



## The QSL Bureau is looking for...

by Beth Webster, VA3CEW

VA3IRX Robertson Iain

The VE3 QSL Bureau has QSL cards for the above, but no mailing funds. If the ham would like the cards forwarded, the ham should send in \$5.00 and six self-addressed adhesive labels (not the small "return address" type) showing their call signs above their names. If they do not want cards, the ham should inform the VE3 QSL Bureau and the Bureau will return all QSL cards back to the senders.

VE3 QSL Bureau  
Box 157  
Downsview, ON, M3M 3A3  
[g.westhouse@sympatico.ca](mailto:g.westhouse@sympatico.ca)  
(Gary Westhouse, VE3NIT)

## We Need Your Help

We are in need of net controllers for the Pot Hole Net. Even if you can only participate once per month, we'd like to hear from you. You need to have HF capabilities in your home QTH.

Your participation in the POT HOLE NET is important for the Club to assess its ability to network and communicate in HF and to document its presence in the HF amateur spectrum. It also provides a fun way for you to assess your own ability to communicate via HF while making your call sign heard in the HF bands. If you are new to HF, the POT HOLE NET provides a friendly way to learn to operate in the HF bands in the SSB mode and to tap the wealth of knowledge and wisdom from some of the most experienced HAMs in the Club. In HF, there is always the possibility of a favourable skip and propagation resulting in unexpected pleasant calls from stations in remote locations...

The Pot Hole Net will be made every Saturday morning at 10:00 AM local time 7.095 Mhz, LSB and Sunday morning at 10:00 AM 3.760 Mhz, LSB from the first weekend following Labour Day Weekend to the last weekend in June.

Please contact anyone on the Executive if you wish to volunteer! For more information, visit us at:  
[ovmrc.on.ca/amateur-nets.htm](http://ovmrc.on.ca/amateur-nets.htm)

## NEXT MEETING 18 Feb 2010

We will be joined by Guest Speaker: Martin Gillen, VA3SIE who will be presenting to us on the subject of *Summits on the Air Nord-Américain*. Martin is an avid outdoorsman who enjoys hiking in the woods with his QRP HF Rig, home-brew antennae and a key...

For more information visit our website.

[ovmrc.on.ca](http://ovmrc.on.ca)

**SEE YOU THERE**

## OVMRC Executive 2009-2010

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*For information about the duties and responsibilities about all Executive and Chair positions, please visit the OVMRC forums, Member section or contact any member of the Executive.*

## Sponsors

The OVMRC acknowledges the following organizations for their support of our activities:

- **Acceptable Storage**,  
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- **Bytown Marine**,  
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- **Elkel Ltee.**,  
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Ltd.**, Ottawa, ON
- **Travel-Mor Trailer Sales**,  
Ottawa, ON

The club's web site is hosted by:

### Magma Communications Ltd.

[www.ovmrc.on.ca](http://www.ovmrc.on.ca)

## OVMRC Life Members

Maurice-André Vigneault, VE3VIG

Ralph Cameron, VE3BBM

Doug Carswell, VE3ATY

Doreen Morgan, VE3CGO

Ed Morgan, VE3GX

Bill Wilson, VE3NR (SK)

## OVMRC Repeaters

147.300 MHz(+)

444.200 MHz(+)

## Amateur Radio Exhibit VE3JW

Web site:

[ovmrc.on.ca/ve3jw.htm](http://ovmrc.on.ca/ve3jw.htm)

Canada Science &  
Technology  
Museum

*The Rambler is the official newsletter of the Ottawa Valley Mobile Radio Club Incorporated and is published 11 times a year (monthly, except for July). 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 to the editor or by e-mail to:

[Robert Cherry, VE2AGE](mailto:robert_cherry@hotmail.com)

[robert\\_cherry@hotmail.com](mailto:robert_cherry@hotmail.com)

## **MINUTES, OVMRC GENERAL MEETING, January 21, 2010**

### **1. CALL TO ORDER**

The President, Michel VE3EMB, called the meeting to order at 19:35. There were 28 people in attendance.

### **2. GUESTS AND VISITING AMATEURS**

Harold VA3UNK, Johnny VE3EIE.

