



# The Compass!

Official Newsletter of the Great South Bay Amateur Radio Club, INC.

January 2020

Volume 48

#1

**Next General  
Membership Meeting:  
Thurs., Jan. 30th,  
8 PM**

**Inside this issue:**

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- **GSBARC General License  
Classes Currently in  
progress. Tuesday nights,  
7 to 9:30 PM**



**Long Island's Friendliest Amateur Radio Club!**





# President's Message



**H**appy New Year everyone! I hope you all had a great time over the holidays with family and friends. Just a reminder: Our Winter Night Out is February 1st at the Irish Coffee Pub in East Islip. The cost is \$60 per person for a great night out with all of us. We need a head count no later than the 27th of this month.

Ham Radio University was great this year and it was terrific seeing all the GSBARC members there. Thank you to the GSBARC members who presented forums. Thank you to all who helped Bob K2TV with the VE session there. We had several members stop by the club table and renewed. We even got a few new members joining GSBARC.

Winter Field Day is coming! Set-up is on January 24th and on-the-air operation is on the 25th and 26th. Contact Lou NO2C if you plan on attending.

As many you have heard, Walter Wenzel KA2RGI has become a Silent Key. Thank you to everyone who donated to the fund we started for the family. If you would like to donate please go to our website. Click on "donate" and once you enter an amount, there will be a line for directions for the donation. Just enter "KA2RGI fund." We will collect donations until January 30th.

As we settle in for the long cold days of winter, this is a great time to finish those projects that we'd put off during the warmer weather. No matter. If it's building a kit, repairing a radio or restoring a vintage radio, please enjoy every minute of amateur radio fun.

We have a lot of work to do—from purging out some no-longer-needed equipment, antenna work at the EOC and yes, we have to still move the Fusion repeater to the tower. Work crew, keep your eyes on your email! I will be sending out an email to look for dates that work for all of you.

Also keep an eye on eBay. We have started an eBay page for the club's use. One of things to first go up is the Viking ranger radio and a few other vintage radios as well. If you're interested in any of the radios we put up for sale, GSBARC members will be considered for a good deal.

Just a friendly reminder: Please do not forget to renew your membership. I hope everyone enjoys all that our club has to offer from the great open houses to the awesome education class. Don't forget all the special event stations we do and of course our great Field Day weekend. Speaking of Field Day, this year it is June 27th – June 28th with setup on June 26th. I will be posting all the details, leading up to the work parties, on the groups.io page. Thank you also to all members who worked the many public service events this past year. Thank you to the rest of the executive board, for all you all do to keep GSBARC as great as it is.

We need more RACES members if you are interested there are some ICS courses you need to complete

ICS 100 <https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c>

ICS 200 <https://training.fema.gov/is/courseoverview.aspx?code=IS-200.c>

ICS 700 <https://training.fema.gov/is/courseoverview.aspx?code=IS-700.b>

ICS 800 <https://training.fema.gov/is/courseoverview.aspx?code=IS-800.c>

Once done send me a transcript of the courses then I can send them to the county to get you on the RACES team.

It is great to help out when help is needed for whatever it is, from emergencies to public service events.

Please stay safe over the winter. When roads are bad, stay off the roads. Don't take unnecessary risks. They are not worth it. I hope to see a great turnout for our general meeting on January 30th at the EOC!

*73. John Melfi, W27CB* 

## Inside the Squirrel Cage

By Caryn, KD2GUT



**W**e must have been very good little OMs and YLs because I think we're getting what we all wanted for Christmas: some new sunspots! Why dream of riding a Harley or a Honda when it's Solar Cycle 25 that might just take you where you need to go once it gets revved up?

I personally can't wait to unwrap this Christmas gift – though it's going to require a little more patience (and a few more Christmas seasons) before we can do just that. Experts say that Cycle 25 initially won't be much different from Cycle 24 but in about three years, the sunspots will hit a range of between 95 and 130. OK, still not impressive numbers when you consider that Cycle 24 peaked with an average of 82 sunspots—and that was more than five years ago.

Operating during the past weeks' special event stations was fun—but I confess: Even though I was wearing active noise-cancellation headphones, I wasn't always sure whether I was listening to a pileup or being given an audiology test.

