

# ARKANSAS DIAMOND



PRESIDENT Roger Alaback \_\_\_\_\_ KF5SDE

www.arkansasdiamondarc.com...web site

ARKANSAS DIAMOND RADIO CLUB NEWS LETTER VOLUME NO. 38 DATE April 13, 2023

## Testing

THE CLUB MEETING WILL BE AT

### **DOWNTOWN CHURCH OF CHRIST**

100 WEST CHURCH ST.  
MORRILTON

#### ***From the old man:***

Monday night 7:30pm 146.685 TONE 141.3 THE  
PETIT JEAN MOUNTAIN NET. JOIN US.

CLUB MEETING 6pm THURSDAY THE 13th.

J. M. ROWE IS OUR GUEST SPEAKER. IF YOU  
WANNA EAT SHOW UP ABOUT 5pm. LOOKS LIKE  
PIZZA IS ON THE MENU. I NEED A HEADCOUNT  
FOR FOOD.

JIM AF5EI .....James Taylor <af5ei@yahoo.com>

Dues for 2023 are Due, so pay your  
Dues

## Coming Up

This is the last meeting  
before Summer Field Day June 24

Hamvention Xenia OH  
May 19-21

We are set for testing this  
Thursday Night if you're  
ready, we are,. You will  
have to have a  
1. FRN from the FCC  
2. An email Address  
3. \$15 For the ARRL

## Local Nets

**Morrilton Monday Night**  
**146.685 141.3 Tone**

**Morrilton Repeaters  
Club**  
**146.685 pl 141.3**

**State Net**  
**146.330 pl 114.5**  
**Tuesday**

**Conway**  
**146.970 pl 114.5**  
**Thursday Night**

**Not up now**  
**443.875 pl 79.5 444.10**  
**114.8**

**Perry County**  
**447.150 pl 100**  
**back up simplex**  
**147.585**  
**8:00 PM Tuesday**

# From the desk of Club President Roger Alabach KF5SDE

**Roger Alabach**

<kf5sde@gmail.com>

**H**ello everyone. I hope all of you are doing well this spring. It has been good for amateur radio. In March the Russellville Club held their Hamfest in Dardanelle. It was a good one. No vendors showed up but there was a lot of activity that you don't normally see in a Hamfest. They had a Foxhunt and a POTA (Parks on the Air) activation. Jim AF5EI and I had the pleasure of attending the Winterfest in Hoxie in February. That was a small one but fun. Our storm spotter class at UAC-CM was well attended. It was also very timely.

Please make plans to attend our meeting on April 13th. J. M. Rowe, N5FXE will be the guest speaker. He is our ARRL Section Emergency Coordinator. His biography is on our website.

In one of our Petit Jean Mountain Amateur Radio nets the question was asked: What is the difference between Emergency and Priority traffic? Mr. Jim

**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 KD5LBE Stewart Nelson**

**All HAM related stories are welcome.**

AF5EI gave the correct answer. To be honest I did not know the answer. So, to clear up any confusion and to have this in writing I am copying the meanings of each as defined by the ARRL. My source of information comes from their website: <http://www.arrl.org/chapter-six-arrl-precedences-and-handling-instructions>.

**Emergency** - Any message having life and death urgency to any person or group of persons, which is transmitted by Amateur Radio in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief to stricken populace in emergency areas.

**Priority** - This classification is for important messages having a specific time limit, official messages not covered in the emergency category, press dispatches and emergency-related traffic not of the utmost urgency.

While I am at it, I will include two other types of messages.

**Welfare** - This classification refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared.

**Routine** - Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine should be handled last, or not at all when circuits are busy with higher-precedence traffic.

And now you know the rest of the story. 73

# NEXT Story

## **WORKING THE GRAY LINE Paul Harden, NA5N**

For those of you new to a solar cycle, an interesting form of working DX is called “working gray line.” This simply means working 15m or 10m during twilight hours. [Take notes, this is on the exam!] Here’s what happens: During the day, solar radiation collides with the molecules in our ionosphere, ripping off electrons. These electrons are called “free electrons” because they are not attached to an atom or molecule. All of these free electrons cause the density of the ionosphere to increase. The more dense the ionosphere, the higher the frequency that is reflected back to earth. Our electron density is what determines the maximum usable frequency (MUF), and the action of solar radiation separating electrons from the molecules is called ionization. During the day, solar radiation causes ionization to stratify, that is, to form distinct layers. The layer closest to the earth is called the D-Layer. It does not reflect signals generally, but does absorb some of the energy, and hence the D-Layer is often called the “absorption layer.” Higher up in our ionosphere, we find the E- and F-Layers. These layers do reflect the signals back to earth if they are below the MUF, and is exactly what causes “skip propagation.” So during the day, the sun is ionizing the D, E and F layers (there are actually two F layers, called F1 and F2). Your 10m signal must travel through the D Layer, getting attenuated, then bounces back from the E or F layer to some exotic DX spot, passing through the D-Layer for more absorption again. But since solar radiation has to travel the farthest to get the D-Layer, absorption is usually fairly minimal. So far, during the middle of the day, we have moderate absorption, and good skip propagation. AT SUNDOWN ... solar radiation no longer strikes our ionosphere right above our heads, and ionization stops. This means there is no solar radiation to form free electrons. In fact, without this solar radiation, these free electrons tend to get attracted back to recombine with their host molecules.

