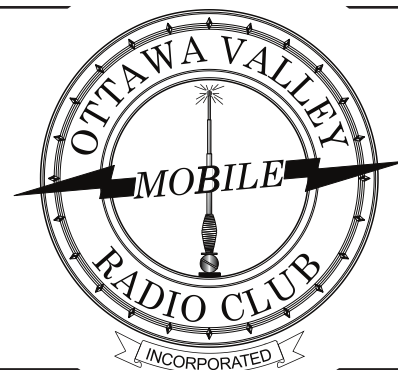


Rambler

Newsletter of the
Ottawa Valley Mobile
Radio Club
Incorporated



Mar 2021

Edition 58

Page: 1

President's Ramblings

The club has been very fortunate over the past several meetings to have a variety of guest speakers introduce many different modes of operation to us that keep the hobby interesting. Yaesu System Fusion kicked things off followed by DMR, then a side trip to satellite operation (many didn't realize you can likely try this mode with equipment you already have), and last month Hugo, VE3KTN introduced us to the many possibilities of operational modes that exist inside FLDigi. This month we are fortunate to have Allan Boyd, VE3AJB, who is also the RAC Regional Director for Ontario North/East, who will introduce us to the D-Star mode of operation. Then of course let's not forget about the introduction of "hot spots" into the mix! The Amateur community is very fortunate to have so many talented Amateurs take the time to prepare and present excellent presentations on such a diverse variety of topics. Remember to set aside some time Wednesday evening, March 17 so you will not miss a presentation on yet another interesting mode of operation, popular in the hobby.

Amongst other agenda items at last month's meeting, the club

sponsored an auction of a DMR portable radio package purchased from DXCanada.ca. This was a small fund raiser for the club as well as a teaser to get more interest in the DMR mode of operation. The winning bid went to Patrick Warner, VA3LTN. Norm, VE3LC volunteered to program the radio for Patrick so he could get off to an immediate start with the radio and new mode of operation. Thanks Norm! DXCanada.ca is still offering a discount of \$15.00 to OVMRC members for any order over \$200.00. All you have to do is enter code OVMRC at checkout.

Winter is starting to lose its grip. The days are getting longer and soon we will be able to get at some outside projects. What do you plan on attempting? Is there something you plan on but are lacking key information? Someone in the club may be able to provide valuable information to help you further your project. Don't forget to ask at the meeting or on any of the well attended weekly nets!

Field Day is also fast approaching. The same rules will apply this year because of COVID and the ongoing restrictions it has imposed upon us all. We will provide a refresher on club participation similar to the way we submitted our individual entries last year. Look for this information upcoming in April or May meeting agendas.

(Continued on page 4)

INSIDE

President's Ramblings.....	1,4
OVMRC Repeater Nets.....	3
Cross Canada C4FM Weekly Net.....	3
Local 2 Metre Nets.....	3
Emergency Measures Radio Group.....	3
HF Nets.....	3
Restaurant Gatherings Cancelled	3
VE3RAM Gateway Repeater D-Star Network...4	
Welcome New Members.....	4
ARDF Fox Hunting Activity Summary.....	5-9
Meeting Minutes.....	9-10
GPS Frequency Reference for IC-9700.....	10-12
Net Activity Check-ins.....	13-15

Calendar

Notice of Meeting

Wednesday Mar 17th 2021
via **Zoom**

Check-in Time 6:45 to 7:15 P.M.

Members and invited guests will be sent an email invitation several days before meeting date with login and password. Others not on our mailing list please contact Norm at: VE3LC@rac.ca for invitation.

Agenda:

- Call to Order at 7:15 by Barry VE3NA;
- Greetings to Guests and New Members;
- Acceptance of February meeting minutes;
- Chairperson Reports;
- Feature presentation by Allan Boyd, VE3AJB on **Digital Voice Radio Networks for Regional and National Nets**. Allan is the RAC Regional Director for Ontario North & East.;
- Other business;
- Meeting adjourned; and Rag Chew for those interested.

OVMRC Executive and Officers 2020-2021

President:

Barry Allison, VE3NA
ve3na@rac.ca

Vice-President:

Norm Rashleigh, VE3LC
ve3lc@rac.ca

Treasurer & Membership Records:

Nicole Boivin, VE3GIQ
nlboivin@sympatico.ca

Corporate Secretary:

Ron Smith, VE3LBU
rjs3.smith@gmail.com

The above four positions are "Directors" and officers in charge of running the Corporate affairs of the Ottawa Valley Mobile Radio Club Inc.

Standing Committees

Club Projects & Bulk Orders:

Barry Alison, VE3NA
ve3na@rac.ca

Radio Course &

Accredited Examiner:

Norm Rashleigh, VE3LC
ve3lc@rac.ca

Meeting Reception:

John McGowan, VA3JYK
john.mcgowan1314@gmail.com

Nets & Radio Operations:

Hugo Kneve, VE3KTN
ve3ktn@rac.ca
Nicole Boivin, VE3GIQ
nlboivin@sympatico.ca

Rambler Newsletter Production:

Norm Rashleigh, VE3LC
ve3lc@rac.ca
Robert Cherry, VA3AOD
cw527@ncf.ca
Bill Hall, VA3WMH
bmhall@rogers.com

Club Web Site & Social Media:

Darin Cowan, VE3OIJ
ve3oij@amsat.org

VE3TWO Repeater Keeper:

Norm Rashleigh, VE3LC
ve3lc@rac.ca

Special Events:

Roger Egan, VA3EGY
va3egy@gmail.com
John McGowan, VA3JYK
john.mcgowan1314@gmail.com

OVMRC Groups.io

Ongoing discussion Group at:
<https://ovmrc.groups.io/g/main/topics>; if you are not a member please subscribe. All radio amateurs are welcome.

