



SEPTEMBER 2024

Volume 13 Issue 9

# VE3ERC-LUB

- President:** Frank VA3FJM
- Vice-President:** Tom VE3DXQ
- Secretary:** Rod VA3MZD
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- Maple Syrup Display:**
- Newsletter:** Bob VE3IXX
- ERC Website:** <https://ve3erc.ca>

## ERC REPEATERS

- UHF 444.700 + TONE: 131.8**
- UHF 444.700 + TONE: 123.0**
- VHF 147.390 + TONE: 123.0**
- VHF 147.255 + TONE: 131.8**
- EMERGENCY SIMPLEX: 146.550**
- UHF-IRLP node 2404,ECHOLINK VE3ERC-L**
- VHF- IRLP node 2403,ECHOLINK VE3ERC-R**

**In an emergency, tune  
 Into our repeaters,  
 UHF 444.700 or  
 VHF 147.390 or  
 HF 3.755 LSB or  
 Simplex 146.550  
 For coordination and  
 assignments.**



The (tr)uSDX radio and antenna used by Rod VA3MZD on his canoe trip in Quetico Provincial Park. See full story page 14



# THE PREZ SEZ!

This club is Radio-ACTIVE  
This club is Radio-ACTIVE

## President's Update for September 2024

I have attached two files that are INVITING all amateurs who might want to participate in a joint exercise with the Canadian Armed Forces entitled "**Noble Skywave**". This will take place October 23-25 in Guelph. Please read over the information and following questionnaire.



Priority: Normal

Sent: Fri 20/09/24 12:00 PM

From: <GRIFFIN.BAIRD@ecn.forces.gc.ca>

To: <GRIFFIN.BAIRD@ecn.forces.gc.ca>

Cc: <GRIFFIN.BAIRD@ecn.forces.gc.ca>

Subject: Exercise Noble Skywave 23-25 Oct 2024 Warning Order for Civilian Participants (31 Signal Regiment)

All,

Warning Orders in the Canadian Armed Forces are precursors to complete orders, giving some space for personnel to do their own preparation before complete instructions are given.

DISTRIBUTED: Local RAC Clubs, Hamilton Signal Association/Vintage Signals Team, TV 24 Participants, 31 Sig Regt Ops.

Situation:

We (31 Signal Regiment) are looking for participants for an upcoming exercise [Noble Skywave 2024](#), a worldwide HF Contest for military units and auxiliary comms groups (CFARS, MARS) occurring 23-25 Oct 24, in Guelph Ontario in order to mentor our signal operators in HF skills, foster connections with the community and succeed in the contest.

Probable Mission:

31 Signal Regiment will Establish an HF station NTL 23 1799 Oct 2024 in Guelph Ontario in order to participate in Exercise Noble Skywave 24.

### Orders Group:

All participants of 31 Signal Regiment for Noble Skywave 24 will be prepared to attend an orders meeting: 9 October at 1900 EST.

### Administration:

-[Fill out this form](#) if you wish to participate, visit or want to be included in the list of participants for Ex Trillium Venture 25.

-Please send all additional inquiries, nominations and requests outside the form to John David, VA3JHD [VA3JHD@gma.il.com](mailto:VA3JHD@gma.il.com) for consideration.

-Our space is limited for Nobel Skywave 24, we would like to prioritize those who 1) Have CFARS enabled radio kit 2) Are looking to participate or have participated on Ex Trillium Venture 24/25 (Early May).

-Those who cannot participate are invited to visit out exercise with advance notice to enable clearance to be obtained.

Planning for Trillium Venture 25, our other exercise making use of CFARS and amateur radio operators for an emergency communications net begins planning in early to mid October.

73,

Capt Griffin R. Baird VA3 LZR,

HF Projects Officer, RHQ, 31 Signal Regiment  
Canadian Armed Forces / Government of Canada  
[griffin.baird@ecf.forces.gc.ca](mailto:griffin.baird@ecf.forces.gc.ca) / Tel: 226-203-1877

## 31 Signal Regiment Noble Skywave 24 Participant Form

23-25 October, Guelph Ontario,

Contact John David and Capt Baird @ [VAeJHD@gmail.com](mailto:VAeJHD@gmail.com) and [griffin.baird@ecf.forces.gc.ca](mailto:griffin.baird@ecf.forces.gc.ca) for more questions.

Expect a follow up within 2 weeks of issuing of this form.

data collected by this form will only be used in the planning and execution of Exercise Noble Skywave 24 and Trillium Venture 25. Data will be deleted upon request, and only distributed to military of other amateur participants/planners.

\* Required

1. Your name \*

Enter your answer

2. Email \*

Please enter an email

3. Amateur Radio/CFARS Callsign \*

Enter your answer

4. Phone Number

Enter your answer

5. Are you interested in Ex Noble Skywave 24? (Participation/Visit) Guelph 23 - 25 October

- Yes - Participate
- Yes - Visit
- No
- Other

6. When are you available for this exercise?

- 23 October Evening/Overnight
- 24 October Morning
- 24 October Afternoon
- 24 October Evening/Overnight
- 25 October Morning
- Other

7. Are you available for an online meeting on 9 October Wednesday at 1900EST

- Yes
- No
- Maybe
- Other

8. Do you have a CFARS enabled HF Radio?

Enter your answer

9. Moveable/mobile HF kit?

Yes

No

Other

10. Would you need parking if you were to attend and how much space.

Yes - Standard parking

Yes - Larger Parking space (please expand at bottom of form)

No

Maybe

11. Do you have your own sleeping bag/kit?

Yes

No

Other

12. Food allergies/restrictions?

Enter your answer

13.  Mobility Issues? (the area we are using requires the use of stairs/ladders).

Enter your answer

14 Are you interested in participating at Trillium Venture 25? (Early May Military Exercise over the week-end)

Yes

No

Other

15 Any other comments or concerns? Kit you intend to bring or things we should know?

Enter your answer



# Test Equipment - Part 1 - By Hagen Kaye VE3QVY

Over the summer months I have upgraded my test bench with new equipment so I can further my learning and exploration of designing and building RF circuits. The end goal would be to design and build my own HF radio from scratch - a long term goal, since I just started in this hobby a little over a year ago. I decided to write up a multi part series on test equipment, how they can be used and selecting the best hobby grade equipment for use on HF and possibly the 6m band. The caveat is, I'm no expert, just an enthusiast that is learning and exploring this RF world that is new to me.



This is my current bench setup which includes a linux computer with a monitor in portrait mode, some great equipment from Siglent - two programmable linear power supplies, 2 channel digital oscilloscope, a VNA/tracking generator/spectrum analyzer and an arbitrary waveform generator. Two handheld meters - one is a digital multimeter and the other is a LCR meter. I also have the popular NanoVNA and tinySA. And to round things out on the top shelf are my reference books and my base station which is an IC-7100, which I really like because it does both HF and VHF with lots of modes.

