

Ozark QRP Banner



The Official Newsletter of the Four State QRP Group WQ5RP

February 2023 Edition

In This Edition: First POTA Activation, Full-Face Front Panel, SP4 SOTA/POTA CW Key, Ham Alert, DMR Activity, Building Aluminum Antennas, Second Sunday Sprint Update, OzarkCon 2023, SOTA 10-Year Celebration Reports, Joy Dufrain - NQ5R, Purchasing Agent for 4SQRP

"THE EXTENDED SOLAR CYCLE: So, you thought you knew the solar cycle? Think again. A new paper published in Frontiers in Astronomy and Space Sciences confirms that there is more to solar activity than the well-known 11-year sunspot cycle. Data from Stanford University's Wilcox Solar Observatory (WSO) reveal two solar cycles happening at the same time, and neither is 11 years long. "
Full details here: <https://spaceweather.com/archive.php?view=1&day=13&month=12&year=2022>

Monitoring the enemy. A good video on this special antenna.

This unique antenna system developed in the 1930's by the Germans.

The Last Elephant Cage documents the history of the FLR-9 antenna located in Anchorage, Alaska and its 50 years of service to the NSA mission. https://youtu.be/uh88Y2_33GI

Thread locker tip from KØPFX

- Use Permatex **ORANGE** thread locker. This stuff is the bomb. It's as strong as the **RED**..... but easy to get out like the **BLUE**.
- Like **Dino** sez, don't use **RED**. **RED** requires 500 deg F heat to get the bolts out!
- The new **ORANGE** is the ultimate solution. No aircraft safety wires required.
- If no **ORANGE** available... (only Permatex makes it, not Loctite), then use **BLUE**. **Blue** used on car suspension pieces.

***** Thank You to all the contributors for this issue!**

First POTA activation:

November 7 2022



It started out as a last-minute plan to visit one of the local state parks and to erect and tune the two antennas I had planned on using for portable/POTA activations. The weather was a typical great fall day and Babler State Park K-1745 was chosen. I checked with the Park Ranger to see if there were any specific restrictions or rules and was assured that I was good to go. On leaving the visitor center a car drove up with two antennas on its roof which looked suspiciously like ham radio gear and then the driver looked familiar. None other than Tony Nass KB9LLD stepped out.

What a surprise. He was on his way home from several activations earlier in the day. I explained that my plan had been to put up my two antennas (an EFHW sloper and a Buddistick Pro) so I could tune them and make sure everything worked. I had in the back of my mind that I might operate some but was very hesitant about attempting an activation. I have been a chaser for some time. My CW skills are improving but still need a lot of work. I sometimes partake in the SST on Fridays and Sundays as well as POTA chasing but have trouble with understanding faster speed CW and I had not done any CQ calls. Tony offered his encouragement as well as assistance if I were to try an activation. What a relief that was.

I decided to just set up my smallest portable station which was my KX2 to run on 5 watts, and an old EFHW as a sloper and use the coax sheath (10 ft RG316 with CMC added at the radio end) as the counterpoise. I snagged a good tree limb on my second throw using an 8 oz weight and a Dyneema 2mm 100 ft throw line. The assembly went quickly but the radio would not turn on. I had brought a spare battery and it was good. I tested the SWR with my Rig Expert and it was about 1.1 right below the end of 20 meters and 1.4 where I was going to operate. I decided to let it go and the KX2 had no problem matching it to a SWR of 1.0.



Tony dropped by and stayed for the activation which I really appreciated. I set up the playback memory for CQ POTA KEØLD, listened for a quiet spot at 14.058, and sent QRL? I self-spotted on the POTA site. Now it was game time.

I suppose I was not mentally ready for a pile up and had never experienced one on this end before. Thank goodness for Tony's help when I had trouble pulling out a call sign. For someone who operates at a slow speed, you can imagine how I felt when I had logged in 20 QSO's in 27 minutes. The radio and antenna were spectacular with great signal reports as far away as Montana -1200 miles. QRT was sent and posted on the spotter page with thanks to all. I packed up my gear and headed home.

That evening I used the POTA website to generate a log and adif file for the activation and turned in my report to POTA. There was one QSO in which I think had an error but my hand notes were not good enough to fix that. My apology to that ham. I added the info to my N3FJP log and then uploaded that to LOTW. Tony took some photos and video of the event and for that I owe him an additional thank you.

Best regards to the club and 73,

Larry Davis
KEØLD



The SP4 POTA/SOTA CW Morse Magnetic Iambic Double Paddle - Designed by NØSA

Super Lightweight, Portable Compact Paddle
with An Attached 3.5mm Cable.

Uses Magnetic Tension and Easily Adjustable
With Stainless Steel Contacts.

Great for portable operations, and supplied with
3M Dual Lock Velcro for easy mounting and
removal of the paddle from base or anything of
your choosing.



<https://cwmorse.us/products/sp4-sota-pota-cw-morse-magnetic-paddle-by-n0sa?ref=pHGSYqNC&variant=43488170410243>

Get Ready, Save the Date



Four States QRP Group Presents

OZARKCON 2023

March 31 - April 1

This is the 20th Year

Registration Form [Registration \(rleepotter.com\)](http://rleepotter.com)

Registration is now Open!

Having Fun with HamAlert

Jeff Logullo NØMII

I have been using a nifty service called HamAlert for a few years, but it dawned on me that I should describe some things I have done with it and how you can give it a try. It costs nothing - which is music to a ham's ears!



HamAlert

Push notifications for amateur radio spots

So what is HamAlert? Here is the description from the HamAlert's "About" page:

HamAlert is a system that allows you to get notifications when a desired station appears on the [DX cluster](#), the [Reverse Beacon Network](#), [SOTAwatch](#), [POTA](#), or [PSK Reporter](#). No need to keep checking these resources manually if you're looking for a certain callsign, DXCC, CQ zone, IOTA island, SOTA summit or WWFF/POTA reference.

A couple things there to catch your eye, eh? We are no stranger to the RBN - Dave NFØR uses it regularly to confirm his faith in mag loops 😊 Many of us have used the RBN to "see how we're getting out" to test antennas, check propagation on a band, etc. But if you think about it, you can also use RBN to see if someone *else* is or has been heard recently.

