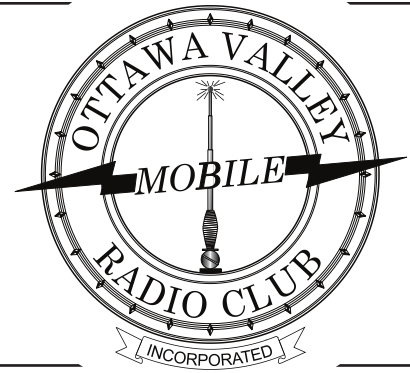


Rambler

Newsletter of the
Ottawa Valley Mobile
Radio Club
Incorporated



Sep 2020

Edition 58

Page: 1

President's Ramblings

What a summer! No end of hot days, little to no rain, lots of yard work completed and **WOW** what a pleasant surprise to see so many club members participate in the annual ARRL Field Day and submit their scores with their affiliation to the OVMRC. I anxiously await the Field Day scores to be published in QST. Norm, VE3LC will have more on this in the Rambler and at the September meeting.

Your executive has been busy readying for the upcoming year of meetings which in all likelihood will be conducted via Zoom. Actually, this isn't all that bad. We have seen an increase of members attending the Zoom meetings likely because it is easy, but also because the meetings were becoming so successful (attendance wise) that the room capacity was exceeding capacity and we were experiencing standing room only situations.

COAX sales have continued to be popular over the summer and soon I will have a small stock of SMA adapters (on order from Amazon) as soon as they arrive. More on that to follow. These are necessary to interface your portable to standard feedline BNC

connectors leading to outside antennas or even auto mag mount roof antennas.

This year we have a new dues payment schedule. Members in good standing with RAC membership will only pay \$10.00. Members in good standing without RAC membership will pay \$20.00 (to offset insurance cost issues) and new members with and without RAC membership will remain the same at \$25.00 with RAC membership and \$35.00 without RAC membership. There is no issue with life membership.

Regarding payment of dues, Nicole, VE3GIQ, club treasurer has been working all summer to set up e-transfer to the club account to allow easy funds transfer of dues and other payments, but cheques will continue to be welcome to the club PO box listed on the club web site. Nicole will have more information on e-transfer before and during the September meeting.

Business out of the way, I still plan on some sort of a club project for this year. It is more difficult to distribute the kits but if I can settle on something of value to the membership, we'll make it happen. More to follow on this.

Club give-a-ways. I'm disappointed to report we will not be having monthly door prize draws. Partly because we are not seeing the usual funding *(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
Membership Renewal.....	4
Field Day BRAVO.....	5-6
VE3NA's Yarn of Discovery.....	6
DMR.....	7-14
Annual General Meeting Minutes.....	15-17
Nets Report.....	17-21
Budget.....	22

Calendar

Notice of Meeting

Wednesday Sept 16th 2020
by **Zoom**

Check-in Time 7:00 to 7:15 P.M.

Members and invited guests will be sent an invitation email several days before meeting date.

Agenda:

- Welcome by President Barry VE3NA;
- Field Day Review by Norm VE3LC;
- Chairperson Reports; and
- Presentation on DMR by Norm VE3LC

OVMRC Executive and Officers 2019-2020

President:

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Norm Rashleigh, VE3LC
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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. 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 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.
- **Sunday Evenings, 8 PM**, Ottawa area 2M SSB Round Table Net 144.250 Mhz

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) input through dues and partly because distribution logistics are more difficult without face to face meetings.

I'm pleased to report we will still have a year end door prize. Not only that, stay tuned for something else we are planning for a year end??? Stay tuned! (same rules as last year)

Let me review the rules:

Last year's draw winners are exempt from winning for one year

(Nicole is back in (she was the winner a year ago), Hugo, Rob and Christina are all out for one year (they were the winners last year)).

Everybody else is in for the draw and you will receive one entry ticket for every monthly Zoom meeting you attend. There will be 10 Zoom meetings this year so if you attend them all you will have 10 chances to win!

The draw will take place at the June 2021 AGM Zoom meeting using the one arm bandit program Nicole runs.

I still have about 440 ft of LMR 400 and 390 ft of LMR 195 (and connectors) in stock for sale to members. LMR 400 is \$1.35/ft, LMR 195 is \$0.80/ft. Connectors are \$2.00 ea.

I could ramble on but let's get on to the rest of this month's Rambler...

Stay safe!

73

Barry, VE3NA

Your OVMRC Membership Renewal Dues are Due!

Thanks to the great efforts of our Treasurer, Nicole, VE3GIQ working with RBC officials, the OVMRC bank account now has privileges to accept "Interac e-transfers". This capability has become necessary during these challenging times when it remains necessary to keep a "social distance" from others. Of course, the Club will also accept cash given in person as well as cheques sent by mail to the Club's PO Box address. However, the preferred method of payment is now by e-transfer for membership dues and other services the Club provides to its members by way of special kit projects and the continuing coax & connector sales program.

Nicole has provided the following instructions for OVMRC members making "e-transfer" payments to the Club:

"From your bank account Interac E-Transfer screen, add a new payee to the Send Money To field. The

name you choose is an alias for the recipient, so you can put anything in there. I recommend "OVMRC E-Transfers". The first time you set up the payee, please fill in the Notify By field by choosing E-mail from the drop down list. The Contact's E-mail address must be: ovmrc.e.xfer@gmail.com. Then fill in the amount and indicate your "From" account. In the Message field, fill in your Callsign, optional first name and the reason for payment. For example: "VE3GIQ Nicole Membership with RAC for 2020/21" or "<my call> <optional first name> <100' of LMR-195>" for a bulk purchase. This should work and you will receive an E-mail notification of your payment. Please don't respond and pay your dues all at once. Take a few days to even out my work load.

Please do not send any mail to the gmail account

above. It is strictly for the system's notification to the payee. If you have any questions regarding your membership status, or need to update your information on the membership file, please contact me at: ve3giq@rac.ca. I maintain a database of membership information going back 3 years (at this point), so there is no need to fill in the membership form, unless you are a new member. If your information has changed, such as E-mail, address or phone, simply E-mail me the changes at my RAC address, and those E-mails I will confirm with a reply."

Membership fees for the 2020/2021 season:

Renewal of membership fees for the 2020/2021 season has been reduced to \$10 with RAC membership or \$20 without, providing you have been a paid-up member in "good standing" of the OVMRC last season. New memberships in the OVMRC will

be \$25 with Radio Amateurs of Canada (RAC) membership and \$35 without. Please note that we charge more for membership in the OVMRC for folks without RAC membership because of the \$11 surcharge per non RAC member on our roster the Club has to pay for

the group liability insurance policy provided by RAC to its affiliated clubs. Persons taking their Basic qualification test by the Club's accredited examiner Norm, <VE3LC@rac.ca > will be invited to become a new member of the Club at no further cost besides the

\$25 administration fee to take the test. All new hams will be expected to take advantage of the first year free membership in Radio Amateurs of Canada offered by the organization.

