



# Canada's Amateur Radio Magazine

## La Revue des Radioamateurs Canadiens

**MAY / JUNE 2012 – MAI / JUIN 2012**

A Tribute to Earle Smith, VE6NM

Cezar Trifu, VE3YLC – Amateur of the Year



Ontario Guides on the Air



A view from OP A at HK0NA



Burnaby ARC Swap Meet



HK0NA Malpelo Island DXpedition 2012



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### OUR COVER: A TRIBUTE TO EARLE SMITH, VE6NM



"Earle Smith was one of the most passionate Canadian Amateurs you could meet," IARU President Tim Ellam, VE6SH, told the ARRL. "A loyal supporter of the Amateur Service in Canada and internationally, he was a true friend of the IARU. I had worked with Earle at Radio Amateurs of Canada and valued his calm demeanour and his ability to form a consensus on difficult issues. His leadership within RAC was second to none. He will be missed not only in Canada, but by his many friends around the world." – see page 10.

Also featured on the cover: "Murphy was to strike early and we were forced to operate our six stations at OP B (the lower and main operating site) and OP A (the mountain top with the capability of 4 stations) without the planned Wi-Fi networking system. Hence, the logs had to be downloaded from each position on a daily basis before uploading them for analysis and submitting to Bob, N2OO, our QSL manager for the 'Club Log' online look up...." – see page 26.

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(\*Note: Method B is preferred).

## Silent Keys – In Memoriam

*With regret, we record the passing of these Amateur Radio operators:*

*ICA regrette de vous annoncer le décès des radioamateurs dont les noms suivent :*

VE1APD – Dick Crabbe, of Yarmouth, NS, at age 78, on December 26, 2011.  
VE1CDA – Bud Barrett, of Dartmouth, NS, at age 81, on March 24, 2012.  
VE1DXG – David Granter, of Liscomb, NS, at age 75, on October 10, 2011.  
VE1FST – Stuart Trask, of Wellington, NS, at age 86, on January 27, 2012.  
VE1GEP – Gordon Pulsifer, of Digby, NS, at age 88, on February 25, 2012.  
VE1GHW – Gil White, of Halifax, NS, at age 73, on March 3, 2012.  
VE1IS – Louis Dauvin, of Port Elgin, NB, at age 98, on January 25, 2012.  
VE1MYR – Charles Bennett, of Mosher's Corner, NS, at age 87, on February 8, 2012.  
VE1NEB – Norm Brooks, of Bedford, NS, at age 63, on January 1, 2012.  
VE1OD – Elmer Norman, of Halifax, NS, at age 91, on January 26, 2012.  
VE1PFR – Peter Rafuse, of Middleton, NS, at age 47, on February 13, 2012.  
VE2WD – Herbert Widdop, of Pierrefonds, QC, at age 92, on March 22, 2012.  
VE3BGX – Gib Walker, of Greely, ON, on March 22, 2012.  
VE3EAY – David Young, of London, ON, at age 56, on February 20, 2012.  
VE3EER – Dick Hayes, of Foxboro, ON, at age 67, on November 2, 2011.  
VE3FMI – Tom Murphy, of Whitby, ON, at age 91, on February 16, 2012.  
VE3GTS – Terry Shortt, of Colborne, ON, at age 70, on January 20, 2012.  
VE3HGN – Don Newlands, of Toronto, ON, at age 84, on March 26, 2011.  
VE3LMM – Bill Astle, of Thunder Bay, ON, at age 95, on January 22, 2012.  
VE3NZP – Steven Smith, of Elmwood, ON, at age 56, on December 16, 2011.  
VE3RA – Bob Andrews (VA3GRA), of Peterborough, ON, on February 15, 2012.  
VE3WV – Al Taylor, of Trenton, ON, at age 96, on January 26, 2012.  
VE4GO – George Gates, of Winnipeg, MB, at age 90, on March 14, 2012.  
VE5IA – Bill Sykes, of Vanscoy, SK, at age 84, on December 23, 2011.  
VE5IH – Dennis Brotzel, of Saskatoon, SK, on February 10, 2012.  
VE5LOG – Ozzie Groeb, of Regina, SK at age 80, on March 5, 2012.  
VE6JC – David Corner, of Calgary, SK, at age 90, on February 5, 2012.  
VE6LEZ – Les Wright, of Grande Prairie, AB, at age 92, on February 5, 2012.  
VE6NM – Earle Smith, of Grand Prairie, AB, at age 81, on February 24, 2012.  
VE6RFN – Ray Nessel, of Sherwood Park, AB, at age 51, on January 27, 2012.  
VE6UL – Peter Fast, of Coaldale, AB, at age 83, on January 18, 2012.  
VE7BPV – Art Bleue, of Penticton, BC, at age 93, on February 10, 2012.  
VE7ECW – Bill Postill, of Takysie Lake, BC, on March 18, 2012.  
VE7FTJ – Joan Moss, of Nanaimo, BC, at age 90, on February 22, 2012.  
VE7IAK – Sandy Robertson, of Abbotsford, BC, at age 77, on October 1, 2011.  
VE7MOG – Bill Morgan (VA7BM), of Victoria, BC, at age 67, on February 21, 2012.  
VE7NQ – Ernie Coe, of Kelowna, BC, at age 86, on March 10, 2012.  
VE7ODE – Herman Genschorek, of Westbank, BC, at age 89, on January 24, 2012.  
VE9OY – Laurie LeBlanc, of New Maryland, NB, at age 75, on January 23, 2012.  
VE9PUP – Pup Bailey, of Fredericton, NB, at age 79, on March 8, 2012.  
VO1OU\* – Bill Cove (VE6WJC\*), of Grande Prairie, AB, at age 78, on October 18, 2011.

Reports on Silent Keys should be sent to RAC Headquarters at <rachq@rac.ca> and must include a letter or note of confirmation from a family member, or a copy of a newspaper obituary notice, or a copy of a death certificate, or a letter from the family lawyer or executor. Hearsay or rumours will not suffice to confirm a Silent Key.

Please include the Amateur's call sign, name, address, date of death and age. Amateurs and family members might wish to remember a Silent Key with a memorial contribution to the RAC Foundation c/o RAC. Your "contribution in memory" may be designated for Scholastic, Research, Community or Emergency grants, or you may let the Directors decide where it is most needed. Tax receipts will be provided by the Community Foundation of Ottawa.

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For Section Reports  
see pages 57-62.



# FEEDBACK READERS WRITE TO THE CANADIAN AMATEUR

## TCA SUBMISSIONS AND EDITING POLICY

The Canadian Amateur welcomes articles, reviews, letters, features and photographs. Submissions should be of interest to Radio Amateurs.

As a general guide TCA accepts material in the following categories: Technical Articles; Technical Notes; Non-Technical articles; News Items; and Letters. Material may be submitted electronically, as a word processing file attachment to an email message, or sent by regular mail.

All submissions to *The Canadian Amateur* – including letters and articles – are eligible to be included in TCA, space permitting, at the discretion of the Editor.

Please limit letters to a few hundred words or less. Longer letters are subject to editing. Letter writers should include their name, address, call sign and phone numbers (voice and fax as applicable) and email/packet addresses (if any).

All material in TCA is subject to editing for length, clarity, style, punctuation, grammar, libel and taste.

All submissions that are approved for publication in TCA will appear in both the print version and electronic (Web) versions of TCA.

We regret that all submissions cannot be acknowledged. Please enclose a self-addressed stamped envelope if you wish pictures or diskettes returned.

For a complete Author's Guide visit [www.rac.ca/tca/authors\\_guide.htm](http://www.rac.ca/tca/authors_guide.htm).

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### Deadlines for TCA

July-August 2012  
May 15  
September-October 2012  
July 15

## CHANGES TO KEYSER PROGRAM

Jeff Davis, VE3COJ, built one of the keyers I described in the November/December 2011 issue of *The Canadian Amateur* ("An Iambic Memory Keyer", pages 23-26).

He found that the memory input system of the keyer was difficult to use because the keyer often reverted to normal operation when he had not completed the message input. The program did this because I had written it so that a slightly longer than word space pause would indicate the end of message input. Timing of this spacing was quite critical; just a bit too long and the program would leave the memory input part of the program.

Jeff suggested that a second push of a memory button would be a better and more unambiguous way to signal the end of a message.

His idea seemed like a very good one to me too so I revised the program to incorporate it. At the same time I extended the memory capacity of each of the three memories from 19 to 38 characters.

With these changes to the keyer program, entry to memory input is as before; with power turned off, the appropriate memory button is pressed and held while the power to the circuit is turned on.

On completion of message input the memory input button is pressed a second time – this signals the end of the message.

During message input, any pause of more than a character space will be interpreted as a word space – the length of the pause does not matter. If more than 38 characters are entered, just the first 38 characters (including word spaces) will be saved.

No changes to the circuitry are required with this revised program.

Jeff also mentioned to me that he had trouble finding the 240 ohm resistors that I had specified in the schematic.

The actual value of these resistors is unimportant; their only purpose is to limit current to a value that doesn't exceed the maximum allowable value (40 mA) for an input/output pin in the event of some unforeseen problem.

According to the ATtiny2313A data sheet "Connecting unused pins directly to VCC or GND is not recommended, since this may cause excessive currents if the pin is accidentally configured as an output".

In this keyer the pins are used, but the current limiting principle is the same. In my experiments I've used values from zero to 1,000 ohms; all worked fine.

I've attached the revised program – "Keyer\_18". I hope it can be made available on the RAC website.

Allen Wootton, VE7BQO  
Terrace, British Columbia

(Thanks Allen. I have uploaded it to [www.rac.ca/tca](http://www.rac.ca/tca). Ed.)

