



CHEROKEE AMATEUR RADIO SOCIETY

# WX4CAR NEWSLETTER

OCTOBER 2025 | ISSUE 26





# MESSAGE FROM THE PRESIDENT



**Marty Buehring - KB4MG**

With Fall in full swing, it's POTA Season! The activities at the club picnic are to help you feel comfortable with bringing your equipment to a POTA park, setting up the needed radio gear, and then activating the park. Once you have tried it, you will be hooked.

Why is POTA so popular and fun to do? There are many reasons I can think of, but here are a few for you to chew on.

POTA mixes adventure with radio. You get to setup in a beautiful park where there are often mountains, streams, wildlife, the beauty of nature. It can be a challenge to get setup and get your antenna working well enough to make at least 10 contacts. Why 10? For POTA it requires to count the park as "activated" for points.

POTA, unlike contesting, is a slower pace and even offers time to talk with other stations about what you are doing and exchange pleasantries. You can call CQ at your own pace, or just hunt for others in parks as well. You may create a "pile-up", so be ready for that. Don't lose your cool. Take the stations in any order that is best for you.

It allows for portable experimentation. This helps to support ARES activations because it helps get the kinks out of your setup in a non-emergency environment. This also builds the skills needed in an emergency.

Lastly, POTA has fun on two sides of the contact. There are others out there acting as "hunters" that are anxious to talk to you. If you register at the POTA website (pota.app), you can post your activation and hunters will come looking for you.

Parks are very friendly towards POTA activators as long as you don't disturb or destroy anything in the park. I know many like to use wire antennas in trees, but a standalone antenna may be a better way to go and avoid damage to tree limbs. Get out of the shack and have some fun!

## A WORD ABOUT ARRL ELECTIONS

October is the month when ARRL members will receive a ballot. Like the old adage says, "if you don't vote, you get what you get." Please take time to review the candidates. Like with any election they all have their strengths and weaknesses.

I have my list of the top four issues I will share. This does not mean they are important to you. Also, the club and I aren't endorsing any specific candidate, so we want you to come to your own conclusions.

### I. Increased interest and support for clubs. What do clubs need? Why not ask them?

- A. Communications with ARRL local and corporate. I want a representative in both places I can call and talk to about things we face as a club.
- B. Most clubs are starved for speakers. We need a registry of people who can speak at club meetings and on what topics.
- C. Materials for presentations for club meetings.
- D. Materials for workshops and hands on learning. Can we leverage any materials from the teacher's institute?
- E. Help with club websites - most are pitiful and never up to date
- F. Quarterly message from our ARRL Director we can publish in our newsletter about what is happening in the SE and how ARRL is helping.

### II. How will you improve the ARRL "brand"?

- A. What influence do you have at ARRL HQ that makes you believe you would be heard?

- B. What do you propose we do? How would you fix it if you were King for a day?

### III. ARES has its own set of issues, which vary a lot from location to location. It is important that ARRL help with relationships building.

- A. In Cherokee County, GA we have a great relationship with the EOC director and his staff. We have amateur radio equipment at the EOC which we exercise regularly. They paid for the equipment and antennas, which underlines their commitment to ARES.
- B. What will you do to foster relationships like that for ARES across the SE?

### IV. Dues and value

- A. How can the ARRL articulate the value of membership? The question I hear most is "what are the dues paying for and what value do I get by being a member?". Many think that ARRL has missed the mark on conveying value.
- B. You miss a huge opportunity of conveying value by not visiting clubs, contributing to our newsletters, and calling club presidents on a regular basis. Will you change that?

You might guess my top issue is support for clubs. Certainly, there are things that ARRL does like Field Day, but we need more. ARRL has said that 2026 will be "The Year of the Club". Thus far we don't know what that means.

I hope to see more POTA stories this Fall. We have a new column in the newsletter called "POTA CORNER" where you can tell us about your adventure.

73,  
Marty - KB4MG





# ARRL CALLS ANTENNA RESTRICTIONS A THREAT TO AMATEUR RADIO'S SURVIVAL

## THE ORGANIZATION HAS LAUNCHED A NATIONAL PUSH TO GET CONGRESS TO ACT

By Lee Hall - K4QO

ARRL is ramping up the fight over rules that restrict the placement of antennas on private property. Since 1996, federal law has guaranteed to every American – except radio operators – the right to erect antennas outside or on their residences for the purpose of TV reception, satellite TV and internet access, wireless internet access, and even wireless internet redistribution. But amateur radio operators are denied the equal right to erect comparable antennas.

