



K4GSO.us

The Oracle

Newsletter of the Silver Springs Radio Club

Oldest Radio Club in Marion County, FL



July 2024

President's Message

Adam Parker, NY5E

I hope everyone was able to celebrate our nation's 248th anniversary with "the three F's" friends, family and food, and that the weather cooperated with whatever events were held. Speaking of weather, with the Summer months come not only heat, but the afternoon thunderstorms will become a daily "feature". As these storms roll in quickly and often pop-up without warning, it's imperative that you disconnect all coax connection and, if readily accessible, you should disconnect power sources from wall sockets. Lightning arresters are readily available, and surge suppression helps when power returns after an outage, but when it comes to lightning "ALL BETS ARE OFF". The only sure way to guard our sensitive equipment is to disconnect it, period. Along those same lines, if you are a member of the ARRL, I would strongly suggest taking advantage of their equipment insurance offer. It is the cheapest, best backed, lowest deductible (\$50) insurance available.

For those who did not participate in the SSRC Summer Field Day extravaganza at Green Clover Hall, you missed a great opportunity to see a wonderfully constructed, well planned station function! With nearly half of our members actively participating, surpassing ALL previous such outings, it was a wonderful representation of our enthusiastic Club population. We are fortunate to have such a willing group of operators to make these types of events possible and I am both thankful for their efforts and proud to be part of the such an experienced group of hams.

With our general meeting right around the corner (July 16th), we get right back into it with our presenter Rob Sherwood NCOB of Sherwood Engineering, Inc., publisher of the Sherwood Report. His report has become the industry standard of evaluation by which many operators base their equipment purchases. As well as our guest presenter, we will also have a brief overview of our new repeater antenna's installation and test results and the organization of our presence at the Marion County Outdoor Expo which is held each year at the World Equestrian Center. This is another chance for members to participate and enjoy a great num-

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Next Meeting

Tuesday, July 16, 2024

Green Clover Hall

319 SE 26th Terrace, Ocala

6:00 PM Mentoring & Socializing

7:00 PM Meeting

**Program: Rob Sherwood, NCOB
Sherwood Engineering
Publisher of The Sherwood Report
(Equipment Evaluations)**

SSRC Board of Directors, First Tuesday, 7:00 PM
Green Clover Hall
All are welcome

Upcoming Events

August 17—Outdoor Expo

9:00 AM-4:00 PM WEC

September 10 —VE Testing

7:00 PM Green Clover Hall

Check out upcoming Events: K4GSO.us

Silver Springs Radio Club Net

K4GSO Repeater, 146.610, PL 123

Mondays at 7:30 PM

ARES/SKYWARN Net

K4GSO Repeater, 146.610, PL 123

Wednesdays at 7:30 PM



Our club is growing and Green Clover Hall has a limited number of chairs. Please consider bringing a folding chair or two as a back up.

ber of vendors, displays in a family friendly atmosphere (Air Conditioned!).

With our membership continuing to grow (three new members for approval Tuesday!), continued informa-

tional presentations, and more community “radio-active” events to explore and discuss, I’m excited to get started. I hope to have a big turn-out Tuesday to welcome new members and make plans for the coming activities. See you at GCH !

[Click Here for the Silver Springs Radio Club Field Day 2024 Special Edition](#)



Membership

Elbert Wilkinson, KQ3K

After cleaning up the membership rolls, the following is a recap of our club profile. We are continuing to grow with new membership applications.

LICENSED MEMBERS	105	Technicians	24
INDIVIDUAL MEMBERS	82	Generals	28
FAMILY MEMBERS	16	Advanced	6
LIFE MEMBERS	7	Extras	44
PENDING MEMBERS	3	Associates	1
ASSOCIATE MEMBERS	1 + 1	Total	103

in the June meeting, the following individuals were approved by the General Membership included in the above totals. Please welcome our newest members and assist them in getting involved in our various activities.

Timothy Connell, WZ1GLX Extra — Robert Eenigenburg, KD9YO General — Brendan McNeil, W3VD.

We also have three new applications and one associate application pending for the July meeting.

