

Rambler

Newsletter of the
Ottawa Valley Mobile
Radio Club
Incorporated



May 2020

Edition 57

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President's Ramblings

Since all public gatherings of more than 5 are not allowed, and all meeting venues are closed, we are going to try to have our May meeting via a Zoom conference.

To that end, the club has acquired a Pro Version Zoom licence for May and June to round out the year of club meetings. The executive has already had one Zoom meeting and we plan on having a "trial" club "drop in" meeting to test things out prior to the May 20 virtual meeting.

Watch groups.io, the Club web site, and tune in on the Thursday night net on VE3TWO for upcoming details.

This is an important meeting. This is the meeting where you can nominate someone for one of the 4 elected positions (President, Vice President, Secretary and Treasurer) on the executive in advance of voting at the June virtual meeting. So far, the current executive has volunteered to stay on for another year unless nominees come forth and a vote will become necessary. Check the club by-laws for eligibility to apply for nomination. We will also ask the current directors if they wish to remain for another year or

retire and create openings for new directors.

We will also announce the new dues rate for next year as hinted at during the April Rambler. Don't worry if you have paid ahead, Nicole will transfer your account to the next year. There is of course no impact to Life Members.

Norm, VE3LC will be posting a document soon on groups.io detailing the Field Day rules for classes of entry other than what we have been use to entering in the past. Rather than me rambling on here, please check out Norm's article as he has put a lot of work into it. The real intent is to hopefully encourage individual participation during Field Day and earn a participation certificate from the club.

But wait, there is still more!

I'm going to give out the monthly door prize at the virtual May meeting. Wow, there is not one, but two door prizes going to be drawn during the meeting. Here is how it is going to work. I'm going to ask John, VA3JYK to record the call sign of all who check in and during the meeting he can transfer the call signs to tickets for the draw. Before we close, John can stir the tickets in the can and while he is swishing them around, I'll say STOP! and he will grab the ticket he is touching at that time. We'll do that twice since I have two *(Continued on page 4)*

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Calendar

General Meetings

- **All in-person meetings of the OVMRC are cancelled for the rest of the Season.**
- **The May 20th and June 17th AGM will be conducted on-line using Zoom.**
- **We will also be conducting a "rag chew" Zoom session Wednesday, May 13th.**
- **Folks should call-in between 6:45 and 7:15. Late check-in may not be answered.**
- **For details, read the section on using Zoom in this issue of the Rambler.**

OVMRC Executive and Officers 2019-2020

President:

Barry Allison, VE3NA
ve3na@rac.ca

Vice-President:

Norm Rashleigh, VE3LC
ve3lc@rac.ca

Treasurer & Membership Records:

Nicole Boivin, VE3GIQ
nlboivin@sympatico.ca

Corporate Secretary:

Ron Smith, VE3LBU
rjs3.smith@gmail.com

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

Standing Committees

Club Projects & Bulk Orders:

Barry Alison, VE3NA
ve3na@rac.ca

Radio Course &

Accredited Examiner:

Norm Rashleigh, VE3LC
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VE3TWO Repeater Keeper:

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John McGowan, VA3JYK
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

**Ottawa Valley Mobile
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 VE3KMOV 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

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

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.

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) door prizes. The prizes are a box of 200 pieces of various sizes of double thick wall heat shrink tubing that is also adhesive lined. All you have to do is attend the meeting to be eligible to win! Winner pick up of the prizes will be arranged after the meeting.

These tickets will then be entered into the year end draw bin for the year end door prize which I still plan to have during the June virtual meeting. Prize reminder: there will be three 30 watt “bricks” (amplifiers) to boost your portable power from 5 watts to 30 watts as well as a small power supply to operate the unit in your shack. This is a high value prize for anyone to win so good luck!

That’s it for the May Ramblings.
Talk to you on the nets.

Stay safe!