ARRL calls such restrictions "...the most insidious and increasing threats to the survival of amateur radio and our ability to serve our communities and nation as we are required to do by federal regulation."

ARRL believes the denial of the rights guaranteed to all non-amateur radio licensed American homeowners is without justification and should not be permitted to continue.

### HOW WE CAN HELP

The organization is asking all hams to support legislation now before Congress that, if passed, would extend to all hams the right to operate from their homes and the right to install antennas on the land they own.

Hams are asked to contact their members of Congress and ask them to co-sponsor and support [H.R. 1094](#) in the US House, and [S. 459](#) in the Senate.

Go to <https://send-a-letter.org/hoa/>, enter your call sign and click on "Send My Letters" and your letters will be delivered to ARRL's Washington legislative team for hand delivery to your representative and senators.

### BACKUP PLAN: THE ANTENNAS YOUR NEIGHBORS WILL NEVER SEE

Many hams have for years battled with homeowners associations over restrictive rules regarding antenna placement. Now, ARRL has offered up some cool solutions in the form of a new publication.



"Stealth Antennas for Ham Radio" is full of antennas to get you on the air no matter where you live. Even radio amateurs who live with antenna restrictions or covenant limitations will find solutions in this book.

Learn how to install a multiband vertical that looks like a flagpole, or how to run an end-fed random wire along your roof, so the neighbors never notice. If you are looking for an invisible repeater connection, try the Ham Walking Stick. If you want five bands but can't put wires in trees or display anything even remotely antenna-like, try the Compact Stealth Inverted L.

"Stealth Antennas for Ham Radio" will also help hams who want to stay unnoticed by neighbors. There are ideas for small lots, covenant-restricted properties, and many other living situations. **Steve Ford, WB8IMY**, kicks off the collection with safe, effective, and ethical stealth operation. "Stealth operating can be highly rewarding if you understand your limitations and work to alleviate them as much as possible," Ford said.

"Stealth Antennas for Ham Radio" is now shipping. Order from the ARRL [online store](#) or find an ARRL [publication dealer](#); ARRL Item No. 2288, ISBN: 978-1-62595-228-8, \$22.95 retail, member price \$19.95.

Source: ARRL





# DIET DR PEPPER, DEAD BANDS, AND DETERMINATION: THE POWER 30 POTA ROVE

By Chad Cone - KY4KP

With a lofty goal of activating 30 parks in a single UTC day, I started planning my trip a few weeks in advance. I am familiar with the parks in northeast Georgia so I figured that would be the easiest place to start on Friday night. Looking at picking up some new parks, I planned Saturday to work towards Macon with a whole host of parks. Having completed several prior roves, I had a head start in planning, executing and of course contingencies for any problems that may arise.

## THE PLAN

My plan was to be on location at US-7451, Swallow Creek Wildlife Management Area (WMA), at the beginning of the UTC day and work my way back towards the QTH. I was counting on west coast stations to keep me rolling as the clock moved towards midnight. With a goal of 14 parks Friday night, I planned to start at US-7453, Allatoona WMA, Saturday morning and work towards US-0264, Piedmont National Wildlife Refuge.

Having learned from previous rove attempts, I had a cooler full of cold ones (Diet Dr Pepper), snacks, food, multiple batteries, multiple radios, multiple antennas



and a full tank of gas. I even carried a 5 gallon gas can just for good measure. I planned on running single sideband (SSB) using my ICOM 7300, 20m Hamstick on a mag mount and a Bioeno battery.

I set up a passenger seat desk in the back seat of the truck with the laptop mounted and ready. I left the mag mount in place for the duration of the rove. All I

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would need to do for each setup is screw the Hamstick into the mag mount. After triple checking maps, park boundaries, charging batteries and going over my loadout several times I was ready for the Power 30 Rove. As you will see later, extra time in the planning stage can make or break an activation or rove.

### THE EXECUTION

Before I left the house, I checked the weather, solar weather as well as the POTA spot page. All of the above looked perfect and prime for a successful rove.