Current dues paying members will receive priority on club activities like Field Day, VE team participation and access to Perry Field and GCH. Non-members can still access the Oracle on the club website but will not be included on member emails. As a final note, subscription to the club's Groups.io page is restricted to dues paying members. Our 2024 goal is to continue to grow and increase member participation in the club's various activities. If you know of other hams who would be interested in joining, please invite them to our meetings, operating days or club activities. There is an online application and a link to a paper application on the K4GSO.us website. We continue to encourage our technicians to upgrade to at least General Class and Generals to Extra to enjoy the full benefits and privileges of their licenses. Regardless of your license class, we continue to learn from each other. Newer hams and members – don't be afraid to ask questions and for help.

UPCOMING POTA EVENTS:

For those who are engaged in POTA activities as Activators or Hunters, there are five "Official Events" each year. The events start at 0000 UTC and end 2359 UTC on the event days. Go to POTA.APP for more details. The next official "Support Your Parks" quarterly event" will be on July 20th and 21st. However, don't wait for an official event to get out and enjoy the fresh air, test your rigs, antennas, setups and portable power. Every time you go out is an opportunity to troubleshoot problems instead of during an emergency (hurricane season is now here) where you might not have that luxury. Another benefit of portable operations is to assess your weaknesses and what you need to improve on for successful operations. For instance, can you operate and understand your antenna analyzer, setup your solar charger and battery cables and make emergency field repairs to your or someone else's equipment. Our club has a growing contingent of POTA activators – both older and younger hams. If you aren't sure how to "do it", ask and also subscribe to the club's Groups.io page where a lot of us post our upcoming activations. Go to the park where the activation is planned. Take your portable station with you and learn. There is plenty of room at our local parks for you. A side benefit is you never know who else you will see and meet there.

HAMFEST:

Mark your calendars for Saturday, December 7 at First Christian Church, Ocala. Vendor setup will occur on the 6th. I know it is early to start thinking about Hamfest, but I'm getting older and now need a running start to stay ahead. Wayne Peterson, AB4WP, has stepped up to as co-chairman, so there is hope for the future. We have great Hamfest teams who know their assignments and their continued participation is vital to our success. More details to follow at club meetings, the Oracle and the club website.

2024 OUTDOOR EXPO:

Mark your calendar for the 2024 Outdoor Expo. Here are the details:

When: Setup – Friday afternoon, August 16
Event - Saturday, August 17

Where: World Equestrian Center

Time: Early morning to mid-afternoon

What: Club exhibit at this well attended community event

Who: Club members to setup operating stations and demonstrate the art and skill of amateur radio operations

Check back on the club website for more details once the event sponsor, K-Country 93, releases them in the next few weeks.

Portable Vertical Dipole Antenna - Revisited

By Bert Garcia N8NN

Last year I built a vertical dipole antenna [1] that was a copy of the V8-Bravo vertical dipole designed by Tom Schiller N6BT [2]. A recent Dxpedition to Sint Maartin Island operated as FS/W8HC and PJ7/W6IZT on June 25 to July 1 using V8-Bravo antennas making 5,889 contacts. The V-8 Bravo antenna uses a remote antenna tuner at the feedpoint to provide multiband capability and to reduce losses on very long feedlines often encountered on DXpeditions, Figure 1.

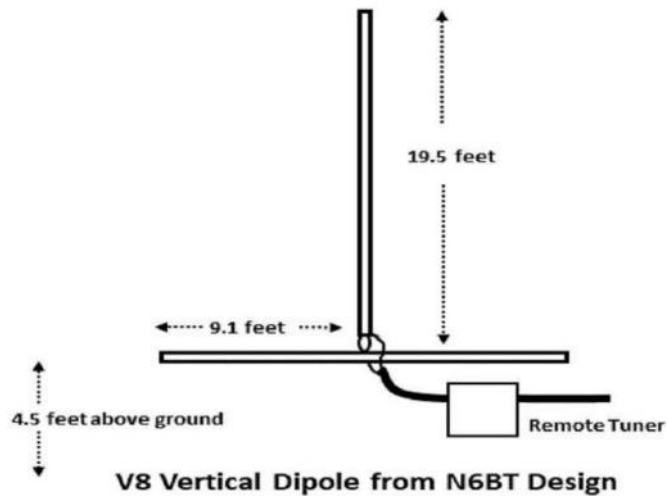


Figure 1: My original vertical dipole antenna specifications.

