

Newsletter

January 2024 - Issue 5

POTA: Exploring the Hidden Gems







Message from the President



Well, here we are in 2024 and starting a whole new year of meetings and activities. As we look at the results of the club survey the Leadership Team will plan what we need for this year. We want to deliver the programs and workshops that

people want to have. This is what makes a club active and vibrant.

As I stated before, but worth repeating, this club is based on three pillars; 1) Education of the members, 2) FCC testing of anyone that comes our way, and 3) public service. We will continue in that vein in 2024.

We recognize that new hams and new members need opportunity to learn and feel a part of the club. It is everyone's responsibility to make new members feel welcome. In 2024 we will have a plan for new hams and new members. In 2023 we had a "New Hams Luncheon". This is a good format as it encourages the new people to come together as a group and ask the questions that they have about the hobby, antennas, related technology, the club, and whatever topic comes up. We want to repeat something like this on a scheduled basis in 2024. We feel the club must assist those who want to be active hams, but don't really know what to do next. If you have a passion for this, please volunteer to help.

January is Winter Field Day on the 27th-28th and will be at Red Top Mountain State Park. We invite any members interested in participating to please contact **Chad Cone (KY4KP)** and get on the list. The format of this is similar to the regular Summer Field Day, but has some slightly different rules. New hams and experienced ones can all have fun. Chad will elaborate on this in his column. I especially encourage new hams to come out for few hours and see what it is all about.

We are pleased to continue to have Dave Jensen(W7DGJ) in 2024 and his column called GEAR. Dave brings a lot of new perspectives to amateur radio, especially in his regular column on QRZ.com, called "Trials and Errors". If you have not yet checked it out, I encourage you to look it up.

I know there has been a lot of noise on Social Media about ARRL raising it's dues and asking for additional money for paper copies of QST. I have read both sides of the story and think that ARRL has used restraint over the years when it comes to dues. Personally, I feel that if the ARRL did not exist, amateur radio would no longer have a voice in Washington and there would be few places for people to go to find good resources. The VEC program and testing would be gone as well as many other great things the league does for contesting, educating our teachers, defending our spectrum, and much more. Please continue to support the league and make use of their resources to better your skills. Could they do better? Yes, I think they could be more help to clubs. Perhaps that will happen as there is more awareness of the value that clubs bring to the hobby.

I think 2024 will be exciting. We have a great club and opportunities to grow and do more. Amateur radio will continue to evolve as we see more use of technology. For example, there is some experimentation going on for digital voice on the HF bands, which promises to improve readability. This is much like what happened in the 1960's when SSB was displacing AM as the mode of choice for phone operations. Noise is a growing problem for SSB communications and digital voice modes can help work around that. Stay tuned for more in this area beginning to happen in 2024.

I encourage you to make a resolution to get more involved in 2024, whatever that looks like for you. Write an article for the newsletter, get involved in a workshop, become a VE and help with testing, do a presentation at a club meeting, participate in POTA events, or maybe start a group to do an activity. It will be fun!

73, Marty KB4MG





Window Screen Radial System Experiment

A single elevated radial wire used on tripod verticals have merits - they're compact, light, and once the proper length is found for that sweet spot resonance, it just works.

eci

That said, I find deploying it to be a tedious process. Many places, I don't have a convenient place to stake the end or there's something in the way of the wire. More aggravating, the wire has to be taut which pulls the feed point of the antenna. This means I have no choice but to stake my tripod or it gets pulled over instantly.

So I recently sought to try something new. Michael from **KB9VBR** Antennas on YouTube tried a large piece of steel mesh window screen and had great success. This was promising news as it was a piece of cake to deploy and didn't require the taut wire I despise so much. However, a rolled up length of metal screen is still rather large.

My first version to an improvement of Michael's system uses aluminum window screen that's cut into strips. Aluminum and steel have different radiating properties, and the differences are discussed in Michael's video. However, my feeling is that there is enough metal in the screen that in practice there is negligible if any difference. For a portable system, aluminum is slightly lighter and a touch more flexible.



Build and assembly:

• I used a 5 foot length of screen from the 3 foot wide roll.

• I cut the 3 foot width into 6 strips of 6 inches each. • Cut metal screen edges have thousands of poking opportunities, so I wrapped the edges in tape, though I expect it to be temporary and have to replace it all soon.

