

RAMBLER

JUNE 2024



VOL. 66 ISSUE 10

NEWSLETTER OF THE OTTAWA VALLEY MOBILE RADIO CLUB INCORPORATED (OVMRC.CA)

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CHECK-IN TIME 7:15 P.M. MEMBERS AND INVITED GUESTS WILL BE SENT AN EMAIL INVITATION SEVERAL DAYS BEFORE MEETING DATE WITH LOGIN AND PASSWORD. OTHERS NOT ON OUR MAILING LIST PLEASE CONTACT NORM AT: VE3LC@MYRAC.CA FOR INVITATION.

MEETING:

WEDNESDAY JUNE 19
IBEW LOCAL 586, 1178 RAINBOW ST.,
GLOUCESTER, 7:00PM IN PERSON
AND 7:15 PM VIA ZOOM

WELCOME TO THE FOLLOWING NEW
MEMBERS OF THE OVMRC SINCE
JANUARY 1, 2024

- | | |
|-------------------------|--------|
| • CHRIS PATTEN** | VA3CJO |
| • SERGIO SLOBORDIAN | VE3KSM |
| • ROBERT RADBURN** | VE3YRK |
| • GEORGE-ANDRÉ CHANDRON | VE2VAB |
| • MICHAEL CARIGNAN** | VA3CMG |
| • DON MCCALLAN | VE3GFD |
| • CHARLES GUERIN** | VA3CGF |

** NEW AMATEUR THIS YEAR

OVMRC AFFILIATIONS





JUNE 19, 2024 - MEETING AGENDA

1. **Greetings and welcoming guests and new members of the Club.**
2. **Acceptance of the May meeting minutes.**
3. **Election of the Club's new Board of Directors.**
4. **Year end - Chairpersons Reports**
5. **Field Day - final Q&A before the event.**
6. **Year End Door Prizes - 4 Raspberry Pi-400 to be given away to the lucky winners.**
7. **Meeting adjournment followed by social hour.**

AMATEUR RADIO OPERATOR CODE OF ETHICS

Code of Ethics by Bill Wilson, VE3NR (SK):

The thoughtful Radio Amateur is:

- **Responsible** - using courteous operating practice, complying with regulations and accepted technical standards;
- **Progressive** - striving to develop and improve operating and technical skills;
- **Helpful** - offering assistance, support and encouragement to other Amateurs, especially beginners; and
- **Public Spirited** - offering use of station, knowledge and skills as a public service whenever possible.

<https://www.rac.ca/operating/guidelines/>

Bill was a long-time member of the OVMRC and was a Life Member.



OVMRC EXECUTIVE AND OFFICERS 2023-2024

DIRECTORS

President:

Norm Rashleigh, VE3LC
ve3lc@myrac.ca

Vice-President:

Rob Haddow, VE3RXH
vicepresident@ovmrc.ca

Treasurer &

Membership Records:

Nicole Boivin, VE3GIQ
ve3giq@myrac.ca

Corporate Secretary:

Alan Fricker, VE3KAE
alanfricker@yahoo.ca

STANDING

COMMITTEES

Club Projects & Bulk

Orders: Barry Alison,
VE3NA ve3na@myrac.ca

Radio Course &

Accredited Examiner:

Norm Rashleigh, VE3LC
ve3lc@myrac.ca

Meeting Reception: John

McGowan, VA3JYK
john.mcgowan1314@
gmail.com

Nets & Radio

Operations: Hugo Kneve,

VE3KTN
ve3ktn@myrac.ca

Rambler Newsletter

Editor and Production:

Alan Hotte, VA3IAH
editor@ovmrc.ca

OVMRC.CA & Social

Media: Adam Bird,
VA3IRD web@ovmrc.ca

OVMRC Repeater

Keeper: Norm Rashleigh,
VE3LC ve3lc@myrac.ca

Special Events: Roger

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

OVMRC Groups.io

Ongoing discussion

Group at:

<https://ovmrc.groups.io/g/main>; All radio
amateur members and
non-members are
welcome

Ottawa Valley Mobile

Radio Club Inc.,

**PO Box 41145 Ottawa, ON
K1G 5K9**

OVMRC Life Members:

Ralph Cameron, VE3BBM
Doug Carswell, VE3ATY
Bill Hall, VA3WMH
Ernie Jury, VE3EJJ
Doreen Morgan, VE3CGO
Bryan Rawlings, VE3QN
Maurice-André Vigneault,
VE3VIG

OVMRC Repeaters:

- **VE3RAM** Limited coverage to Orleans and East Ottawa 443.700 MHz (+) DMR CC1 & D-Star Network connected to Brandmeister
- **VE3TWO** Limited coverage to East and South Ottawa 147.300 MHz. +, PL 100.0 Hz. Analogue FM and C4FM

Special Event & Field

Day Call Sign VE3JW



LOCAL WEEKLY NETS (ALL CHECK-INS WELCOME)

- **Rubber Boot Net**, VE3OCE 146.880 MHz (-)136.5 Hz tone weekday mornings at 7:30 AM conducted by Roger, VE3NPO
- **Pot Hole SSB Net**, 3760 kHz, every Sunday morning at 10:00 AM conducted by Ernie, VE3EJJ, or Glenn, VE3XRA.
- **Pot Lid Net**, Sunday night, 7:30 PM, 50.090 MHz., horizontal polarization. Join controllers Hugo (VE3KTN), Norm (VE3LC), Mike VE3FFK and Ante VA2BBW for accomplished and budding CW operators alike.
- **QCWA Chapter 70 Net**, VE3OCE 146.880 MHz (-) 136.5 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 STP Net**, VE3STP 147.060 MHz -, (114.8 Hz tone), held Monday through Saturday at 7:00 PM.
- **Phoenix Net**, VE3OCE 146.880 MHz (-) 136.5 Hz tone, Tuesday evenings at 7:30 PM conducted by Pete, VE3XEM
- **Upper Frequency Net**, Simplex 144.250 MHz using USB, Tuesday evenings at 9:00 PM conducted by Glenn, VE3XRA. Following check in on 2 m you can check your radios on 6 m at 50.150 MHz and 70 cm on 432.150 MHz as well using USB. All check ins are welcome.
- **Almonte ARC's D-Star Net** Tuesday evenings at 8:40 p.m. carried on XLX197 and everything connected to it. Dale VE3XZT presides.
- **OVMRC 2-Metre Net**, Thursday Evenings, 8:00 PM, Club Net on FM will be held through VE3OCE 146.880 MHz (-)136.5 Hz tone conducted by Hugo, VE3KTN.
- **Weekend Allstar Nets**, on an ad hoc basis the EMV_E repeater will be linked temporarily to the Allstar Canada Hub for weekend nets.
 - <https://thecanadahub.ca/>
 - http://www.emrg.ca/repeater_s.htm

INFORMAL AMATEUR RADIO RESTAURANT GATHERINGS

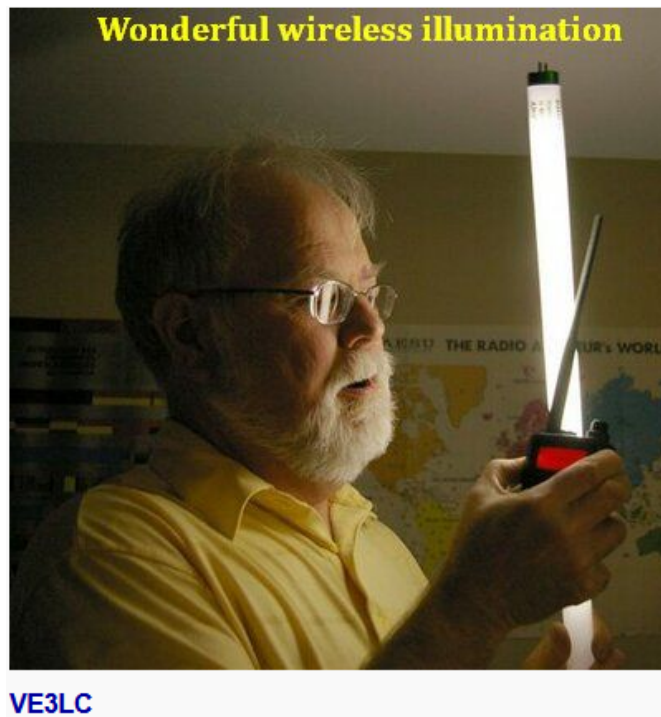
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|--|---|--|---|
| • QCWA Chapter 70
Breakfast gathering every Tuesday morning at 7:30 to 10:00 AM, Summerhays Grill, 1972 Baseline Rd., Nepean - Restarted | • Orleans Coffee gathering every Friday morning at 9:00 AM, McDonald's 1890 Innes Rd., Ottawa, K1B 3K5 | • QRP Group Dinner meeting, (on hold) , Second Wednesday every month, 5:00 PM, Newport Restaurant, 322 Churchill Ave N., Ottawa | • Phoenix Net monthly Breakfast gathering (on hold) , usually the second Saturday every month at 9:00 AM, Check with Pete ve3xem@myrac.ca |
|--|---|--|---|



President's Ramblings

Summer is upon us. We will soon be concluding another season of the OVMRC with our Annual General Meeting (AGM) on June 19th and our Club Field Day event the weekend of June 22-23 this year hosted on the grounds of the Cumberland Heritage Village Museum.

The main item of Club business at the AGM will be the election by the membership of the 5 Directors of the Club that will be responsible for managing the operations of the Club for the next season commencing immediately following the AGM.



These people have agreed to stand for election and serve the Club as Directors for the next season:

1. **Norm Rashleigh, VE3LC, President and chairperson of the Board.**
2. **Rob Haddow, VE3RXH, Vice President.**
3. **Nicole Boivin, VE3GIQ, Treasurer and Membership chairperson.**
4. **Kathleen Murphy, VA3WEX, Corporate Secretary.**
5. **Patrick Brewer, VE3KJQ, Director at Large.**

No others came forward or were nominated.

To this end, we raise the following motion for an OVMRC membership vote:

“Be it resolved that Norm Rashleigh VE3LC, Rob Haddow VE3RXH, Nicole Boivin VE3GIQ, Kathleen Murphy VA3WEX and Patrick Brewer VE3KJQ be elected as Directors of the Ottawa Valley Mobile Radio Club Incorporated for a term of one year and serve the Club to the best of their ability until the next Annual General Meeting in the month of June, 2025”.



In addition to the OVMRC Directors, the following members have agreed to serve the Club and be responsible for the following functions:

- **Alan Hotte VA3IAH: Rambler Newsletter editor and publisher.**
- **Rob Haddow VE3RXH, Roger Egan VA3EGY, and John McGowan: Events organizers.**
- **Hugo Kneve VE3KTN: OVMRC Nets and Radio Operations.**
- **Adam Bird VA3IRD; Club Web master and IT specialist.**
- **Barry Allison VE3NA: Bulk Orders.**
- **Norm Rashleigh VE3LC: Accredited Examiner and keeper of the Club Call Signs.**

Ontario Not For Profit Corporations Act

As reported previously, the Club must submit a revision of its Bylaws by October to be compliant with certain requirements of the Ontario Not-For-Profit Corporations Act. We do have a working group on this project consisting of myself, Alan VA3IAH, Alan VE3KAE, Nicole VE3GIQ and Hugo VE3KTN. We have made some progress but have not yet finished the task because of other more immediate priorities in running the Club for the benefit of the membership. We plan on resuming this important work during the summer and will have something ready prior to the first meeting in September when we will present it for a membership vote. Indeed, if we finish the work sooner, we may call a special meeting by Zoom or otherwise for membership approval of the revised bylaws earlier than the September meeting.

Field Day - June 22-23 Weekend

As most folks know, Field Day planning is taking shape. By the time you read this, we will have had our Zoom Field Day planning meeting that hopefully assigns the tasks to everybody in the Club that wants to participate. All that said, whether you are able to spend the whole weekend doing the Field Day on-the-air event or whether you can only spend an hour or two helping to setup and/or tear down the equipment and antennas or do a bit of operating, all members of the OVMRC and family and friends are welcome. Indeed, since the Cumberland Heritage Village Museum is providing the grounds to host our FD event, this may be a wonderful opportunity to tour Museum Village with its many buildings and exhibits showing the way it was in the 1920s and 30s. A final word of thanks to all on the OVMRC executive committee who have contributed to making the Ottawa Valley Mobile Radio Club the premier amateur radio club in Ottawa area including:

- **Rob VE3RXH, Roger VA3EGY and John VA3JYK** for organizing the POTA Picnics and Fox Hunt events and other activities of participation for members of the Club.