### **3. PROGRAM**

Bertrand VE2ZAZ presented a talk entitled *A Beginner's View of Easy Moonbouncing*. He mentioned some of the reasons why amateurs get involved with moonbouncing which is also known as Earth-Moon-Earth (EME). He discussed the history of EME, the challenges that must be overcome to achieve a successful QSO, the bands on which EME commonly takes place, the types of antennas used and some of the software available to track the moon and communicate between stations. He offered many tips based on his experience with EME and provided a number of useful references.

Bertrand illustrated his talk with charts and photographs and played a number of sound clips of actual EME communication. Bertrand's main objective was to encourage other amateurs to

get involved in this particular aspect of amateur radio.

Amateurs get involved with EME because the challenges that must be overcome are both, unusual and substantial. EME provides an exceptional opportunity to master communication theory and to build efficient antennas. Many enthusiasts consider EME the pinnacle of amateur radio communication.

The first EME bounce was made in January 1946 using 3 KW of power on a frequency of 111.5 MHz under the auspices of the Diana military project. Subsequently, in 1953, two stations heard their EME echoes on 144 MHz. The first QSO on 144 MHz occurred in 1960, the first on 430 MHz in 1965, the first on 50 MHz, 222 MHz and 2.2 GHz during the 1970s, the first on 3.4 GHz, 5.7 GHz and 10 GHz during the 1980s and the first on 28 MHz, 24 GHz and 47 GHz during the early 2000s. The band most commonly used for EME is 144 MHz and the power used tends to be between 500 and 1000 Watts.

Successful EME requires dealing with many challenges. For example, EME bounces involve round trip distances of roughly 770,000 km. Transmission

and reception involve small angles between earth-moon-earth. The moon reflects only about 7% of the transmitted signal and the delay between transmission and reception is more than two seconds. Path losses are huge and reach some 250 dB when using a frequency of 144 MHz.

Further, successful EME QSOs must take into account the mismatch of signal polarity resulting from the relative positions of the two stations attempting communication and the moon (spatial polarity). They must also take into account rotation of polarity resulting from signals traversing the ionosphere twice (Faraday rotation). Both of these phenomena are even more challenging because they interact. As well, they must deal with interference resulting from reflections off the jagged surface of the moon and from the wobbling of the moon in orbit (libration fading). Further, they must mitigate cosmic and solar noise as well as man made noise.

Both very large and more modest stations can participate in EME. HB9Q <http://hb9q.ch/joomla/index.php>, in Switzerland, can be worked on 50 MHz, 144 MHz, 432 MHz, 1296 MHz and 2304 MHz. Some

others include W5UN <http://www.w5un.net/>, VA3TO [www.va3to.com/](http://www.va3to.com/), and Bertrand's own VE2ZAZ. Yagi arrays and dishes are the antennas of choice. Modes commonly used in EME are CW, digital and voice.

There are websites and software available to facilitate EME. These include NOUK, for on-line chatting, EME System and NOVA for tracking the moon and WSJT (JT65) for digital communication. In order to be successful in EME, QSOs must be well planned. QSL cards are the norm and they are customarily sent directly.

Bertrand offered much advice based on his personal experience and experimentation with EME. He emphasized that successful EME requires minimizing the loss between antenna and preamplifier, using the best available transmission line and connectors, using modern Yagi design, operating during the best moon conditions, exploiting ground gain, avoiding hot switches, compensating for Doppler shift and controlling polarization. For further information, visit the following:

[www.wcarc.on.ca/presentations/ememinimizer.ppt#1](http://www.wcarc.on.ca/presentations/ememinimizer.ppt#1)  
[www.nlsa.com/nets/moon-net-help.html](http://www.nlsa.com/nets/moon-net-help.html)  
[www.df2zc.de/newsletter/](http://www.df2zc.de/newsletter/)  
[www.sm2cew.com/dubus-aw-70.html](http://www.sm2cew.com/dubus-aw-70.html)  
[www.chris.org/cgi-bin/jt65talk](http://www.chris.org/cgi-bin/jt65talk)  
[www.ar1.org/FandES/filed/regulations/techchar/18JT65.pdf](http://www.ar1.org/FandES/filed/regulations/techchar/18JT65.pdf)  
[www.flehn.org/](http://www.flehn.org/)  
[www.nlsa.com/nfw.html](http://www.nlsa.com/nfw.html)

