

January 25

ARKANSAS DIAMOND RADIO CLUB NEWS LETTER

Volume 43

Local Nets:

Petit Jean Mountain
Monday Night
7:30pm 146.685
141.3 Tone

ADARC Simplex
Thursday Night 8pm
146.51 No tone no
offset

CAREN Statewide Net
Tuesday Night 7pm
146.330 pl 114.5

FARC Conway
Thursday Night
7:30 pm 146.970 pl
114.5

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Next Meeting January 9th

North Fire Station

By the Hospital and Next to Colton's

5pm ish if you want to eat

6pm for the regular meeting

John Evans will give the program so don't miss.

Greetings from the PREZ – David W5WUP



Greetings to all members and friends of Arkansas Diamond Amateur Radio Club!

Here we are on the brink of 2025, one quarter of the century is now behind us. Let that sink in....One Quarter Century has now passed behind us once again. As I reflect on this past year there are several things that come to mind.

First, like many of you, I never imagined that the corner stone of our club, Jim Taylor AF5EI, would leave us when he did. His departure left a significant silent band on our radio spectrum. Jim is missed every day.

Second, when I became active in Ham Radio again, I never dreamed that I would become the president of ADARC within the year, nor did I dream that I would have experienced such health issues as I have since September. I'm thankful that GOD has allowed me to continue to wake up and know where I am every day. Twice HE has decided to leave me here to find HIS purpose for my life. I'm still seeking that answer. However, I do know that this radio community has something to do with that purpose.

Third, we have come a long way as a club toward being prepared to support our community with

President's article from page 1.

emergency communications if called upon. Yet we still have much to do. The ECLIPSE was a bust as far as businesses in Arkansas were concerned but it was instrumental in getting more focus on Amateur Radio in the state. As disappointing as the business side was, the additional focus on preparedness and resources was invaluable.

As we move forward this year we have several things ahead of us. Our next club meeting is the 9th of January. At that time we will either confirm the officers for another year OR entertain nominations and votes for new officers. This will be at the will of the club, SO PLEASE ATTEND!

We have Winter Field Day coming up January 25 and 26, and Summer Field Day June 28 and 29.

We have Hamfests coming up, among others: Hoxie February 15. River Valley (Dardanelle) March 8.

We need to develop additional Net Control stations for the Monday Night Net, Wolverton Mountain Net, our Simplex Net, and the Greenbrier Net. This will give us some depth of resources incase one of us cannot call the net on a given night. This has become painfully evident

as I have been recovering from my fall and my subsequent surgery. It seems that I am the only one who can call the Thursday Night Simplex Net due to my antenna location. We need to find a couple of others that can step in if needed.

As we move into 2025, I cannot help but believe that there will be numerous opportunities to expand our knowledge and operating skills.

Later in this newsletter I know that Roger will elaborate on TECH NIGHT and Play Days that we need to support and expand.

As I move into the new year, I will be working on my Task Qualification for AUXCOMM. I will also be continuing to explore the various ways that I can use the ARRL Emergency Coordinator appointment to support our club and radio community.

2025 has many new adventures ahead and promises to be an exciting quarter century milestone.

Please evaluate your interests and support for our club and our "hobby" and see where you can contribute or participate in the Arkansas Diamond Amateur Radio Club.

Until the 9th and our scheduled meeting, I am QSY....

73s,

Blast From the Past written by Stewart Nelson in 2013 for in our Newsletter.

Class One in Contesting

There is contesting and there is contesting. To many HAMs contesting is the essence of what HAM radio is all about. It is a short exchange usually almost scripted. It is talking to as many different stations in the shortest possible time as you can. To the contester it is going for points and don't mess with me. It is "pile ups" where twenty people are trying to call the same HAM all at the same time. You are recognized, you tell them who you are, the exchange, and finish it with QSL or I copied what you said. Don't forget to write everything in your log book. To some this is for blood, to other of us it is just for fun. For tears, or fun.

As is always said about HAM radio there is always something for everyone. With weekly working the nets you make one exchange usually with the same people and that ends your time

on the radio and everyone is pretty nice. For long conversations with someone you probably have never met, this is "rag chewing". You might feel that you really don't know a lot about HAM radio so you are not ready to rag chew. So where do you get started and get comfortable picking up that mike and giving that new call sign? I would suggest contesting is the best place to start and to me it is loads of fun. If you want to score a million points the following thoughts are not for you. If you get really serious you can go to the Contest University at the Dayton Ham Fest or the ARRL has a contest section on their website. If you are not a member of the ARRL join, there are a lot of neat places to go. You might want to get a copy of the rules for contesting from the ARRL web site and read over their helpful suggestions and put it all on your computer like the phrases that they use in contests and the rules and everything that seems important.