Bravo to OVMRC Members for Outstanding Participation in at the DIY Field Day 2020

VA2EEK	Complete	Ottawa Valley Mobile Radio Club	1C QC
VA2NB	Complete	Ottawa Valley Mobile Radio Club	1E QC
VA3BGO	Complete	Ottawa Valley Mobile Radio Club	1D ONE
VA3VGR	Complete	Ottawa Valley Mobile Radio Club	1B1B ONE
VA3YYF	Complete	Ottawa Valley Mobile Radio Club	1B1B ONE
VE3EUS	Complete	Ottawa Valley Mobile Radio Club	1D ONE
VE3GIQ	Complete	Ottawa Valley Mobile Radio Club	1D ONE
VE3HSU	Complete	Ottawa Valley Mobile Radio Club	1D ONE
VE3KJQ	Complete	Ottawa Valley Mobile Radio Club	1D ONE
VE3KTN	Complete	Ottawa Valley Mobile Radio Club	1E ONE
VE3LAF	Complete	Ottawa Valley Mobile Radio Club	1B ONE
VE3LBU	Complete	Ottawa Valley Mobile Radio Club	1D ONE
VE3LC	Complete	Ottawa Valley Mobile Radio Club	1E ONE
VE3NA	Complete	Ottawa Valley Mobile Radio Club	1E ONE
VE3QN	Complete	Ottawa Valley Mobile Radio Club	1E ONE
VE3RXH	Complete	Ottawa Valley Mobile Radio Club	1D ONE
VE3XEM	Complete	Ottawa Valley Mobile Radio Club	1E ONE
VE3YDK	Complete	Ottawa Valley Mobile Radio Club	1E ONE
VA3LJS	Complete	Ottawa Valley Mobile Radio Club	1D ONE
VE3DTI	Pending documents	Ottawa Valley Mobile Radio Club	1E ONE
VE3NLW	Complete	Ottawa Valley Mobile Radio Club	1D ONE
VE3NZL	Complete	Ottawa Valley Mobile Radio Club	1D ONE

Thanks to all 22 OVMRC members that participated Field Day 2020 and submitted their results to the ARRL. Here is a listing of all the individual OVMRC entries from the FD ARRL web site. We definitely had a good showing compared to other Canadian Clubs. We will look forward to seeing the Club's tally of our aggregated score that will be published in the December issue of QST magazine.

As for myself, Norm, VE3LC I operated in the 1E Class, QRP from the home QTH in Orleans with an unusual emergency power source. To properly qualify for QRP (5 watts or less), I needed to power the entire FD station on battery power alone although it

was permissible and I did use solar power for at least 5 contacts to achieve the 100 bonus points for "natural power". The rest of the operation was powered using (indirectly) the 28 kW/hr battery of my Hyundai "Ioniq" all-electric car parked in my garage "turned

on" but going nowhere and, of course, not producing a microgram of climate changing carbon emissions. While "on" and ready to drive, the car's big lithium-ion battery kept the vehicle's little 40 Amp/hr, 12 volt lead-acid battery fully charged and able to provide

sustained power delivery. In turn, the 12 volt battery powered my 800 watt DC to AC inverter which powered all the ham equipment with 60 Hz AC power including my computer used for logging and the WSJT-X software for FT8 and FT4 digital contacts for most of the FD operational period. For the last hour of FD operations, I switched the AC inverter to another 12 volt battery kept charged from a 200 watt solar panel I had installed on the roof of our back-yard shed.

All HF contacts were made using my Icom IC 7300 carefully throttled back to 5 watts of RF output power as measured on my very accurate digital milliwatt RF meter. I also made a few contacts on 2 m FM simplex on 146.52 using my FTM 3200 also powered by battery and set for 5 watts of

Barry, VE3NA's Yarn of Discovery on Field Day 2020

I operated the entire contest on battery, charged by solar panels prior to Field Day. This is the story of a not thought through "discovery". Sometimes things right before your eyes go unnoticed.... Until the light comes on!

I have an Elecraft KX3 QRP transceiver. I also have all the stuff that goes with it to make it a 100 watt home station. This is my shack operating position.

Now for field day, I used only the bare bones rig and operated at 5 watts to comply with the QRP entry.

Since the rig was designed with portable operation in mind, power management was top of game by

power. All QRP contacts gave me a power multiplier of 5.

My submission included:

CW contacts:

32 on 80m, 74 on 40m, 100 on 20m, 30 on 15m, and 14 on 10m for a total of 250 CW contacts X 2 multiplier for CW = 500 points for CW

FT8/FT4 digital contacts:

22 on 40m, 4 on 20m, and 19 on 10m for a total 48 digital contacts X 2 multiplier for digital = 96 points

FM Simplex contacts: 3 in total on 146.52 MHz = 3 points

My claimed score for contacts = $500+96+3=599$ X 5 multiplier for QRP power = 2995 contact points.

the designers. The result is in receive mode, I consume ~ 190 mA of power and during transmit it was ~ <1A. Added to this power consumption was three charging cycles of my lap top battery (I should have measured that current).

I was able to reduce my power consumption by turning off features in the KX3 that I didn't need: The display backlight, the internal battery charger, the i/q output since I wasn't using my Panadapter, and the mic bias. Current consumption was minimized as best I could achieve.

The two large Kirkland batteries I have were barely used after the contest.

Now what did I discover that never occurred to me?

Norm also operated his ICOM 7300 at QRP 5 watts. The

My submission included the Bonus points for:

- 100 % Emergency Power in the 1E Class: 100 points
- Copying the ARRL Field Day Message from W1AW on 80m CW: 100 points
- At least 5 contacts using natural (solar) power: 100 points
- Entry submitted via ARRL web app: 50 points

Total Bonus Points: 350

Total claimed score submitted was: $2995 + 350 = 3345$ points overall score.

Norm VE3LC

difference is the 7300 is a base station and power consumption was not necessarily top of game, but, it also has a host of features always available. He reported receive current draw of ~2+ A, and a transmit current draw of ~6+ A.

Now while there is nothing wrong with this power consumption, particularly since it had all the features available all the time, it just opened my eyes to the difference between a QRP designed radio to one not designed for QRP portable operation but can still operate in QRP mode.

That is what I discovered after the light came on!

Hope you enjoyed my yarn of discovery!

Barry VE3NA

DMR

There has been a lot of local amateur interest recently in DMR. The acronym DMR means “**Digital Mobile Radio**” and this is yet another digital voice 2-way radio technology available to the amateur radio community.

Whereas D-Star from ICOM (and recently Kenwood as well) and Yaesu C4FM (Fusion) technology are exclusively amateur radio digital voice protocols based on FDMA (frequency division multiple access), DMR is an open technology (but not new) based on a 2 slot TDMA (time division multiple access) digital protocol that was designed for the LMR (land mobile radio) market but adopted and adapted in recent years for the amateur market.

DMR over-the-air protocol conforms to the ETSI (European Telecommunications Standards Institute) document series, TS 102-361 first published in 2005; these specifications are available freely on the internet. There are 3 “Tiers” in the DMR standards; amateur radio uses the non-trunking “Tier 2” type of DMR. As a consequence of being an open standard, the technology specifications are available to a large number of competing companies able to design and manufacture DMR interoperable products at price points that make DMR very attractive to radio amateurs. In addition, the technology works well and has some key advantages over Icom D-Star and Yaesu System Fusion. DMR (like other digital modes) lends itself well for worldwide networking using the Internet. All DMR radios must be configured with a 7 digit DMR registration

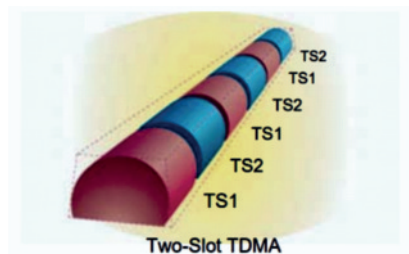
number provided by the amateur radio registration authority at < radioid.net > upon presenting proof of your amateur radio credentials. There is a separate registration database of non-amateur DMR. The registration ID is transmitted along with the overall digital payload with every transmission made by the radio identifying always who you are receiving in terms of ID number. At the present time, there are over 100,000 DMR amateur radio registration numbers assigned in the registrant database. Some DMR radios have enough memory capacity to hold this entire amateur radio registrant database as a “Contact List” for instant lookup and display of each DMR radio signal received in terms of call sign, name and location.