In this first part I'll take a look at measuring components - specifically resistors, capacitors and inductors with the LCR meter and comparing that to measuring with my multimeter and the two VNAs. All four of these instruments can measure components with their own advantages and disadvantages. We'll look at how accurate they are and understand what the equipment is actually measuring when we talk about measuring components.

Measuring resistors is probably the easiest to understand. These can be measured with an ohm meter which basically applies a known voltage across the resistor and measures the current flowing and calculates the resistance for you - using Ohm's law. Capacitors and Inductors must be measured with AC and introduces a second measurement which is the phase difference between the voltage and current - commonly referred to impedance. This of course changes with the frequency and as the frequency increases more the imperfections of the component (called parasitic capacitance and inductance) can dramatically alter the value of the component and even turn a capacitor into an inductor at high frequencies.

Let's start first with my multimeter which can measure resistance and capacitance, but not inductance. I took a 100pf capacitor out of my parts box and connected it to my multimeter. A reading of 104pf and this thing works! These caps are rated +/- 10% so the tolerance was as expected. Trying out different valued capacitors and measuring capacitors with seemingly good accuracy, until I start trying capacitors that are less than 30pf, the meter reads 1 or 2 pf and goes to zero when trying to measure a 10pf capacitor. So there is an obvious limit here.

Being the curious type, I decided to connect my oscilloscope to the capacitor under test to see if there are clues as to how this meter is measuring the capacitor. Sure enough, easily recognizable is the charge/discharge waveform of an astable oscillator. So the capacitor under test becomes part of an oscillator and the frequency of the waveform is used to calculate the capacitance. The higher the capacitance, the lower the frequency and vice versa. The frequency range seems to be from less than 1Hz to about 15kHz and at the high end the meter reads 0pf.



As an added side note, connecting the oscilloscope probe to the capacitor under test increased the reading on the meter by 20pf - which is more or less the capacitance of the oscilloscope probes. So the test equipment leads can add to the inaccuracy of the measurement of the device under test. More on that later.



In order to measure with more accuracy and to measure inductance as well we need to use a special purpose LCR meter. The model I chose is the DER EE DE-5000 meter which is under \$200 and has all the features and accuracy of tier 1 brand meters costing \$800 or more. LCR meters can be had for less money but they lack two important features - a 5 wire Kelvin bridge and the ability to set the measurement frequency to 100Hz, 120Hz, 1KHz, 10KHz and 100KHz.



The meter comes with two Kelvin probes, one with alligator clips and another with tweezers to measure surface mount components. A Kelvin probe has 5 wires, one is a shield, two are used to measure the voltage across the component under test and the other two measure the current going through the component under test. Since two separate wires are used the LCR meter can remove any errors caused by the test leads themselves and just measure the component. As we saw with the oscilloscope probe adding 20pf to the measured value with the multimeter, these Kelvin probes eliminate that error.

The Kelvin probe has multiple connectors and easily plugs into the meter with its flat double sided prongs. Of course, a normal test lead can also be plugged into the meter using the banana clips, but you lose the ability to eliminate the test probes from the measurement.

That 100pf capacitor that measured 104pf with my multimeter is actually 96.21pf on the LCR meter. Measured without the Kelvin probe, using the same test leads as the multimeter the value is 96.54pf. And when I attach my oscilloscope probe to the capacitor it adds 17.35pf to the measurement - which completely matches the label on the scope which says all inputs are 17pf.

So we are talking about some serious accuracy or are we? More on that later.



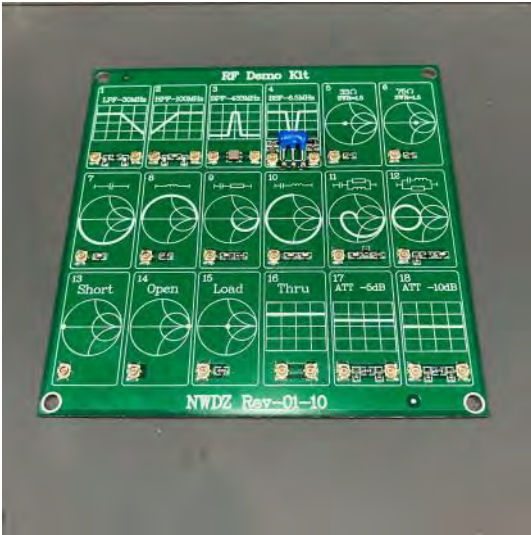
Beside being able to measure resistance, capacitance and inductance this meter can also measure the dissipation factor (D), the Q, ESR and phase angle (voltage vs current). But what do these secondary values mean and how do we know if the value is good? Well this is a component tester and is meant to measure components to see if they are in spec with the manufacturers data sheets. Being curious I downloaded a data sheet on a capacitor I bought from Digi-Key and I never knew how much detailed information (besides the capacitance) the manufacturer states about their parts - riveting reading at 2am - just kidding.

This is where the frequency selection is an important part of the meter and why the values of 100Hz, 120Hz, 1 KHz, 10 KHz and 100 KHz are on the meter. Depending on the use of the component, manufacturers will give tolerance (percentage capacitance) at a given frequency and temperature. As well the dissipation factor if the capacitor is used in a power supply to eliminate ripple voltage or the ESR if it is used in a switching power supply. This meter can quickly check if a capacitor still meets the specs of the manufacturer.

This is all great stuff, but how do I test the components at HF frequencies (or even higher)? What if I'm making a filter for the 20m band, my LCR meter can't go as high as 14Mhz. You'll either need to buy a more expensive LCR meter, or you can measure your components with a VNA. I have a Siglent SVA-1015X VNA that can go as high as 1.5Ghz so measuring capacitors and inductors at HF frequencies is not a problem. As a side note, I did the following experiments with my Siglent and my NanoVNA and both had similar results. I'll leave the Siglent vs NanoVNA comparison for another future article.