And so... what HamAlert can do is watch the RBN feed in real time, looking for someone you would like to listen for. This is the very first thing I used HamAlert for. When I was in CW Academy, I put my instructor and classmates' calls in HamAlert so I would get a heads-up if one of them were calling CQ on the air.

HamAlert is also a POTA- and SOTA-chaser's dream. During the week when I am working in my home office, I keep one eye on HamAlert. By tailoring HamAlert to alert me for "good" POTA spots, I can decide whether to hop over to the shack and listen for the op, judge the size of the pile-up, and if I have got the time to go for the contact.

While my examples below are CW-specific, please understand that you can also receive triggers for voice and data modes. The Reverse Beacon Network is CW-specific of course, but other spotting networks can give you alerts for SSB, FT8, JS8Call, RTTY... there are lots of options.

If you want more details about the sources of data that HamAlert can tap into, follow these links for details about how each works and what they can do:

- [DX cluster](#)
- [Reverse Beacon Network \(RBN\)](#)
- [SOTAwatch](#)
- [POTA](#)
- [PSK Reporter](#)

Here are a few examples of triggers I have set up in HamAlert. This one is called "SLQS":

Edit trigger

Conditions

Callsign K0FHG, KB9LLD, KC0PP, KK0U, KK9U, KO0Z, N0SA, N0SO, N8LA, NF0R, W0DCX, W0DF, W0MFQ, WA9GQT, WB0TUA

The callsigns without any prefixes/suffixes, separated with commas, spaces or line breaks.

Mode CW

Note: Cluster spots may not have mode information (CW and SSB will be guessed according to the band plan if unambiguous, and most digimodes are recognized in spot comments).

Add a condition

All conditions must match for this trigger to be executed.

Actions

☒ App ☐ Threema ☐ SMS ☐ Telnet ☐ URL

Comment

SLQS

Changes may take up to a minute to be applied. Cancel Save

I have set this up to trigger on any of several callsigns of SLQS members, with mode CQ. If any of these hams send a CQ or a "TEST DE <callsign>", HamAlert will notify me.

Notice that under "Actions" I've chosen to be alerted via the HamAlert app on my phone. If you have an Apple or Android phone, the app is available (free!) in your app store. I find this a very useful way to get the messages - I've always got my phone with me. If alerts come in at a bad time (I'm not at home, or buried with work or etc.) I can press on the alert and choose "Mute Callsign" which will temporarily disable that alert. The app has a "Mute Duration" preference which sets how long you'd like to have that alert muted (mine's set for one hour). After that time period, the app will resume alerting you.

If you don't have a smart phone you can use SMS notifications. Be aware that "aggressive" triggers can flood you with text messages. Consider carefully the impact to your phone data plan before using this feature.

And don't forget that HamAlert is designed to aggregate multiple sources (RBN, POTA, SOTAwatch, etc.) and send alerts to your phone. If you're going to be at home in the shack, going directly to one of the spotter sites for the activity of interest (ex: <https://pota.app/> for POTA spots) will let you watch real-time spot activity right in your computer browser.

Here is another fun example; this one is called "POTA US":

Edit trigger

Conditions

Band 7 items selected

Mode CW

Note: Cluster spots may not be planned if unambiguous, and comments will be guessed according to the band (comments).

Park division K

Add a condition

All conditions must match for this trigger to be executed.

Actions

☒ App ☐ Threema ☐ SMS ☐ Telnet ☐ URL

Comment

POTA US

Changes may take up to a minute to be applied. Cancel Save

Notice here that I have specified several bands (shown in an inset). These are the bands where I have an antenna at the ready. You can pick-and-choose (as I have here); you can specify larger segments (VLF, HF, UHF, etc.) - whatever suits you.

I have also specified CW as the mode, but HamAlert can also give you alerts for voice and data modes as well.

I have got some other ham-specific alerts that I use for those "someday, someday" events. I have got one for Friend of the Club Paul Harden NA5N. ☺ Another is for John AL7JK in Alaska. I have traded emails with him over the years and by golly I'll get him in the log someday.

And a while ago I realized that it would be a real kick if I could work [John Shannon K3WWP](#). John has an unbroken streak of QRP contacts stretching back 10,387+ days - that's more than 28 years. I kind of figured it would be cool to get in John's log. HamAlert helped me make it happen: By setting and watching an alert, I got a sense of which band and time John would typically be on, and so I was at the ready when I decided it was time to listen for him. Quite a thrill when I was able to make it happen.

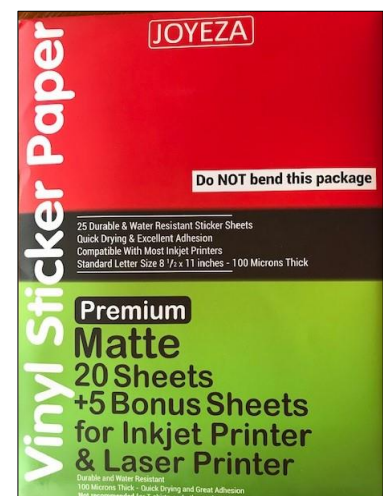
I hope this will encourage you to give HamAlert a try!

How to Make a Full-Face print for your next project's Front Panel

Many kit suppliers offer either a scaled drawing or at least a dimensioned sketch showing the drilling pattern for the Front Panel of the project at hand. Many times you have to make your own drawings to complete the fabrication of the panel, especially if it's your design.

Labeling has always been a source of irritation for me as I want the finished project to look presentable. The problem is that making just one has never been an easy task so I used the label maker like every one else and painted the box before applying the labels.

Long story short, I came by some Vinyl Sticker Paper (mine was on a roll of 2x4 labels) and discovered that a Sanford Permanent Marker or Ink Jet ink would quickly soak in to the "paper" and dried smudge free, applying a coat or two of clear acrylic spray like the one below and you have a good looking finished project.



The beauty of this is of course that the insertion of your Call Sign and colors of your choosing along with any logo you want is all up to your crafty imagination.



