



## Lest We Forget

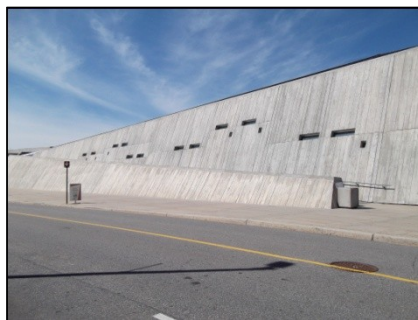
By: Michel Barbeau, VE3EMB

November 11 is Remembrance Day in Canada. Let's remember with an amateur radio perspective.

Our first stop is at the Canadian War Museum/Musée Canadien de la guerre in Ottawa. The museum is dedicated to the remembrance of the military history of Canada. The architecture of the building, work of Raymond Moriyama, is truly unique and evokes the chaos created by war. Picture 1 shows the Museum with the wall of windows. What looks like random sequences of short and long windows spell out in Morse code the phrases *Lest We Forget* and its French translation *n'oublions jamais*.



**Figure 1: The wall of windows of the Canadian War Museum/Musée Canadien de la guerre spelling out in Morse code *Lest We Forget/ n'oublions jamais* in morse code.**



**Figure 2: shows a concrete wall of the Museum, next to the visitor entry. The windows spell out in Morse code the letters CWM (for Canadian War Museum) then MCG (for Musée Canadien de la Guerre).**

The third picture shows the Peacekeeping Monument in Ottawa. The monument is work of Jack Harman, in 1992. The monument honors more than 110,000 Canadian peacekeepers that served in zones of conflict

around the world, since 1948. The monument also evokes reconciliation. The picture focuses on one of the three soldiers, a woman, who carries and operates a portable radio. The radio is a model AN/PRC-25 or AN/PRC-77, which means an army-navy (AN), pack or portable (P), radio (R), receiving and transmitting (C), model number 25 or 27. The use of this model started in 1962. Over 130,000 units were produced [www.milspec.ca]. Model 25 is a VHF radio, solid state, except for the final stage that uses one power amplifier tube. It is a FM VHF radio (30 to 75.95 MHz), low power (1 to 1.5 Watts) for short-range communications (8 km). Model 77 looks similar to model 22 and was its replacement, from 1968. It has very similar specifications, but it is entirely solid state. The radio is still in use, but solely for training purposes.

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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**, Ottawa, ON
- **Bytown Marine**, Ottawa, ON
- **Elkel Ltee.**, Trois-Rivières, QC
- **Kenwood Electronics Canada Inc.**, Mississauga, ON
- **Ottawa Camping Trailers 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

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Submit articles to the editor or by e-mail to:

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

## MINUTES, OVMRC GENERAL MEETING, October 28, 2010

### 1. CALL TO ORDER

The General Meeting Chair, Beth VA3CEW, called the meeting to order at 19:35. There were 40 people in attendance.

### 2. GUESTS

Annie Girard, James Buck, Michael Nemat, Geoff Bawden VE4BAW President RAC,

Mitch Mitchell VE6OH RAC Director for Alberta, Northwest Territories and Nunavut,

Mike VE3FFK and Mike VE3IPC.

### 3. TECHNICAL ASSISTANCE

A fellow amateur is looking for a used television antenna rotor. Contact Joe VE3EUS for details.

### 4. PROGRAM

#### 4.1 Remote Tracking of a GPS Tracking Device

Michael Nemat, School of Computer Science, Carleton University, presented a talk entitled *Remote Tracking of a GPS Tracking Device with Google Maps via GSM Cellular Networks*. This talk was based on his fourth year honours project. Michael described how to build hardware and software solutions for near-real-time remote geo-location, using

GPS technology and GSM cellular mobile communication networks.

One main objective of the project was to reduce the complexity of building a functional product by using open-source and free technologies to avoid licensing or usage fees. Another objective was to develop solutions with as much open-source technology as possible to avoid unwanted, malicious or other undesirable functionality that could compromise the product.

The talk presented by Michael generated much interest among members. He was asked numerous questions on a wide range of topics, the answers to which testified to his considerable knowledge and to his ability to communicate it effectively. Congratulations Michael.