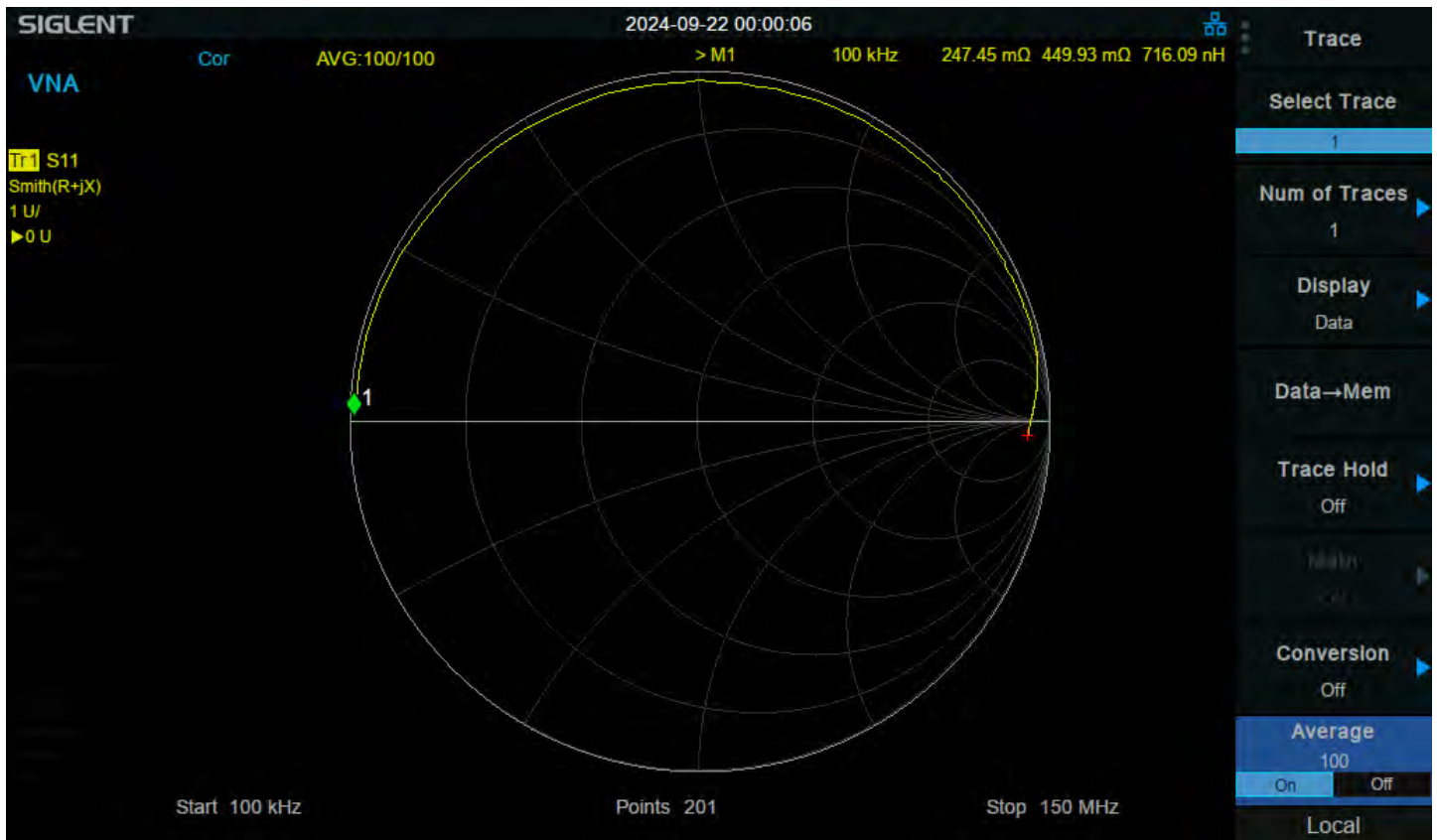
VNA's are capable of very accurate measurement at RF frequency however they must be calibrated before use. Calibration, very much like the Kelvin probes, eliminate the probes, cables, jig, etc. from the measurement of the component or device. The standard calibration technique is to calibrate against an open (no component connected), short and a 50 ohm load (a resistor).

The VNA will take the baseline measurements across the spectrum of frequencies you select and use that baseline to eliminate the impedance of the test probe.

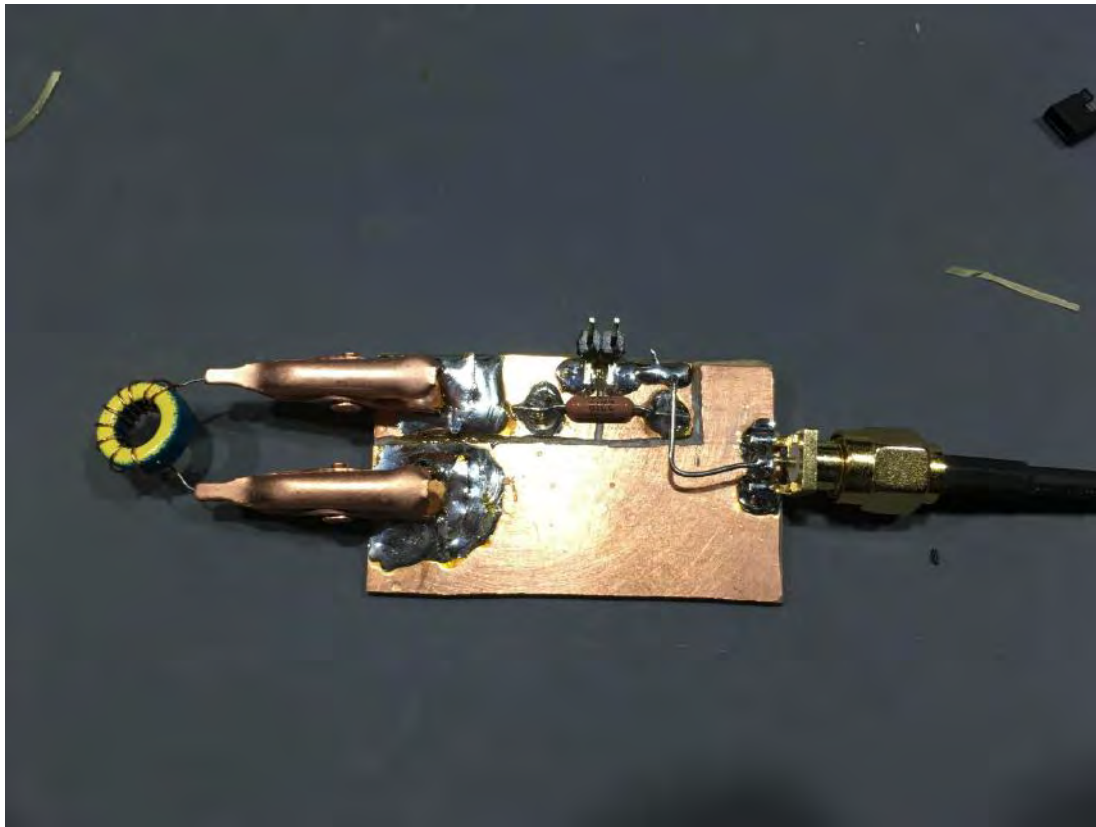


To make measuring components easy and compare with the LCR I bought this handy RF Demo Kit. It has various filters and circuits on it, but more importantly it has an open/short/load circuit to calibrate the VNA and a single capacitor and a single inductor on it to measure. I'll be using the tweezer Kelvin probe with the LCR meter to measure and connecting the VNA with a UFL patch cord to measure with the VNA.