Details:

If the layout is not offered by the kit supplier, then you have to make one yourself. There are many drawing programs to be had I think Open Office has one that may work well. Get familiar with the dimension aspects of any program you use and of course, practice, practice, practice.

Your printer is the next item to check. I suggest that using your drawing program, make some thin vertical and horizontal lines 1, 3 and 5 inches apart, perhaps boxes of a known size, and print this "drawing" on plain paper. Now check with a good metal ruler to be sure that your printer can be trusted to reproduce your dimensions accurately, or at least close enough.

Assuming everything works out and you printed out your Front Panel on the Vinyl Paper successfully our next step is applying it to the panel. For this you will need some Scotch tape, Exacto Knife (trimmer), and a Light Table.

Cut your finished drawing leaving a 1/2" or so all around and secure it to the light table (front facing down) by lifting the backing off the paper's ends and with the Scotch tape fix it flat to the table. After it is secure you can remove the rest of the backing.

Wash the aluminum panel with 91% isopropyl alcohol and let dry, make sure that all drilling oils and chips are removed.

Next, take two pieces of tape and make a little circle out of each and stick them to the BACK of the panel towards the ends, these will serve as your handles to position the panel to your label. Be sure to use holes at the extremes of the panel to line up by as you lower the panel onto the label. There really should not be any crinkles or bubbles but to be sure take a credit card and working from the center out squeezing the label to the panel should really do the trick.



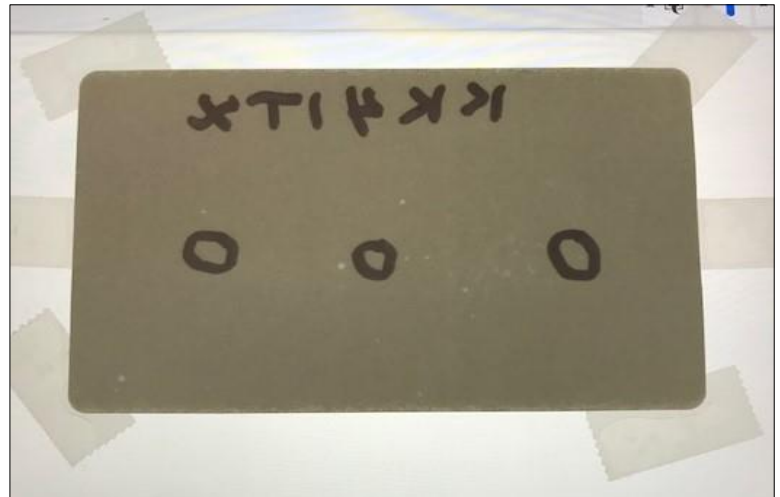
Next you need to clean out the holes from the front using an Exacto Knife and take care to only cut on the down stroke as you work around the hole, do not saw up and down. Trim around the edges with the knife or flat file and remove the scrap. Now finish with the acrylic spray.

I understand that most folks do not have a light table at their disposal so we need to get creative. I used my iPad and a free Sketch App that had a white background but any App that has a white or bright background will work. Lacking a tablet of any brand you should have a window that you can tape to and use it as noted above.

The paper product that I have, came from Amazon but one like it should be available at any office supply or hobby stores perhaps. It is simply called **Vinyl Sticker Paper** (glossy or matte finish) and it's 8"x11", I think

mine had 25 sheets at about 50 cents each..... which is probably two lifetimes supply!

At right is a label face down with some hole outlines and Call Sign using a Sanford Marker showing how well the iPad works as a light table. Extra tape was used for photo purposes.



Happy building!!

John
KK4ITX

Good on QRZ

I do not have any pecuniary interest in any of the products mentioned above.

Did Santa bring that new radio or kit? NO...? Well get yourself or a friend a new kit from the 4States QRP Group!



Help support OzarkCon!



Components



Parts Sourcing

Joy Dufrain - NQ5R, Purchasing Agent for 4SQRP, began in 2014 and she is in her 9th year of wrestling component shortages, long production lead times, out of specification clones, tariffs, taxes, rising shipping costs, lost shipments and the dreaded back orders.



If you have built a 4QRP kit since 2014 then Joy was involved with the Kitting Team getting your kit ready to ship. Joy, says, "working with the Engineer/Designers to keep components to their exact specifications takes time and consulting the Designer cases of substitutions. A good example is the 2N7000. We must use the original spec components since the clone "cheapies" do not perform well and cause problems with the circuits. Figuring out what are clones vs originals is sometimes not easy.

"Being in constant communications with Designers, Kitters, supply vendors, shipping agents and chasing component backorders, reordering, and in some cases ordering the pc boards can keep me pretty busy," Joy said.

The 4SQRP kits are the support for OzarkCon. 4SQRP kits are fun, easy to build, and low cost. It takes everyone in the kit development team; beta testers, kit manager, support staff, kitters, purchasing and of course our treasurer and web support to make this happen.

Joy says, "Thank You for supporting the 4SQRP Kits and OzarkCon which has helped many Hams learn to build and have radio equipment they actually build and use on-the-air".

73.....interview by Walter - K5EST

Feb 1st - Missouri 10th Anniversary SOTA Event

Soapbox:

I got home at around 1845 local, after a 3 hour hike out. Worked 55 folks, 40, 30, 20, 15 & 10m. Worked the ever present F4WBN & also GIOABZ. Lot of the 'usual' DX missing. Good day to hike. Sat & enjoyed the absolute quiet for a while, too. I am beat!

73,
Jim
KKØU

I was home by 5:00. Lots less hiking than Jim! Only 2 miles each way. I got around 47; three S2S. For DX I got Costa Rica and the same Ireland station as Jim. Once again I learned the walk home is easier than the walk up :) I don't know that I need a SOTA outing any more challenging than Buford or Johnson. Johnson had a great place to sit! The concrete block near the fire tower foundation. Room for my butt and the radio next to me. The whole time the night before I was worrying about sitting on the ground in the snow. Ha. I am sore and cramping now. Tomorrow should be interesting!