73

Barry, VE3NA

Using Zoom for participating in the OVMRC on-line video conferencing meetings

- The OVMRC has now subscribed to a paid version of Zoom to host meetings for up to 100 check-ins and 24 hours of connect time per session.
- Each meeting we call will be sent to members of the Club as an email invitation indicating the date and time of the session and including a web-link and meeting ID and password.
- Although Zoom can work with several popular “browsers”, it is best that folks prepare themselves for a Zoom session by downloading the free Zoom client software available at: <https://zoom.us/download>. The Zoom client software is available for Windows, MacOS, and Ubuntu Linux. Zoom is also available for your mobile devices at the Apple Store and Google Play.
- For more information on using Zoom, refer to:

<https://support.zoom.us/hc/en-us/articles/214629443-Zoom-Web-Client>

Another Test, Another New Ham and Member of the Club

I indicated in last month’s Rambler, in these times requiring social isolation, I conducted an amateur radio test remotely using the video conferencing application Zoom. To do so, I was given special permission by the Amateur Radio Service Centre of ISED. Technically, the system worked well, but required considerable verbal interaction between the examiner and candidate as I was in control of advancing the display of each question for the candidate to read and answer. Since then, I have conducted another test, but this time, I had the candidate write the exam in the isolation and comfort of his own car parked in front of my residence. After assuring the candidate had no reference material, I monitored his progress much the same way as conducting other ham exams using more conventional meeting places. We were both comfortable that we exercised good precaution keeping ourselves safe from each other. From the result of this test on May 6th, I am happy to report we have another new radio amateur and member of the OVMRC, Scott Waller, VE3OCB. Welcome him when you hear him on-air.

- Norm VE3LC@rac.ca

Call for Executive Committee Nominations

The following incumbent Directors of the Club have agreed to offer their services again for next season and were so nominated collectively at the last meeting of the executive committee.

President:	Barry Allison	VE3NA	for a 3 rd term
Vice President:	Norm Rashleigh	VE3LC	for a 3 rd term
Secretary:	Ron Smith	VE3LBU	for a 3 rd term
Treasurer	Nicole Boivin	VE3GIQ	for a 4 th term

The following incumbent Committee Chairpersons have agreed to offer their services for next season:

Club Projects & Bulk Orders:	Barry Allison, VE3NA
Membership Services:	Nicole Boivin, VE3GIQ
Radio Course & Accredited Examiner:	Norm Rashleigh, VE3LC
Reception & Welcoming:	John McGowan, VA3JYK
Nets & Radio Operations:	Hugo Kneve, VE3KTN
Rambler Newsletter:	Norm Rashleigh, VE3LC
Club Web Site & Social Media:	Darin Cowan, VE3OIJ
Special Events:	Roger Egan, VA3EGY

According to the Bylaws of the Club posted on the Club Web Site at:

https://www.ovmrc.on.ca/Rambler/OVMRC_BYLAWS_approved_May_15_2019.pdf, the executive committee is open to nominations from the membership to challenge any of the above Director incumbents by sending the nomination(s) via email to one or more for the members of the executive committee of the OVMRC. Any such nominations will be reviewed based on the candidate's willingness and eligibility to hold office for a particular position according section 8.2 of the Bylaws. Such nominees determined eligible by a special meeting of the executive committee will be so notified and put on the ballot for a particular position at the June Annual General Meeting of the Club. After election that may be required for any particular position (by a show of hands on Zoom), there will be a motion and vote of acceptance for the entire slate of Directors and Chairpersons to serve your Club next season starting September 1st, 2020.

Field Day 2020 Do-it-Yourself (DIY) Information Document

On-Air Operating Event, Saturday
June 27 at 2 PM local for 24 hours.

Due to the current requirement and prudence for physical isolation, the OVMRC will not be staging a multi-op, multi-station, Field Day (FD) operation this year.

Instead, the OVMRC will be encouraging its members to participate in the ARRL Field Day on-air communications exercise June 27-28 on an individual basis by awarding special "Stay-at-Home" Field Day 2020 Certificates and score recognition to all that officially submit their Field Day logs to the ARRL and to the OVMRC. All individual submissions to the ARRL should include your OVMRC membership affiliation as "Ottawa Valley Mobile RC". This will be recognized by the ARRL when they publish the Field Day results in the December issue of QST. (Let's see how many OVMRC entries are made)

To understand what Field Day is all about and the rules of the game, goto: <http://www.arrl.org/field-day>
To download the complete 2020 FD rules document complete with operating tips and procedures goto:

<http://www.arrl.org/files/file/Field-Day/2020/2020%20Field%20Day%20Packet.pdf>

It is hoped that the challenge for Club members operating their own Field Day station this year, and the process of submitting your results to the ARRL, will provide a good measure of experience in setup and contesting for organizing and

staging and promoting the Club's Field Day event in future years when we can all get together again for our traditional "Class A" team effort.

