



Radio Amateurs
of
du Canada

June/July
2024

Newsletter

Seaway Valley Amateur Radio Club

The Seaway Valley Amateur Radio Club is a 'not for profit' organization incorporated in the Province of Ontario that promotes Amateur Radio and provides Auxiliary communication Services in Cornwall and surrounding area. The Club's mailing address is 4672 O'Keefe Road, St. Andrews West, ON. K0C 2A0.

The Seaway Valley Amateur Radio Club operates several repeaters in Cornwall and the surrounding area. For a detailed list of repeaters operated by the club please visit our website at SVARC.ca

Next Club Meeting

The next meeting will be a hybrid Zoom / in-person session; 7:00 PM, Wednesday Sept 25, 2024.

Location: Saunders Hydro Dam Visitor Centre, 2500B Second Street West Cornwall, ON K6H 5R6

Guest Speaker – Steve, KM9G - Steve has a YouTube Channel called Temporarily Offline Ham Radio where he explores the tech of amateur radio, building kits and opening up radios as well as some other things.

Club Breakfast

(aka Coffee Klatch)

Saturday Breakfasts—Best Western, Cornwall every 2nd and 4th Saturday of each month, 8:30 A.M. will be held at the Best Western restaurant at 1515 Vincent Massey Drive.

Club Executive & Volunteer Positions

- **President:** John Grow (VE2EQL)
- **Vice-President:** Hunter Racine (VA3HWF)
- **Secretary:** Roger Bélanger (VA3GBV)
- **Treasurer:** Chris Lauzon (VA3CRR)
- **Technical Director:** Doug Pearson (VE3HTR)
- **Net Manager:** Earnest Vinson (VA3EWV)
- **ACS Coordinator:** Earle DePass (VE3IMP)
- **Newsletter:** Steve Harvey (VE3EZB)

Inside this issue

President's Musings	2
Editor's Ramblings	3
Geek's Corner	4
ACS Report	9
Net Manager's Report.....	10
June's Fox Hunt	11
SVARC Calendar	12

Upcoming Events

- July 14th 1300-1700h— POTA at Cooper March
- Saturday Aug 10th (rain date Aug 11th) 1400-1900h - SVARC Summer BBQ
- Aug 17-18—MS Bike Run
- Sept 28th—SVARC/PRARC Ham Fest



President's Musings

John – VE2EQL

Greetings from the Ottawa Heart Institute where I have been a guest since May 15th. I've had a double bypass operation that went very well except my wounds were infected and another smaller issue. I'm told that they will release Tuesday, June 18th.

This will be the first time in a very long time that I will miss Field Day. It's frustrating not to be able to attend and participate. Jason our Field Day planner working with Earnest will ensure 2 days of fun times and operating.

Our Eastern Ontario Hamfest is shaping up. We have rented out more tables. We have also created a Facebook event page, we are going to up-load a lot of pictures and information. Our door prize list is very impressive.

Check out: <https://prarc.tech/hamfest/>

That's it for now.

John Grow VE2EQL

UPDATE: (18 Jun 2024) It has been confirmed today, that they are releasing me. I will be recuperating on the South Shore of Montreal, where I will receive home care.





Editor's Ramblings

Steve – VE3EZB

What can I say about field day this year? Despite Mother Nature raining on the parade, I still had a blast.

Before I speak to the more “serious” aspects of field day, I would like to highlight and thank a few folks who worked hard to make this year a success. First, I say míle buíochas (Gaelic for a thousand thank yous or many thanks) to Sue and Earnest (VA3EWW) for opening up your property to us and the club for field day once again this year. I also want to thank Dan's (VA3SDO) XYL Pamela for picking up the food and saving us all from starvation. The food selection was perfect... salads, burgers and hot dogs (oh my ... I couldn't help myself) were appreciated by all. I also want thank the SVARC for providing the funding for the aforementioned food and drinks. And of course, all that food would have been useless if we didn't have a great grill master. Thank you Jason (VE3PRY) aka “Grill Master Extraordinaire” for the excellent “cooking” and for prepping the food station and feeding the hungry hams. And last but not least, a big thanks to Nathan and Josh (Dan's (VA3SDO) sons for all their help logging (Nathan) as well as both their help setting up and tearing down, and thanks to Hunter (VA3HWR), Rob (VE3ARF), Dean (VA3BS), Larry (VA3RSQ), Dan (VE3DIT), Doug (VE3HTR), and Roger (VA3GBV) for their help with the setup and tear down in the pouring rain. I hope I didn't miss anyone and if I did please accept my apologies.