You might want to just make a few contacts to feel out that button on the mike and see if it works. You can down load on

Blast From the Past continued..

your computer and read the rules for contests and usually they specify a lot of different things that you can and cannot do, or you can listen and see if you can tell what the rules are by the exchanges you hear. There is a monthly ARRL bulletin that lists the contests.

If you want to just get started there are a few simple rules. Rule one, listen. Every contest has an exchange it might be any number of things something as simple as the sequential number of people you have talked to in the contest. Kilo Delta 5 Lemma Bravo Echo .. KE5DOR you are 500 what is your number? You ... KD5LBE you are number 1 QSL. This is KE5DOR's first contest contact so you are number 1 and your next contact will be 2. QSL is did you copy what I said. 500 contacts were made by KD5LBE and the next one will be 501. The exchanges can be anything from when you got your first license to your grid square or a whatever. You can listen to one person contesting and pick up on everything pretty quick as to what the exchange is.

Rule Two, QRZ. QRZ means that the person on the radio is ready to talk or listen to the next person. If the whole place explodes with calls go look for someone else that is in the contest. If you hear someone give their call more than once they are probably listening for someone and you and your little 100 watt rig isn't going to be heard over the contesteer running 1500 watts. The 1500 station will be picked up by the person calling.

Rule three, do not expect the station that you are trying to get an acknowledgement from, to call you back on your first try. I have tried for 5 minutes waiting for each QRZ to give it another try. What you are listening for is something like "Contest Contest this is KD5LBE QRZ" and your response is KE5DOR and nothing else. Just listen for the KD5LBE to respond KE5DOR. You give your call sign again if you need to correct any errors, give the exchange and a QSL or do you understand and end it for the next station.

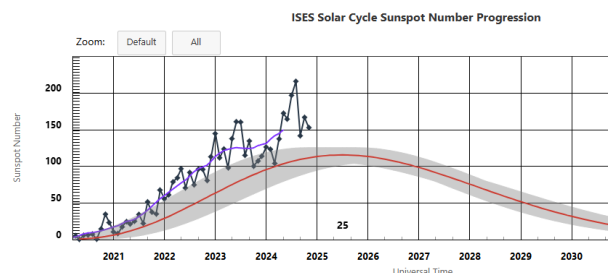
Remember when you are contesting, the radio is alive with people that want to talk to you. It is easy to find someone to talk to, just cruse up and down the band making contacts. The more you make the easier it gets. Even if you don't turn in a score, do practice keeping a list of the people you have talked to. Unless you have a 75 foot Yagie antenna and are running 1500 watts skip the first hour of the contest and the first hour of Field Day or two hours. The last 6 hours are the golden hours. HAMS are trying to get the last few points and they have talked to just about everyone else that is on the air. They are looking for fresh meat and they really want to talk to you. When you keep hearing "Contest Contest" over and over, no matter how weak your signal is they will pull you out. The easiest contacts to make on the 24 hour Field day event is from the break of dawn Sunday morning to the end at noon.

Want to start your path of fun on the radio, step in easy to contesting.

Cycle 25 and Radio Propagation .

As you may know sunspots and solar radiation have an influence on radio propagation. Without getting too scientific, the more sunspot activity the better our radio signals bend around the earth. For more detailed information on this subject go to <https://www.hamradioschool.com/post/sunspots-and-propagation>. Sunspot activity rises and falls in 11-year cycles. The point where the least solar activity occurs is called the solar minimum. And of course, when the activity is at its peak, we call this the solar maximum. We are currently in the 25th cycle since sunspot activity has been measured. Referring to the graph below, one can see we are approaching the solar maximum. To us ham radio operators it means that the 10 through 17 meter bands will be more open than they have been since 2019.

This graph is from <https://www.swpc.noaa.gov/products/solar-cycle-progression>. The redline is the predicted. Blue and purple are actual.



My purpose in writing this article is to encourage you to set up those HF stations. Get on the air and make those DX contacts. Whatever you like the most in amateur radio, now is the best time to pursue it. Later in this decade you will find that making contacts will become more challenging.