## A LONG RUN...

I just received the latest TCA in the mail this morning and as always I turn to your column first ("29 MHz and Up", by Peter Dewolf). Sad to see you go, but everyone needs a break now and then. You have certainly had a long run; longer than I did when I was writing the APRS column several years ago.

I too enjoyed putting my thoughts down in print for everyone to read, but in my case my career just got too busy, and my family got too big to allow any free time to write.

I am not active on the air much, but you will always see me on

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the map tooling around Belleville, Napanee and Kingston. Cheers!

Jeff Robbins, VE3JTR/VA3JTR  
Lennox and Addington County  
Emergency Services

## Pete's response:

Thank you for your kind note Jeff and glad to hear you enjoyed the column.

Good luck and hope to hear you on the air one of these days soon and get the chance for a good ragchew.

73, Pete Dewolf, VE3YYY

## CALENDARS AND BATTERIES

Thanks for your article in TCA which I have just received.

The "Fresh on the Air" type of article is very important, not only for new hams, but for us older folks who need refreshers now and then.

Regarding the first paragraph, the current Mayan Calendar cycle ends on the 21st of December in 2012, not 2011.

In the third column, second paragraph, a battery saver set for 200ms will turn the radio on 5 times per second, not 5 times per minute.

I look forward to reading more articles from you.

Best regards for 2012.

Gordon, Murray VE3JSJ  
Hamilton, Ontario  
(licensed in 1979)

# AROUND THE CORNER...

People, Places, News and Events on the Canadian Amateur Radio Scene

The following news items have been compiled from Industry Canada, RAC bulletins and the RAC website at <www.rac.ca>. To subscribe to RAC bulletins visit <http://rac.eton.ca/racbullemail.htm>. Thanks to RAC Bulletin Editor – Vernon Ikeda, VE2MBS/VE2QQ.

## Update on 60 Metres

RAC has been pursuing channelized access to 60m since early 2010. Our request was for an allocation identical to the US allocation, with one additional unique Canadian channel, and with fewer restrictions (the US allocations were restricted to USB voice only, with power and antenna restrictions). Amateurs will recall that one of the rationales for RAC requesting a 60m allocation was to enhance emergency communications including cross-border interoperability. Industry Canada (IC) responded by indicating that they were prepared to support access in synch with US Amateur allocation and regulations. In late 2011, in response to an ARRL petition for change, the FCC issued a final Report and Order that, once it has been published in the *Federal Register*, will result in a change to the frequency of one of the channels and will enable the use of CW and data modes in addition to USB voice. These features had already been in the original RAC request. The FCC Report and Order has cleared the way for Canada to move ahead with finalizing its allocation to match the new US allocations, including the ability to use CW and data modes. This allocation, which will be on a secondary basis, requires a public consultation through the *Canada Gazette*, which RAC anticipates will occur in the second quarter of 2012.

It is important that Canadian Amateurs comment on the draft once released. RAC will continue to keep our members aware of the status of this important initiative.

An important offer has been made by IC with regards to 60m. Industry Canada is prepared to license operators in channelized 60m operation pending the results of the consultation process. The licensing process will be managed out of IC's regional offices and is open to any Canadian Amateur. The process requires a formal licence application, payment of a licence fee, and the use of a special call sign instead of the licensee's Amateur call sign. RAC regards this as an important interim step allowing Amateurs to get on the air in the 60m band as soon as possible and thanks IC for this initiative. RAC's objective, however, is to ensure that Canadian Amateurs have the 60m allocation available to all Amateurs as part of their Amateur Radio certification, i.e., without licence applications, licence fees or special call signs. RAC is cautiously optimistic that this will come about in the summer of 2012.

If you wish to obtain a temporary, paid licence to operate on 60m, please contact your local Industry Canada Regional Office to complete the application form. The total fee depends upon the date of your application but in any case is less than \$100.

Bill Gade, VE4WO  
RAC Regulatory Affairs Officer

## Mise à jour sur le 60 mètres

RAC a préconisé l'accès par canaux au 60m depuis les débuts 2010. Notre demande était pour une attribution identique à celle des USA, plus un unique canal additionnel canadien, et

avec moins de restrictions (les attributions aux USA sont limitées à la phonie BLUH (USB) seulement, avec des restrictions de puissance et d'antennes). Les radioamateurs se rappelleront que une des raisons évoquées par RAC de demander une attribution sur 60m était d'améliorer les communications d'urgence, incluant l'interopérabilité frontalière. IC a répondu en indiquant qu'ils étaient en faveur d'un accès en accord avec les attributions et règlements radio amateur aux USA. À la fin 2011, en réponse à une demande de modification de l'ARRL, le FCC a émis un Report and Order final qui, une fois publié dans le *Federal Register*, aura pour effet de changer la fréquence de un des canaux et qui permettra l'utilisation du CW et des modes digitaux en plus de la phonie BLUH. Ces éléments faisaient déjà partie de la requête originale de RAC. Le Report and Order du FCC a laissé la voie libre pour le Canada de poursuivre la conclusion de son attribution pour correspondre aux nouvelles attributions aux USA, incluant la possibilité d'utiliser le CW et les modes digitaux. Cette attribution, qui sera sur une base secondaire, requiert une consultation publique par l'entremise de la *Gazette du Canada*, qui RAC prévoit se fera dans le second trimestre de 2012.

Il est important que les radioamateurs canadiens commentent l'ébauche du projet lorsqu'il sera publié. RAC continuera de tenir ses membres au courant des progrès de cette importante initiative.

Une importante offre a été proposée par IC au sujet du 60m. Industrie Canada est disposée à accorder des licences d'opérateur pour opérer par canaux sur 60m en attendant les résultats de la consultation publique. Le processus d'attribution de licences sera géré par les bureaux régionaux de IC et est accessible à tous les radioamateurs canadiens. Le procédé requiert une demande formelle de licence, un paiement pour des droits de licence, et l'utilisation d'un indicatif spécial au lieu de l'indicatif radioamateur du licencié. RAC considère ceci comme une importante étape intérimaire pour permettre aux radioamateurs d'opérer sur la bande de 60m le plus tôt possible et remercie IC de cette initiative. L'objectif de RAC pendant est de s'assurer que les attributions sur 60m soient accessibles par tous les radioamateurs canadiens en tant que faisant partie de leur certification radio amateur, c'est-à-dire sans demande de licence, droits de licence ou indicatifs spéciaux. RAC est prudemment optimiste que ceci se réalisera à l'été 2012.

Si vous désirez obtenir une licence temporaire et payée pour opérer sur 60m, s.v.p. contactez votre bureau local d'Industrie Canada régional pour remplir un formulaire de demande. Le montant total dépend de la date de votre demande mais est dans tous les cas inférieur à 100\$.

Bill Gade, VE4WO  
Responsable des affaires réglementaires Radio Amateurs du Canada Inc.

(Traduction par Serge Langlois, VE2AWR)

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## Section Emergency Coordinator Appointed for Quebec Section

It is with a great deal of pleasure that I announce the appointment of Normand Pitre, VE2NHK, as Section Emergency Coordinator for the Quebec Section effective immediately. Normand has shown great interest in emergency communications and ARES and is eager to learn more. He recently earned his RAC Certified Emergency Coordinator designation and is eager to chat with any members of the Quebec Section that might have an interest in establishing a new ARES unit.

Normand resides in Saint Zotique, Quebec and I would like to wish him the very best. Welcome Normand.

Gilles Larivière, VA2SGL  
RAC Section Manager – Quebec

## Coordonnateur d'urgence de section nommé pour la section du Québec

C'est avec grand plaisir que je peux annoncer la nomination de Normand Pitre, VE2NHK, en tant que coordonnateur d'urgence de section pour la section du Québec, effectif immédiatement. Normand a démontré beaucoup d'intérêt pour les communications d'urgence et le SURA (ARES), et il est désireux d'en apprendre plus. Il s'est récemment mérité sa nomination en tant que coordonnateur d'urgence certifié de RAC, et il a hâte de communiquer avec tous les membres de la section du Québec qui pourraient être intéressés à créer une nouvelle unité de SURA.

Normand réside à Saint Zotique, Québec, et je voudrais lui souhaiter la meilleure des chances. Bienvenue Normand.

Gilles Larivière, VA2SGL  
Gérant de section du Québec

(Traduction par Serge Langlois, VE2AWR)

## Public Information Officer Appointed to the RAC Field Organization National Secretariat

I am extremely pleased to announce the appointment of Alan Bauld, VE3CBR, to the Field Organization National Secretariat effective immediately. Alan resides in Stittsville, Ontario just outside Ottawa and will be a welcome addition to our ever-growing team.

Alan has an impressive CV and I'll list just a couple of highlights:

- Holds a Master of Arts in Education
- Bachelor of Arts in Geography/Anthropology



- Has an Electronics Technology Diploma
- Has other qualifications and certificates too numerous to mention
- He is currently an Eastern Canadian Storage Architect with Softchoice Canada
- Has experience as a Professor and Lecturer
- He is a Lieutenant and Training Officer in the Canadian Forces Reserves with the 736 Communications Squadron
- Has published many, many articles

Alan, I join with the entire National Secretariat, RAC Board of Directors and RAC Executive and say welcome aboard. We look forward to working with you.

*Doug Mercer, VO1DTM/VO1DM CEC  
RAC Chief Field Services Officer*

#### **Responsable de l'information au public nommé au secrétariat national de l'organisation des services extérieurs**

Je suis très heureux d'annoncer la nomination de Alan Bauld, VE3CBR, au secrétariat national de l'organisation des services extérieurs, effectif immédiatement. Alan demeure à Stittsville, Ontario, juste à l'extérieur d'Ottawa, et il deviendra un ajout bienvenu à notre équipe toujours en expansion.