First up is measuring the capacitor and inductor with the LCR and we get 100.04pf and 721nH. I adjusted the VNA to sweep from 100 KHz to 150 Mhz and calibrated it with the open, short and load connections on the test board. At 14Mhz the measured values are 99.5pf and 658nH. So the capacitance measurement is almost the same at 14 Mhz but quite a bit less for the inductor.



Taking a look at the Smith Chart we see an interesting curve for the inductance when going from 100Khz to 150Mhz. At 100 KHz (the same frequency as the LCR) the inductance is 716 nH (0.6% difference - the LCR meter is rated at 2.5% accurate for an inductor this value) and the inductance decreases as the frequency goes up. At about 135 Mhz the inductor becomes a capacitor - in other words the stray parasitic capacitance of the component has now neutralized any inductance.



Now these measurements were done with almost pristine conditions - a surface mount component on a professional PCB with a UFL connector. But what if you want to measure loose components with a VNA? You'll need a test jig that you can calibrate to eliminate the impedance of the test jig so the VNA can measure the component only. These can get quite expensive, but you can make your own like this one with reasonable accuracy - about 3% tolerance.

This exercise of measuring capacitors and inductors with different test equipment have revealed some interesting shortcomings when it comes to measuring components. At low frequencies capacitors and inductors are straightforward and behave as expected. At RF frequencies inductors can become capacitors as the frequency gets too high, and vice versa. So while a part may have one value at 100 KHz it could have a different value at 14 Mhz.

Using an LCR meter is by far the fastest, easiest and most accurate to measure parts and the secondary information provided will give you an idea of the quality of the part as well. A VNA can measure the part at the frequency you'll be using it, however it requires special attention to calibration and a good test jig. As well, a VNA will have an ideal impedance range where measuring a component is quick, for components that have very low or very high impedances the VNA will need to be set to average out the readings to get a fairly accurate reading. A good guideline I discovered through experimentation is to have the VNA average a 100 readings, which is easily set on my VNA.

Finally, now that you've measured the components once you solder them to the final circuit board, that board will have its own parasitic capacitance and inductance that will interact with the component to alter the values further. So, at least for myself, I'll quickly measure a component with a LCR and not get fooled by that 2 decimal place accuracy because once it's on the PCB in a circuit and at RF frequency the circuit will need to be tuned with a VNA for any final adjustments anyway.

Hope you found this quick article on measuring components interesting.

**73, VE3QVY**



**CONTRIBUTIONS TO VE3ERC-CLUB  
NEWSLETTER**

Do you have an article you'd like to submit? Or photos? Do you have any comments you'd like to make?

Perhaps you'd like to share a photo of your shack, a special project you are working on or a special

interest!

**SEND THEM TO:**

**Bob [bobve3ixx@gmail.com](mailto:bobve3ixx@gmail.com)**

**(519-787-2279)**



**WEDNESDAY NITE NET CONTROLLERS**

**AUGUST 14 - BILL VA3QB**

**AUGUST 21 - BOB VE3IXX**

**AUGUST 28 - REG VE3RVH**

**SEPTEMBER 4 - HAGEN VE3QVY**

**SEPTEMBER 11 - FRANK VA3FJM**

**SEPTEMBER 18 - TOM VE3DXQ**

**SEPTEMBER 25 - MEETING**

**OCTOBER 2 - TED VE3TRQ**

**OCTOBER 9 - TONY VE3DWI**

**OCTOBER 16 - BRIAN VA3DXX**

**OCTOBER 23 - MEETING**

**OCTOBER 30 - BILL VA3QB**

**NOVEMBER 6 - BOB VE3IXX**



# From the PAST

Thanks to Rick VE3BK for sending this along:

## A Homebrew transmitter & Replica

During the second world war many small and easy to use transmitters were built for use on the continent. After the war someone decided that they should be destroyed, so originals are quite rare.

Mitch Powell, VE3OT, is building a replica two tube crystal controlled transmitter, trying to be as close to the original plans as possible. Attached are three photos taken of work in progress.





## Quetico QRP

### Operating POTA from the interior of Quetico Provincial Park CA-0359 with a (tr)uSDX

**By Rod Murray VA3MZD**

In a previous guest post on QRPer I gave a brief history of my introduction to Ham radio and specifically POTA and my experiences activating local parks by bicycle. My initial excitement about POTA was inspired by the YouTube channels of some noteworthy field operators, Tracy VE3TWM, Julian OH8STN, Adam K6ARK, Stuart VE9CF, and Thomas K4SWL of course, just to name a few.

Tracy VE3TWM's experiences on a canoe trip to Algonquin Provincial Park, Ontario, a place he and I know well (although we've never met) were particularly inspirational. In this video from 2021 Tracy activated Algonquin Provincial Park CA-0138 from a lake that I'd previously paddled to on a canoe trip. I wanted to do that too! But it would take quite a while. Let me tell you.