*Ottawa Valley Mobile
Radio Club, Incorporated
PO Box 41145
Ottawa, ON K1G 5K9
www.ovmrc.on.ca*

OVMRC Life Members

Ernie Jury, VE3EJJ
Maurice-André Vigneault, VE3VIG
Ralph Cameron, VE3BBM
Doug Carswell, VE3ATY
Doreen Morgan, VE3CGO

OVMRC Repeaters

VE3TWO

147.300 Mhz (+) 100 Hz tone
FM & Yaesu C4FM Digital
Operation

VE3RAM

Limited coverage to
Orleans and East Ottawa

443.700 MHz (+)
DMR CC1 & D-Star
Network connected to
Brandmeister

Special Event & Field Day Call Sign

VE3JW

The Rambler is the official newsletter of the Ottawa Valley Mobile Radio Club Incorporated and is published 10 times a year (monthly, except for July and August). Opinions expressed in the Rambler are those of the authors and not necessarily those of the OVMRC, its officers or its members. Permission is granted to republish the contents in whole or in part, providing the source is acknowledged. Commercial use of the contents is expressly prohibited.

Submit articles and notices to:

Norm at ve3lc@rac.ca

OVMRC Affiliations



The Wednesday evening Cross Canada Weekly C4FM is again hosted on VE3TWO

OVMRC members can again check into the Wednesday evening Cross Canada C4FM net on Club repeater VE3TWO 147.300 (+ offset) thanks to a remote Wires X connection provided by Steve VA3MPS. Steve will be engaging his node station onto the repeater Wednesday Evenings at 9:00 PM. All check-ins are welcome using the Yaesu C4FM digital voice mode.

Emergency Measures Radio Group: (EMRG)

Monthly Repeater Tests are conducted by Dave VE3KMY on the first Wednesday of each month at 8 PM on VE3OCE 146.880 MHz – (136.5 Hz tone). From initial contact on VE3OCE, you'll be asked to test VE3EMV/East 146.985 MHz – (100 Hz@ tone), VE3EMV/West 145.210 MHz – (123.0 Hz tone), VE3OFS 146.670 MHz – (136.5 Hz tone), VE3OCE 443.8000 MHz + 5 (136.5 Hz tone) and VE3EMU 444.9500 + 5 (136.5 Hz tone). It is advisable that all the EMRG frequencies be programmed into your radio. All check ins are welcome.

See: <http://www.emrg.ca/repeaters.htm>

Informal Amateur Radio Restaurant Gatherings

(All Cancelled until Further Notice)

- **QCWA Chapter 70** breakfast gathering every **Tuesday** morning at 7:30 to 10:00 AM, Summerhays Grill, 1972 Baseline Rd., Nepean
- **Orleans Coffee gathering** every **Friday** morning at 9:00 AM, McDonalds, 2643 St. Joseph Blvd, Orleans
- **QRP Group Dinner** meeting, **2nd Wednesday** every month, 5 PM, Newport Restaurant, 322 Churchill Ave N., Ottawa
- **Phoenix Net monthly Breakfast** gathering, usually the **second Saturday** every month at 9 AM, T-Basil Restaurant, 2440 St Joseph Blvd, Orleans. (get on Pete VE3XEM's mailing list for monthly reminder VE3XEM@RAC.CA)

OVMRC Repeater VE3TWO :

147.300 MHz +600 kHz, 100 Hz Tone and Yaesu C4FM Digital Voice

OVMRC VE3TWO Weekly Net:

- **Thursday Evenings, 8 PM**, Club Net on FM conducted by Hugo, VE3KTN.

Other Local 2 Metre Repeater & Simplex Nets: (all check-ins welcome)

- **Rubber Boot Net**, VE3MPC 147.150 +, (100 Hz tone) mornings at 7:30 AM conducted by Roger, VE3NPO
- **Phoenix Net**, VE3MPC 147.150 MHz +, (100 Hz tone), Tuesday evenings at 7:30 PM conducted by Pete, VE3XEM
- **QCWA Chapter 70 Net**, VE3MPC 147.150 MHz +(100 Hz tone), Monday evenings at 7:30 PM conducted by John, VE3ZOV
- **Capital City FM Net**, VE2CRA 146.940 MHz -, (100 Hz tone), Monday evenings at 8:00 PM.
- **Champlain Mini Net**, VE3STP 147.060 MHz -, (114.8 Hz tone), every evening at 6:45 PM.
- **Upper Frequency Net**, Simplex 144.250 MHz using USB, Tuesday evenings at 9:00 PM conducted by Glenn, VE3XRA. Following check in on 2 m you can check your radios on 6 m at 50.150 MHz and 70 cm on 432.150 MHz as well using USB. All check ins are welcome.
- **DEXNET (Digital Experimental Net)**, Simplex 144.210 MHz, USB, vertical polarization. Check the schedule on groups.io for digital mode used each week.

OVMRC HF Nets

- **Pot Hole SSB Net**, 3760 kHz, every Sunday morning at 10:00 AM conducted by Ernie, VE3EJJ, or Glenn, VE3XRA.
- **Pot Lid Slow Speed CW Net**, 3620 kHz, every Sunday morning at 11 AM conducted by Roger, VE3XRR.

(Continued from page 1)

The club still has LMR 195 @ \$0.80 / ft and LMR 400 @ \$1.35 / ft, crimp on connectors @ \$2.00 ea, (type "N" connectors are \$4.00 ea), SMA to BNC adapter kits @ \$6.00 ea (5 kits left), and crimper tool kits @ \$95.00 ea (2 left). All prices are tax included.

The agenda for the March meeting is the usual opening boiler plate, February meeting minutes approval (published in this issue of the Rambler), Allan's D-Star

presentation, director reports, other business, and closing. Remember, attendance at the monthly meeting buys you another "free" ticket for the year end door prize draw if you are a club member in good standing and did not win one of the door prizes last year. I hope to announce the item (s) at the March meeting and promise it will be a valuable addition to your shack!

I had better stop the rambling on here. Everyone is invited to join in on the Club March Zoom meeting

Wednesday March 17. Check in will start at ~ 6:45 PM with a planned start time as close to 7:15 PM as practical. Anyone not receiving the check in credentials can do so by sending an email to Norm (Zoom custodian) VE3LC@rac.ca.

Stay safe, stay home, stay on the air!