Logging Software:

Folks should download and use a Field Day contest logging program that specifically captures the Field Day exchange information. The recommended N3FJP Field Day logging software is available for download from:

<https://www.n3fjp.com/fieldday.html> This is an intuitive FD logging package for Windows complete with a map view of all the sections worked; it requires a modest paid registration but is offered on a trial basis for 30 contacts for learning and try out. The Club has a subscription so OVMRC members that will be using the N3FJP logger for Field Day, please contact Norm at ve3lc@rac.ca for the activation credentials. Alternately, the N1MM contest logger can also be used with the FD contest profile; this can be downloaded from <https://n1mmwp.hamdocs.com/> and is free for the taking, however, because of its comprehensive capabilities, it may be more challenging for some to configure and use properly. One of the features of all contest logging programs is a check for "DUPES" which prevents you from working the same station on the same mode on the same band more than once during the contest. Of course, actual logging can also be done manually with pen and paper log form, and transcribing to computer log file after the operating period for submission; however, you will not have the benefit of an automated checking while you are making contacts. Log files for

submission must follow a specific format outlined in the rules for entry upload onto the ARRL submission web page for Field Day. See: <https://field-day.arrl.org/fdentry.php> Note, also on this form that proofs are required for some of the bonus points.

The N3FJP Field Day logging software provides a listing and recording of the ARRL/RAC standard abbreviations for "Sections". If you are operating from Eastern Ontario including Ottawa, you will report "ONE" or "Oscar-November-Echo" or if you are operating within the province of Quebec your Section will be "QC" or Quebec-Charlie.

Classes of Operation:

Normally, the OVMRC stages a Class A "Club" effort with 2 HF stations operating simultaneously, plus additional VHF bonus stations on 6 and 2 all operating under the Club call sign VE3JW. In the last several years, we have also included a "GOTA" station using the Club's other call sign, VE3RAM. According to the FD rules, this all fits within the popular 2A Class of operation. However, as noted above, this year, we will be promoting "Classes" of operation that can be carried out by Club members individually or as small "family" groups; these are:

- **(Class D) Home Stations: Station operating from your permanent home station location using commercial power.** As a Class D station, you can only count contacts with Class A, B, C, E and F Field Day stations; contacts with other Class D home stations do not count on your Field Day score. As

a one operator Class D station, you will report "1D" as part of your Field Day exchange. If you are blessed to co-habit with other hams in the family, it is also permissible to operate two or more stations simultaneously (under the same call sign) in which case you could be Class 2D ...or 3D or more.

- **(Class E) Home Stations are similar to Class D except operating on Emergency power.**

As a Class E home station, you can contact and count all Classes of other Field Day Stations. As a one operator, one transmitter on the air at one time Class E station, you would report you are "1E" as part of your Field Day exchange. If you operate QRP (5 watts or less) and provided the radio is powered by battery for the duration of your FD operations, you can claim a multiplier of 5 X for every contact made. However, if the batteries need recharging during the FD operational period, they can only be recharged by a means that does not use commercial power or power derived from a motor-driven generator; therefore, solar recharging would be the natural choice. When operating Class E, computers used to make Digital mode contacts also must be powered by non-commercial power but if used solely for logging, any power source is permitted for the computer.

- **(Class B) One or two person portable station (away from your home station with temporary antennas established for FD operation).**

This Class of station can count contacts with all other Classes of FD stations. Class B is not eligible for a GOTA station or free VHF station. As a one or two

person Class B station, you give "1B" or "2B" respectively as part of your Field Day exchange. This Class of FD operation would be ideal for a camp or cottage location away from your home QTH provided you are not using already established antennas. This type of class of operation can use commercial power, however, by using emergency power, you can claim the 100 point or 200 point emergency power bonus depending whether you have 1 or 2 radios active at the same time.

- **(Class B – Battery) One or two person QRP (5 watts or less) portable station with a power source other than commercial power or motor-driven generator.**

To keep your battery alive for the duration of your FD operations, you can also include solar power for this Class of operation. As a one or two person Class B - Battery station, you give "1B" or "2B" respectively as part of your Field Day exchange. Class B – Battery will inherently qualify for the 100 or 200 point emergency power points as well as 5 x multiplier for every contact made.