Alan a un CV impressionnant et je vous en souligne juste quelques points marquants :

- Détient une maîtrise en arts et éducation
- Bachelier ès lettres en géographie/anthropologie
- Possède un diplôme en technologie électronique
- A d'autres qualifications et certificats trop nombreux pour être tous mentionnés
- Il est actuellement architecte de Eastern Canadian Storage avec Softchoice Canada
- A de l'expérience comme professeur et conférencier
- Il est lieutenant et officier d'entraînement dans les Forces de Réserve canadiennes avec l'escadron de communications 736
- A publié beaucoup, beaucoup d'articles

Alan, je me joins à l'ensemble du secrétariat national, au conseil d'administration de RAC et à l'exécutif de RAC pour te souhaiter la bienvenue parmi nous. Nous attendons avec impatience de travailler avec toi.

*Doug Mercer, VO1DTM/VO1DM  
Responsable en chef des services extérieurs  
– Radio Amateurs du Canada Inc.*

(Traduction par Serge Langlois, VE2AWR)

#### **Ontario Section Emergency Coordinator Appointed**

I am pleased to announce the new appointment for the position of Ontario Section Emergency Coordinator (SEC) for ARES in Ontario. Scott Carter, VE3CGN, of Dutton, Ontario is our new SEC for Ontario.

Scott brings with him much experience in the field of emergency communications. Scott was the former District Emergency Coordinator for the Tecumseh District. Scott has many certifications in emergency management including his CEC, BEM, IMS-100, IMS-200 to mention a few. Scott is also very active with the Salvation Army Team Emergency Radio Network (SATERN).

## **EXCITING NEW RAC MEMBERSHIP BENEFIT!**



The Radio Amateurs of Canada is constantly seeking out new benefits that enhance membership in RAC. For several years, our members have asked about the possibility of expanding the popular RAC Insurance Program to include home, auto and travel health insurance.

We are now pleased to announce the launch of an exciting new Home, Auto and Travel Insurance Program for members of RAC, through a new relationship with Johnson Inc. Johnson is one of Canada's leading insurance providers and is well known for creating unique insurance products for organizations like ours. Members of RAC will now be able to join in on a first class program that is currently provided to many organizations involved in educational, health care, 50+ and public service.

Radio Amateurs of Canada has chosen Johnson because it offers our members a complete and comprehensive range of insurance coverage, combined with:

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A letter will be sent to you shortly providing more information and details on the program and its coverages. In the meantime, please see the ad on the Inside Front Cover and visit Johnson online at <[www.johnson.ca/rac](http://www.johnson.ca/rac)>, or for a no-obligation quote on your home or auto insurance, call Johnson at 1-800-563-0677 and on MEDOC® travel insurance at 1-866-606-3362. To ensure you receive all of the benefits and discounts arranged for you, please identify yourself as a member of Radio Amateurs of Canada and quote your RAC membership number and our group ID code (WY and 088-06), when requesting your quotes for home and auto insurance and/or MEDOC® travel insurance.

This program represents a great advance in the benefits available to members of the Radio Amateurs of Canada.

Scott's appointment took effect on March 1 and his term is until September 1 when respective appointments will be made in each of the four new Sections in Ontario. I ask you all to join me and welcome Scott to his new position as he will be a great asset to the Ontario Field Services and ARES.

Thank you and welcome aboard Scott.

*Allan Boyd, VE3AJB  
RAC Section Manager – Ontario*

#### **Nomination du Coordonnateur d'urgence de section de l'Ontario**

Je suis heureux de vous annoncer la nomination d'un nouveau Coordonnateur d'urgence de section d'ARES pour l'Ontario (CUS – SEC) en la personne de Scott Carter, VE3CGN, de Dutton.

Scott possède beaucoup d'expérience dans le domaine des communications d'urgence. Il a déjà été le Coordonnateur d'urgence pour le district Tecumseh.

Il détient aussi plusieurs certificats en administration d'urgences incluant les CEC, BEM, IMS-100, IMS-200 pour n'en nommer que quelques uns.

Scott est aussi très actif avec l'organisation SATERN de l'équipe du réseau radio de l'Armée du Salut

La nomination de Scott prend effet le 1<sup>er</sup> mars 2012 pour se terminer le 1<sup>er</sup> septembre 2012, quand les nominations seront effectives dans chacune des quatre nouvelles sections de l'Ontario. Je vous invite tous à vous joindre à moi pour souhaiter la bienvenue à Scott à son nouveau poste, sachant qu'il sera d'une aide précieuse pour les Services à l'extérieur de l'Ontario et pour ARES.

Merci Scott et bienvenu à bord!

*Allan Boyd, VE3AJB  
Gérant de section – Radio Amateurs du Canada en Ontario*

(Traduction par Claude Lalande, VE2LCF)

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## A MESSAGE FROM THE PRESIDENT UN MESSAGE DU PRÉSIDENT

I must confess that like many of you I started summer early this year. I am writing this Message from the Chihuahuan Desert just outside Big Bend National Park in Texas and I am enjoying roving in the desert. Venus and Jupiter are chasing each other in the Western sky just after sunset and are the brightest objects in the heavens. Venus outshines Jupiter but Jupiter's disk is larger as befits the giant planet. The winter constellations are still high in the sky although this has been a very mild winter across much of the country. I must be off shortly to fix the ground on my HF antenna.

For those of you who didn't start summer early, I hope that your winter was mild and your health grand.

In my last President's Message I was pleased to announce that we have another new Deputy Director. Normand Pitre, VE2NHH, will be a tremendous asset in support of Quebec Regional Director Sheldon Werner, VE2SH. Here is some more information about Normand:

*"It all started back in January 1995 when I took a weekend crash course in Amateur Radio. I had maybe 8 to 9 hours of class preparation and since I didn't have an Elmer I spent lots of time listening in to get the feel of things until the fear of pressing the PTT was gone.*

*From there I checked into the nets and made some new friends and I learned more. I also travelled a lot and made new Amateur friends from W1, W2, W3, W4, W8 and from VE9- and VE3-land. I also joined several clubs throughout that period.*

*My main interest in the hobby is Emergency Communications and Public Services, which won't stop me from doing a social QSO or trying to learn about other aspects of Amateur Radio. I have also joined a Search & Rescue group and I passed my Certified Emergency Coordinator exam.*

*I am the Director of the VE2CRL Club Radioamateur Laval Laurentides and I am pleased to be the new RAC Deputy Director for Quebec."*

I have been told in the past that "RAC punches above its weight internationally". Once again this has proven to be true and Bryan Rawlings, VE3QN, is to be congratulated on his role. Amateur Radio scored again internationally and again at a World Radio Conference – this time at WRC-12. You will find Bryan's report on page 19. We should also thank Ken Pulfer, VE3PU, a prominent RAC member for his role with the International Amateur Radio Union (IARU) at WRC-12. Ken has been serving RAC

Je dois admettre, comme plusieurs d'entre vous, que j'ai « débuté » mon été plus tôt cette année! J'écris le présent message à partir du désert de Chihuahuan, juste à l'extérieur du parc national Big Ben au Texas, où j'ai du plaisir à explorer le désert au moyen de ma petite RV. Venus et Jupiter jouent à la cache-cache dans le ciel, à l'ouest, sitôt après le coucher du soleil. Ils sont les astres les plus brillants du ciel. Venus est la plus brillante, mais Jupiter la dépasse en diamètre comme il sied à la notre planète géante. Les constellations hivernales sont encore hautes dans le ciel. Je dois quitter rapidement pour réparer le « ground » de mon antenne HF. Pour ceux dont le début du printemps retarde, j'espère que l'hiver aura été doux et votre santé resplendissante.

Dans mon dernier message à titre de président, j'ai eu le plaisir de vous annoncer que nous avions un nouvel assistant directeur, Normand Pitre, VE2NHH. Il sera d'une aide précieuse pour le directeur de la région du Québec, Sheldon Werner, VE2SH. Voici quelques informations sur Normand:



*"Tout a commencé en janvier 1995 alors que je vivais une fin de semaine de cours intensifs en radioamateurisme. J'ai passé peut être 8 à 9 heures en classe pour me préparer et comme je n'avais pas d'Elmer (conseiller), je me suis appliqué longuement à écouter les conversations afin d'acquiescer le « feeling » du microphone et de vaincre ma peur du PTT.*

*À partir de ce moment, je suis allé sur les réseaux pour me faire de nouveaux amis et apprendre davantage. J'ai aussi beaucoup voyagé et grossi le nombre de mes amis amateurs chez les W1, W2, W3, W4, W8 et*

*aussi parmi les VE9 et VE3. Je me suis joint à plusieurs clubs durant cette période.*

*Mon intérêt principal dans notre hobby concerne les communications d'urgence et les services publics. Ce qui ne m'empêche pas d'apprécier les QSO à caractère social ou d'améliorer mes connaissances sur d'autres aspects du radioamateurisme. Je me suis aussi joint à un groupe de recherche et de secours (Search & Rescue) et obtenu mon certificat de coordonnateur agréé en urgence.*

*Je suis le directeur du club radioamateur de Laval-Laurentides, VE2CRL, et je suis heureux d'être le nouvel assistant directeur de RAC pour le Québec."*

Souhaitons la bienvenue à Normand.