#### 4. COMMITTEES

##### 4.1 Amateur Radio Exhibit

##### a) Proposed Upgrades to the Club Station

Maurice-André VE3VIG presented a proposal to upgrade the Club station VE3JW. The main objective of the proposal is to make the experience at VE3JW even more meaningful to visitors, and to youth in particular. Some of the aging or obsolete equipment at the station would be replaced with more user-interactive technologies, the type with which youth are both, familiar and comfortable.

The proposed upgrades include software defined radio, digital voice radio, a mockup of the amateur radio station that is installed on the international space station (ISS), three new monitors, a computer-controlled satellite tracking

interface, a telebridge and a large LCD screen.

The software-defined radio envisaged would be a FLEX 3000. This radio incorporates an automatic tuning unit, digital signal processing and it has a maximum output of 100 Watts.

The use of digital voice radio is expanding significantly. Over 1,700 amateurs use some 450 digital radio gateways every day. The total number of users is estimated to have reached 10,000. The digital voice radio proposed for the Club station is an Icom D-Star ID-880H. This radio is a dual-bander with a maximum output of 50 Watts.

The mockup of the ISS would be installed next to the Club station. One of the main features of the mockup would be an interactive bank of pre-recorded answers to some of the most interesting questions posed by children to astronauts. Visitors would select questions by using a virtual Kenwood D-7000 microphone.

A telebridge would be installed to make it possible for schools located out of range of satellite orbital passes to talk to astronauts from VE3JW. Telebridges are currently installed elsewhere, including in California, Belgium and New

Zealand. To be useful, the telebridge would need to be accessible 24/7 at the Club station. Such access will require approval of the management of the Museum. A telephone line would be required, but NASA would pay for the long-distance charges.

The current NLSA-SASI satellite tracker is aging and needs to be replaced. An AMSAT LVB tracker is proposed in conjunction with AMSAT PC SAT 32 software.

Visitor interaction with the new technology would be displayed on a 50-inch LCD screen. Three 19-inch LCDs, a RIGblaster Plus, and a Carolina Windom antenna for 10 through 80 meters would be installed. Finally, the University of Toronto would be approached to provide a model of a Cubesat, which would be used for display purposes.

The total cost of the upgrades would be between \$3,000 and \$5,000 depending on how much of the proposed equipment potential corporate donors might be prepared to subsidize.

#### b) Graduates of Satellite Communications Course

Maurice-André VE3VIG congratulated Beth

VA3CEW, Jacques VE7DF and John VA3US on successful completion of the satellite communications course offered by the Club.

#### c) Volunteers Needed for White Cane Week

Once again, the Club will be hosting the visually impaired during White Cane Week, which is held February 7 through 13

[www.ccbnational.net/new/index.php](http://www.ccbnational.net/new/index.php). Club members have participated in this event for at least the past 15-20 years. Volunteers from the Club and from the amateur community at large are required to transport the visually impaired to and from the Club station VE3JW and to help them make contacts on amateur radio. To assist with this event, contact Maurice-André VE3VIG at [vig@mondenet.com](mailto:vig@mondenet.com).

#### d) Guides on the Air

On February 20, the Club will host a number of Girl Guides at the Club station VE3JW. The objective of this event is to introduce Guides to amateur radio and to help them make contacts. Club members and other amateurs who can assist with this event should contact Maurice-André VE3VIG at [vig@mondenet.com](mailto:vig@mondenet.com).

#### e) Poldhu Radio Club

The Club station VE3JW was featured in a recent bulletin of the Poldhu Amateur Radio Club. The article was written by the secretary of the Poldhu club following a visit to VE3JW.

#### 4.2 Amateur Radio Training

##### a) Radio Theory Course

Ernie VE3EJJ reported that the radio theory course offered by the Club is nearing completion. Four of the eight students that started the course remain.