- **(Class C) Mobile: Stations in vehicles capable of operating while in motion and normally operated in this manner.**

This includes maritime mobile and even aeronautical mobile if you are fortunate to have access to plane. As a one person Class C station, you give "1C" as part of your Field Day exchange. It is possible to have 2 or even 3 C class if you have more than one mobile station operating in the same vehicle at the same time, this may be possible if you are maritime mobile on the big yacht. We see in the 2019 field

day results there were 2 and even 3C Class entries. Operating C Class in a car or truck would require using standard "mobile antennas" affixed to the vehicle that provides normal mobile operation while in motion on the roadways with a height limitation that provides adequate clearance at bridges and overpasses. This would mean, for most North American jurisdictions, 13 feet, 6 inches (or 4.15 metres) overall car or trunk height; therefore, having a 30' vertical whip mounted on your road vehicle would not be permitted for FD Class C operation. However, if you have the opportunity to operate on a ship, such limitations may not apply. If you are running 5 watts or less from a mobile installation and if the radio is powered from the normal vehicle battery which is typically charged by the vehicle engine, it would not qualify for the 5 X multiplier, however, it should be permissible to run QRP in an all-electric car and powered from the car battery since it is not charged by a motor-driven generator (alternator). See FD rules, section 4.5 . When mobile as a Class C station on the move, be mindful of the actual section boundaries involved so you can accurately provide that information in your exchange report. As a suggestion, if you only have a VHF FM mobile, go seek a high point of land, maybe one of the lookouts in Gatineau Park, call CQ Field Day on 146.520, spend a few hours and see how many FD contacts you make. Your exchange info will be 1C and your section (ONE or QC) and log and submit all your contacts.

Other Scoring multipliers:

- All “phone” contacts including SSB, AM, and FM, or digital voice only count as one point each.
- All CW and Digital (data) contacts count as (2) two points each.
- If all your station transmitters used are 5 watts or less power output and if the power source is battery supported by solar power or other natural power source, the power multiplier for each contact is X 5 (five).
- If any or all contacts are made using a power output of 150 watts or less, the multiplier is 2 (two).
- Operating with a power output above 150 watts, the multiplier is 1 (one)

Bonus Points (section 7.3 of FD Rules Doc)

The following is a brief description of the FD bonus points and how they may or may not apply to the B, C, D and E Classes of FD operation.

- **100% Emergency Power:** 100 bonus points per active station (at the same time) in the Class for operating on non-commercial sources of power. Inherently, a Class D home station would not qualify for these bonus points.
- **Media Publicity:** 100 bonus points – applies but may be difficult to obtain for individual operations.
- **Public Location:** 100 bonus points – not applicable to Class D, E or C operations and otherwise not applicable during these times of social isolation.

- **Public Information Table:** 100 bonus points – also not applicable to Class D, E or C operations and otherwise not applicable during these times of social isolation.

- **Message Origination to Section Manager by radio:** 100 bonus points – yes this should be achievable especially using the Winlink radio e-mail service. Ensure you are keeping under 5 watts if the rest of your operations are QRP for the 5 X multiplier. Check out EMRG 145.03 MHz Winlink gateway. A copy of this message must accompany your submission. For Ontario East, the RAC section manager is Mike Hickey, VE3IPC, email address VE3IPC@gmail.com

- **Message Handling:** 10 bonus points for every formal message passed. See section 7.3.6. A copy of each message will be necessary for your submission.

- **Satellite QSO:** 100 bonus points - according to the rules, not available to Classes D, E or C.

- **Alternate Power:** 100 bonus points – according to the rules, this is not available to Classes D or C but will apply to B and E Classes. For these bonus points, it is necessary to make at least 5 contacts using a “natural” power source such a solar; this can be buffered by batteries charged in this manner. The 5 contacts for these points should be identified separately in your submission and photographic proof of your method of “Natural” will be necessary.

- **W1AW Message Bulletin:** 100 bonus points for copying the W1AW bulletin. Read 7.3.9 for

details . Available to all Classes of FD operation. A copy of the copied bulletin will be required with your submission.

- **Educational Activity:** 100 bonus points – not applicable during this period of social isolation.