73
Barry, VE3NA

VE3RAM is now a Gateway Repeater for the D-Star Network

Besides operating as a DMR repeater with network access to the Brandmeister Canada master server, VE3RAM serving Orleans and Eastern Ottawa is now configured to repeat and provide network access for the D-Star network. Several local hams have been using VE3RAM with D-Star including VE3VIG and VA3LUI and myself, VE3LC to access the Monday evenings Northern Ontario D-Star Net at 8 PM and the Can-Net Friday evenings at 9 PM; both can be accessed by connecting to reflector XRF301B.

Please respect that when VE3RAM is engaged in D-Star communications, it is not available for DMR traffic and vice versa.

Before using VE3RAM, it is best to see it's status by viewing the repeater's "Dashboard" at: <http://ve3ram.ddns.net:380/>

VE3RAM 443.7000 (+ 5 MHz)
DMR CC1

All DMR Brandmeister network traffic should be carried out on Time Slot #1. Time Slot 2 is reserved for XLX196B Reflector traffic using TG 6.

All comments and questions about VE3RAM should be referred to Norm at: VE3LC@rac.ca

Welcome New Members to the Club this season:

Bryan VE3ZRK,
John VE3ZOV,
Frank VE3YY,
John VE3WHZ,
Harrie VE3HYS,
George VE3ENU,
Kevin VA3YHM,
Ryan VA3RVZ,
Assaf VA3PCI,
Louis VA3LUI,
Matt VA3KXA,
Shuo VA3HSH,
Martin VA3DFR,
Colin VA3CSG,
Connor VA3COK,
Andre VA3CHH,
Adam VA3AUM,
Jean VA2KEI,



The company has added many new products to their site. They offer the Anytone D878UV portable radio, one of the most popular DMR radios on-the-air today. \$15 off on purchases over \$200 if you checkout indicating "OVMRC".

ARDF Ottawa – Transmitter Finding Activity Summary- Feb. 12-15, 2021

This was our first Transmitter Finding (aka Fox Hunting) activity of 2021 and despite difficult times, we are pleased to see that a few of you were willing and able to participate. We hope to see these numbers grow over the coming months

We wanted to experiment with a higher power transmitter this time to provide the community with a different and in some ways more challenging experience.

Roger, VA3EGY Harrie, VE3HYS and Rob, VE3RXH spent a Saturday earlier in the month, confirming the fox setup and propagation range. We drove around town taking S-meter readings at various locations. We learned a few things then and more during the actual event which we will share in this article.

We had 6 active participants and a few more who sent emails or posted to groups.io to confirm they could hear the fox but had decided not to participate this time.

Three people found the fox (Jeffrey, VA3PEW; Michael, VE3WMB; and Thane, VA3TTM) and some shared their approach and challenges which we so appreciate and which they have agreed we can share in this article.

Where was the fox?

The fox was hiding at Scouts Headquarters, 1345 Baseline Road, Ottawa. There is already a radio shack there as part of the Scouts

Museum. Harrie, VE3HYS with help from Thane, VA3TTM, and new HAMs Tom, VA3TXL and Dave, VE3FCQ installed a new permanent tower with several antennas on it last fall for future activities including Jamboree on the Air (JOTA)



The setup:

A mid-1970's Kenwood TR9000 VHF rig (<http://www.rigpix.com/kenwood/tr9000.htm>) transmitting at one watt over 90 feet of LMR400 feedline to a 42-foot tower and 4-foot mast with a Diamond V2000 (<https://www.diamondantenna.net/v2000a.html>) antenna (6.2dB gain) on 147.57 MHz mounted on top.



Fox Propagation Range:

From testing, we could hear the fox as follows:

- east to at least Hwy 174 and Montreal Road;
- south on Woodroffe Ave to

past Barrhaven;

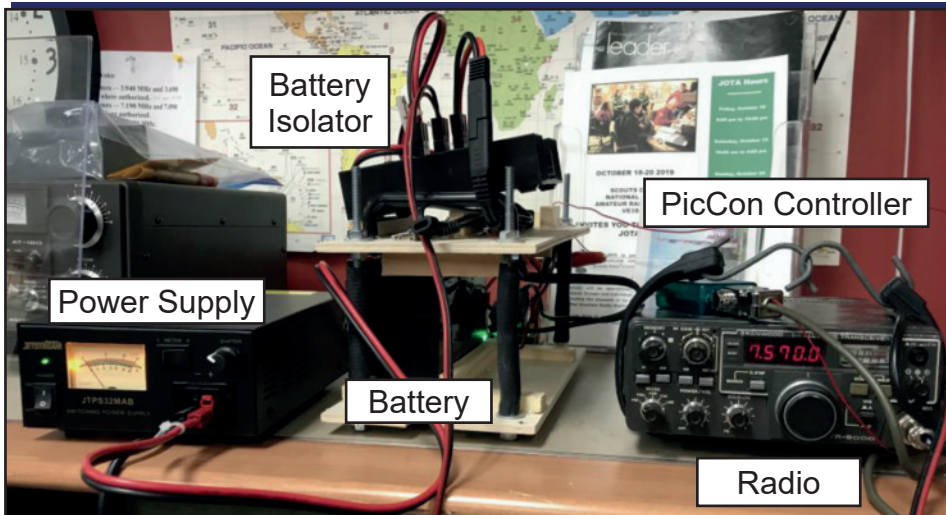
- west on Hwy 417 to Tanger outlet and;
- north from March Road, along Carling; Ottawa River Parkway to parliament hill

Houston...we had a problem:

Despite extensive testing, thanks to Harrie, VE3HYS; Rob, VE3RXH and Roger, VA3EGY, we discovered the fox would intermittently stop transmitting and then restart on its own or with some assistance. It did this at least 3 times over the 3 days of the event. We still don't know why.

The unit was on a power supply with automatic cutover to battery so the issue must be either an RF or static interference

(Continued on [page 6](#))



with the circuit or a software glitch in the controller.

We now have a 2nd controller so we can compare performance and hopefully work this out before our next event. Our apologies to those of you that reported you almost found it and then it disappeared. I guess it was behaving a lot like a real fox in that regard.

Participants Feedback:

Jevin, VA3JEV from the Ottawa Valley QRP Society. We are very happy to see more participation from the QRP group. Many thanks to Norm VE3LC for posting an advertisement on the Ottawa Valley QRP Society and the OVMRC groups.io pages. Everyone is welcome of course!

