

Rambler

Newsletter of the
Ottawa Valley Mobile
Radio Club
Incorporated



February 2020

Edition 57

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President's Ramblings

I was quite worried about the January meeting because of the impending winter storm and members facing difficult driving conditions. Fortunately, the storm held off, and despite the cold, we had a record attendance of 50 plus members and guests. I guess we're doing something right after slightly modifying the meeting format, which we'll stick to... but with one final tweak.

The start time for the February meeting will be backed off to 7:15 PM. We noticed that by starting at 7:00 PM, members were still arriving at, and after 7:00 PM. I also received several "suggestions" that 7:00 PM was a little tight for many and reverting to 7:15 PM would be better. Based on your suggestions, the February meeting start time will be 7:15 PM. The end time will remain as close as possible to 9:45 PM, allowing time for your help putting tables and chairs away.

I have mentioned this before, but if you are unsure of your status as a paid-up member you can always check with Nicole, VE3GIQ, club Treasurer. This is important since only paid up members are eligible for door prizes, 50/50, and subsidized club kit costs. I have another useful door prize for

February. Normally I keep this for a bit of a surprise but I just couldn't keep this one under wraps. It is a kit of 40 clip-on toroid chokes, 8 each of 5 different sizes. Some lucky attendee will take this useful kit home!

There are a few surge arrestor project kits remaining that will be available for purchase at the February meeting. If you are looking for one, please bring exact change of \$15.00 for Nicole. I'll have the kits and payment can be made directly to Nicole. Assembly instructions are posted on the club web site under the presentations and projects tab, and on the groups.io page.

Included in this Issue of the Rambler are the results of the tests Norm, VE3LC performed on the completed kit. Thanks Norm!

Now on the topic "the bands are dead!"; I beg to differ. I was testing a transceiver prior to preparation for sale, and after finalizing tests into a dummy load, I decided to try it on my G5RV to test the built-in antenna tuner. Indeed, initially the band (this was 80 M) did appear "dead", so I tuned up and threw out a call... nothing heard. After another call, didn't a guy from Michigan come back to me. Turns out it was winter field day weekend and he needed a contact. Well that turned into a pile up! Turned out many were looking for a VE3 in (Continued on page 4)

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Calendar

General Meeting Wednesday

February 19th
7:00 P.M.

Science & Technology Museum
Studio 6

Feature Speaker: Denis Rule, VE3BF

Topic: Portable HF Portable Operation
using a 35 foot HF mobile mounted vertical

Next Meeting

Wednesday March 18th, 7:00 PM

Feature Speaker: Chris Allingham, VE3FU
Topic: Operating CQ160CW contest
station VO2AC at Point Amour
Lighthouse, Labrador.

OVMRC Executive and Officers 2019-2020

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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:

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Radio Course &

Accredited Examiner:

Norm Rashleigh, VE3LC
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john.mcgowan1314@gmail.com

OVMRC Life Members

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

OVMRC Repeater

VE3TWO
147.300 Mhz (+) 100 Hz tone
FM & Yaesu System Fusion Digital
Operation

OVMRC Call Signs

VE3JW
VE3RAM

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

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Radio Club, Incorporated**
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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. The Net can also be accessed in the west-end of town using the Fusion repeater VE3DRE on 146.805 (- offset) owned and operated by Denis VE3BF who is the Net Control Station. All check-ins are welcome using the Yaesu C4FM digital voice mode.

Emergency Measures Radio Group: (EMRG)

Monthly Repeater Tests are conducted by Dave VE3KMV 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 are welcome)

- **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

VE3TWO Scheduled Nets:

- **Thursday Evenings, 8 PM**, Club Net on FM conducted by Hugo, VE3KTN and Rob, VE3RXH.
- **Sunday Evenings, 8 PM**, Ottawa area 2M SSB Round Table Net 144.250 Mhz (*Updated*)

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 Mike, VA3TJP
- **Phoenix Net**, VE3MPC 147.150 Mhz +, (100 Hz tone), Tuesday evenings at 8:00 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, Tuesdays 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.

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)

ONE! An hour and a half later I logged up 70 plus contacts! It goes to show that maybe everybody is listening and not talking, so the next time you find the band is dead, maybe just go ahead and throw out a call. You never know what may happen!

The guest speaker for the February meeting will be Denis Rule, VE3BF. His talk will be about "Operating Portable". He has an impressive mobile set up and we will no doubt hear about his ventures operating and activating Parks-on-the-Air.

Report on the annual gathering of the Contest Club of Ontario - Ottawa Luncheon Meeting, February 1, 2020.

In the January issue of the Rambler, we advertised as a "Happening" a luncheon meeting and presentation session on February 1st at the Barley Mow restaurant on Merivale Rd. under the banner of the "Contest Club of Ontario", a club which is open (primarily, but not exclusively) to hams with an interest in contesting and radio sport. Their web site is at: <http://www.va3cco.com/> where you can join and get yourself on the roster for free, although donations are accepted. Folks can also tune into the CCO on Groups.io. The Ottawa luncheon gathering was organized by Bob MacKenzie VA3RKM and Dave Parks VE3AV.

Some radio amateurs in the local area take contesting very seriously. Others, like myself, dabble and dabble in contests by giving others

The coax project is ongoing and as a reminder here are the costs to paid up members:

- LMR 400 Cost \$1.35 per foot.
- LMR 195 Cost \$0.80 per foot.

Connecters: PL259 (male uhf type) \$ 2.00 ea including heat shrink tubing for environmental sealing. BNC connectors are also available for the LMR 195 cable at the same \$2.00 cost.

The club also has about 30-40 sets of Anderson Power Pole connectors available for a cost of \$1.00 per set (red + black + 2 pins).