- **Station visitation of Elected official:** 100 bonus points – probably not applicable during this period of social isolation.

- **Visitation of Rep from an Agency:** 100 bonus points - probably not compatible during this period of social isolation.

- **GOTA Bonus points:** not applicable to Class B,C,D or E operations.

- **Social Media:** 100 bonus points, see section 7.3.16 of the FD rules. This promotion of FD is definitely available to all Classes of FD operations.

- **Field Day Youth Participation:** See section 7.3.15 Not available to Class B. Also, probably not applicable during this period of social isolation unless within a co-habiting family unit.

- **Web Submission:** Although paper submission is still acceptable for FD results, it is encouraged by the ARRL and for that matter, it is much easier, to make your official submission at the FD submission web page: <https://field-day.arrl.org/fdentry.php> web app. Doing so will buy you 50 additional points to your score. In addition, all individual or small group entries of members that belong to the OVMRC should indicate their Club affiliation on the Web Submission form for the

record of “Club or Group name” as: “Ottawa Valley Mobile RC”; this will give the Club recognition for each OVMRC individual entry that will appear in the December issue of QST. All entries must be submitted by Tuesday July 28th, 2020.

High Rise Apartment dwellers Operating Field Day on VHF is for you.

If you are a dweller in one of the many high rise apartment buildings in town and operating the HF bands is challenge, you may be well suited to operate Field Day on the VHF bands with your high up balcony antennas. Here’s what you should consider:

- Ideally, limit your power to 5 watts with a battery source of power using supplementary solar charging if necessary. This will put you in the 1E Class of operation and give you a 5 X multiplier for each contact made. Remember, if you operate on AC commercial power, you are Class D and therefore you cannot count other Class D stations in your FD score.
- As a FM or digital voice station, Field Day contacts cannot be made through repeaters or any network connected station. Only simplex contacts are allowed. In this area, it will be permissible to make FD contacts on 146.52 MHz as long as you listen first and give way to priority traffic. Of course, other simplex frequencies can be

- **Safety Officer Bonus points:** For the purpose of a Field Day submission, these bonus points only apply to Classes A & F Club Field operations and do not apply to Classes B, C, D, E operations. Notwithstanding, all amateur operations should be conducted in a “stay safe” manner in all respects.

used if you find FD activity there such as 146.55 or 58, etc. Besides those that can only operate on 2 metre FM, we encourage all Club members to have an active radio on 146.52 to give contacts to one another to bolster their individual scores.

- If you have a 2 metre multi-mode radio, look for FD activity on the SSB calling channel of 144.200 MHz. Generally horizontal polarization is used for non FM activity.
- If you have a 6 metre multi-mode radio, look for, or initiate, FD calls on 50.125 MHz SSB. Six metres during the Field Day weekend can be alive with daytime sporadic E propagation and under these conditions look for considerable SSB activity from 50.125 to 50.200 and if packed up to 50.300 MHz.
- Consider also using the FT8 mode on 2 and 6 metres; the required FD exchange for Class and Section are now built into the WSJT-X digital software and each contact counts has a 2 X multiplier. For interfacing the WSJT-X logging to the N3FJP FD logging package, you will require intermediate API linkage software provided by “JT-Alert”. The FT8

This Topic appeared on the Club’s Groups.IO page, May 4th ..

See:

<https://ovmrc.groups.io/g/main/topics/discussion/thread>.

frequency for 6 mtrs is 50.313 and on 2 mtrs is 144.174 MHz.

- Besides the Field Day exchange information of Call Sign, Class of FD operation and your Section (ONE for Ontario east or QC for Quebec), VHF stations you contact may also want to log your location “Grid Square”. For the Ottawa area that most likely would be FN25. To know for sure, look it up at:
https://www.levinecentral.com/ham/grid_square.php
- For further information about operating VHF on Field Day including Active satellites available, Read the section “VHF Operations and Field Day FAQ’s, Tips and Guides for Getting More Field Day QSOs” as part of the “FD Packet” document available at:

<http://www.arrl.org/files/file/Field-Day/2020/2020%20Field%20Day%20Packet.pdf>

Any questions, be in touch

Norm, VE3LC@rac.ca

Speech Processors - How They Work

By: Hugo Kneve - VE3KTN

Introduction

From time to time, I hear people on HF discussing or asking about how the speech processor function works on their rig and the best way to set it up. This article is an attempt at providing a basic explanation of speech processing as it applies to amateur radio equipment and some guidelines for setting it up.