Je me suis laissé dire que dans le passé, RAC pouvait jouer un rôle à l'international dépassant sa stature. Encore une fois cet adage s'est avéré vrai et Bryan Rawlings, VE3QN, doit en être félicité. Le radioamateurisme gagne encore à la conférence internationale WRC-2012. Vous trouverez le rapport de Bryan à la page 19. Nous devons aussi remercier Ken Pulfer, VE3PU, un éminent membre de RAC, pour son rôle à l'Union internationale des radioamateurs (UIRA/IARU) concernant la conférence WRC-2012. Ken travaille pour RAC – et pour l'UIRA sur le plan international – depuis plusieurs années. Il pourrait bien avoir vécu son dernier WRC. La protection et le renforcement de nos fréquences nécessitent autant une présence nationale qu'internationale. RAC doit s'y connaître dans les deux domaines pour démontrer son sérieux et faire valoir son savoir faire. Nous devons notre succès à leur dur labeur.



– and the IARU internationally – for many years but this may be his last WRC. All Amateurs should thank both Bryan and Ken for their significant contributions to the Amateur Service. I occasionally hear about Amateurs galavanting overseas, but frequency protection and enhancement requires both a national and international presence. RAC must have a profile in both domains to demonstrate our seriousness and gravitas.

On page 14 of this issue of TCA you will find an article by Cezar Trifu, VE3LYC, who was nominated by his many colleagues and appointed as Radio Amateur of the Year by the RAC Board of Directors. I was very pleased to phone Cezar to tell him the good news and I look forward to presenting him with the award at a later date. Congratulations Cezar!

I am hoping that by the time you read this article the Industry Canada 60 metre consultation will have been completed or will be underway. As you may recall, US Amateurs have had channelized access to 60 metres for some time. As of March 5, 2012, the US regulatory process has completed its cycle and has also completed an adjustment to the 60 metre channels available to Amateurs. Industry Canada, through the Canadian Amateur Radio Advisory Board (CARAB), has indicated its support for Canadian Amateurs having the same or perhaps greater privileges.

RAC returned to the Dayton Hamvention last year for the first time in a decade and hundreds of Amateurs from around the world signed our Guest Book. RAC members who visited our Booth were given a token of our thanks just for visiting. This year we will have Booth BA0436 (see page 60) and we look forward to seeing you there. We are once again looking for volunteers to operate the Booth from May 18 to 20. Last year we organized a single three-hour slot for each volunteer. Your availability will determine your slot and flexibility is the watchword. Please forward your contact information and availability by email to <ve4baw@rac.ca> with a copy to our office at <rachq@rac.ca>.

Once again I would like to thank the Montreal Amateur Radio Club for hosting the upcoming 2012 RAC Annual General Meeting. The AGM will be held in Montreal on the weekend of September 22-23 and will be held in conjunction with their 80th Anniversary Celebration. There will be a great deal of fun and this is your opportunity to put me on the spot. Please join us in “la belle province”.

RAC Director Mitch, VE6OM (Alberta, the Northwest Territories and Nunavut) has been labouring mightily to shape a RAC Forum within an Amateur Radio Conference and has announced that yes, indeed, we will be having a Conference in Edmonton on August 10, 11 and 12. I am looking forward to being in Alberta this summer and I hope that you will join Mitch and the crew at the 2012 RAC Convention.

Lastly, it was with tremendous sadness that I learned that former RAC President Earle Smith, VE6NM, passed away on February 24, 2012. Earle served as RAC President from late 2004 to the end of 2007 and was well respected by Amateur Radio operators, both within Canada and Internationally. He was a gentleman and friend to all hams and a strong advocate for Amateur Radio and for the Radio Amateurs of Canada. We all miss you Earle. Please see the article on page 10 for a special tribute to Earle.

– 73, Geoff, VE4BAW



À la page 14 du présent numéro de TCA vous trouverez un article de Cezar, VE3LYC, qui a été mis en nomination par plusieurs de ses collègues et choisi radioamateur de l'année par le Conseil d'administration de RAC (Board of Directors). Il m'a fait plaisir de téléphoner à Cezar pour lui laisser savoir la bonne nouvelle. Je lui remettrai personnellement le prix aussitôt que possible. Félicitations Cezar!

J'espère qu'au moment où vous lirez cet article, la consultation d'Industrie Canada portant sur le 60 mètres sera complétée ou sera en voie de l'être. Si vous vous rappelez bien, les amateurs des États-Unis ont travaillé à accéder au 60 mètres pendant un certain temps. Le 5 mars 2012, le processus réglementaire américain arrivait à son terme en procédant aux ajustements nécessaires sur les canaux du 60 mètres accessibles à tous les amateurs canadiens. Industrie Canada, via le CARAB (Canadian Amateur Radio Advisory Board), a manifesté son soutien aux amateurs canadiens qui obtenaient les mêmes privilèges et peut-être davantage. Voir le site web d'Industrie Canada à <<http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf01751.html>> pour plus d'informations. Elles y seront ajoutées au fur et à mesure de leur disponibilité.

RAC est retourné au Hamvention de Dayton l'an dernier pour la première fois depuis dix ans et des centaines d'amateurs de partout à travers le monde y ont signé notre livre des présences. Nous remercions les membres de RAC qui sont venus à notre kiosque même pour une simple visite. Cette année nous occuperons le kiosque BA0436 (voir page 60) et nous espérons bien vous y voir. Nous sommes toujours à la recherche de volontaires pour travailler à notre kiosque du 18 au 20 mai. L'année dernière nous avons réparti le temps en tranche unique de trois heures pour chacun des bénévoles. C'est votre disponibilité qui déterminera le moment de votre présence. Notre mot d'ordre est “flexibilité”. Veuillez, s.v.p. communiquer avec nous par courriel à : <ve4baw@rac.ca> pour faire connaître votre disponibilité et autres informations et envoyer une copie à notre bureau à : <rachq@rac.ca>.

Un fois encore, j'aimerais remercier le Club Radio Amateur de Montréal de nous accueillir pour l'Assemblée générale annuelle des membres de 2012. L'AGM aura lieu à Montréal durant la fin de semaine du 22 – 23 septembre et sera tenue conjointement avec les célébrations du 80<sup>ème</sup> anniversaire du club. Il y aura beaucoup de plaisir et se sera une occasion pour vous de me rencontrer et de me mettre à l'épreuve! S.V.P. vous joindre à nous dans la « Belle province ».

Mitch VE6OM, directeur de RAC (Alberta, Territoires du Nord-Ouest et Nunavut) a travaillé vaillamment pour organiser un forum intégré à une conférence radioamateur de RAC. Et il nous a annoncé, hors de doute, qu'il y aura une conférence à Edmonton les 10, 11 et 12 août. Je projette aller en Alberta cet été et j'espère que vous vous joindrez à Mitch et au personnel pour la convention 2012 de RAC.

Finalement, c'est avec beaucoup de tristesse que j'ai appris le décès d'Earle Smith, VE6NM, un ancien président de RAC, le 24 février 2012. Earle s'est dévoué comme président de RAC de la fin de 2004 à la fin de 2007. Il était très estimé des radioamateurs, tant à l'étranger qu'au Canada. Il était un gentleman et ami de tous les radioamateurs et un puissant défenseur du radioamateurisme et de Radio Amateurs du Canada. Tu nous manques à tous Earle! S.V.P. voir l'article à la page 10, un hommage spécial à Earle.

– 73, Geoff, VE4BAW



Traduction par Claude Lalande, VE2LCF. Merci Claude!

# A TRIBUTE TO EARLE SMITH, VE6NM

## Earle Winfield Smith, VE6NM – November 7, 1930 - February 24, 2012

Former RAC President, Earle Smith, VE6NM, beloved husband of Barbara, passed away after a brave and courageous battle with cancer at the Queen Elizabeth II Hospital in Grande Prairie, Alberta on February 24, 2012 with his family by his side.

Earle was born in Macan, Nova Scotia, eldest child of Lorne and Mildred Smith and was raised in rural areas of Cumberland County, Nova Scotia.

He enlisted in the Royal Canadian Air Force at age 17 and was stationed in various parts of Canada including Montreal, Whitehorse, Alert, Beaverbank, and Beaverlodge.

He retired in 1968 and then spent 23 years with Alberta Power (ATCO Electric) managing communication systems in northwest Alberta and retired in 1992.

He got bored and took up truck driving.

An active Radio Amateur since 1948, Earle was first licensed as VE1SA. He served as Northwest Alberta Director of the Amateur Radio League of Alberta (ARLA), and later as the Assistant Director for Northwest Alberta for the Canadian Radio Relay League (CRRL), as well as various executive positions with the Canadian Amateur Radio Federation (CARF).



He worked on the merger of the CARF and CRRL to form Radio Amateurs of Canada. Before becoming RAC President, Earle served as RAC Director for Alberta, the Northwest Territories and Nunavut. As RAC President, he served as the RAC Delegate Team Leader to several IARU Region 2 conferences.



Earle served as President of Radio Amateurs of Canada from late 2004 to the end of 2007 and was well respected by Amateur Radio operators, both within Canada and Internationally.

He was a gentleman and friend to all hams and a strong advocate for Amateur Radio and for the Radio Amateurs of Canada.

He will be sadly missed by his wife of

60 years Barbara, son Ian, daughter Heather (Craig) Stanley, grandsons Kyle (Cassidy) Wardlow, Quinn (Mandie) Wardlow, granddaughter Kendra Stanley, his great-grandson Kallen James Earle Wardlow born on February 25, 2012 and honorary daughter, Heather Rowe.

He will also be missed by his siblings: Betty Adams, Johnson (Shirley), Lorne, Richard (Beverly), Evelyn (Ken) MacKay, Eric (Lucille), Karen (David) Dickinson, and Leslie (Joyce); and many other relatives and friends.

### Message from the RAC President

I first met Earle, VE6NM, in 2006 at the combined Saskatchewan Amateur Radio Hamfest and RAC Annual General Meeting in Saskatoon. He impressed me as a gentleman, dedicated and deeply concerned about the future of Amateur radio and RAC. I came away from Saskatoon convinced that RAC was in good hands.