All prices are tax included.

competing for awards valuable contacts. Whether a serious contender or a fellow making casual contest contacts, the skill, developed with contest activity, especially when using CW, is good practice for Club Field Day operations in June which, in my mind, is very much a competition in which we can take pride when our ranking is high in our "Class" is compared to other clubs in Canada, if not all of North America.

At the "CCO" luncheon meeting, there were two presentations; one from Vlad, VE3JM who operates a contest station near Vankleek Hill on property especially purchased for the purpose. There, he has installed towers and antennas and can run the power necessary for a very competitive undertaking on the HF contests. Vlad's presentation topic was about his 160 M full size vertical antenna system with a parasitic reflector that included EZNEC modeling to show its predicted performance.

The club tool kit custodian is now Richard, VA3RLA so if you need power pole connectors, or want to borrow the club tool kit, contact Richard.

I also have received a number of SMA male to BNC female connectors available for sale at \$2.00 ea. Perfect for your 2 M portable or NanoVNA.

That's about it for now. I hope to see many club members at the February meeting, Wednesday, February 19, 7:15 PM, at the Science and Tech Museum.

73

Barry, VE3NA

The other presentation was from contester Chris, VE3FU who, as folks may recall, gave a talk at the OVMRC last year on setting up and operating his remote station he installed at his parent's home in Goose Bay, Labrador under his other call sign VO2AC. His presentation at the CCO luncheon meeting on February 1st was about the travel and setting-up and operating the CQ 160 M CW contest just the weekend before at the historic lighthouse site of Point Amour, Labrador that looks across the strait to the northern peninsula of Newfoundland. Chris's 160 m contest station again this year used the call sign VO2AC which was in the multi-op affair with co-operators being Dave Goodwin, VE9CB/VO1AU and Robert, VO1HP. Over the operating time of 34 hours, they logged 1,648 contacts in 58 individual states and provinces and 85 countries giving them contest a score of 1,735,734. Their score puts them in the league of top contenders for this contest, worldwide.

As a matter of comparison, I achieved only 170 contacts in 26 unique states, 3 unique provinces and 2 Caribbean countries over a couple of evenings of contest operation. My contest score was a meager 24,862. One on my contacts was indeed, VO2AC late in the contest and Chris was at the key. At the luncheon, Chris wrote me up a VO2AC contest QSL card; see below:

For the full story about the VO2AC "CQ WW 160m CW" contest operation 2020, Chris Allingham has agreed to make a presentation to the OVMRC at our March meeting. Don't miss it!

Norm ve3lc@rac.ca



Point Amour, Labrador
www.pointamourlighthouse.ca

VO2AC



CQ Zone 2
 ITU Zone 9
 Grid GO11



VO1AU and VE3FU
 CQ160 CW Contest by
 Chris VE3FU / VO2AC and
 Dave VO1AU / VO2AAA
www.qsl.net/ve3fu
ve3fu@rac.ca

To Radio <i>VE3LC</i>				
Date	UTC	MHz	2-Way	RST
<i>26 Jan 2020</i>	<i>0416</i>	<i>1.8</i>	<i>CW</i>	<i>599</i>
<i>[Signature]</i>				

73 *[Signature]*

Many thanks to: Steve Decker of the Canadian Coast Guard, Bonnie Goudie (www.labradorcoastaldrive.com), Wilfred & Margaret Buckle, Marty & Rosita Fequet, and Cecil & Rita Davis (lighthousecovebb.labradorstraits.net)

TXX CQSO Norm!

Doug Leach, VE3XK SK

On January 15th, 2020, we lost suddenly a very prominent and accomplished Ottawa area radio amateur, Doug Leach VE3XK; he was 81.



His obituary can be read at: <https://ottawacitizen.remembering.ca/obituary/douglas-leach-1078297251>

Doug was first on the air in 1954 as VE3DWG as a teenager in the village of Brussels, Ontario where he grew up; he later held the call signs VE2ATJ and VE3DWK and finally, VE3XK since 1998 living in Stittsville. A graduate of the Ryerson Institute of Technology in 1958, his career evolved in the radio and electronics instrumentation industry that culminated as President of Anritsu Wiltron Canada Ltd. Doug retired from full time employment in 1995 to several years of leisure and interesting winter sailing with his wife on their 44 foot trawler in the southern waters of the Bahama Islands.

Back in Ottawa, Doug became involved in the formative years of Radio Amateurs of Canada serving as First Vice President in 1997-98 and Director of Ontario North Region from 2001 to 2004. Doug was also the author and editor of several RAC publications and reports including the RAC Operating Manual, the RAC Emergency Coordinator's Manual; the RAC Official Observer's Guide; the RAC Administration Manual; and the RAC Manual for Directors. Doug was a very progressive radio amateur with operating experience on all amateur radio allocations from 160 metres through to 23 cm and also the 10 GHz band. In recent years, he would often join Ray Perrin, VE3FN on hill-top operating expeditions trying to set distance records on the microwave bands. He achieved multi-mode DXCC on most HF amateur bands.

Besides his membership in RAC, Doug was also a member of the ARRL and locally a member of the Ottawa Amateur Radio Club and West Carleton Amateur Radio Club and Chapter 70 of the QCWA where he served as web master and Chapter archivist. We don't believe Doug was ever a member of the OVMRC but he was certainly a valued visiting guest and is featured in several yesteryear issues of the OVMRC Rambler Newsletter for his contributions to amateur radio. Doug could always be called upon to give well produced and most interesting presentations at local radio clubs.

Doug's contributions to amateur radio are legendary and he will be sorrowfully missed.

Norm ve3lc

January Meeting Minutes

Date / Time: Wednesday,
January 15, 2020. 19:00

Location: Canada Science and
Technology Museum, Ottawa,
Ontario.

1. Call to order:

President Barry Allison, VE3NA called the meeting to order at 19:00. There were 52 in attendance, including 4 guests.