Speech processors are implemented in two classes: audio and R.F. with the R.F. type being the most popular in modern commercially built rigs. Regardless of which kind of processor is implemented, the purpose is to increase the average R.F. power in a transmitted signal, not the Peak Envelope Power (PEP), without adding objectionable harmonics and distortion. An optimally adjusted speech processor can provide up to a 6 dB. (4x) increase in average R.F. power which can substantially improve the chances of busting through a contest or DX pileup. To some, the compromise paid in transmitting a slightly more distorted signal during a short period QSO is a small price to pay versus spending big money for a linear amplifier and/or multi-element antenna array to achieve the same result.

Automatic Level Control (ALC)

Without speech processing applied, the operator's voice audio signal is simply amplified and managed by an automatic level

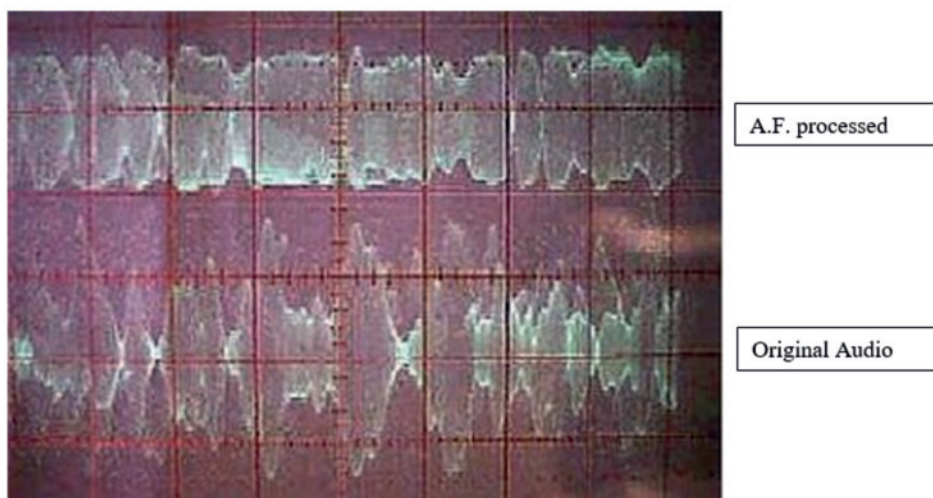
control (ALC) circuit which attempts to limit the peak voltage into the modulator section, thus minimising harmonic and intermodulation distortion while driving the radio to its maximum rated PEP. Most amateur rigs will have a manual ALC gain control available that needs to be adjusted to suit each operator's speaking characteristics. Some people speak softly, others are more assertive and there is a continuum of speaking traits in between; it's just the way we are as people. The ALC control is adjusted and monitored on a metering display that's available on the radio's front panel and must be set according to the user manual instruction. It's important to set the ALC properly before dealing with the speech processor in order to get enough drive to achieve rated Peak Envelope Power in SSB mode but not too high so as to generate intermodulation and harmonic distortion of the final R.F. signal.

Once again, before doing anything fancy, make sure your rig's ALC is adjusted correctly with respect to how you speak.

Speech Processing Principles

As mentioned, speech processing modifies the envelope of the audio signal prior to modulation. Both the A.F. and R.F. methods will provide improvement in average transmitted R.F. power but there are advantages to R.F. processing versus A.F. Suffice that this is so - I'm not going to get into the details here because it can get complicated and even after several decades of there being speech processors, there's been some controversy over how, and how well, they work. I should also mention that speech processors only work on variable-envelope power signals, principally single sideband. It does not work, nor should it be enabled, on AM, FM and digital modes.