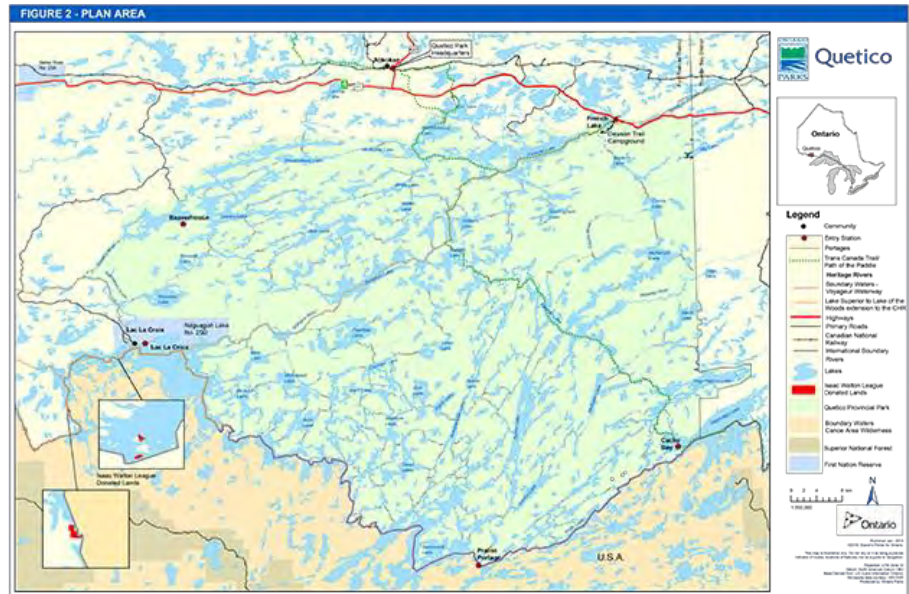
In 2022, with my regular paddling buddy Tom, we planned to take our wives to one of the premier canoe tripping parks in North America that we'd never visited. We've been paddling together since we were teenagers at an Ontario summer camp and had been taking our partners along on canoe trips for over 30 years. Quetico Provincial Park in North Western Ontario, Canada, one of the province's crown jewels, stands as a legendary wilderness area that can only be accessed by canoe or kayak in summer and ski or snowshoe in winter, with one exception. There is one road accessible campground and visitor centre in the park's northeast corner. The Park, which is over 4700 square kilometres, is also surrounded by thousands more square kilometres of wilderness public land, known in Canada as "Crown land." Numerous First Nation communities are also adjacent to the Park. To the south is the equally famous Boundary Waters Canoe Area in Minnesota, USA. Indeed, one can start a canoe trip in one country and finish in another, or paddle a route along the International Boundary (hence the name!), crossing the border numerous times as you go, with the required documentation of course.



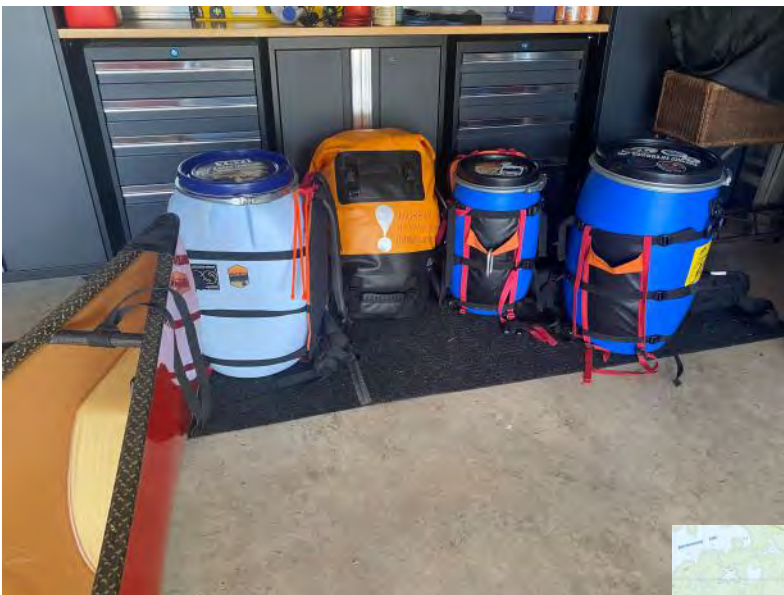
*Location of Quetico Park, Ontario, The Boundary Waters, MN, and Algonquin Park, Ontario in North America from [ottertooth.com](http://ottertooth.com)*

We had a successful trip to Quetico in 2022 and I vowed to return when the opportunity arose. Meanwhile, I'd since become very active in POTA, and was more determined to complete a POTA activation from a wilderness park while on a canoe trip.

*Quetico Park close up map from the Ontario Parks Master Plan*



That determination was finally put in motion in early 2024 when another Quetico canoe trip was planned for August. But the challenge would be to put together a radio, an antenna and battery light enough and compact enough to pack in a canoe trip barrel.



*Canoe Trip Barrels and Waterproof Eureka Pack ready to go!*

Our plan was to enter the Park at one of the north east access points, travel south across immense Pickerel Lake, then paddle and portage our way as far as Fern or Oli-faunt Lakes, depending on our progress and the weather, and return via the same route. Or, if we were feeling adventurous, to complete the circle route made possible by the historic Deux Rivière and Pine Portages. See Map below.

*Canoe Route across Pickerel Lake into Bud and Fern Lakes with Start, Campsites and Portages marked and possible Circle Route*



Either way would require 8 portages totaling more than 7 km. Everything has to be small and light because a portage is a rugged trail between lakes where you must carry everything on your back. Because my wife and I have four packs in total for a 10 day trip, plus the canoe, each portage must be walked 3 or more times, back and forth, until all the gear is carried over. Incoming History lesson: From my university days as a researcher for the Kanawa Canoe Museum, now the Canadian Canoe Museum in



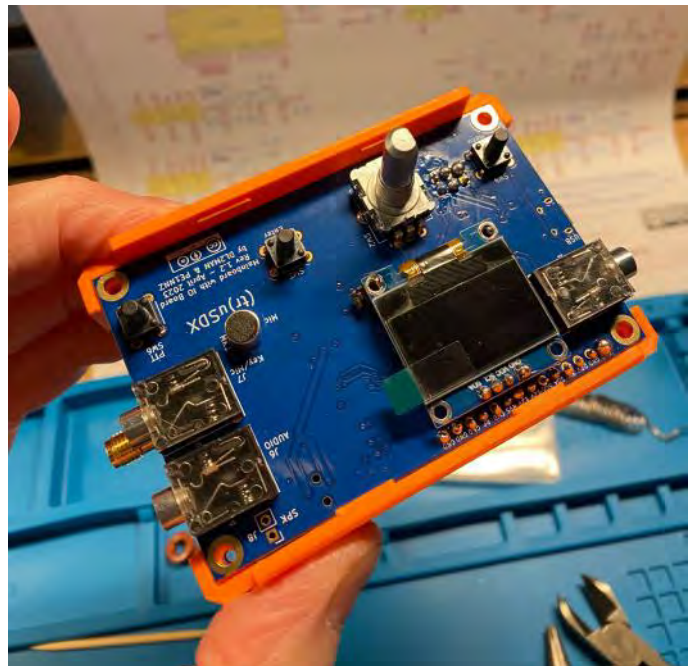
Peterborough, Ontario, I learned that “portager” is a French verb that translates “to carry” and has its origins with the French Voyageurs who paddled the continent trading furs. Therefore “portage” should always be pronounced in French.

At 67 years young, I now own a Swift Kevlar canoe that weighs under 14 kg, about 30 pounds. The food and equipment barrels are about 20kg each. I wasn't about to pack or portage much more in the form of radio equipment. It had to be light!