• These 6 strips were separated into 2 sets of 3 strips. • Each sets' strips were attached together with an eye bolt, 2 fender washers (for the most contact), and a wingnut. Rather than using a regular bolt and nut, the eye bolt and wingnut let it be tightened and loosened without tools which is handy.

• The two sets are coupled with a short length of 16 gauge stranded wire with automotive ring connectors.

• Finally, one of the sets is connected to the antenna ground with another length of wire, ring connector on one end for the radials, and an alligator clip on the other for the antenna.



Note when using a radial system on the ground such as this, I've found the antenna needs to be as low as possible. In the photos below I have the tripod collapsed as far down as it'll go. If it were even lower it'd work better, but this works ok. When the antenna is higher, radials need to be elevated, and this mesh screen is a little floppy and refuses to float in the air.







All my test usage was on 20m at or near the beach where I saw consistent <1.1:1 SWR with great resistance and reactance on a coil and 6 foot whip. I witnessed better results than I saw previously with a single elevated radial wire which has to be tuned precisely, and easier than a ground radial system of multiple individual wires which have to be laid out one-by-one. I'll continue testing on other bands and other places and in different configurations in the future, but this proved to be a worthwhile experiment.

73,

Jason

KO4NDP







Contest Corner January 2024 ARRL RTTY ROUNDUP

1800Z, Jan 6th to 2400Z Jan 7th

ARRL KIDS DAY 1800Z- 2359Z Jan 6th

North American QSO Party, CW 1800Z Jan 13th to 0559Z Jan 14th

North American QSO Party, SSB 1800Z Jan 20th to 0559Z Jan 21st

ARRL January VHF Contest 1900Z Jan 20th to 0359 Jan 22nd

WINTER FIELD DAY

January 27th and 28th Red Top Mountain State Park Cottage 14

We will begin setting up Friday evening after 5:00 pm. There will be multiple stations running all weekend for both POTA and WFD. Come join the fun. If you plan to attend, send me an email to get on the list. ky4kp@hotmail.com





POTA: Exploring the Hidden Gems

Not only is Parks on the Air fun, it also encourages ham operators to get out and visit places they might not even know exist. While taking a week-long camping trip to Eastpoint, Florida, near Apalachicola, I set out to explore some hidden gems. There are several POTA spots in the area so I took the opportunity to activate them when I could. Some of these parks we planned to visit regardless of radio, but most I found by looking at the POTA map (https://pota.app/#/map) and wouldn't have discovered them otherwise.

The map below shows where we camped and the stars indicate the 10 POTA spots I activated.



Apalachicola National Forest (K-4470)



This is a huge forest mostly used for hunting and a few nature trails. Inside the forest is Fort Gadsen, a Prospect Bluff Historic Site where African Americans were put in charge of a fort by the British following the War of 1812. I was disappointed to find the site's gate closed when I arrived despite recent Google reviews indicating the site was open to visitors. Already inside the National Forest by miles, I set up a Xiegu G90 in a portable box with a homebrew vertical on a tripod and elevated radial wire at the gate entrance and played radio miles from anything. My mother was along for the ride and got the opportunity to listen to some exciting CW for a few minutes.

Apalachicola River Wildlife Area (K-6288)



https://myfwc.com/recreation/lead/apalachicola-river/

This large section of land straddling either side of the Apalachicola River contains several fishing docks, boat ramps, and places to enjoy the wildlife. I chose an empty public boat ramp with plenty of space and, once again, used my G90 with the vertical on a tripod. Using my new aluminum mesh screen radial system (see upcoming article), I worked off the tailgate and enjoyed the quiet weekday morning.

Tate's Hell State Forest (K-4640)

https://www.fdacs.gov/Forest-Wildfire/Our-Forests/ State-Forests/Tate-s-Hell-State-Forest

This large tract of land is used mostly for hunting but there are opportunities for fishing and hiking. Small lakes with public access points and boat ramps are good activation spots, but I chose a hiking trail head since it was empty on the weekday morning I







was there. As space was plentiful, I ran my Xiegu G90 with a vertical on a tripod, working solely off the tailgate and using the mesh screen radial system.