DMR Channels

Whereas for an amateur analogue FM radio channel, we need only to specify frequency and CTCSS tone frequency (if used), a DMR radio needs to specify for every channel not only frequency (or frequency pair in the case of a repeater) but also a Talk Group numeric identifier, a Time Slot (TS1 or TS2) and a parameter called “Colour Code” being a numeric value 0 to 15; this is used mainly to separate access to repeaters with overlapping coverage on the same frequency pair much the same as CTCSS (Continuous Tone-Coded Squelch System) provides for controlled access to FM repeaters. Most DMR radios also accommodate high level AES (Advanced Encryption Standard) encryption capability of the digital voice and messaging payload which, of course, must not be used for amateur radio communications.

Time Slots (DMR has two)

As mentioned, DMR is two slot TDMA technology; this means that the transmitted RF output from user radios (as opposed to a repeater), is literally switching off and on (30 ms on, 30 ms off) during the transmitting cycle. For portable radios, this provides longer battery life as compared to FDMA technology radios (digital or analogue). The DMR time slots are designated TS1 and TS2; one or the other can be specified on a channel by channel basis and a DMR repeater can handle both at the same time allowing two different “Talk Groups” (two separate conversations) to share the repeater on a single pair of repeater frequencies at the same time providing each talk group is on different Time Slot. A DMR repeater will occupy both time slots in its transmission whether or not there is active traffic on both times slots at the same time. It is interesting that the RFI caused by a DMR radio to a radio sensitive audio system (such as computer speakers) produces a “motor boating sound” from the DMR radio carrier switching on and off.



Talk Groups (TG)

For DMR, a “Talk Group” (TG) number defines a unique “logical” pathway of communications between users that want to talk to each other. It is part of the digital

information sent to and from DMR radios and to and from servers that do network switching and management of communications between repeaters (and hotspots) over the internet.

On the worldwide networked server system called “Brandmeister”, for instance, there are over 1500 Talk Groups that are defined by number and descriptive name specifying their intended purpose or theme of communication content. For instance, DMR TG 91 is designated as a Worldwide communications pathway for radio amateurs globally to identify and call each other for short QSOs. The same TG number may be setup on different selectable channels in a user radio along with different frequencies, time slots and repeater colour codes (see the following section) depending how and where you access the Talk Group through this or that networked repeater (or HotSpot). By way of control by the repeater system operator (sysop), DMR repeaters have a specified plan for offering Talk Groups on the Brandmeister network. A specific TG may be setup on a repeater as a “Static” assignment or “Dynamic” assignment. A “**Static**” assignment of a Brandmeister TG will be live and transmit out on a specified Time Slot (determined by the repeater Sysop) whenever there is traffic on the TG incoming from the network. TGs that have a “**Dynamic**” assignment designation that is not live and broadcasting on a networked repeater until a user makes a transmission into the repeater on the selected TG. Dynamic TGs are governed by a timer reset by transmissions

into the repeater so just monitoring and tying up the resources of the repeater by using a Dynamic TG cannot continue without periodic transmitting.

In the case of local Quebec based repeaters in the area, the “Quebec Wide” TG3022 is typically setup as a “Static” TG assignment on Time Slot 1. Therefore, a user should be able to monitor that TG (on TS1) for extended periods of time and hear any traffic incoming from the network from folks transmitting into other repeaters located elsewhere in the province on the same TG. Some other TGs are typically given a “Dynamic” assignment on Time Slot 2.

Hand-Off Timer:

This applies to networked TGs on a repeater that are not setup as Static or Dynamic assignments. On the Brandmeister Canada Master Server, this timer is set to 15 seconds. Time out of the Hand-Off Timer after a TG has become inactive will result in the Time Slot used becoming available for another user on another TG. This allows the back and forth of 2 way conversation to proceed on the TG in question without interruption.

On Demand Timer:

On the Brandmeister Canada Master Server, this timer is set for 10 minutes. This timer keeps a Dynamic Assignment talk group connected without needing another user key-up reset for the time out period.

Private Call vs Group Call

DMR Talk Groups are defined by a number (like TG 2 or TG 302310) but are also defined by a choice of being a “Group Call” or

“Private Call”. Most TGs are “Group Calls” meaning all users on the selected TG in question hear transmissions from everybody else when they transmit whether through the repeater, or network or on a Simplex channel. However, with DMR, when programming a TG into your radio on a specific radio channel, instead of a TG number, you can specify a TG with another user’s registration ID number and designate it as a “Private Call” and by doing so, you will be able to call the other station, in private, without others listening in. Likewise responding to the call, the called person can answer the call on a programmed channel with the calling party’s ID number specified and a 2-way conversation can take place. All others tuned to the DMR radio channel (and Time Slot involved) will not be able listen in on the “Private Call” between the two parties talking back and forth, at least with the normal settings of the radio. Note that this is not encryption. Most DMR radios support Private Calls on the “fly”. For instance, on an Anytone DMR radio, holding the Zero button for a second or more will result in displaying a window for entry of another person’s 7 digit ID number for the purpose of initiating a Private Call. Followed by a PTT of the radio, the other person will be called directly with routing in the network to the called party on the repeater or hotspot where they were last heard. A “Private” 2-way conversation can follow providing the resources of the repeater or other access point are not otherwise busy. That all said, Private Calls should not be encouraged and should be the exception, and not the rule in

amateur to amateur DMR communications especially over a shared resource such as a repeater.

Special TG assignments:

TG 99 – Use TG99 for Simplex frequencies with TS 1 and Colour Code 1, on simplex frequencies. Recommended DMR simplex frequencies in the Ottawa area are: 441.0000, 433.4500, 446.0750, and 446.5000 MHz.

Special Function TGs on network repeaters

The following are special function TGs that work with networked repeaters or a HotSpot and should be programmed or actioned as a Private Call on your radio:

TG 9990 – Parrot Function:

This Brandmeister TG supports a record and play back connection for testing your radio's audio settings.

TG 4000 – Disconnect Function:

This TG is used to disconnect an active “Dynamic assignment” TG to allow key up and connection of another TG right away.

TG 5000 – Repeater Status Function:

The repeater will respond to this function by indicating whether a TG (especially a Dynamic TG) is engaged on a network repeater or that the repeater is “Not Connected” to any TG.

Colour Codes:

Another parameter for setting up a DMR radio channel is the so called “Colour Code”. This is a strange thing to call this parameter because it is a numeric setting from 0 to 15 and has nothing to do with colour.

The “colour code” must be matched between transmitting and receiving user radio channels. It is mainly intended for selective access of different repeaters with overlapping coverage and sharing the same frequencies much the same way different CTCSS tones are used to access analogue FM repeaters. All the DMR repeaters in the Ottawa area and the Outaouais use Colour Code 1 except VE3TST which, for some reason, is set for access on Colour Code 13.

DMR registration Number and Contact List:

As mentioned already, all DMR amateur radio operators must apply for a unique 7 digit registration number which is set into the DMR radio(s) used. This number must be loaded into your radio; it is then sent with every DMR digital payload that the radio transmits. The amateur radio registrar for DMR is <RadioID.net >;

to apply go to page: <https://www.radioid.net/register#!>.

As mentioned before, some DMR radios have memory capacity to support uploading of the entire database of amateur radio registration numbers and associated call signs, names and locations of all registrants worldwide to provide instant lookup and display of who you are receiving and talking to on your radio. The worldwide contact list is available from

<https://database.radioid.net/databases/dumps#!>. Download and store the “user.csv” file; this is a big file with over 100,000 ID records. It can then be uploaded to your radio by way of the “CPS” radio configuration software. The

database is a CSV file that can be viewed with most spread-sheet software packages.

Zones:

When programming a DMR radio, the CPS will usually provide a way to organize channels together in what is called a “Zone”. Other amateur radios products may call this a “Bank” of memory channels. Zones can be labelled with a name and may group together DMR Talk Groups available on a local repeater or your hotspot all having a common frequency access and colour code. Zones may also be applied to grouping repeaters together based on their geographic coverage areas. For the programming of my radio, I have put all the FM repeaters into one Zone, simplex FM channels into another, WX stations (for receive only) into another and each of the local DMR repeaters and my hotspot all having access to many DMR Talk Groups into their separate Zone. DMR radios will have a Zone Selector control. Channels within a Zone for different repeaters are usually selected on most radios by rotating a selector knob.