Jevin has a DF loop as per these plans he shared.
<https://qrm.guru/how-to-locate-the-noise-source-building-df-loop/>
 Thank you Jevin. I plan to build one of these myself to see how it works.

Jevin let us know that he could not get a decisive null with this antenna because there was just too much signal from his QTH. Next time, we suggested he might want

to use a tape measure Yagi antenna from plans on the internet (http://theleggios.net/wb2hol/projects/rdf/tape_bm.htm) with most parts available at your local hardware store for around \$40. There is a really good youtube video by KB9VBR on how to build this antenna at <https://m.youtube.com/watch?v=BmHoQrDfw-0&noapp=1>. And, an offset attenuator, like the kit we built as a club project last winter from KC9ON as a kit (<https://kc9on.com/product/fox-hunt-offset-attenuator/>) for about \$20 or assembled (<https://kc9on.com/product/fox-hunt-v6-smd/>) for about \$40. Maybe we will do a bulk purchase again if we see enough interest. Drop me an email at va3egy@gmail.com and let me know if you are interested in building a tape measure antenna, an offset attenuator or both.

Wray, VA3EO reported:

“I tuned my desktop 2M rig to the frequency and the fox came booming in. Wow what a signal! Anyway, I disconnected my indoor antenna and still picked it up through my coax. My

HT even picked it up in my basement. So, my guess is that the fox is either in my garage at 21 Quinterra Court or possibly on VE3YY's balcony on Uplands Drive. With all the reflections in the house, my coax loop sniffer does not do much good.”

I am sharing Wray's feedback with thanks to Wray for being so specific about his experience in hopes that it will help others who were not able to get out this weekend, to prepare for the next one.

It's one thing to have a fox transmitting on a few milliwatts that you have to drive around until you can hear it within maybe a 1-2 km grid, but with 1 watt, you really need to invest in some basic equipment (directional antenna and an offset attenuator) to be able to see a peak or a null in the signal for direction and a radio with an S-meter to know when you are getting closer or farther away from the fox. In Wray's case he was fully 6 km from the fox and the signal was just too strong without an ability to attenuate it.

Dave, VE3FCQ a new HAM in 2020, got his license to follow in his dad's amateur radio footsteps. Dave bought one of our available offset attenuator kits and borrowed a Yagi. I don't think he found the fox but he sure gave it a good try. I think he was out twice over the weekend.

There is no shame in not finding the fox, it takes practice to develop the skills and you definitely learn some new techniques and tricks every time. Feel free to reach out

and tell me what you tried and I may be able to offer some of my own tips. I am not an expert but definitely willing to share as others have done to help me get started.

Jeffrey, VA3PEW emailed us on Saturday afternoon. Jeffrey is a keener and has not missed a fox hunt in the past 3 years. Now Jeffrey is a software engineer and I think this background goes a long way to inspiring his problem-solving approach. On the one hand, he does not have an attenuator or a directional antenna. Instead, he uses his mobile rig with a hatch mount omni-directional antenna and uses his s-meter to develop a matrix of signal strengths that leads to a possible grid where the fox might be hiding. He said next time he wants to think about how the antenna placement on one corner of his vehicle is affecting the ground plane antenna gain pattern to further refine his plotting.

“Is the fox in the apartment buildings at the corner of Baseline and Merivale?”

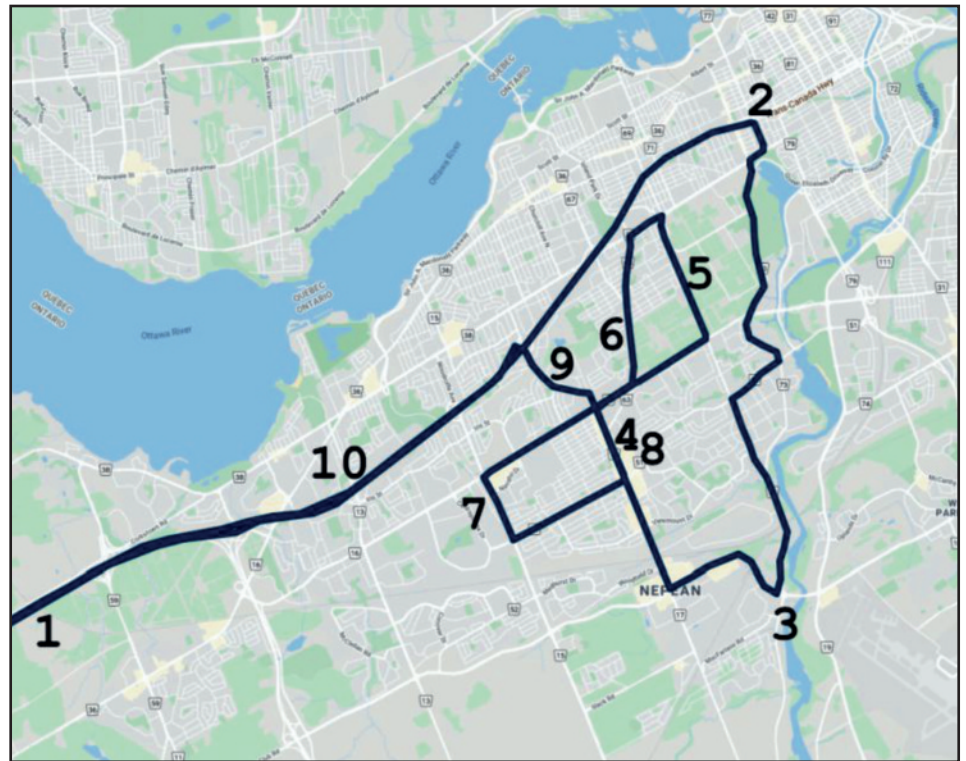
At first, I didn't think I was going to figure out anything more specific than "Nepean" since the signal/range was much stronger this time, but then I remembered I could add an +0.010MHz offset and then that signal dropped into a range that gave me more information, but I kinda had to discard the mental propagation map I had in my head at the time and start over...