2. Approval of minutes from previous meeting:

MOTION: Moved by Tim Bailey, VE3TXB and seconded by Douglas King, VE3YDK that the minutes of the previous meeting held Wednesday, November 20, 2019, be approved.

VOTE: All in favour.

CARRIED.

3. Greetings:

Barry, VE3NA, extended greetings to everyone including guests:

Phil Lytle, VE3HOA,
Wayne Getchell, VE3CZO,
Shaun Lumley, VE3VHU, and
Justin McGillivray,

who attended the meeting by invitation.

4. Agenda and Meeting Content:

Barry, VE3NA outlined the agenda for the meeting.

5. Announcements, Projects and Events:

A) Announcements: Barry Allison, VE3NA reminded Members of several items:

i. The regularly scheduled monthly meeting of the OVMRC now begins at 7:00 PM.

ii. The new meeting format now includes a longer break, only one main feature topic and a closing time of no later than 9:45 PM.

iii. Check out and enrol in groups.io. Please log in to keep up to date on ham activities within the OVMRC.

iv. Event Activities. Members should regularly reference The Rambler newsletter on the club's website to stay informed. Members can use the hyperlinks there for upcoming activities, information and contests.

v. Membership dues for the 2020 season are due and payable to OVMRC.

ACTION REQUIRED: Please check in with Nicole VE3GIQ to settle your account and to verify your membership information.

vi. ARISS/AMSAT. The club has received a letter of thanks and an AMSAT medallion for its recent financial contribution. Barry, VE3NA displayed the medallion.

vii. Year-End Attendance Prize Draw. Barry Allison, VE3NA reminded members again that there will be here will be 3 prizes, each consisting of a 2W in / 30 W out, 2 M amplifier and a power supply for base use. Total package value will be \$800.00.

viii. Coax. Barry Allison VE3NA reminded members that LMR 400 is available. Member price is \$1.35 per foot, tax included. PL259 connectors will be mounted at \$2.00 each, including tax.

ACTION REQUIRED: Contact Barry at VE3NA@RAC.ca to place your coax order.

ix. The Emergency Repeater Frequency tests happen on the 1st Wednesday of every month on VE3OCE. The necessary CTCSS Tones are also available in the Rambler.

x. Barry VE3NA, reminded members that volunteer radio operators are once again needed for the annual Canadian Ski Marathon happening in Quebec on February 8 and 9, 2020. For information, please go to: <https://hambone.ca>

B) Club Projects and Member Builds:

Barry Allison, VE3NA – A portion of the cost for Club projects will be subsidized by the Club this year. The balance of the project cost will be paid by the member at a group buy/discounted rate. Among the Projects and builds are:

i. A Lightning Arrestor/ Surge Suppressor, HF to 2 metres at a cost of \$15.00 to the Member. Kits are now available from Barry. This project is on groups.io here: <https://ovmrc.groups.io/g/main/files/OVMRC%20Surge%20Arrester%20Project>

and the club website here: <https://www.ovmrc.on.ca/presentations/>

The surge arrester project instructions, photos, and videos are posted on the club web site under the Presentations and Projects tab. Barry, VE3NA also thanked Peter Carss, VE3XEM for his assistance.

ii. A 6M dipole antenna, as a club project, will be somewhere around

\$15 cost to the member. This project is in the planning stage.

iii. Snap-On cylindrical and toroid cores kits for HF interference suppression of sensitive electronic devices around home. Devices and price to members TBD.

ACTION REQUIRED: Members who have NOT signed up, are asked to contact Barry at VE3NA@RAC.ca

C) Haves:

i. None noted.

D) Wants:

i. None noted.

E) Show and Tell:

Prior to the break, Wayne Getchell, VE3CZO demonstrated his home brew Continuity Tester. In addition to his presentation slides, Wayne shared some operating functions of the tester and explained his criteria for building a full featured tester with instant response time. Several members asked questions. The tester was available at the break and after the meeting for viewing by members. The continuity tester will be offered as a kit for interested people for approximately \$40. This kit will involve soldering Surface Mount Devices (SMD). Wayne will be scheduling 2 or 3 weekend workshop sessions, place and dates to be determined. A signup sheet for the project was passed around at the meeting and several OVMRC members signed up.

F) Presentations –

a) Feature Presentation – Ron Smith, VE3LBG - “NORCAL 40 DDS Implementation”

Barry, VE3NA introduced OVMRC member Ron Smith, VE3LBG. Ron has been working on his QRP home brew rig for several months. He wanted full 40 Metre band coverage using a robust, fully featured motherboard. Ron reviewed with members, the options he explored before and during construction using a wide variety of mail order parts. Several modifications were made to the design and Ron admitted there is more development to come. The rig design plan began with an Arduino board but it proved too slow for Ron’s requirements. He switched to the Blue Pill STM32 and found results to be much improved. Ron shared several slides which provided the members with an overview of the steps he took and the changes made along the way. Following questions, Barry, VE3NA thanked Ron. The NORCAL rig was available for member viewing and questions at the break.

b) ARIES Project Update – Michael Babineau, VE3WMB

Although Michael VE3WMB could not attend tonight’s meeting, the December update to the Orion Manual can be found here:

<https://ovmrc.groups.io/g/AriesHAB/files/OrionManualV02draft.pdf>

c) OVMRC 2 M Transmitter Hunt – Rob Haddow, VE3RXH

On behalf of Roger Egan, VA3EGY, Rob, VE3RXH presented an update. The 3-

element light weight 2m Yagi antenna design has been completed using flexible rod and coax braid the upcoming order may include up to 10 antenna kits and 10 inexpensive special offset-frequency attenuator kits (by NC9ON) for your own 2M fox hunt receiver. For members who wish in on the purchase contact Rob at VE3RXH@rac.ca for information and ordering. A link to the Fox Hunt Sub-Group presentation can be found on groups.IO here:

https://ovmrc.groups.io/g/fohunt/files/Foxhanty%20Subgroup%20Presentations/Fox%20Hunting%20Presentation_16Oct2019.pdf

d) WRC 19 ITUWRC Update – Bryan Rawlings, VE3QN

Bryan, VE3QN provided an extensive summary including slides and photos from the recently completed WRC 19 conference in Sharm-El-Sheikh, Egypt. Region 1 obtained the allocation in 6 metres as hoped. A summary of other decisions taken at WRC 19, including wireless power transfer (trucks and buses) and small satellites can be found on the RAC website here:

<https://www.rac.ca/wrc-19-six-metre-allocation-in-region-1/> The next WRC conference is scheduled for 2023.