It so happened that a new member of my club, the Elmira Radio Club of Ontario, Hagen VE3QVY, had recently built a (tr)uSDX radio. The radio is a masterpiece of miniature hardware and brilliant software thanks to Manuel DL2MAN and Guido PE1NNZ. Hagen is an electronics whiz, to say the least, and he knew of my interest in this radio (I was on the original list for the Canada group kit build). He lent me his (tr)uSDX back in April and after making an easy trans-Atlantic QSO with it on 5W, I immediately ordered a Classic band kit. I was already thinking about activating Quetico from the park's interior when I started my build.

### *My (tr)uSDX build in progress*

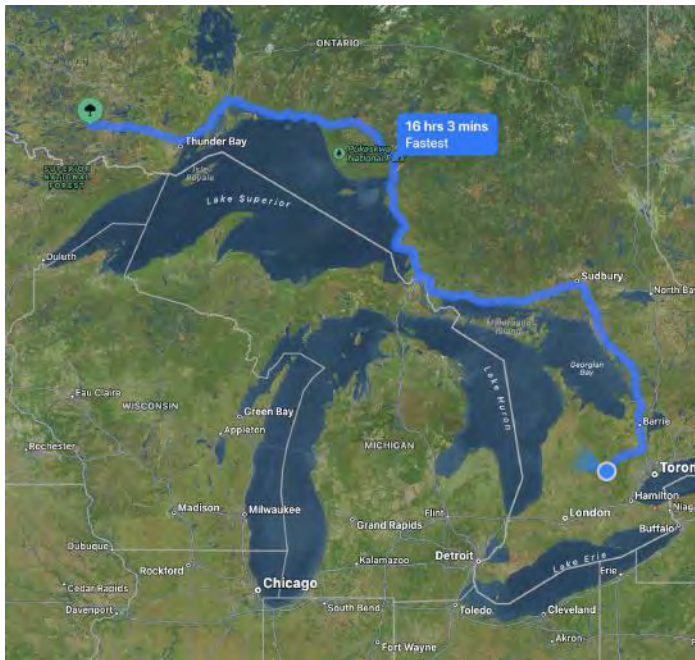
Hagen offered considerable help with my (tr)uSDX since the last time I built a kit was in 1970 when I worked on a Heathkit SW receiver I got for Christmas. Hagen installed some improved MOSFETS, precisely rewound all the toroids, tested and improved the radio's performance and measured all the specifications, to the point where the radio was transmitting a minimum 5W on all bands with very high efficiency. And it only weighed 150 grams, perfect for my needs!



It was time to gather the necessary accessories to complete this rig keeping it lightweight and portable. I added a short length of thin RJ-316 BNC coax to my kit and included the high performance Tim Ortiz N9SAB Nano QRP 20m dipole that I'd been using for POTA with my FT-818. At only 100 grams and a reliable performer, it would fit the bill, but limit my operation to 20m. I already had a small Bioenno 3Ah battery that could power the radio through more than a few activations, which added another 400 grams. With a few extra accessories and cables and a N6ARA mini paddle, just in case (I've never made a CW contact but might try if needed) my lightweight kit was well under 1 kg and complete. The rig and accessories easily fit inside the soft pouch with my fishing reels, so no extra space was required.

I started to think about how I could get spotted while in the wilderness far away from any cell towers. Perhaps, I thought, if I could add a few FT8 contacts while in the Park I could surely make 10 QSOs to confirm an activation without a spot on POTA.app. I solved the spotting quandary for an SSB activation after much deliberation. I also tested a number of mobile phone apps that run FT8. I tried both iOS and Android apps and settled on FT8CN for Android. After updating the (tr)uSDX firmware to run CAT and audio through a single USB cable to an Android phone, I gathered a few of the USB micro to USB-C cables needed to connect the radio to a phone running the FT8CN App. Eventually, after considerable trial and error, it all worked! To be clear, the FT8CN software has a bit of a learning curve, but that is another story. It works well with some practice.

In early August, the barrels were packed and ready to go. After two full days of driving north and west 1500 km on the Trans-Canada Highway from our QTH in South Western Ontario, we arrived at Quetico Provincial Park. Yes, the province of Ontario is that big!



*Map of Ontario showing the 1500 km driving route to Quetico from SW Ontario*

We camped overnight at the Park's Dawson Trail campground and set off on our canoe trip the following morning crossing the expanse of Pickerel Lake in breezy, warm, pleasant summer weather. A few open stretches of the lake required that we paddle behind islands to avoid the bigger waves. But all that would change, dramatically.

After settling into a campsite out of the cool north wind that developed late in the afternoon, we crawled into our tents for a deep sleep, only to awake the next morning to a wet drizzle, with an air temperature of 8C and considerable wind chill. That's typical of a northern

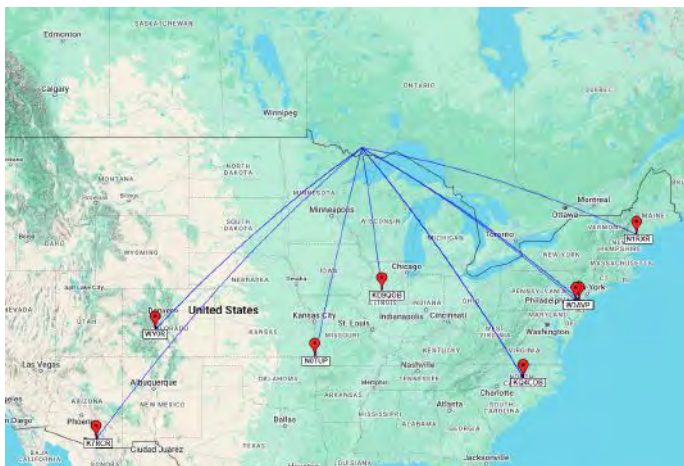
Ontario summer. One day it's hot and sunny, another cold and wet. Staying put to ride out the unpleasant weather, my fellow canoe trippers settled into their tents with books. I, on the other hand, had POTA to attend to.

I set up my 20m N9SAB dipole, plugged the battery into the (tr)uSDX and spun the dial up to the SSB portion of the 20m band and heard a strong 54 CQ POTA call and got K7RCR in the log almost immediately! I was off to the races. Could I get another nine contacts by just hunting? I had a way to spot myself, but decided to only hunt stations calling CQ POTA. Before I left on the trip, one of my radio club colleagues, Paul VA3PDC, agreed that if I texted him from my Garmin InReach, he would spot me on the POTA site, increasing my chances of activating. But I decided to stick with my hunting plan for this activation.



*Activating Quetico from under the tarp on Day 2*

It took a few hours of hunting, but with a 2fer and an even better, 2 operator 2fer, I had 13 SSB contacts in the log. I had activated Quetico Provincial Park CA-0359. I needed a cup of warm soup, then crawled into my tent and down sleeping bag to get warm again.