For the full text of Michael's report, visit:

[http://people.scs.carleton.ca/~barbeau/Honours/Michael\\_Nemat.pdf](http://people.scs.carleton.ca/~barbeau/Honours/Michael_Nemat.pdf)

#### 4.2 Discussion of Issues Facing Radio Amateurs of Canada (RAC)

Geoff VE4VAW, President of Radio Amateurs of Canada, led a lively discussion of issues facing that organization. Topics included the recent

intrusion into the 2-metre band, the nature of coverage under RAC insurance, the financial situation at RAC, and the outlook for a healthier balance sheet. Ensuring that RAC remains relevant to the Canadian amateur radio community and the urgency in recruiting younger members were the issues that generated the liveliest debate.

Many in the audience were surprised to hear that RAC bulletins are not automatically sent to members. The future of RAC depends on its relevance to the Canadian amateur radio community. RAC, it was felt by many, needs to better communicate with its stakeholders.

Recruiting young amateurs to RAC is an urgent matter for which the window of opportunity may be fast closing. Resurgence in electronics in the past few years may lengthen that horizon somewhat. Nonetheless, decisive action is required by RAC in the use of novel media such as Facebook, Twitter and others, to bolster its communication and recruitment efforts aimed especially at youth.

To request RAC bulletins, visit:

<http://rac.eton.ca/racbullemail.htm>

## 5. BUSINESS

### 5.1 Amateur Radio Exhibit

Darin VE3OIJ described the recent upgrades to the Club station VE3JW. These upgrades are attracting an increasing number of visitors to the Station. He invited all amateurs to come operate at the Station and compete for the QSO awards that were recently instituted.

### 5.2 Amateur Radio Training

Ernie VE3EJJ reported that 11 students, including three women, are taking the amateur radio course offered by the Club. Students have completed the DC portion of the course and will be writing their first exam shortly.

### 5.3 Budget for 2010-2011

Robert VA3SHO presented the final budget for 2010-2011. The budget previously presented to members was revised to take into account more detailed estimates for costs of special events and the Christmas party, as well as increased revenues from the amateur radio course offered by the Club.

*MOTION: Moved by Chris VA3SM and seconded by Darin VE3OIJ that the budget for fiscal 2010-2011 be*

*approved as amended.*

CARRIED

### 5.4 Historical

Ante VA2BBW reported that he would be looking at QSL cards received by the Club station VE3JW with a view to producing a slide show to attract more visitors to the station.

### 5.5 Membership

As at the end of the meeting, 50 amateurs had completed a Club membership application for 2010-2011.

### 5.6 Program

Michel VE3EMB reminded members that there are speakers required for the program portion of some of the Club meetings. Contact Michel to submit your suggestions.

### 5.7 Special Events

Bob VA3QV informed members that he planned to hold Field Day 2011 in a more secure location. In the past two years, there have been acts of vandalism directed at the property of Club members while participating in Field Day on Museum grounds adjacent to St. Laurent Boulevard. This planned change of venue will entail additional costs that have been reflected in the budget.

### 5.8 Website

Chris VA3SM reported that Club members could now purchase OVMRC merchandise on the Club website. Prices include taxes, but exclude shipping. Visit the Club website for further details.

## 6. COMMENTS FROM THE FLOOR

### 6.1 Technical reports

to the Saint Lawrence Valley Repeater Council are due at the end of October.

### 6.2 The Ottawa Emergency Measures Radio Group (EMRG)

will hold a meeting at City Hall, Saturday November 6, at 09:00. The meeting will include a tour of the emergency operations centre (EOC) located on the premises.

## 7. PRIZES

Proceeds of the 50:50 ticket sales were \$56.00. The 50:50 draw (\$28.00) was won by Don VE3KII. Don graciously donated his winnings to the Defence of Amateur Radio Fund (DARF). The Club matched that donation. DARF was established in 1991 by Bill VE3AR and Tom VE3CDM to collect funds to pay for the expenses of a licensed radio amateur to be part of the Industry Canada delegation at World Radio Conferences and its preparatory sessions. Frequency allocations for all



radio spectrum users are decided at these conferences.

Door prizes were won by Brian VE3KNE, David VE3ZZU, James Buck, Joe VE3EUS and Marcel VE3FNG. Prizes were supplied by the Club.

## 8. UPCOMING CLUB MEETINGS

The next meeting of the Club Executive will be held at 19:00 on Thursday, November 4, 2010 at the Canada Science and Technology Museum.

The next general meeting of the Club will be held at 19:30 on Thursday, November 18, 2010 at the Canada Science and Technology Museum. The OVMRC mini flea market will be the highlight of the meeting.