6. Prizes and Draws:

Tonight’s door prize was a package of various adapter cables with 8 in the kit. The winner was John McGowan, VA3JYK. The 50/50 draw for \$32.00 was won by Tom Mercer, VA3LJS.

7. Upcoming contests:

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

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

RAC Members can login and go here:

<https://wp.rac.ca/amateur-radio-contest-calendars/>

ARRL Members can log in and go here:

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

8. Adjournment:

MOTION: Moved by Chris Rochefort, VE2MW that the meeting be adjourned at 9:02 PM.

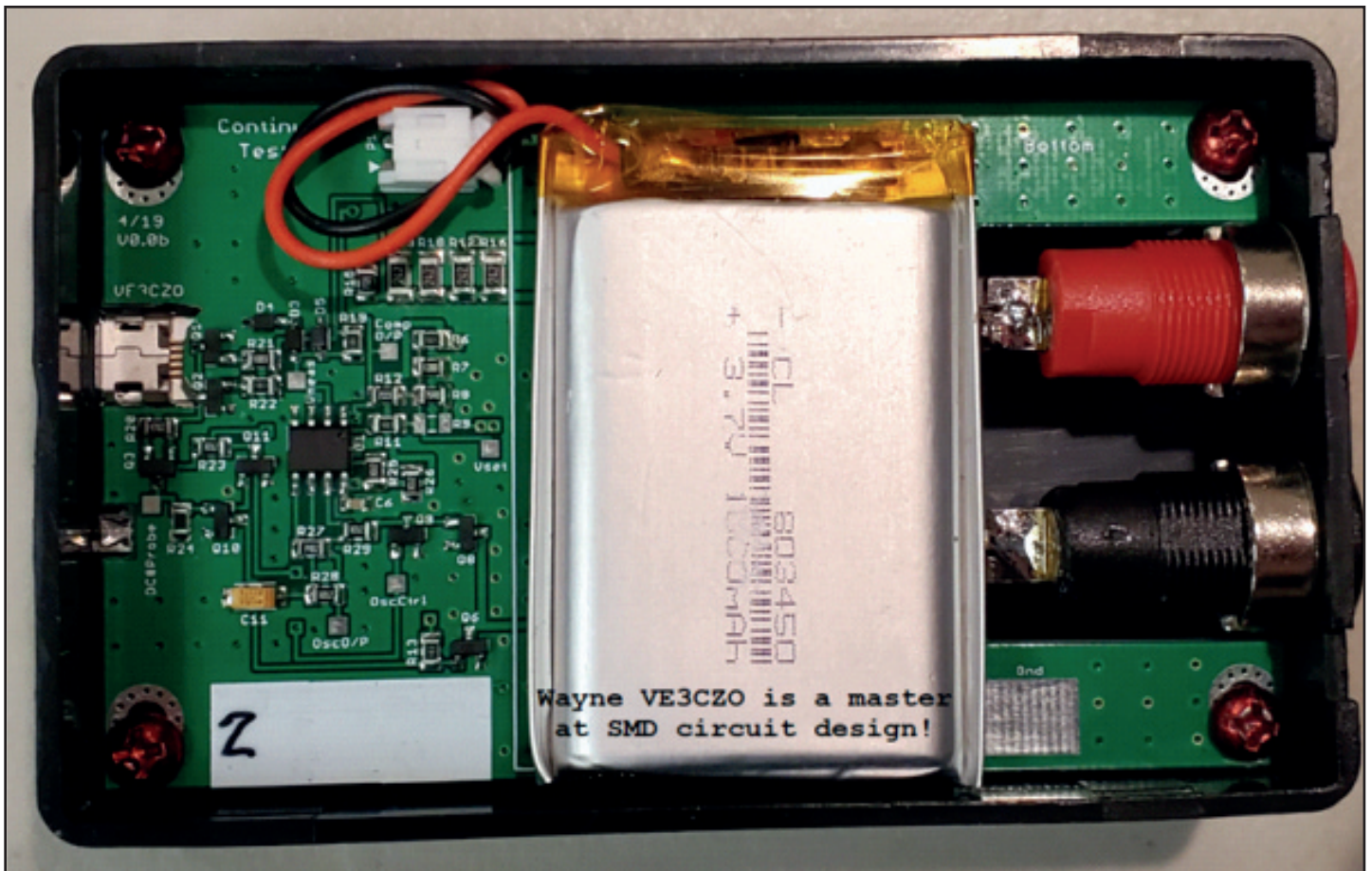
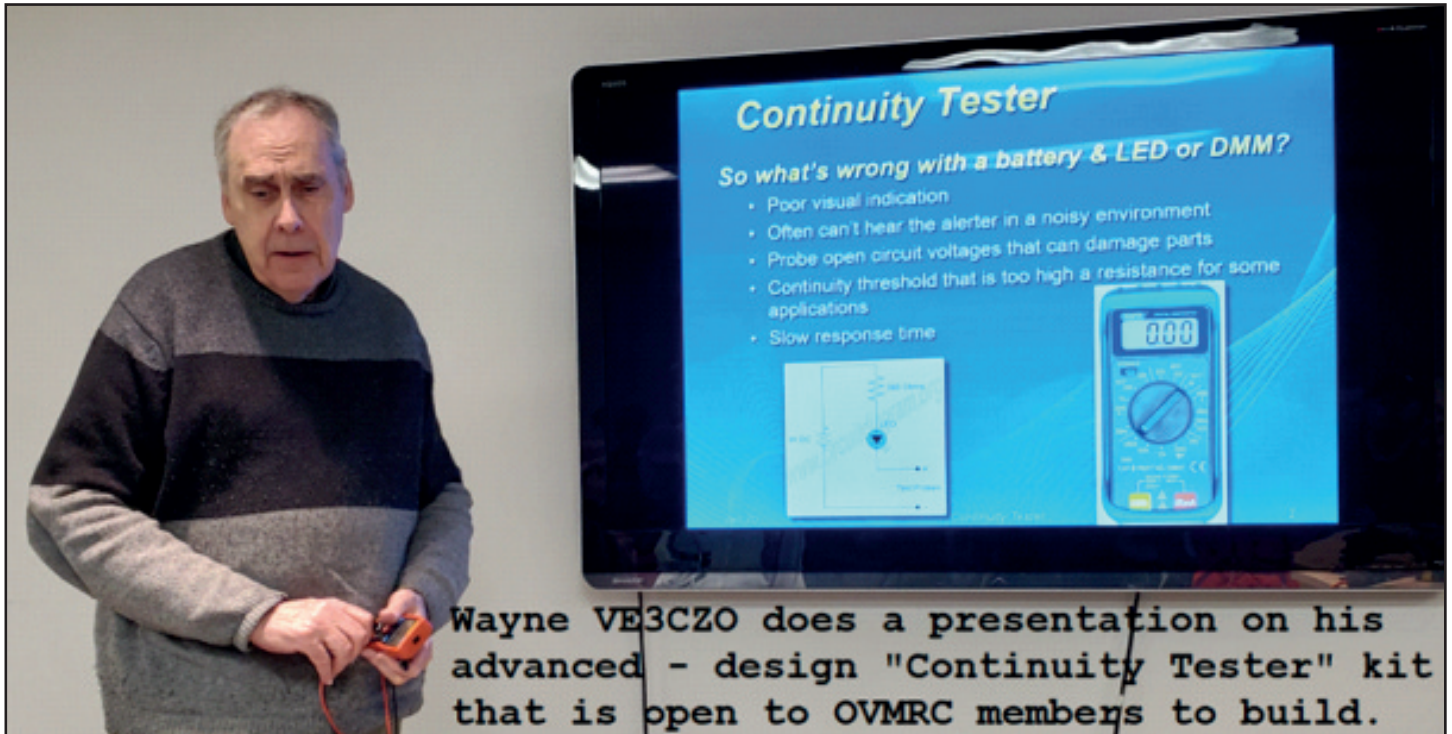
9. Next meeting:

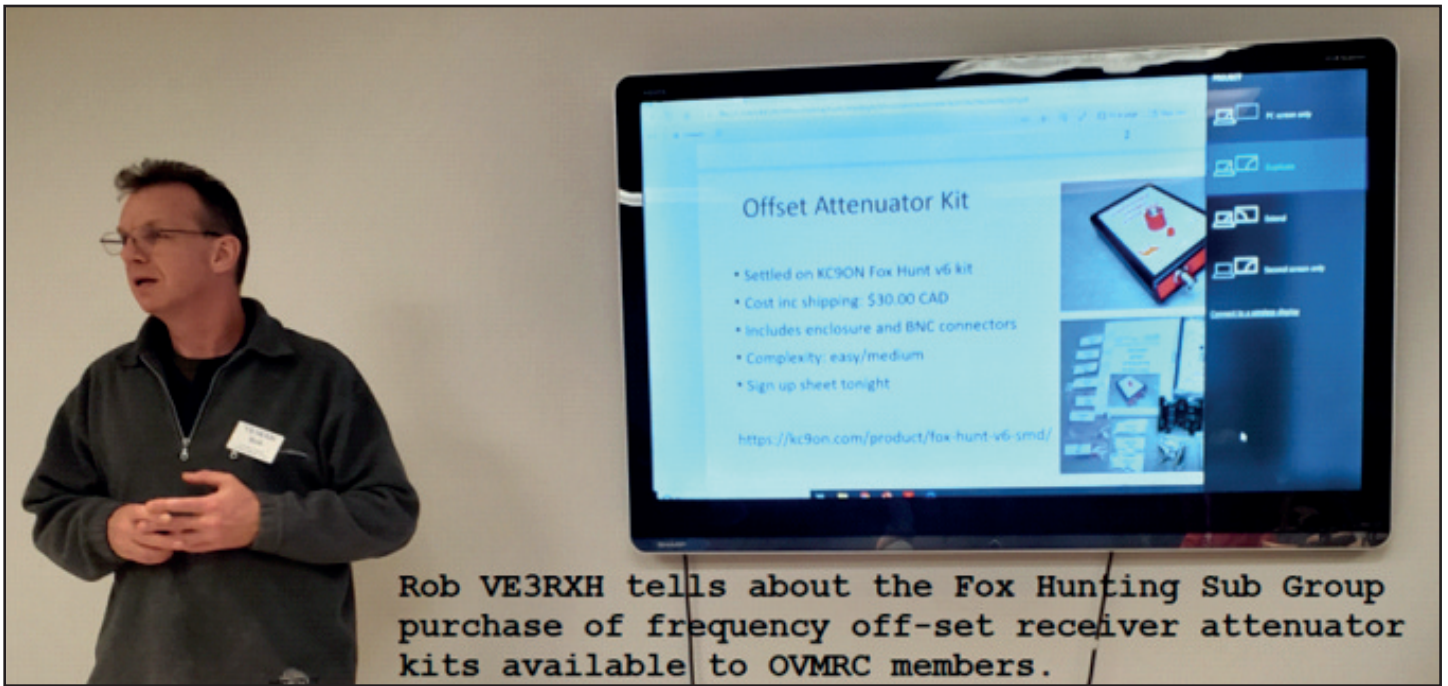
The next regularly scheduled monthly meeting of the OVMRC will be held Wednesday, February 19, 2020 at 7:15 PM at the Canada Science and Technology Museum, 1867 St Laurent Blvd, Ottawa, ON K1G 5A3.