Bald Point State Park (K-1835)



https://www.floridastateparks.org/parks-and-trails/ bald-point-state-park

This Florida State Park is further from Apalachicola, almost to Panacea, but was a sightseeing destination on our trip. It is located at Alligator Point where Ochlockonee Bay meets Apalachee Bay. It is a large area with a "nature preserve" feel; plenty of marsh land to keep the Florida wildlife happy (including alligators), a boardwalk over the marsh, and a beach area with picturesque views of the bay.

It was a cold, rainy, and windy afternoon so I set

up on a picnic table under a pavilion, attaching my homebrew vertical to a table clamp and running an



elevated radial wire out a few feet. As this pavilion was a short walk in the rain, I toted a QRP rig that's tiny and therefore easy to pack.

Ochlockonee River State Park (K-1907)



A few minutes from Bald Point State Park is Ochlockonee State Park. Located just below Sopchoppy, FL, this is a large scenic State Park with good camping, hiking and biking, nature viewing, and plenty of access to the Ochlockonee River for fishing and other water activities. They have camping here, but on a loop road with some tight turns, lots of trees, and low limbs, it may be best for tents and shorter campers.

Since the day continued to be cold, rainy and windy, I set up under one of the awesome pavilions by the river. The weather kept our exploring to a minimum but I was able to enjoy a quick radio session, again using truSDX with a table-clamped vertical and elevated radial wire.

St Andrews State Park (K-1917)

This park is located in Panama City which is close to a 2 hour drive one way from Eastpoint. POTA was the reason for traveling this distance, and it proved to be an interesting departure from the more "nature-y parks" previously visited. It's a beautiful park with nice beach access, big piers, fun jetties, good camping, and a ferry to Shell Island. If we had more time, and if it weren't cold and rainy with winds hard enough to stop the





ferry running, we would have gone to Shell Island to enjoy the beach and gather shells. There is also what seemed like a nice campground, but oddly enough, it was gated and only open to campers with reservations. They do not allow non-campers to drive through just to see.



The location was great and despite being drenched by sideways rain and wind,

I stuck it out in a beach side pavilion using the truSDX, table-clamped vertical with radial wire staked into the sand.

Box-R Wildlife Management Area (K-6293)



A true WMA, there's almost nothing else here but woods for hunting. However, I found a boat ramp and parking lot just at the far northwestern edge. Much to my surprise, there were also pavilions. By this time, the weather had turned from cold and rainy to sunny and warm and made for a great activation. Able to park close by, I used my G90 again with the vertical on a tripod and elevated radial wire.

T. H. Stone Memorial Saint Joseph Peninsula State Park (K-1918)



https://www.floridastateparks.org/parks-and-trails/thstone-memorial-st-joseph-peninsula-state-park

You might know the area where this park is located as Cape San Blas. This Florida State Park is on the peninsula off of the Cape and is widely known for its beautiful white sand beaches. Years ago it was voted #1 beach. I grew up camping here in the summer and scalloping in Port St. Joe Bay. Over the years, nature took its course and beaches and boardwalks were built and rebuilt. However, in 2018, Hurricane Michael wiped this park off the map. Not only did the hurricane obliterate nearby Mexico Beach, much of St Joe's peninsula was destroyed as well. The road into the park was completely washed away delaying repairs for months. Through great effort by a lot of dedicated folks, the park has recently reopened and is arguably better than ever. What was once a shady gravel campsite loop in a marsh with rutted, sandy campsites, is now a paved, open loop with meticulously maintained gravel sites. Some of the tent sites even have screened pavilions.

With a lengthy walk on the boardwalk to the beach, I went with the truSDX since I also had a load of other beach stuff to tote. I used 2 antennas here, starting with a 20m dipole in inverted-V form, atop a 5m Sotabeams mast. Surprisingly, it was not a very good performer this day. After probably too long, I switched over to the same homebrew vertical I'd been using everywhere else and completed the activation in a few minutes.



Orman House State Park (K-3643)

Nestled in downtown Apalachicola are a few pieces of Civil War history, one being the Orman House built and owned by Thomas Orman in the early 1800s. Thomas Orman owned slaves and one of the slave houses is still standing with a plaque mentioning Milton, a slave that went with William Orman to fight for the Confederacy. Tours of the house are available, but were closed at the time I visited.



