

Ozark QRP Banner



The Official Newsletter of the Four State QRP Group WQ5RP

November 2021 Edition

In This Edition: Big Brutus Bash, WSPR Lite, A Loop Tuner, Polarity Protection, The Secret Wireless War, SLQS Fall Outing,

Four State QRP Group Updates:

- Parts are being acquired for the Souper Upper Kits, for the Bayou Jumpers. Keep an eye on the 4State kit page.
- The 20 Meter Cricket will be added to the kit line up soon.
- A re-designed QRP Test Set to replace the original is in progress.

Planning has begun on OzarkCon 2022 for early April

Stay tuned for updates

The planning committee is looking for presenters. If you are interested and have something of interest to share, please contact Johnny at AC0BQ@4sgrp.com

Hamvention® 2022 Update!

Hamvention Special - Michael Kalter, W8CI is here with Tim Duffy, K3LR to give an update on Hamvention 2022! Order your ticket(s) and make your hotel reservations now!

<https://forums.qrz.com/index.php?threads/hamvention%C2%AE-2022-update.780086/>

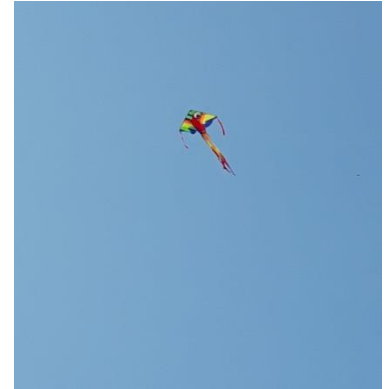
Missouri RF Adventures MORFAdventures@groups.io

Coordinate and share your Missouri portable amateur radio adventures here. Where are you going, what are you doing for upcoming event? What questions do you have for the group? How did it go, what did you do, what did you learn? *Guys from the Mid Missouri Electronics group (and also 4SQRP members) wanted to put together a portable ops group, so it's the MO RF Adventures.*

Editors Note: Don't forget to place your spot on <http://www.qrpspots.com/>

Big Brutus Bash

The weekend after Labor Day is the normal **Big Brutus** gathering at West Mineral, KS which is only a few miles from Pittsburg, KS. With Covid still an alert situation, our small group decided to keep the event alive this year and be safe as possible, medically speaking.



A long standing ritual is getting a kite in the air, first! The Parrot kite was flown Friday night at the hotel parking lot by Walter - K5EST.



Johnny - ACOBQ, Pam - KE0ZWZ,
Joy - NQ5R, Bert - N0YJ.

ACOBQ, KE0ZWZ, NQ5R, Sharon -
KE0VMX

The 3 ladies were the **Super Team** at the
Ozarkcon Registration Booth.





Pam and Joy, are setting up the lunch fixings. You may think we come to Big Brutus to operate radios.....actually we come to devour ACOBQ's BBQ ribs!

On the left in the yellow shirt is Joe - WOMQY. Johnny - ACOBQ is on the right. Joe, was an organizer for many years for the Big Brutus Bash.

For a small group of only 7 4SQRP members, we had a great laid-back Saturday, making a few contacts, munching on BBQ ribs and the fixings, and enjoying visiting with longtime friends. We did use a 1 x 1 call sign - KØB, and quickly found out it was not picked up easily by some of our contacts. I'd bet next year we use WQ5RP!

Hopefully Ozarkcon 2022 will be the next gathering of 4 State QRP if the Covid thing goes away, so see you all there!

73, Walter - K5EST



The Story of a Boy and His WSPR LITE

By Roger Rugg, NØRSR

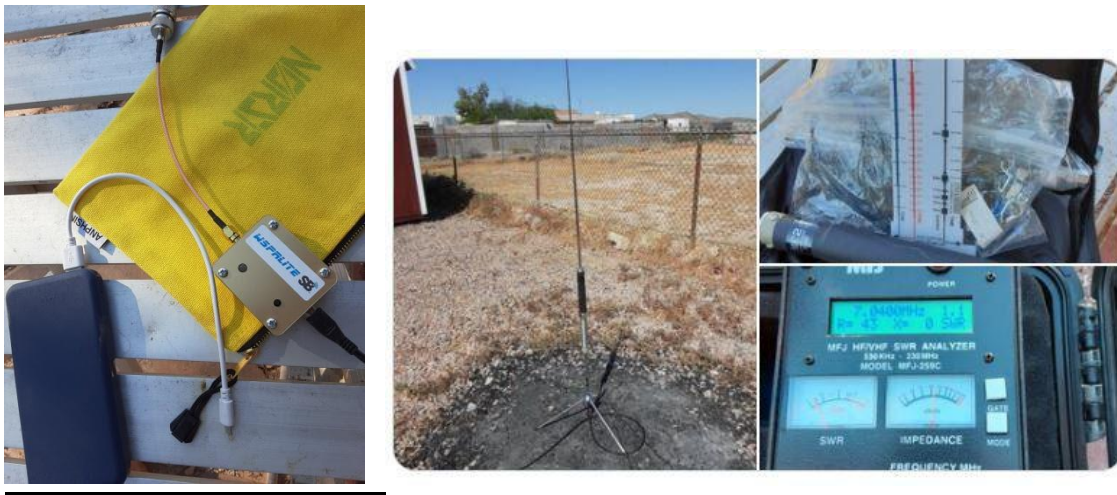
It all started as I became a HAM back in 2018. I started out looking at all the different niches in the hobby. I fell into some areas that have stayed with me and some that have run their course.

I've primarily worked satellites and took a stint thru the FT8 realm. While exploring the digital modes available under WSJT-X, one mode stood out as really cool. That was WSPR, the Weak Signal Propagation Reporter mode.