*Minutes recorded by
Ron Smith, VE3LBU,
OVMRC Secretary*

Pictures from our January 15 meeting thanks to Dave VE3ZZU







When UHF Really Isn't UHF

By: Hugo Kneve VE3KTN

This story begins at the 2019 Rockland fleamarket/hamfest when Norm, VE3LC, sidled up to me and asked if I had come to the event with my truck. Quickly suspecting that Norm had just, or was about to buy something rather larger than a bread box I said "Yes. What do you need?", after which he pointed out two sound studio tripod stands that were selling for \$40 the pair complete with a 70 cm-ish looking beam on one of them. Not long after that, the deal was done and I was then the owner of one of those stands and the 8 element beam which Norm didn't

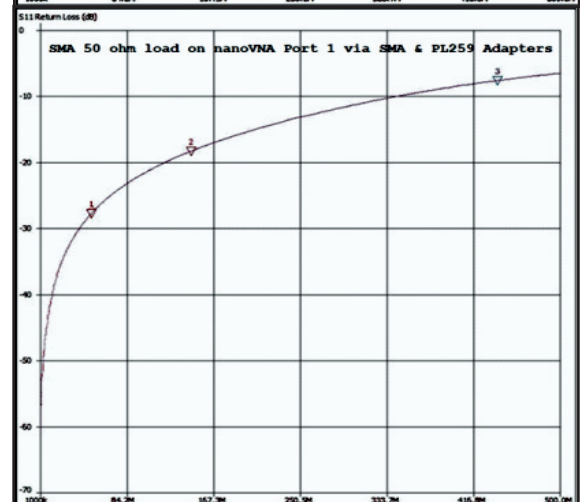
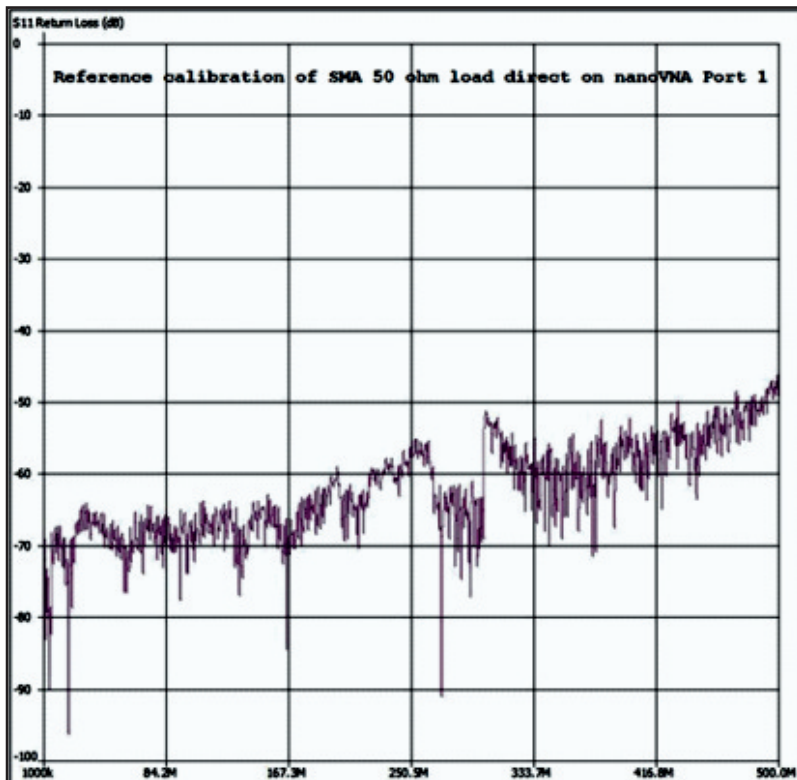
want. So he was happy, I was happy, and after all that, it turned out that the one stand Norm wanted fit easily into the trunk of his car. It's curious, sometimes, to watch how the universe unfolds.

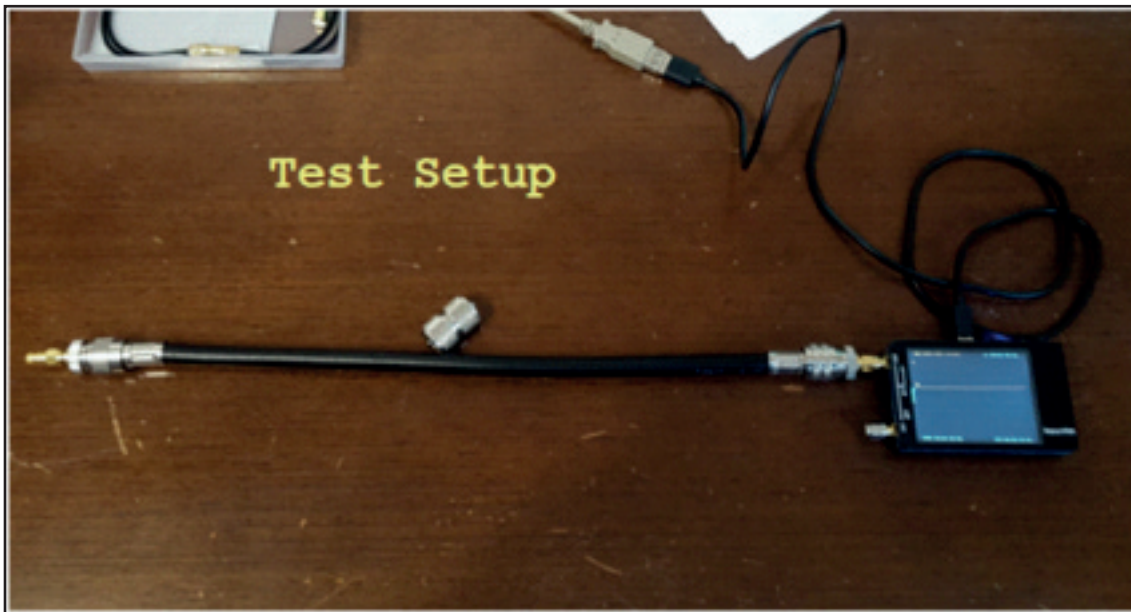
On the way home from Rockland I was thinking how useful my tripod stand would be for either a temporary antenna setup or semi-permanent install for the 2 metre 5-element beam I'd homebrewed the previous year and/or the 8-element 70 cm. beam that came with the stand. But, winter was coming on and I'd need to lay a new run of LMR-400 for that project, so in went the order for the 2019-20 OVMRC bulk cable buy.