##### 4.3 Emergency Preparedness

Paul VE3NJS invited members to join the committee in its discussion of issues, including the future of the Club trailer.

##### 4.4 Membership

Joe VE3EUS reported that the Club now has more than 90 current members.

##### 4.5 Publicity and Programs

The chair of that committee is vacant. The Club is seeking a volunteer to fill it.

##### 4.6 Website

Chris VE3CUZ invited members to provide their suggestions to improve the Club website. He also invited them to provide a new photograph for the home page. He encouraged

amateurs and other interested parties to join the Club forum and the Club mailing list.

## 5. BUSINESS

Bureau Looking for Amateurs

Beth VA3CEW asked members to help the Bureau locate a number of amateurs. The audience was able to offer assistance with one missing amateur. The list of amateurs sought by the Bureau is published in the January 2010 issue of the Rambler.

## 6. COMMENTS FROM THE FLOOR

Harold VA3UNK reminded amateurs that the Canadian Ski Marathon, which will be held February 13-14, 2010, welcomes additional licensed radio operators. Some 30 operators are required each day of the Marathon. Those who can volunteer should contact Harold at [radio1@admin2.ca](mailto:radio1@admin2.ca).

## 7. UPCOMING CLUB MEETINGS

The next meeting of the Club executive will be held on Thursday, January 28, 2010 at 19:00 at the Canada Science and Technology Museum.

The next general meeting of the Club will be held on February 18, 2010 at 19:30

at the Canada Science and Technology Museum.

## 8. DOOR PRIZES AND DRAWS

Door prizes were won by Ante VA2BBW, Beth VA3CEW, Barney VA3BGB and Michel VE3EMB. The 50/50 draw (\$21.00) was won by David VE3ZZU.

## 9. ADJOURNMENT

There being no further business, the meeting was adjourned at 21:45 at which time the audience was invited to continue discussing EME with Bertrand VE2ZAZ. Subsequently, many of the attendees proceeded, as is customary, to the local coffee shop to talk radio. All are welcome to join in after the meeting.

## 10. SIGNED

Joe VE3EUS, Secretary

## Guides on the Air

On February 20, the Club will host a number of Girl Guides at the Club station VE3JW. The objective of this event is to introduce Guides to amateur radio and to help them make contacts. Club members and other amateurs who can assist with this event should contact Maurice-André VE3VIG at [vig@mondenet.com](mailto:vig@mondenet.com).

## Name Tags Have Arrived

Recent Order of OVMRC Name Tags Has Arrived

If your name appears on the list below, there will be an OVMRC name tag waiting for you at the February 18 general meeting. If you have ordered a name tag and your name is not on the list or, if you would like to order a name tag, please contact Joe, Membership Chairman at [VE3EUS@rac.ca](mailto:VE3EUS@rac.ca).

CHRIS	VE3CUZ
DAVID	VE3ZZU
GRAHAM	VE3GBD
GREG	VA3OMP
HERVÉ	VA3RKO
MARTIN	VA3SIE
PAUL	VA3PAN
PETER	VE3DPN

A FINANCIAL AUDITOFTHE OTTAWA VALLEY MOBILE RADIO CLUB (OVMRC)

During the period 15-18 October 2009 an audit was conducted on the financial statements of the OVMRC covering the period 01 July 2008 to 30 June 2009.

AUDIT METHODOLOGY

The financial files and reports noted below were systematically cross checked to verify each report of transaction and Bank statement, Income/Expenses and budget. Only one discrepancy was noted concerning cheque #979. Telephone discussions and a follow up email from the OVMRC Treasurer cleared up the matter (See attached email).

FINANCIAL FILES AND REPORTS:

- A. File FY08/09 Expenses (Receipts)
- B. File FY07/08 Bank Statements
- C. File FY08/09 Bank Statements
- D. File FY08/09 Inflows
- E. Report - Transactions By Payee
- F. Report - Transactions By Account
- G. Report - Transactions By Category
- H. Report - Budget – Last Year
- I. Report - Banking Summary (Income/Expenses)
- J. Report - Account Balances As of 2009-06-30
- K. RBC Cheque Duplicates

The review and financial audit of the OVMRC files and reports have shown that the financial well being of the club is in good and capable hands.