WSPR mode uses low power transmissions to demonstrate what propagation is doing in real time. This is accomplished by being spotted by listening WSPR stations across the world, and spotting those signals that your own setup is hearing. Generally saying that if you can hear them and they can hear you, there's some sort of opening between the stations. I found myself doing less of it as time went on and life got busy.

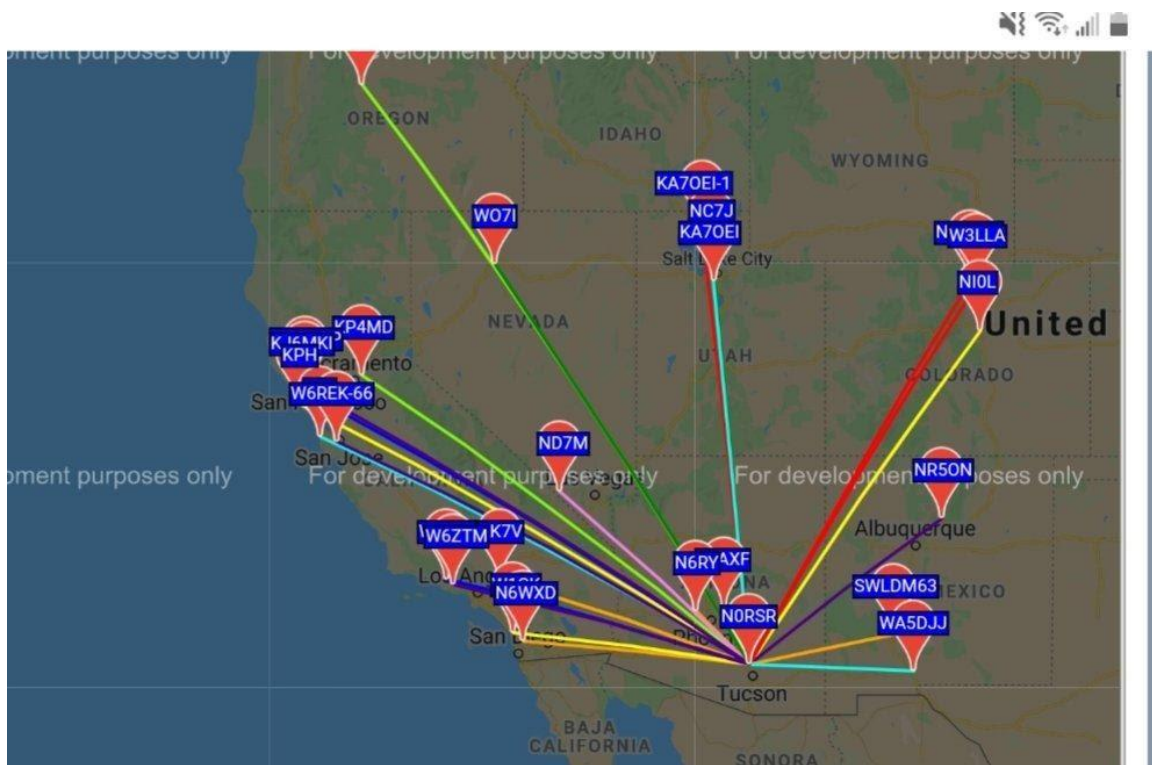
Move to a time in the recent past as the pandemic was taking shape and doing stuff at home became all the rage, I started looking at purchasing a WSPRLITE device (a portable WSPR transmitter), strangely the device is scheduled to be delivered in December due to backorder. However, while perusing the Tucson Hamfest this past week, a WSPRLITE was to be had for very cheap money.

Now, having a WSPRLITE in hand meant that I could test some antennas and see what they'd do.

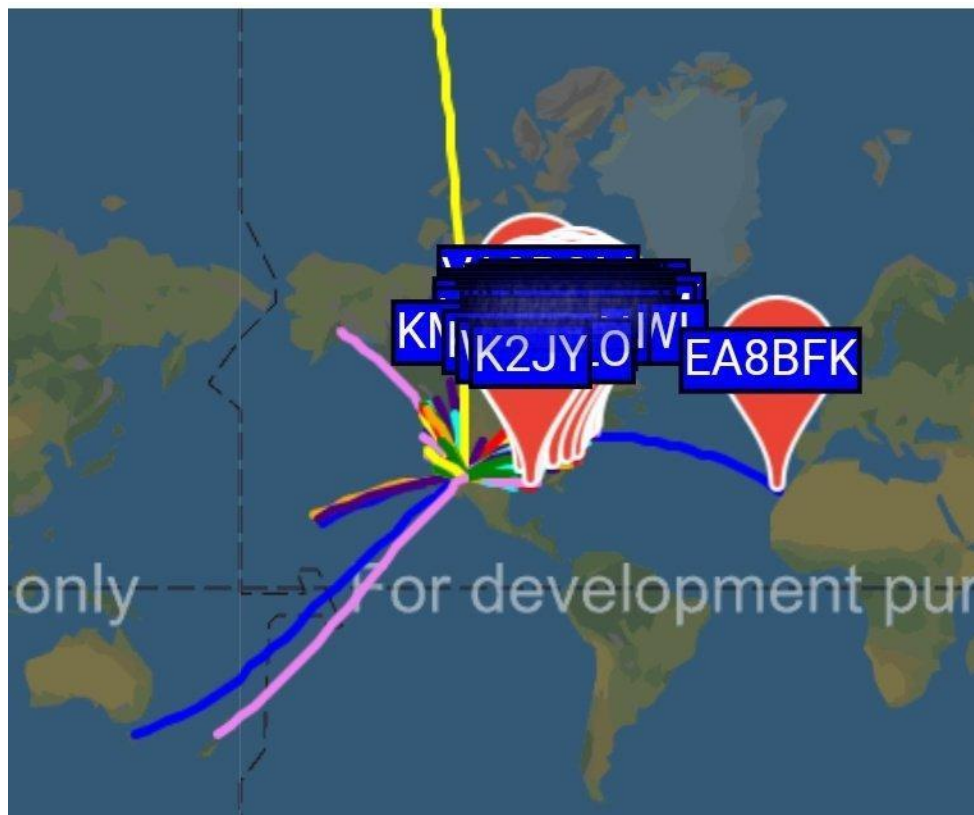


The linked dipole went first and I think got a bit of a sunspot activity boost followed 24 hours later by the vertical to which it had no such boost.