As I prepared for Field Day, I wondered if a remote antenna tuner was necessary since I planned to use a reasonable antenna feedline length of 100 feet. The first task was to modify my vertical dipole antenna by replacing the remote antenna tuner with a 4:1 unun at the feedpoint and removing the matching coil. The feedpoint now looks like this:



Figure 2: My vertical dipole antenna current configuration.

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I had a 5 KW dual-unun with 9:1 and 4:1 in the same box, so I used that and made SWR measurements at the end of a 100 ft RG-8X feedline with these result, Figure 3.

	9:1	4:1	w/Internal Rig Tuner 4:1
Band			
40	2.6	2.6	1
20	1.9	1.2	1.1
15	1.5	1.4	1.2
10	2.2	1.7	1.2

Figure 3: SWR Measurements with the Unun.

The 4:1 was better than the 9:1 giving a lower SWR. The 4:1 vertical is usable on 20/15/10 without a tuner, but the internal tuner in my FTDX10 transceiver provides a low SWR on all bands 40-10 meters. Pretty good for Field Day, and easy to set up.

So, the question arises.... **Is it better to use a remote tuner or the 4:1 Unun?** Figure 4 shows that adding a remote tuner can overcome the line losses (calculated using the KV5R coax loss calculator [3] with 100 feet of RG-8X coax, 100 watts from the radio).

Band	4:1	% Loss without a Re- mote Tuner	Power at Antenna without Tuner	Power at Antenna Using a Remote Tuner
40	2.6	19%	81 watts	86 watts
20	1.2	19%	80 watts	81 watts
15	1.4	24%	76 watts	77 watts
10	1.7	28%	72 watts	74 watts

Figure 4: Calculated Line Loss with 100 ft of RG-8X Coax.

The conclusion is that adding a remote tuner at the antenna input **makes no significant improvement** in the power delivered to the antenna. Realistically, there are losses in the remote tuner, so it's possible that adding a remote tuner would decrease the power delivered to the antenna. I repeated the analysis for 400 feet of RG-8X with the same results.

I used my vertical dipole antenna with a 4:1 unun on Field Day with excellent results and will continue to use it as my preferred portable antenna.

References:

- [1] *A Portable Vertical Dipole Antenna*, by Bert Garcia N8NN, The Oracle, February 2023, page 8, <https://k4gso.us/wp-content/uploads/2024/03/The-Oracle-February-2023.pdf>.
 [2] *V8-Bravo Vertical Dipole*, by Tom Schiller N6BT, <https://tinyurl.com/mtsvwc5r>.
 [3] KV5R Coax Loss Calculator, <https://kv5r.com/ham-radio/coax-loss-calculator/>.

FT8 is an Easy Way to Spread the Word

Carl Berry, KC5CMX



I know that by now everyone has had their fill of 4th of July leftovers while working contests and experimenting with what they have and trying to stay cool. It's not so easy to do this early in the season of the summer wilderness, and no one wants to lug heavy radio "stuff" around, so pare it down to just what you need.

A battery, radio, antenna, coax, connectors and jumpers, *a tuner (I don't care **what** the "experts" say)*, tripod, computer and assorted other staples (food, drinks etc.) This idea works for other modes, not just FT8. Bring your key, and headset with a mic with you too!

Before you go out to the field, you must do as Bill Gillespie, KW5BG, says. PREFLIGHT YOUR EQUIPMENT. MAKE SURE YOU HAVE EVERYTHING YOU NEED AND IT IS IN PROPER WORKING ORDER BEFORE YOU TURN ON THE IGNITION KEY. Make a checklist like Elbert, KQ3K, does for each rig and mode. You'll never come up short and you'll always have something in your car "just in case".

Your setup can be anyplace. Being as blisteringly hot as it is, I recommend setting up someplace with air conditioning, if possible (it's nice to have a store)

Your antenna doesn't need to be the latest and greatest gazillion dollar Buddipole that kinda works, and you spend more time tinkering than operating. I bought a \$120 Toybox, Comet HFJ-350M. After a short training period, I am ready to share with you what I learned about it, including the slightly expensive mistake.

Disclaimer: What works well for me may not work well for you. It may need tweaking one way or the other.



This is the antenna in it's natural, stress free environment. Set up on a tripod, ONE counterpoise of about 15'-30' and, 2'-3' off the ground up to the location I was running it to.

The antenna itself is *similar* to the Outbacker, except it is *cheaper*. With the price difference, naturally, there are compromises you must make. I'm going to point out the tap system. You have a common, and tap the bands as appropriate, with none for 40M and a couple others.