We entered field day this year as a 4A with a GOTA station. We had 7 antennas in the air and they worked fairly well as can be seen by the results.

Total QSOs – 1008 (last year we had 606)

12 FT8 contacts on 6m;
28 FT8 contacts on 15m;
1 CW contact on 20m;
16 CW contacts on 40m;

2 SSB contacts on 10m (what can I say, 10m was dead);
223 SSB contacts on 15m;
95 SSB contacts on 20m; and the big one,
631 SSB contacts on 40m

Before I finish rambling this month, I do want to address the question as to why we used VE3MMH (my call) for the club field day. A group of us decided to “do our own thing” for field day this year at the QTH of Earnest (VA3EWW). For our call sign, we chose VE3MMH (my call) because it's easy to say phonetically as well as send on CW.

When it was realized that the SVARC wasn't able to secure a location to set up for field day, Earnest invited the club to join us. Since we already had planned to use the call VE3MMH, (I even made name plates with the call sign and the phonetic version of the call) there was no good reason to change it. That said, field day this year really was a club effort and we all had a great time.

Now, when I make a mistake, I will admit it and with regard to the GOTA Station, well, I totally messed up here. I made the assumption (we all know about assumptions ... and yes, I certainly do feel like the first three letters of that word) that the GOTA station was to use the same call sign as the main group. I was wrong. The GOTA station was supposed to use a different call sign ... my bad (as the “cool kids” say) Now, I don't believe we ever had all 5 stations on the air at the same time so we may be good with the rules however ... not sure how its all going to work out at the ARRL but we will have to wait and see.

Well done to all those who braved the rain to make field day a success this year. Winter Field Day anyone?

*'Til next time – Smile and Cruise.
73 – Steve – VE3EZB*



Geeks Corner

This months geek

Roger—VA3BGV

Why you want a nanoVNA

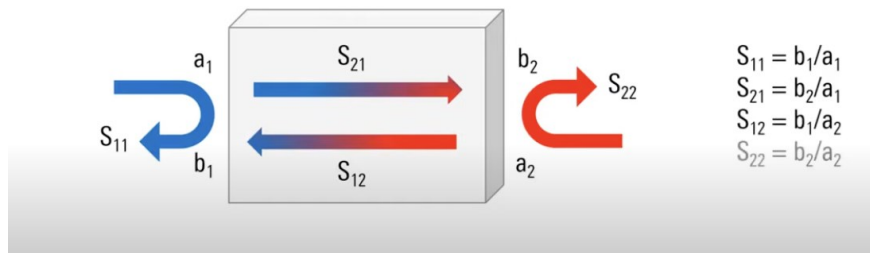
Part I

Well, first what is a nanoVNA.

A VNA is a Vector Network Analyzer. A nano VNA is, of course, a small VNA.

A vector network analyzer (VNA) includes both source signals and a receiver. The receiver detects changes to the output signal from a device (or network), compared to the source signals input to the device. The results are transmission measurements (transmission coefficient, insertion loss, gain), reflection measurements (reflection coefficient, VSWR, return loss), impedance and the S parameters (scattering parameters) S11, S12, S21, S22.

In a two port network there are four S-parameters: S_{11} , S_{21} , S_{12} , and S_{22} .



BTW, don't be intimidated by the S-parameter terminology. Referring to the simplified diagram above:

S11 is I/P Return loss

S21 is Gain or Insertion Loss

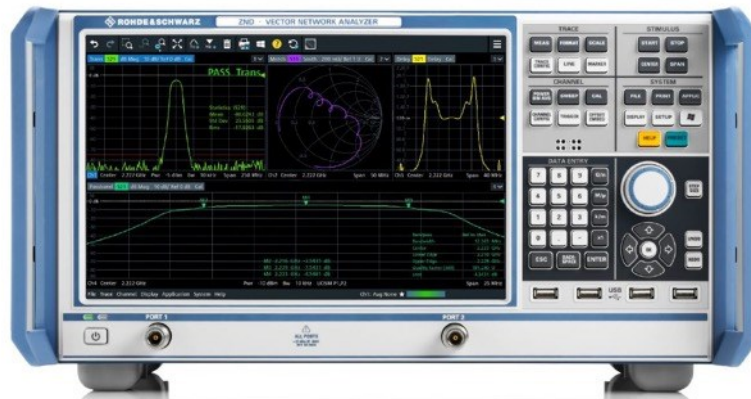
S12 is reverse gain

S22 is O/P Return Loss

Pro versus Nano:

First let me just say that up-to 10 years ago, a VNA was a very expensive piece of test equipment that was only found in professional communication equipment laboratory. For \$100,000 you could get a Rhode and Schwarz VNA.