The linked dipole was tested on 40m at 200mw. The first spots returned showed some decent coverage and evidence of NVIS (Near Vertical Incidence Skywave). NVIS is good for getting those nearby stations that are normally in the skip zone (the 2 closest). It also shows the AZ to OR RF highway that seems to exist.(the near double length line between AZ and OR

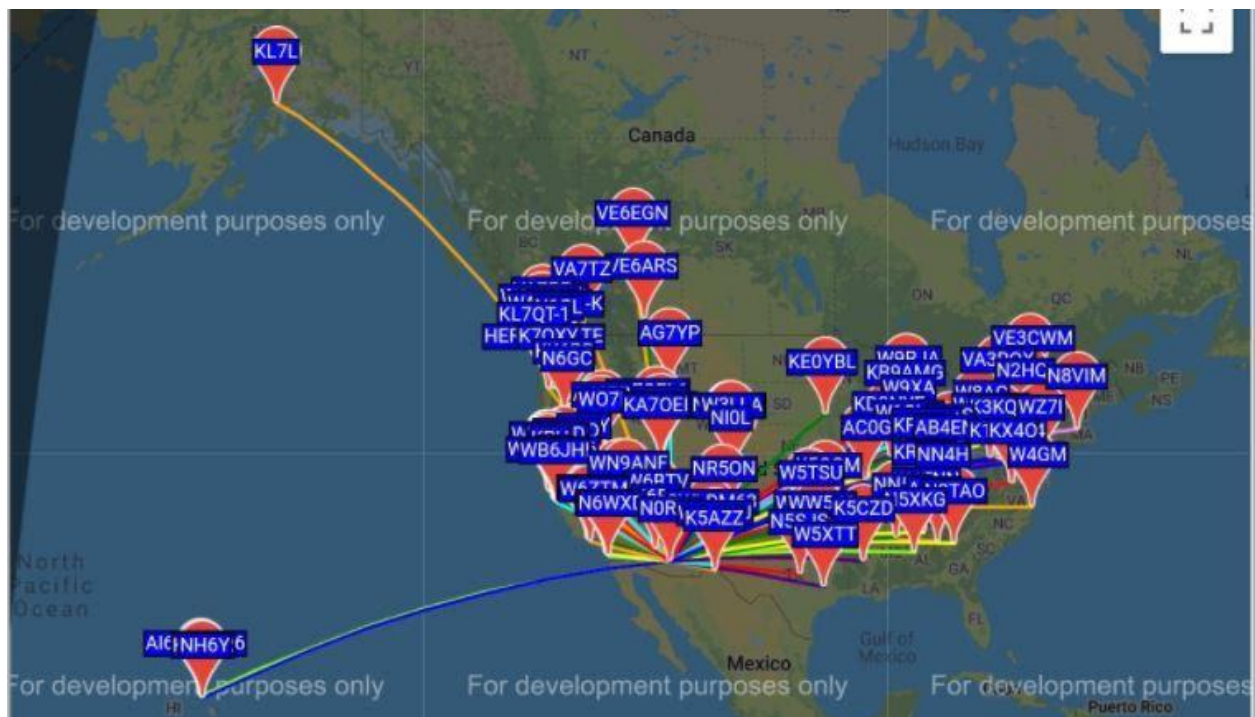
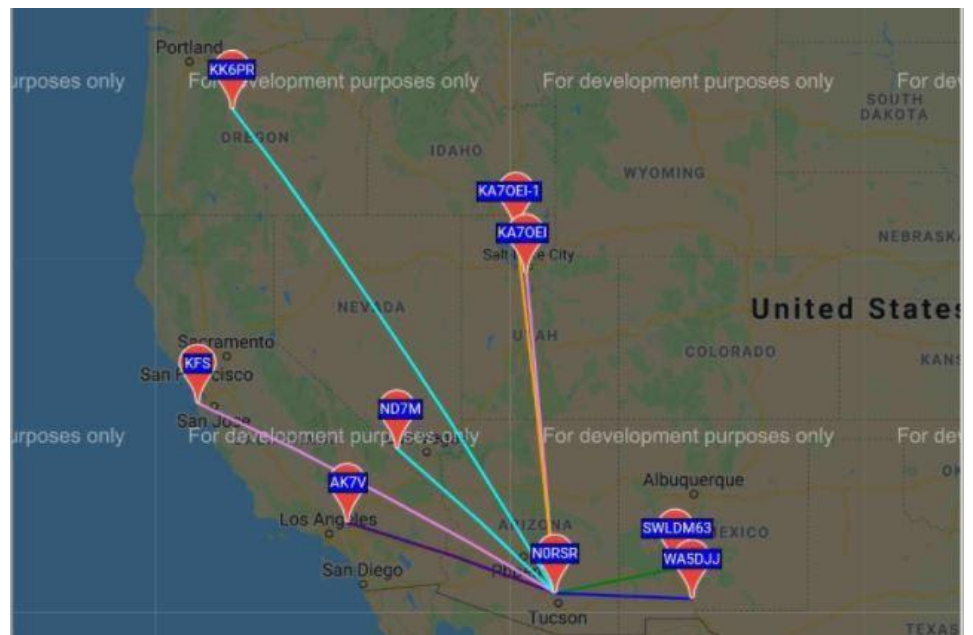


Overall, the dipole was able to hit Canada, HI, AK, Africa and near Australia on a whopping 200mw and most likely some heightened sunspot activity as shown.