So does this 100-watter buy an amp....or should I just bide my time? Well, let's just say that right now the future looks a bit spotty. But that might turn out to be a good thing after all. 📡

## New Year Musings

By Anne Fanelli WI2G



**T**he amateur community received a holiday gift on Christmas Eve with the discovery of not one, but two sunspots (one in each solar hemisphere) from the nascent—and despaired-of by some who feared a new Maunder Minimum—Cycle 25. The sunspots were identified as products of a new cycle by their reversed polarity from corresponding Cycle 24 spots; northern- and southern-hemisphere sunspots have different polarities. These two new sunspots, combined with two other spots numbered earlier this year and more ephemeral sightings dating back to 2016, indicate that Cycle 25 is very slowly getting underway and is currently forecast to peak in July 2025. Details, with links to reports of earlier sightings, are at <https://spaceweatherarchive.com/2019/12/25/reversed-polarity-sunspots-appear-on-the-sun/>

The latest (December) issue of the always-excellent QNI newsletter by James Wade WB8SIW is available to read online or download at <https://qninewsletterdotnet.files.wordpress.com/2019/12/qni-2019-12.pdf>.

After an encomium to James' demonstration spark-gap transmitter and an explanation of how spark was used (and eventually replaced by continuous oscillation, the basis of all radio modulation), he emphasizes the importance of a peer-to-peer relationship—instead of command-and-control—between emergency-communications providers (that's us amateurs) and the agencies we serve. Radio Relay International has a comprehensive library of everything you ever wanted to know about traffic-handling (including radiogram forms to download and print) at <http://radio-relay.org/about/publications/>

Next, however, is a rumble of distant thunder. "The War on Winlink: An Editorial" describes a Request for Declaratory Ruling to the FCC that the commission declare PACTOR and other ARQ (handshaking) modes which use compression are encrypted communications and violate Part 97; this would—theoretically, for now— make them illegal for amateur use in the United States. This is, to put it mildly (and print-ably), bizarre. PACTOR has been

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## Boat Anchor Radio Restoration-Part 2

by Phil, W2UV



**Editor's Note:** *Boat anchor restoration involves working with high-voltage equipment. If you are not comfortable with or don't fully understand the safety issues involved – DON'T DO IT. For safety reasons, it is also recommended that you not attempt any of this while working alone.*

In a previous issue of The Compass, we talked about the tools and instruments needed as we begin contemplating a radio restoration; now we are going to talk about where we start. The first item on this list is getting the schematic and both the user and service manuals for the radio you are going to work on.

Begin by looking on Google for the make, model and chassis number of the radio especially if it is an old Admiral© or Philco©. These two companies had many radios of the same “name” but depending on the feature set of the radio, each chassis had its own unique number. The manuals and schematics for these radios go by the chassis number, not the radio model, number or name. The next place to look is <http://bama.edebris.com/manuals/>. This site is the gold mine for those hard-to-find radio schematics and manuals, including some military radios. Still stuck? Try [www.AntiqueRadios.com/forums](http://www.AntiqueRadios.com/forums). You can even make an account, it's free. Take a picture of the radio, post it, and ask nicely for help and usually you will get a reply or replies within a day or so.

Step number two is getting the radio chassis out of the cabinet. Depending on its construction, there will be several screws on the sides, bottom and back that need to come out. Sometimes the knobs, shaft-retaining nuts, and switch retaining nuts need to come off too. This allows the shafts and switch stems to slide out the faceplate if the faceplate is an integral part of the cabinet. Once it's out of the cabinet,

pull all the tubes. However, before you do, make a diagram of where they all go; some of these beasts have as many as 27 tubes and you don't want to test your memory.

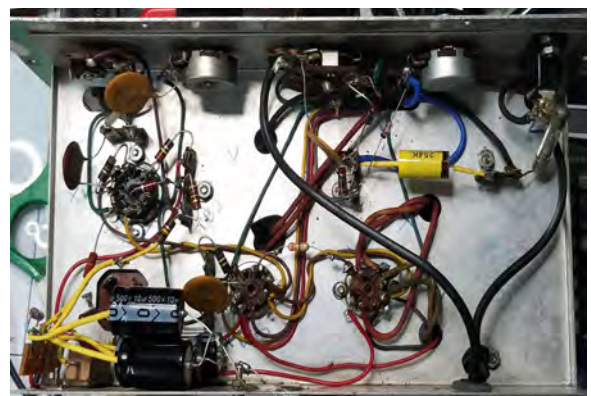
We are almost done with the top side of the chassis. Inspect the top side and look at the tube sockets. Examine them closely for cracks, especially if they are ceramic. Next examine any top side chokes or transformers for obvious damage. Check their wires too. They are often cloth-over-rubber insulation. Look for cracks, breaks, or shorts where they pass through chassis openings to the underside. Lastly clean the top side of the chassis, remove all the dust and dirt with a damp cloth—I MEAN DAMP. Windex© or similar cleaner works well here. Do not use aggressive cleaners like Fantastic© or Formula 409©—these are strong enough to remove any printed labeling that may be on the chassis. Don't use any of these on the faceplate as the markings are often decals and the moisture will lift them off. Ooops!! Again the radio forum comes in handy here for finding what is safe to use on the faceplate, especially on the dial glass.