This is called “recombination” (gee, how original!). Recombination, when it starts to get dark, causes the electron density to go down, forcing the MUF to go down as well, which is why by total darkness, 10m (and a bit later 15m) are completely dead. The MUF is far below 28 MHz. The D-Layer is the first layer where ionization stops, since the sunlight no longer reaches near the surface of the earth, but is still illuminating (and ionizing) the ionosphere far above our heads. (For the same reason, we can see satellites pass overhead in the early evening ... it’s dark on the ground, but the satellites are still being illuminated.) As the D-Layer goes into recombination, the electron density goes down, and the absorption does down. This is why signals appear stronger at night, because there is less absorption by the D-Layer at night. BUT DURING TWILIGHT ... OR IN THE “GRAY LINE” ... the D-Layer suddenly causes little absorption to signals passing through it, while the E and F layers are still being ionized by sunlight. This makes for about 45-60 minutes of interesting operating, especially for “QRP”ers (low power operators). There is almost no signal attenuation, but the MUF is still very high, so long-distance skip is still possible. However, when the sun quits illuminating the E and F layers, the MUF can drop dramatically. 73

**The introduction of our  
Tuesday Night Speaker  
N5XFW J.M.Rowe ARES  
RACES in Conway County,  
N5XFW J.M. Rowe  
Posted on March 28, 2023**

Hello Roger,

When I retired several years ago one of the first things I did was throw anything away that might tempt me to get a job! But I’ll send a short note to get things going for you.

I attended the University of Arkansas studying Electrical Engineering until I realized that had nothing to do with what I enjoyed! During the summer between my sophomore and ju-

nior year, I started as a volunteer fireman. At that time, the Fire Department would send you to EMT school for free. I did that just as a way to keep from having to get a real job. Unfortunately, it did lead to a job at the first municipally owned ambulance service in the state. I was then able to go to the very first paramedic class held in Hot Springs.

We started with 40 students, and 5 of us finish. It was quite the experience.

As part of my duties at the ambulance service, I was assigned as the representative to the Local Emergency Planning Committee. The communications guy told me that I needed to be a ham radio operator, and I didn't have any better sense so I said OK. I shortly became the ARRL EC for Garland County, then was appointed as the Southwest DEC. I became the Section Emergency Coordinator when David Norris was elected as SM (Section Manager ARRL) I enjoyed that position until David was elected as a Director. The ARRL appointed me as the Section Manager when that occurred. During that time I became responsible for all amateur and outside-the-box communications for what is now the Arkansas Division of Emergency Management (ADEM). I was appointed to be the Section Emergency Coordinator by our current SM, Jay Ferguson N5LKE.

Along the way I was able to attend the first Communications Unit Leader (COML) class in the state. I am the chair of the Communications Unit Working Group (COMU) for the state, which is responsible for advising the Arkansas Wireless Information Network (AWIN) on qualifications for all ICS positions in the Incident Command structure, We also make recommendations about talk groups for Public Safety agencies.

I teach ICS 300, 400, COML, and AUX-COMM for ADEM. I am a member of the SAFE-COM committee, which is a Federal Advisory Board. I sit on two other committees for AWIN; Technology and the Policy Working Groups. I'm also a voting member of the Arkansas Wireless Information Network Executive Committee. I hold an amateur, SHARES, and GMRS licenses, I lived and breathe radio.

## Next Story

From KD5LBS Stewart

### I May Have To Go in For Addiction Therapy

I have been a Ham since around 2000. I have enjoyed Ham radio and I have made a few contacts and have spent a lot of time looking for someone to contact. I have gone up and down the band with a good radio and 100 watts (bare foot) varying antennas from pretty good to pretty bad. My most fun has been with two meters and nets. In all this running around I played with digital but that comes with matching a computer to a radio with a sound card in between. In talking to my friends digital there has always been a frustration in setting the whole thing up. I have a number of sound cards that were bought with hope but nothing to show for my effort. I even bought one Software Defined Radio, that's one that you computer can control the radio to try digital. You don't need one of those digital radios but I was told that it helps.