The SuperAntenna was tested with the same 40m at 200mw. This time it looked a little more sparse with no hint of the NVIS (NVIS isn't a feature of verticals) or even ground wave to the nearby stations. The stations are generally all the same stations reporting a spot if they hear you, in this case there's a few not hearing the 200mw.

During the 24 hour test period this particular antenna didn't find any boost to grab the further places as the dipole did. Also perhaps being a compromise antenna, it might just need to make some compromises.



Both antennas from this location seem to have a few holes in the reporting mesh, perhaps lack of WSPR monitoring to the west of the midwest, and that south east corner of the states.

Overall, the WSPRLITE is a fun little test tool. It sets up quick and easy with its own setup app. The device is a TX only device with a max power of 200mw and runs from a USB power pack for portable use. You'd be able to run tests from a park or mountain top or anywhere else you may need.

You can see WSPR spots and maps at:

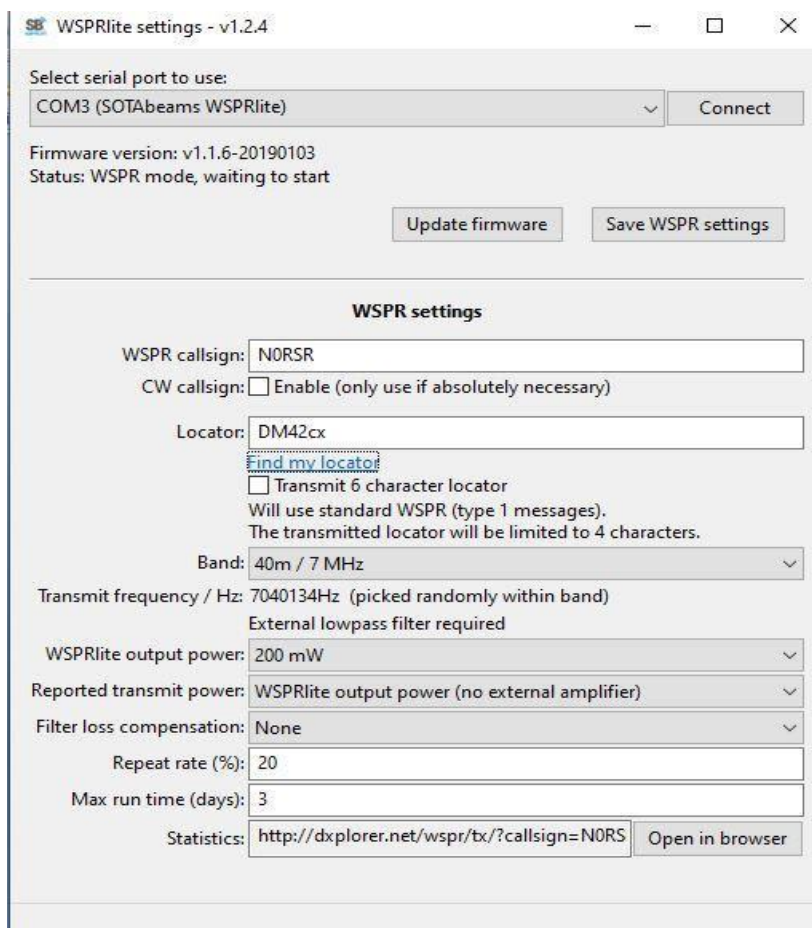
www.wsprnet.org

All spot maps are from wsprnet.org

Photos by Roger Rugg, NØRSR

Twitter:

[Twitter.com/R_Rugg](https://twitter.com/R_Rugg)



WSPRlite settings - v1.2.4

Select serial port to use:
COM3 (SOTAbears WSPRlite) Connect

Firmware version: v1.1.6-20190103
Status: WSPR mode, waiting to start

Update firmware Save WSPR settings

WSPR settings

WSPR callsign: NØRSR

CW callsign: ☐ Enable (only use if absolutely necessary)

Locator: DM42cx

[Find my locator](#)

☐ Transmit 6 character locator
Will use standard WSPR (type 1 messages).
The transmitted locator will be limited to 4 characters.

Band: 40m / 7 MHz

Transmit frequency / Hz: 7040134Hz (picked randomly within band)

External lowpass filter required

WSPRlite output power: 200 mW

Reported transmit power: WSPRlite output power (no external amplifier)

Filter loss compensation: None

Repeat rate (%): 20

Max run time (days): 3

Statistics: <http://dxplorer.net/wspr/tx/?callsign=NØRS> Open in browser

Tweaking the Yaesu FT-817 for Portable CW

by

Dave Gauding, NFØR
dgauding@sbcglobal.net

I tweaked my Yaesu FT-817 for portable CW with a couple of additions. I'm pleased with the way it has turned out. I trust other 817/817ND/818 owners will find this a helpful undertaking.

The first ever tweak was a 500 hz CW FILTER ordered with the radio by the original owner about twenty years ago. While the IF SHIFT can get you by temporarily a filter is a must have for the dedicated CW operator.

The second tweak (now two decades later) is an internal Windcamp WLB-817S 3000 mAh LIPO battery. The pack slips right into the interior space occupied by the eight AA-cell battery tray. I added thin stick-on rubber feet to the case to protect the charging port and power slide switch on the battery hatch. And, to keep the radio from sliding off my lap which will become obvious later.