This is an article I copied from the NewHams.info website. It's a bit long but gives a simple explanation of the ionosphere and propagation.

Why Hams Care About the Ionosphere

There are many questions concerning the ionosphere and its layers in US license exams.

T3C02-2018: Which of the following is an advantage of HF vs VHF and higher frequencies?

Long distance ionospheric propagation is far more common on HF

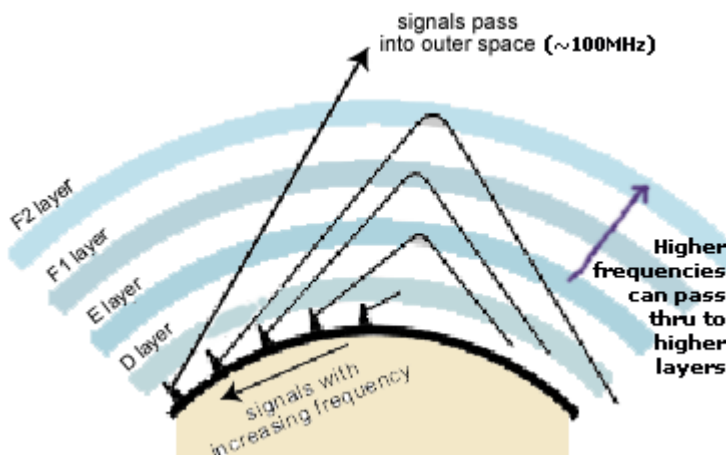
Experienced hams talk about the ionosphere a lot these days and we see plenty written on the topic in amateur radio websites and magazines. So what's the importance of the ionosphere?

The real magic in ham radio is skywave propagation where signals can travel well beyond line of sight, even to the other side of the planet if conditions are right. We can have two-way radio communication between Iceland and Australia and places in between because voice, video and data signals may be bent back to earth by the ionosphere.

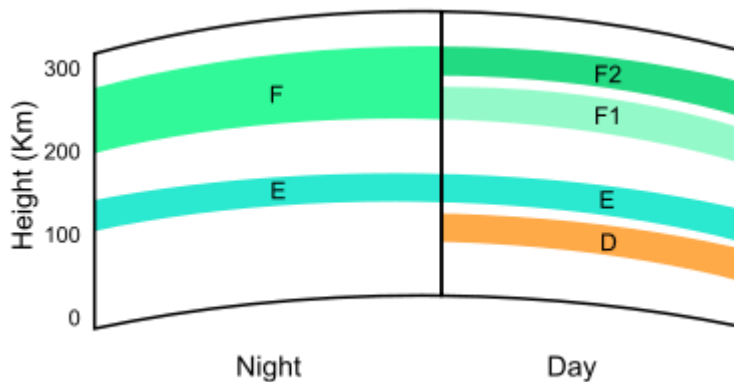
T3A11-2018: Which part of the atmosphere enables the propagation of radio signals around the world?

The ionosphere

The ionosphere is shell of electrons and electrically charged atoms and molecules (ions) that surrounds the Earth, stretching from a height of about 50 km (31 mi) to more than 1,000 km (620 mi). Because this band is electrically active the ionosphere is able to reflect or refract electromagnetic radiation at certain frequencies, the HF bands in particular. For most hams communicating beyond line of sight is a big deal and the ionosphere is what makes long distance (DX) contacts commonplace.



There are two defined ionospheric layers at night and four in daytime, the difference being exposure to the sun which provides most of the energy to the ionosphere.



In daylight the F layer separates into F1 and F2 regions. Because F2 is farthest from the earth's surface it can bend radio waves the greatest distance.

G3C03-2015: Why is the F2 region mainly responsible for the longest distance radio wave propagation?

Because it is the highest ionospheric region

Long-distance propagation changes with day/night cycles and seasonal variance away from the equator. There are numerous anomalies and disturbances that can affect the ionosphere. Between all these factors the ionosphere is not a uniform shell; it has varying height, thickness, and density. This continually changing area makes HF propagation highly variable.