Encryption

It will be noticed when programming most DMR radios that they have the capability of providing encrypted digital voice and messaging communications utilizing the “Advanced Encryption Standard” with a 256 bit key length. AES is a specification for the encryption of electronic data established by the US National Institute of Standards and Technology (NIST) in 2001. The encryption key(s) are based on a 64 Hex character word (256 bits)

of which certain keys (involving repetitive hex digits) are not allowed furthering the strength of this encryption standard. At the present time, there is no known practical attack that would allow someone without knowledge of the key to read data encrypted by AES when it is correctly implemented. You can read more about AES at: https://en.wikipedia.org/wiki/Advanced_Encryption_Standard

Some DMR radios also provide a choice of a lesser 30 or 40 bit key length encryption protocol.

Of course for communications in the amateur radio service, as we all should know, the use of encryption is forbidden. The reference in Canada for the radio amateur service is made in Section 47 of the Radiocommunications Regulations. Therefore, ensure you don't activate the encryption capability of your DMR radio.

Code Plugs and CPS radio programming software:

To the uninitiated, programming the DMR radio can be daunting. For any desired DMR digital channel of communications, it involves TX and RX Frequencies, channel Colour Code number, Talk Group number, and Time-Slot designation 1 or 2 and grouping of channels into manageable "Zones". In addition, each channel (and Zone) is usually programmed to display a label or name. Most of these parameters must match the other end of the radio circuit or desired communications will not happen. Although these parameters on some amateur radios may be adjusted on the fly, it is normally

setup using a computer "CPS" application meaning "Customer Programming Software". This comes from the Land Mobile Radio industry where radios, by design regulation, cannot be configured by the end user but instead must be programmed only by authorized technicians on end-user selectable channels with the fixed parameters as noted above. The CPS computer file for any particular radio configuration is known as a "Code Plug". For most amateur operations, setting up a DMR radio with CPS for the local area of operation and the repeater access points involved is the most manageable way to operate a DMR radio. Once a "code plug" is development to access the desired repeaters in the area, the "CodePlug" file can be shared with other hams in the area for the same radio with simple instructions to set your 7 digit ID and call sign into your radio and also the settings of frequency for your HotSpot, if you have one.

DMR Repeaters and HotSpots

There is commercial-ready DMR repeater equipment available on the market made by Motorola Solutions, Kenwood, Tait Communications, Vertex Standard (Yaesu), Hytera, to name a few. These products are intended for the Land Mobile Market with closed systems. However, some of these commercial repeaters are very expensive to purchase and may not lend themselves well to amateur networking which is ever evolving by an amazing team of volunteer software developers worldwide. According to the <Brandmeister.network > web site, almost 75% of the amateur

DMR repeaters (and Hotspots) are based on MMDVM hardware using Pi-Star software which has been developed for amateur radio by radio amateurs. The actual radio equipment hardware used is typically surplus re-purposed mobile radios configured into a full duplex package with direct access to the FM TX modulator and RX discriminator allowing direct connection of the data modem.

MMDVM means "multi-mode digital voice modem" used along with amateur-developed Pi-Star software operating on very inexpensive Raspberry Pi computers board. Besides DMR, Pi-Star software also has modules of operation for Yaesu Fusion C4FM, D-Star, P25 (phase 1 public safety digital radio standard), Kenwood/Icom NXDN, and others. A repeater running Pi-Star, if properly configured, can support all digital modes and network connections, one at a time.

The difference between a DMR repeater and a Hotspot both that may be running Pi-Star software is that: A Repeater is a full duplex machine able to receive and transmit at the same time on a pair of frequencies and therefore able to repeat a signal it receives and therefore provide extended radio to radio coverage; whereas, a Hotspot is usually limited to simplex single frequency operation providing very limited range running only 10 to 20 mW and designed for personal use. Otherwise, they can both connect through the internet to network servers and their DMR Talk Groups or connect to a network "Reflector" in the

terminology of other modes besides DMR; it is all a matter of setup and configuration. Hot Spots can also be purchased as a very low power duplex machine; this can provide an advantage for personal use having the advantage to respond and send commands to the network servers while the busy Talk Group engaged is still busy transmitting; this can be important to issue a TG 9990 disconnect command releasing connection of the TG involved. Besides using a HotSpot in the home, they are sometimes used by radio amateurs in their vehicles or remote locations with internet connectivity provided by WiFi through the data plan of their smart phone. This practice may be contrary to the spirit of amateur radio communication for some folks.

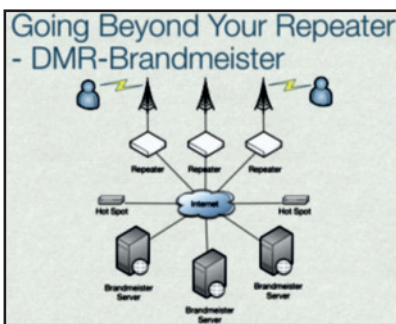


DMR Networks:

There are two main networks that support worldwide connection of DMR amateur radio repeaters; these are as follows:

*The **Brandmeister Network** is the newest system that provides over 1500 Talkgroups utilizing 46 Master Servers connected together across the globe by the internet. There are*

currently over 4000 repeaters and over 14,000 Hotspots connected to this system. Most repeaters in the Ottawa area utilize connectivity through the Brandmeister Network. For information on the Brandmeister Network and to see the dynamics of its operation, go to: <https://brandmeister.network/>.



The **DMR-MARC Network** is the original DMR network sponsored and run by the “Motorola Amateur Radio Club” and still has a good following. Like Brandmeister, it provides worldwide connectivity in over 74 countries through more than 500 repeaters. The main difference with the MARC network is that “Talkgroups” provided on a repeater must be static and the complement is therefore limited and determined by the repeater sysop. There is no dynamic option by PTT functionality as there is with Brandmeister network TGs. More can be read about the DMR-MARC Worldwide Network at: <https://www.dmr-marc.net/>

Roll your own “Cluster Networks”

The newest edition of network server development (software) is the “XLX Reflector” that allows the local amateur community to

spin up their very own DMR or YSF (Yaesu System Fusion) or D-Star reflector. XLX server software can provide XLX conferencing modules with any of the legacy D-Star connectivity protocols including REF, SRF or DCS but also to DMR and Fusion repeaters with full audio transcoding. A local XLX Reflector (196B) has been put into operation by Jeff VE3EFF for the Almonte Amateur Radio Club that ties together several local repeaters onto a common TG6; this can be accessed in Ottawa on VA3ODG as well as Pi-Star based HotSpots if they are properly configured. Jeff’s XLX reflector runs on a Linux based computer well connected to the internet; the reflector’s “Dashboard” that shows who is and has been connected and can be viewed at:

<https://xrf196.spdns.org/index.php>

Some of the Local DMR Repeaters available to Ottawa Area Hams:

The VE2REH group operate:

3 DMR UHF repeaters located in Gatineau, Mont-Laurier, and L’Ange-Gardien, Quebec and all are connected to the Brandmeister network with the same Talk Group configuration. The Mont-Laurier site uses MMDVM fashioned equipment and their web site page: <https://ve2reh.com/wp/repeteur-dmr/> indicates the other two sites that use commercial Hytera and Motorola DMR equipment. As well, VE3PRV in Hammond, ON is a partner repeater in the VE2REH system with a similar Talk Group configuration.