This battery upgrade almost doubles the capacity of Yaesu supplied 9.6V rechargeable battery packs, increases the voltage to 12.6V and halves the recharge time. The normal recharging time claimed for the Windcamp battery is up to three hours and that appears to be accurate. The battery does not have to be removed from the radio.

There are quite a few Windcamp sellers on eBay. I searched over several days and settled on a competitive price including shipping. The compact battery, upgraded metal hatch cover containing the protection circuitry and the charger were well-packed. Detailed instructions are included. The installation took just a few minutes and is followed by an initial charge. Shipping time from China was five weeks.

To help create this portable station the latest (and last) tweak is an older NØSA TIP-1 (Tiny Iambic Paddle) mounted on the top right side of the 817 case using Velcro dual-lock tapes. Other miniature paddles are easily candidates for this same arrangement.

Mating the dual-lock tapes on a forty-five degree angle provides a rigid mounting and good ergonomics. Shortening the paddle's cable assembly to just a few inches and using a right-angle plug helps keep everything tidy and compact.

Other additions! To insure call signs and names are handy while in QSO a pad of Post-It Mini-Notes is now located between the paddle and the front panel. I'm keeping the note pad in place using cellophane tape and recently stretched a wide rubber band around the case to serve as a pen holder. It turns out to be a very useful and welcome addition.

At the top left rear of the case is my "cheat sheet" showing software commands as they appear in the 817 menus for quick reference during busy moments.



A/B A=B SPL
IPO ATT NAR
PWR MTR
10 BACKLIGHT
13 BEEP
21 SPEED
44 SIDETONE

My preference when operating portable is to sit in a camp chair, hold the radio in the left hand, rest it on my right leg and key with the right hand. The 817 with Windcamp battery installed weighs about 40 ounces. The display screen or speaker can be held up to my eyes or ears quickly when necessary.

I find camp chairs a lot less fatiguing than solid picnic table benches. And, especially so during an extended portable operation. These usually comfortable lightweight canvas seats mean no more time lost searching park grounds for an unoccupied picnic table. Especially for a table in a shady spot that's perfect for antennas and with convenient parking nearby.

A hand-held 817's front panel controls can be manipulated with either hand while in QSO. However, holding on to the radio makes it too easy to accidentally bump the VFO. It's best to engage the frequency LOCK control immediately after tuning.

I always make sure the backlight off unless it's needed. When paired with earbuds these two choices alone can reportedly reduce battery consumption up to 20%. My 817 shuts down when it reaches 9.6V. The Windcamp battery provides 5W output right up to that time.

Battery performance is better than I expected. Informal testing disclosed that my fully-charged Windcamp battery is good for at least three hours operating on CW at five watts. That translates to mean receiving, calling CQ and making routine contacts at a comfortable pace.

"Convenient" is absolutely the best word to describe this portable station. The antenna and paddle are the only connections that need to be made at the operating location. Plus ear buds should conditions call for them.

Being so compact makes it easy to operate from inside the car in cold weather. Waiting for Spring to return so I can enjoy working portable again in comfort is no longer an issue.

My preferred portable antennas with this station are a homebrew resonant 20-30-40M vertical or a homebrew magnetic loop covering 10-40M. The 817 already includes an SWR bridge and while it would be nice to have an antenna tuner too none is needed with these antennas.

817 operators only working portable occasionally might consider loading the OEM battery tray with eight high-capacity disposable AA cells (i.e. Duracell Quantum Alkaline). Performance in the field needs to be determined but the cost of five reloads is about the same as the cost of the re-chargeable Windcamp battery kit.

To recap - the new internal Windcamp LIPO battery provides my 817 with a solid five watts output on CW for hours. Attaching a miniature paddle to the case truly simplifies keying in the field. Plus, the generous audio from an 817's speaker is always welcome. All this and more from Yaesu's now twenty-year old, all-band, multi-mode, miniature QRP transceiver. Enjoy!

MFJ-9232 Loop Tuner de KK4ITX



*"If you read the manual and pay attention to the details
you can have a very
effective loop for not much money !"*

If you're new to a loop antenna you might ask, why a loop?
Is a loop superior to other antennas? Is it easy to operate?
Aren't they expensive?

Well, first the **why a loop?** and just like my mother used to
say "Because I'm the Mom". It's uniquely different,
compact, and this one can be ready to tune in 2-3 minutes.
It can be used where other antennas cannot. It's great for

HOA's, limited spaces and above ground apartments, hilltops and my favorite, beach parking areas.

No, a loop is not **superior to other antennas** in fact it probably is only 70-80% as efficient as an EFHW
but it hears better because it's much quieter and directional so in most cases you can reduce or
eliminate QRM and QRN depending on your proximity to the interference. The end result is that you
should be able to complete more QSOs with less noise. That said the WSPR discussion later on was an
eye opener for this loop's propagation on 20m.

Easy to operate? If you are thinking "Plug and Play"..... not by a long shot but once I learned the ropes
it's a breeze for me. 60 years ago, I learned how to tune a guitar and banjo and 30 years ago how to
tune satellite dishes to get a signal from 26,000 miles away into your living room and both tasks seem
relevant in this endeavor also.

Loops are expensive, if you buy one because there usually is a fair amount of work involved in making
one. Basically, there's engineering, a tripod, control box and a loop(s) made of some material like coax
cable, copper or aluminum and of course a profit has to be made.

The **MFJ-9232** loop tuner was designed to give you the opportunity to experiment with the building of a
loop with the tuner as the heart of the project.

I chose to use a tilting/panning camera tripod I had picked up at a Flea Market for \$4.00. The part that
the camera sits on with the 1/4-20 screw was reworked to accommodate a couple of electrical 1/2" pipe
clamps. You can certainly make your own tripod or re-purpose one used for building or surveying or hang
it from a tree.