Sincerely,



Ken Halcrow

Dated: 17 November 2009

1577 Zachary St.

Orleans, Ontario

K1C 6C7

## **Upgrade of VE3JW: The Amateur Radio Exhibit at Canada Science and Technology Museum**

The amateur radio exhibit at the Canada Science and Technology Museum is sponsored by the OVMRC. It is also the club's amateur radio station.

### **Rationale for the upgrade**

We propose an upgrade of the amateur radio exhibit at the Canada Science and Technology Museum, i.e. the VE3JW station. The upgrade consists of new pieces of amateur radio equipment. We are aiming at exhibiting some of the latest innovations in the field of amateur radio. A goal is to stimulate the interest for the station and hobby with fellow amateurs and potential new amateurs. It is also our desire to increase the attractiveness of the station for visitors of all ages at VE3JW.

The pieces of equipment proposed for the upgrade are organized into three lists according to three priority levels: 1. Highest, 2. Medium and 3. Lowest.

### **1. Highest Priority List**

The highest priority list is composed of items that we should have at VE3JW:

Software Defined Radio Model Flex-3000	1,972.00
D-Star ID880H VHF/UHF radio	678.00
50" LCD screen	1186.50
Three 19" monitors	339.00
Total	4,175.50

The amateur radio community played during the last decade a non-negligible role in the development of the Software Defined Radio technology. The main contribution of amateurs has been to create units that are affordable to the average experimenter. One can foresee that Software Defined Radio will become ubiquitous in amateur radio by the end of this decade. We believe that it is important for VE3JW to showcase what is currently one of the major innovations in the world of amateur radio. The Flex-3000 has several characteristics of higher-end models, excluding extensibility which is not deemed necessary for VE3JW. The output power of the Flex-3000 is 100 Watts. Lower-end models are QRP and of limited usability at VE3JW. The base price is \$1,714.00, plus \$58.00 of shipping. A power supply is also required (at \$200.00). Total estimated cost is \$1,972.00.

Amateur digital radio and digital voice over radio have recently experienced amazing growth around the world. It is also among the top current innovations in amateur radio that we would like to demonstrate at VE3JW. D-Star is by far the most successful and advanced technology of that type. The D-Star model ID880H radio can be used with a free software program called D-RATS for transferring files, images, text and messages as well as QST beacons and positioning on maps. It is dual band. It has 50 Watts of output power and an easy to use interface for control. It is excellent for emergency networking. The base price is \$600.00, plus \$78.00 of taxes, for a total estimated cost of \$678.00.



The 50" screen is proposed as a replacement of the current 35" screen. With the current screen, the displayed information is difficult to view and appreciate at visitor's distance in particular when digital modes are demonstrated, which often happens. In short, after ten years of service, the current screen has reached the end of its lifecycle and doesn't display nicely anymore. Moreover, the current screen is CRT and power hungry. A new LCD monitor will reduce consumption of energy. A 50" LCD can be obtained from local retailers at \$1,050.00, plus \$136.50 of taxes (13%), for a total estimated cost of \$1186.50.

The station has presently three CRT computer monitors. They were purchased 10 years ago. They are now showing signs of malfunction. Ideally, they should all be replaced at the same time, to maintain uniformity of the display. The cost of new 19" monitors is relatively low, estimated to be \$100 per unit. Three units would cost \$300 plus \$39 of taxes (13%), for a total of \$339.

## 2. Medium Priority List

The medium priority list comprises two items that will enhance the facilities available at the station and the display of amateur radio to visitors:

• Phone patch	500.00
• ISS mockup	200.00
Total	700.00

The phone patch will give the capability to establish phone-radio links at VE3JW. It will particularly be useful in the context of the ARISS activities, in which VE3JW has been involved for several years. ARISS organizes communications sessions between high school students and astronauts onboard the International Space Station (ISS). The phone patch will play the role of *telebridge* between the ISS and schools where the setup of a satellite ground station is difficult or impossible to achieve.