One of his goals was to visit every region during the term of his office and during a visit to Winnipeg he stated publicly to our club – and again privately – that he did not intend to run for another term. I was surprised by this and told him so, hoping that he would change his mind. His mind was made up.

Subsequent RAC Presidents, including myself, leaned on Earle as a Presidential Advisor. I shall miss our conversations and emails.



Every man can be judged by the people that he has touched. Earle touched many people. When the news of his passing went out, my inbox filled with comments from people around the world – with words of shock and sadness. Words from individual Amateurs, National Societies and the International Amateur Radio Union.

Earle faced his mortality with a courage that few could possess. He was always concerned about the people around him. They were always the important ones.

Earle was 81 when he passed away on February 24. He had been an Amateur radio operator since 1948.

You will find and I hope leave your memories of him and your condolences to the family at the RAC website at <<http://earlesmith.rac.ca/>>.

We will all miss him.

Geoff Bawden, VE4BAW



## "A HAM'S HAM AND A MAN'S MAN"

"Earle's devotion to Amateur Radio and his down-to-earth friendliness earned not only respect, but also affection from those who had the good fortune to know him," said ARRL President Kay Craigie, N3KN. "Earle's passing is a loss to Amateur Radio in Canada and to the whole ham radio family."

Smith was a Life Member of the RAC, the Quarter Century Wireless Association (QCWA, Chapter 151), the Society of Wireless Pioneers (SOWP), and a member of the ARRL and of several Amateur clubs across Canada. Smith noted that he was proud to be the sole Canadian recipient of the prestigious Azteca Award from the Federacion Mexicana de Radioamateur Experimentadores (FMRE), for services rendered to Amateur Radio in Canada and Mexico. "It was a privilege for me, while serving as RAC President, to visit every Canadian Province and Territory while meeting many Amateurs," he said on his QCWA bio. "I've also attended several QCWA National conventions and enjoy meeting so many enthusiastic Amateurs."

"Earle also held the call VE8BY, and to 6 metre enthusiasts, that call means 'The Baffin Island Beacon,' which was located on 50.050 MHz," explained ARRL Membership and Volunteer Programs Manager Dave Patton, NN1N. "Earle's love of Northern Canada and 6 metres combined to give the rest of us a unique operating thrill – hearing a signal from Baffin Island. As well as seeing Earle when he attended ARRL Board meetings on behalf of RAC, I had the pleasure of attending conferences with him in Mexico at FMRE events. Earle instantly earned friendship and rapport with our counterparts in Mexico, and I could tell that he would be liked and respected by anyone he met."

"Earle was a 'Ham's Ham' and a 'Man's Man' and I will miss him."

According to his QCWA bio, Smith said his favourite band was 6 metres; he sponsored two 6 metre beacons: VE8BY at Iqaluit and VE6ARC near Grande Prairie.

"Earle Smith was one of the most passionate Canadian Amateurs you could meet," IARU President Tim Ellam, VE6SH, told the ARRL. "A loyal supporter of the Amateur Service in Canada and internationally, he was a true friend of the IARU. I had worked with Earle at Radio Amateurs of Canada and valued his calm demeanour and his ability to form a consensus on difficult issues. His leadership within RAC was second to none. He will be missed not only in Canada, but by his many friends around the world."

– from The ARRL Bulletin with our thanks



## In Earle's own words....

Earle describes some of the unusual weather conditions which can suddenly grip Alert.

"I remember working up on a tower one time doing some feedline repairs when a windstorm came up, blowing snow. The blowing snow was from ground level up to approx. 25 agl. I couldn't see the guys in the group, just a faint glow from their flashlights. It was perfectly clear up on the tower where I was. Looking down was like looking at waves of water flowing by me".

Reflecting on a memorable trip Earle wrote:

"I'll admit that fishing out on Great Slave Lake, flying from Fort Simpson to Virginia Falls in a floatplane and over some of the most gorgeous mountain and river scenery in the world, plus the White Pass & Yukon Railway ride on the narrow gauge line down through the White Pass to Skagway, followed up by the two-day trip on the Alaska Maine Highway was all worthy of IMAX. My problem is that I've seen so much of all of this so many times that I just enjoy it all even more each trip and never think about taking pictures."

Dana Shtun, VE3DSS, reflects about Earle:

"I had the great pleasure to work with Earle in the creation of RAC. As the President of CRRL at the merger, we always found a way around the roadblocks thanks to Earle.

During RAC board meetings, any time things got a bit testy, Earle also found a way through or around!

Over the years Earle worked on beacon projects that included 50 MHz, and I kept trying to get him to get active on 50 MHz, which he always joked about ... whenever we crossed paths I always asked him where he was driving to next! I certainly will miss his infectious smile, and kind words and gentle manner!

A true ham to be sure."

Dana Shtun, VE3KU/VE3DSS TCA columnist, 1st VP RAC, Past President CRRL, one of the fellow founders of RAC along with Earle...

# SIX METRES AND DOWN

## CYCLE 24 UPDATE

Well, what can I say? The sun became rather quiet in January 2012 and stayed that way through February.

There was no F2 for anyone north of 30 degrees latitude in North America, however those within range of the TE (Trans-Equatorial) zone made some good north-south contacts in the period.

Traditionally, on 50 MHz the propagation is not as productive for us in Canada even during peak sunspot cycle years. However with all the activity kicked up in November, we were hopeful of a steady upward trend. Unfortunately, after the ARRL January VHF Sweepstakes and the HK0NA Malpelo DXpedition (see page 26 of this TCA) mentioned in my last column, the sun entered a rather quiescent state with the flux hovering around 90 to 100!

This all changed quite dramatically in March, with a series of solar flares emanating from two groups of sunspots kicking up the second strongest flare of Cycle 24, and with an X5.4 event on March 7 that brought the Solar Flux up to 120 with the A Index of 12, stirring up some Aurora and Auroral E. By March 9 the flux had soared to 140, the A hit 24 and the K hit 6. Aurora was detected in Toronto with weak KL7 (KL7NO and KL7KY) and VE8NSD signals heard. Activity continued to climb and on March 10 the flux hit 146 and the A hit 68! Sadly no strong Aurora was heard in Toronto.

The sunspot group rotated away from view and continued to flare on the back side of the sun so, hopefully, it will still be a source of action when it comes back around.

Typically during March, with the Spring Equinox we may see some strong north-south openings – more likely out in the West Coast towards VK and ZL. Time will tell.

So Cycle 24 continues to gain momentum, and we are still eight months away (as of late March) from the fall period when conditions hopefully will see an improvement – and a peak now likely in 2013.

### WINTER E AND AURORA ACTIVITY REPORTS FROM VE7

**John, VE7DAY, writes:**

*"I had a bit of an opening here today. I heard several stations and worked a few.*

*I saw on the ON4KST chat that AG6AZ was being worked in the Pacific Northwest and I listened for him. Soon I was able to hear him and after a couple of calls, he answered.*

*February 23:*

*2022 AG6AZ 58 DM12*

*2038 K7JA 599 DM03*

*2044 W6ZL 559 DM13 heard only.*

*2140 W7RCS 59 DM34*

*I heard the XE2K/b beacon, weak but solid during this time and for about a half-hour after hearing no one else.*

*I thought I heard some very weak CW beaming the South Pacific but couldn't make out any calls."*

**John, VE7DAY, also reports the following Aurora contacts on March 7:**

*"Last night after the Canucks hockey game I came into the shack and saw there was an auroral opening.*

*I heard a station working KL7NO and.... worked the following:*

*0603 KL7NO 57A BP54*

*06 22 W7FI 57A in CN87*

*0639 W7OFT 55A in DM09*

*06 56 N7LT 55A in DN28*

*I heard W7OUU in DN22 for about a half-hour but he could not hear me.*

*0735 K7CW 55A CN87*

*I was hearing VE4 beacons. Pretty strong auroral signals with deep QSB.*

*VE7FG/b was strong aurora at this time as well and I could hear the beacon until after 0900.*

*Then, at 0745 I called CQ and worked:*

*0748 K1TOL 55Au E FN44 His signal had deep QSB but strong at times!!!*



Dana Shtun, VE3DSS/VE3KU  
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*0845 K7EK 55A CN87*

*0852 VE6ARC/b heard 52A for the first time.*

*During the opening, KE7V in CN88 was 10 over 9 at times and he sounded like about three stations at once: Es, Au and Au E at the same time. Really neat sounding.*

*I had to arise early so I closed down at about 0130 local time, even though the band was still open."*

On March 9, John, VE7DAY, reported working Ken, VE6AFO (DO21) in Calgary; KL7NO in BP54 Alaska, heard KL7KY also in BP51 and K7ABW in DN17.

During the March 17 aurora event, Larry, VY0HL, on Baffin Island was worked across Northern Quebec by Michel, VE2XK, in FN07 and also over in to the Upper Peninsula of Michigan. Unfortunately, we only got bits and pieces of Larry's Auroral E signal down here in Toronto this time.

Also active during this one was John, VE3EJ, in FN03 and Paul, VA3LX, in FN14 (who we worked on Tropo).

I'm so glad to see our northern brethren active on 50 MHz and I hope that their activity will continue during the 2012 Sporadic E season and on into F2 season!

### 432 WORK

Stu, VE2XX, in FN25 emailed me to advise that he has his 8938 amp running now at 1.0 kW!

The 8938 is the UHF version of the Eimac 8877 triode and it plays very well at 70 centimetres.

Stu is driving an array of eight K1FO 22-element yagis on 432 EME so he will have a BIG signal on 70 cm EME on CW and SSB and lots of fade margin for WSJT as well.



