or other voice modes, use standard phonetics. Being "cute" may not land the DX contact and surely won't earn you any brownie points.

Until next time, "73 ES GUD DX."

Bob K9JU

Please email any comments or suggestions to: ["k9ju@arrl.net"](mailto:k9ju@arrl.net).

Disclaimer: I have no pecuniary interest in Heil Sound, Ltd.



SKYWARN
WEATHER.GOV®

NWS Holds Skywarn Training Class in Blount County

Lead Meteorologist and Senior Forecaster, Jeremy Buckles, WX4JLB, from the National Weather Service office in Morristown held a Skywarn Weather Spotter training class on February 26th.

Scheduled in conjunction with our February meeting, the class was moved to a special venue due to renovations underway at the USW Union Hall. Our meeting followed the presentation.

Our thanks to the St. Paul Lutheran Church for allowing us to utilize their facility for the class and our monthly meeting.

If you were unable to attend, and would like to attend an upcoming class in person or online, visit the NWS Morristown Spotter Training Classes page at https://www.weather.gov/mrx/skywarn_classes

From the Editor...

First, let me say I'm honored, humbled and possibly a little terrified. Now that the hard part is over, please let me know what types of articles **you** would like to see in our club newsletter.

I've tried to put in items of interest to accommodate the broadest array of member's interests.

Let me know how I'm doing. What you like, don't like and what I can improve upon!

I'm already collecting articles for the next issue, so please continue to send them in!

73 de Jeff/N4POD

info@w4olb.org or jeffn4pod@gmail.com

SMARC Breakfast

As many of you may be aware, a fire afflicted one of the frequent places where SMARC members congregate — TC's Grill in Maryville.

The Friday **SMARC Club Breakfast** resumed on March 8th with a huge turnout!



There were lots of smiling faces...



And we even had a very special guest joining us!

Drop in and say "Hi!"
Every Friday morning
starting at 8:30am.

TC's Grill
2514 Old Niles Ferry Rd
Maryville, TN





Did You Know?

Tennessee ARES District 8 is one of the largest districts

in the state. District 8 comprises of 16 (sixteen) counties in East Tennessee:

Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier and Union.

These align with the TEMA district.

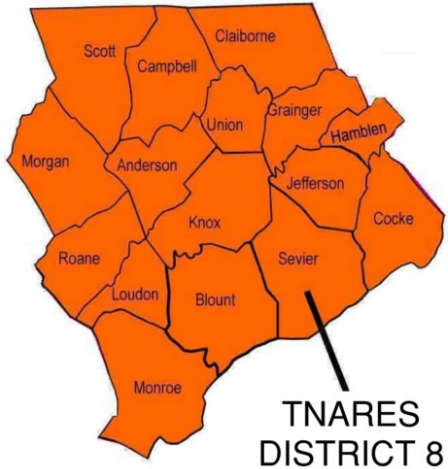
The TN ARES District is further sub-divided into 4 (four) distinct areas to provide for better coverage and coordination of activities between neighboring counties:

Area 1: Anderson, Campbell, Morgan and Scott

Area 2: Blount, Loudon, Monroe, and Roane

Area 3: Claiborne, Grainger, Hamblen and Union

Area 4: Cocke, Jefferson, Knox and Sevier



TN Section Manager, David Thomas, KM4NYI Announces Changes for ARES

“The ARRL is in the process of rolling out a new simplified, uniform system of reporting the monthly participation numbers for individual ARES groups. We should start testing the new system here in Tennessee by the end of February.”

Some might consider the monthly report to be needless “red tape”, but that would be a big mistake. The number of ARES volunteers and their hours are used by the league in their working with FEMA, the FCC, and our congressional lawmakers. The number of volunteer hours runs into the hundreds of thousands every year, representing millions of dollars worth of service provided by civic-minded ARES volunteers. When all of our county ARES groups report their participation numbers, we can get a better picture of exactly how much we contribute to our state and our local communities. To that end, it is essential we make every effort to improve our reporting accuracy.”

EMCOMM NEWS FROM AROUND TNARES DISTRICT 8

Monroe County ARES—Mike Wagner, KK6OKU

I have been working with FEMA and the TN Governor’s Commission for Volunteerism and Community Service to establish a Certified CERT (Community Emergency Response Team) program for our counties. This will include a Training for Trainers instructor and Program Manager. This will enable instructors for various townships that would like to establish the CERT program in their area.

MC ARES was re-established approximately two years ago. In that time, we were deployed via the Monroe County EMA for search and rescues, damage assessment and training. Monroe County ARES does support Skywarn with Spotter Training, Weather Nets (145.270), the METERS Hospital Net and our Weekly ARES Net, not to mention our adjoining counties in District 8 Section 2 (D8 Sec2, Blount, Loudon, Monroe, and Roane).