*Map of August 9, 2024 CA-0359 Quetico Park Activation*



The next day, in much better weather, we set out towards the Pickerel River, which drains the lake southwards over a series of waterfalls. Waterfalls mean portaging the canoe around them with all the gear. It's hard work.



*Loaded up for the portage with barrel and canoe pack*

*Pickerel River waterfall selfie*



*Fishing below the waterfall*

*Portaging our Swift Kevlar Canoes*



Once over the portage we rigged up our fishing rods and caught a few Small-mouth Bass and Pickerel (US translation = "walleye") which made all the heavy lifting a lot more fun! After three portag-

es we arrived at Bud Lake, deep in the Park and settled into a beautiful campsite on a stunning lake with extraordinary sunsets!





*Mirrored Sunset on Bud Lake*



*Pickereel for dinner!*

From one extreme to the other, the weather turned hot and humid for the next four days. We paddled and fished in the early mornings to escape the heat which meant that in the afternoon I could place my camp chair under the shade of a towering White Pine tree and do more POTA while the others read. I set up the radio with the CAT USB cable to the Android phone running FT8CN. After a few glitches I started getting replies to my "CQ POTA VA3MZD EN48" calls. Something I had to figure out was that the phone, without a cellular connection, obviously, could not sync the time. FT8CN has a manual time offset. After numerous trial and error adjustments and comparing the phone clock to my Garmin Instinct Solar watch, I was able to get the time sync correct and was on my way to another activation.

### *Activating under the pines*

Over the next two days I was able to complete two additional FT8 and SSB activations from near my tent looking out over Bud Lake. I sent a satellite text message to Paul VA3PDC on one activation who then spotted me on the POTA website which helped hunters find my frequency and make contact. The weather was so hot and humid we were forced into the shade except for an afternoon swim in the cool waters of the lake. I made a total of 32 contacts on SSB and FT8 on one of the days which more than met expectations. On my last activation, I even got the aforementioned Stewart VE9CF in the log, Park to Park, from the Bay of Fundy, New Brunswick. After a short chat, we both carried on our respective activations. *Activating from the lookout on Bud Lake*







*Map of August 13, 2024 Activation with a total of 32 SSB (red) and FT8 (blue) QSOs*



*Activating from the lookout on Bud Lake*

Eventually the weather turned cooler. We decided to return to Pickerel Lake via the same three portages. With the food barrel now depleted, and considerably lighter, we made it back to Pickerel Lake after 4 hours of paddling and portaging. As we set up camp, another storm set in. Although it rained through the night, we were able to pack up, and make the crossing of the big lake in relatively calm waters the next morning. Lastly, we portaged back to the vehicles from Stanton Bay on Pickerel Lake.

### *Paddling across Pickerel Lake*

And just like that, our 10-day Quetico Canoe Trip 2024 was over. We had portaged around some spectacular waterfalls, paddled through scenic lakes, caught fish and, I'd accomplished my goal of activating Quetico Park. We headed home via Thunder Bay and Sault Saint Marie. On the return trip, I was also able to activate CA-4885, the Historic Canal between Lakes Superior and Huron. Eventually we made it home to South Western Ontario.



It took a few days to unpack, clean up and store the canoe tripping equipment. Equally important, I double checked, edited and uploaded the logs to the POTA website.

A canoe trip is a rejuvenating adventure. I thank my wife Colleen, and our long-time paddling partners Tom and Patti for making this an unforgettable trip. It's hard work, but the compan-

ionship, wilderness scenery, fresh fish meals, morning coffee and sunsets more than make up for the challenges.

I'd be remiss If I didn't thank the many hunters and activators who made my unique POTA QSOs possible! Quetico Park is rarely activated so I hope the hunters were as thrilled as I was to get them in the POTA logbook.