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NOW PAY ATTENTION: If you set your antenna up, as shown on a tripod, or something that is easy to tip, WITH THE ANTENNA, IT'S TAPS IN. This thing, **TAPS IN or when (not if) it falls over, it will land on the taps, they will snap off into the holes and it's unreparable. It will cost \$10 for the wire with the banana plugs, \$28 for the base section, and another \$12 for FedEx shipping.**

The clamp shown is a screw down jaw type that will rotate 90 degrees. With this type of configuration, it will keep the pins from hitting the ground. Tower's hamcation cost, \$30. You do not need to over tighten. You do need a 2" or longer barrel connector, just to save your nerves.



You will need to add counterpoises or radials at some point. The biggest problem I have had with them on this type of antenna is having to repeatedly connect and disconnect them.

Work smarter, not harder. **Attach short jumpers, no longer than 1½" and put "shovels" on the end of them. Now, using a roll of 14 gauge automotive primary wire (it's cheap, effective and that's it!) cut 5 sections in 15' lengths and put shovels on one side and a spade on the other (the mate to it).** The other end, you can either tie a knot or just extend it as you want. The signal will use the appropriate amount and disregard the rest.

The working theory is that when you have to extend the counterpoise for a different band, you can add or remove in 15' increments. Clean, neat and efficient. You can also mark them off with colored tape along the way for 12" increments or different bands, (yes, it works for that too).

The tap system is pretty cut and dry. I'm not going to reinvent the wheel. Here's a cheat sheet. I took the calculations for the metric (when will we learn?) and converted it.

Professor Google did my math, so if it's wrong ...

THIS IS THE LENGTH CHART FOR THE WHIP. 80 & 160 METERS NEEDS THE EXTRA SECTIONS

Band	MHz	In	chg per cm	Band	MHz	In	chg per cm
80	3.5	37 1/6	20kHz			3/8"	1cm
40	7	37 13/16	25	15	21	29 1/2	80
30	10	39	40	12	24	20 7/8	100
20	14	31 1/2	60	10	28	39 3/8	120
17	18	42 1/8	5	51	6	37 3/8	100

This is for the radials

Band	MHz	FT	Bands	MHz	FT
80	3.5	65			
40	7	32	15	21	0
30	10	23	12	24	0
20	14	6 1/2	10	28	0
17	18	6 1/2	51	6	0

For the "experts" who can do everything, know everything, and are able to get it right the first time, everytime, skip this section. For the normal people, read this. Don't be intimidated. It's all fun!

The YouTube videos and other documentation say you do not need a tuner with this antenna. That's true. In theory and the right connectors, you can connect it right to the radio. You can also load up a chainlink fence. Again, I wouldn't try it without a tuner.

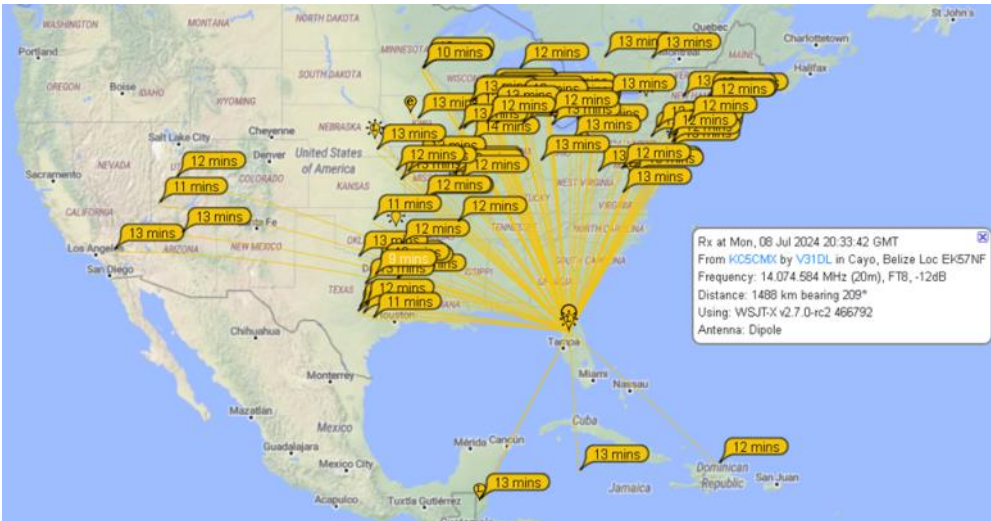
If you want to spend time going back and forth, tweaking and adjusting trying to get the SWR almost perfect, go for it. Or you can just hook up your old, trusty MFJ tuner. When using a Xiegu G106, as shown, you need to pull out every single miliwatt.