## CENTRAL STATES VHF CONFERENCE CALL FOR PAPERS

The premiere VHF Meeting of the summer in North America is run by the Central States VHF Group each year. This year the event is in July and they have issued a Call for Papers! Please see the box at the right for more information.

### TOWER WORK

With the sudden arrival of warm weather in Toronto in late March I had the opportunity to scamper up the tower and repoint the antennas which had been blown off course during the heavy crosswinds of late February.

Not only was it pretty warm up in the sunshine, but it was interesting to see what you could see before the leaves all came in on the trees.



The tower is a 56-foot Trylon, with a 16-element yagi on 144 MHz (shown at top) and a 7-element yagi on 50 MHz.

The small loop yagis are for 903 and 1296 MHz. Feedlines are all 7/8 inch heliax.

By the time you read this column it should be perfect weather for working on antennas and doing post-winter tower maintenance. Nice to have some warm weather!

Well that's it for now. In the next issue we will have a Dayton report and I hope to report some DX as well. Hopefully we can report on some higher band DX on 144, 222, 432, 903, 1296, 2304 and higher!

Dana, VE3KU/VE3DSS

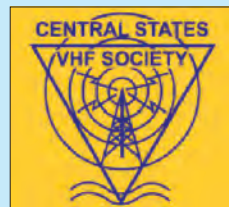


## CALL FOR PAPERS

### CENTRAL STATES VHF SOCIETY 46TH ANNUAL CONFERENCE

Cedar Rapids, Iowa – July 26-28, 2012

The Central States VHF Society is soliciting papers, presentations, and poster displays for the 46th annual conference on July 26-28, 2012.



All aspects of weak-signal work on Amateur Radio bands of 50 MHz and above are sought. The papers will be published in the Conference Proceedings and available at the conference.

You do not have to attend the conference nor present the paper to have it published in the Proceedings. Posters describing your project will be displayed during the two-day conference.

Presentations and Posters at the conference may be technical or non-technical but will cover the full breadth of Amateur weak signal VHF/UHF activities.

The presentations generally vary from 15 to 45 minutes covering the highlights with details in the proceeding paper.

Topics of Interest include:

- VHF/UHF Antennas
- Propagation Modes: such as Meteor Scatter, Sporadic E, Aurora and Tropo-scatter
- Equipment Design & Construction: such as pre-amps, transverters, power amplifiers and related accessories
- EME (Moon Bounce)
- Rover Stations: design, construction, and operation
- Digital Modes
- Digital Signal Processing and Software Defined Radios
- Operating: including Contesting, DXpeditions and Awards

If you would like to contribute a paper, presentation or poster, please contact Rod Blocksom, K0DAS, CSVHF Conference Program Chairman as soon as possible with the title and a short description.

You can reach Rod at <k0das@arrl.net> or 690 Eastview Drive, Robins, Iowa 52328. Author Guidelines and other details are available online at <www.csvhfs.org>.

Deadlines for submissions are:

- Proceedings – June 15, 2012
- Presentations – July 26, 2012
- Posters – July 26, 2012

# CANADIAN RADIO AMATEUR OF THE YEAR FOR 2011

The RAC Board of Directors takes great pleasure in announcing the selection of Dr. Cezar Trifu, VE3LYC, of Kingston, ON as the Canadian Radio Amateur of the Year for 2011. Dr. Trifu exemplifies the Canadian Amateur with numerous IOTA DXpeditions since 2008 covering Canadian Islands and recently overseas islands. He has raised the profile of Canadian Amateur operations worldwide with thousands of QSOs with DXCCs covering over six continents. His dedication to HF operations has been recognized with the DXCC Honour Roll, IOTA Honour Roll, IOTA Gold Level Awards, Canadian Islands Award and US Islands Award to name a short list of numerous awards. Cezar has also raised the national and international awareness of the Canadian Amateur scene with over 20 multi-language articles in several Amateur journals.

## Cezar Trifu, VE3LYC

I would like to thank the RAC Board of Directors for bestowing this honour upon me. There are numerous avid Canadian DXers of exceptional performance and many IOTA activators whose operations remain legendary. On behalf of them all, I am proud and humble to have been chosen to exemplify our common efforts to raise the profile of the Canadian Amateur Radio community at home and abroad.

Since my early steps into the hobby I was highly interested and motivated by performance, primarily as a DXer. Fighting the pileups in chase of a rare one always brought a thrill. It was later on, during my involvement with the Islands On The Air (IOTA) program, that my connection with the community reached a different dimension. Operating from remote and difficult to reach islands, I was captivated by the journey as much as by the destination. "Dream big and dare to fail" became my motto in setting up amazing journeys through the wonders of nature, outlining in the process the perseverance and determination of the human spirit, as well as our profoundly social nature.

Having recently met the conditions for IOTA 1000, DXCC Challenge 2500 and 5BWAZ (200), I am grateful to the countless number of skilled and brave operators who made it all possible. Wishing to give something back to the community, during the last four years I have embarked on several IOTA projects, operating from rare and new island groups in the Canadian Arctic and South America as VO2A (Finger Hill Is., NA-194 and Paul Is., NA-205), VY0A (Fox Is., NA-186), VY0O (Gilmour Is., NA-230 New), VY0V (East Pen Is., NA-231 New), VY0X (Ulituqisalik Is., NA-208), CE9/VE3LYC (Herschel Is., SA-031 and Gonzalo Is., SA-097 New) and CE4A (Pupuya Is., SA-095 New).

Receiving the RAC Amateur of the Year Award offers me the best opportunity to publicly acknowledge that none of the



above would have been possible without the moral, physical and financial support of numerous groups and individuals.

First and foremost, I would like to thank my wife Lucia and my son Tiberius for their unconditional love and understanding of my passion for the hobby. I wish to thank Frank, VE7DP, Garry, VE3XN, Reg, VE7IG, Dana, VE1VOX, Nenad, VE3EXY, Pat, VE7QCR, and many, many other Canadian island chasers and DXers for their continuous encouragement, friendship and support. I am indebted to George, VE3GHK, for his always prompt, skilled and generous technical support and for his close friendship.

I would like to express my gratitude to the guides, boatmen, sailors and everyone else who contributed to ensuring the necessary logistics for the success of these projects. I owe a special thank you to Icom Canada, particularly Paul Veel, for their generous and continuous support of my projects.

As undeniable proof that IOTA is a world program, some of the above projects gave me the chance to partner with Ken, G3OCA, Johan, PA3EXX, Christian, CA3TAM and Juan, CE5PHI, all exceptional friends, whom I would like to thank dearly for sharing with me their passion and skills.

I am hugely grateful to David, W5BXX and Toshi, JM1PXG, for their trust and extraordinary support. International Radio Expedition Foundation (IREF), German DX Foundation (GDXF), Swiss DX Foundation (SDXF) and Clipperton DX Club are also acknowledged for their invaluable and continuous support of the IOTA projects.

A huge thank you goes out to Dino, CE3PG, whose enormous passion for Amateur Radio and tireless logistical efforts were instrumental. I would like to express my sincere appreciation to Roger, G3KMA, for his management of the IOTA program and to also thank him for his always competent advice and prompt feedback. Last, but certainly not least, my thanks go out to the many hundreds of Amateurs who followed my adventures closely and who provided constant encouragement and support. They made it all worthwhile.

DXing and island chasing is a lot more than fighting in the pileups to log stations transmitting from very rare locations on earth. It is about making friends and being part of a fantastic adventure. Join in! I look forward to meeting you on the air!

*A word about the photo. I have many photos taken during my various trips. However, there is something about this particular photo that I personally like. First, the photo was completely unstaged. As my Inuit team took down the tent, I have requested them to let me finish the JA pileup. Consequently, they worked to finish packing everything, while I was still on the air, frenetically picking up as many Far Eastern stations as possible. A polar bear showed up out of nowhere on the other side of the bay, 300 metres away from our camp. As the team was packing, one of the guys took the camera and shot this unique photo. I am heavily dressed, as the night-time temperature was around the freezing point sometimes in early September, while the sweat pants were the only pair I was left with after my jeans were destroyed along with a couple of shirts a few days earlier, when our boat almost sunk off the coast of Gilmour Is. (Ottawa Islands), and moving the batteries around to equilibrate the boat I involuntarily poured a lot of acid on my clothing.*

TCA



# ANTENNAS & TRANSMISSION LINES

## NEAR FIELD INTERFERENCE FROM TRANSMITTING ANTENNAS

Note: This article uses TCA hotlinks to provide access to enriched media from the RAC website. For more information, please go to: <[www.rac.ca/tca](http://www.rac.ca/tca)>.

### INTRODUCTION

Worldwide communication systems have seen a rapid growth since the development of low cost communication devices such as cellphones, personal computers and related devices. Because of this growth, the number of radio transmitters and noise sources has increased dramatically, both in urban and rural areas. As urban dwellers now live in much denser environments, the problem of interference between radio transmitters/receivers and electronic equipment is increasing at a steady rate. Amateurs experience this on a daily basis as our receiver S meters in the HF and even VHF bands show stronger and stronger background levels as high as S9 in some cases.

The rural community is not immune from this either. Many people that live in rural environments still receive television off-air with relatively weak signals which can easily be interfered with by moderately strong radio stations or noisy farm equipment.

Industry Canada has addressed this interference problem through a document called EMCAB-2 (see TCA hotlink1). It basically identifies the cause of an interference problem. If the electric field strength is greater than 3.16 V/m (measured) on the premises where there is an interference problem with Radio-Sensitive equipment, then the problem is judged to be with the transmitter. If the field strength is less than 3.16 V/m, the affected equipment's lack of immunity will be judged the cause. This value does not depend on frequency and covers the Amateur Radio bands from 160 metres to 70 centimetres.