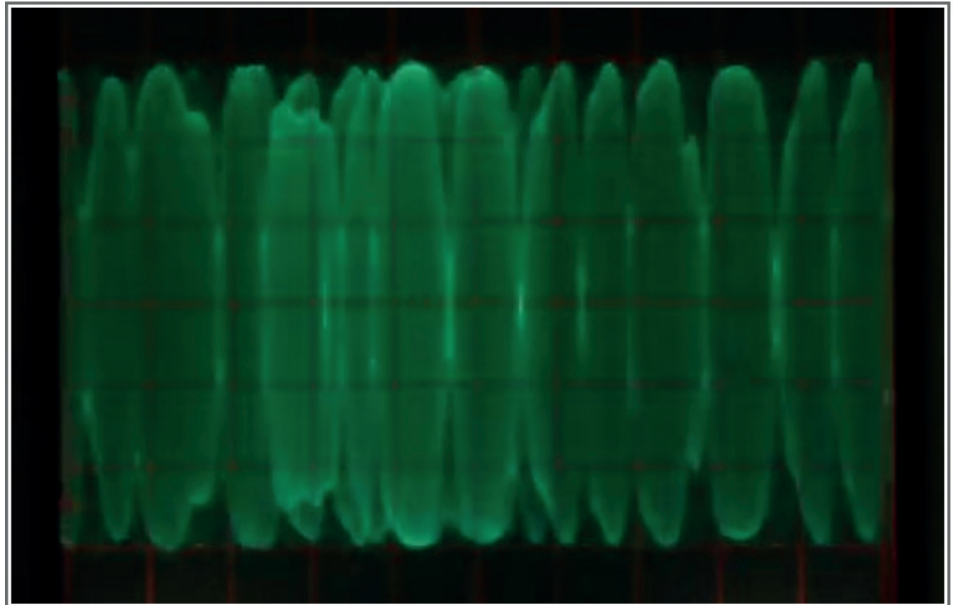
Audio frequency processing simply applies level compression to the audio signal before presentation to the radio's ALC. It typically looks like this:



One can see that by boosting the lower level parts of the original audio there is a reduction of the signal's dynamic range, the ratio of maximum to minimum voltage, thus more energy is contained in the processed signal which translates into transmitting a higher average R.F. power. The penalty to be paid is some increased distortion caused by "flat-topping" of high amplitude voice peaks.

You can see it between the 2nd-3rd and 6th-8th vertical grid lines along the processed signal. Such flat topping is caused by clipping of the original audio signal without appropriate low pass filtering. This is one of the disadvantages of A.F. speech processing and why it's important not to exceed the manufacturer's recommendation for setting the amount of processor compression. If you drive the compression too hard, you'll generate more harmonics and intermodulation distortion which leads to "splatter" that could put R.F. energy outside the regulated bandwidth as specified by I.S.E.D. Besides running an arguably illegal operation, you could risk messing with other people's enjoyment of spectrum that would otherwise be available.

R.F. speech processing works similar to A.F. processing except that the A.F. signal is usually first double-sideband modulated, compression applied to the modulated signal, filtered and then demodulated back to A.F. before presentation to the radio's modulator. This is how a typical R.F. processed signal might look:



It can be seen again how there is less dynamic range in the processed signal but that the envelope has a much more gentle attack and decay characteristic than a directly processed A.F. waveform which means less distortion and risk of splatter.

Setting Up Your Processor

Adjustment of your speech processor is generally straightforward and is explained in the radio's user manual. Always follow the recommendations in the manual to be sure you're running a clean operation.

1. Set up the ALC level with speech processor disabled. When properly adjusted, you should see ALC deflection on your radio's meter according to the user manual recommendation and seeing the radio deliver rated peak envelope power on voice peaks.
2. Enable the speech processor and adjust the compression level according to the user manual recommendation. This is typically an indicated compression of 10dB. You should still see rated PEP

output but the RF power metering will show a higher average deflection.

3. Select ALC level indication again while keeping the processor enabled and check that the ALC deflection is still within the recommended range. Adjust ALC control if necessary to restore the recommended level and that you still have rated PEP on voice peaks.

It may be necessary to do steps 2 and 3 a couple of times to achieve both correct ALC gain and processor compression.

Final Words

I hope the guidance in this article will help those who have been unsure as to what their radio's speech processor does and how to adjust it. It is important to follow the recommendations in the user manual because manufacturers differ in how their designs work and settings will vary, even among different models of radio produced by the same manufacturer.

This discussion should be taken as very basic advice because state-of-

the-art radios, and especially DSP radios, do other things as part of their speech processor functionality such as segmenting the audio spectrum into several bands and processing them separately, applying proprietary dynamic compression algorithms and, very likely, things that I don't even know about.