As I approached Helen, I could see dark clouds to the north and realized I had no rain jacket. Another lesson learned and added to the ever-evolving POTA Rove 101 handbook. While I got a nice shower at Swallow Creek WMA, the rain didn't last very long. As the clock rolled over to 8:00 p.m. local time, I fired off my first activation and the rove was underway.

I was able to move quickly through the parks around Helen using SSB. I collected 11 contacts at each park, removed the antenna and then headed to the next location. I would like to get at least 11 contacts at each park. That way I have a little breathing room in case of a logging error. Don't ask me how I learned this lesson.



When I arrived at the Dahlonega Gold Mine Museum, US-7456, 20m SSB was up and down with contacts coming to a grinding halt. I quickly switched over to my good friend **Bruce's, K4OTX**, favorite mode and ran ft8. My average of 6-10 minutes total time at a park had quickly turned into nearly 45 minutes in Dahlonega.

My anticipation of endless hunters standing by on 20m phone across the west coast never materialized. Amicalola Fall State Park, US-2166, was no different. By the time I finished Cochran's Creek WMA, US-12421, it was nearly 1:30 a.m. and I was running out of gas.

With conditions deteriorating and slowing for me, I decided to head home and start fresh the next morning. I was only able to collect 11 parks Friday

night and had to back track to Dawson Forest, US-4650, early Saturday morning.

### DAY 2



I started off behind the sticks with a lot of work ahead to get back on track. My first activation Saturday began around 8:00 a.m. and the second half of the rove was underway. I started off running ft8 early in the morning and made my way through the Cartersville parks with relative ease. Once I crossed the lake, traffic plagued me until I got well on the other side of Atlanta. I figure I lost at least two hours working my way through the city. This was the price I accepted and considered possible to reach the parks I was after going towards Macon.

Once I got to Panola Mountain State Park, US-2193, I was back on track averaging less than 10 minutes total per park running 20m SSB.

My next roadblock appeared around Clybel WMA, US-7141, in the form of extreme noise on the bands. I chose this area due to the multitude of parks located close together. I'm not sure what the interference was but it affected the entire band and once again I was forced to switch modes to make contacts.

Running ft8 as patiently as I possibly could, all I could focus on was the time clicking away on the clock. Marben State Fishing Lake, US-7467, had the same noise level and struggle running ft8. Calling an audible, I abandoned the remaining four WMA's in the area and relied on my pre trip planning. I headed further south towards US-0264, Piedmont National Wildlife Refuge.

From my pre trip planning, I knew there was another cluster of parks to fall back on. With the Silverado hammered down, I was determined to complete the Power 30 Rove. Once I completed the 25th park, I told my POTA compadres it was going to be tight. As it turns out the noise issue was definitely located around Clybel WMA and nonexistent once I arrived at US-0264, Piedmont National Wildlife Refuge. I was able to mount the antenna, spot and complete the



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activation in five minutes and get back on the road. I completed my 31st park at 7:23 p.m. with time to spare.

As I drove the two hours back to my QTH, I was able to reflect on the adventure and add a few more lessons learned to the ongoing POTA ROVE 101 handbook. Always have a backup plan for changing conditions, don't count ever count on the west coast, **ALWAYS HAVE PLENTY OF FOOD AND SNACKS** (this lesson still haunts me), have multiple modes available, be prepared to change bands and most importantly be able to abandon the plan altogether and call an audible. While SSB is certainly my favorite mode, without the ability to run digital I would not have been able to complete the rove. As with any POTA activation, I had a great time and saw some beautiful parks. The family will be planning on returning to many of them. My most notable contact was made on 20m SSB with Saudi Arabia.