The ISS amateur radio mock-up physically consists of a monitor and can be a small cell next to VE3JW or a panel in the ISS display of the museum. The concept consists of an exhibit where the visitor picks a question addressed to an ISS astronaut displayed on the monitor. In return, the exhibit plays the answer from the astronaut. The answers are actually pre-recorded from real ARISS contacts. The questions cover topics such as the life in space and astronaut career path. From our point of view, it demonstrates to visitors the capability of the use of amateur radio to communicate from ground with ISS astronauts. Indeed, the visitor will virtually communicate using amateur radio with ISS astronauts. The estimated cost of the ISS mock-up is \$200.

## 3. Lowest Priority List

The lowest priority list is made up of articles that are necessary for operation at VE3JW:

• HF antenna	197.75
• LVB Tracker	220.00
• RigBlaster Plus	180.20
Total	597.95

A new antenna is necessary as a replacement of the current 80/40-meter antenna that recently collapsed. Given the poor condition, it is not recoverable. VE3JW has currently no 80/40-meter communications capability because of the loss of this antenna. Replacement with an OCF-DXCC antenna is proposed. The estimated cost is \$175, plus \$22.75 of taxes (13%), for a total of \$197.75.

The current computer to azimuth-elevation rotator interface, used for satellite communications, shows signs of malfunctioning and needs to be replaced. A replacement by an AMSAT-LBV tracker is proposed. The estimated cost is \$200, plus \$20 of shipping and handling, for a total of \$220.

The RigBlaster Plus is a computer to radio interface. It will enable operation in digital modes with the Kenwood TS-2000 radio of VE3JW. The estimated cost is \$160, plus \$20.80 of taxes (13%) for a total of \$180.80.

The total estimated cost of the upgrade is \$5,473.45.

Maurice-André Vigneault (VE3VIG), Amateur Radio Exhibit Chair  
Michel Barbeau (VE3EMB), President  
Ottawa Valley Mobile Radio Club

## **Bill Wilson, VE3NR SK OVMRC Life Member**

Bill received his Amateur Radio Certificate in 1939 and his first call sign, VE3BUZ, 1948. In the 1960's, with others, Bill was responsible for the adoption of frequency allocations for the new Amateur Satellite Service at the international level, and worked out guidelines for the use of Amateur repeaters in Canada. "I am particularly proud that these guidelines did not have to be put in our Regulations because of the nature of Canadian Amateurs," says Bill. "In the US, the use of repeaters is set out in FCC Regulations."

In the late 1970s, Bill was a key force in revising the Radio Regulations and Amateur qualifications and reviewing the ITU Table of Radio Allocations, and persuaded the DOC to authorize the 7.15-7.3 sub-allocation in the 40 m band for Canadian phone and CW operation.

In 1980, with Bob Benson, counsel for the CRRL, Bill was successful in having the Tariff Board drop import

duties on Amateur equipment, a major economic sore point for Canadian Amateurs up to that time.

Bill served as President of the CARF from 1978-1981 and in 1979-80 founded CARF Publishing Ltd. and became its first President.

Through the 1980s, Bill was involved with rewriting examination requirements of Amateur Certificates, working with industry to reduce cable TV interference to Amateur communications, championed Amateurs' rights to use radio in the face of consumer interference complaints, and was instrumental in ensuring retention of Amateur allocations above 30 MHz.

In the 1990s, Bill continued in his advocacy for Amateur Radio with government on future policies for regulation of radio in Canada, and contributed to Canada's policy on revised international radio regulations and frequency allocations at the 1992 ITU

WARC in Geneva. Bill has also been a major contributor over the years to official guidelines on how Amateurs and municipalities consult and interact on antennas and towers. In 1994, Bill co-drafted a proposed joint Canada-US Frequency Coordination Agreement on Amateur sharing in the 220-222 MHz band with land mobile users in the US.

Bill was the prime motivator and spiritual inspiration behind the new and updated "Guidelines for the Radio Amateur" which appeared in the December 1997 TCA.

We not only lost a very valuable member of our club, a real pioneer in the true sense of the word for Amateur Radio but also a friend.

73

Larry  
OVMRC Historical Chair

*Material above was extracted, from **The Canadian Amateur**, April 1998 issue, provides more information regarding Bill's lengthy Amateur Radio Activities.*