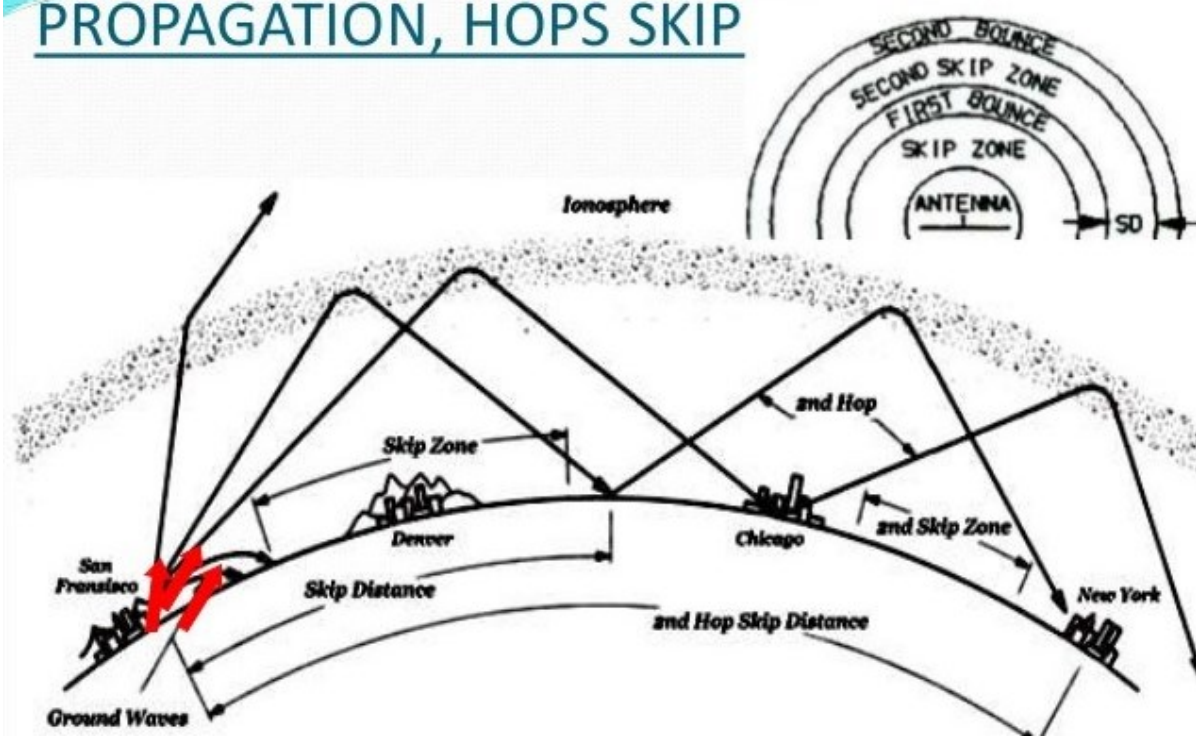
Also known as skip, ionospheric propagation of shortwave (HF) radio signals travel a specific radius or skip distance from the transmitting antenna. This makes received signals particularly strong at the skip distance.

T3A09-2018: Which of the following results from the fact that skip signals refracted from the ionosphere are elliptically polarized?

Either vertically or horizontally polarized antennas may be used for transmission or reception

In addition to single skip distance, the earth itself can reflect/refract signals from the ionosphere back up, resulting in a secondary skip or hop and perhaps beyond that (multi-hop). There are significant losses with each bounce, so signals get progressively weaker as they skip along.

PROPAGATION, HOPS SKIP



While we are here let's mention a few related topics of importance.