Today professional VNA are less expensive but still in the \$20K range like this Rhode and Schwarz VNA:



But if you are a low budget Amateur radio operator like me, there are scaled down VNAs, appropriately called nanoVNAs that are very affordable. For instance, the NanoVNA-F V2 comes under \$200 and has many of the same functionality of the pro VNAs.



What differentiates the pro from the nano?

Frequency range:

A pro VNA will easily extend from 50KHz to 40 GHz while the NanoVNA-F V2 will typically range from 50KHz to 3GHz. For the run-of-the-mill amateur, 3 GHz is more than enough. In practice we need to cover LF, HF, VHF and UHF. There are rare cases of repeaters in the 920MHz band and 1250MHz band.

If you are into RC modeling and drone, you may want capability in the 2.4 GHz band, which the nano covers.

Dynamic range:

The dynamic range of a pro VNA will easily be more than 90 dB while the nano will range from 50 to 70 dB depending on the type of measurements.

Measurement accuracy:

Let's just say that for amateur radio purposes, +/- 0.05 ppm for frequency accuracy and +/- 0.25 dB is more than enough for our purposes.

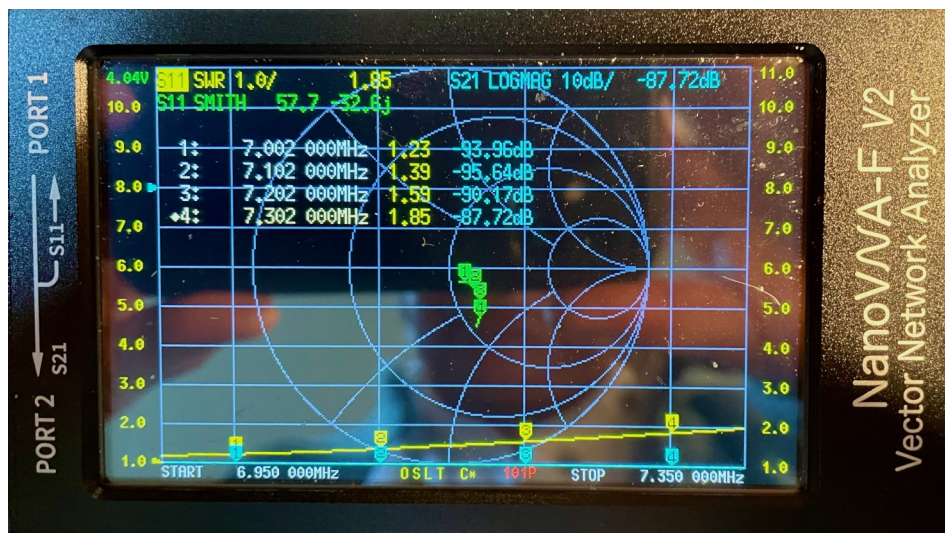
There are other bells and whistle that the nano lacks, like multi-screen operation and more.

So, why you want a nanoVNA?

For one, with a single little nano VNA you can measure all your equipment from Very Low Frequencies to HF, VHF, UHF and SHF.

You can measure your antennas VSWR over the allotted band.

You can measure and tune filters and cavities over frequency for bandwidth, insertion loss, VSWR. You can measure cable loss and even cable physical or electrical length. For instance, here is what my Off-Center-Fed inverted-Vee dipole looks like on the 40 meters band.