But with that technique, I was able to narrow it down to that intersection. I didn't notice any particular bias in any direction or shadows caused by buildings, so I

figure it must be near the top (or on the roof?) of a tall building... I used Google Maps in 3D mode to see which buildings were the tallest in the area and did my lookup of ham addresses (via 3, doing searches like "<street name> Ottawa") to see if there's a correlation.

Perhaps the QTH of David Robert Parks VE3AV or Everett E Stevens VE3CYO?

Here is Jeffrey's driving trace with numbers overlayed to indicate where he started (coming from



Kanata) and each successive segment as he tried to narrow down his search area.

Jeffrey says he drove 47.6 km over 52 minutes and ultimately his guess was just a couple hundred meters from Scouts HQ. An awesome effort!

Michael, VE3WMB who also loves a radio finding challenge,

lives in Central Park area which is right behind Scouts headquarters. Here is what he had to say on Sunday evening in just one short paragraph...

“Unfortunately, the beacon was down when I went out for my walk this afternoon, so I was unable to get an additional outdoor fix. This thing is really close, and it seems that I am getting some reflections making it seem at times like it is everywhere. However, I

was able to get a rough direction from an upstairs bedroom, so I am going to make an educated guess that the beacon is located at the Scouts Canada Building on Baseline Road.”

Well Michael, you are absolutely right! Congratulations and thanks for sharing this picture of your rig



display which shows a clean signal and a strong ERP with antenna gain.

And saving the best until last.

Thane, VA3TTM sounds like he had the most fun of all and gets an "A" for effort as well as the best ending for his fox hunt adventure. Here are some excerpts from what he shared with us...

"It took me a lot longer than I expected it would.

I was not able to hear it from three of my attic mounted antennas, so at 2:00 PM Sunday, I drove to the top of Corkstown hill. I could hear it there with static with just my Baofeng with the rubber duck.

I pulled into the ski trail parking lot to connect an 8 element Yagi, only to find out that it was using an RCA connector instead of an "F" connector. My 75-ohm to 50-ohm transformer has F on the 75-ohm side and SMA on the 50-ohm side.

I continued down Corkstown hill toward Moodie drive, where I lost the signal. I got the signal again briefly when I crossed the Queensway at Moodie.

I could not find an F to RCA, so switched to my 4 element Yagi and went back to Corkstown hill with the small Yagi connected to one radio, and the rubber duck connected to another.

I was not able to pick up the signal with the Yagi at Corkstown hill, so I drove to Moodie, and then went to Carling Avenue. (editorial note – this might have been one of the times the fox stopped and restarted intermittently)

On Carling, I could get the signal on the rubber duck, but I did not want to try to drive while holding up the Yagi, and each time I pulled off Carling to park, I lost the signal.

When I got to Merivale Road, just using the rubber duck, the signal seemed to be clearer to the south than to the east.

So, I started to drive South on Merivale. When I got to Baseline Road, I started hearing the signal from the radio with the Yagi, even though the Yagi was on the seat beside me pointed to the floor.

I decided I needed some place to park so I could get out of the car and wave the Yagi around.

So I went to scout HQ. There I could receive the signal on all sides of the building, and in all directions. I assume that the signal could be bouncing off all the tall buildings in that area. Where did you have the fox? Was it vertically polarized or Horizontal?"

Editorial - Thane – thank you for this wonderful account. We all agreed that as far as we are concerned you found the fox.

One of Harrie's Scout students borrowed a Yagi and spent some time searching. He actually started at the Experimental Farm which is very close but then headed to Carlingwood Shopping Centre parking lot. Harrie will have to spend some time with this fellow to help him get ready for an awesome experience next time.

I'm sure there were a few more of you that were out for a bit looking or using your beam and discussing locations on the OVMRC

groups.io page; VE3VIG and VE3KMV come to mind.

In closing:

Congratulations to all who gave it a try and to Michael, Thane and Jeffrey for providing the rest of us with some things to think about between now and our next event.

If you would like to hide the fox in a future event, please get in touch with me at va3egy at gmail.com

And a big thanks to Neil VE3PUE for creating and maintaining our website at <https://ardfottawa.ca> where you can find more information about equipment and upcoming events as they are planned. If you would like to be notified of upcoming events, please subscribe to our email list on this website.

February Meeting Minutes

Date / Time: Wednesday
February 17, 2021 19:15

Location: Via ZOOM on line meeting

1. Call to order:

President, Barry Allison, VE3NA called the meeting to order at 19:21. There were 66 check ins including visitors/new hams Alan Boyd, VE3AJB RAC Regional Director for Ontario North and East and President of the Manitoulin Radio Club, Louis Cote VA3LUI; Ryan Zariski, VA3RVZ; Paul Coverdale, VE3ICV; John Walsh, VE3WHZ and George Farach.

2. Moment of Silence and Greetings:

Barry Allison, VE3NA opened the meeting with a solemn statement and moment of silence honouring Tim Orange, VA3ZZW (SK) who passed in Ottawa last weekend. Following the observance, greetings were extended to members and guests.

3. Approval of minutes from January 20, 2021:

MOTION TO ACCEPT: By Bill Henderson, VA3HWA and seconded by Fred Crowe, VE3LAF that the minutes of the meeting

held Wednesday January 20, 2021 be accepted.

There were no objections.

4. Projects, Dues and Announcements:

1) **Haves and Wants** – From an estate sale there are two Grundig SW radios available. A 4B 400 and a Satellit 800 for \$375 for both radios or B.O. Contact Barry at VE3NA@rac.ca if you are interested. There were no Wants this month.

2) Reminder that paid up members are eligible for the year end draw prize. Membership dues outstanding as of now are considered delinquent and those members are not eligible for the draw. See the September 2020 Rambler, page 4 for instructions on paying using e-transfer.

<https://www.ovmrc.on.ca/Rambler/Archive/Ram2020-09.pdf>

5. Agenda, Meeting Content and Directors' Reports:

Barry Allison, VE3NA outlined the agenda for the meeting which included:

- Guest Presentation: An Introduction to FLDigi - Hugo Kneve, VE3KTN, Net Operations

Hugo split the presentation into two parts, the first being a PowerPoint deck of 10 slides, followed by a video. The aim of the presentation was to introduce members to this versatile open-source software digital suite. The slides addressed the methods for configuring the FLDigi software with radio software. Hugo also spoke about rig configuration, CAT control using FLRig, QSO logging and file transfer. The link to both the slide deck and the video is available on Groups.io and a reminder that the video will only be available until the end of March. Right click on the following link and it will take you to both the PowerPoint and the video.