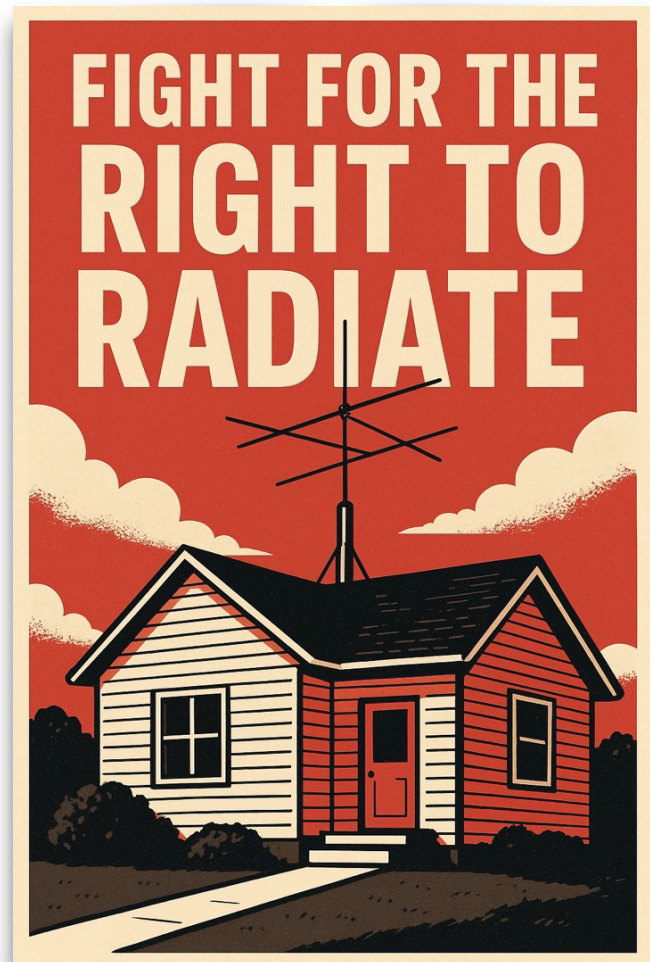
### THE AFTER ACTION REPORT:

- ★ 532 miles driven
- ★ 31 parks activated
- ★ 345 contacts
- ★ Contacts w/ Canada, Sweden, Dominican Republic, Greece, Spain, Ecuador, Puerto Rico and Saudi Arabia (20m SSB)
- ★ 1 case of cold ones consumed
- ★ 1 club contact: Bruce K4OTX

### PARK LIST

- ✓ US-7451 Swallow Creek WMA
- ✓ US-7447 Chattahoochee WMA
- ✓ US-2204 Unicoi SP
- ✓ US-4473 Chattahoochee NF
- ✓ US-3718 Hardman Farm
- ✓ US-2199 Smithgall Woods
- ✓ US-7138 Chestatee WMA
- ✓ US-7456 Dahlonga Gold Mine Museum
- ✓ US-12521 Cochran's Creek WMA
- ✓ US-2166 Amicalola Falls SP
- ✓ US-4556 AP Trail
- ✓ US-4650 Dawson State Forest
- ✓ US-3743 Dawson Forest WMA
- ✓ US-7454 McGraw Ford WMA
- ✓ US-7453 Allatoona WMA
- ✓ US-3715 Etowah Mounds
- ✓ US-2194 Red Top Mountain SP

- ✓ US-7471 Allatoona Pass Battlefield
- ✓ US-0711 Kennesaw Mountain
- ✓ US-2193 Panola Mountain SP
- ✓ US-7139 Arabia Mountain
- ✓ US-7902 Walton WMA
- ✓ US-2184 Hard Labor Creek SP
- ✓ US-7140 Charlie Elliot WMA
- ✓ US-7467 Marben State Fishing Lake
- ✓ US-7141 Clybel WMA
- ✓ US-0264 Piedmont National Wildlife
- ✓ US-3720 Jarrell Plantation
- ✓ US-4649 Hitchiti State Forest
- ✓ US-7858 Dames Ferry Campground
- ✓ US-3772 Rum Creek WMA





# CHEROKEE ARES PROVIDES VITAL LINK AT GEORGIA JEWEL

Runners call it "tough, but mostly awesome." The Georgia Jewel, a trail run through the North Georgia mountains, attracts participants from all over. Last year, close to 200 runners trekked through courses of 35, 50 or 100 miles. Why? Who knows.

This year's event drew 365 runners. Someone has to keep track of them all and report their progress to race officials, a challenging task in a corner of the state far removed from cell phone towers. During this year's race, run the weekend of September 19-20, volunteers from Cherokee ARES manned one of the trail checkpoints. It's a perfect test of amateur radio's ability to communicate where other technologies can't.