So you didn't listen and the decals washed off, now what? Go here <http://www.radiodaze.com> Their reproduction graphics department will remain open. You still have that picture, right?? They will need it to fix you up.

How let's look at the bottom of the radio.

Welcome to the dark side—I mean the bottom side. In preparation for turning the radio chassis over, we are going to need several wood blocks of various sizes to support the chassis. We don't want it resting only on the faceplate, transformers/chokes, and chassis edge. The faceplate will bend. Not good. So, let's turn it over and get it propped up on those blocks so it's level and steady. All set? Good!

Let's have a look at what we've got. UGH! A lot of crud in here too! Get the vacuum with the crevice tool and go to it. Gently clean out as much as you can without breaking anything. Now that we can see, you do have good work lights right? You will notice that there are no PCBs—just what appears to be a chaotic tangle of wires and leads along with resistors, funny-looking capacitors and things that look like bumble bees if they only had wings Yikes! It's called point-to-point wiring. See the picture below.





With point-to-point wiring all the leads and wires go either directly to the pins on the tube sockets. If a signal has to go to through a filter or some other stage, it will move via a component attached to a terminal strip. It may even move directly pin to pin via a component too. The chassis on the left is an Eico 147A signal tracer. This device is just an extraordinarily sensitive amplifier for both RF and “noise” signals. I chose this example because it is, for point-to-point wiring, fairly uncluttered and easy to examine.

Check the line cord look for cracks, breaks in the insulation, etc. If it is a cloth-covered line cord it has to go for safety reasons. There is no way to check the insulation for breaks or shorts. Just change it out. If the radio you’re working on has to be period correct there are resellers of reproduction cloth-covered line cord out there.

For instance, [www.antiqueradiosupply.com](http://www.antiqueradiosupply.com), <http://www.radiodaze.com> may still have some left. Next examine all the wiring that’s present on the underside of the chassis. In a more complex chassis it will all be loomed (tied nicely in bundles). Yes, you will have to untie the bundles to look for breaks in that cloth insulation. Sometimes it’s so dry-rotted that just touching it makes it fall off—a pain I know but it’s worth doing rather than having a shocking experience or a fire. In the chassis above the bright red wire and the blue wire needed changing due to flaky insulation. Once you’ve checked all the wiring found the bad stuff and changed it out, we are ready for parts testing and replacement.

As stated last time in reference to the capacitor picture, I will tell you now why every capacitor in that radio or test equipment has to go except for the following: ceramic disk capacitors rarely if ever go bad so leave them alone; the “domino” silver mica capacitors are the same way. They don’t die either. Do not change one of these “domino” capacitors unless you are absolutely certain it is faulty. These are often handpicked for their values at assembly to get the circuit they are in to function correctly. They are often found in mixers and oscillators. Change it out and you may never get the dial to read right again no matter how hard you try.

These mica capacitors are highly stable that’s why they are in the circuits named above. But I can change out everything else: the little chief, the black cats, the black beauties, the bumble bee caps, the wax and paper caps, the paper and resin caps, and all electrolytic capacitors have to go. All of them have outlived their usefulness and are leaking.