-
- **Nicole VE3GIQ** for administering and recording all the financial transactions of Club as OVMRC Treasurer and submitting the annual CRA return. Nicole is the longest standing Treasurer in the history of the OVMRC and has been doing the job since 2016. Nicole also is responsible for organizing the amateur radio response for providing volunteer communications in support of the August MS Bike event. Thank you Nicole for your dedication and commitment to the OVMRC; it has been very much appreciated for so many years on the job!
 - **Alan VA3IAH** for assembling and publishing the OVMRC Rambler Newsletter each month so well. This is a job and a half with a dead line to get it out on-time before the next monthly meeting. The Rambler continues to be the best well read amateur radio club newsletter in the area. Thanks Alan!
 - **Alan VE3KAE** for providing the OVMRC corporate secretary duties of recording and publishing the executive and general meeting minutes for the last two years. Thank you Alan for the detail in your records of all our proceedings.
 - **Colin VA3CSG** for providing the wonderful accommodation of the IBEW Local 586 meeting hall for our monthly meetings. Thank you Colin!
 - **Adam VA3IRB** for being our Web Master and keeper of the all things internet and IT on behalf of the OVMRC. Adam this last year setup an AllStarLink hub for the Club which we plan to utilize for linking repeaters in the coming year. Thank you Adam!
 - **Barry VE3NA** for continuing to be the purchaser and keeper of high demand goods and materials on behalf of the Club and its members. Also, thank you Barry for serving the Club as president for the four previous seasons.
 - **Hugo VE3KTN** for continuing to be Club's net manager and reporting in the Rambler all those that check into the Club's Pot-Hole and Thursday evening FM net that Hugo conducts. Hugo is also a frequent contributor of articles published in the Rambler. Thank you Hugo.

Enough said for this session of my Ramblings.

I hope to see you all in person at the Annual General meeting June 19 three days before Field Day.

73 all and have a good summer.

Norm Rashleigh, VE3LC



OVMRC General Meeting Minutes

Date / Time: Wednesday, May 15, 2024 at 7:15 PM

Location: IBEW, 1178 Rainbow Street, Ottawa, ON, and via ZOOM on-line meeting

1. Call to Order

OVMRC President Norm Rashleigh VE3LC called the meeting to order at 7:18 PM. There were 42 total attendees present for the meeting, both in person and online.

2. Agenda and Meeting Content

Norm VE3LC opened the meeting by outlining the agenda for tonight's meeting that includes:

- 1. Greetings and special welcome to guests, new hams and new members to the OVMRC,**
- 2. Acceptance of the April 2024 meeting minutes published in the May 2024 Rambler,**
- 3. A vote on a proposed resolution for a fifth director position,**
- 4. Chairperson Reports,**
- 5. OVMRC Field Day 2024 Update,**
- 6. Door Prize Draw,**
- 7. Other business that may arise,**
- 8. The meeting will be followed by a social session with coffee and donuts.**

3. Welcome and Guest Greetings

Norm VE3LC then extended a welcome to any guests, visitors, and new hams who are present for the meeting. Greetings were extended to returning member Douglas VE3YDK.

4. Approval of Minutes from April 17, 2024 Meeting:

MOTION: Moved by Wray VA3EO and seconded by Sandy VE3HAZ that the minutes of the OVMRC meeting held Wednesday, April 17, 2024 be approved.

VOTE: No Objections.

CARRIED.



In the May 2024 issue of the Rambler, the membership was informed of the introduction of a special resolution for a vote at tonight's meeting. The resolution is as follows:

"Be it resolved that the Ottawa Valley Mobile Radio Club Incorporated add a 5th Director position with no specific responsibilities to the existing four Director positions of President, Vice President, Treasurer and Secretary and this position will be known as Director-at-Large."

To clarify the purpose of the resolution, Norm VE3LC informed that the OVMRC has four director positions currently – an even number. A fifth director position will ensure there are no “tie” votes regarding executive business. In addition, the creation of the position will support our bylaw modification activities resulting from the new ONCA rules. It is likely this work will carry on with the working group over the summer.

Norm VE3LC then introduced the resolution to the membership for a vote.

Motion: Moved by Norm VE3LC and Seconded by Richard VA3HBL

Carried

5. OVMRC Treasurer's Report and Public Service Event Update - Nicole VE3GIQ

Nicole VE3GIQ provided a financial report, membership update and a status of the upcoming public service events. The OVMRC bank balance is \$5603. The club continues with its \$15,000 GIC investment that matures in January 2025. The club has made a donation of \$2000 to the RAC VE3RHQ building fund, as was approved by a vote of the membership at the April 2024 meeting, as well as a \$200 donation to DARF and a \$200 donation to the RAC Foundation. Club membership is now 139. Nicole reminded the attendees about the new email address for meeting announcements – membership@ovmrc.ca.

Nicole then provided a brief update about planned public service events and amateur radio volunteer participation in those events.

The CN Cycle for CHEO event took place on May 5, 2024. The event broke previous records with \$2.175 million raised and involving more than 4,000 participants, a significant increase over last year.

The Rideau Lakes Cycle Tour is scheduled for June 8-9, 2024. There is still a need for volunteers, at least five for Saturday, and seven for Sunday. Nicole says that those wishing to volunteer may contact Richard



Hagermeyer VE3UNW at hagemeister@gmail.com. The website for the event may be found at <https://cncycle.radio-1.ca/>.

The MS Canada Bike event will be held on August 17-18, and is an Ottawa to Brockville and return event. Nicole showed a detailed graphic depiction of the route that identified checkpoints and amateur radio operator stations. She mentioned that APRS will be used to track APRS equipped amateur operators, with other stations being tracked via cellphone. She says she will require a total of 8 fixed amateur stations at rest stops, supplemented by two observers and a number of mobiles. Nicole will issue instructions and schedules and there will be an on line training session in July 2024.

Nicole is looking for more volunteers as she only has four confirmed volunteers so far. With respect to those who wish to volunteer, Nicole says she needs the following information:

- indicate availability for Saturday or Sunday or both days
- indicate preference for fixed or mobile assignment
- indicate APRS beacon capability
- provide a cell phone number

Nicole mentioned that there are potential volunteers from Brockville and Cornwall, and that anyone interested in volunteering to contact her at membership@ovmrc.ca.

Norm VE3LC suggested that conducting a radio and antenna performance check a week before the event might be very useful. Norm VE3LC then thanked Nicole VE3GIQ for her interesting presentation and update.

6. Upcoming Event – May 25, 2024 Foxhunt, Mobile Radio Demo and Swap Meet - Rob VE3RXH

Rob VE3RXH provided a brief update on the upcoming May 25th activities. The membership were previously reminded of this event by Norm VE3LC in his President's message in the May 2024 edition of the Rambler. The event will be held at the IBEW parking lot from 10:00 AM until noon.

Rob says this will be an “in vehicle” fox hunt. The transmitter will be heard along the 417 corridor and he anticipates it will be audible between Trim Road and as far west as the West 416/417 intersection. The transmitter will start up at 9:00 am and will end at 11:00 am. He suggests those not participating in the fox hunt to bring in their vehicles around 10:00 AM for the mobile “show and tell” as many will enjoy seeing the various mobile installations, including pedestrian and bicycle/motorcycle mobiles as well. Rob says it would be very interesting to see a HF pedestrian setup with a big antenna. There will be a tailgate as well and an opportunity for a swap meet, so bring any items that you want to swap



or sell.

Rob reminded those who are coming to bring a lunch. Norm VE3LC says he expects coffee and donuts will be on hand. Washroom facilities will be provided by the IBEW and the event will run rain or shine.

Norm VE3LC thanked Rob VE3RXH for his event update.

7. OVMRC ARRL Field Day 2024 Update - Norm VE3LC

Norm VE3LC provided an overview and update regarding the proposed OVMRC 2024 ARRL Field Day activities on June 22-23, 2024. He began his presentation by asking how many new ham members were present who have not participated in a Field Day. He then mentioned that Field Day is a North American event that begins at 2:00 PM on Saturday June 22nd and runs for 24 hours.

He then outlined the objective of ARRL Field Day and mentioned that the only amateur bands that cannot be used is the 60 meter band, as well as the WARC bands. It's all about emergency communications and operating in less than optimal conditions.

With respect to a Field Day location, Norm had some exciting news about a Field Day location for the Club. The club now has a site, courtesy of the Cumberland Heritage Village Museum and the approval for this came only a few hours before this meeting.

Norm summarized some of the benefits of the location. First of all the property is managed by the City of Ottawa. The Cumberland Heritage Village Museum has a suitable big open field There aren't large trees suitable for hanging antennas, however we will work around that. They have given the club permission to operate and stay overnight. Norm says we will need to finalize details and approvals about bringing travel trailers to the site.

Norm then discussed the various Field Day classes of operation. He spoke about Class A and he anticipates we will operate Class 2A with two HF stations on the air. We will also operate a GOTA station for new members or those who have never operated field day previously.

Norm says we propose to operate QRP and noted that at least four club members, and possibly more, have ICOM IC-705 radios. Norm then spoke about the benefits of operating QRP. QRP operations means every contact has a multiplier of 5 and you can therefore be very effective using 5 watts. Stations will operate under the call sign VE3JW and the GOTA station will operate with the call sign VE3RAM.



All stations will need to operate QRP. He further noted that operating CW or digital modes gives a further multiplier of 2x over the multiplier of 5 and suggests the club use digital modes as much as possible. He further noted that to get that multiplier of 5, we have to operate on battery power, and gas generators cannot be used.

Norm asked for questions. Rob VE3RXH mentioned that any computers running digital mode also have to be run on batteries. He noted that Raspberry Pi's can be used and they run on 5 volts. Chris VA3CJO also mentioned an iPad is useful as well in his experience.

Many amateurs have an assortment of useful batteries. We can charge with solar panels but will need sufficient capacity to sustain power overnight. Norm VE3LC mentioned he is willing to use his electric car to supply power via an inverter, which is permitted under the rules.

Peter VE3XEM mentioned that as some members may not be very much interested in running QRP and/or digital modes, would it be possible to run in a hybrid mode. Norm confirmed the option would not be possible. It has to be all QRP and he sees this exercise as an experiment to see how well we can do and that the decision to operate QRP was a club executive decision. He reminded that SSB at 5 watts can still be done but we will not get the higher score multiplier.

Kathleen VA3WEX asked for further clarification about operating from home and contributing scores to the club. Norm says individual scores will not contribute to the overall club scores as the rules have changed since the previous temporary "COVID" rules.

There was then further discussion and a great exchange of ideas about scoring, the difficulty of making Canadian contacts as they are often chasing US stations, the benefits of QRP and using modes such as FT8, and the use of generators and other AC sources for use in logging, and the type of log to be used, and the availability of washrooms (we may have to secure rentals) and food preparation including barbecue setup.

Norm then talked about the elements for a Field Day exchange with a typical exchange usage and then reviewed the points multipliers scheme.

Norm then outlined planning for Field Day at the Museum. He reiterated that CW operation is very much automated. CWGet can be used for decoding and a WinKeyer USB device can be used for sending code. WinKeyer USB also links directly to the logging program and has the option for paddles or straight keys.

Norm then demonstrated how these tools can be used to make a contact using macro definitions with the logging program N3FJP and noted that



this will surely be a learning experience for those who have never operated CW.

Norm mentioned that with the ICOM IC-705 transceiver you can also have voice CQs operated from the touch screen. WSJTX/FT8 now has the capacity for managing Field Day exchange information. And of course this can run on a Raspberry Pi as well as other platforms. Norm then showed some photos from Field Day 2019.

Norm then asked for further questions. Roger VA2EGY asked about food for the event? Norm says the club does have a budget for this, and food and refreshments will be available. Kathleen VA3WEX asked if there was a plan to set up specific operating blocks over the 24 hours of the event. Norm says yes as it is a group effort.

He also mentioned that we will have to set up and take down antennas, towers, masts, poles and tents, etc. The club has much of the equipment required, however we will rely on members to supply tents and operating tables. Set up can take place Friday evening and Saturday morning. The on-air event starts at 2 PM on Saturday and runs 24 hours. We will then need to immediately take down everything at the end of the event on Sunday.

Norm concluded his presentation by stating that all of this needs to be coordinated in detail, and that further planning sessions will take place before Field Day.

Norm reminded the group about the Eastern Ontario Hamfest sponsored by the Prescott-Russell Amateur Radio Club & Seaway Valley Amateur Radio Club that will take place on September 28, 2024 in St. Albert, ON. Information may be found at https://hambone.ca/rac/events/detail.php?event_ID=2351.

Norm thanked the group for their interest and the input received during his presentation.