Association des Radio Amateurs Indépendants VE2REH: Gatineau, QC, 442.6500 MHz + 5, Colour Code 1, Hytera RD982 VE2REH: Mont-Laurier, QC, 444.1500 MHz +5, Colour Code 1, MMDVM VE2REH:L'Ange-Gardien, QC, 442.5500 MHz + 5, Colour Code 1, Motorola XPR8300 VE3PRV:Hammond, ON, 442.8500, MHz + 5, Colour Code 1			
Talk Group	Time Slot	Description & Purpose	Remarks
2	2	Local	Cluster Outaouais – all repeaters
9	2	Local	Repeater only
3022	1	Quebec	Static on TS1 by itself
3023	2	Ontario	
302	2	Canada	
93	2	North America	
91	2	Worldwide	
310	2	TAC310	Tec Talk net
302310	2	Canada Tac310	
302050	2	DSTAR/DMR/YSF	
3023354	2	ARAI	Static
30239	2	SBO/OVSSAR	Special TG for Search & Rescue

The VA2RAO Club DMR repeater operates on a similar plan as VE2REH group of repeaters:

VA2RAO: Gatineau, QC, Hull Sector Hospital, 443.9500 MHz + 5, Colour Code 1, Priority is given to TG3022 reserving TS1 to traffic on this TG.			
Talk Group	Time Slot	Description & Purpose	Remarks
2	2	Local	
9	2	Local	Repeater only
3022	1	Quebec	Static
3023	2	Ontario	
302	2	Canada	
93	2	North America	
91	2	Worldwide	
310	2	TAC310	
302310	2	Canada Tac310	
302050	2	DSTAR/DMR/YSF	

The “**Ottawa Digital Group**” operates a 70 cm MMDVM networked repeater VA3ODG. This site formally had a “D-Star” exclusive system on 2m, 70cm and 23cm but we understand this has been removed in favour of the MMDVM single band 70cm system that supports DMR.

The VA3ODG “Pi-Star” Dashboard can be viewed at: <http://va3odg.ddns.net:380/>

VA3ODG, 444.8500 MHz + 5, "Colour Code" 1 Location: YMCA Building on Argyle St.			
Talk Group	Time Slot	Description & Purpose	Remarks
2	2	Local	
6	2	Local Cluster XLX196B	Arnprior, VE3STP & VE2CRA
9	2	Local	
3022	1	Quebec	
3023	1	Ontario	
302	1	Canada	
93	1	North America	
91	1	Worldwide	
310	1	TAC310	
302310	2	Canada Tac310	
302050	2	DStar/DMR/YSF	

VE3TST, 444.1250 MHz + 5, "Colour Code" 13 Location: North 410' tower of CFRA AM Transmitter site.			
Talk Group	Time Slot	Description & Purpose	Remarks
2	2	Local	Not Networked - Local Rag Chew

VE2CRA, 444.4000 MHz + 5, "Colour Code" 1 (under development) Location: Will be at			
Talk Group	Time Slot	Description & Purpose	Remarks

VE3TWO

Plans are being developed by the OVMRC for an east-end 70 cm coverage DMR MMDVM (multi-mode) repeater running Pi-Star software. The RF hardware will be one of the Club's existing Yaesu DR-1X repeaters. On order at the present time is a STM-32 DVM PiHat board that will work with a Raspberry Pi computer awaiting delivery from: <http://www.repeater-builder.com/products/stm32-dvm.html>. Frequencies are being sought from the Saint Lawrence Valley Repeater Council. More information will be provided as the project develops.



STM32_DVM_PiHat Board
ordered for DR1-X Repeater

Table of comparison of Popular Amateur Radio Digital Voice Modes

	D-Star	Yaesu-Fusion	DMR
Vocoder	DVSI AMBE +	DVSI AMBE+2	DVSI AMBE+2
Vocoder Data Rate (Kbps)	2.4 voice + 1.2 FEC	2.4 voice + 2.8 FEC	2.45 voice + 1.15 FEC
Voice Quality	Good	Good	Good
Modulation	GMSK	C4FM	4FSK
Multiplex Method	FDMA	FDMA	TDMA
Data Transmission Rate	4.8 Kbps	9.6 Kbps	4.8 Kbps X 2
Emission Bandwidth	6.25 KHz	9.36 KHz	7.60 KHz
Voice paths per RF Channel	1	1	2
User Radio ID method	Call Sign	Call Sign	7 digit ID code
Call Sign Display	Yes	Yes	Yes – by “Contact List”
Networking	“Reflectors”	“Wires X Rooms”	“Talkgroups”
Analogue FM Mode Select	Key Press	Key Press or “AMS”	Radio Memory Selection
Manufacturers	Icom - Kenwood	Yaesu only	Lots of competition
For comparison, re Emission Bandwidth noted above, FM with +/- 5 kHz deviation occupies 16 KHz.			

Abbreviations:

“**AMBE**” means “Advanced Multi-Band Excitation”. It is used almost universally in the digital mobile radio industry as a superior technology for analogue voice to digital conversion and vice versa. The AMBE +2 vocoder is a proprietary product of Digital Voice Systems Inc. (DVSI).

See Web Page:

https://www.dvsinc.com/soft_products/ambe_p2.shtml

“**FEC**” means “Forward Error Correction”

See:

https://en.wikipedia.org/wiki/Forward_error_correction

“**GMSK**” means “Gaussian Minimum Shift Keying” It is used (instead of FSK) to minimize channel bandwidth occupancy.

See:

https://en.wikipedia.org/wiki/Minimum-shift_keying#Gaussian_minimum-shift_keying

“**C4FM**” means “Continuous Four Level Frequency Modulation”, which is a special type of “4FSK”

or 4 level frequency shift keying both of which are used in conjunction with “FDMA” meaning “Frequency Division Multiple Access”.

“**TDMA**” means “Time Division Multiple Access” and is used by DMR

“**AMS**” means “Automatic Mode Select”. Yaesu Fusion radios including their repeaters when set in this mode will be able to receive either the Yaesu C4FM digital transmission or an analogue FM transmission automatically.

73 de Norm VE3LC@rac.ca

Minutes of the Annual General Meeting

Date / Time: Wednesday, June 17, 2020 at 19:15

Location: Via ZOOM video conference call on-line meeting

1. Call to order:

President, Barry Allison, VE3NA, called the 2020 Annual General Meeting of the OVMRC to order at 19:21 There were 48 check-ins.

2. Approval of minutes from previous meeting:

MOTION: Moved by Tim Bailey, VE3TXB and seconded by Sandy Haggart, VE3HAZ, that the minutes of the previous meeting held Wednesday, May 20, 2020, be approved.

VOTE: All in favour.

CARRIED.

3. Greetings:

Barry, VE3NA extended greetings to everyone including new ham Sana Abou-Shaabab, VA3SXA, and new members to the Club.

4. Projects, Dues, Haves, Wants and Announcements:

Membership dues must be paid up to participate in both the monthly and year end draw prizes.

Membership dues are valid for the September to August period.

Check with Nicole to ensure you are current with your dues. The 2020 year-end draw tonight includes 3 prizes, valued at \$300. Each prize is a 2 watt in and 35 watts out VHF amp and power supply (aka a "Brick"). Membership dues next CLUB year

(September 2020 to August 2021) will be \$10.00.

A) Haves: Ron Smith, VE3LBU has a Yaesu 2 M FTM3200D radio for sale, asking \$135. Contact Ron at VE3LBU@rac.ca See <https://www.radioworld.ca/ya-ftm3200dr>

B) Wants: None

5. Agenda and Meeting Content:

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

- The Election of Director positions for the next year: There were no other nominees put forth. The Notice to Members was published in the June Rambler on page 4.

<https://www.ovmrc.on.ca/Rambler/Archive/Ram2020-06.pdf>

MOTION: Moved by Richard Haberl, VA3HBL and Seconded by Bill Henderson, VA3HWA, that the incumbent directors be acclaimed for one more year.

VOTE: All in favour.

CARRIED.

- The Zoom on-line break was postponed and the meeting carried on.