This year's ARES crew included... **Rob Bruderer (W1JKU), Bill Sangster (KO4UQF), Rod Atwell (KO4PWB), Bruce Alden (N4ALD), Mike Vincent (KQ4MV) and Shawn Walsh (K4ZRI)**





# ALTOIDS TIN POCKET TUNER

By Jason Turnage - KO4NDP



I was in the market for a manual QRP tuner, and I wanted it as compact as it could be. There are a few miniature Z-match tuners on the retail market, but nothing is quite small enough for my purposes. Compared to the QRP Labs' QMX I want to pair it with, which packs the most components possible into the smallest space possible - about the size of a pack of smokes or deck of cards - most consumer project-box-size tuners are largely empty space inside and resemble putting a weed whacker engine in a Cadillac body just to have a go cart. I discovered the Pocket Tuner by **Barbaros (Barb) Asuroglu (WB2CBA)**. He had this same dilemma, and designed a rather compact tuner board on a PCB about the size of a credit card.

Below is my journey in building and using it.

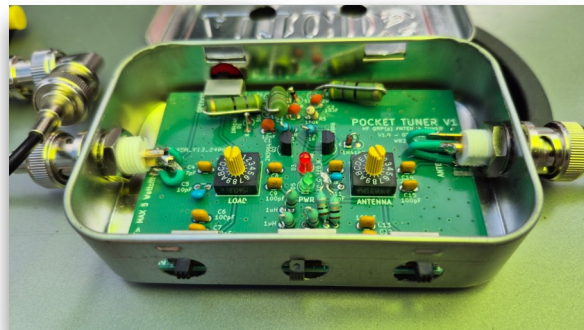
## POCKET TUNER INFORMATION

- Bands: 10m to 40m. With an additional mod (which I did), it will work on 80m, but can struggle, depending on the antenna
- Power: Up to five watts
- Tuning: Resistive tuning process indicator (SWR Bridge), radio only sees < 2:1 SWR (usually <1.5) when in tuning mode

You can find Barb's build instructions, design diagram, PCB schematics, bill of materials, and usage guide on his website: <https://antrak.org.tr/blog/pocket-tuner-v1/>. He links to [github.com](https://github.com), where he hosts the source material. You can download everything here, but you'll find the instructions are more detailed on his website. I opted to put mine in an Altoids tin where it fits snugly.

## HOW IT WORKS

The tuner works by using two series capacitor banks and a switchable inductance bank. Where most mini-T-match tuners use relatively large polyvaricon capacitors, this unit uses much smaller hexadecimal rotary encoder switches, resulting in capacitance values from 10pf to 379pf in 10pf increments by adding sets of capacitors, depending on where the switches are rotated. For inductance, there is a three-position slide switch giving inductance from 0.5uH, 1.5uH, and 2.5uH, respectively. Barb suggests 2.5uH on the 3rd switch is good for up to 40m, but for 60m and 80m, an extra 1uH helps (bringing it to 3.5uH). I made that modification, but have yet to test it. However, I can say that with the mod, it still also works great on 40m.



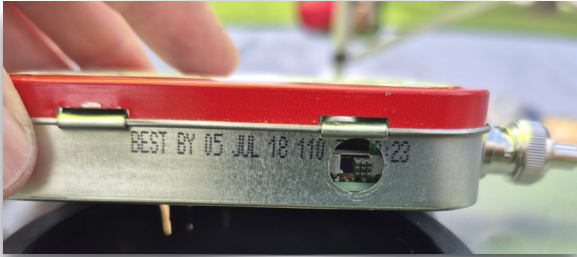
## TUNING

The tuner is very intuitive once you understand how it works, and what the switches and knobs do. To tune, the following steps are used:

- The antenna is connected to the **ANTENNA** jack, the transceiver is connected to the **RF IN** jack
- The **Tune/Operate switch** is flipped to the **Tune** position. On the back of my case, it's the lone switch. The PCB has the word "TUNE" printed on



one side of the switch, and "Operate" on the other. It would be handy to have it on my case as well.