EMCAB-2 and other Industry documents were discussed by Norm Rashleigh, VE3LC, in the March/April and November/December 2011 issues of TCA. He also calculated the expected field strength from two popular antennas to demonstrate the magnitude of the problem. In these cases, he used the formula for the far field of a radiating antenna and kept the distance between the transmitter and area of interference to at least two wavelengths where the calculation is reasonably accurate.

This article expands on Norm's work to include the calculation of electric field very close to transmitting antennas (closer than two wavelengths) as well as for long distances. The article sets up a framework where a specific situation can be readily analyzed by Amateurs who are designing a new antenna system or are presently involved in an interference problem. Several common situations are presented in the article which can be used as good starting points for an investigation.

### BACKGROUND

The space surrounding an antenna consists of fields that are extremely complex (see TCA hotlink 2). These fields consist of:

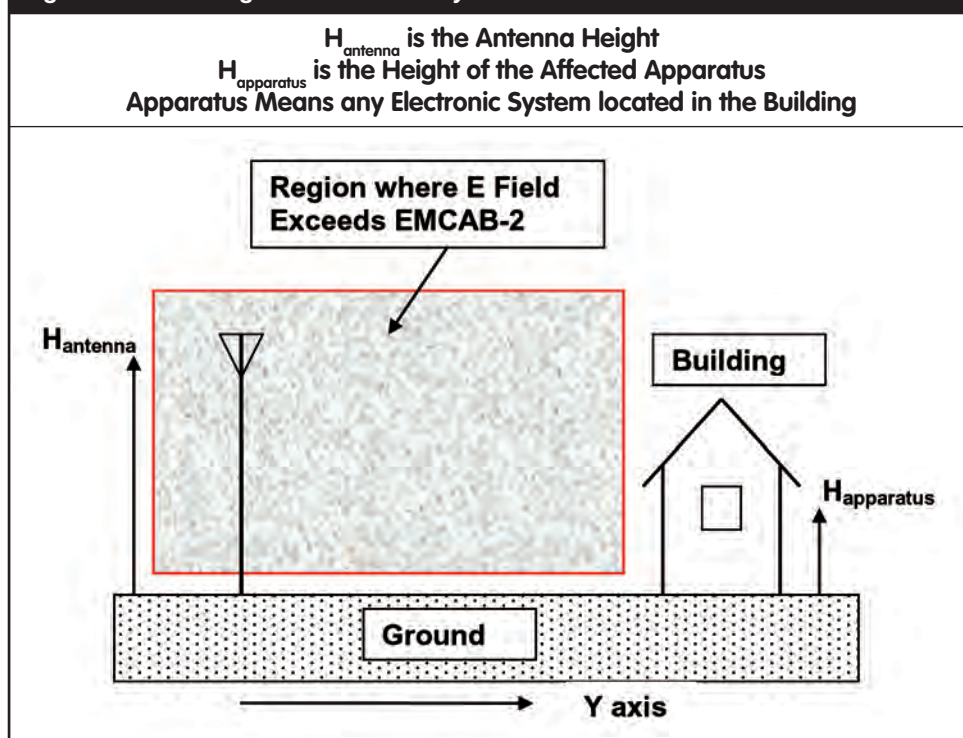
- Fields that do the work for us with well-defined and fixed antenna patterns that do not depend on the distance from the antenna. These are called far field radiation patterns. It is the far field that we normally discuss in antenna articles and calculate with antenna simulators such as **EZNEC** and **4nec2**. The power density of these fields decay as  $1/r^2$  where  $r$  is the distance from the antenna and the radiated power does not depend on  $r$ .
- Fields near the antenna that also radiate but where the radiation pattern depends on the distance from the antenna. These are sometimes called near field radiation patterns.
- Fields very close to the antenna. They do not radiate power. They are analogous to fields near a conducting wire or inside a capacitor at low frequency. They do not consume power unless they are coupled to some lossy circuit.

The term near field can be quite confusing and we must use it with care in the context of using simulators. For example, the **EZNEC** manual states that: "Near field analysis, as it applies to



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Figure 1: Block Diagram of Antenna System



EZNEC, is something of a misnomer, because the complete field is actually calculated and reported. So near field results apply equally well in the far field."

Hence, to calculate the complete field at any distance from the antenna with the aid of EZNEC, one must press the "Near Field" button to invoke the calculation.

For this study, we want to know the complete field so the "Near Field" calculation will be performed with EZNEC software.

The situation that we are analyzing is shown in Figure 1 on the previous page. Here it assumed that we have a transmitting antenna mounted above ground and located at some distance from a house or other building that contains radio-sensitive electronic equipment. The antenna height is denoted  $H_{\text{antenna}}$  while the height of the apparatus is  $H_{\text{apparatus}}$ .

The term "apparatus" as used here refers to any field-sensitive piece of electronic equipment under discussion.

The analysis does not include the geometry or structure of the building. We assume that the building is "invisible" to RF fields. In some real-life cases, the fields inside the building will be smaller than predicted, but in other cases the house wiring can act as a receiving antenna which can produce large conduction currents and fields inside the building. Hence, the analysis acts only as a guideline for getting an idea of the magnitude of the electric field. The final analysis must be determined by actual measurement of the electric field.

The following sections present several case studies covering different bands of operation and antenna types. The results of some of these case studies are quite surprising. These case studies include dipoles, a ground mounted vertical and a three-element Yagi. All case studies are for a 100 Watt transmitter with each antenna adjusted for resonance at the indicated frequency. For the dipoles and the Yagi, the complete electric fields are calculated broadside to the antenna in the region of maximum radiation.

## CASE STUDIES

### Horizontal Dipoles: 1.8, 3.5 and 7 MHz Mounted in Free Space

These lower frequency examples show basic trends that continue with other antennas at the higher frequencies. The results of the analysis are shown in Figure 2 for 1.8, 3.5 and 7 MHz. The first thing to notice is that the complete electric field near the antennas increases with increasing frequency. The electric field for the 1.8 MHz dipole equals 3 V/m at a distance of approximately 3 metres from the antenna while the same field strength for the 7 MHz antenna occurs at approximately 20 metres. The field strengths for the 3.5 MHz antenna lie between those cases. The near field of the 1.8 MHz antenna is low because of its very large dimensions, effectively spreading the energy over a very large space.

None of these antennas exhibit far field operation up to a distance of 35 metres. The far field region would have equal field strengths since the radiated power equals 100 Watts in all cases.

### Horizontal Dipoles: 14, 28 and 50 MHz Mounted in Free Space

The study was extended to 14, 28 and 50 MHz resonant dipoles that radiate 100 Watts as before. The results are shown in Figure 3. The complete field strength at 35 metres from the

Figure 2: 1.8, 3.5 and 7 MHz Half-Wave Dipoles in Free Space

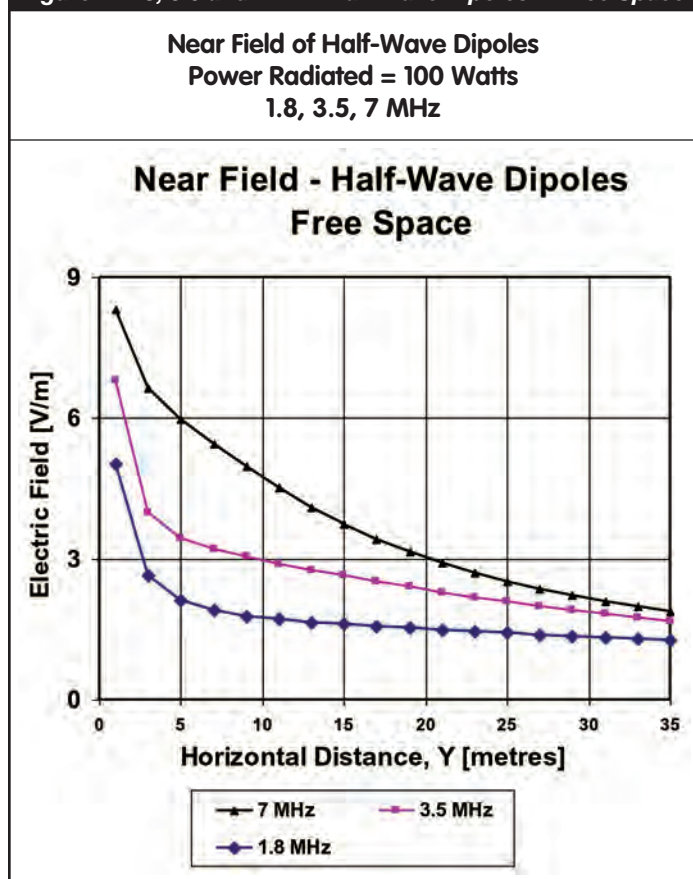
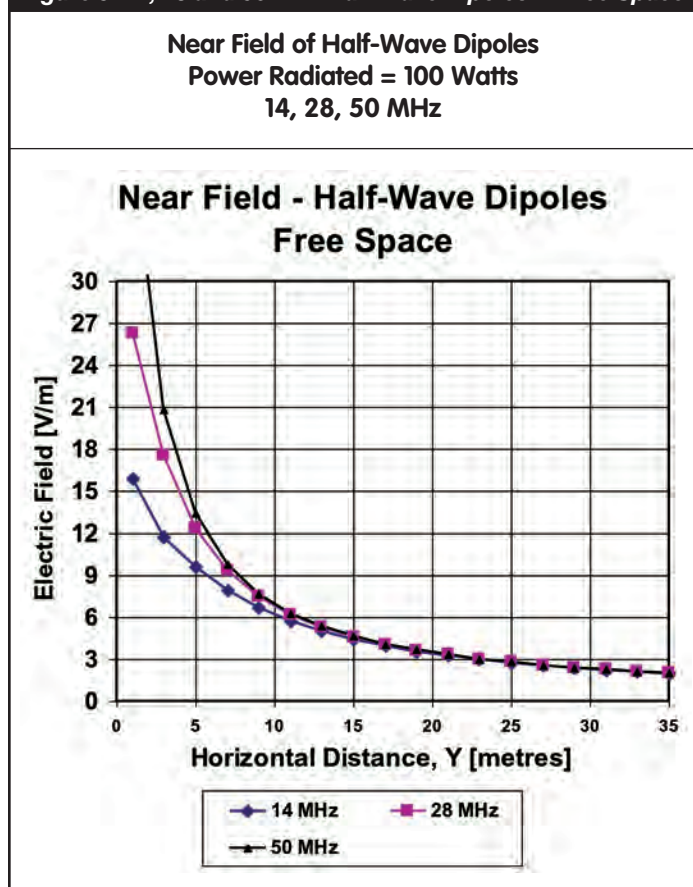