- **OVMRC Radio Course -** Norm Rashleigh, VE3LC summarized the radio course held between September 2019 and December 2019. 33 were enrolled originally, some coming from Lansdowne, Cornwall and Johnstown. Some could not follow through, but current hams did attend some of the course sessions. Group exams were held in

December 2019 with 22 graduating. A list of the new hams was published in the January Rambler. Congratulations were extended to Walter Szyz, VE3SYZ, who took his advanced level exam today and passed successfully. During the pandemic, new Covid 19 exam regulations are in place including giving online exams and writing an exam in isolation under physically distanced supervision by the examiner.

- **The Rambler:** Norm, VE3LC acknowledged and thanked members Bill Hall, VA3WMH for layout and design, and Robert Cherry, VA3AOD for proofreading another successful year of the Rambler.

- **VE3TWO REPEATER:** Norm, VE3LC advised members that the repeater is operating status quo and the interference from the paging system has abated. It seems the pager has gone silent during the pandemic.

- **Financial Report by Nicole, VE3GIQ:**

Nicole reported in summary form the details of her report as found in the June Rambler:

<https://www.ovmrc.on.ca/Rambler/Archive/Ram2020-06.pdf>

One member asked if the Balloon Project expenses were on the books and yes, the cost is noted. Membership dues for next year will be \$10 for members whose accounts are current and paid up. Nicole also advised that the club continues to negotiate with RBC and other financial institutions to provide the club with a low or no cost electronic banking service, including provision of electronic payment on line. A decision will

be made soon and available in her yearend report.

- **Secretary's Report by Ron Smith, VE3LBU:**

Ron stressed the importance of good club inter-communication over the summer. Stay in touch by enrolling and accessing Club updates and discussions on groups.io here:

<https://ovmrc.groups.io/g/main/topics> and checking the OVMRC club website regularly.

<https://www.ovmrc.on.ca/>

- **Nets Year End Report by Net Operations Chair, Hugo Kneve, VE3KTN:**

The year end report is available in the June Rambler on page 14 here; <https://www.ovmrc.on.ca/Rambler/Archive/Ram2020-06.pdf>

Hugo reminded members that the 2 M Net on VE3TWO Thursdays at 8 P.M., along with the Sunday morning Pot Hole net at 10 A.M. at 3760 KHz, will carry on over the summer. Ernie Jury, VE3EJJ will host the Pot Hole Net and Hugo, VE3KTN will host the 2M net.

With the retirement of Rob Haddow, VE3RXH as back up 2M net controller, Hugo is asking for a volunteer to share 2M net controller duties starting in September. If interested, please contact Hugo at VE3KTN@rac.ca. A PowerPoint breakdown of the stats for the year can be found on groups.io here:

https://ovmrc.groups.io/g/main/topic/copy_of_club_nets_report/74957499?p=,,,20,0,0,0::recentpostdate%2Fsticky,,,20,2,0,74957499;

Barry, VE3NA thanked Hugo and Rob for their controller work this year.

- **Roger Egan, VA3EGY - Mobile Fox Hunting Exercise:**

Roger staged a brief show and tell of the equipment used in the weeklong event held in May. This included one of the 25 attenuators that we ordered as kits and some assembled in a club build session at Ottawa U and rugged transmitter housings that he has assembled including 5 ammo boxes and 5 'stealth' tubes to provide weather protection. Roger also acknowledged the generous \$2,300 grant from IEEE Ottawa which has been used to purchase Eleven 'sniffers' and fiberglass element Yagi handheld antennas. Two more Micro fox 15 transmitters are on order. Roger congratulated the 11 successful participants who chased the fox by following the visual clues provided. The beacon was located in John's, 'VE3JYK's south end apartment. See page 8 of the June 2020 Rambler for Roger's summary and list of participants. Certificates will be sent to each by email.

<https://www.ovmrc.on.ca/Rambler/Archive/Ram2020-06.pdf>

- **Project Aries Pico Balloon Update by Michael Babineau, VE3WMB:**

Michael updated members and shared slides of progress to date. As March through May put everything on hold, some momentum was lost, however, plans are moving ahead. A series of Aries Project Subgroup emails is posted on groups.io and will bring everyone up to speed.

<https://ovmrc.groups.io/g/AriesHA>

[B/topics?p=recentpostdate%2Fsticky,,,20,2,0,74849298](https://ovmrc.groups.io/g/main/topic/topics?p=recentpostdate%2Fsticky,,,20,2,0,74849298)

The next steps include pricing the helium, payload package testing in order to fly by September 2020. There will be no in-flight battery; only, solar panels will be used. Costs for the project are expected to come in just under \$265.

- **Norm Rashleigh, VE3LC DIY Field Day Discussion:**

Norm reminded members that due to the current pandemic, he has prepared a full guide for individual operating during this year's ARRL Field Day. The guide is available in the May Rambler on the OVMRC web site or on Groups.io. Members planning to work Field Day should contact Norm at VE3LC@RAC.ca to let him know of their plan. Folks that intend to operate FT8 on Field Day, JTAlert will provide Dupe Checking. Using WSJT-X with JT Alert, check here for the guide with screen shots;

<https://ovmrc.groups.io/g/main/topic/75074180>

Members should log all contacts and submit on line and include their affiliation with the "Ottawa Valley Mobile RC". Individual scores will be shared and totalled later in the summer to determine how the club performed overall.

- **Prizes and Draws with Barry Allison, VE3NA:**

The door prize for the Zoom meeting was a 200-piece heat shrink tubing kit. The winner was Dave Scott, VE3ZZU. The Year End Door Prize Draw for paid members was 3 portable radio 'bricks'...a 2-metre power supply

and 2 watts in and 35 watts out amplifier. There were three winners; Hugo Kneve, VE3KTN, Rob Haddow, VE3RXH and Christina Comeau, VA3WTZ. The 50/50 draw is suspended during the current pandemic.

6. 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/>

7. Adjournment:

MOTION: Moved by Bryan Rawlings, VE3QN to adjourn at 8:59 P.M.

8. Next meeting:

The next monthly meeting of the OVMRC will be held Wednesday, September 16, 2020 at 7:15 P/M. Meeting type and location to be confirmed.

Minutes recorded and prepared by Secretary, Ron Smith, VE3LBU.

OVMRC Nets Report

by Hugo Kneve, VE3KTN

Hello and greetings to all OVMRC members and supporters! Although it's a bit hard to think that the summer is drawing to a close and the snow is coming, maybe we're also looking forward to seeing the tail end of 2020 considering all the social upheaval we've experienced so far.

Despite this, one beneficiary of the imposed mobility and sociability restriction has been the upswing in our local nets activity. Both the Thursday, 2 metre and Sunday, Pothole Nets continued after Field Day on an essentially unchanged schedule and continue to provide forums for passing items of news and interest to our group. Thanks go out to Ernie, VE3EJJ, and Glenn, VE3XRA, for co-hosting the Pothole Net even though we had no idea on how well that net would run over the summer given the anticipated degradation in 80 metre propagation and the continued low solar flux numbers. As it turned out, attendance remained unchanged on average through thick and thin; there were days when propagation was worse, but there were surprises occasionally when propagation was quite good.

The Thursday, 2 metre net statistics show an obvious up tick in attendance in the third week of March when socializing restrictions were imposed across Canada, and has remained at elevated levels throughout the summer. It does seem that attendance is tapering off a bit which may be an indicator that people are returning to a somewhat more normal lifestyle. Who'd have

thought that watching the 2 metre net attendance trend could also be an indicator of the general recovery of our social lives? The summer 2 m net was run a bit less formally, mainly by an abbreviated introduction and going to general check-ins immediately rather than inviting Club Exec to start things off. Even though the looser format had no apparent effect on attendance, the net will return to its more structured format starting with the first 2020-21 net on September 10.