The pipe clamps were drilled and taped for 8-32 screws to use as a clamping and adjusting mechanism for the tuner onto the main vertical 1/2" PVC Schedule 40 pipe.

As supplied the MFJ tuner comes with some wire, terminals and instructions. Please read the instructions as there are some hints on the use and suggestions for wire length for the various bands. PRACTICE in tuning is essential to success. As you practice you will soon become more proficient and you will be able to switch Bands without thinking..... almost.

Below is a chart of sizes to start you off, it comes from the MFJ manual, read it and re-read it.

MFJ-9232 Single-Band Loop Wire Lengths

<u>Band</u>	<u>Length (feet)</u>	<u>Length (meters)</u>
80-M	63.0	19.20
40 -M	28.0	8.53
30-M	20.0	6.96
20-M	13.0	3.96
17-M	9.0	2.75
15-M	7.0	2.13
12-M	5.5	1.68
10 -M	4.0	1.22

MFJ-9232 Multi-Band Loop Wire Lengths

<u>Bands</u>	<u>Length (feet)</u>	<u>Length (meters)</u>
40/30-M	20.0	6.96
30/20-M	13.0	3.96
30/20/17-M	9.0	2.75
20/15 -M	7.0	2.13
17/15/10-M	4.0	1.22

Tuning the MFJ Loop unit is not unlike tuning a stringed instrument as it requires you to develop a second sense between turning the mechanisms and hearing the results..... as you sort of "sneak" up to the sweet spot. **HINT:** The knobs as supplied (about 1/2" dia) for me were hard to grasp and turn so I swapped them out for some around 3/4" in diameter making it easier to tune in smaller increments and I will be redesigning the box for larger knobs soon and perhaps a vernier dial. As supplied the tuning capacitors are about 1" apart so you need to get creative. The Tuning control is perhaps the most critical of the two and is needed for fine tuning should you move away from the tuned area. Both controls only turn 180 degrees so perhaps something like a Popsicle Stick will find its way to the knobs before I'm done?

I am 100% deaf in one ear with hearing loss of 30% in the other, yes, I've heard that joke and that's hard on the hobby too! Because of my issue I was determined to use my small antenna analyzer to tune up. It does work but I found that my limited hearing was a plus, not a negative. I am able to pick up the "swish" as I pass into the "Sweet Spot" from several feet away and gooing slooowly the SWR falls to 1:1 or so.

Yes, the control is mounted upside down. For reasons beyond my pay grade, I found that there was far less reaction to my hands near the box when it was mounted this way. I had changed it because the cable seemed to always be in the way. Compare the knobs on this photo to the originals above.

Instead of using the 16ga wire that came with the control box I had some 4 wire trailer hookup cable and it makes my conductor about 3/4" wide instead of just the 16ga.



So the next step was making the loop itself and I tried several approaches and while each worked I think that my last effort is really the best, it certainly was the easiest but I was not the first to try it..... it's been done before! A trip to Dollar General yielded a small Hula Hoop for a \$1.00. Peel off the label and you'll find a connector for the hoop..... it just pulls apart, insert your wire and connect to the control box hang the hoop from the PVC pipe and you're done. Simple, efficient and effective.

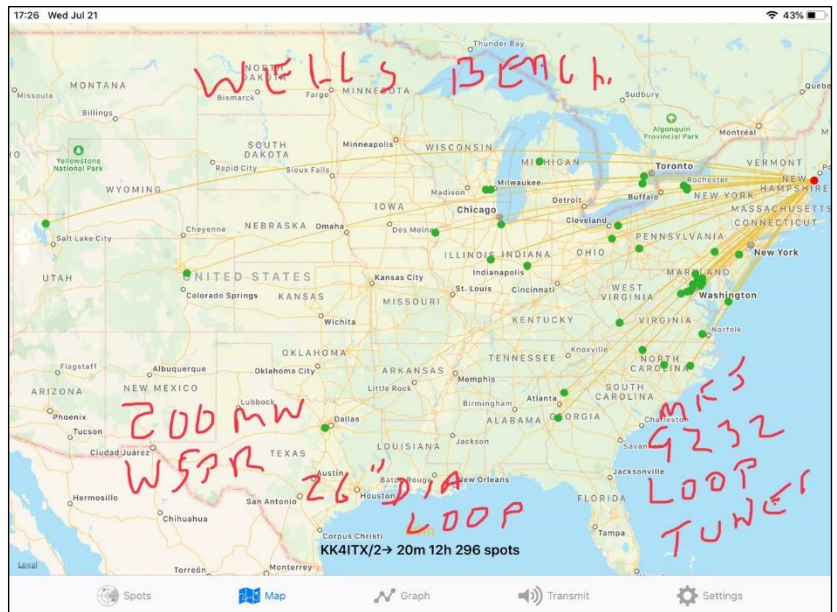
I usually use about a 9ft RG8x cable so I don't have too much to work around.

Here I'm set up on Drakes Island on the Wells Harbor, Maine canal. Really a nice spot for an old dog.

Particularly with a new setup I run Weak Signal Propagation Reporter (WSPR) developed by Joe Taylor, W1JT, one of the two inducted into the 2021 FDIM QRP Hall of Fame! Anyway, using this great mode with a SOTABeams WSPRLite at only **200mw** my little loop at under \$80 performed well. For those not familiar with WSPR the power out, in this case 200mw, is approximately equal to 20 times in CW or 4w and that shows me about where I could expect my signal to be picked up. It's not a perfect picture because it takes a receiver at that location to spot you just like a reverse beacon does.

But whatever, 200mw to Salt Lake City from Maine with a cobbled together loopy thingy is totally awesome as far as I am concerned!

To me the main takeaway of this article is that I had a chance to play with antennas and make something a little different AND it worked too!