Special thank you to Ed Biedricki, N2QJN, for the tuner. Thanks! It's a perfect match!

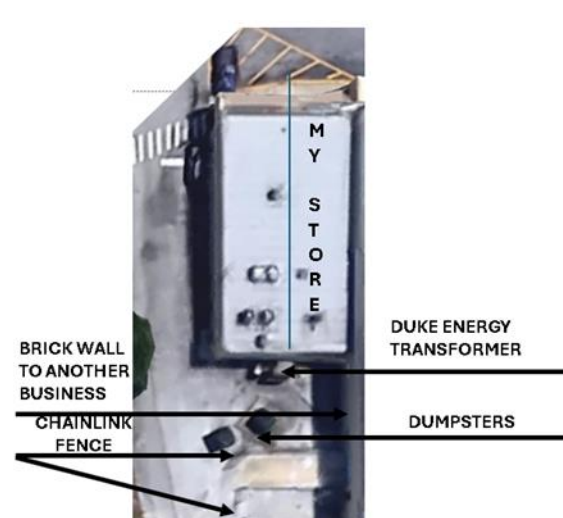
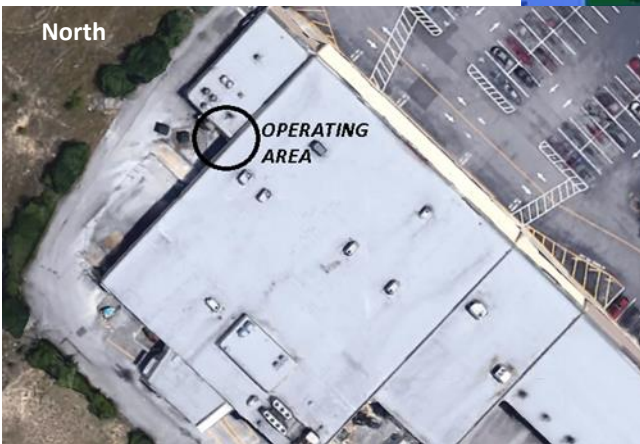


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As it is, as I am writing this, I just got through working Belize. Right after **Beryl** had passed through, and the atmosphere is still churned up. I have been working FT8 a lot over the last few days, since late June. The way I have the antenna set at the store, it's behind the building, stuffed in a corner. I can still get out and be heard in Maderia Islands, Sweden, Moscow (wow!) and, the Netherlands, the south and pacific not so much, but hey, this is all good!



In case you are wondering why it is so compromised and only able to get out one way, this might help explain it a little. The antenna position is jammed against a corner wall, power transformer, chainlink fence and not shown, the worlds longest dipoles – high tension lines about 500' away. More of them across the street on SE Maricamp.



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Don't let the little things overwhelm you. Figure out the best you can and move on to the next problem. There's always one waiting, but most of all, just have fun with it.
If it breaks, fix it as best you can and press on.

Addendum. Today 7/10, I went to a local car dealership to get the XYLs gar taken care of and had a disasterously fun time!

Forgot the clamp for the tripod, so I had to **improvise**. The wire antenna setup I have ended up being ran around the canopy. I was able to finally get a signal to NY and ELI. The best part was just sitting there, looking like I was having fun and answering questions from the staff and other customers. You don't always have to make a radio contact, just in-person contact, answering questions and discussing the hobby can have more memorable merit.

SSRC Has a Group Email! Have You Signed UP?

Andy Allen, NA4DA, Director

Our group is: K4GSO. Just type groups.io in your search bar and follow the link to the site. Sign up if you don't have an account and search for our group: K4GSO. You will see our group: K4GSO / Silver Springs Radio Club. Click on the button: Apply for membership in this group. You're now a member.

Questions? Andy NA4DA 212-729-0446
andy@na4da.com

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SSRC Board of Directors

first Tuesday, 7:00 PM
Green Clover Hall
All are welcome



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