Jeff
NØMII

I was worried about Hwy CC but it only had patches of the icy snow mix. When I did my activation there was absolutely no wind and it was 16 F. From arrival to departure was about 1 hour and worked 44 stations on 40 and 20. With some DX thrown in. 20 as usual was in and out. I sat in my car between band change and warmed up my fingers then back outside to finish. You guys did not have that luxury but you were probably warmed up from the hike. *I need to design a set of paddles that you can work with heavy gloves on.* Thanks for participating today. Bill Gerth W4RK managed to work me on 40, that was nice. Maybe you guys got to work him too.

Larry
nØsa

10 YEARS OF MISSOURI SOTA

By Larry Naumann nØsa

I had the pleasure of activating Taum Sauk Mtn. WOM/ SF-001 for the tenth anniversary of the first activation in Missouri. It was set up, to honor Bill Gerth W4RK who set up and organized the Missouri section of SOTA. Bill did the first activation from Taum Sauk Mtn 10 years ago. He and I did a 5 year reunion activation there too. This year due to health issues he was not able to attend although he did work stations from home.

I personally am indebted to Bill for his SOTA work. I have always loved Missouri outdoor activities whether it be hiking, camping, fishing or mountain biking. Ever since my first camp out with my parents in grade school I was hooked. Needless to say, I am a huge fan of Missouri outdoors. When Bill set it up, I had just retired and was raring to go. I have always felt perfectly comfortable wondering around in the woods of Missouri. I am a solitary hiker and prefer to go it alone at my own pace and direction. Setting up SOTA activations was a work of joy. Laying out my routes on maps and GPS and determining the best route was a real challenge. Although many times, the route I chose turned out not to be the best. But I always enjoyed the challenge.

Now, due to age and some health issues, I have dialed it back a bit but still enjoy getting out in my beloved Missouri woods and parks.



This year's activation almost did not happen as the weather did not cooperate much. Two days before the activation the roads in the area were still not cleared of sleet and snow but MoDOT managed to get things cleared up and I headed down in the morning. I was not sure what the road conditions would be like but decided the only way to find out was to drive on down and see what it was like. I was pleasantly surprised to find the roads mostly in good shape. I managed to get set up quickly and worked about 44 stations on cw on 40 and 20. Taking a



break between band change to warm up my frozen fingers. It was a whopping 16 degrees during the activation. But other than my fingers getting really cold it wasn't too bad. The sun was out and there was zero wind. I have operated from Taum Sauk many times and I cannot recall a time when the wind wasn't blowing. Good luck for me that day. All in all, it was a good activation and Bill and I actually made contact on 40 meters. That was the best part. John Watkins, nØevh and Mike Smith, adØym worked from the western part of the state and Jeff Logullo, nØmii and Jim Smith, kkØu operated from eastern summits. They can tell their stories and their participation was greatly appreciated. I am certain we would have had more participation as some people planned activations at summits with fire towers and the gravel roads used for access were too dangerous to drive on.

SOTA Activations for Fun and Proffit

I volunteered to activate Proffit Mountain (WOM/SF-004) as part of the February 1, 2023 WOM 10th anniversary celebration. Unfortunately, the area received snow one night, then freezing rain the night before Activation Day. Knowing the roads to the Scour Trail trailhead were not too twisty or hilly, I decided to head down there anyway. I left $\frac{1}{2}$ hour earlier than usual to account for conditions. The only dodgy road was hwy N, and it was not very bad - I just drove 45mph.

Once at the trailhead, I decided to drive the $\frac{1}{2}$ mile down to the Johnson Shut-Ins ranger station to see if there was a bathroom I might use. The parking lot looked like it had a fresh dusting of about $\frac{1}{2}$ " of snow. When I got out of the truck and nearly wound up on my head, I discovered that there was a thin invisible layer of ice all over everything. I gingerly made my way to the bathroom, discovered it was open **and it was heated!** High point of the day.

I hit the trail by 0855, and could see I was the only one who had been hiking here since the snowfall. The 19 degree air wasn't too bad, and I quickly shed a couple of layers as things started to go vertical.

If you're going to hike Proffit, starting from the Scour Trail end is the shortest route. I once scouted out what appeared to be a much shorter route, but that gravel road terminated in a gate a big signs indicating **TRUSSRIPPERS WILL BE PERSECUTED** or some such nonsense. If you are not familiar with The Scour, google it. It resulted from the December 14, 2005 failure of the Taum Sauk upper reservoir, dumping over a billion gallons of water into Johnson Shut-ins.

The idea is to head up the Scour Trail, and stay on the Ozark trail to Taum Sauk. After about 5 miles (at roughly 37.5670, -90.7935), I turned hard left and bushwacked up about 200 feet until I hit the jeep road. I then followed that to the activation zone.

There I set up shop. I erected my black tarp facing the sun, to act as a kind of radiator (it works quite well), as there was no wind. I have a smaller tarp to put on the ground, then an insulated mat to go on top of that. The antenna was my trusty 30m $\frac{1}{2}$ -wave inverted vee, supported by a crappy pole and fed with 300-ohm twinlead.



I have one of cwmorse.us's NØSA keys stuck to a clipboard with 3M Dual-lok (great stuff!). That is where the log, the pencil, and hopefully my hands are, too.

I first worked Jeff NØMII on Johnson Mountain (WOM/SF-006), checked the alerts for any other WOM activators (I had missed Larry, NØSA), then set about hitting 40 meters. I worked more stations on 40m that I have in a long time in a SOTA activation. I then worked my way up to 30 and 20 meters. About 1905Z I took a break to get 10 QSOs in the 1900Z CWT run. Finished that about

1920Z and set about gathering SOTA contacts on 10m. Worked a few there, and worked a few on 15m before calling it quits at 1945Z. I wanted to get back to my truck before dark (I have been stuck on this trail in the dark before), and I was also getting sufficiently cold. Somewhere in there, I also ate my lunch.

As luck would have it, some fool hiked up the very same way I was going back! All I had to do was follow his/her footsteps. The boot tread seemed vaguely familiar. . .

The hike out was happily uneventful. I made pretty good time thanks to the person who left me the footprints.

I made it back to the truck by 2250Z (1650 local), which meant that if I hurried, I might avoid Rush Hour in Bismarck.

After the two hour ride home, I treated myself to two fingers of brandy and a hot bath.