Leaking doesn’t mean they are leaking some substance out and on to the chassis (it does happen with oil- filled capacitors). They leak DC. We all know capacitors pass AC and block DC. These are so old that the paper in them

has gone acidic. They aren’t capacitors any more. They are becoming resistors. When this happens, the DC is passed on to the grid of the tube. In the next stage changing the bias of the tube this is what burns out IF transformers, power transformers, red plates the tube and destroys them. What if they tested OK on your LCR meter? Your LCR meter doesn’t test for leakage if it has ESR capability. It will give you a “use-no use” reading if you can find the data sheet on a 50- or 60-year-old capacitor and if that value is even on sheet. You need a Heathkit IC-11 or IC-28 or a Jackson 591 capacitor tester. All of these instruments will put as much as 600 VDC on the capacitor. The Jackson is the safest. It automatically switches to discharge when you let go of the leak test switch. With the Heathkit, you have to remember to take it out of leak test and put it into discharge. It will also have that 600VDC on the leads unless you remember to switch it back down to 5 VDC. If you forget and come across the leads - remember that part about meeting your maker?

A lot of restorers like the Heathkit testers because they can leave them on an electrolytic capacitor and “reform it” bringing it back to life like the zombie maker. Do not do it and it will fail again – dramatically - letting the magic smoke out with a bang and taking your restoration permanently to the grave. At the time capacitors were the most expensive part of the radio. Today they are cheap so just change it and be safe.

Below are some pictures of what capacitors have to go:



The blue one’s electrolytic is dried out; the red and yellow ones, wax and paper; and the big one below also wax and paper. But see that black band that says “outside foil end?” That’s the big secret to hum reduction. We all know capacitors are constructed of two conductors separated by an insulator wound into a tube shape with leads attached and put in a tube or sealed with epoxy dipping. The last layer is the outside foil and goes to one of the leads. This lead ALWAYS goes to the lowest impedance point in the circuit. Here is an example: If the capacitor is on the plate

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# Everything Should Be Made As Simple As Possible, But Not Simpler

By Dan Romanchik, KB6NU



“Everything should be made as simple as possible, but not simpler” is a quote attributed to Albert Einstein (<https://quotationcelebration.wordpress.com/2017/01/07/everything-should-be-made-as-simple-as-possible-but-not-simpler-albert-einstein/comment-page-1/>). Here’s one way to apply this principle in amateur radio, specifically to code practice oscillators.

A week ago, my friend, Paul emailed me:

“I am planning on teaching a two-hour introduction to Morse code to 14 girls ages 8 to 9 [Paul’s granddaughter is a Girl Scout.]. I plan on having the girls build a code practice device. I need your help in selecting a low cost buzzer and battery holder. Please take a look around and see would you can find. I would like to limit the power to one or two AA batteries.”

I replied that I’d be happy to help him with the demonstration, and offered the following advice:

“A while back, I built the QRPGuys’ K7QO Code Practice Oscillator (<https://qrpguys.com/k7qo-code-practice-oscillator>). It uses a CR2032 coin battery.

“Unfortunately, they don’t sell it anymore, but the assembly manual is still online ([https://qrpguys.com/wp-content/uploads/2017/03/cpo\\_assy\\_012616.pdf](https://qrpguys.com/wp-content/uploads/2017/03/cpo_assy_012616.pdf)). The assembly manual doesn’t call out specific parts, but here are some Amazon SKUs:

B00J4BK0NS, Black 3V Electromagnetic Type Piezo Buzzer, 20 pcs/\$6.58

B06XF3K4NP, Coin Cell Button Battery Holder, 30 pcs/\$9

B008SNZUYC, 3 Pin PCB Mount Female 3.5mm Stereo Jack, 10 pcs/\$5.40

B071RMD6FD, 1/8” 3.5mm Stereo Male Connector, 10 pcs/\$7

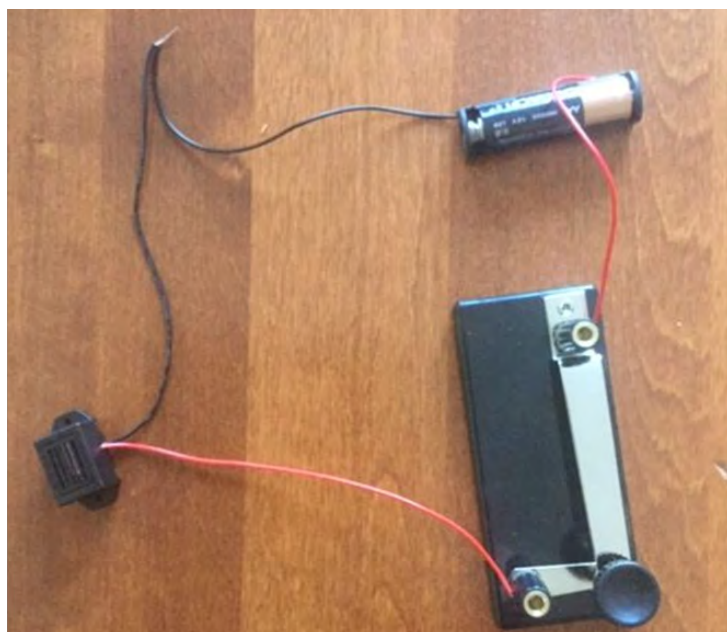
“Batteries are available at the dollar store for about 30 cents each. So, you could do the whole thing for less than \$5 for sure, even with a printed circuit board, which I would suggest that we do. Heck, if you ask nicely, the QRPGuys might even give us the artwork, or even better, have some boards still in stock. Even if they have neither, you should be able to get the boards in plenty of time.”