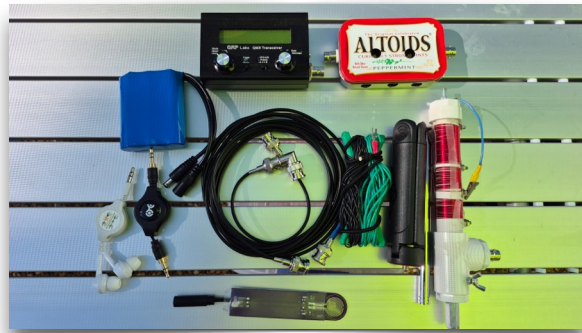
- Load capacitance (LOAD\_C) and Antenna capacitance (ANT\_C) switches both to the right (in the position NOT adding 200pF extra capacitance)
- Transmit (CW tone works well) and use trial and error with INDUCTANCE three-position slide switch to find a position where RED LED dims and/or GREEN LED brightens. This is usually position 1 for  $\leq 20\text{m}$ , position 2 for 20m and 30m, and position 3 for  $\geq 40\text{m}$ .
- Turn LOAD rotary switch (left knob) and find a position where RED LED is dimmest and GREEN LED is brightest.
- Turn ANTENNA rotary switch to fine-tune even further, finding the dimmest RED LED and brightest GREEN LED.
- It may be necessary to add 200pF extra capacitance to either the LOAD side (left side two position LOAD\_C switch) or the ANTENNA side (right side 2 position ANT\_C switch), or both. If so, it's probably best to set one, then re-work the LOAD and ANTENNA rotary switches all over again to test before adding the other switch.
- The goal is to get RED LED as dim as possible, and GREEN LED as bright as possible.
- While using this unit in the Tune mode, the resistive SWR bridge is activated, and the radio will never see a bad SWR. This also means the SWR reading on the radio is false.
- When a good match is found with the tuner, switch the Tune/Operate switch to the Operate position

### USING

As a quick test, I connected a NanoVNA directly to a vertical and saw 3.6:1 SWR on the lower portion of the 20m band. After connecting the tuner and playing with the knobs and switches, I quickly was able to get it down to 1.12:1 SWR.

Aside from the SWR though, the more important numbers we're actually tuning are the 51ohm resistance and 1.90nF reactance, which is vastly better than where we started. Going from 3 to 1.1 SWR really isn't that impressive though, any tuner can do that. In fact, my use case for this tuner will be tweaking an SWR that's starting between two and three to a more reasonable match that won't risk harming the radio. That's a typical case for most hams. Any higher, and the antenna really should be tweaked first before tuning, and if it's any better, then you may not even need a tuner.

The impressiveness is its ease of use in such a compact form factor, it only takes a few seconds to tweak and tune, and it doesn't require any batteries or power source.



The smallest loadout for me looks like this.

### IN THE FIELD

In this kit:

- QRP Labs' QMX 20m-80m
- 12v battery
- Pocket Tuner in Altoids tin
- 12-ish feet of RG-174 coax, and another nine-inch coax jumper
- CW paddles & retractable cable
- Earbuds (also retractable)
- Vertical antenna (coil, tripod, whip, and radial wire)

First, I'll deploy my antenna, whether it's this vertical or any other antenna. Then I'll test the antenna match and make whatever tweaks need to be performed with the tuner. This can be done with the NanoVNA as shown earlier, or directly with the transceiver in reduced-power Tune mode and watching the SWR carefully while also monitoring the Red/Green LEDs on the tuner. Alternatively, when traveling and I don't



even care to get out of my truck I can simply spread the entire kit over my armrest and have room to spare!

**FINAL THOUGHTS**

This tuner is not for everybody.

- First, it required building myself (though it wasn't hard). It required several parts that I didn't have and had to order, as well as a few I begged friends in the club for.
- The components it uses limit it to QRP (5w) only
- It's quick to use, but it's no auto-tuner.
- Larger Z-match units in the same category may be more flexible in their tuning capabilities

But as you can see, the size of this tuner unit fits right in with the compact nature of the rest of my radio kit. Plus, it doesn't require batteries, as compared to my previous ATU-10 auto tuner that was constantly running out of juice before I was finished using it. It's quick and easy enough for me (and most hams) to use so that the few extra seconds it takes to tune don't really matter. And it's got a range that meets most of my normal operating needs.



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For all of your Amateur Radio needs, CARS recommends [DX Engineering](http://www.DXEngineering.com).





# TINY SA PART II - WHAT CAN I DO WITH THIS THING?

By Bob Cheek - N4RFC

In the first article, (August 2025 newsletter) I detailed what the Tiny SA was, where you could buy one, and what accessories come with it. I also gave some suggestions on what else you might need to make it a useful test instrument. Then I covered a brief description of the user interface and some links to details on the menus and what was available in the firmware. In this and following articles I will demonstrate how to setup the Tiny SA for typical measurements.