Thanks to John NØEVH for getting the word out on this! Due to the crappy weather, perhaps we can make the month of February WOM Activation Month. . .

--73, Jim KKØU



Missouri SOTA Celebration from Webster County

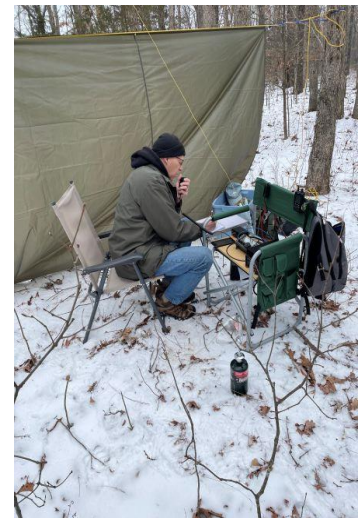


Weather was a factor for the 10th anniversary of WOM for sure. A couple of our teams were unable to safely negotiate the back roads to their target summits. However, we had success overall and were able to light up summits from SW to SE Missouri on February 1st.

Our two man team made it to Webster County HP which is ES-001 about noon and moved our gear to the easy summit via tub sled. With a wind break, a propane heater for the op position and even a hot pot of tea we were able to stay out for three hours on a pretty nice day considering it was the

middle of winter.

Frank KDØMQO started on 20 meter phone with our KX3 and 100 watt amp working his first station in France. After that it was mostly CONUS but we had a bunch of fun. I worked several local CW ops on 40 early and then after Frank was out of Q's on 20. I ran a bunch on 30 meter CW. Think we put about 60 contacts in the logbook. Of course, able to work short hop to Bill W4RK in Jeff City the founder of WOM SOTA in our state. We had to lower our amp to 50 watts to avoid some RF in the shack. Learning from that we will modify our feed lines and inverted L layout for future outings.



One photo shows one of our twelve visitors going to and from town. They only sent dits and their spacing was off, never could be their callsign.

Thanks to all who got out on summit and the many chasers.

John NØEVH
SOTA WOM Association Manager



Second SOTA—Johnson Mountain

WOM/SF-006—10 Years of SOTA in Missouri

Jeff Logullo, NØMII



I Survived the hike! Ready to get set up...

"What have I gotten myself into?" I thought as I backed down the driveway. It was 8:00am February 1st, the ten year anniversary of the establishment of Missouri's SOTA Association "WOM". Bill Gerth W4RK paved the way for SOTA activation enthusiasts in the Show-Me State back in 2013. And by happy coincidence, SLQS (St. Louis QRP Society) member Larry Naumann NØSA has been friends with Bill from the beginning. Larry has been prepping the club with news about the upcoming anniversary, and getting several of us to pick a summit and put it on the air for the big day.

And that's how I found myself driving south on I-55 toward Johnson Mountain, or [WØM/SF-006](#) in SOTA-speak. The dash thermometer said 21°F. Crazy!

But I was prepared this time. My previous SOTA activation was my first, only two weeks earlier. At the time I thought I'd be activating Buford Mountain ([WOM/SF-002](#)) for the anniversary, so I visited Buford as a dry run. It was generally a

success, and the weather was very nice for mid-January. But I'd learned some things on that trip - especially that one cannot activate a SOTA peak more than once per year! Scratch Buford!

I also picked up some tips just a few days earlier when I tagged along with Jim Smith KKØU on a POTA activation at Castlewood State Park. Jim's a SOTA veteran and I paid close attention to what he brought along.

First of which: his antenna. At Buford I brought my [QRP Guys Tri-Band Vertical](#) antenna: a wire vertical which I hoisted skyward with a [SOTABeams Travel Mast](#). But that mast is a little heavy compared to what Jim was using. The SLQS old-timers know what we mean when we say "SD-20" - the venerable "Sunny Day 20" fiberglass crappie pole. I have a pair of them in the shack. Time to give them some fresh air!

Jim was also using a simplified version of the guying method I use for my Spiderbeam mast: he had paracord tied to his fishing pole, and these would serve as guys fastened to the ground with cheap screwdrivers as pegs. The pole would slip over a fifth screwdriver as a center base. Quite sturdy!

I also noted that Jim was using a doublet cut for 30m and fed with 300 ohm foam twinlead. Jim said that the tuner in his KX2 would handle the doublet from 40m and up. One antenna: multiple bands. Perfect for a SOTA outing! These days that type of twinlead is just about impossible to find... but I couldn't shake the thought that I had some stashed away. And I did! Found a small coil that was the perfect length. My antenna plans were shaping up.

A little research on doublets led me to an article by L.B. Cebik titled [Suppose I Could Have Only One Wire Antenna...](#) turns out KKØU's antenna sounded a lot like what L.B. was describing. Very nice. The last piece was the need for a 4:1 balun. From my KX3 I'd need a short coax jumper to a balun, and from there the twinlead to the top of the pole. Rummaging through a drawer in the shack I found an old project: a [W1CG Low Power Balun](#) from the New Jersey QRP gang. I'd built it but never used it. Until now!

So the important stuff was lining up: radio, antenna, feedline. I put some fresh [Scotch Dual-Lock](#) on the bottom corner of a clipboard. Rotated 90° the clipboard would hold a small steno pad on the left, and on the right I'd snap my [NOSA POTA/SOTA paddle](#).

Other tips I picked up from KKØU: at Castlewood I saw him reach in his backpack and pull out a thin LCD travel clock. Set to UTC it greatly simplifies noting the time in the log occasionally. Jim also had a thin folding foam pad to sit on. Small, light, functional. A couple of clicks on Amazon.com and those items were on the way.

No amount of tips and gadgets was going to solve one issue: the weather. Two days before the event we had a cold front move through that brought some ice and snow: "wintry mix" they call it. As I was leaving home, I could still see a little white in the lawn. The MODOT maps showed the highways to Johnson mostly clear, but one never knows...

I enjoyed the drive through charming small towns - some familiar, some new. Bonne Terre, Leadington, Bismarck, Caledonia. The roads were dry, and snow in the grass and woods seemed to have lingered only in more shady or sheltered spots. I was less and less worried about having to sit in the snow.