8. Door Prize Draw:

This evening's door prizes consists of four packages of terminal strips and other items including BNC to SMA cables, a rechargeable task light, and coaxial cable (45 ft RG58), and the winners were:

Douglas VE3YDK, Steve VE3MVK, Peter VE3XEM, Dave VE3ZZU, Pat VE3KJQ
Ante VA2BBW, Sandy VE3HAZ, Colin VA3CSG



9. Adjournment:

Norm VE3LC then asked if there was any other business, and as there was no call for further discussion he asked for a call for a motion to adjourn the meeting.

MOTION: Moved by Rick VE3RVV to adjourn the business meeting at 8:57 PM.

10. Next Meeting:

The next monthly meeting of the OVMRC will be held on June 19, 2024, at the IBEW facility, 1178 Rainbow Street, Ottawa, ON. The meeting will also be available on-line via Zoom.

Minutes recorded and prepared by Secretary, Alan VE3KAE.





Report on the Canada Wide Science Fair (CWSF) 2024 at Carleton University

The Canada Wide Science Fair (CWSF) is a science project competition for students in grades 7 to 12. Over 400 finalists from the Canadian regional competitions compete at their grade level for prizes and scholarships. Carleton University hosted the competition in the last week of May this year and previously in 2018. Besides the display and judging of student projects, the CWSF is open to exhibitors from post secondary institutions, government departments, non-governmental organizations and corporate entities involved in science and technology. The goal of exhibitors is to engage the young people attending and promote their interest in a career in Science, Technology, Engineering or Mathematics (STEM). The CWSF is also open to the public and it was estimated that over 5,000 students locally, from other regions in Canada and even an international group of young people from Taiwan attended.

Again this year, Radio Amateurs of Canada (RAC) sponsored an exhibitor booth at the CWSF to promote amateur radio to young people. The booth was staffed by RAC Regulatory Officer, Dave Goodwin (VE3KG), Norm Rashleigh (VE3LC), Ron Vadeboncoeur (VE3REV) and Daniel Alvarez (VE3FCT) a young radio amateur (age 16) from the Toronto area.

We believe the RAC booth was a big success. We had a steady stream of young people as well as teachers, chaperones and parents that took an interest in what we had to show and tell about amateur radio as a STEM hobby. We brought several show and tell “props” that included a portable 2m/70cm satellite antenna, an IC-705 “go” station, the colourful ISED “Radio Spectrum Allocations in Canada” Chart, a couple of build-yourself QRP CW kit transceivers and a Raspberry Pi computer displaying the “HamClock” application showing the differences between HF band propagation and a satellite orbit application tracking the ISS and amateur satellites. For many “kids”, the highlight was learning the basics of sending Morse code. Dave VE3KG issued a RAC Morse code proficiency certificate to all that sat down a straight key and oscillator and code sheet and sent their name in Morse code well enough for Dave to copy. Among other things, I prepared and gave out a printed sheet with the OVMRC logo with a brief explanation about the many aspects of amateur radio, what’s involved in becoming a radio amateur and contact information for learning more about the hobby including my email address. So far, I’ve had one response.

A few pictures taken at the RAC booth showing the scene with young Daniel VE3FCT enthusiastically engaging with students of his own age about the wonderful hobby of amateur radio. 73 Norm, VE3LC



Norm VE3LC Daniel VE3FCT Dave VE3KG

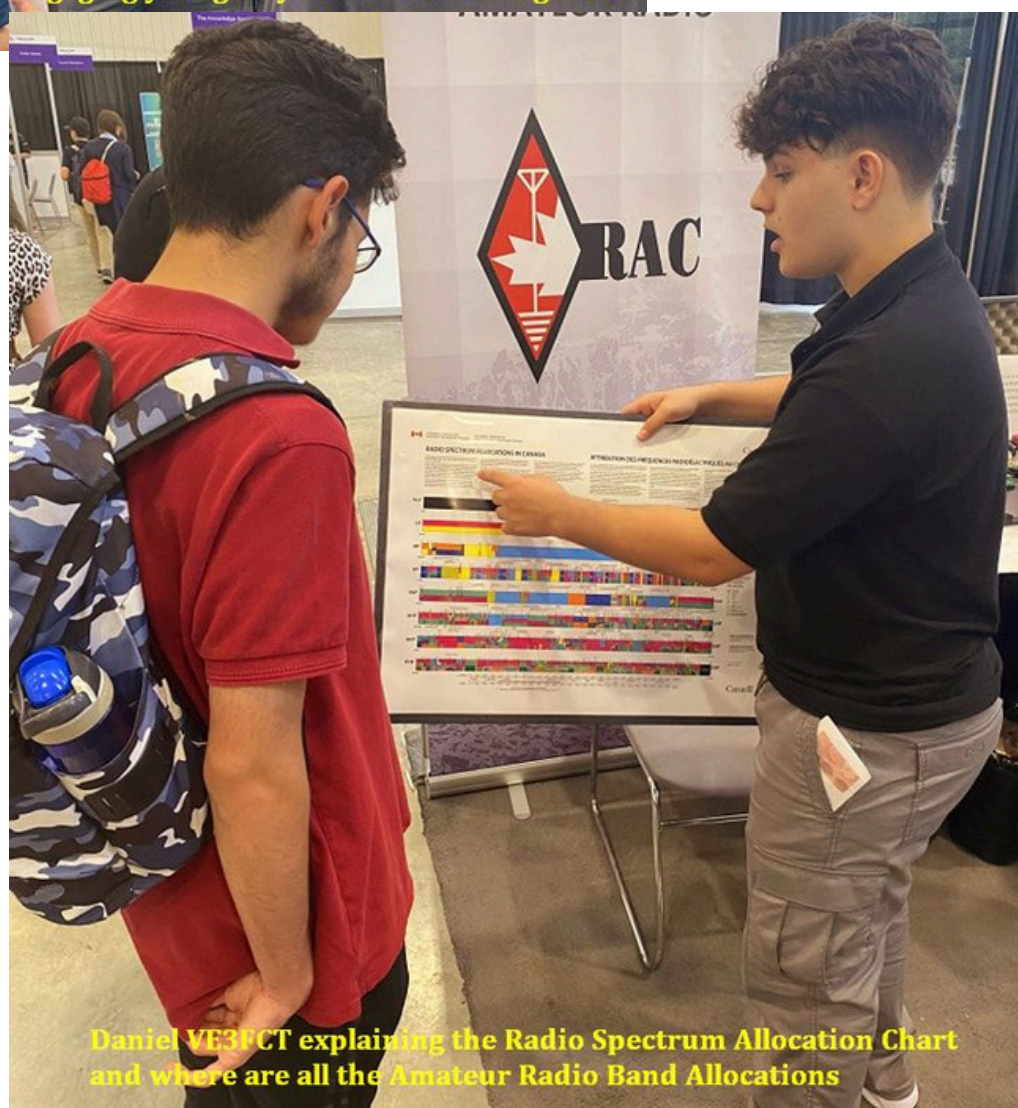


Daniel VE3FCT

Ron VE3REV



Daniel VE3FCT engaging young lady student attending Fair.



Daniel VE3FCT explaining the Radio Spectrum Allocation Chart and where are all the Amateur Radio Band Allocations



Daniel VE3FCT explaining portable radio operation to a young student attending the Fair.





OVMRC Vehicle Fox Hunt and Mobile Radio ‘Show and Tell’

What a great day for our in-vehicle Fox hunt and mobile radio ‘show and tell’ on Saturday 25th May. The sun shone and everyone was in a great mood to play radio. We really did put ‘Mobile Radio’ back into our Club name!

The fox was activated at 9 am and by 9:45 am Rick, VE3RVV had sniffed it out at P26 Green’s Creek, just 800 metres from the IBEW (as the crow flies).



Photo 1: Rick VE3RVV (on right) first to find the fox, setup by Roger VA3EGY (on left) at P26 Green’s Creek.



Back at the IBEW, deep discussions on choice of mobile radio, cable routing, antenna mounts and mobile operating were in full swing by 10 am with about a dozen vehicles being shown off and a few bicycle mobile and portable setups too. Side deals for various ham radio related parts were underway and a close inspection of the Ammo Can Fox designed and built by Roger, VA3EGY was made.

Rick, VE3RVV, was awarded an OVMRC mug for being the first to find the fox.



Photo 2 - Rick, VE3RVV, (on right holding the Ammo Can fox) was awarded an OVMRC mug by Club President Norm, VE3LC (on left), for being the first to find the fox.



The Ammo Can fox is a Harbour Freight Ammo Can containing a Yaesu FT-60 handheld, a PicCon fox controller and a 12 volt, 10 Ah Dakota lithium battery. One advantage of the Yaesu FT-60 is that it can be powered from an external source (like the Dakota lithium battery) and this lets it run at high power for an extended period of time. Roger, VA3EGY, designed the fox with a layered approach, the bottom layer containing the battery and the top layer for the PicCon controller and radio. A BNC antenna connector mounted on the top of the Ammo Box allows the use of a short rubber duck or any other antenna.

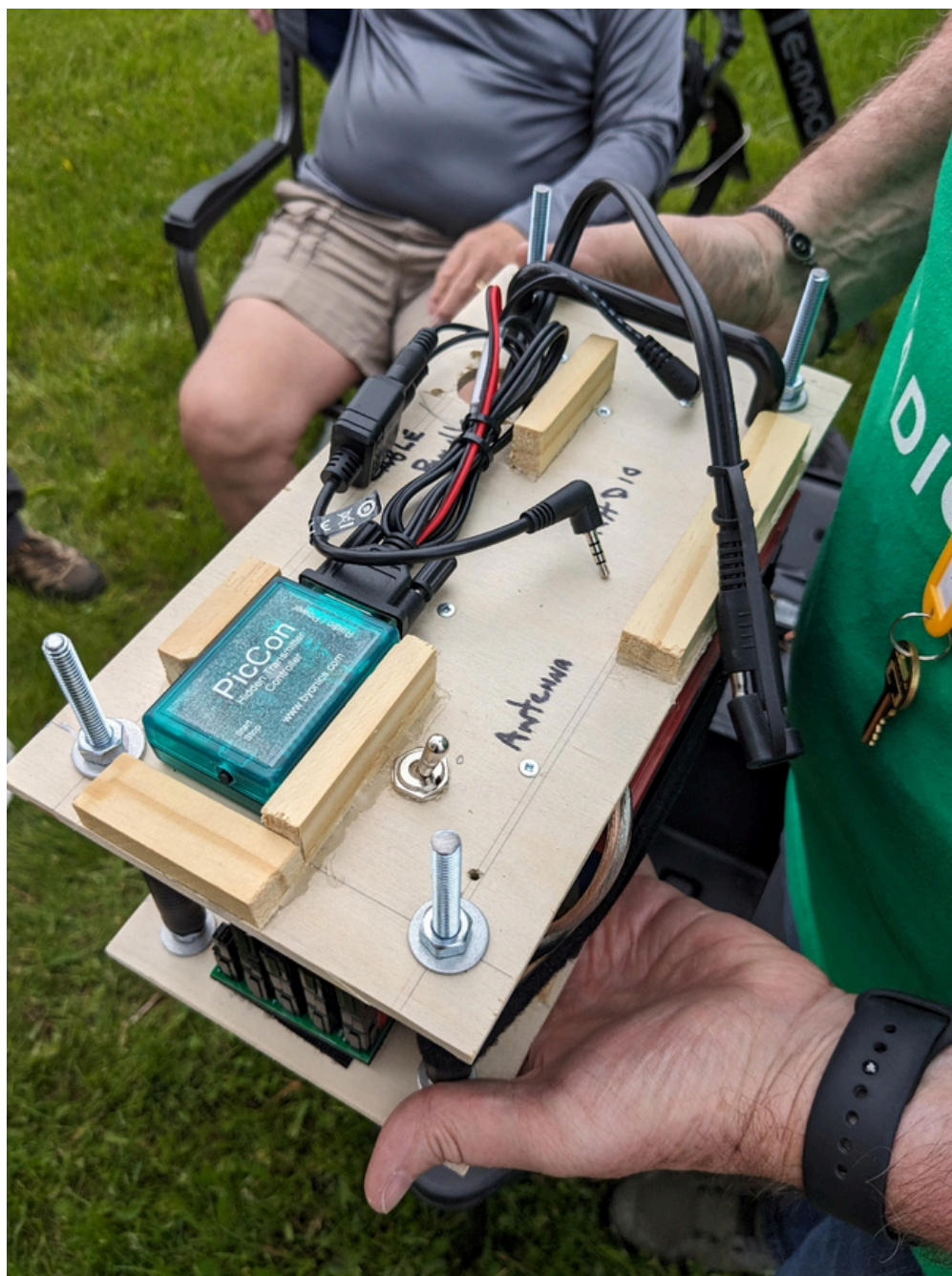


Photo 3 - the top layer of the Ammo Can Fox showing the PicCon controller and space for an HT.