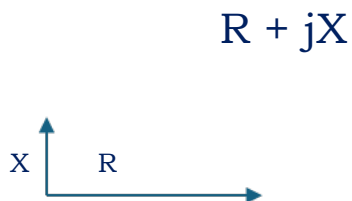
The yellow trace is S11 or VSWR, 1.23 to 1.85 over the 40 meter band. The blue trace is the insertion loss which is infinite as there is no signal into Port 2

Just for the above measurements over the full spectrum from 50 KHz to 3GHz, a nano VNA is well worth the investment, but beware of cheap clones. As the saying goes:

“I am too poor to buy cheap”

But there is more to it.

The key element of a VNA is not only that it can do multiple type of measurements, it can also measure complex impedances. A complex impedance is expressed in the form of a vector, where the resistive component is along the X axis and the reactive component is along the Y axis:

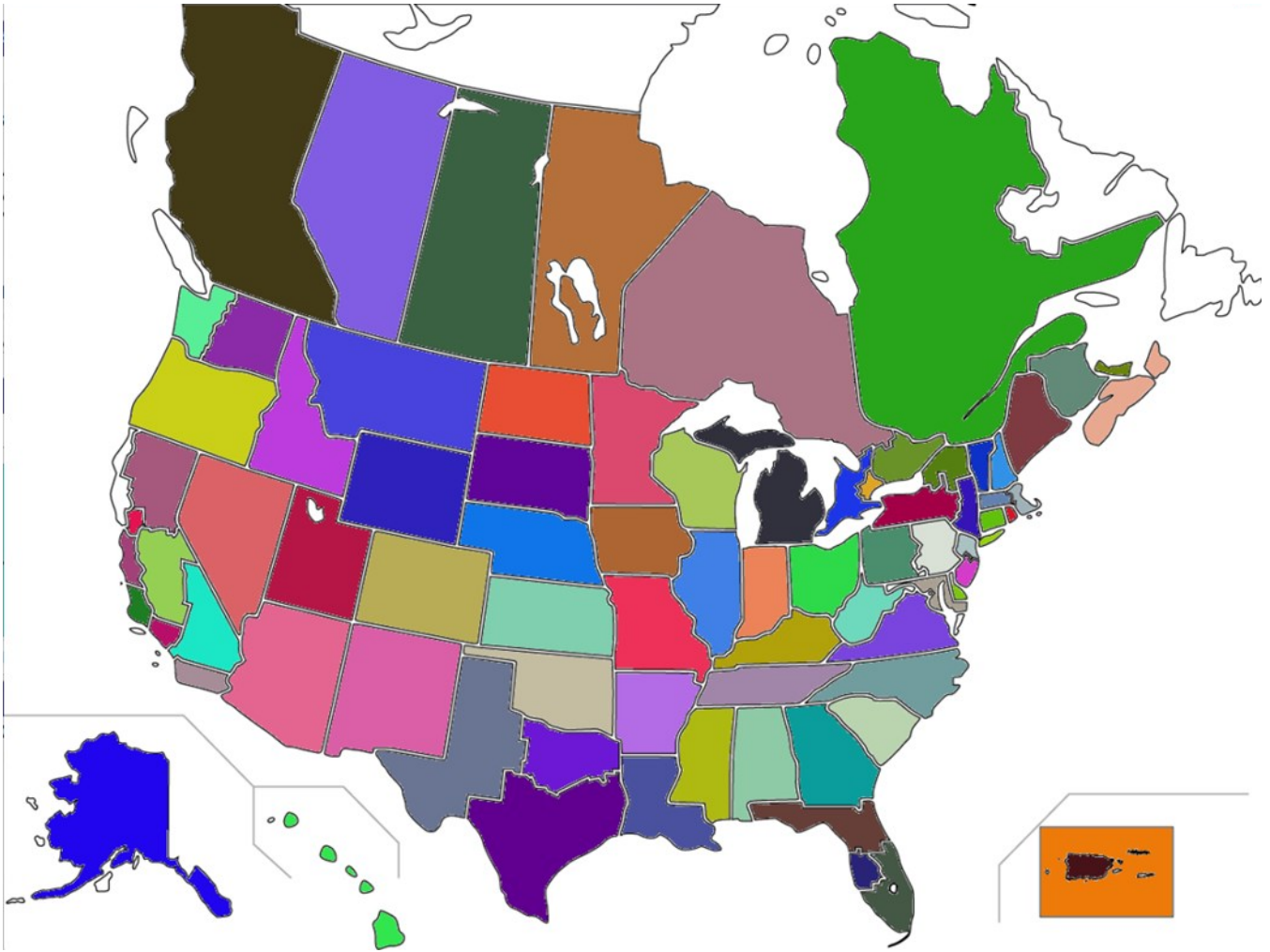


X being positive for inductive impedance, and negative for capacitive impedance.