<https://www.ovmrc.on.ca/Rambler/Archive/Ram2020-09.pdf>

Barry, VE3NA thanked Hugo on behalf of the club. When appropriate, a club mug will be presented to Hugo for his presentation.

- Club Fund Raising Auction: Anytone AT-D878UV Plus Analog FM + DMR Digital portable radio and accessory package was held between part one and two of Hugo's presentation. Bidding opened at \$225 and quickly climbed to over \$400. The winning bid of \$450 was submitted by Patrick Warner, VE3LTN. Norm

Rashleigh, VE3LC will program the radio for Patrick and provide the package to him. All in all, the auction was a big success for the Club and for Patrick. Thanks to everyone who participated in this fun event. The detailed description and a photo of the auction package is on groups.io here:

main@ovmrc.groups.io | OVMRC February Auction A reminder that DX Canada offers OVMRC Members a special coupon offer on purchases over \$200. Use Coupon Code 'OVMRC' to get \$15.00 off your purchase. Check out their website at DXCANADA.CA Amateur Ham Radio Online

- **Next Month's Guest Speaker:** Allan Boyd, VE3AJB from Little Current will discuss digital modes like DMR, D-Star and Fusion, using Hotspots like the OpenSpot3 and how Reflectors create a linked network in Ontario. Allan hosts weekly nets including the D-Star Net Monday evenings at 8 PM and the Friday night 'Can-Net'.

- **Finance and Membership Report:** Nicole Boivin, VE3GIQ reported there are now 107 members as of the meeting. Under the Financial Report, the Club has \$37.00 in cash and \$27,088.77 in financial assets. The GIC's have been cashed out and deposited, including accrued interest.

GPS Disciplined Oscillator Precision Frequency Reference for My Icom IC-9700

The IC-9700 is a wonderful VHF-UHF transceiver companion radio for the popular IC-7300 HF (+ 6 m) transceiver. Both radios have the same physical appearance and look good side by side. The 9700

- **VE3KTN Net Operations Update:** Hugo, VE3KTN regularly updates the full schedule of regional nets. Right click to open this link:

<https://www.ovmrc.on.ca/club-info/amateur-radio-info/amateur-nets-ottawa-area/>

- **Fox Hunting/Transmitter Hunting Update:** Rob Haddow, VE3RXH along with Harrie Jones, VE3HYS summarized the

February 13th event. The transmitter was located at Scout headquarters at 1345 Baseline Road, Ottawa. The output was only 1 watt, but covered a good portion of the city and some outlying areas. Activity information is available on the ARDF (Amateur Radio Direction Finding) Ottawa.ca website. Going forward, an event a month is contemplated between February and September, 2021. Roger Egan, VA3EGY has prepared a summary for the March 2021 Rambler. You can also view Roger's report on groups.io here:

https://ovmrc.groups.io/g/main/topic/amateur_radio_transmitter/80879277?p=,,20,0,0,0::recentpostdate%2Fsticky,,,20,2,0,80879277

- **Course Instruction Report:** Norm Rashleigh, VE3LC advised that course packages have been

distributed to those who have expressed interest in taking the amateur radio course.

operational and computer connectivity features of the IC-7300. Like the 7300, the IC-9700 uses full SDR digital processing architecture for receiving and transmitting signals at the frequencies of operation except for the 1200 MHz band where signal heterodyning is necessary.

distributed to those who have expressed interest in taking the amateur radio course.

6. Upcoming contests:

For more detailed information on upcoming contests, see the WA7BNM contest calendar:

<https://www.contestcalendar.com/>

RAC Members can log in and go here:

<https://www.rac.ca/category/prog/contesting/>

ARRL Members can log in and go here:

<http://contests.arrl.org/>

7. Adjournment:

Moved By: Douglas King, VE3YDK that the meeting be adjourned at 21:44.

8. Next meeting:

The next virtual monthly meeting of the OVMRC will be held Wednesday, March 17, 2021 at 7:15 PM using ZOOM meeting. Please watch for your email meeting invitation and link to Zoom.

Minutes recorded

and prepared by

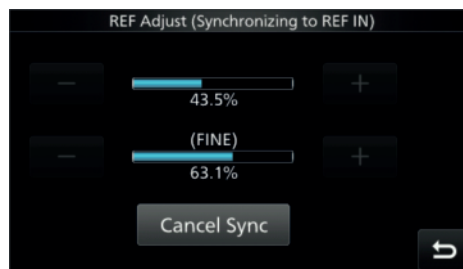
Secretary Ron Smith, VE3LBU

For all modern transceivers, the RF signals are generated using a TCXO (temperature compensated crystal oscillator). These devices are quite stable for most operational requirements. However, because these devices operate at relatively low frequencies, when applied to VHF and UHF transceivers, harmonics of the operating frequency of the TCXO are often required. What that means is any instability (or frequency drift) at the fundamental frequency is multiplied several times. Also multiplied is the phase noise of the TCXO; phase noise is caused by random variations of the phase of the cyclic oscillator signal that is like a very low level FM modulation on the signal that widens its ideal spectral purity. Some oscillators are better than others but few are perfect. Local oscillator phase noise can also affect the performance of receivers to resolve very weak signals.

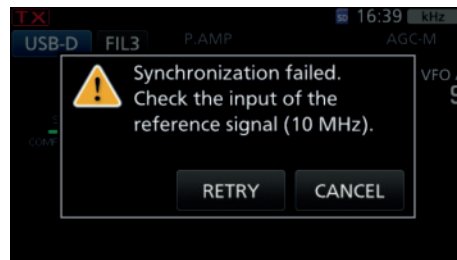
Although for wide bandwidth modes such as FM and SSB on the VHF and UHF (and higher) amateur bands, attention to frequency stability or accuracy is not so important; it is however, very important for the very narrow bandwidth modes with long transmission duration such as WSPR that occupies a bandwidth of only 6 Hz using 4 level frequency shift keying (FSK) using 1.4648 Hz spaced tones. Having a frequency stable transmitter and receiver at both ends of the radio path are therefore of paramount importance considering the 110 second transmission and reception duration of the mode. This precludes the use of most low end radios, especially on the 2 m, 70 cm and higher bands without

attention to design to exceptional frequency stability.