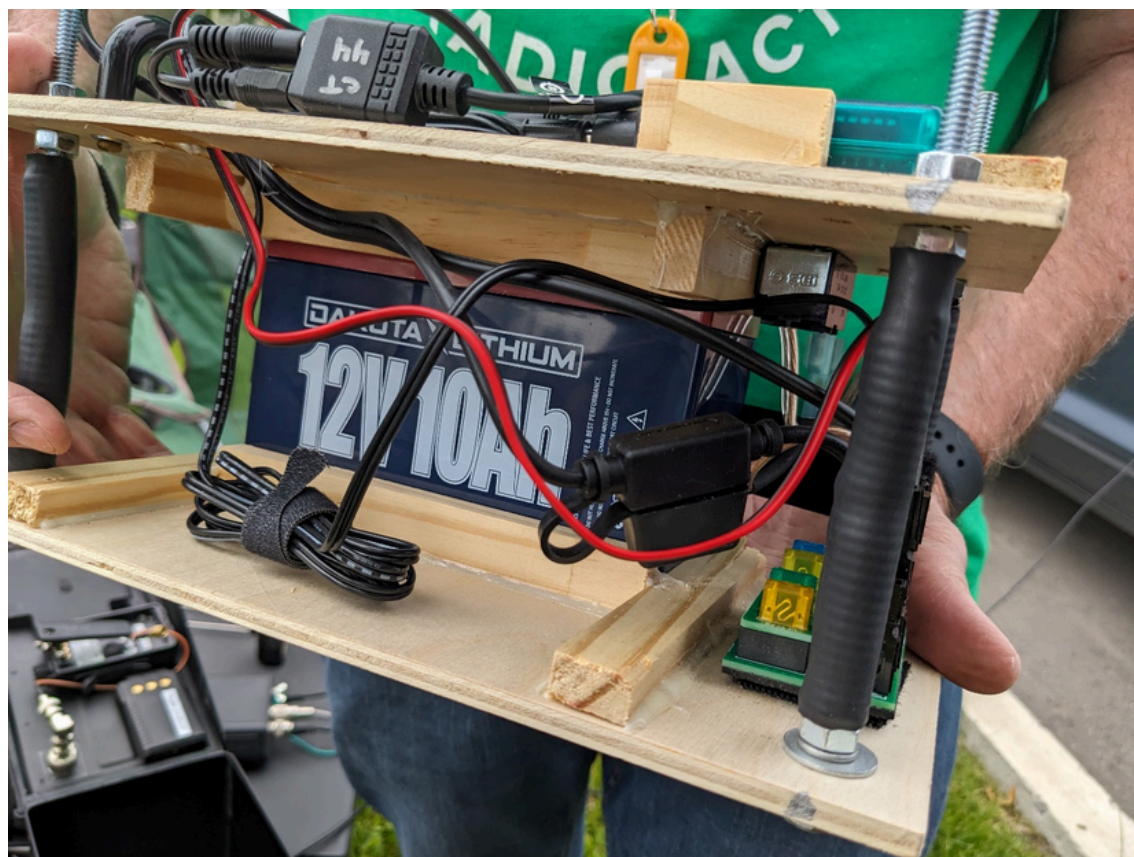


Photo 4 - the bottom layer of the Ammo Can fox showing 10 Ah lithium battery and fused power pole distribution board (photo credit Chris, VA3CJO).

VE3LAF, Fred, setup his portable station with a multi-band vertical antenna and brought along his bicycle mobile too.



Photo 5 - Fred, VE3LAF's bicycle mobile and portable stations (photo credit John, VE3JYK).



Photo 6 - VE3LAF, Fred, with his portable antenna setup.

Fred also has a great mobile installation in his vehicle using Hustler antennas to cover the HF bands.



Photo 7 - Hustler mobile antennas used by Fred, VE3LAF.



Pete, VE3XEM has a well established VHF APRS and HF/VHF setup in his truck using radios from Kenwood and Yaesu mounted under the back seat. The Yaesu 857D control head is mounted into his centre console. His HF/VHF Yaesu ATAS 120A antenna is mounted at the driver's side rear corner of the truck cap and tuning across the 40 m to 70 cm amateur bands is controlled by the Yaesu 857D with one touch of a button.



Photo 8 - Pete, VA3XEM/VE3XEM, has a Yaesu ATAS 120A HF/VHF screwdriver style antenna mounted on the back of his truck and a separate VHF antenna on the hood.



Photo 9 - close-up of the ATAS 120A mounted to the side of Pete, VE3XEM's truck cap with a tether line to avoid losing the antenna in case it breaks off.



Photo 10 - Yaesu 857D remote control head mounted in the centre console of Pete, VE3XEM's truck.



Photo 11 - Fern, VA3LMA chats about his mobile VHF radio install.



Photo 12 - Arwyn, VE3YB brought some items for sale that caught the eye of Pete, VE3XEM and Sandy, VE3HAZ.

Norm, VE3LC, was making some contacts with his portable station on a table next to his electric car, with a multi-band HF antenna mounted on the vehicle roof.



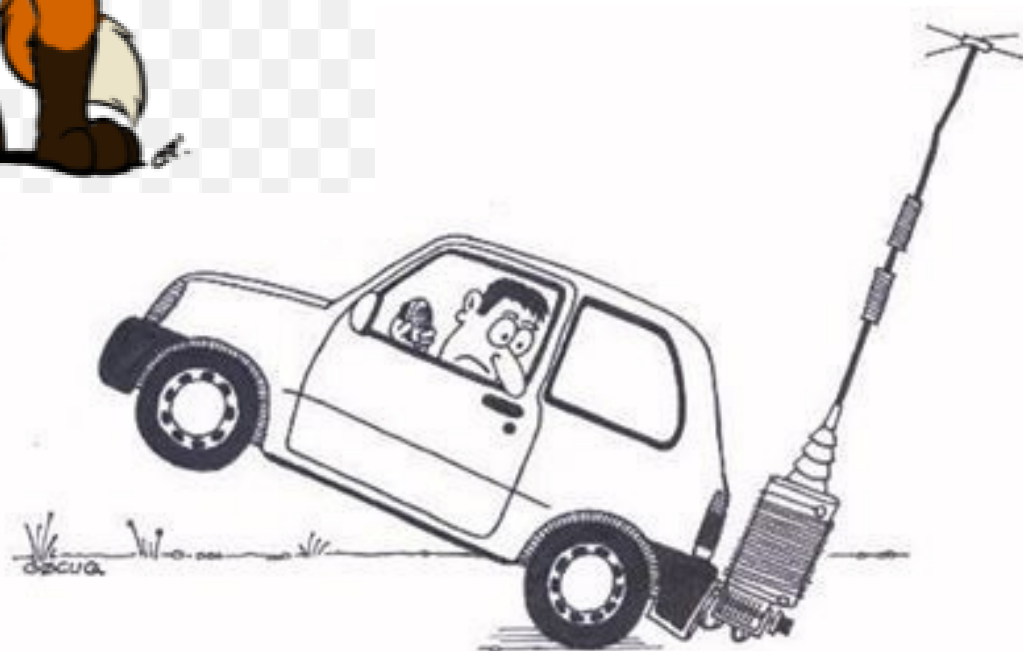
Photo 13 - Norm, VE3LC, demonstrating his HF portable/mobile setup to Will, VA3ODW.



I recognise that many other Club members were present on the day and did not have their mobile or portable setup featured. So, if your install did not get a mention this time, make sure to buttonhole me at a future mobile radio 'show and tell', or you could always write it up for the Rambler!

For details of other Club events over the next couple of months, see the updated schedule of events in this issue.

73, Rob, VE3RXH



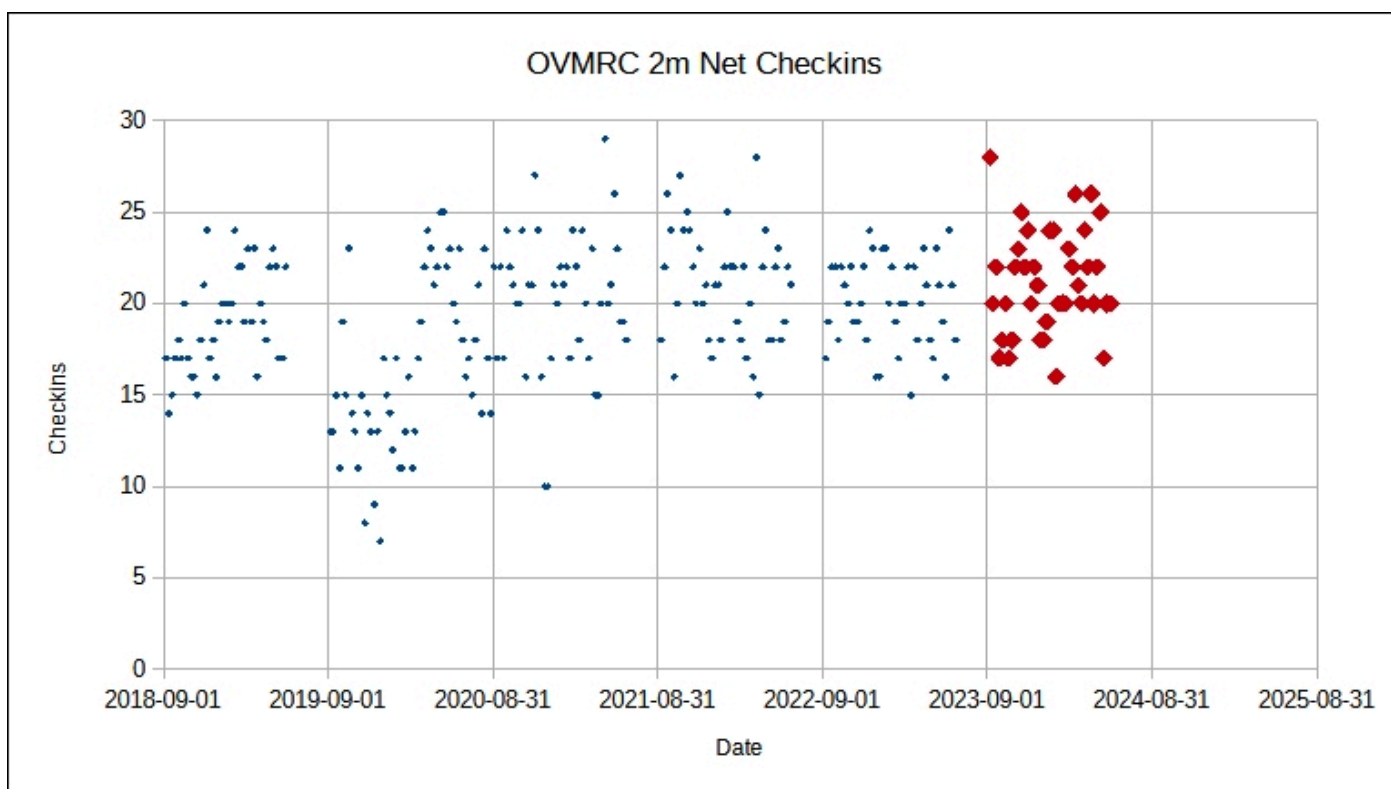


2023-24 Year End Nets Report

Hello, all OVMRC members and participants in our weekly nets. It is certainly comforting to have had a continued dedicated following on the OVMRC nets this season; I'm grateful to all attendees who check in to report on their weekly exploits across the bands and also to all the new operators who have gained amateur proficiency certification and are keen to join in the fun.

The Thursday evening 2 metre FM net has continued with good attendance and lively discussion. The weekly attendance trend chart shows an average of 20+ check-ins each week being much the same as during the 2022-23 season. Everyone on the 2 metre net has something interesting or helpful to say and the net usually runs rather long at 90 minutes or so. Nevertheless, even with the long run times, most attendees do stick around to the end which indicates to me that things are running right. I'm very pleased that Ante, VA2BBW, has continued to serve as our Contests and DX reporter, providing a comprehensive report on those fronts for the weekend following each net.