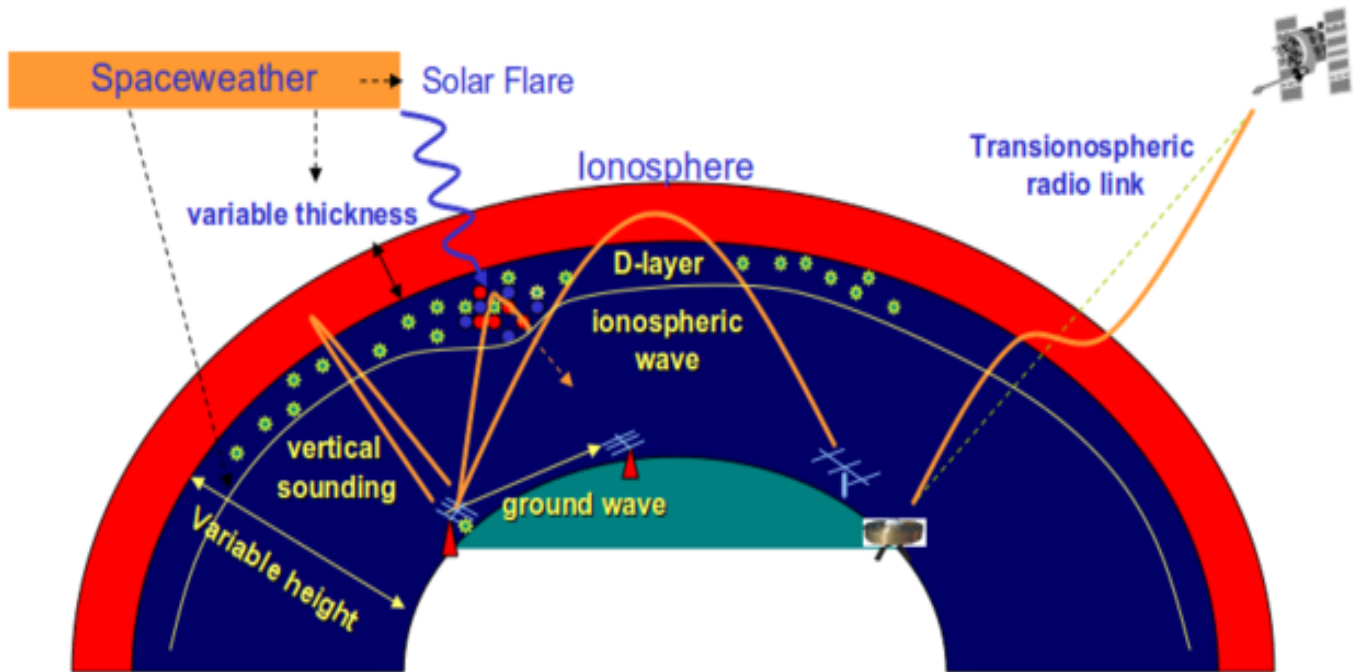
First, the useful state of the ionosphere is almost entirely dependent upon solar activity which is not constant. There are periods of excellent skywave propagation when the sun is active and then times of poor propagation when the sun is quiet. This is an important subject.

Second, the specific condition of the ionosphere at any given moment affects both the lowest usable frequency (LUF) and the maximum usable frequency (MUF). These are complex statistical values to help determine an operating frequency for communication between two points.

G3B05-2015: What usually happens to radio waves with frequencies below the MUF and above the LUF when they are sent into the ionosphere?

They are bent back to the Earth

Finally, various diagrams presented here show that skip distance depends in part upon the angle that a radio wave takes from its transmitting antenna. A low takeoff angle favors greater distance while from the diagram below it is particularly evident that a high takeoff angle favors shorter range communications, the principle behind near-vertical incidence skywave (NVIS) antennas. With NVIS the ionospheric signal bending is more acute, more like reflection than refraction.



Now maybe as a ham you only care about local communication, in which case the ionosphere doesn't matter much to you. VHF and UHF signals for local simplex and repeater use normally pass through the ionosphere into space.

T3C01-2018: Why are direct (not via a repeater) UHF signals rarely heard from stations outside your local coverage area?
UHF signals are usually not reflected by the ionosphere

Fair enough; the rest of us love and appreciate the magic of ham radio in making contacts far beyond line of sight and hopefully you now know why the ionosphere is important and why there are so many license exam questions on the subject.

We'll leave you with [this link](#) to a 1950s-era US Army video on the subject. It's old and corny but technically sound (still valid) and does a great job of explaining ionospheric propagation. Enjoy!



We still have a few of Jim's items for sale listed below:

MFJ	1606T	6M HF Mobile	6	New in box
MFJ	1610T	10m HF Mobile	10	New in box
MFJ	1620T	20m HF Mobile	20	New in box
MFJ	1640T	40m HF Mobile	40	New in box
Yaesu	FT8900R	Quad Band FM Transceiver	2, 7cm, 10, 12	Well used
BlackBird Antennas	2M/70cm	J Pole Antenna	2m,70cm	Good

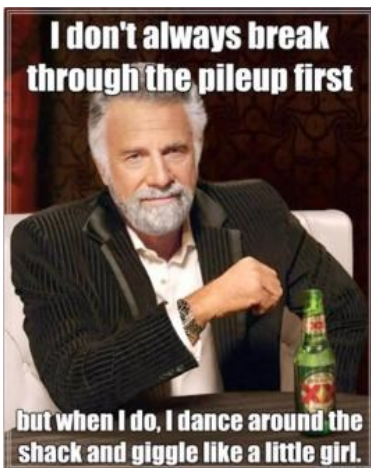
Other items include an old Kenwood 2m fm transceiver, a 5amp power supply, a Yaesu fm transceiver FT-2800M, and a couple of CB radios. We also have a bag of antenna poles with the tripod.