The primary use of any spectrum analyzer is to examine and measure the spectral purity of a waveform or a signal. This is useful for determining the suitability of a transmitter or linear amplifier to be used on the air.

In this article I will demonstrate setting up the Tiny SA to measure the spectral purity of a QRP transmitter, the Elad FDM-DUO. The FDM-DUO is a five-watt SDR transceiver that covers from the 160-meter to 6-meter ham bands. This is a direct sampling SDR radio. They added the DUO to the name because it can be used either standalone with its internal display or with a computer equipped with software that gives you control of the receiver with a full-size spectrum and waterfall on the computer screen.

One of the features that I liked about the FDM-DUO was its comprehensive set of low-pass filters on the transmitter. These filters are highly effective, according to the specs on the transceiver.

Many of the low buck SDR QRP radios have either poor or no filtering at all on the transmitter. That can cause some serious signal problems with emission of second and third harmonics.

## BASIC SETUP - WHAT DO WE NEED?

1. Tiny SA
2. Sampling coupler
3. A radio and a power supply
4. 50-ohm dummy load
5. Coax cable jumpers with appropriate RF Connectors.
6. May need CW Key to make the radio transmit on CW.

## LET'S HOOK IT UP....



At the top of the photo is the QRP radio, or as it is called the DUT (Device Under Test). It is powered up and set to 14.000 MHz in the CW mode, TX power set to full. To the left is the CW key. By turning off the internal keyer and pressing the paddle either way the transceiver will transmit a continuous CW signal.

In the center of the photo is the sampling coupler. The left side is attached to the TX output (or antenna) of the transceiver. The right side is connected to the 50-ohm dummy load. The coupler is bi-directional, so it doesn't matter which side is connected to transceiver/dummy load.

I have attached the Tiny SA to the sampling port on the coupler (SMA connector) going to the "LOW" port on the Tiny SA. Low as in low frequency.

As we saw in the introduction, the LOW input covers 0.1 to 350 MHz. Power from the transceiver will be passed through the sampling coupler and a tiny fraction of the signal will be available at the SMA





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connector on the coupler. This coupler has 70 dB attenuation between the signal passing through to the SMA connection. At a five-watt power level we don't need any additional attenuation in the line to the Tiny SA.

### SET UP THE TINY SA

- Tap the menu and select MODE → Return to LOW In
- Tap the menu again and select FREQUENCY → START → then enter 14.00 M (mhz)
- Tap the menu again and select FREQUENCY → STOP → then enter 50 M (mhz)
- Tap the menu and select LEVEL → check EXT GAIN and make sure it is 0.0 dB
- Tap the menu again and select LEVEL → Make sure AUTO and UP EDGE are checked on

Now we are ready to make a measurement! For this radio, pressing one of the paddles will transmit a continuous CW signal. Your setup may vary. Do what you need to do to transmit a solid carrier at full power on the rig. Don't use AM or FM modes as we don't want any modulation for this measurement.



Above is something like what you will see. On the left of the trace is the fundamental frequency, 14 MHz. Amplitude of the measured signal is displayed in the vertical axis and frequency on the horizontal axis. The start frequency, 14 MHz, is seen on the left and stop frequency, 50 MHz, on the extreme right side of the display. The vertical scale is calibrated in dBm, here we see 0 dBm at the top and -80 dBm at the bottom. These ranges are set by the Tiny SA when we set LEVEL to Auto.

### HOW DO WE INTERPRET WHAT ARE WE SEEING?

I have positioned the pointer on the peak of the fundamental frequency, and it measures -16.5 dBm at 14 MHz as shown at the very top of the screen. Looking across the trace to the right there are no

discernible peaks, just a flat string of random noise at about -85 dBm. No second harmonic on 28 MHz, and no spurious signals between 14 and 50 MHz. Spurious signals might be seen from unwanted products of mixing signals within the transmitter. None show up, so that is good!

Doing the math on the measurement,  $-85 \text{ dBm} - (-16.6) = 68.5 \text{ dBm}$ . That indicates that the harmonic and spurious outputs are 68.5 dBm down from the fundamental frequency. That's EXCELLENT!

I wanted to see some second harmonics or some spurious signals. Oh well, but now I know that the FDM-DUO has a very clean transmitted signal on CW.