Last week, that is January 15, Barry, VE3NA, delivered the 150

feet of LMR-400 and bag of PL-259 crimps I'd ordered and I'm ready to go with making a few jumpers to clean up the connections inside the shack and terminating the remaining long run that is to be my VHF-and-higher feed to the outside. Production of the jumper cables is where this story really starts.

As a very delighted owner of a nanoVNA, it was only natural that I should check each of the new cable assemblies for good return loss, but I soon discovered that all, not some, but all of the jumpers had a distinct characteristic of rather good return loss at 50 MHz. or less, sort-of-acceptable return loss at 146 MHz. and total junk return loss at 440 MHz. Here's what I found:





Test Setup

The trace markers are at (1) 50 MHz., (2) 146 MHz. and (3) 440 MHz. Quite clearly, the PL-259 to SMA adapters don't perform at all well at frequencies above roughly 100 MHz. if one is to take a 20 dB. return loss (VSWR 1.2:1) as being the minimum acceptable for an interconnect. If one is to expect a reliable return loss of 30 dB., it will only come at frequencies below 50 MHz.

The jumper assembly is a bit better but only because of luck in how the reflections add up from impedance discontinuities which undoubtedly occur at each of the PL-259 crimp connections. The

A measurement of VSWR introduced by OVMRC Coaxial Cable Lightning Transient Suppressor Kit.

I conducted a simple VSWR sweep test using my NanoVNA to test one of the OVMRC Coaxial Cable Lightning Transient Suppressor Kits that I built according to

return loss may be better or worse depending on how long the cable is. For example, I put the nano on my 60 foot run that connects to a 2m/70cm j-pole and, while the return loss of the cable alone at 146 MHz. is OK, it's terrible at 440 MHz.

So, what's going on? The PL-259's are called UHF connectors, so they should work at UHF. No? Well, no. As Norm, VE3LC, commented on today's Pothole Net, the term "UHF" is a holdover from way back in the good ol' days when "UHF" meant "frequencies above 30 MHz." and that the ubiquitous PL-259/SO-239 connector series are little more than a banana plug-socket with a

Barry's instructions to see if it introduced any significant mismatch in impedance through it, especially when operating VHF on the 6, 2, and 1.25 M bands. The tests were made using a precision 50 ohm "Bird" "dummy" load with specified low SWR to > 1GHz. Two sweeps were carried out, one directly into the load as a base line and to make sure the cables, connectors and adapters did not

threaded shield around it.

You can read the details, (where else?), on Wikipedia: https://en.wikipedia.org/wiki/UHF_connector

So, why do amateur radios that transmit at 70 cm. have such a terribly performing connector as an R.F. interface? I'm sure it's cost and immediate

compatibility with most ham-consumer antennas that are on the market. One PL-SO connection probably isn't going to affect performance that much, being physically close to the radio's final transistor stage, but surely anything further down the line that isn't at least a Type-N is very likely going to seriously degrade the performance of your UHF setup.

That new run of LMR-400 I'm planning? Yes, it's going to have Type-N's on it. That freebie 70 cm beam? It's got a Type-N pigtail. I guess that settles that.

*73 folks
Hugo ve3ktn*

introduce significant SWR by themselves; this then was compared to a sweep through the suppressor kit. All the same adapters and cables were used between the two test sweeps spanning 1 to 300 MHz which is within the primary operating frequency range of the NanoVNA. Although the NanoVNA claims operation above 300 MHz, this is based on harmonics of the

instrument's DSS chip and therefore does not resolve critical measurements as well as operating in its primary range up to 300 MHz.

Attached is a photo of the Test Setup + Sweep / VSWR through suppressor kit compared to VSWR directly into load resistor.

The results show only a slight rise in VSWR through the suppressor kit compared to connection directly to the dummy load.

In the VHF range, the VSWR through the suppressor measured at:

- 1.030:1 at 50 MHz

- 1.042:1 at 144 MHz
- 1.081:1 at 220 MHz

Other tests indicated that even at 500 MHz, the performance was better than 1.5:1

These readings show negligible VSWR in the VHF range introduced by the kit, and better still on HF.

Conclusion: Folks that bought and assembled these kits according to instructions should not worry about using them on the 2 m band, or even 70 cm if a bit of SWR can be tolerated.