The GPS got me to the turn-off onto a gravel road. After a slow mile-long drive I arrived at a gate blocking the road. From here it was a two mile hike to the summit. The temperature had zoomed up to a blistering 23°! I grabbed my backpack and started walking.

I had learned on the Buford trip that it only takes a few minutes of uphill hiking to make your coat unnecessary. Same here: soon I was carrying my coat over one arm (keeping that hand warm) with the other hand stuck in my pocket. The air was crisp but the sun was poking through the thin clouds at times, and the occasional wind was very light. My weather fears had been unfounded. This was a rather nice day!

I made it to the summit at last and started setting up. I discovered what looked like old foundations of a tower at the top. Radio tower? Fire observation tower? Whatever it was, it left behind some chunks of concrete with large bolts protruding from them. And near the center of that area was another larger block of concrete - taller, rectangular, and level. This would be a perfect place to sit with my radio gear at my side!

The ground was frozen a little and the soil was rocky, but I had no trouble pushing my screwdrivers into the soil. I



Operating Position – Johnson Mountain – N0MII – 2023-02-01

spooled out the halves of my doublet through the grass in a north/south orientation (well, tilted a little to the west to aim for the northeast and southern California). My SD-20 was soon guyed and headed skyward.

Everything was ready with 10 minutes to spare before my predicted start time of 1800 UTC. Cell coverage was thin but workable and I prepared a self-spot on [SOTAwatch3](#).

I had used the SOTAwatch3 web site the evening before to post an Alert with my intentions regarding this trip. I had stated that I'd be using CW on 40, 30, 20, 15, and 10 meters. Quick checks with the KX3's tuner, however, confirmed what I had discovered the afternoon before: I was not able to get a good tune on 10 meters with this antenna config. Shortening or lengthening the feedline would probably help... but that wasn't an option at the moment. I scratched 10m from my plans.

As the time ticked over at 1800 I made my first call. CQ SOTA DE NØMII NØMII... and there's the first call! It was Tony KB9LLD, a friend from SLQS. I smiled as I said hi and completed the exchange.

And there's the next one - and another! Any lingering doubts about the effectiveness of my antenna, or the weather, all evaporated as I started getting in the rhythm. And then I heard a very faint "S2S"... and I

responded with my own NØMII S2S... and everything went silent. SOTA folks are simply the best - everyone knows what a Summit to Summit contact means, and they're very good about patiently waiting while two ops work to get their exchanges through. I got good signal reports from my four S2S contacts that day, but for a couple I had to contend with QSB and my unfamiliarity with other SOTA sections' formats. After a few requested repeats I managed to capture what I hoped was correct.

If you happened to be one of the SOTA Chasers contacting me on this trip, how did it go? You may have been the one where I tried to hold my pencil in my keying hand. That rarely works; it's a guaranteed flub in sending a call sign back. Or how about when my clipboard started sliding off my lap? That's a good time to hear me sending random dots as I grabbed to put things back. And it's not all mishap - sometimes I just had to ask for a repeat call sign because I didn't "get it" the first time.

When the calls on 40 stopped coming I switched to 30. Once again KB9LLD was my first call. And hey there's Jim KKØU with an S2S call from the neighboring Missouri summit of Proffit Mountain! That was an especially nice contact as he was also participating in this anniversary celebration. Jim was a good 50% of my motivation to get out and try SOTA operation in the first place; I was glad that we made the contact.

Also in the log was Larry NØSA, who's the other 50% of my SOTA inspiration. If you review the Missouri summits, you'll see that Larry was the first to activate many of the Show Me State's SOTA summits. But the biggest highlight was working Bill Gerth W4RK - a man to whom we owe a debt of gratitude for getting Missouri established as an official SOTA association.

I'd made my way through 40, 30, and 20 meters and had been on the air for a good 45 minutes, when WOW! I am COLD! I'd left my jacket unzipped, and suddenly I realized that the breeze had been slowly picking up. That, plus having burned off all my hiking steam... I had a good shiver! I sent a quick AS AS (____) and stood up to zip my coat and pull on my gloves. I'd practiced sending while wearing gloves at the kitchen table the night before. Fuggetaboutit! I had a good laugh as I tried responding to a call. Popped off the sending hand glove and sent a SRI and tried again. If that was you at the other end, now you know what was going on.

A few more calls on 20, and then I moved to 15. I was on the air from Johnson Mountain for almost exactly one hour, and across the four bands I had logged 46 contacts. I reached for my travel thermos and poured a few cups of celebratory coffee to warm up. It had been a good time. I hardly remembered the huffing and puffing on the way up!

By now the temperature was about to cross the magic 32° mark. I dropped the antenna and gathered up my gear. And then I (somewhat belatedly) took some time to walk around the summit site, seeing what I could see in different directions. No it's not the same kind of majestic view one might enjoy in Colorado or the Swiss Alps. Still, Missouri has become my home, and I was happy to be standing on the seventh highest point in the state. As I looked to the horizon I thought "It's good to be here."

The walk back to the car gave me time to ponder. What would I do differently next time? What else should I bring? What did I bring that I could leave behind? (No, don't say the thermos!) Where would I go? Another SOTA site? POTA spots? Once the outdoor operating bug bites, the itch never seems to go away. Looking forward to the next adventure!

New to SOTA?

SOTA has been carefully designed to make participation possible for all Radio Amateurs and Shortwave Listeners - this is not just for mountaineers! There are awards for activators (those who ascend to the summits) and chasers (who either operate from home, a local hilltop or are even Activators on other summits).

See the '[Joining In](#)' section of the website for lots of information, advice, rules, guidelines and our FAQs.

SOTA is fully operational in nearly a hundred countries across the world. Each country has its own Association which defines the recognised SOTA summits within that Association. Each summit earns the activators and chasers a score which is related to the height of the summit. Certificates are available for various scores, leading to the prestigious "Mountain Goat" and "Shack Sloth" trophies. An Honour Roll for Activators and Chasers is maintained at the SOTA online database.

SOTA is designed to be compatible with other mountain users. Please see our [environmental statement](#) for details.