Why is it useful to measure the complex impedance of an antenna for example?

Well stay tuned for part II of: **Why you want a nanoVNA.**

The field day operators certainly had their crayons at the ready this year.





Fox Hunt—6 July 24

Dave – VA3OPS (aka the fox)

Here are the instructions from the **Fox**:

Timings:

12:30h - Rendezvous at Tim Hortons at the corner of Pitt St and Tollgate Rd.

13:00h - 15:00h Hunt is on!

15:10h (ish) - Rendezvous at Starting Location for our after-hunt discussions.

Frequencies in use:

Fox - 146.565 MHz

Group Comms - VE3VSW (442.200 +)

In the event that you need to contact the Fox directly, I will be monitoring VE3SVC throughout the entire hunt, or I can be called directly at 613 360-6803

Boundaries:

North - Tollgate Rd. (as indicated on the attached map)

South - 9th street (as indicated on the attached maps)

West - Pitt Street (as indicated on the attached maps)

East - Boundary Rd. (as indicated on the attached map)

Dress:

Dress appropriately for the weather. There will be **MINIMAL WALKING** required.

Good luck to all the hunters, be safe and have fun.

Dave (VA3OPS)



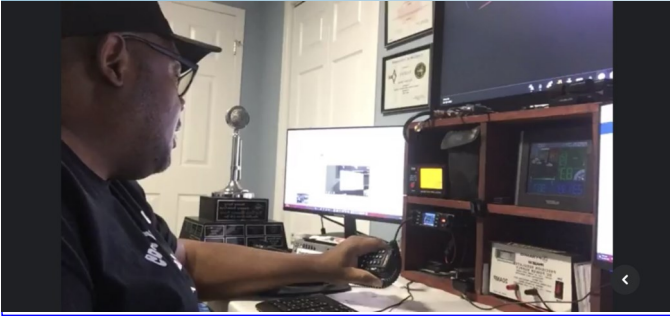


ACS Report

Earle – VE3IMP



To fly or to sail ... so many choices.



Net Manager's Report

Earnest – VA3EWW

Not much to say this month. Been busy getting ready for field day. That said, here is a link to our field day video.

<https://www.youtube.com/watch?si=C0Fiw0WrH3SxkNGy&v=LQbBGaC5aGo&feature=youtu.be>

Many Thanks,
Earnest Vinson - VA3EWW

Facebook: <https://www.facebook.com/groups/688459506568805>

YouTube: https://www.youtube.com/channel/UC5-TxDHPR1bl_vMYXU1Mmg



June Fox Hunt



Dave (VA3OPS) first to find the fox.



The Fox



The hunters (left to right)—Jason (VE3PRY), Dave (VA3OPS) and Earnest (VA3EWW)



A little "post hunt snack" (left to right) - Earnest (VA3EWW), Jason (VE3PRY), Dave (VA3OPS) and Hunter (VA3HWF)

SVARC Calendar

Wednesday, June 26th. SVARC Meeting – St Andrews Church Hall, 17298 County Rd 18, St Andrews West, ON .

July & Aug—Summer Break

July 14th 1300-1700h—POTA at Cooper March—If you are interested in participating, please contact Jason (VE3PRY) via email at ve3pry@gmail.com or Earnest (VA3EWW) at earnestvinson@gmail.com.

Saturday Aug 10th (rain date Aug 11th) 1400-1900h - SVARC Summer BBQ to be held at Pam and Dan's (VA3SDO) Home, 4571 McGillis rd. St-Andrews West. This is a pot luck BBQ. BYOB and lawn chairs. During this BBQ, we will have a draw in support of the club for a 3D printed lamp in the shape of a microphone (donated by Steve (VE3EZB)). The mic includes a call sign flag for the top of the microphone. Also donated by Steve, are several 3D printed, custom solder dispensers. A great addition for the workbench.

Below is a photo of the Main Prize for the BBQ Draw as well as a photo of the solder dispensers. Earnest's photo of the lamp is much better than my photo of the dispenser. Good luck to all who participate. (yes, the microphone is bigger than the solder dispenser)