73 all

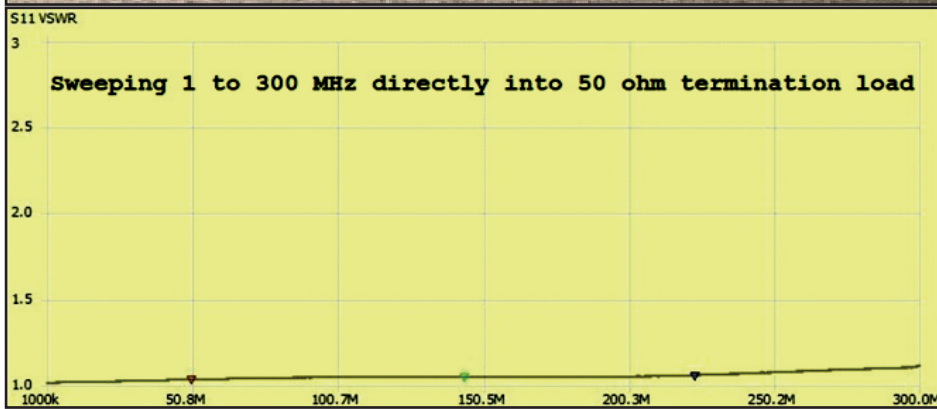
Norm VE3LC @ rac.ca

Post Script Note:

These tests were carried out in a similar manner as those performed in the previous article by Hugo VE3KTN. The NanoVNA can display impedance mismatch in terms of VSWR or dB Return Loss. Hugo chose to show his results in dB Return Loss. There is a direct relationship between the two. The formulas for conversion between the two are:

$$\text{Return Loss} = -20 \log_{10} \left(\frac{\text{VSWR} - 1}{\text{VSWR} + 1} \right) \text{ dB}$$

$$\text{VSWR} = \frac{10^{\frac{\text{Return Loss (dB)}}{20}} + 1}{10^{\frac{\text{Return Loss (dB)}}{20}} - 1} : 1$$



OVMRC Net Activity, Check-ins for Last Month.

Prepared by: Hugo Kneve VE3KTN

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

January 2	January 9	January 16	January 23	January 30
New & Visitors	New & Visitors	New & Visitors	New & Visitors	New & Visitors
VE3VHU VA3IAH	VA3VGR		VE3RYX	VE3OAT
General Check-ins	General Check-ins	General Check-ins	General Check-ins	General Check-ins
VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS	VE3RXH - NCS	VE3RXH - NCS
VE3SYZ	VE3NA	VE3NA	VE3FNG	VE3FNG
VE3NPO	VE3LC	VE3GIQ	VE3NA	VE3NA
VE3NA	VE3GIQ	VE3LC	VE3LC	VE3LC
VE3LC	VE3OWR	VE3ZZU	VE3NPO	VE3XEM
VE3RXH	VE3OKD	VE3KAE	VA3RLA	VE3KTN
VA3RLA	VE3LBU	VE3RXH	VE3KAE	VE3NPO
VE3LBU	VE3KAE	VE3LBU	VE3LBU	VE3KAE
VE3TXB	VE3NPO	VE3HAZ	VE3ZZU	VA3RLA
VE3BF	VE3RXH	VA3BIT	VE2BJZ	VE3LBU
VA2EEK	VE3SYZ	VA3RLA	VE3KTN	VE3RKB
VA3BGO	VA3RLA	VE3RKB		VA2EEK
VE3KAE	VE3VHU	VE3YDK		VA3EO
VE3OKD	VA3BIT	VA2EEK		VE3ZZU
VE3FNG				VE3GIQ
				VA3BGO

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

January 5	January 12	January 19	January 26
VE3XRA - NCS	VE3XRA - NCS	VE3EJJ - NCS	VE3XRA - NCS
VA3QV	VA3ZTF	VE3BAE	VA3QV
VE3EJJ	VE3EJJ	VA3RLA	VE3EJJ
VE3LC	VE3LC	VE3LC	VE3LC
VA3RLA	VA3RLA	VA3BGO	VE3NA
VE3KTN	VA3PCJ	VA3QV	VA2EEK
VA3BGO	VA3BGO	VE3KTN	VE3EKN
VE3EKN	VE3EKN	VA3BIT	VA3BIT
VA2EEK	VE3KTN	VE3EKN	VA3BGO
	VA3NAH		VE3KTN
	VA2EEK		

MEMBERSHIP FORM

Ottawa Valley Mobile Radio Club, Incorporated
 PO Box 41145
 Ottawa, ON K1G 5K9

- ✓ The membership year starts 1 September, and runs until 31 August of the following year.
- ✓ Regular membership is open to licensed amateurs.
- ✓ Associate membership is open to all unlicensed radio enthusiasts.
- ✓ Membership includes a digital subscription to the club newsletter, the OVMRC Rambler.

NEW

RENEWAL

UPDATE/CHANGE

Please print legibly

Call Sign	Surname	Perferred first name
Street		Apartment
City	Province	Postal Code
Home/primary phone	Work/other phone	E-mail address
Are you a member of Radio Amateurs of Canada (RAC)? Yes / No		
RAC ID: _____ Expiry (YYYY-MM-DD): _____		

Do you wish to order an OVMRC name tag? (+\$12.00) Yes No

Callsign for name tag	Name for name tag
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Full Membership (Not a Member of RAC)	\$35.00/yr	<input type="checkbox"/>	Amount Enclosed \$ _____ Cheque / Cash
Full Membership (RAC Member)	\$25.00/yr	<input type="checkbox"/>	
Associate Membership (Unlicensed)	\$25.00/yr	<input type="checkbox"/>	

Circle your interests

Bands	Modes	Building	Other
Microwave	CW	RX	Teaching
UHF	Digital	TX	Speaking/Presenting
VHF	Phone	Antennas	DF/Fox hunting
HF	EME	Test equipment	Contesting
LF and below	Satellite	Other	DXing
	Experimental		Computers/IT
			Other

Signature _____	Date _____	<input style="width: 80%; height: 40px;" type="text" value="Initials"/>	<p><i>By initialing this box, I confirm that I consent to receiving e-mail messages from the Club.</i></p>
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