Later that day, Paul replied:

Thanks, Dan, for the information and making yourself available to help. I am just going to use a buzzer, key, and battery. The buzzer has a frequency of 400 Hz.

- <https://www.xump.com/science/Buzzer-Leads15V.cfm>
- <https://www.xump.com/science/ContactKeySwitch.cfm>
- <https://www.xump.com/science/Single-AA-Battery-Holder.cfm>

And this morning, he sent me this photo, noting, “FYI. Also sounds great.”



I think that this is as good an example of “Everything should be made as simple as possible, but not simpler” as there can be. I’ve volunteered to help Paul with his class. That will be fun, too. ☺

—Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog ([KB6NU.Com](http://KB6NU.Com)), the “No Nonsense” amateur radio license study guides ([KB6NU.Com/study-guides/](http://KB6NU.Com/study-guides/)), and often appears on the ICQPodcast ([icqpodcast.com](http://icqpodcast.com)). When he’s not trying to keep up with ham radio, he likes to build stuff and operate CW on the HF bands.

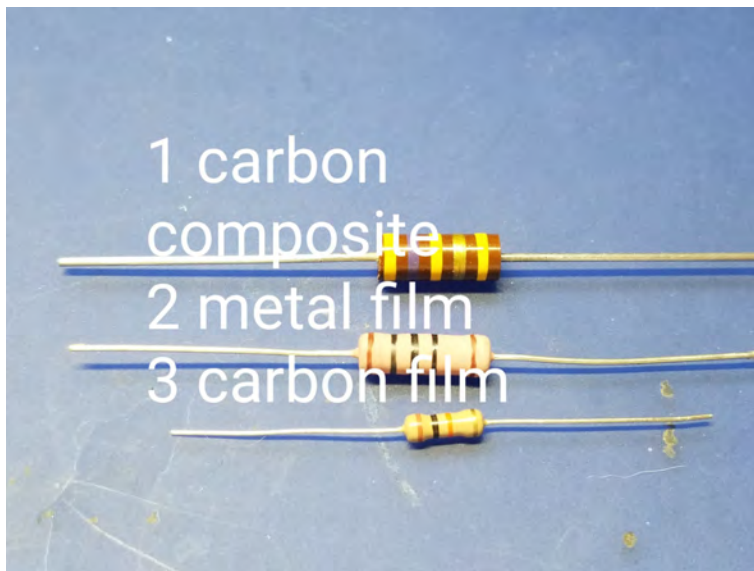


of stage one, the foil end goes to the grid of the tube in stage two. If is a filter, the foil end goes to ground. See the chassis picture: the yellow capacitor has a black band that I put there. The lead goes to the ground connection of the terminal strip.



Mr. Carlson's lab has a very good video on how to find the foil end of your brand new orange dip, green dip and polyester film capacitors. Here is the link. I strongly suggest you watch it: [https://youtu.be/BnR\\_DLd1PDI](https://youtu.be/BnR_DLd1PDI)

Resistors may be among the other things that have to go, especially if they are "roundies" (as Mr. Carlson would say). These are resistors with rounded ends. The Allen-Bradley style with square ends (meaning flat) rarely go bad



but they still need checking. I've seen a few of them be way out of tolerance—and if they are bias resistors bad things happen.