One thing to know about enabling speech processing is that since the effect is to boost low level signals by anywhere between 10-15 dB.,

any background noise such as your kids watching TV or the noise from the air conditioner in your shack will be more easily heard over the air because those low level signals will be boosted whenever you're not talking and the mic is still open. So be aware. Also, engaging the speech processor for local ragchews has very little benefit - if anything, it could be more objectionable because of the added distortion. I have a regular sked with friends in

western Ontario and have never used the processor for those chats but I might be tempted to turn it on for a pileup to Diego Garcia.

Suffice to say that, ultimately, the purpose of the speech processor is to increase the average RF output power of your radio with minimal added distortion and is most effective when working DX or when conditions are poor.

73,
Hugo, VE3KTN.

OVMRC Net Activity, Check-ins for Last Month.

Prepared by: Hugo Kneve VE3KTN

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

April 5	April 12	April 19	April 26
VE3XRA - NCS	VE3EJJ - NCS	VE3XRA - NCS	VE3EJJ - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors
		VE3MKX VE3CVG	
General Check-ins	General Check-ins	General Check-ins	General Check-ins
VA3QV VE3NA VA3ZTF VE3LC VA3RLA VE3LLX VE3EKN VE3KTN VE3EJJ VE3NPO VA3EO VE3BAE	VA3QV VE3KAE VE3NPO VE3KTN VE3LC VE3NA VA3RLA VE3EKN VA3PCJ VE3XRA VA3BGO	VE3EJJ VE3LC VE3KTN VE3NA VA3RLA VE3EKN VA3BGO VA3QV VE3NPO	VA3ZTF VE3KTN VE3EKN VE3XRA VA3RLA VA3BGO VE3NA VE3NPO VE3LC VE3MKX

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

April 2	April 9	April 16	April 23	April 30
VE3KTN - NCS	VE3KTN - NCS	VE3RXH - NCS	VE3RXH - NCS	VE3RXH - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors	New & Visitors
		VA3KDQ		
General Check-ins	General Check-ins	General Check-ins	General Check-ins	General Check-ins
VE3NA VE3LC VE3GIQ VE3KAE VE3XEM VE3LBU VA3ORL VE3BOE VE3RKB VA3RLA VA3EO VE3HAZ VE3OKD VA3IAH VA3JYK VA3FCV VE3RXH VA3BGO VA2EEK VE3TSC VE3VIG	VE3GIQ VE3NA VE3LC VE3XEM VE3ZZU VE3KAE VE3NPO VE3LBU VA3WTZ VA3RLA VE3LAF VA2EEK VA3EO VE3TSC VA3IAH VE3VIG VE3RXH VE3KJQ VE3SYZ VA3BGO VA3JYK VE3HVA VA3HJR	VE3LAF VE3ZZU VA3EO VE3NA VE3LC VE3LBU VE3TSC VE3KAE VA3AOD VE3VIG VE3NPO VA3ZZW VE3FNG VA3YYF VA3RLA VE3KJQ VA3IAH VA3BGO VE3KTN VE3SYZ VE3HHS	VE3FNG VE3NA VE3LC VE3ZZU VE3LBU VE3KAE VE3LAF VA2EEK VE3OKD VE3TSC VA3KDQ VA3IAH VE3KTN VE3VIG VE3YDK VE3WNX VE3KJQ VA3BGO VA3VGR VA3MVW	VE3ZZU VE3OKD VA3ZZW VE3GIQ VA3YYF VA3EO VE3LAF VE3NA VE3LC VA3JYK VE3TXB VE3KAE VE3BF VE3NPO VA3BGO VE3IPC VE3VIG VE3KTN VE3KJQ VA3IAH VE3EJJ

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 <input type="checkbox"/> No <input type="checkbox"/>		
Callsign for name tag	Name for name tag	

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

Circle your interests

Bands Microwave UHF VHF HF LF and below	Modes CW Digital Phone EME Satellite Experimental	Building RX TX Antennas Test equipment Other	Other Teaching Speaking/Presenting DF/Fox hunting Contesting DXing Computers/IT Other
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Signature _____	Date _____	<div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> Initials </div>	By initialing this box, I confirm that I consent to receiving e-mail messages from the Club.
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