QRP and or any outdoor operating makes you think and be creative rather than be just an operator with an amplifier and store bought antenna operating from the climate controlled comfort of your castle. QRP is not for everybody that's for sure, many do not have the patience or desire to make it with low power and when the going gets tough.

I'm not fast, I don't use a keyer (SK only) and I only use 5w or less but I'll try to answer your CQ anyway.

72,

John
KK4ITX

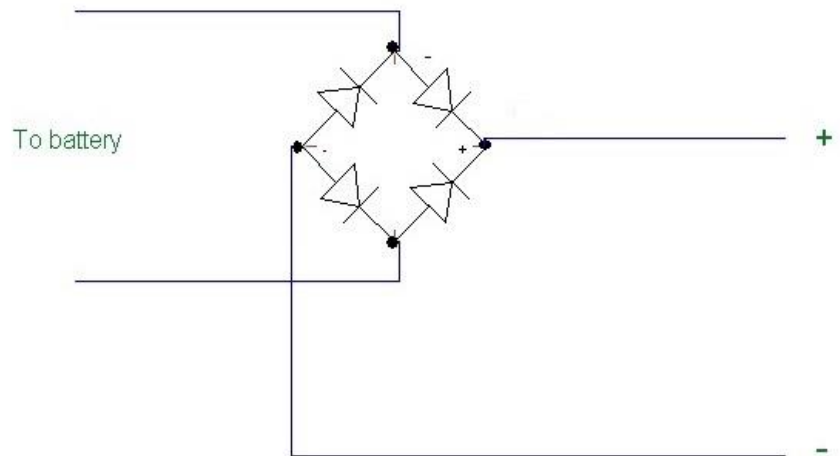
Comments & questions: kk4itx@arrl.net

Polarity Protection with A Bridge Rectifier

Never worry about polarity protection again!

de Tom Severt, N2UHC

Here's a simple way to avoid problems with reverse polarity voltages from accidentally hooking up a battery backwards. Using a simple bridge rectifier circuit, you can completely avoid worrying about which wire to connect to which battery terminal. Using a rectifier, it simply doesn't matter which way you connect the battery because you'll always have the correct polarity at the plug.



Normally bridge rectifiers are used to convert AC voltage to DC voltage, giving pulsed DC which is filtered to a steady DC voltage. The same principles used to convert AC to DC in a bridge rectifier means that whichever DC polarity is present at the rectifier's input means that there will always be proper DC polarity at the output.

In many radio designs, a single diode is used backwards between the +V input and ground, along with a fuse. If the radio is connected backwards, the diode shorts and the fuse is blown, protecting the radio. This works well unless you're short of fuses. Using a simple bridge rectifier totally eliminates the possibility of accidentally blowing fuses from accidentally hooking up a battery backwards. I recently obtained a QRP radio which takes a very small coaxial DC plug. Luckily I had a cord on hand with the proper plug, and on the other end was a cigarette lighter plug. I bought an inline female cigarette lighter jack, and inside it I installed a rectifier with two battery connection wires coming out the end. Not wanting to fry the radio, I felt this gives much better protection than having to always make sure I connect the battery properly, since I don't know what kind of polarity protection the radio itself has.

Bridge rectifiers are easily available from electronics supply sites, or can be salvaged from old electronics equipment. A rectifier can also easily be built using typical 1N400x diodes.

Editors Note: There will be a .6 volt drop that may be of concern when operating with a battery.

de NFØR/QRPP

It's not really an amateur radio topic but to locate a library copy of *The Secret Wireless War* by Geoffrey Pidgeon (2003) my search finally turned to **MOBIUS**. See: <https://mobiusconsortium.org/>

This not-for-profit 501(c)(3) organization linking the catalogs of seventy-six library systems and independent libraries in Missouri and nearby states. It's a free service. Use "Search MOBIUS Catalog" on the opening page to inquire about a specific title. General browsing is also offered for inter-library loans.

The book focuses on MI6 (British foreign communications espionage) during WWII between 1939-1945. The ARRL store charges \$39.95 plus \$10.50 shipping for this soft-cover book. Used copies can be purchased on-line for \$14 to \$20 but most book re-sellers also charge for shipping.

A copy of the book was provided to me by MOBIUS through the Central Arkansas Library System. It was delivered to a specified branch of the St. Louis County Library in eight days. After being notified by e-mail a requester has seven days to pick-up the book and four weeks to read it. Books may be renewed twice if there are no outstanding holds. Audio-visual materials are also available.

The author addresses the total MI6 contribution to the war effort. While doing so he explains the significant role played by amateur radio operators. During WWII up to 1700 hams supported a secret wireless listening project throughout the UK by becoming a "Voluntary Interceptor" or "VI". The Radio Society of Great Britain (RSGB) was actively involved in recruiting volunteers starting early in the war.

Already licensed as amateur wireless operators' VI listeners arrived on the scene familiar with Morse code and experienced in weak signal work. They were able to start copying German wartime traffic on assigned frequencies fairly quickly. VI's worked alongside a similar number of trained military and civilian personnel provided through the Ministry of Defense.

Many of the volunteer amateurs held day jobs. They would monitor signals from home stations during off-hours or operate from government installations. The VI's also staffed eight direction finding stations within the UK to identify sites where enemy signals were originating.

Enemy messages copied by the listeners were always enciphered. It had to be frustrating not knowing who you were copying, what you were copying or even how your intercept would be used. It deserves mention the VI's stayed with it for six long years in spite of these unknowns.

The MI6 listeners eventually identified and monitored one-hundred forty-seven secret enemy wireless stations. At the height of conflict up to two-hundred and eighty intercepts were being collected daily. At the same time great care was taken to insure the clandestine listening operation was never compromised. The organization was very successful at doing that.