For this reason, ICOM built into the design of the IC-9700 the ability to connect an outboard GPS Disciplined Oscillator (GPSDO) operating a 10 MHz to the SMA connector on the back panel of the radio. When connected and the radio detects this 10 MHz, (-10 dBm) reference signal, the 9700 through menu settings provides setting an automatic adjustment mode for (synchronization) of the dial readout to be accurate, based on a very stable GPSDO derived reference signal. As the radio's TCXO master clock drifts in frequency (which operates at a nominal frequency of 49.152 MHz), adjustments are made in frequency synthesis divide ratios of the radio to compensate and keep the radio's frequency reasonably stable.



Menu screen showing the automatic adjustments to compensate for frequency drift of TCXO based on the 10 MHz reference signal input.



If the GPSDO 10 MHz signal is lost to the IC-9700, it flashes up this message.

Unfortunately, the response for this method frequency stabilization is not necessarily fast enough for some very narrow band digital modes such as WSPR that requires signal frequency stability within 4 Hz during its 110 second transmission cycle. This requirement applies to the combined drift of the transmitter and receiver at both ends of the radio path. If two 9700s are involved, the transmitting one likely drifts one way (while heating up) and the receiving one drifts the one way (while cooling down) thus compounding the problem. Also, if the drift is not “linear” but abrupt, it can also affect the decode of digital signals such as WSPR. It has been demonstrated that the IC-9700 can change in frequency quite abruptly many Hertz beyond the WSPR tolerance because of TCXO voltage transient changes when the radio's fan cycles off and on.

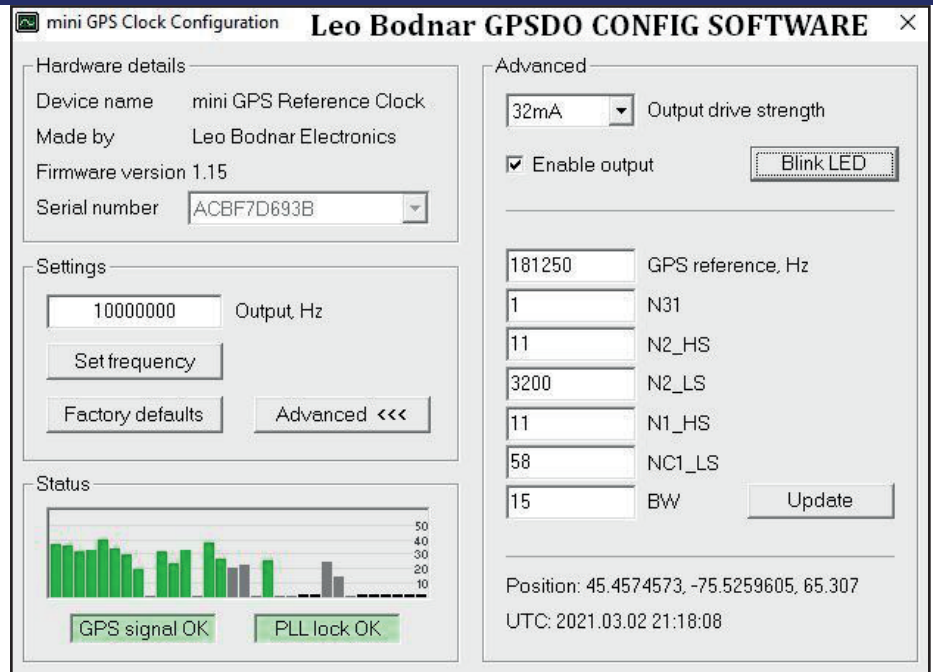
However, there is a solution to these stated problems for the very fussy of IC-9700 owners like myself, that being to stabilize directly the TCXO clock with a GPSDO derived 49.152 MHz signal and not use the “built-in” Icom solution that uses relatively slow to react software routines based on the input of a GDSDO 10 MHz reference signal leaving the TCXO free to drift as it may.

A UK company called Leo Bodnar provides a product assembly for this purpose. It consists of an:

1. “Injection Board” that is designed to screw mount on top of the radio's shielded compartment housing the TCXO. The Leo Bodnar board is fitted with an SMA connector to provide for

connection of an external GPSDO derived reference signal setup to operate precisely at the TCXO nominal frequency of 49.1520 MHz. The Injection Board couples into the TCXO circuit through a small surface mounted inductor device so no physical solder connection made to the transceiver. The injection board can be removed leaving no trace it was even installed; something to consider if any warranty repair is ever required.

#2. The second part of the “kit” utilizes the Leo Bodnar “miniGPS Referenced Clock”. This product is small and comes complete with a GPS receiver mag mounted active antenna and 18 feet of cable. The GPSDO module is frequency programmable by the vendor’s PC software and locked by user settings between 400 Hz to 810 MHz. The assembly is powered via a USB cable (supplied) typically from the computer



running the configuration software. When using this product with the “Injection Board” it can be programmed exactly to output 49.1520 MHz or if used as the “Ref” input signal for the 9700, it can be set at 10 MHz.

This Leo Bodnar modification kit to the IC-9700 will cost approximately \$260 Cdn to land in your mail box.

Norm, VE3LC@rac.ca

References:

<https://www.leobodnar.com/shop/>

Videos:

<https://www.youtube.com/watch?v=rhu6fRz6Z3g>

<https://www.youtube.com/watch?v=u0MqtZNYzLE>

<https://www.youtube.com/watch?v=S4yGdaiYMM0>



OVMRC Net Activity, Check-ins for February, 2021.

Prepared by: Hugo Kneve VE3KTN

OVMRC 2 Metre Net: VE3TWO 147.300+ 100 Hz. tone, Thursdays 8 p.m. local.