## 9. ADJOURNMENT

The meeting was adjourned at 22:00 at which time many of the attendees proceeded, as is customary, to the local coffee shop to talk radio.

## 10. SIGNED

Joe VE3EUS, Secretary

## VE3JW MMA OCTOBER RESULTS

Jamboree On The Air (JOTA) took place in October, and scouts visiting VE3JW made 9 contacts with other JOTA stations, including a multi-hour contact with a large number of scouts in the US. Through the month we recorded a total of 400 visitors, and 191 QSOs.

The bands were open nicely through October, particularly on 15 meters where VE3JW made many contacts. Although VE3JW was unable to take advantage of them, there were 10m and 12m openings through the month, and that may be an indicator that conditions are finally starting to turn for the better.

One of our operators, Beth Webster (VA3CEW) made a number of SSTV contacts into Europe in early October. This is a mode not commonly used at VE3JW and made for a nice little change.

### October results

#### Made by Guests and Visitors:

1. Best SSB QSO (Distance): Kanata Scouts to K2BSA, 2300 km

#### Made by regular ops:

6. Best SSB QSO (Distance): VE3LTN to TM0RDR, 5374 km

7. Best CW QSO (Distance): No CW in October

8. Best HF Digital QSO (Distance): VE3FTF to ZS2DK and VE3VCF to ZS1CI, >13000 km

9. Best Satellite QSO (Distance): VE3OIJ to ON5NY, 5590 km

10. Best D-Star QSO (Distance): VE3VCF to VE3LDJ, 679 km

\* Five QSO list for Oct 2010: Kanata Scouts, VA3FTF, VE3LTN, VE3VCF, VA3CMD, VE3OIJ, VE3EJJ, VE3HAZ

\* Most contacts for Oct 2010:

- Guest op, Kanata Scouts, 9

- Regular op, VE3VCF, 68

\* Total QSOs at VE3JW for Oct 2010: 191

### Volunteers hours for Oct 2010:

This month our operators have totalled 152 hours and 0 minutes.

Well done everyone!

Darin Cowan, VE3OIJ  
VE3JW Manager

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**Figure 3: The Peacekeeping Monument in Ottawa.**

Several members of the Ottawa Valley Mobile Radio Clubs (OVMRC) served in the Canadian Forces. The amateurs listed below are current OVMRC members who serve(d) in the Canadian Forces or who participated to cadet programs.

Robert Cherry VE2AGE,  
Cadet Lieutenant, Army, 61-66

Darin Cowan VE3OIJ,  
Captain, Air Force, 83-92

Ken Halcrow VE3SRS,  
Captain, Navy and Air Force,  
63-92

Mike Joyce VE3LTN,  
Communications Officer,  
Navy

Marcel Lemay VE3FNG,  
PO2, Navy, 54-69

Steven Lemay VA3SVN,  
MCpl, Army, 88-

Richard Murtick VE3RNM,  
Corporal, Army, 65-80

Arthur Smith VA3BIT,  
Leading Seaman, Navy, 82-91

Maurice André Vigneault  
VE3VIG, Captain, Air Force,  
50-88

Patrick Warner VA3LTN,  
Lieutenant, Navy, 80-86

Beth Webster VA3CEW,  
Cadet, Navy, 85-88

Acknowledgements: Thanks to Darin Cowan for help to indentify the radio model on the Peacekeeping Monument. Thanks also to Joe Lemieux for compiling the list of members who served in the Canadian Forces and Robert Cherry for reviewing the initial version of this text.

## **Amateur Radio and Military Service**

### **Similarities and Relationships**

Ever asked an Amateur Radio operator if he has ever served in the Canadian Forces? You'd be surprised at the number of positive answers you get back. In OVMRC alone, my club, we have a fair number of members who have served in the different branches of

National Defence, be it Navy, Army or Air Force.

Overseeing communications in all three services is the Communications and Electronics Engineering Branch. All military communications operators have been or are under CELE. The Directorate of Communications and Electronics Maintenance (DCEM) deals with the technical aspects of communications. So there, you have an unending pool of potential Amateur Radio operators, and many chose to continue communicating on their own, for pleasure or service to the public, during or after their career by enlisting in the ranks of Amateur Radio.

I started my career in the military as a Radio Operator for the then Royal Canadian Air Force in 1950 and served until 1988, 38 years of covering the operating trades and the technical trades offered by the service. I spent 6 years in Europe under NATO, 6 years travelling to the North Poles (magnetic and geographic) maintaining air navigation aids, and the rest between Halifax and Victoria.