**My Canoe Trip Equipment**

(tr)uSDX Radio

RJ-316 Coax

N9SAB 20m Nano QRP Dipole Antenna

Android Phone running FT8CN

N6ARA mini paddle

Garmin InReach

Garmin Instinct Solar Watch

MSR Elixir Tent

MEC Sil Tarp

16' Swift Prospector Canoe

Barrel Works canoe trip barrels

Eureka Canoe Pack

Helinox Camp Chair

**73 and POTA on!**

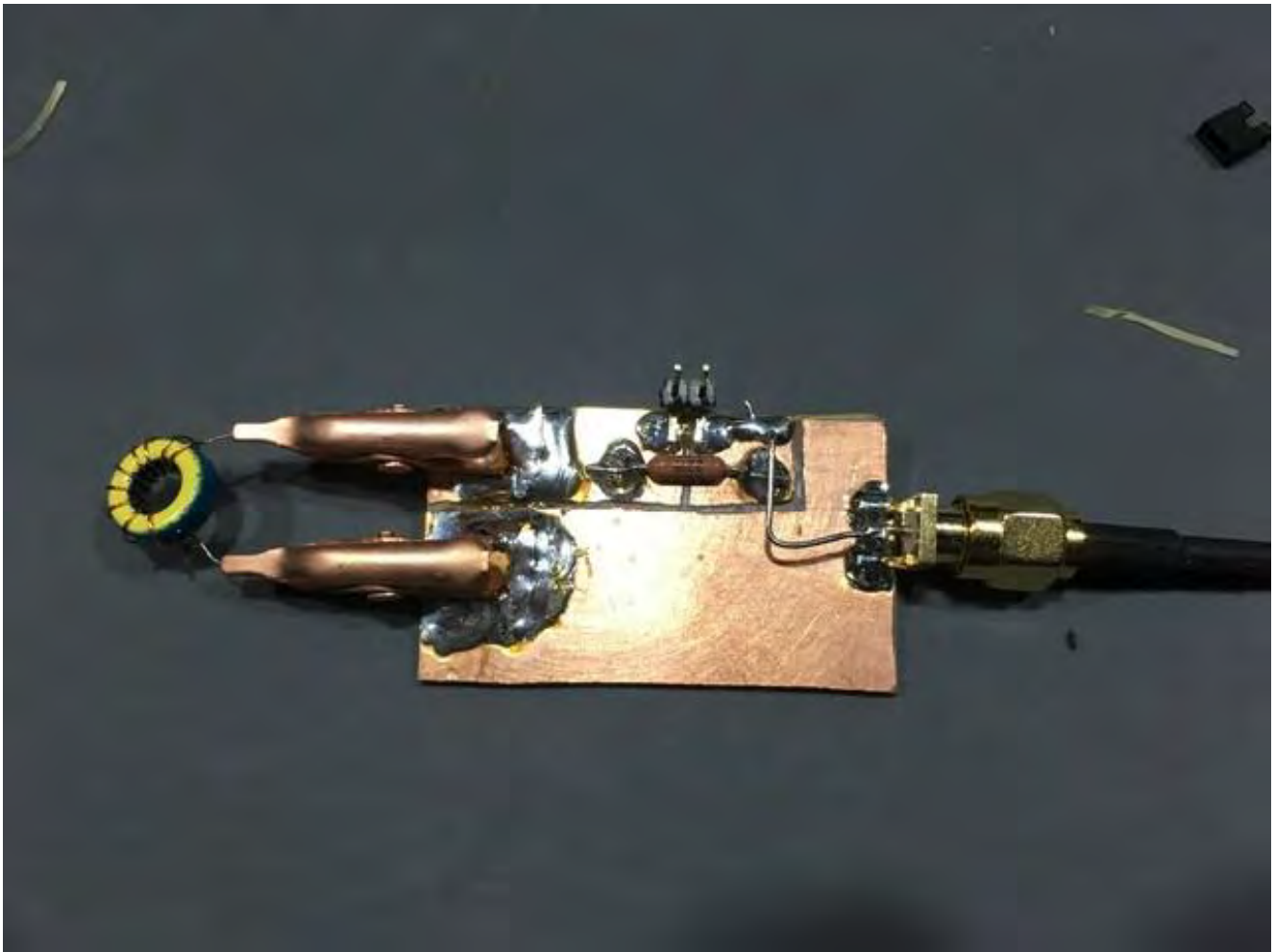
**Rod VA3MZD**



# Tech Tips

## Tech Tips

Trying to get accurate measurements with a VNA is easy and hard, sometimes you need to build a special jig like this for the hard measurements like this.



Thanks to Hagen VE3QVY.



## Elmira Radio Club VE3ERC Monthly Meeting Minutes

Wednesday, Sept 25, 2024

VENUE Elmira Fire Hall – 44 Howard Ave, Elmira, Ontario

- Zoom Link – if you are unable to make it in person, here is the Zoom link to join in online:  
<https://zoom.us/j/98888306876?pwd=azJWNUxTOFcrQ0UvU2dIMFAyTlpCdz09>

### AGENDA

7:00pm Virtual Eyeball QSO – Setup, Social time & Coffee

1. Meeting Call to Order, Welcome - Frank VA3FJM - Frank called the meeting to order at 7:34 pm EDT

2. Roll Call & Quorum – In attendance in person at the Firehall were: Graham VE3BYP, Ken VE3KCY, Paul VA3PDC, Bob VE3IXX, Tony VE3DWI, Tom VE3DXQ, Frank VA3FJM, Rene VA3RRP, Ted VE3TRQ, Reg VE3RVH, Jim VE3JLC, VE3EJN Jeremiah, Rich Ve3DCC, Hagen VE3QVY, John VE3JXX, John VA3PT, Andy (guest).

In attendance via Zoom - Mike VE3FE, Linda VE3CZ, Judd N4WXU, Dave VA3DAS, Bruce VE3QB, . Quorum was obtained with 21/50 members (1/3 or 17 required for Quorum )

3. Adopt Agenda – Tom VE3DXQ • Motion to adopt Agenda for September meeting with the change that the presidents report would include a presentation by Frank about an invitation bt the Canadian Military to participate in a communication exercise in October. Motion seconded by Hagen. Carried.

4. Presentations/Speakers/Workshop

- Summer Radio Activity Round Table. There were reports from members present on their activities including Field Day, Point Clark lighthouse weekend, new equipment, and radios purchased by individual members as well as traveling adventures.

5. Secretary's Report Tom VE3DXQ • Motion to accept Minutes of June Meeting. Seconded by TED VE3TRQ Carried.

6. Treasurer's Report Ted VE3TRQ • Monthly Financial Report as submitted by Ted

Most of Dues came in June which started in March. There were payments for Ham Fest tables. Also payment for the out house on Field Day, Gas for the generator, and some food cost. Ted



made a motion to have the Treasurer's report accepted. Rich VE3DCC made an amendment to the motion to have Hagen VE3QVY reimbursed for the food provided at field day as well as a yellow VE3ERC T shirt. Ted to send out email as to who would like a yellow T-shirt, as the minimum order is for 10. Motion Carried.

7. President's Report - Frank VA3FJM – Frank said that Canadian Armed Forces would like to get Ham Radio operators involved in a communications exercise in the Guelph Area in October. There is a meeting with the CAF on October 9<sup>th</sup> at 19:00 hours regarding the exercise that will take place October 23 to 25<sup>th</sup>. There is a form to fill out if you are interested. Please contact Frank if you are interested. Call Frank by phone as he is having email issues at this time

Frank mentioned that this would have helped to have extra communications during events like the big ice storm that hit Ontario and Quebec in the 1990's

8. Committee Reports • Repeater Technical Committee -Tony VE3DWI - Nothing to report.

9. Unfinished Business • Linking the VA3TET and GARC VE3RKL Wires-X repeaters - contact with Barry VE3SLD - discussion postponed - Frank will make contact with Barry

10. New Business

- Purchase of New Repeater- Ted advised he has the new repeater at his QTH and it is Wires x and C4FM capable and is to be installed at the firehall. Rich made a motion to have the club purchase the repeater as there is currently no VHF repeater there.
- Bob seconded the motion Carried.
- Zoom Account for club. The consensus was that we move to Google meet.

11. Announcements

- Next meeting: Wednesday, October 23, 2024 @7pm Elmira Firehall
  - Wires-X Net - 4th Thursday of the month -Thursday, Sept 26, 2024 **TOMORROW!** Net Controller is ?. Rod is away,
- Other Announcements?

12. Adjournment • Motion to adjourn the meeting- Frank adjourned the meeting at 9:20 pm EDT

## CORRESPONDENCE

Thanks to Rene Paquin VA3RRP who sent the following links to access **Winlink Wednesday** and **APRS Thursday**. The sites contain a wealth of information.

<https://winlinkwednesday.net/>

<https://aprsph.net/aprsthursday/>

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**Paul VA3PDC sent the following link about the vital role amateur radio plays in emergency communications. It's a great video.**

<https://www.facebook.com/share/r/1CHFatncRWSH5yNy/?mibextid=VMBKnz>



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**Ted VE3TRQ wrote the following about the new repeater:**

If you'd like to try out your programming for the new Elmira Firehall ERC repeater, VA3EFH, it is now in test mode at my place in Waterloo.

Frequency 145.490, negative offset, tone 131.8. Also C4FM. No Wires-X yet.

Listen on 145.490, transmit on 144.890 with your radio set to Tone 131.8 - try it out, it will be on-line at all times except when I am using my antenna for the morning net at 8 AM