<https://www.sota.org.uk/>

St. Louis QRP Society - Winter Field Day 2023

Briefly, Winter Field Day 2023 will go down in club history as a winner! The weather was unseasonably nice -- we almost reached 60°! Jim KKØU warned us that we might need to break out the sunscreen at one point :-). It was windy and later in the day the temps began a steady down-slide... but overall, we caught a nice break.

The fire in the Cochran Shelter fireplace helped too!

Bands were not quite as hot as hoped, but we did okay. Log data will be assembled in the next few days. Stay tuned!

Hearty Thank-You(s) to Dave NFØR for the pre-WFD research (contacting park officials, sending out logistics emails, etc.), and to Larry NØSA for joining NFØR in being first to the shelter and securing it for us; and for bringing a supply of "starter wood" for the fire! KCØPP was the event photographer; stay tuned for photos to come!



We had a total of 13 SLQS members and 4 guests (friends of AAØZ). Plenty of activity on 10/15/20/40 meters and we managed to stay active most all of the time.

Members:

- Dave NFØR
- Keith KCØPP
- Larry NØSA
- Jeff NØMII
- KK9U Sean
- Dave WØDCX
- Lawrence ADØBI
- Larry KEØLD
- Gib KEØPRK
- Derek WBOTUA

- Lou N8LA
- Kyle AAØZ
- Vern AEØTT

Guests/Visitors:

- [Jocelyn KD8VRX](#)
- [Chris KD8YVJ](#)
- [Connor KD9LSV](#) (guest op on 20m!)
- [Kaitlin KD9WHO](#)

Jocelyn is Chris' father - and is quite proud of the fact that Chris was awarded the ARRL Hiram Percy Maxim award in 2015 and the Amateur Radio Newsline Young Ham of the Year for 2020. Both Chris and his dad's QRZ profiles have a lot of interesting facts that did not come up in conversation -- have a look (links above).





And I just learned that Connor and Kaitlin are twins! Two more "radio-active" younger visitors yesterday :-). Connor was not shy about sitting down and taking a shift on 20m. Thanks Connor! Kaitlin is also an Extra and a VE for W5WI.

I'm pretty sure I heard the phrase "annual event" more than once yesterday... here's to next year's WFD!

Jeff NØMII

The Second Sunday Sprint Update

GE All, John, AAØVE has retired after a great support of the 4s Sprints. Thank You John, for all the good work!

You can find the contest rules here:

http://4sgrp.com/SSS/sss_rules.pdf

February Sprint will be just a little different and plans are to add to the fun. Coming in the February Sprint is the addition of a Minimalist Station Sprint. This will give the rockbound and milliwatt stations to show QSOs are alive and well with stations that are minimal components and power output. More on this later.

With propagation going long in the evening, it is sure possible we should get the Sprints on-the-air maybe a bit earlier. Any thoughts? Also, should we keep the Sprint on Sunday? Let me know your thoughts!

73,

Walter, K5EST 

4sQRP Contest Coordinator

DX MAPS

Here is a great website if you have not already come across it. There are maps for each band showing where contacts are being made and indicating where the band is open to.

If you log in and setup an account you can list your QSO that will also show up on the maps.

The maps cover from LF-HF through UHF, Satellite and others. Be sure to check it out.

<https://www.dxmaps.com/spots/mapg.php>

DMR and the DMR Net

As you are probably aware, the DMR net is in session each Wednesday evening. The check-ins are usually the same folks each week (about 9-12 members). The 4States Group would like to encourage more participation from the members. The 4State talk group was established so the members could communicate with each other regularly.

We realize many members are not into digital communications other than CW. However, think of this as another avenue for members to communicate with each other. During times when the net is not in session, there is almost no activity on the 4State talk group. But there are almost **900** members that are registered on the 4State talk group. We would like to see activity throughout the week and use this communication avenue to keep in contact with members and/or discuss projects, kits, on the air operating, etc. One thing for sure, propagation does not affect DMR, so when the bands are dead you can communicate around the world on DMR.

DMR equipment is easily available. The Anytone 878 is a great HT that does digital as well as analog and has outstanding audio, it is available from BridgeCom here <https://www.bridgecomsystems.com/>. They run specials from time to time.



You will also need some type of Hotspot to connect to the internet. These are available at many dealers, on ebay and at Bridgecom. Programming can be a little intimidating but there are many videos and sources to assist you. And don't forget other 4State members as a resource. The 4State Group has a groups.io, subgroup for digital communications here: <https://4sgrp.groups.io/g/DigitalFM>

Hope to hear you on the talk group soon.

How to Build Aluminum Antennas

Here is a good guide for the construction of aluminum antennas from DX Engineering.

Posted by [Ward Silver, NØAX](#)

[How to Build Aluminum Antennas \(onallbands.com\)](#)

Here are a few products to consider that will prevent corrosion on antenna connections and joints.

Permatex Anti-Seize This is typically used for the installation of steel spark plugs into aluminum engine heads. Permatex's Anti-Seize Lubricant is a highly refined blend of aluminum, copper, and graphite lubricants. Use during assembly to prevent galling, corrosion, and seizing due to weathering or chemicals. Anti-Seize assures easier disassembly. Temperature range: -60°F to 1600°F (-51°C to 871°C). Salt, corrosion, and moisture resistant and is ideal for marine use. Non-aerosol version meets Mil Spec #907E.

Penetrox is an electrical joint compound for a proper electrical connection between metal parts such as conductors. It is an oxide-inhibiting compound for preventing galvanic corrosion and enhancing the connection in electrical joints. It can be used in aluminum to aluminum, aluminum to copper, and aluminum to conduit applications.