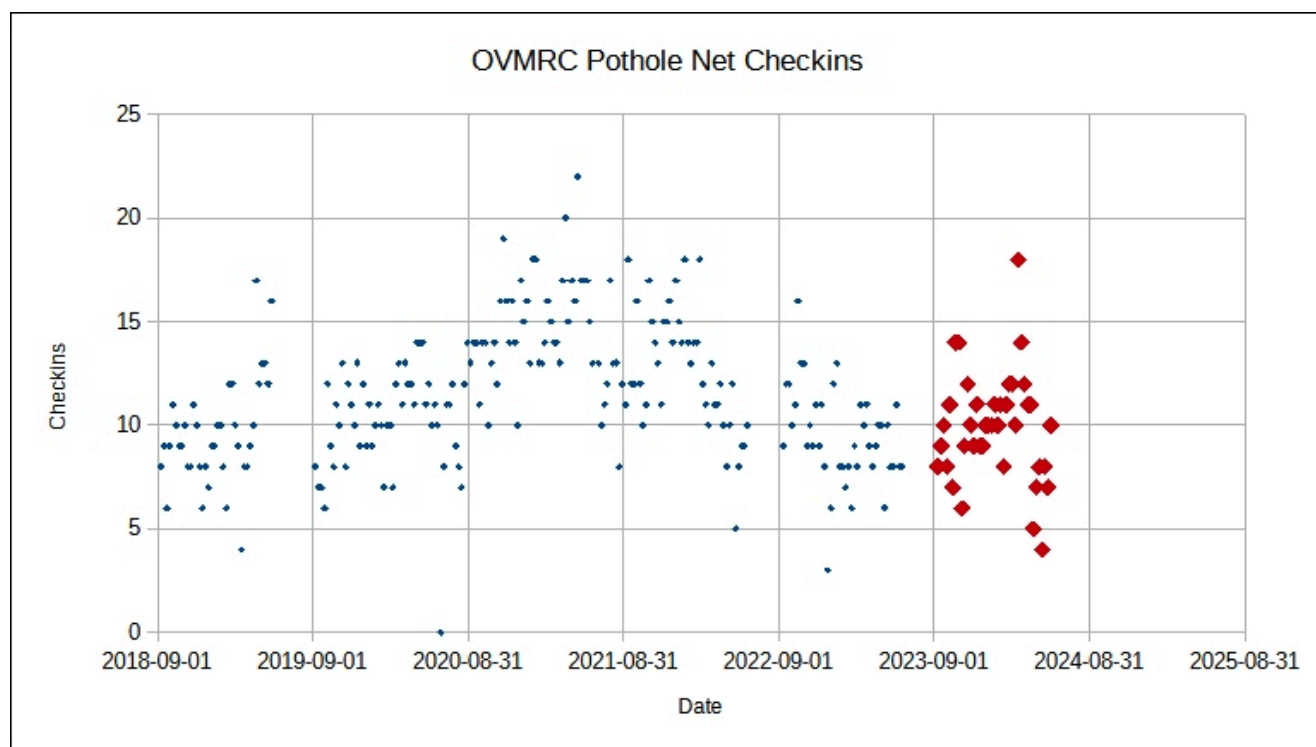
The net will be taking a break for the summer once again, with the last session of the season taking place on Thursday, June 20 and resuming on Thursday, September 5.





The 80 metre Pothole Net resumed operation after the 2023 summer break and continued at the same level of attendance, averaging 9 participants each Sunday morning. Solar Cycle 25 appears to have peaked in 2023-24 so it has been a tough go with having an 80 metre net at mid-morning, but Ernie, ve3ejj, lead net controller and Glenn, ve3xra, have persevered through it with the help of some relays and the monitor available from VE3HOA's SDR. I will say that it's been both interesting and reassuring that the PHN isn't limited to being heard only in Ottawa as Bob, VA3QV, makes his weekly presence known from Kingston. Even on days when propagation has been particularly bad, I could pull Bob out of the noise and have his check-in logged for the record. A tip of the hat to Bob for staying with us.

The PHN will be taking a break for the summer with the last net being held on Sunday, June 16 and returning on September 8.



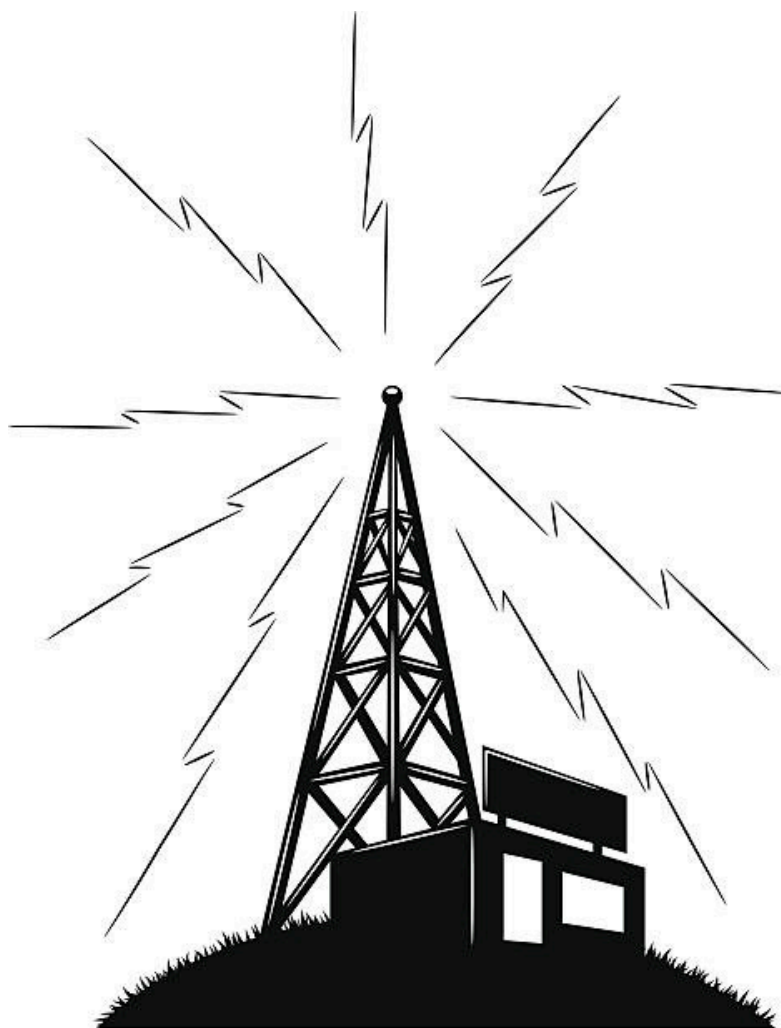
Finally, the Potlid Slow Speed CW net continues on 6 metres with a core attendance of 6 local hams. Mike, VE3FFK, has joined in the net controller rotation and now provides for coverage from central Ottawa. Mike now joins in with me, Norm VE3LC and Ante VA2BBW as PLN controllers so there ought to be a good chance of listeners being able to tune into the action at least once a month. I will say once again that listening to CW on 6 metres can be confusing because of multipath from aircraft.



The reflections are usually Doppler-shifted by a few Hz. which ends up appearing as two or more ghost signals at a receiver and sounds like a warble as opposed to a clean tone. Don't worry - this comes and goes depending on airline traffic patterns As with the other OVMRC nets, the PLN will take a summer break with the last net being run on Sunday, June 16 and resuming on September 8.

Best wishes all OVMRC members for a good summer whether it be with ham radio or family-friends summer activity. Please remember to join in the nets again starting the 2024-25 season on the first net day after Labour Day, September 2.

73, Hugo, VE3KTN.
OVMRC Nets & Ops Chair





Portable Operations Battery Box: A lower cost alternative

For a couple of years I have looked on enviously at the many battery boxes that innovative ham radio operators have put together to power their equipment while on portable ops. POTA and public service events in particular, often run for longer time periods, or need higher transmit power levels than that offered by an HT. A portable battery box is an ideal solution to extend run time and/or allow higher transmit power.

In this article, I would like to describe my portable battery box solution for POTA and portable operations that will allow me to run my equipment for longer periods and at higher transmit power than my HT's can achieve. It also has 110 volt power outlets to run my laptop and additional 12 volt outlets that will let me recharge an HT battery for example.

Previously I have used a variety of methods to power my radios for portable work such as supporting the MS Bike Tour and Rideau Challenge Journey, often cobbling together a spare car starting battery to run my higher power mobile radios and an inverter to charge a laptop and HT batteries. Not the tidiest of solutions.



Photo 1 – Existing car battery used for portable operations.

12 volt lead acid batteries are heavy and, if repeatedly drawn down below about half of their rated Ah capacity, they tend to lose that capacity over time. Lithium Ferro Phosphate (LFP or LiFePO) batteries have become much more affordable and offer their full rated capacity for over 2000 recharge cycles.



Go kits and battery boxes have become commonplace over the last few years, especially as portable operations seem more popular than ever, so there were plenty of pre-built options to choose from. A quick market survey however showed the pre-built options to be somewhat pricey by my frugal standards!

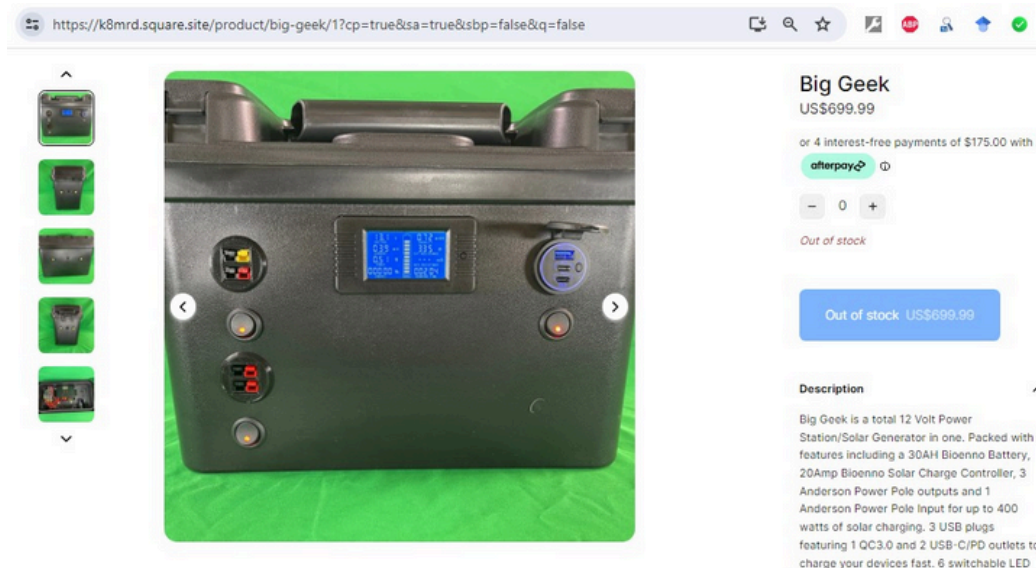


Photo 2 – Big Geek 30 Ah LiFePO battery pack from popular Youtuber K8MRD at \$699 US, but it does include a solar charge controller.

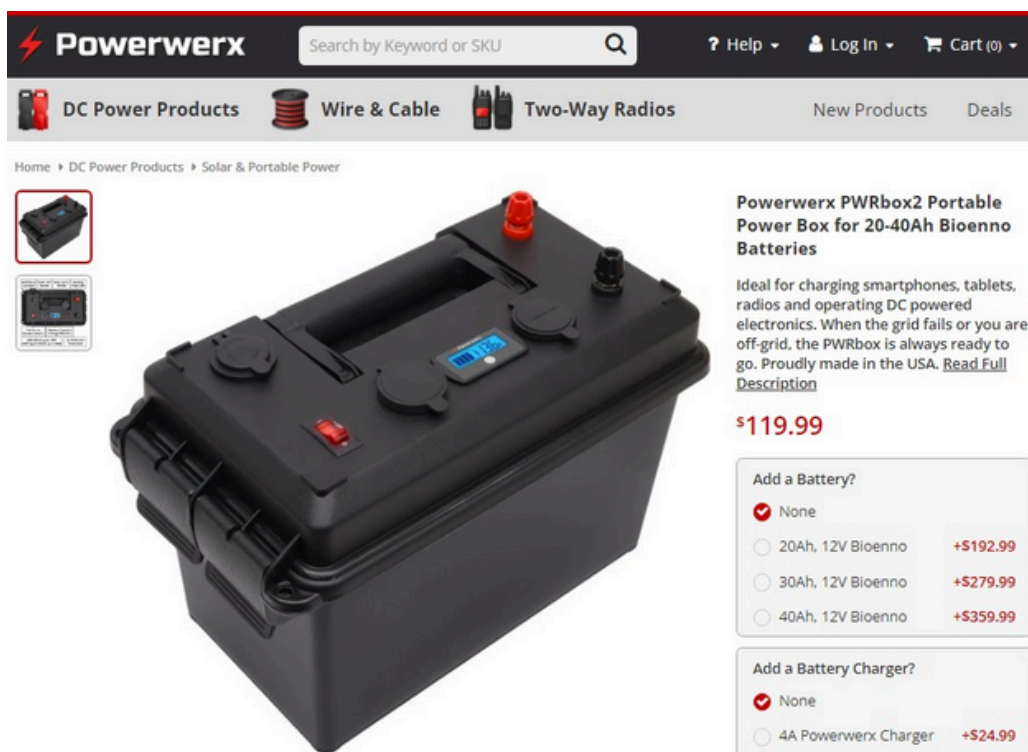


Photo 3 – Powerwerx battery box \$119 US without battery or \$192 US upwards with a LiFePO battery.