Known as the "Y Service" listeners forwarded raw five-letter code group intercepts by Royal Mail to Bletchley Park. See: https://en.wikipedia.org/wiki/Bletchley_Park. Most messages encrypted by German Enigma machines were deciphered there by the world's first computer and converted into actionable intelligence. See: https://en.wikipedia.org/wiki/Cryptanalysis_of_the_Enigma

After careful vetting radio amateurs chosen to participate in intelligence gathering signed the Official Secrets Act. See: https://en.wikipedia.org/wiki/Official_Secrets_Act_1911. Their wartime experiences remained classified for forty years.

The secret was unceremoniously revealed by a BBC television program (The Secret Listeners) in 1979. See: <https://www.youtube.com/watch?v=RwbzV2Jx5Qo> Only then did surviving participants learn how their very best efforts were instrumental in bringing WWII to an end.

Being an ardent student of WWII since high-school it was an interesting and informative read for me and a long one. There are 337 pages in this oversize book and copies of period photos and documents are featured. Those interested in wartime radio sets and Parasetts in particular should be pleased.

The book is a well-researched and remarkably detailed effort. It documents the official activities of both Allied and Axis participants. There is also in-depth coverage of MI6 spying, black propaganda broadcasts, radio technology and first-hand wartime recollections. Most readers have rated the book with four out of five stars.

Building an EFHW Antenna

NØSA has shared this information for building EFHW antennas. Go to the link and plan to spend some time absorbing all of the in depth research provided by HB9EAJ. From the SOTA Reflector.

[HB9EAJ](#) 17 August 2021 17:16 #1

After a long amateur radio break, I rediscovered this great hobby and especially SOTA about two years ago.

I tried and evaluated different HF portable antenna designs that fulfilled my personal needs, which finally brought me to experiments with resonant end-fed half-wave antennas.

During these experiments, I came up with a EFHW design that I had not seen before: a radiator containing one by passable loading coil for more bands to cover. The result is a 20m long EFHW antenna that is resonant on the 60-, 40-, 30-, 20-, 17-, 15- and 10m-band, depending if the coil is short-cut or in use.

Further, I experimented with small but efficient couplers, adding more bands to the antenna, and much more. All the measurements were taken during my SOTA activations.

Please have a look at the resulting [A Portable 7-Band End-Fed Half-Wave \(EFHW\) Antenna](#) document, consisting of more than 50 pages that I promised to several hams for so long.

Update: Linked to version 1.2 that contains more information about the transformer winding and several small fixes.

I hope that some contained ideas will be a useful source of inspiration for your own antenna projects.

73 Stephan

NE3I Coffee Can Vertical

de NE3I

After Hiroki Kato, AH6CY's recent QST article, "The Tin Can Tower Vertical", describing a Home Brew Vertical constructed using ILLy Coffee Cans, I decided to experiment with some ILLy Coffee Cans that I had saved myself. (Hiroki graciously provided me with additional photos and information.)

Because the Iilly cans are covered with a non-conductive transparent film, soldering the cans together proved tedious with my small 25 Watt soldering iron. Consequently, I elected to use sheet metal screws, nuts, fender washers and bolts to build my stack of cans, sanding the multiple contact points for conductivity.

The Iilly cans proved to provide Broad Band Resonance with stacks significantly shorter than a quarter wave length. However, my "Nuts and Bolts" Version was rather wobbly so, I eventually reduced the number of cans and added a 10 Foot telescoping whip instead. The NE3I Coffee Can Vertical shown covers the entire 10, 12 and 15 Meter Bands with an SWR below 1.7:1 with a single adjustment of the telescoping whip. (Naturally, resonance could be achieved by adjusting an appropriate length telescoping whip without the cans. However, the Five Can stack by itself also provided an SWR of about 2:1 over the entire 6 Meter Band.)

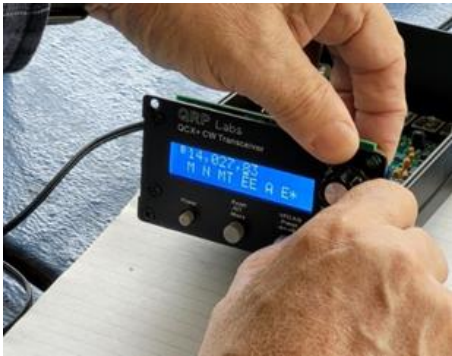
The enterprise confirmed the Broad Band Resonance and Shorter than Quarter Wave Length characteristics indicated in Hiroki's QST Article. In portable tests mounted on a tripod with only three 8 foot "radials", I received good signal reports from Cuba, Washington State and Wyoming on 15 Meter CW transmitting only 25 Watts. Local 10 Meter contacts were significantly better with the Coffee Can Vertical than the Mobile's HV7A.



73. Griff NE3I

SLQS Fall Outing

About a dozen or more members of the St. Louis QRP Society attended the Annual Fall Outing on Saturday, October 23rd. The day started out partly sunny but soon the clouds took over. Temperatures held in the 50's, so not too bad for this time of year. Three members brought some radios and setup field antennas.



There were the usual rigs; a QCX, QCX+, RGO ONE and KX3.

Antennas were a vertical, EFHW for 40 meters and the SLQS Mag Loop.



KØFHG with the KX3 and a 40m EFHW



WØDF with the QCX and SLQS Mag Loop



NFØR and NØSA admiring the RGO ONE



And of course, there was food. We always manage to work that in to an outing.



The chef at this event was KCØPP with Chili (perfect for a cool fall day), Hot Dogs for the Chili Dogs and Brats.



WB8EJN, AAØVE, KØFHG. NØWL, WØMFQ



NØSA, NFØR, WØDF

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 at this time.

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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"Sorry OM, I can only work QRP at the moment!"