- #1 Allen-Bradley carbon composition
- #2 A metal film resistor
- #3 A carbon film resistor

Until next time stay safe and happy electron pushing. ☺

**73 W2UV**

around for decades, and I remember W2LWB having fun with it when we lived in Queens —John was an excellent touch-typist—after 60-speed Baudot and AMTOR had lost their thrill. Although the Candy Company gets its share of wacko petitions for rulemaking and what-not, what's especially concerning about this one is that it was filed (in late October) on behalf of New York University. According to James, NYU Wireless (a corporate-funded "research center," which translates as using academia for commercial R&D in my book; I don't think it's a coincidence that NYU is a private institution) is directed by Theodore Rappaport: a ham who, for some reason, has taken aim at Winlink and the Amateur Radio Safety Foundation (its parent organization). James quotes the NYU website as saying that Rappaport has also founded similar centers at Virginia Tech and the University of Texas at Austin.

Things become murky here (or not, depending on your point of view and ethical compass). Filing a petition as an NYU organization, based on the agenda (personal or professional) of an individual amateur radio operator, creates a conflict of interest for that ham. Although many (if not most) hams have derived at least some professional benefit from their hobby, Part 97.3(a)(4)—quoted by James—is unequivocal; the Amateur Radio Service is "A radio communication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest." Although you can derive "pecuniary interest" as an indirect result of the amateur service, you cannot do so as a direct result.

It belabors the obvious to note that we live in interesting times, when the line between academia and corporatism has become increasingly blurred. Only a Pollyanna could fail to see how desirable our spectrum is to telecommunications "providers" whose main interest is their quarterly balance sheet. As my better half astutely observed, corporations tend to play the long game; if a portion of spectrum becomes less desirable to its users, its appropriation becomes easier. You know me, Al; digital modes (except for CW) have no great appeal here, although I've always appreciated their appeal to others. Differences of opinion make horse races. However, we need to become aware of (and accept) the possibility that the spectrum we—let's face it—take for granted may be coveted by non-amateurs. Although the December 15th deadline for comments on the NYU proposal has passed, we need to keep our ears to the ground for future threats and not rely on George to do it. Eternal vigilance, alas...

(Anne W12G is a very active traffic handler and net manager of the Empire Slow Speed Net and the second region phone net. She is originally from Queens, NY and now lives in Elma, New York.) ☺

# NanoVNA

By Ed KD2ADC



So, as amateurs we like to experiment with electronics and antennas. It is part of the fascination and pleasure of the hobby!

The ability to do this usually requires some type of test equipment which can be costly depending on what you buy.

The traditional analyzers like the MFJ, Rig Expert, Array Solutions and others can run anywhere from a few hundred dollars to over \$1,000.

There is some truth in the saying “You get what you pay for.” (Sometimes!)

## Enter the NanoVNA

I was visiting Pres, W2PW, and he showed me this analyzer called a NanoVNA.

I asked how much he paid for it and it was around \$50.

I asked him if I could borrow it for a while.

I took it home and started trying it out on different antennas and filters and after a few tests I was surprised as to how close it was to some of my other equipment!

The NanoVNA is not just an antenna analyzer but a Vector Network Analyzer as well.

## So, what is a Vector Network Analyzer?

This is a device that does S11(single port/reflection) and S21 (dual port measurements/through).

So, what is this?

An S11 measurement is what your typical antenna analyzer does.

In practice, the most commonly quoted parameter in regards to antennas is S11.

S11 represents how much power is reflected from the antenna or device you are measuring, and hence is known as the reflection coefficient or SWR.

It sends out a signal or a signal sweep of the frequency you are measuring and looks at the return for amplitude, return loss and SWR.

Some of the more sophisticated ones will do phase measurements as well.

S21 represents the power received at port 2, through the device you are testing, relative to the power output from port 1.

The NanoVNA is an open source Vector Network Analyzer developed in China and is being supported by independent firmware developers all over the world.

Currently it comes in 2 configurations: one with a 2.8 inch touch screen and one with a 4.3 inch touch screen.

The kit comes with open, short, load and cal standards and some adapters and 2 cables.



## Using the NanoVNA

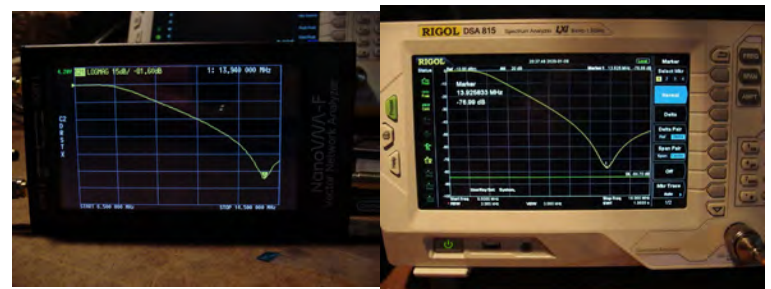
The unit should first be calibrated using the OSL method (open, short, load) as close to the frequency you are trying to measure.