Even empty battery boxes, ready for you to add a separately purchased battery and outlets seemed expensive.

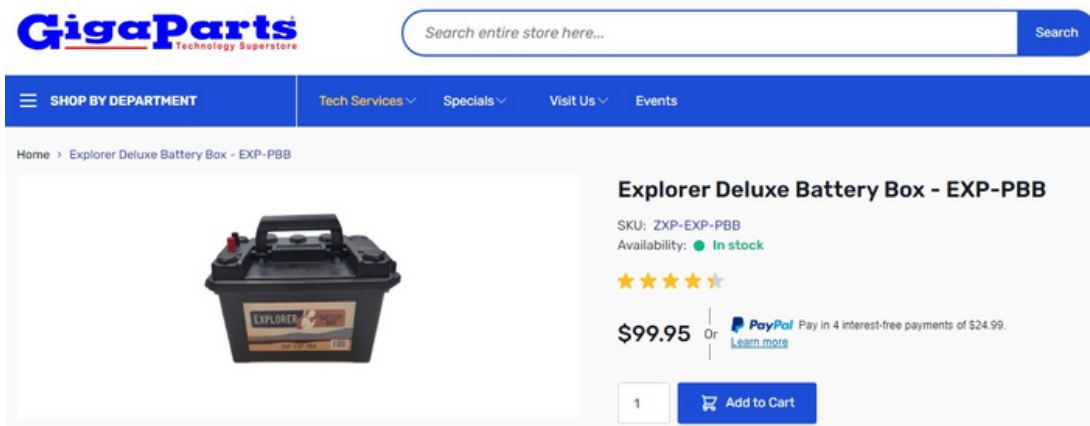


Photo 4 – Gigaparts Explorer Battery Box at \$99.95 US.

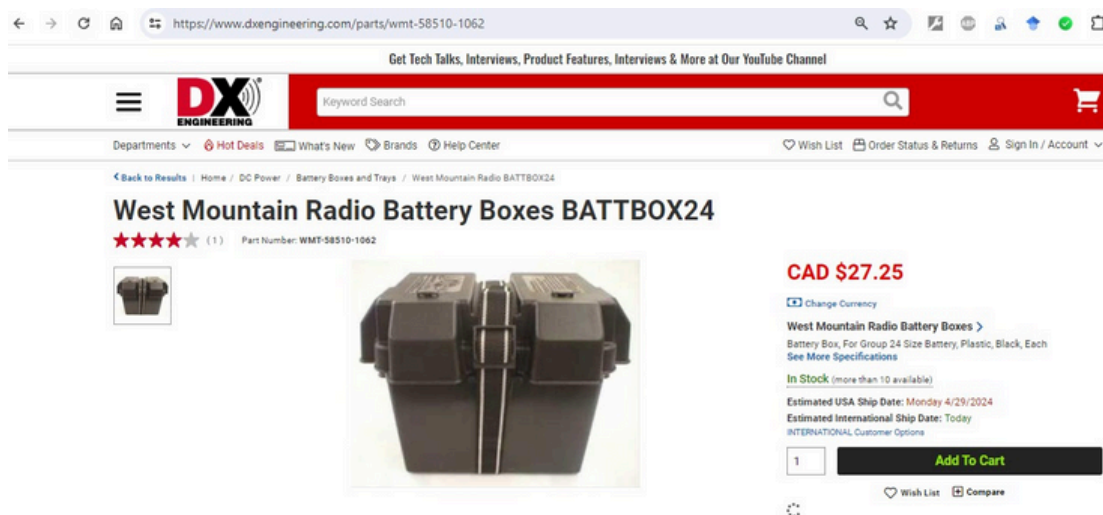


Photo 5 – DX Engineering's West Mountain Battery Box at \$27.25, more affordable but no power outlets.

Some pre-built options are summarised in the table below and range from \$699 US for a fully functional battery box to just over \$27 CAD for an empty box. There are many more options available online.



Prebuilt Options Table:

Supplier	Make	Model	Output/Equipment	Battery	Cost (\$)
K8MRD	Own brand	Big Geek	Power Poles, USB, 6 LED lights, Solar Charge Controller	30Ah LiFePO	699 US
Powerwerx	Powerwerx	PowerBox 2	Power Poles, USB, 12 cigarette lighter	30Ah LiFePO	279.99 US
Powerwerx	Powerwerx	PowerBox 2	Power Poles, USB, 12 cigarette lighter		119.99 US
GigaParts	Own brand	Explorer Deluxe	Power Poles, USB, 12 cigarette lighter	None	99.95 US
DX Engineering	West Mountain Radio	Battery Box	None	None	27.25 CAD

Interestingly none of the commercial products offered an inverter and with their relatively high cost, it seemed there might be a better way. Step forward a used MotoMaster portable powerpack.


So, last fall I invested a bit of time in checking the used market on Facebook Marketplace and Kijiji, and identified that there were a few used MotoMaster style portable powerpacks/boosters for sale at very good prices. These were originally supplied with a lead/acid battery and if not charged frequently, the battery would fail to hold a charge after just a couple of years. It seemed that often the original purchaser would buy a new unit rather than replace the battery, sometimes selling the old one at a very reasonable price.

I figured one of those would make a well manufactured battery case, with existing 110 volt AC inverter, some USB and 12 volt DC power outlets. All it would need is a replacement 12 volt LiFePO battery and some modifications to add PowerPole outlets.

Originally retailing at \$269 CAD at Canadian Tire, I was able to pick up an old MotoMaster Powerbox 600 with a dead lead-acid battery for just \$15 from Smiths Falls, and this became the basis for my portable power station.



MotoMaster Eliminator
MotoMaster Eliminator PowerBox® Portable Power Pack & Battery Booster/Jump Starter, 1600 Peak Amps, 600W #011-2014-0
★★★★☆ 3.4 (1,327) [View Product Details](#)



\$269.99
Best Seller Exclusive

Only 4 Left - Limited Stock - Aisle 1

Free Pick Up
Curbside Pick Up Available
Kemptville, ON
Ready for pick up by 03:00 p.m., Apr 28
[Find stores with inventory](#)

Ship to home
Same-Day Delivery is available for this product

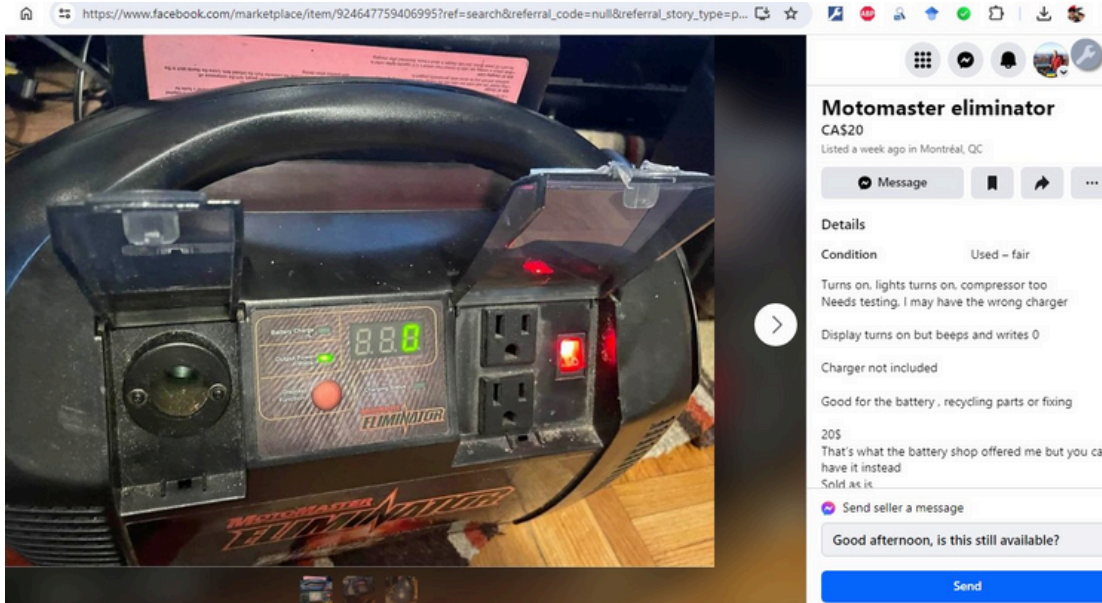
- 1 + [Add to Cart](#) [♡](#)

[Add to Registry](#)

[Triangle](#) Reward yourself with Triangle®
Collect and redeem Canadian Tire Money, faster, at more places you love.

Photo 6 - New MotoMaster Elimiator Powerbox 600.

A quick check on the popular used goods websites identified these current options (as at May 2024) at \$20 to \$35 asking price.



https://www.facebook.com/marketplace/item/924647759406995?ref=search&referral_code=null&referral_story_type=p...

Motomaster eliminator
CAS20
Listed a week ago in Montréal, QC

Message

Details

Condition Used - fair

Turns on, lights turns on, compressor too
Needs testing, I may have the wrong charger

Display turns on but beeps and writes 0

Charger not included

Good for the battery, recycling parts or fixing

20\$
That's what the battery shop offered me but you can have it instead
Sold as is.

Send seller a message

Good afternoon, is this still available?

Send

Photo 7 - example used MotoMaster power box.

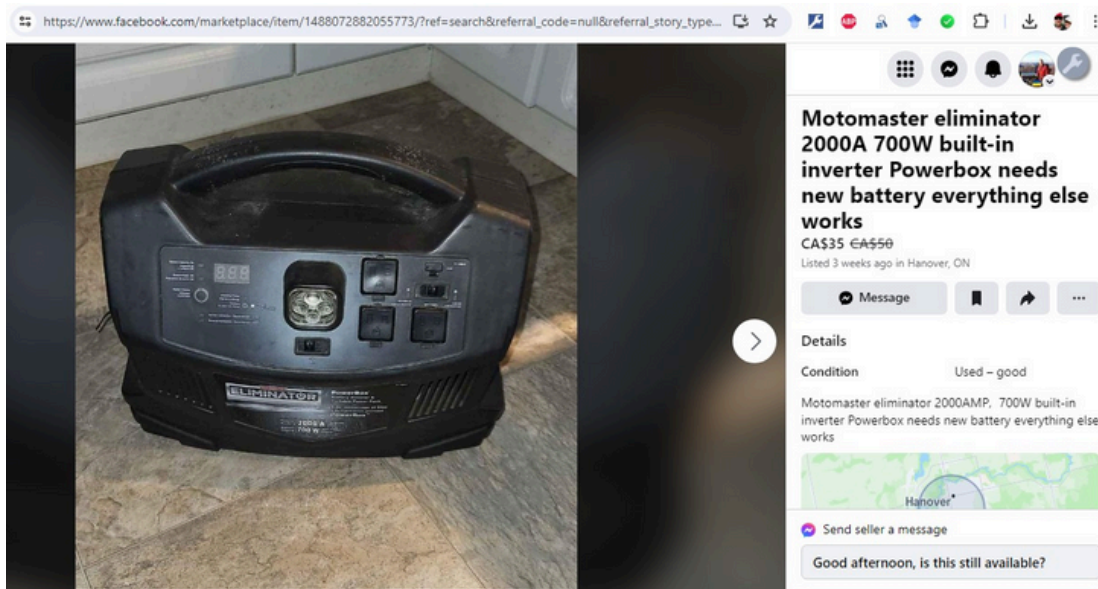


Photo 8 - example used MotoMaster power box

The pictures and descriptions of my battery box re-build will take over from here.

I first opened up the battery box to check the dimensions of the original lead acid battery as that would pretty much dictate the space available for a replacement battery. It also allowed me to size up potential locations for a Powerwerx 4 PowerPole outlet that I purchased from Ham Radio Outlet for about \$15. I selected the four outlet model since the cost was only a couple of dollars more than the two outlet model and I was sure I had the space to install it.



Photo 9 - my used MotoMaster Eliminator power box showing the Powerwerx four outlet PowerPole receptacle before mounting.



My selected location for the PowerPole outlet was on the top, where it would be close to existing wiring points and have a sufficient large and relatively flat space for the mounting hole to be cut.