As many have said, the ARES Nets in our counties are one big ARES Group that just changes Frequencies during the week. The interoperability that has strengthened through time is outstanding, with the support from the Sec 2 Counties and others. I truly thank them for their support.

Training varies throughout the year for MCARES. Go to www.mcares.net for up-to-date information. Feel free to join

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Blount County - 146.625—Thu at 21:00 ET
Loudon County—146.685— Thu at 20:00 ET
Monroe County—145.270—Wed at 20:00 ET
Roane County—147.015—Tue at 20:00 ET
Anderson County—147.150—Thu at 19:00 ET
METERS/ARES (Knox County) - 146.940—Mon at 19:00 ET

Smoky Signals

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the groups.io (visitors/guests are welcome to do so also) to receive up to date information. Also you will find the "files" section of the .io, where completed ICS forms to are available to review and use for your own event, copies of the MCARES Preambles for Nets and so much more. We welcome everyone to attend our nets and functions. Formally trained or not, every event makes a great training opportunity, and the experience is priceless. You are a valuable resource to any group during an emergency or catastrophic event occurring in any of our group areas. As many say, "the emergency does not stop at the county lines."

We are so lucky to have the resources brought to us by the Clubs and ARES Group Members in the D8 Sec 2 area. The knowledge we are able to tap into from the members is priceless. Their willingness to take time out of their day to help others with programming a rig, to repeater repairs, tower climbers, antenna installs, plus much more, not to mention all the Club and ARES volunteers that help the communities.

I am honored to be a part of it.

Blessings and 73,

Mike Wagner KK6OKU

TN ARES D8 Sec 2 ADEC / Monroe County EC

Roane County ARES — Bill Farnum, KI4FZT

The Roane County Amateur Radio Emergency Service has weekly ARES nets on Tuesdays at 2000hrs local time. The repeater is 147.015mhz, requiring a tone of 110.9hz. The repeater is owned by the Roane County Amateur Radio Club, which has designated the repeater for use for any ARES need.

Our weekly nets always contain an educational component and last generally an hour. We do not have merely check-in nets or nets for only finding out how everybody is doing. We educate about any topic dealing with ARES, emcomm, emergency management, safety, etc. We work hard to support the concept of mutual support and aid. We believe that in our area there is simply one ARES net that moves among different repeaters at different times.

We urge those from other ARES nets to come join ours, as we

encourage our own members to frequent the ARES nets of other counties as much as possible. This practice has significantly increased the bonds between all of us as we prove that relationships ARE the force multiplier of interoperability. We currently have 18 members in Roane ARES. All Roane ARES members are registered with the local EMA ("civil defense agency") so that in the very unlikely event of it being needed all could operate under the RACES rules of Part 97.

Blount County ARES — Lou Dreinhoefer, WB3JKQ

Some info on Blount County ARES group

We have a membership of 39 today with about 40% active regular basis We have backbone group called BEARS (Blount Emergency Amateur Radio Service).

BEARS allows us have ownership of equipment, make tax exempt purchases and receive donations.

We would like for all members to have some active role in our functions. Badges are printed and renewed every 3 years for active members.

Members with no activity will be dropped after 3 years, it is not a point system like some counties.

We do not charge dues but do request \$2 to pay for badge printing every 3 years.

Some of our activities

Monthly nets on 146.625 every Thursday at 9 pm EST.

Monthly meetings every third Tuesday at 7 pm at BC 911 Center

Check into monthly hospital coalition net every last Friday of month using BMH radio station. We use both voice and digital communications.

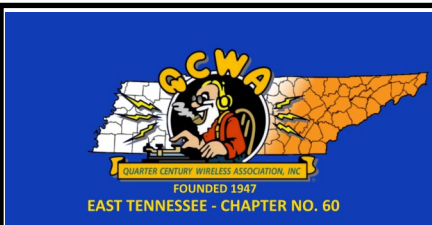
Maintain and update BMH radio station. Previously funded by a grant to 16 Knoxville area hospitals

Maintain and update our communications trailer, previously owned by SMARC.

We are trustee for call sign WB4ARS.

So if you have some time and skills please step up and help.

If your ARES, EmComm group or other organization has news of interest, please send it to: info@w4olb.org



QCWA is an *international* organization open to all amateurs first licensed 25 years or more ago. *You need not be continuously licensed!*

East Tennessee - Chapter 60 is back! <https://www.qcwa60.org>

Youth scholarships are available! Already a QCWA member? Affiliate with Chapter 60!