Attendance statistics for both the 2 metre and Pothole Nets are included at the end of this message. I would like to again make known that anyone in the Club who wants to take a turn at hosting the 2 metre net from time to time is certainly welcome to do so. Simply send me an email indicating when you'd like to give it a go. As always, Club members' comments and suggestions are welcome for improvements or modifications to either of the 2 m. or Pothole nets. Please send all net-related correspondence to my email - ve3ktn@rac.ca.

Best wishes to everyone for the coming season, and looking forward to your check-in.

73,

Hugo, VE3KTN

OVMRC Net Activity, Check-ins for July, 2020.

Prepared by: Hugo Kneve VE3KTN

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

July 2	July 9	July 16	July 23	July 30
VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors	New & Visitors
				VE3JWE VE3HOA
General Check-ins	General Check-ins	General Check-ins	General Check-ins	General Check-ins
VE3ZZU VE3KMV VE3XEM VE3RXH VA3RLA VE3NA VE3LAF VE3GIQ VA3PSI VE3RUU VE3LC VE3KJQ VA3JYK VE3LBU VE3KAE	VA3ZZW VE3GIQ VE3ZZU VA3VGR VE3LC VE3LBU VE3KAE VE3NA VE3KJQ VA3PSI VE3LAF VA3EO VA3BGO VE3NPO VA3JYK VA3RLA	VE3LBU VA3BGO VE3RUU VE3LC VE3TXB VE3NPO VA3RLA VE3OKD VA3PSI VE3NA VE3KJQ VE3LAF VA3ZZW VE3KAE	VE3LAF VE2MPP VE3ZZU VA3EO VE3RUU VE3LC VE3LBU VE3YY VE3KAE VA3RLA VE3OKD VE3NA VE3KJQ VE3GIQ VA3ZZW VA3BGO VE3KMV	VE3ZZU VE3RUU VE3KJQ VE3NA VE3LC VE3LBU VE3LAF VE3RXH VA3RLA VA3EO VE3NPO VE3BOE VA3PSI VE3GIQ VE3KAE VE3YY VE3TSC VA3BGO

OVMRC Net Activity, Check-ins for August, 2020.

Prepared by: Hugo Kneve VE3KTN

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

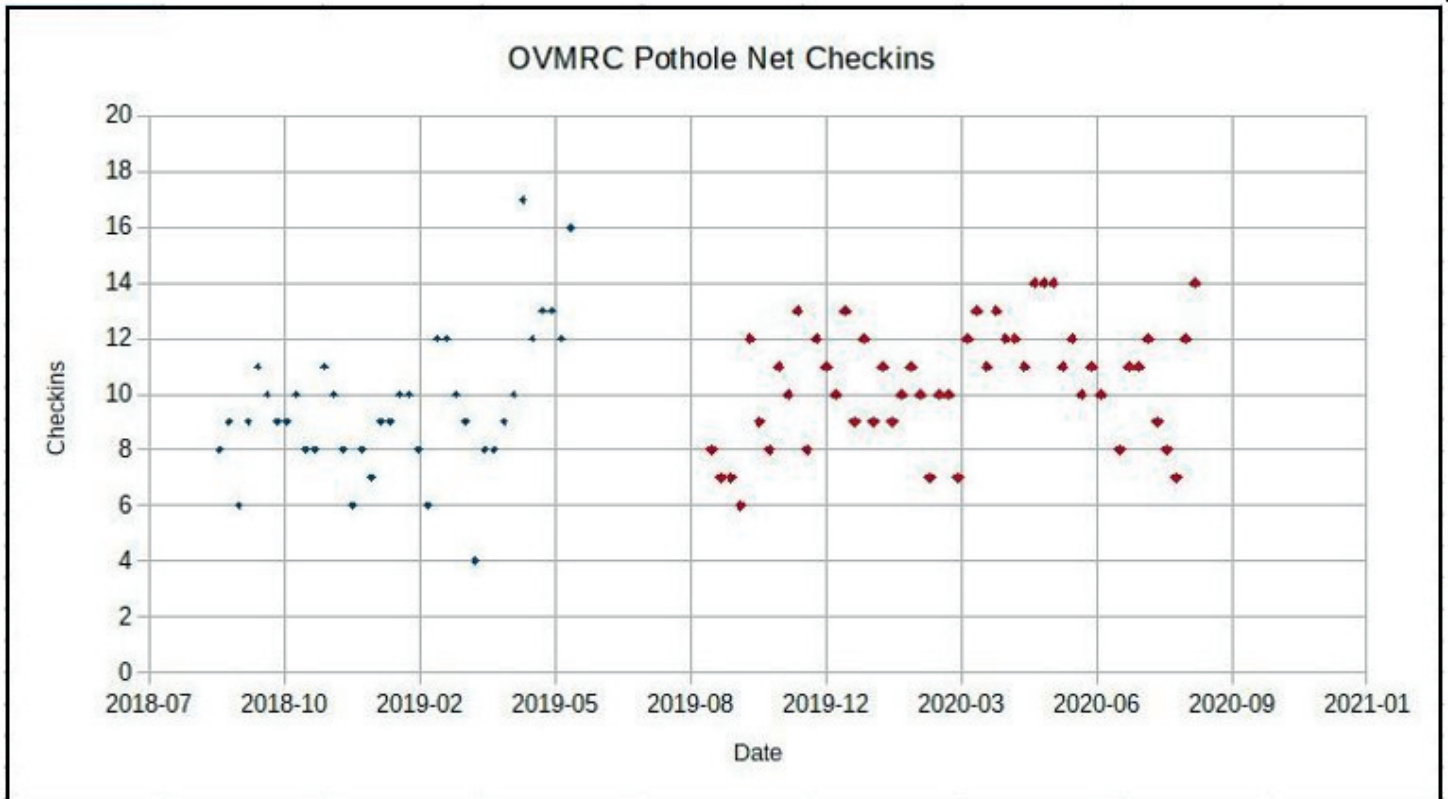
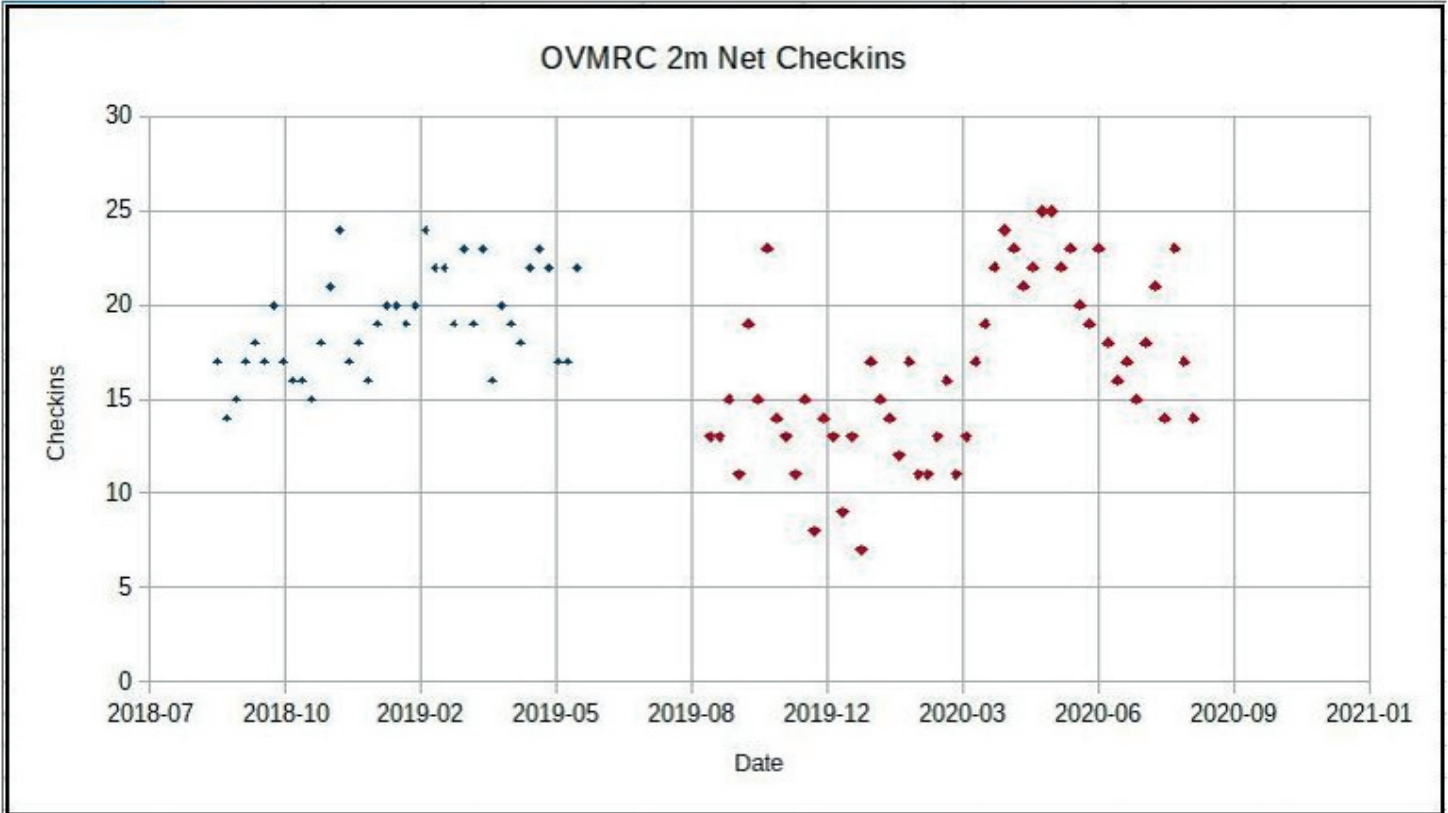
August 6	August 13	August 20	August 27
VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors
VE3FCQ			
General Check-ins	General Check-ins	General Check-ins	General Check-ins
VE3ZZU VA3PSI VE3RXH VE3RUU VA3HBL VE3KAE VE3NA VE3LBU VA3RLA VE3LAF VE3KJQ VE3JWE	VE3ZZU VE3RUU VE3JWE VA3HBL VA2EEK VE3RXH VE3KAE VE3LBU VA3RLA VA3PSI VE3GIQ VE3LC VE3NA VA3AUM VE3KJQ VA3EO VE2OCQ VA3JYK VA3BGO VE3NPO VE3OKD VA3VGR	VE3ZZU VE3RUU VE3OKD VE3XEM VA3ZZW VE3LC VA3AUM VE3NA VA3RLA VE3KJQ VA3HBL VE3RXH VE3LBU VE3LAF VE3NPO VA3JYK	VE3ZZU VE3RUU VE3LC VA2EEK VE3LBU VE3GIQ VA3RLA VE3KJQ VA3BGO VE3NA VE3RXH VA3HJR VA3AUM