SS-30™ Extreme literally copper plates mating and sliding surfaces to provide protection against seizure, galling, and heat-freeze. SS-30 Extreme's high content of copper particles prevents metal-to-metal contact, maintaining lubrication qualities under wide variations of temperature, expansion, contraction and cyclic loadings. *Recommended and used by NØSA*

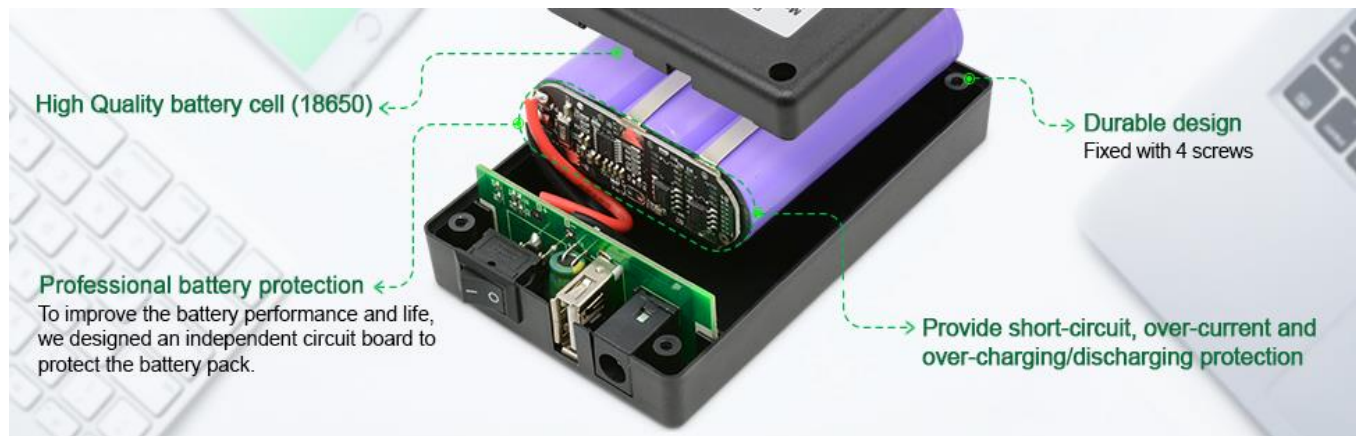
MOSLEY ANTI-CORROSION COMPOUND PART# A-1123 A corrosion resistant compound that prevents oxidation - assures electrical conductivity and lubrication of all metal fittings. A workable mix in all temperatures and climate conditions. Use on electrical fittings and "swaged" (tapered ends of aluminum) elements of antennas. Available in 1 oz. package. [Mosley Electronics | Manufacturer of World Famous HF Communication Antennas! \(mosley-electronics.com\)](#)

A very affordable Li-Ion rechargeable battery



One of the most affordable rechargeable battery packs for the QRPer in your life is the [TalentCell Rechargeable 12V 3000mAh Battery Pack](#). This pack typically costs around \$30 US and is sometimes even less expensive.

This little pack is great because it will not only output 5V to recharge USB devices, but it also outputs 12 volts which is brilliant for QRP radios like the Elecraft KX series, TX-500, FT-817/818, Mountain Toppers, Penntek TR-35, Venus SW-3B, QCX and many others.



The battery comes with the charger and standard barrel connectors on the included DC cord which fits Elecraft and Penntek field radios among others.

[Amazon.com: Talentcell Rechargeable 12V 3000mAh Lithium ion Battery Pack for LED Strip, CCTV Camera and More, DC 12V/5V USB Dual Output External Battery Power Bank with Charger, Black : Electronics](#)

Technical details:

- Model: YB1203000-USB
- Capacity: 11.1V 3000mAh
- Input: 12.6V/3A Max. (our package include a 12.6V/0.5A AC/DC lithium ion battery charger)
- Output: 12V (voltage range is 12.6-9V) /3A Max.
- Weight: About 190g

Four State QRP Comfortable Nets

Meet each Wednesday night beginning at 20:00 Central Time. Add anything to the exchange that you wish, temp, rig, ant, etc.

Checking into all sessions is encouraged. We call it the "Clean Sweep".

8:00 pm Central time - 40 Meter Net on 7.122 +/- QRM ACØBQ/NCS

8:30 PM Central time - 80 Meter Net on 3.564 +- QRM ACØBQ/NCS

9:00 pm Central time - DMR Net on Talk Group 31654 NØYJ/NCS

NO dIGITAL Net currently.

All are welcome!

DMR Voice Net

Wednesday evening DMR Voice Net will be at (Thursday) 0300 UTC (9:00PM Central Time Wednesday/) Four States QRP has a Brandmeister DMR Talk Group (TG31654). Join us to discuss QRP, ask questions, or just ragchew.

The Wednesday net is a directed net but any other time you may use the Talk Group to chat with other QRPers. Net Control operator is Bert NØYJ.

For information and help, check out the DMR subgroup on 4sqrp.groups.io

<https://4sqrp.groups.io/g/DigitalFM>

Second Sunday Sprint

Occurs on the second Sunday of each month, 7 to 9 PM Central

Any mode, any band (except WARC & 60 mtrs) -

- Suggested frequencies: standard calling freq. plus 7122 and 3564 (CW), and 3985, 7285, and 14285 (SSB).
as well as the usual QRP watering holes.

QSO's with the same station on different bands are allowed. CW and SSB portions of a band count as two bands.

- Calling CQ is suggested to be "CQ 4S"
- Exchange is "RST, SPC, member number (power if non-member)"
- 5 Watts max CW, 10 Watts PEP max SSB.

The station with the most contacts each month will be emailed a certificate. Furthermore, the top three stations with the most SSS contacts during the year will also receive certificates via email.

Scores are submitted via the grpcontest.com/4sgrp website (compliments of W8DIZ).

For full details, please download the [complete rules \(PDF\) here](#).

For questions, please contact John (AAØVE): SecondSundaySprint@4sgrp.com

Thursday Morning

The Four State morning net has been convened for members who like to start the day on the air.

We meet each Thursday morning at 8:00 AM Central on 7122 kc. 7122 has become the Four State 40M hangout frequency, and often members can be found there on any morning.

Editor's Note:

Articles are needed to make every Banner issue successful. If you have something of interest, please send it to the editor at the email address below. You do not need to send a finished article. You can send some comments, notes, etc. and I can put it all together for you. Pictures are always of interest. Some of the items of interest would be outings and /or operating events by yourself or a group, construction whether equipment, antennas, accessories, QRP Field Day, SOTA, etc. Anything QRP is welcome.

de KCØPP

editorqrpbanner@gmail.com

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