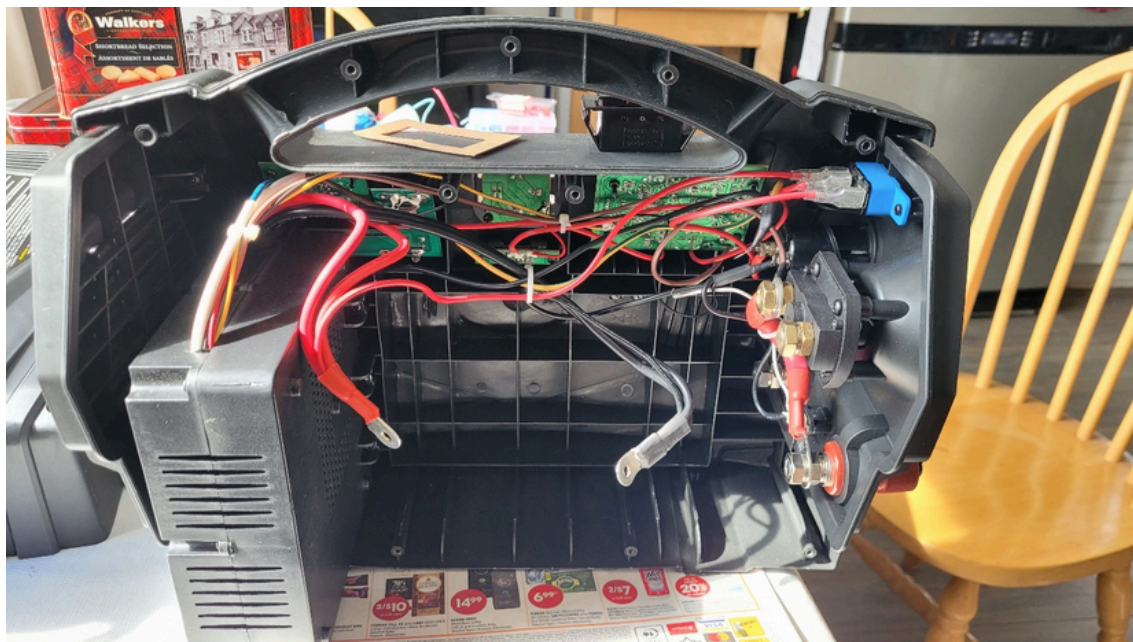


Photo 10 - Inside of the Power Box with the original lead acid battery removed.

Photo 10 shows the inside of the Power Box. The 110 volt inverter is on the left. The visible green circuit boards are for the USB and 110 volt outlets; the LED light and the display.

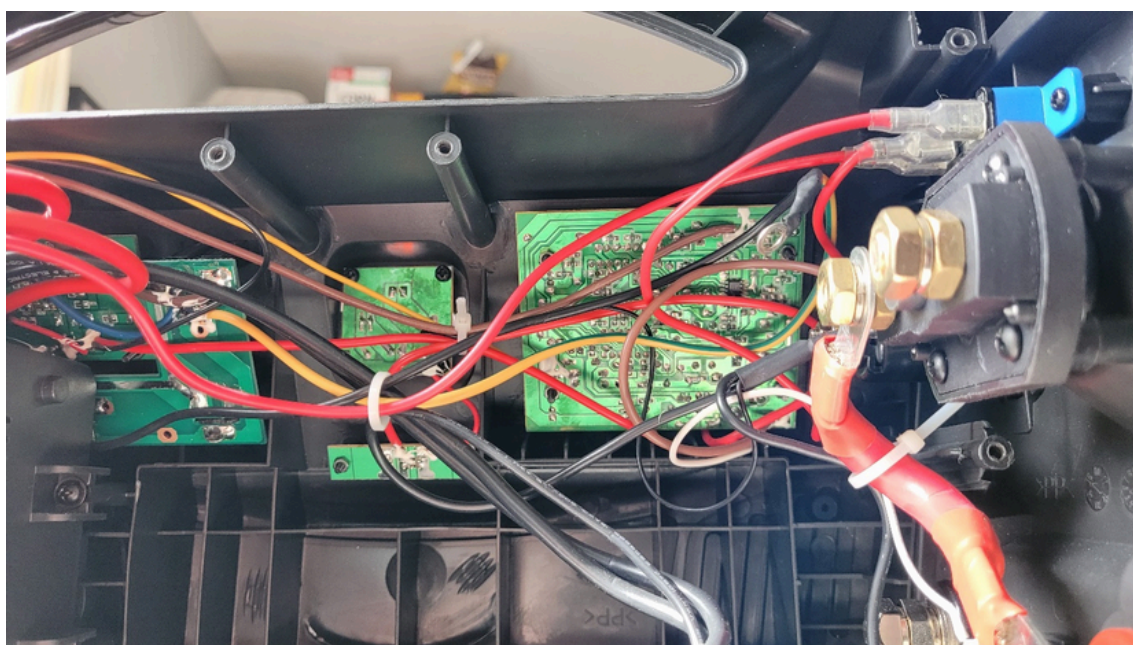


Photo 11 - looking for a suitable Power Pole outlet location.



Photo 12 shows my chosen location to mount the PowerPole outlet and was one of the few areas that were flat and large enough for the hole to be cut to allow flush mounting.

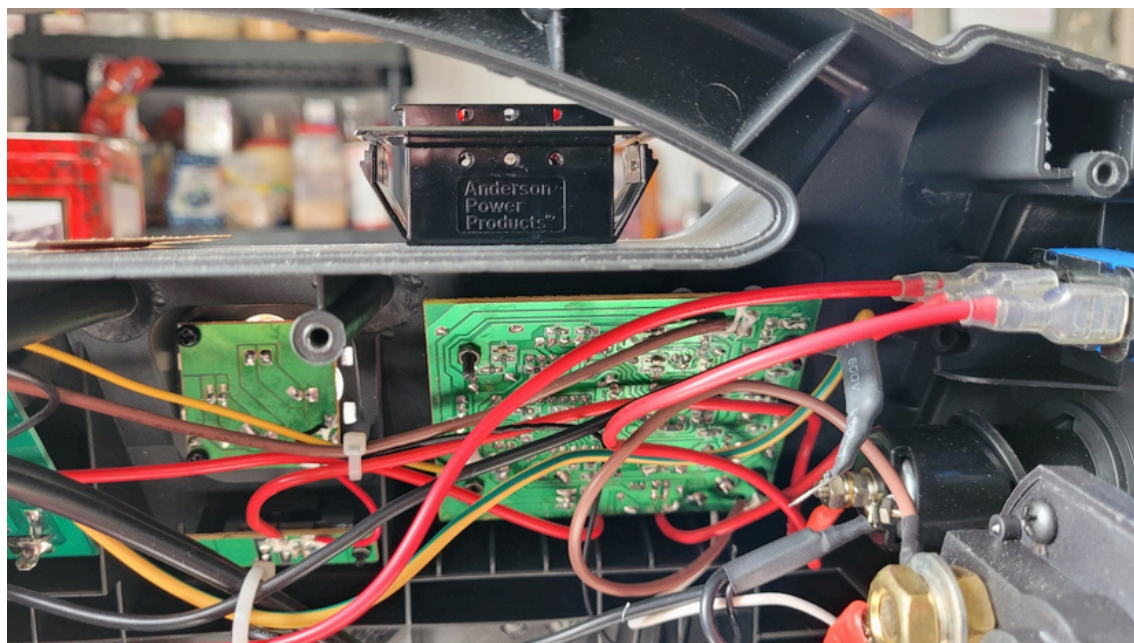


Photo 12 - Final location for the PowerPole outlet. Checking clearance on the inside for the Power Pole outlet.

I created a card template to the correct dimensions for the mounting hole and drew the outline on the top of the power box. I then used a Dremel tool with cutting disc to cut the hole.



Photo 13 - Dremel tool with cutting disc

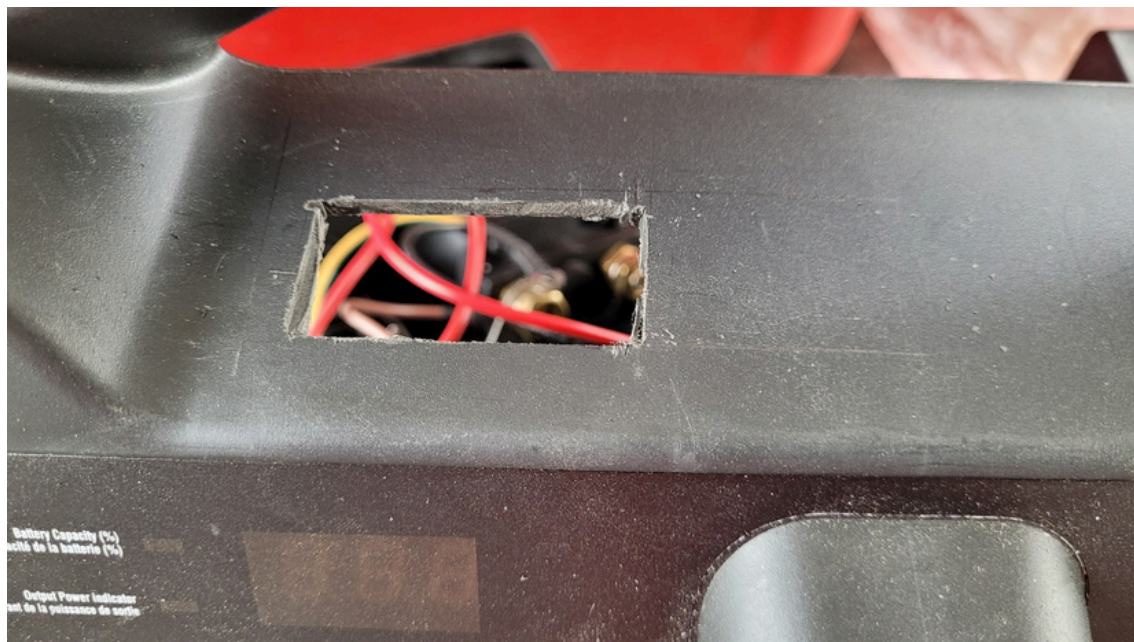


Photo 14 - initial hole cut and ready for cleaning up.

Once the hole was cut it needed some additional trimming with a box cutter knife to fit the PowerPole outlet.

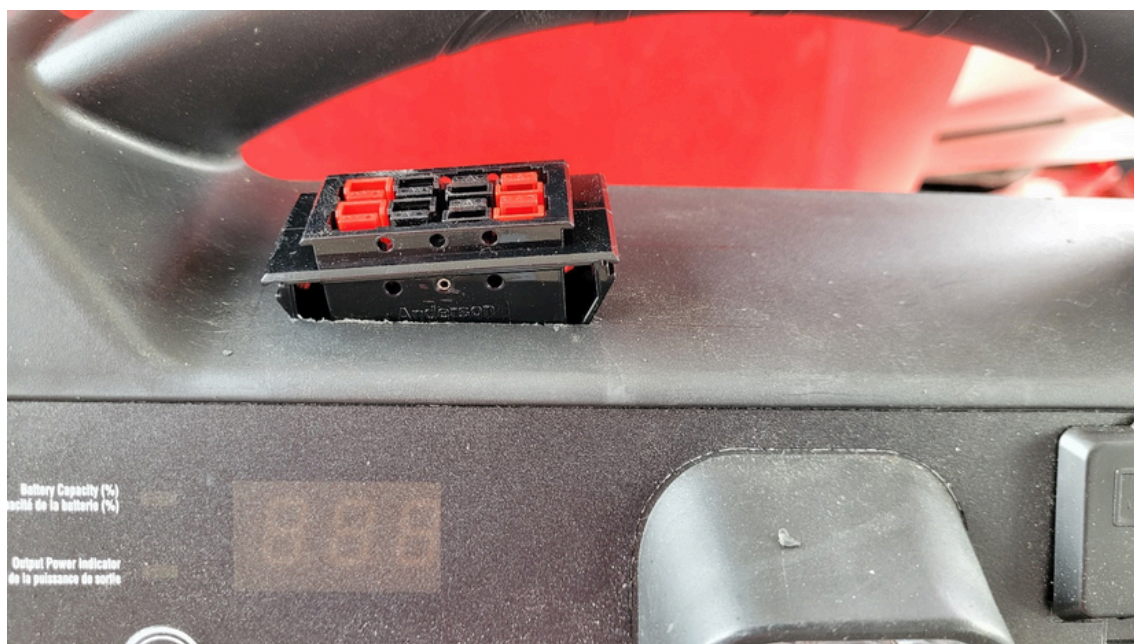


Photo 15 - check fit of the PowerPole outlet.



Photo 16 - tight clearance inside the box for the PowerPole outlet.

For the battery, I selected the 30 Ah LiFePO from Eco-worthy. I made my choice based on the dimensions, since it had to fit in the existing space where the 32 Ah lead acid battery was removed from, and the maximum discharge current of 25 Amps, which should allow a 100 W radio to run at maximum output power. Cost was also a factor with the Eco-worthy costing \$130 CAD.