I hiked in from a nearby public parking space adjacent to the botanical gardens and Three Soldiers Detail Vietnam memorial statue. Hiking in, I used the truSDX again with a table-clamped vertical and the aluminum mesh radial setup at the picnic table shown below.

St. George State Park (K-0635)

St. George Island is a place we usually visit when we go to the Apalachicola area, but this time I brought a radio. There is camping, hiking trails, and miles of white sand beach with seemingly endless beach access points to give visitors an "almost-private" experience.



Though it was a little hike to bring in a bunch of weight, I really wanted to use the G90. I set up a portable table and my chair and worked on the beach. Once again I chose the vertical with the aluminum mesh radials.



Conclusion

Parks On The Air may not be for everyone, but for ham operators that like to travel, it offers another way to explore areas that may otherwise go unseen. Activation spots are located in national parks, historic sites, battlefields, state parks, scenic trails, wildlife management areas, and nature preserves, all of which are beautiful, natural wonders just waiting to be explored. It takes some preplanning, but by checking the POTA map ahead of time, I was able to add unique points of interest to an otherwise typical travel itinerary. It also helped to get the family involved by giving everyone a chance to see something new.

73, Jason KO4NDP







If you are like me, when you are shopping you are always on the lookout for something that might improve your shack. Recently, I was in my local Home Depot store looking for a 220v cable for a new linear amplifier I was testing. I found what I needed, and on the way out I spotted these great bulletproof

bags made by the tool company Husky. This item is called a Document Bag, and Home Depot (and probably Lowes as well) sells a couple of different sizes. The package I bought gives you a set of four (8"



x 12") and I was impressed with their construction. They are super heavy duty and water "resistant," and cost less than \$15. I am amazed at all that I can fit into them. They're easy to customize with your call sign in the spot for this on the outside flap, and you'll have an extra bag or two to pass along to your ham buddies if you don't need all four. The same company makes a smaller set of these bags (great for connectors and short cables) but for me this one is the perfect for my 2-meter J-pole antenna, or a 20-meter dipole and short coax. It's just big enough to hold an HT plus accessories but not so big as to be cumbersome. I would highly recommend them.

About six months ago I watched a YouTuber show off his POTA table, a portable device he got from Amazon. I bought one, but only rate it a C+ versus his A rating. This table (Amazon, Baide Pack item # BOB2P2J69Z) measures 37" by 23" and has two heights, either 21" or 29" high. The major reason I



didn't get as much pleasure out of it as my YouTube friend is that it is not all that adjustable to wild terrain; the legs are not infinitely adjustable. You can have

the legs flaced in one of two positions, so it must stand on a flat surface. In my backyard, POTA is done in rocky terrain and desert parks where the ground is anything but flat. If you're regularly out in the grass somewhere at an urban park, you'd be fine with one of these and they are darn convenient.



I would rate the build quality of this table to be a C and the usability factor to be a B. It's a pleasure to have a flat surface this large for your radio and laptop, and then to be able to dissemble it easily and pack it into a small package to carry back to the car – it weighs about 12lbs and takes two minutes to put together or take apart. The cost varies by time of year and coupon used, but always in the range of \$55 to \$65. 73 for now, Dave



Dave Jensen, W7DGJ, was first licensed in 1966 as WN7VDY (and later WA7VDY). Dave loved radio so much he went off to study broadcasting and came out with a BS in Communications from Ohio University. After working his way through the microphone business of Audio-Technica, he moved to

Arizona and was later re-licensed as W7DGJ (Scottsdale). His column, Tooling Up, ran for more than 20 years in the website of the leading scientific journal, SCIENCE, and his column Trials and Errors: Ham Life with an Amateur continues to be a popular read each month on QRZ.com.

Read Dave's column at https://www.qrz.com/trials-and-errors





Amateur Radio on the International Space Station

ARRL Teacher Institute Training and Conference

The Amateur Radio Relay League (ARRL) held a teacher conference and training institute for radio and wireless technology – which relates to the ARISS direct contact. Dr. Z spent over 40 hours during the week, learning about desk radios, handheld radios, antenna types, wiring, morse code, cyphering, mapping, transceivers, and tracking satellites in space.