In looking for a new way to get into digital radio, I was told that there was an old radio on the market Icom-7300 that had a sound card built in and that it was designed for digital radio. Let me stop here and say there is a lot of digital radio modes up to bouncing radio waves off of airplanes and the moon. Hams that like digital radios modes because the radios, com-puters, and special digital radio programs hear things that the Ham can't.

I bought the radio with my '23 Christmas money and made a new try at it. No luck. I watched the Youtube videos and it still didn't help. With the help of John WB5BHS, I got things rolling of FT8/WSIT-X. FT8 along with a number of other modes works well with poor antennas, radios, computers and other stuff and with a very low power of 5 (QRP) to maybe no

more than 50 watts.

Without going into the details you are working in a small band segment set aside for that mode. There is no sound that you hear or any words that you have to say. You click one signal you see on the screen or send a CQ. If you make contact the compute does the rest. You don't have to be connected to the Internet.

So what does that have to do with my addition? Starting on 1/24/2023 at 21:39 hours GMT, I have logged over 350 contacts, a bunch of which are out of country (DX). It is wrong to say it is easy to make contacts but it is world better than the old way. I do us SSB,

the old way, but nothing like FT8. I heard (but I don't know if it's true) but over 50% of the logged contacts today are digital. Before I turn off my rig at night I like to slip in a couple of more contacts to round off the day. Working Digital is like learning you beginning license over again and unless your are the exception setting up your rig on a good table so you can hit it when you become frustrated. It is a learn-ing experience and there are not a lot of books to read up on the topic. When you start mak-ing contacts, it will hook you. There are people making contacts with 1500 watts and an 80 foot antenna their whole life that you could not equal you in a year. I am hooked bad and don't intend to stop.



Assistant Radio Operator KD5LBE/Jr resting



Very successville storm Spotter Class. Thank you UACCM for providing the space and to Jim for organizing the event.



Lalley Light Corp Christal-Radio about 1915 Serial 11807 looking for a simple easy to use radio.

To those of you that wonder about how well Jim did at the Hoxie State ARRL meeting. Like last year? Of course!

**Arkansas Diamond Club Members  
maybe  
WE ARE WORKING ON THE  
MEMBERSHIP LIST**

**Roger Alabach KF5SDE  
Walter Barfield W5WRB  
Kelly Boswell KA5MGL  
Will Cody KG5MMH  
Billy Collins III K8BBC (6/22)  
George Cossey K5GOC  
Charles Drinkwater KG5AUV (6/22)  
Dave Huett WB5RUH  
Jeffery Johnson WB5QWN  
Timothy King K5BXM  
Matthew King KG5QNY  
Jeremy Landon N5JKL  
Robert Lanning K5ZZB  
John Lawrence KI5DBS (2023)  
D'Ann Lindstrom KI5APK  
Greg Lindstrom K5GSL  
Lynda Milligan KG5UFT  
Bill Mooney Jr, W5WMM  
Kathleen Moorman KI5QJS  
Michael Moorman KC5MM  
Richard Neal KF5IHY  
Stewart Nelson KD5LBE  
James Scott K5NWS (6/21)  
Adam Sullivan W2SUL  
Jim Taylor AF5EI  
Joe Taylor KF5DIH  
Jim Wiedower AC5RT  
Daniel Weatherly N5DD**

**George Carrol N5GC  
Clyde Armstrong SR KE5YPZ  
Rachel Beavers KF5MAD  
Steve Beavers KF5DIF  
Richard Cate KI5GUJ  
Sharon Clarkson KG5DAD  
Bruce Curtis W5ATC  
Don Dacus K5SEC  
Hugh Donnell KF5EST  
Joe Dube KF5ESP  
Eichenberger KF5IJA  
Clifford Evans KI5ITD  
Karolczak KF5UDD  
Carlos Lott KI5GWB  
Mike Martin KC5YWN  
Terry Martin K5TGZ  
Mc Dearmon KC5EIK  
Bobby Moses AC5RM  
George Peters KI5HOV  
James Ridling WB5RZR  
Jeffery Ridling KE5UAN  
Sean Rikard W5RKD  
Kirk Rose KF5ITM  
Eric Stricklin AG5EI  
Lenny Stroud KF5DIB  
Anita Tienken AA3AT  
ShellyTienken KF5SBG  
Charles Tudor N5EH  
Wayne Van De Pol N2WV  
Jimmy Wiedower KD5YZD  
Mike Karolczak KF5UDD**

If you are missing OR CAN'T READ  
contact <AF5EI@AF5EI.COM>