If you are measuring S11 (reflection/SWR) only port 1 needs to be calibrated.

If you are measuring S21 (through a device) then a full cal needs to be performed.

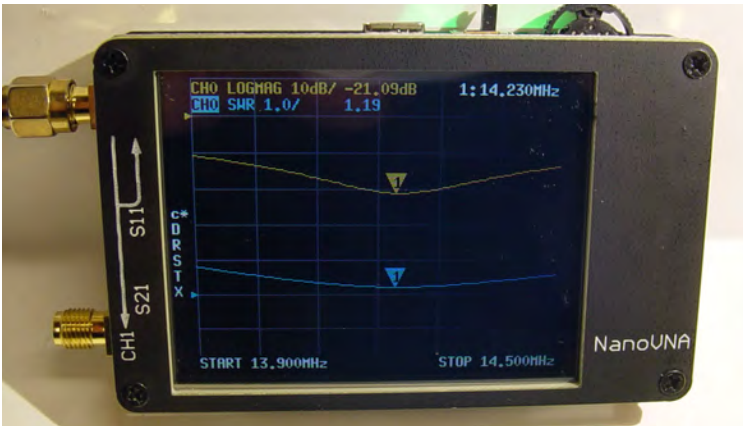
I was pleasantly surprised that for a low cost device it measured very close to much more expensive test equipment,

I measured 40 meter QRP filter with the nano and with a Rigol DSA815 TG and the results were within 1 dB roughly.

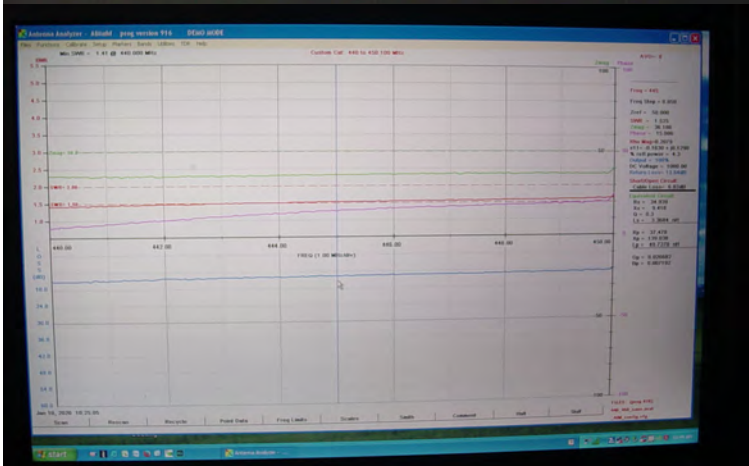




This is sweep of an OCF at 20 meters



This is a sweep of a 70cm 1/4 wave ground plane



## A few things to remember:

Choosing the proper frequency span for S11/S21 measurements is critical the span is directly related to RBW (resolution band width).

The NanoVNA samples 101 points across the frequency span, this is a fixed value.

Set the start and stop frequencies as close to the minimum span as possible

Example: Start freq=6 Mhz Stop freq=16 Mhz the span is 10 Mhz.

10Mhz /101 points 99.009Khz.

The NanoVNA will only sample every 99.009 Khz

## Calibration:

This is one of the most important parts of obtaining accurate measurements.


Careful attention to detail is most important!

The calibration/reference plane:

When calibrating the unit it is imperative that the OSL (open, short, load) take into account any lead length, connectors etc.

Sometimes it is physically impossible to account for all of the devices in the chain so it is best to minimize this as much as practical.

Different connector types may have different calibration planes.

If you want to do some experimenting on a budget and get some reasonable results check out this tool, there's plenty of information as well as constant firmware updates on the net. 