She participated in building her own antenna system, transceiver fox hunting, learning how to solder electrical components, and how to use a handheld



radio with her cell phone to record a slow-scanned television image sent from the International Space Station as it flew over the parking lot. I even had a chance to operate the radio at W1AW! Overall, the experience was amazing, and the learning was vast.

Upon Dr. Z's return, the students, and teachers, have already begun to implement and experience several of the topics from the training and conference. Because of the path the ISS travels, select homerooms from kindergarten



and second grade learned how to track the ISS from an application called ISS Tracker, and then headed outside where they used the handheld radio and Dr.



Z's cell phone to record the "sounds" being sent from the ISS over 250 miles above them. Once those

sounds were recorded, Dr. Z brought the students back into the classroom, turned on the decoder and an image slowly appeared line by line. In other homerooms, students were taught how radio waves travel

and students had an opportunity to listen in on a weather forecast from NOAA. Lastly, students have been learning about Earth's rotation, daylight timing, satellite tracking, and a radio waterfall screen.







Becoming a Set of Headphones

Students, and members of the Building Leadership Team (BLT), used the "humming" of their voice to learn how to cancel out radio signals found within various classrooms. The students, and teachers, asked "wait – we are going to make noise to cancel noise?" ... and so, the experiment started. By watching the screen, students saw the waves on the screen moving in various directions – even though they were sitting so quietly – the waves stayed. They started to realize that there were "things" in the room making noise, things they could not see or hear. So like excellent scientists, they began to search the room, listing all the items making "noise" ...even the classroom lights were turned off when one student said "I hear buzzing from the lights!"

They all sat back down, determined they found all the noise, but unfortunately, the noise still existed. That is when we started to hum, low. Slowly, the noise began to change, the screen was becoming less and less filled with waves. Then suddenly it happened...no waves... all because we were humming at the perfect pitch and tone. We cancelled the noise by making noise! Students (and teachers) were amazed at what just happened and then quickly wanted to try again. We all got the same result...to which Dr. Z said out loud – "congrats, you just became a pair of noise cancelling headphones!"

GeoChron, SPARKI, ISS Above

There are some new technology additions in the STEM Lab – ISS Above Software, SPARKI Radio Kits, and The GeoChron. Here is some interesting information about each:

ISS Above Software – designed to track the International Space Station all over the globe. It offers students a chance to relate position of Mountain View to the sun and moon. The software will also let students know how much time will pass before the next fly over occurs, which astronaut crew is aboard, which educational contacts the astronauts have made with students, and all the details of the current flight track such as magnitude, direction, distance, and time of contact.

SPARKI Radio Kits – designed to utilize a software defined radio based in a digital format. Students will be able to learn morse code, read strength of signal, locate potential sources of communication, switch between bands, and listen to NOAA weather...all with the click of a mouse. Students will also learn the importance of radio waves and how antennas collect and distribute the information.



The GeoChron – this is Dr. Z's personal addition to the STEM Lab, a digital world map. The software is coordinated with earth's true rotation and timing. The GeoChron has the ability to showcase airline travel, shipping lanes, earthquakes, volcanic eruptions, air quality, light pollution, HAM radio, precipitation, barometric pressure, wind speed, ISS Tracker, NOAA satellite trackers, carbon pollution, cloud cover and more! The software has four different viewing options...in REAL TIME.





Winter 2024 Field Day





January 27th & January 28th Location: Red Top Mountain State Park Cottage 14

The purpose of Winter Field Day is to set up a station(s) in adverse weather conditions and effectively pass information. Late January is typically cold



and wet in our part of the country. This event will allow us to simulate providing communications during a winter weather event.

Although the event is not a contest, we are scored based on the number of successful contacts we are able to complete during the operational period. We are also encouraged to operate on emergency power, outdoors as well as away from our home shack. The intention is to gain experience operating in the less than favorable winter conditions. Our operating position is a screened in covered back porch overlooking Lake Allatoona. We have limited lodging available for those who



wish to stay overnight. The cottage is very spacious and allows you a great place to warm and enjoy great conversation. We have limited parking at the cottage and will shuttle people back and forth to the main parking area. We will be monitoring the KG4VUB 145.270 repeater during the event.