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

July 5	July 12	July 19	July 26
VE3EJJ - NCS	VE3XRA - NCS	VE3EJJ - NCS	VE3XRA - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors
			VE3SON
General Check-ins	General Check-ins	General Check-ins	General Check-ins
VA3QV VA2GN VE3LC VE3KTN VE3KAE VE3NA VA3BGO	VA2GN VE3MKX VE3EJJ VA3BGO VE3KAE VE3KTN VE3NPO VA3PCJ VE3RXH VA3EO	VE3MKX VE3XRA VE3LC VE3KTN VE3KAE VA3BGO VE3EKN VE3BOW VA3RLA VA3YB	VE3MKX VA2GN VE3EJJ VE3LC VE3KAE VA3BGO VE3NPO VE3KTN VE3EKN VA3QV

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

August 2	August 9	August 16	August 23	August 30
VE3EJJ - NCS	VE3XRA - NCS	VE3EJJ - NCS	VE3XRA - NCS	VE3EJJ - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors	
	VA3PCI			
General Check-ins	General Check-ins	General Check-ins	General Check-ins	
VE3LC VE3NA VA3RLA VA3PCJ VE3XRA VE3NPO VE3KTN VE3BOW	VE3NA VE3EJJ VE3KTN VE3BOW VA3PCJ VE3LC	VE3NA VA3BGO VE3XRA VE3BOW VE3KAE VE3NPO	VE3EJJ VE3LC VA3BGO VA3PCJ VE3NA VE3KTN VE3NPO VA3PSI VE3BOW VE3IGN VA3QV	VA3YB VE3BOW VE3KTN VA2EEK VE3KAE VE3NA VA3PCJ VA3BGO VE3LC VA3PCI VA3QV VE3NPO VE3XRA



Budget:

Your Executive Committee has prepared a Budget for this season of the OVMRC. Please review below; it will be presented as motion of acceptance and vote at the October meeting.

OVMRC Budget for the 2020/21 Season							
Category	Line Items	Qty	Income	Expenses	Profit/Loss	Last yr Actual	Remarks
Bank	Acct Charges		0	45	-45	0	
	GIC Interest		427	0	427	151	
Memberships	Associate	1	10	0	10	10	Member without ham ticket
	Life	6	0	0	0	0	
	Not RAC	15	300	0	300	525	Renewal @ \$20 ea this year
	RAC	73	730	0	730	1575	Renewal @ \$10 ea this year
	New Hams	10	250	0	250	0	\$25 ea from random Exams
Wearables	Name Tags	8	120	0	120	108	\$15 ea
	Clothes	TBD	0	0	0	0	Maybe Club Hats ?
Obligations	Museum Rent		0	0	0	-226	Likely no rent deal this year
	RAC Insurance		0	483	-483	-483	
	Club Affiliation		0	32	-32	-32	
	Postal Box		0	220	-220	-220	
	Zoom for Meetings	12 m	0	271	-271	0	This in lieu of rent
Radio Course	Tuition		0	0	0	3500	No course this year
	Books	3	150	0	150	0	Available from last year
	Random Exams	10	0	0	0	0	See new memberships
	Exam Printing		0	50	-50	-60	Printing supplies
Club Projects	Build Kits	TBD	0	0	0	0	Project TBD – cost neutral
	Coax Buy & Sales	Bulk	1500	1500	0	-256	Some Inventory on-hand
Donations	ARISS		0	0	0	-607	Not this year
	AMSAT		0	0	0	-607	Not this year
	DARF		0	600	-600	-600	Defence of Amateur Radio
	RAC Foundation		0	400	-400	-400	Scholarship fund
Special Events	Field Day		0	0	0	0	
	TX Hardware	2	0	350	-350	0	2 new Beacon Transmitters
	Picnic		0	0	0	0	Maybe next spring
	Xmas Party		0	0	0	-198	Prizes
	Promotion Events		0	0	0	0	
Meetings	Door Prizes		0	0	0	-165	No meetings no prizes
	Year End Prizes		0	450	-450	-1396	Yes re attendance Zoom
	50/50		0	0	0	221	Can't hold this year
	Coffee & Cookies		0	0	0	-89	
Club Repeater	Maintenance		0	0	0	0	
	Equipment Upgrade		0	225	-225	0	Upgrade Project for DMR
Web Site	Hosting and Domain		0	343	-343	0	Teuthis Consulting Corp
			0	0	0	0	
Totals			3487	4969	-1482	751	

Notes:

1. The OVMRC will be operating at a deficit this year mainly due to the loss of revenue by not conducting the amateur radio course this year because of the Covid 19 pandemic.
2. The deficit this year was further increased this year by the decision of the Club executive committee to reduce dues for this year
3. The operating deficit will be covered by the considerable cash reserves the Club built up over the last number of years of surplus budgets.
4. No money has been put in for Field Day this year. If things improve with the Covid pandemic situation by June 2021, we may request a special budget amendment for Field Day expenditures from the membership of the Club