February 4	February 11	February 18	February 25
VE3KTN - NCS	VE3KTN - NCS	VA3AUM - NCS	VE3KTN - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors
			Glenn - VE3WGD Craig - VA3KRT
Check-ins	Check-ins	Check-ins	Check-ins
VE3ZZU	VE3RUU	VE3ZZU	VE3RUU
VA3EO	VE3ZZU	VA3KXA	VE3OKD
VE3RUU	VE3NA	VE3NA	VA3GLB
VA3AUM	VE3LC	VE3LC	VE3NA
VE3NA	VE3LBU	VE3LBU	VE3LC
VE3LC	VE3XEM	VA3EGY	VE3LBU
VE3LBU	VE3VIG	VE3KAE	VE3ZZU
VE3VIG	VE3NPO	VE3RXH	VE3KAE
VE3KAE	VA3EO	VA3BGO	VE3NPO
VA3HJR	VE3YY	VE3VIG	VA3EO
VE3TXB	VA3PSI	VE3BOE	VA3PSI
VE3RXH	VA3LUI	VA3PSI	VE3RXH
VE3BOE	VE3BOE	VE3KJQ	VA3AUM
VA3KXA	VE3RXH	VE3KTN	VA3IAH
VE3KJQ	VA2EEK	VA2EEK	VE3VIG
VE3YY	VA3IAH	VA3EO	VE3KJQ
VA2EEK	VE3KJQ		VE3SYZ
VA3IAH	VA3KXA		VA3BGO
VA3BGO	VA3HJR		VE3YY
VA3DEF	VE2OCQ		VE3SMF
	VE3KAE		VA2EV*

OVMRC Pothole Net: 3760 kHz. LSB Sunday mornings at 10 AM. local

February 7	February 14	February 21	February 28
SFI:73 A:7	SFI:72 A:13	SFI:73 A:20	SFI:79 A:4
VE3XRA - NCS	VE3XRA - NCS	VE3EJJ - NCS	VE3XRA - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors
Check-ins	Check-ins	Check-ins	Check-ins
VE3BAE VA3BGO VE3SYZ VE3EJJ VE3LC VE3QN VE3KTN VA3PCJ VE3YY VA3EO VE3EKN VE3NA VA3IAH VE3NPO VA3NAH VA3PSI VE3WMB	VE3EJJ VE3MKX VE3QN VE3LC VE3KTN VE3NA VE3NPO VA3EO VE3YY VA3PSI VA2EEK VA3IAH	VA3BGO VE3LC VE3KTN VE3YY VA3PSI VE3QN VE3KAE VE3EKN VA2EEK VE3EKN VA3EO VE3KAE VA3IAH	VA3BGO VE3NPO VA3PSI VE3LC VE3QN VE3KAE VE3EKN VA2EV* VA3IAH VA3EO VE3EJJ VE3NA VE3KTN

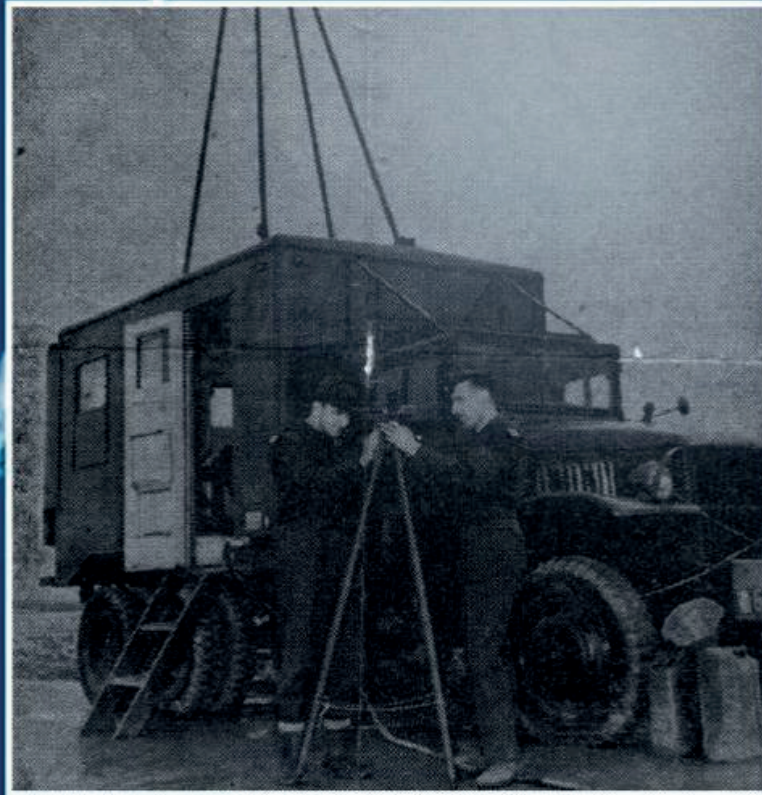
* VA2EV is Don in Gatineau, also known to us as VA2EEK.

OVMRC Digital Experimental Net: 144.210 MHz. USB, V-pol Sundays 7:30 P.M.. local.

Net meets on PSK31 before proceeding to the mode-of-the-day.

Date	Mode	Config
2021-03-07	FSQ	FSQ4.5
2021-03-14	Olivia	16-1000
2021-03-21	Contestia	16-1000
2021-03-28	MT63	MT63-1000
2021-04-04	IFKP	1.0X
2021-04-11	DominoEX	DominoEX8
2021-04-18	Thor	THOR16
2021-04-25	Throb	THROBX4
2021-05-02	Hellschreiber	FELD HELL
2021-05-09	RTTY	45.45B/170Hz shift
2021-05-16	BPSK-31	
2021-05-23	QPSK-31	
2021-05-30	MFSK16	
2021-06-06	FSQ	FSQ4.5
2021-06-13	Olivia	8-1000
2021-06-20	Contestia	8-1000
2021-06-27	MT63	MT63-500

MUD ON MY BOOTS



Dares and Ventures of a Canadian
Airman During the Cold War

MAURICE A. VIGNEAULT

Copyrighted Material

OVMRC Life Member, Maurice André Vigneault, VE3VIG has written and had published a book about his Cold War experiences as a Canadian Airman during the Cold War. His book is available on Amazon. Maybe when the Club can assemble again with regular in-person meetings, we can have Maurice André conduct a "Book Signing" event.