## Club Apparel

Want a shirt, jacket, hat, sweatshirt or t-shirt with a Great South Bay club logo? We now use *Mr. Shirt*, located at 80 East Montauk Hwy. in Lindenhurst ([www.mrshirt.com](http://www.mrshirt.com)). Now you can get color matched backgrounds on your logo too. Check them out... ☎

## ARES/RACES Information

### Div. 1—Town of Babylon ARES/RACES

Net: 146.685/R, Mondays 8:15 PM  
EC/RO: John Melfi, W2HCB, (631) 669-6321

### Div. 2—Town of Huntington ARES/RACES

Net: 147.210 MHz +600/ PL 136.5,  
Mondays 7:00 PM  
EC/RO Steven W. Hines, N2PQJ,  
<http://www.huntingtonnyaresraces.org/>

### Div. 3—Town of Islip ARES/RACES

Mondays 8:30 PM  
EC/RO: Philip Jacobs, W2UV, 631-838-2500

### Div. 4—Town of Smithtown ARES/RACES

Net: 145.430 MHz, PL136.5, Mondays 7:30 PM  
EC/RO: Rich Johnston, KC2TON, 631-872-4039

### Div. 5—Town of Brookhaven ARES/RACES

EC/RO: Ted Debowy, AC2IR, 631-751-6576

### Div. 6—Riverhead ARES/RACES

EC/RO: Steve Casco, W2SFC, 917-701-3919

### Div. 7—Southampton ARES/RACES

EC/RO: Removed & Currently Vacant

### Div. 8—Southold ARES/RACES

EC: Don Fisher, N2QHV, 631-765-2757  
RO: Charles Burnham, K2GLP, 516-779-4983

### Div. 9—East Hampton ARES/RACES

EC/RO: Eddie Schnell, WZ2Y, 864-973-9250

### Div. 10—Shelter Island ARES/RACES

EC/RO: Vacant (Neal Raymond, N2QZA, SK)

### Suffolk County

#### ARES/RACES Net:

Mondays 2100 Local—145.330/R (136.5 PL)

Alternate Frequency—146.820 (136.5 PL)

### New York State

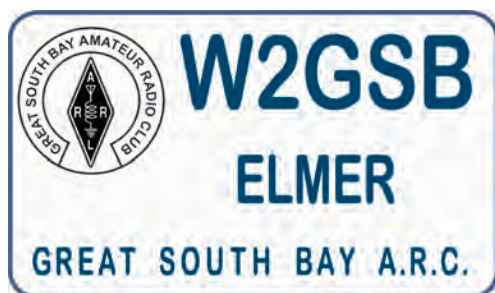
#### RACES Net (HF)

Sundays 0900 Local, 3993.5 KHz LSB

## Club Name Badges

Club name badges are available from *The Sign Man* ([www.thesignman.com](http://www.thesignman.com)) of Baton Rouge, LA.

The badges which are 1-3/4 in. x 3 in. If you visit The Sign Man's webpage you can order the badges by using a drop down selection on the orders page and clicking on "Great South Bay ARC—NY" ☎



## The GSBARC Repeater List

146.685 W2GSB - shift 110.9 Hz Enc/Dec

223.860 W2GSB - shift 110.9 Hz Enc/Dec w/ ECHOLINK

223.860 - shift 156.7 Hz Enc/Dec Local use

440.850 W2GSB + shift 110.9 Hz Enc/Dec

446.775 KB2UR - shift 110.9 Hz Enc/Dec

927.3125 W2YMM - shift D606 Enc/Dec

440.250 W2TOB/B + shift DSTAR REF020A Babylon

445.725 WD2NY/B - shift DSTAR REF020A Selden

## 2020 VE Session Dates

- January 25th
- February 22nd
- March 28th
- April 25th
- May 23rd
- June 20th
- July 25th
- August 22nd
- September 26th
- October 24th
- November 28th
- December 26th

All sessions are at the Town of Babylon EOC at 10 a.m., located in the basement in the rear of town hall. Please bring photo ID, a copy and your original amateur radio license (if you have one), and any CSEs you may have. Non programmable calculators are allowed. The exam fee is \$15 payable by cash or a check made out to "ARRL VEC."

Visit [FCC Universal Licensing System site](http://www.fcc.gov) to register for an FRN number to use on the paperwork.

## 2020 Winter Night Out

Plans are underway to have our annual club "Winter Night Out" at the Irish Coffee Pub on Carleton Avenue in East Islip sometime in January of 2020.

Date, time, menu and cost will be announced in *The Compass* and on our *Groups.io* page.

Come join us for a memorable dinner and socializing away from the EOC.