Curiosity, adventure, and a taste for the beyond were responsible for my choice, edged on by the fact that, in those days, the family radio was only handled by

parents, which held me in earnest. No wonder then, that when I landed my first job, I had my own radio. I spent many hours listening to far away stations at night, when propagation on the AM band was open to distant stations.

On turning 18, I joined the RCAF as a Radio Operator and I was sent on a course at RCAF Station Clinton, Ont. where I first learned the Morse Code. The structure of communications in the Air Force was such that you had to request for a change of trade in order to progress in this Field. I did just that and ended up covering most aspects of communications offered by the service. From Radio Operator to Communications Operator which included Radio Teletype, a brief stint in the Comm Shop, to a Radar course for the PineTree Line, to a Precision Landing Radar course (GCA), to Navigation Aids including Arctic TACANs, and, upon commissioning, DCEM VHF/UHF Comm Officer at National Defence HQ here in Ottawa where I met Ed, VE3GX, who was a Life Cycle Materiel Manager (LCMM) for that office.

Common to both, Amateur Radio and Military communications, you find transceivers, antennas, power supplies, amplifiers,

tuners and all the comm modes including digital, except for band allocations which are limited in the Amateur Radio Service. Morse code, SSB voice, FM, RTTY and a plethora of digital modes are all available to both services.

In Amateur Radio we have local nets and world wide nets. Our National Traffic System uses formulated messages with priorities. This is also the case for our Amateur Radio Emergency System, and in some situations we are linked through the Canadian Forces Affiliate Radio System (CFARS). We use identifying call signs and operating procedures which are much the same. There are plenty of similarities over all except for the content of the traffic.

When I was at Alert, on the northern tip of Ellesmere Island, the most northerly outpost in the world, the life line of communications with our families was through Amateur Radio station VE8RCS. Dedicated radio amateurs in the major centres in Canada would provide phone patches for us. When my family was in Ottawa, Jim Cotter, VE3JW, the first blind radio amateur licensed in the 1920's, was providing patches for me from 1967 to 1969. Amateur Radio Exhibit station VE3JW at the Canada

Science and Technology Museum is dedicated to the memory of Jim W Cotter.

Many other services were provided to the Military through Amateur Radio, especially since Canada got involved in Peace Keeping duties around the world. Be it in Cyprus or any other theatres of conflict, Amateur Radio worked hand in hand to support our troops by providing HF links to families at home.

If you enjoyed communications as your chosen trade or profession, then Amateur Radio offers an extension to that pleasure. I could not do without communications, so, after retiring I joined the Amateur Radio community. A new community of friends, but now and again, some old military acquaintances popped up -- that made me feel the continuity of a common purpose.

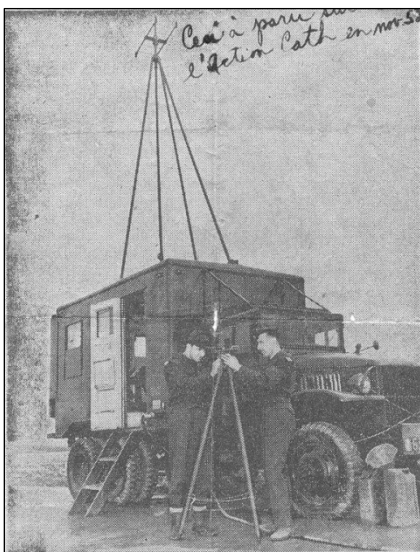
The highlight of my participation in this new community came in 2009 when I represented it as AMSAT Canadian Delegate to the ARISS International Working Group at a yearly meeting, this time at the European Space Agency technical centre in Holland.

As with the military, Amateur Radio is not confined to Canadian borders. We stretch out to



international organizations and situations that call on our communications skills. Many astronauts around the world, and most astronauts in Canada, get their Amateur Radio certificate in order to complement their mission in space. Colonel Chris Hadfield of the Canadian Forces will be on his way to the International Space Station soon for a third mission during which he will become Space Station commander. He intends to use his Amateur Radio privileges (VA3OOG) to contact many school students around the world. This is a prime example of how these two services join together to promote communications advancement all the way to outer space.