Photo 17 - Eco-worthy 30 Ah LiFePO battery.



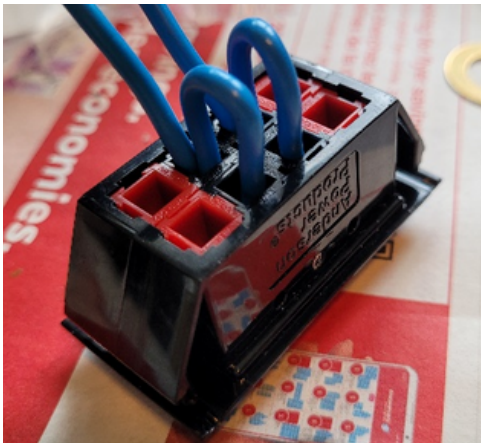
Product Name	LiFePO4 Battery
Model	ECO-LFP1230
Rated Capacity	30Ah/384Wh(25°C,0.5C)
Rated Voltage	12.8V
Voltage Range	10 ~ 14.6V
Maximum Continuous Charging Current	20A
Maximum Continuous Discharging Current	25A
Charing Voltage	14.6V
Demensions (LxWxH)	7.1*6.3*3 inch 18*16*7.6cm
Weight	7.2 lbs / 3.26kg
Charging Temperature	32~131°F / 0~55°C
Discharging Temperature	-4~131°F/ -20~55°C

Photo 18 - specification of the Eco-worthy LiFePO battery.

The original specification of the battery box was a 33 Ah lead acid battery and a total weight of 13.1 kg. I was expecting a big weight saving.

The next step was to wire up the battery box, starting with a sub-harness for the PowerPole outlet. I chose to use two positive side and two negative side wires for power to two pairs of PowerPoles, then short jumper cables to connect the remaining two outlet pairs. Since the battery can only supply 25 Amps maximum, it would not be possible to draw the rated 35 Amps from each PowerPole outlet pair. By wiring two sets of PowerPoles in parallel I would save wire, speed the install and yet give sufficient current handling for all expected situations.

The following series of photos show the wiring sub-harness for the PowerPole outlet.



Photos 20 - 25 - Sub-harness complete for the PowerPole outlet.

It was then time to install the PowerPole outlet and battery. The existing wiring loom was retained and routing adjusted to match the slightly different battery terminal locations on the new battery. The PowerPole outlet was wired through the existing On/Off switch on the end of the battery box, so that all outlets could be shut off with one switch.

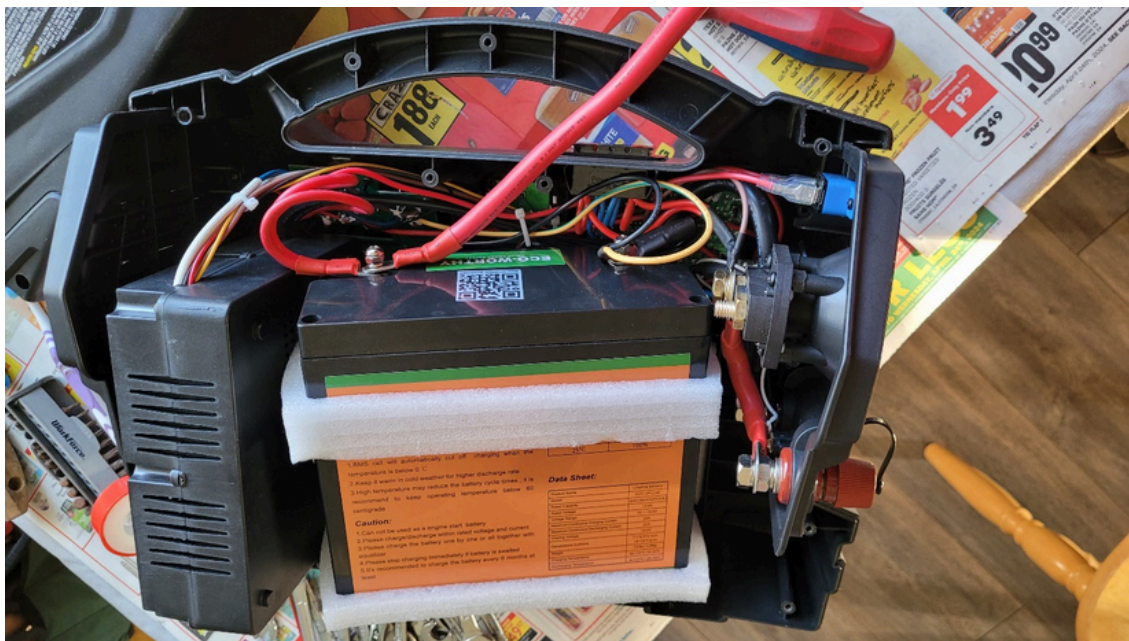


Photo 26 - PowerPole outlet connected and new battery being installed with existing wiring harness being re-used.

Foam packaging from the battery shipping was used to take up any space and ensure that the battery was held in place.

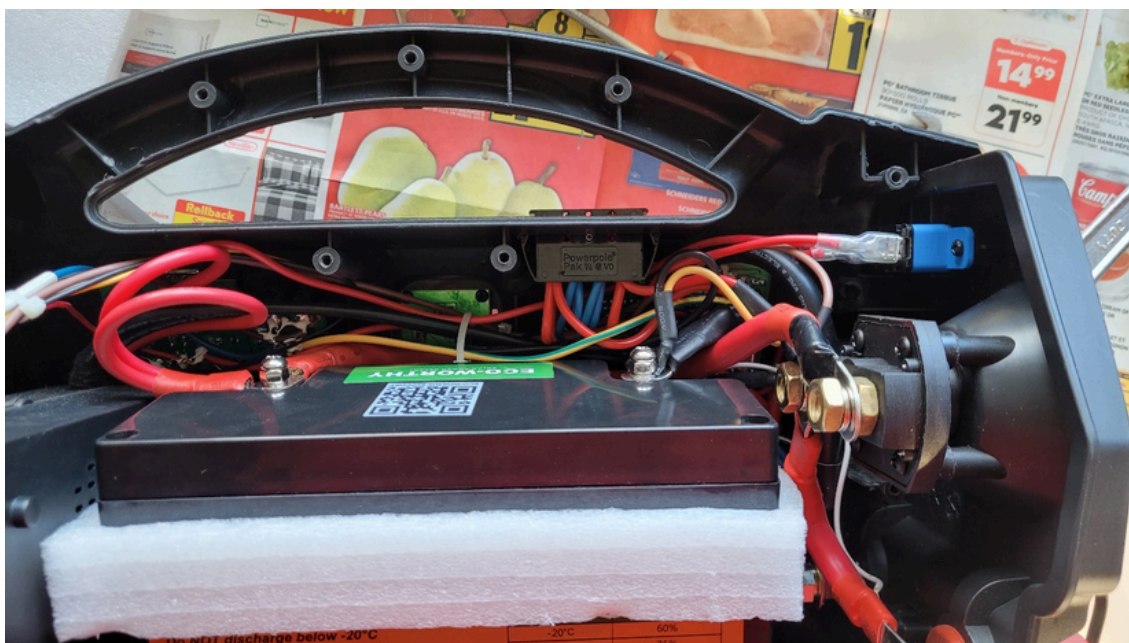


Photo 27 - Battery in place and wiring routed as necessary.

Once everything was in place and all outlets were tested for functionality, the battery box could be reassembled and given a final test.



Photo 28 - Battery box final test powering multiple devices.

For the final battery box final test I powered the LED light, a Kenwood 2m mobile radio from the PowerPole outlet, through a power meter; an HT battery charging through the 12 volt cigarette lighter output (on left side of photo); a triple cigarette lighter expander connected to the PowerPole outlet and running a second HT charger; a 110 volt receptacle powering a cell phone charger and finally the USB outlet charging the cell phone that took the photo. All worked as expected.

Next step and remaining work. The original PowerBox battery was charged with a 13.6 volt 1 Amp wallwart. Since the Lithium battery needs 14.6 volts to fully charge it an additional circuit will be added to step up (boost) the original charging voltage to between 14.2 and 14.4 volts. This should allow nearly a maximum charge on the battery, while maintaining the longevity of the battery.

Further testing of the display will determine if it is correctly identifying the load through the 110 volt receptacles and USB port. Since the PowerPole outlet is separated from the existing wiring it is unlikely to be included in that display.

Finally the completed battery box was weighed and 6.9 kg is the new weight, almost half of the original! Allowing for the fact that the lead acid battery should only be used to half of its rated value, ie 16 Ah and the lithium battery has 30 Ah available, this is a win-win with about half the weight and twice the power!



Photo 29 - New weight measurement of 6.9 kg.

The total cost for my battery build was (\$ CAD):

Original MotoMaster power box: \$ 15

New Eco-worthy battery \$130

Powerwerx PowerPole outlet: \$ 15

TOTAL: \$160

I have purchased a boost converter for \$2.50 from Aliexpress but not installed it yet. The commercial power boxes do not include a charger.

The nearest commercial equivalent would be the Powerwerx Powerbox2 with 30 Ah LiFePO battery at \$280 US.

Conclusion. An enjoyable build project with satisfying savings over a commercial equivalent. Full testing and installation of the charging booster to follow.

73, Rob, VE3RXH



OVMRC Net Activity, Check-ins for May, 2024

Prepared by: Hugo Kneve VE3KTN

OVMRC 2 Metre Net: VE3OCE 146.880- 136.5 Hz. tone,
Thursdays 8 p.m. local.

May 2	May 9	May 16	May 23	May 30
VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors	New & Visitors
	Douglas VA3CMG		Vince - VA3VF	Jeff - VE3WWJ
General Check-ins	General Check-ins	General Check-ins	General Check-ins	General Check-ins
VE3RUU VE3LC VE3RXH VE3KAE VA3IAH VE3CWM ¹ VE3NA VE3NPO VA3ZZI VA2BBW VE3KJQ VA3PSI VE3RRB VE3LPH VA3LMA VE3OTW VE3VIG VA3EO VE3LAF VE3XEM VE3YY	VE3RUU VE3DNU VE3OTW VA2BBW VE3LC VE3KAE VE3IPC VE3LAF VA2OJD VE3LPH VE3NPO VE3NA VA3PSI VA3EO VE3BOE VE3CWM ¹ VA3ODW VA3LMA VE3RKB VA3VGR VE3XEM VE3HVA VE3VIG	VE3OTW VA2BBW VA3DFX VE3LC VE3KAE VA3IAH VA3EO VA3WEX VA3CJO VE3NA VE3YY VE3WWJ VE3QO VA3LMA VE3VIG VA3CMG	VE3RUU VE3OTW VE3LC VE3RXH VE3KAE VA3IAH VE3YY VA2BBW VE3VIG VE3NA VE3NPO VE3CWM ¹ VA3LMA VA3WEX VA3EGY VE3KJQ VA3CJO VE3XEM	VE3RUU VE3LC VE3RXH VE3KAE VA3IAH VE3VIG VA3ZZI VA3PSI VA3WBR VA3EO VA3WEX VA3CJO VE3NA VA2BBW VE3KJQ VE3OTW VA3ODW VA3LMA

Notes:

1 - Cold War Museum. Norman, VE3NPP at the mic.



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

May 5 SFI:167 A:6	May 12 SFI:214 A:272*	May 19 SFI:194 A:12	May 26 SFI:152 A:6
VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS	VE3KTN - NCS
New & Visitors	New & Visitors	New & Visitors	New & Visitors
General Check-ins	General Check-ins	General Check-ins	General Check-ins
VA3QV VE3BF VA3EO VE3YY VE3OWV VE3BQ VE2JCA	VE3OWV VA3IAH VE3CWM ¹	VA3QV VE3EJ VA3IAH VE3LC VE3RXN VA3ZLA VE3CWM ¹	VA3QV VA3ZLA VA3EO VE3OWV VA3IAH VE3EJ

The "SFI" and "A" values are the Solar Flux Index and Geomagnetic A-Index respectively as reported on the NONBH Space Weather web site: <https://www.hamqsl.com/solar.html>. Values are taken within 30 minutes prior to net start time.

* - Major CME event starting May 10 that strongly affected LF and HF propagation.

Notes:

1 - Cold War Museum. Fred, VE3LAF at the mic.



General Links of Interest:

ARDF Ottawa



Go t-hunting with ARDF
(Amateur Radio Direction
Finding) Ottawa

RCJ



Volunteer radio ops help
scouts on the Rideau
Challenge Journey

New Hams Ottawa



Information for new hams with
an Ottawa focus

Editor's Note:

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: Alan at editor@ovmrc.ca
73, Alan VA3IAH

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