We will begin setting it up at 5:00 pm on Friday the 26th. A park day or yearly parking pass is required. The daily rate is \$5. Once again, we will be



operating 4 stations covering phone, CW and digital. Along with WFD, we will also be operating multiple Parks on The Air activations over the weekend. If you are interested in getting on the air, enjoying some great fellowship or just want to learn more about the world of Amateur Radio, mark your calendar and plan to attend the event. If you plan on stopping by, send me an email with dates and times you will attend. As always, thank you for being the best part of CARS.

Chad KY4KP ky4kp@hotmail.com







WX4CAR Resource Links

Website - https://www.wx4car.org

Contact Us - https://www.wx4car.org/contact-us.html

Membership - https://www.wx4car.org/membership-form.html

CARS Club Technical Programs - https://www. wx4car.org/technical-monthly-programs.html

Club Activities - https://www.wx4car.org/club-activities.html

POTA Corner - https://www.wx4car.org/pota-corner. html

ARRL FIELD DAY - https://www.wx4car.org/field-day.html

Ham Fests - https://www.wx4car.org/amateur-radioevents.html

CARS Groups.io - https://groups.io/groups

ARRL Testing Info - https://www.wx4car.org/ testing2023.html

New Ham Kit - https://www.wx4car.org/ uploads/8/3/7/7/83773582/wx4cars_intro_to_new_ hams-7apr2021.pdf

Ham License Upgrading - https://www.wx4car.org/ obtaining-a-license.html

Technician Ham Cram Study Guide - https://www. wx4car.org/uploads/8/3/7/7/83773582/2022-2026_ technician_pool_study_guide.pdf

Club Apparel - https://www.hamthreads.com

CARS Club Badges - https://www.thesignman.com/ clubs/carsga.html

POTA Supplies - https://www.clubgearonline.com

Contesting Links

ARRL Contest Calendar - http://www.arrl.org/ contest-calendar

Contesting Calendar - http://www.contesting.com/

CQ Contest Calendar - http://cq-amateur-radio.com/ cq_contests/cq_annual_contest_calendar/cq_annual_ contest_calendar.html

SolarHam Site - http://www.solarham.net/index.htm

Space Weather - http://www.spaceweatherwoman.com/

Contest Calendar - https://www.contestcalendar.com

Other Links

ARRL - http://www.arrl.org

Sky Warn - http://skywarn.org

QSO Today - http://qsotoday.com

Cherokee EMA - http://cherokeega-ema.org

Georgia ARES - https://www.gaares.org

Ham Radio Work Bench - http:// hamradioworkbench.com

On All Bands - https://www.onallbands.com





CARS Officers for 2024:

President: Martin Buehring – KB4MG Vice President: Chad Cone – KY4KP Secretary: Mark Schulze – KO4IFY Treasurer: James James – KE4HMS Cherokee County Emegency Coordinator: Rob Bruderer – W1JKU

Email-club.wx4car@gmail.com

Time & Location of Meetings:

Meetings are the second Saturday of each month at 10:00 am Eastern Time.

William G. Long Senior Center 223 Arnold Mill Road Woodstock, Georgia 30188

Our meetings are open to all visitors. You do not need to be a member or have a license to attend.Come for the fellowship and technical programs.

We also have a combined ARES meeting at the same time. ARRL FCC Testing is at 1:00PM following the meeting.

Newsletter Team:

Editor: Lee Hall – KB4KDX kb4kdx@gmail.com Editor: Jim King – KO4EAN king4144@gmail.com Design: Carmon Madison – KQ4JIO carmon@icloud.com



Mission Statement

The mission of the Cherokee Amateur Radio Society is to promote the hobby of amateur radio to the Cherokee County residents and surrounding communities. It primarily serves to provide education, FCC testing, public service, and fellowship to people with the common interest of amateur radio.

Cherokee Amateur Radio Society is an organization of FCC licensed amateur radio operators (also called Hams) that meet and share the hobby, educate people about amateur radio, as well as support our local community in times of disaster. We are located in Cherokee County, Georgia and have club call sign **WX4CAR**. We are an ARRL Affiliated Club.

The club also participates with ARES, and the Cherokee County EOC when severe weather gets close to the area, and we help with local public service projects. The members of the club also dedicate some of their time to promote and help new hams to develop their skills and knowledge on Amateur communications modes and to be better operators. We are a very active club and participate in ARRL Field Day every year. If you are located in Cherokee County or the surrounding area, we would like to invite you to participate.