In the next article I will put a Hardrock 50 QRP linear amplifier in the DUT circuit and see how it does amplifying the output of the FDM-DUO, and I will add a two-tone modulation test. Hopefully these tests will be as good as this one turned out.



For all of your Amateur Radio needs, CARS recommends [DX Engineering](http://www.DXEngineering.com).



# GET TO KNOW...

## DAVID JENKINS, KO4UZZB

**CARS IS A VIBRANT AND EXPANDING COMMUNITY, WELCOMING NEW MEMBERS REGULARLY. TO FOSTER CONNECTIONS, WE'LL PERIODICALLY SPOTLIGHT A MEMBER THROUGH A BRIEF Q&A. IF YOU'D LIKE TO BE FEATURED OR HAVE SOMEONE IN MIND, [PLEASE LET US KNOW](#).**

**What is your name, callsign and license classification?**

David Jenkins, KO4UZZB, General

**What modes do you operate?** Phone, Winlink packet and VarAC, FT8. I'm also pursuing DMR and JS8Call.

**What interests you most about amateur radio?**

Emergency communications and preparedness, digital modes, DXing (primarily with FT8)

**What are some of your most memorable experiences with amateur radio?** Working DX stations and seeing just how far my signal can reach.

**How long have you been a member of CARS?** Since 2021

**What is your most memorable QSO?** Believe it or not, Puerto Rico! I must have worked a dozen stations before one of them confirmed on Logbook of the World.

**What is one piece of advice you would offer a new ham?** Join a club and participate. This is where you'll find the support and mentoring that you need. Hams are generous people and are willing to help you.

**What do you like to do outside of ham radio?** Kayaking, camping, enjoying grandchildren and genealogy.





# CONTESTING

## CONTEST CORNER OCTOBER 2025

**OCEANA DX CONTEST, CW**  
0600Z, Oct 11 to 0600Z, Oct 12

**NTC QSO PARTY**  
1900Z-2000Z, Oct 16

**WORKED ALL GERMANY CONTEST**  
1500Z, Oct 18-1459Z, Oct 19

**ARGENTINA NATIONAL 40M CONTEST**  
2130Z-2330Z, Oct 18

**ARRL SCHOOL CLUB ROUNDUP**  
1300Z, Oct 20 to 2359Z, Oct 24

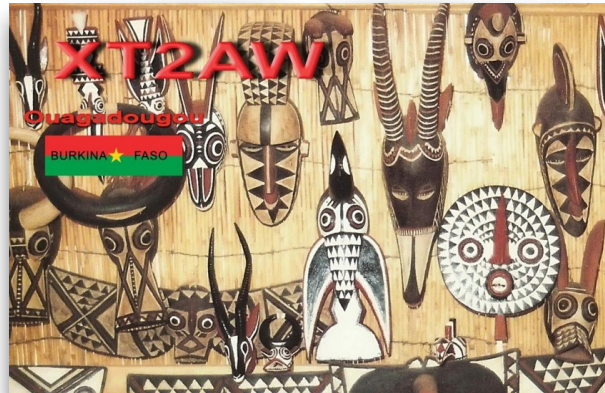
**CQ WW DX CONTEST, SSB**  
0000Z, Oct 25 to 2359Z, Oct 26

**STATE QSO PARTIES**  
CA,NV,AZ,PA,SD,NY,IL

## DXPEDITION NEWS



WH0RU, Saipan Island October 2025, 40-10m  
SSB,CW,RTTY



XT2AW, Burkino Faso, Oct 4-27, 80-10m SSB, ft4



VU7T, Lakshadweep Islands, Oct 25, HF Bands





# 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-radio-events.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](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](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/](http://cq-amateur-radio.com/cq_contests/cq_annual_contest_calendar/)

**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>





## 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.

### CARS OFFICERS FOR 2024:

**President:** Martin Buehring - KB4MG

**Vice President:** Chad Cone - KY4KP

**Secretary:** Mark Schulze - KO4IFY

**Treasurer:** James James - KE4HMS

**Cherokee County Emergency Coordinator:**

Rob Bruderer - W1JKU

**Email:** [club.wx4car@gmail.com](mailto: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 - K4QO

[k4qo.mail@gmail.com](mailto:k4qo.mail@gmail.com)

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