*Maurice-André,  
VE3VIG*



**Figure 1: October 1952, at #2 Fighter Wing Grostenquin, France. Installing a radiogoniometer, a direction**

**finding unit, to help bring home the pilots of our four squadrons of F-86 Sabres.**



**Figure 2: The inside view shows the manual rotor wheel used to spin the antenna consisting of two driven elements and two reflectors. In the middle of the wheel is a round black plate which we depressed in order to establish if we had a direct bearing or a reciprocal. We would read off the bearing indicated on the 360 degrees scale above the manual rotor wheel. The radio used was a BC-639 VHF unit tuned to air navigation frequencies.**



**Figure 3: After days of monitoring, searching, calling for the Canadian NATO Contingent in the Congo, we finally made the first contact at three in the morning from the Trenton MACS Centre. (Military Aeronautical Communications System)**

This picture appeared in the newspapers relating the events culminating in the successful establishment of

a reliable radio communications channel with the Congo. A daily net of direct RTTY traffic was set up and we used the available frequencies for air-ground-air, obtaining North Star cargo information shortly after take-off from Leopoldville. (Congo crisis 1960)

The MACS console has been saved and it can now be seen at the Kingston Military Communications Museum on display.

*Maurice-André,  
VE3VIG*

### 2010 Club Meeting Dates:

- November 18
- December 16 (Christmas Party)
- January 20, 2011
- February 17
- March 17
- April 21
- May 19
- June 16

### 2010 Exec Meeting Dates:

- December 2
- January 6, 2011
- February 3
- March 3
- April 7
- May 5



## Presentation on GPS by Michael Nemat

Here are a few links with helpful information about the GPS receiver used in Michael Nemat's project. Feel free to pass this on to the interested parties.

The GS407 receiver with U-Blox 5 chipset and Sarantel GeoHelix antenna:

[http://www.sparkfun.com/commerce/product\\_info.php?products\\_id=9436](http://www.sparkfun.com/commerce/product_info.php?products_id=9436)

U-Blox 5 Protocol Specification (Both NMEA and UBX protocols documented):

[http://www.sparkfun.com/datasheets/GPS/Modules/u-blox5\\_Protocol\\_Specification\\_s%28GPS.G5-X-07036%29.pdf](http://www.sparkfun.com/datasheets/GPS/Modules/u-blox5_Protocol_Specification_s%28GPS.G5-X-07036%29.pdf)

Receiver breakout board (basic, no connectors or backup battery):

[http://www.sparkfun.com/commerce/product\\_info.php?products\\_id=9692](http://www.sparkfun.com/commerce/product_info.php?products_id=9692)

Receiver breakout board (advanced, has backup battery, voltage regulators, and connectors):

[http://store.diydrones.com/uBlox\\_Adapter\\_p/br-0008-01.htm](http://store.diydrones.com/uBlox_Adapter_p/br-0008-01.htm)

U-Blox U-Center GPS configuration and evaluation software (Allows configuring of GPS output formats, various settings, etc... Windows only):

<http://www.u-blox.com/en/evaluation-tools-a-software/u-center/u-center.html>

U-Blox U-Center Mobile (Windows Mobile Only):

<http://www.u-blox.com/en/evaluation-tools-a-software/u-center/u-center-mobile.html>

U-Blox Assisted GPS (AGPS) information and server:

<http://www.u-blox.com/en/assisted-gps.html>

FTDI USB to Serial cable (5V VCC, 3.3V I/O, perfect for connecting the GPS+DiyDrones breakout board to a computer):

[http://www.sparkfun.com/commerce/product\\_info.php?products\\_id=9717](http://www.sparkfun.com/commerce/product_info.php?products_id=9717)

Three short pieces of advice regarding this receiver:

- The connector on the receiver is not very strong and can easily be disconnected and possibly damaged. I would strongly recommend using a glue gun or epoxy to permanently attach a breakout board to the receiver. I have had absolutely no reliability problems after I glued mine.

- The voltage regulators on the advanced breakout board from DiyDrones are very useful and handle just about every common voltage range EXCEPT single-cell lithium ion batteries (3.7-4.2V). I used this board but had my own external ULDO 3.3V regulator (MIC5305-3.3YD5 TR - <http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail&name=576-1298-1-ND>)

- This receiver is very popular and there are plenty of comments, feedback, and discussion regarding it on the forums at both [diydrones.com](http://diydrones.com) and [sparkfun.com](http://sparkfun.com).

*Michel Barbeau*

**Next Meeting**  
**18 November 2010**  
**19:30 Hrs**