Meeting January 9th: Don't miss our meeting. We will be taking dues for 2025. \$10. We will also be electing officers and discussing important club business.

Program: John Evans will be our presenter.

Tech night: We have not been doing tech night. There are reasons for this. So we will need to discuss at the meeting if we should continue to do this or not. I would like someone to take the lead and make it happen.

Hamfests: Hoxie Winterfest February 15th
River Valley (Dardanelle) March 8th.



Here are a couple of Special Event Stations that might be of interest.

2/01/2024 | 60th Anniversary of the Amateur Radio Stamp and the 110th Anniversary of ARRL

Dec 1-Jan 31, 0000Z-2359Z, K7S, West Jordan, UT. The Utah DX Association. All bands, all modes; 7.260 14.260 21.300 28.470. QSL. Wesley Wilkinson, 7363 S Galaxy Hill Road, West Jordan, UT 84081-3961. The first 200 confirmed contacts will receive a used Amateur Radio Stamp. SASE will be needed to receive your QSL. w7wes@yahoo.com, www.udxa.org or www.qrz.com/db/w7wes

02/15/2025 | Ice Station W0JH - Frozen Minnesota Lake Portable

Feb 15-Feb 17, 1600Z-2300Z, W0JH, Stillwater, MN. Stillwater (MN) Amateur Radio Association - SARA. 21.360 14.260 7.260 3.860. Certificate. E-certificate only, send QSL info , to, W0JHrequest@gmail.com. W0JH will operate portable from a frozen lake in Washington County, Minnesota (Grid Square EN34). In a meager attempt to drive away the remainder of Minnesota winter, the Stillwater Amateur Radio Association will be generating as much RF as possible over the President's Day weekend. (Please help us!!) Certificates will ONLY be sent via email in PDF format. (Send requests with standard QSL confirmation info to: W0JHrequest@gmail.com). There is no need to send a QSL card. www.Radioham.org

02/16/2025 | The White House Communications Agency Amateur Radio Club Presidents Day 2025 Commemoration

Feb 16-Feb 18, 0000Z-0000Z, W0H, Jackson, OH. White House Communications Agency Amateur Radio Club. 3.875 MHz 7.275 MHz 14.250 MHz 28.550. Certificate. Lowell Yates, 6809 Four Mile Rd, Jackson, OH 45640. The White House Communications Agency Amateur Radio Club is excited to honor all of our Presidents this Presidents Day. We would like to especially recognize the Presidents for whom the White House Communications Agency "(WHCA) has provided communications support since its founding in 1942. A WHCA-ARC Special Event certificate will be awarded to commemorate this special occasion. For more information, please visit our events page. <https://whitehousecomms-arc.org/events/whca-arc-presidents-day-special-event/>

For a more complete list of upcoming special event stations go to: <https://www.arrl.org/special-event-stations>

Get on the air!



Arkansas Diamond Amateur Radio Club

P.O. Box 1262
Morrilton, AR 72110.

The Arkansas Diamond Radio Club (KE5FSY) of Morrilton News Letter
This bulletin is published 4 times a year for the promotion of HAM radio. Ham radio is for enjoyment and is the emergency back bone of communication for the communities. When all else fails we will be there, we have in the past and will be in the future. Editors are KF5SDE Roger Alabach kf5sde@gmail.com All HAM related stories are welcome.


Organization

Club Officers

David (W5WUP) is the Club President, Conway County ES Training & Resource Officer, County Emergency Coordinator for ARES/RACES/AUXCOM.

Roger (KF5SDE) is the Club Vice-President and the Deputy Communications Officer for Conway County ES/911. He is also in charge of the quarterly newsletter.

Steve Beavers (KF5DIF) is the Club Treasurer and Director of Conway County Office of Emergency Services/911

We are on the web

<https://arkansasdiamondarc.com/>