Figure 3: 14, 28 and 50 MHz Half-Wave Dipoles in Free Space





antennas is approximately 2 V/m for all antennas in this group indicating far field operation. As before, the field strength is greatest for the high frequency cases (close to the antenna). For the 50 MHz antenna, the complete field is approximately 18 V/m at a distance of 3 metres compared to a field strength of only 3 V/m for the 1.8 MHz antenna at the same distance.

All antennas in this group produce a field strength of 3 V/m at a distance of approximately 23 metres.

#### Horizontal Dipoles: 144, 220 and 430 MHz

A similar study was conducted at 144, 220 and 430 MHz. The results are shown in Figure 4 for the cases of 144 and 430 MHz. The fields for the 220 MHz case are very close to the 144 and 430 MHz cases.

The study shows that:

- The field close to the antenna is highest for the 430 MHz dipole due to its very small size with its current distribution covering a very small physical region. The difference between these antennas is not evident on the scale of the graph shown in Figure 4 which was chosen to demonstrate the field problems out to 35 metres.
- The electric field for all antennas in this range approaches 3 V/m at a distance of 23 metres.
- For distances below 5 metres, the electric field becomes quite large: the largest in the dipole group that was studied.

#### Horizontal Dipole: 50 MHz Mounted Over a Real Average Ground

The impact of mounting an antenna over a real ground was also studied (see Figure 1 for the geometry). Here, the antenna is mounted at a height of  $H_{\text{antenna}}$  and the electronic apparatus is mounted at a height of  $H_{\text{apparatus}}$  and located Y metres from the transmitting antenna.

The results are shown in Figure 5, where the complete field is plotted against the distance from the broadside as before for three different apparatus heights (2, 6 and 10 metres). The antenna height was fixed at 10 metres.

Note that the reflections from ground cause a ripple in the electric field as expected. However, the ripple is not extremely large in most cases allowing us to perform most antenna analysis in free space as a first point of an investigation. The ripple extends the region where the field is close to 3 V/m.

Also note the extremely high values of the electric field close to the antenna for the case where  $H_{\text{antenna}} = H_{\text{apparatus}}$ . This is expected because the apparatus is very close to the antenna. In the other cases, the antenna and apparatus are well removed from each other.

#### Two Typical Antennas: 50 MHz Three-Element Yagi and a 14 MHz GP Vertical

To complete this brief study, I also reviewed the performance of two typical antennas: a three-element 50 MHz Yagi and a 14 MHz ground mounted quarter wave vertical antenna. The results are given in Figure 6 on the next page. As seen in the graph, the vertical antenna performs about the same as a horizontal dipole with the complete field falling off gradually with distance. The electric field is approximately 3 Volts/metre at a distance of 20 metres from the antenna.

Figure 4: 144 and 430 MHz Half-Wave Dipoles in Free Space

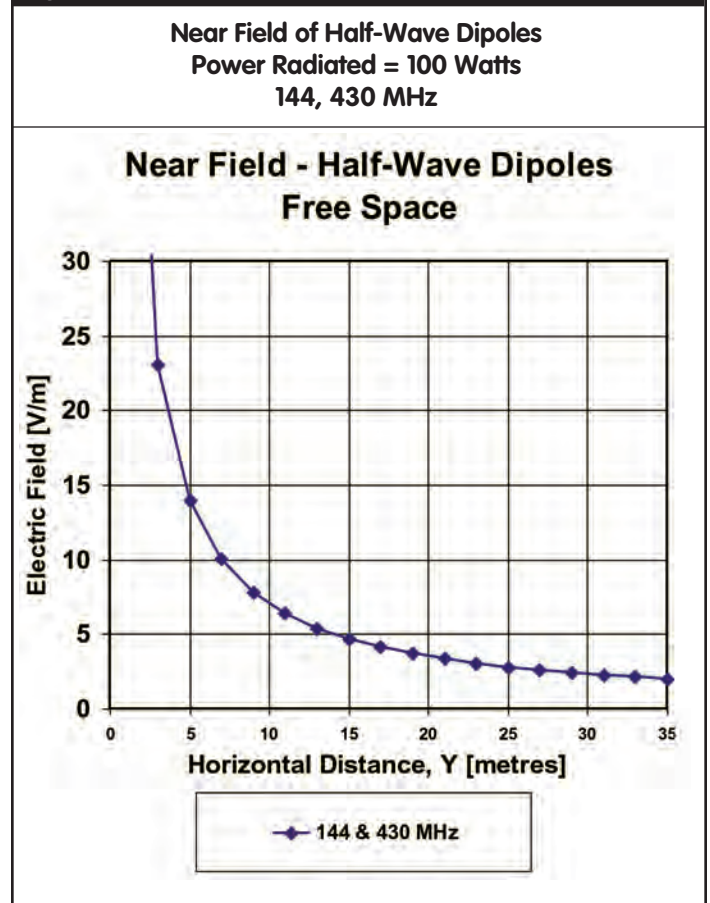
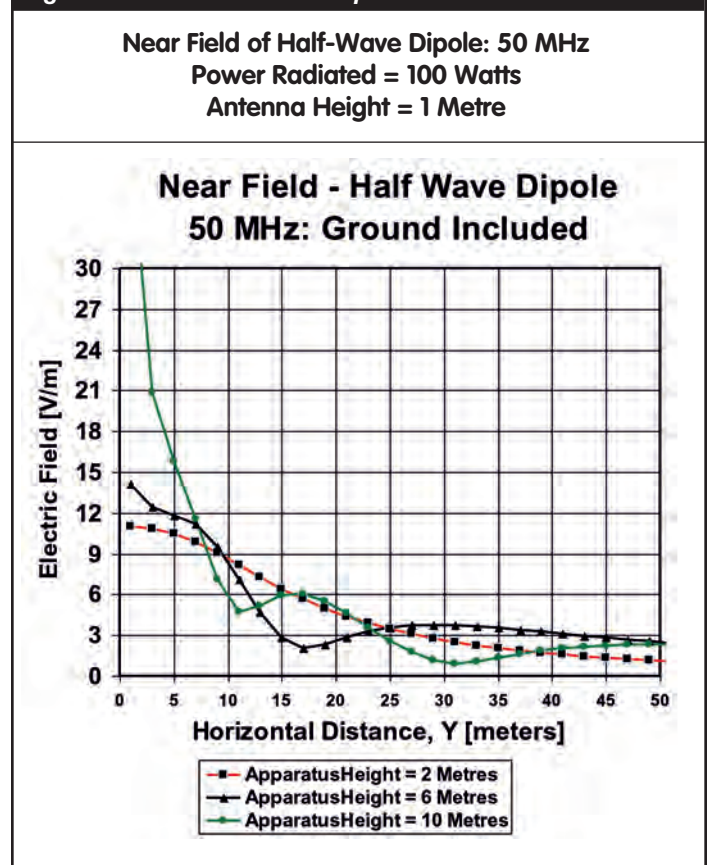


Figure 5: 50 MHz Half-Wave Dipole Mounted Over Ground



There are two curves shown for the Yagi antenna that is mounted over an average ground. One curve shows the electric field for the antenna and apparatus mounted 3 metres above an average ground while the other shows the electric field for the antenna and apparatus mounted 10 metres above an average ground. Note that for the Yagi that is mounted well above ground (10 metres), the field exhibits a considerable ripple and the electric field is still around 3 Volts/metre at a distance of 100 metres from the antenna.

## USING EZNEC FOR NEAR FIELD CALCULATIONS

If you are familiar with using EZNEC for ordinary far field and SWR calculations, it is quite easy to perform the near field calculations. Here are the steps that I use:

- Open up an antenna file of interest from your EZNEC folder. Check that the file is correct. Calculate the far field and SWR to see that everything is working as expected.
- Now, adjust the voltage or current sources to set the power to 100 Watts or another value of interest. This must be done manually. Click the SRC tab. This brings up a window where the power and other items are shown. If the power is too low, increase the voltage or current source until you arrive at a suitable value.
- Now click the "Setups" tab on the main window. Select the "near field". A window appears showing the range (x,y,z) where you want to perform the calculation. For an antenna oriented along the x axis I usually set the x range to zero metres, the z range equal to the height of the antenna and then vary the y range from 1 metre to about 100 metres. Click OK. The window closes.
- Now click the NF Tab. A window appears with the values displayed in a table. This can be saved in a regular .txt file for your records.
- For your convenience, I have included the antenna files used in this article on my website (TCA hotlink 3). The range for the calculations is given in these files which you can easily change. Go to my website and click the "TCA Files" tab.

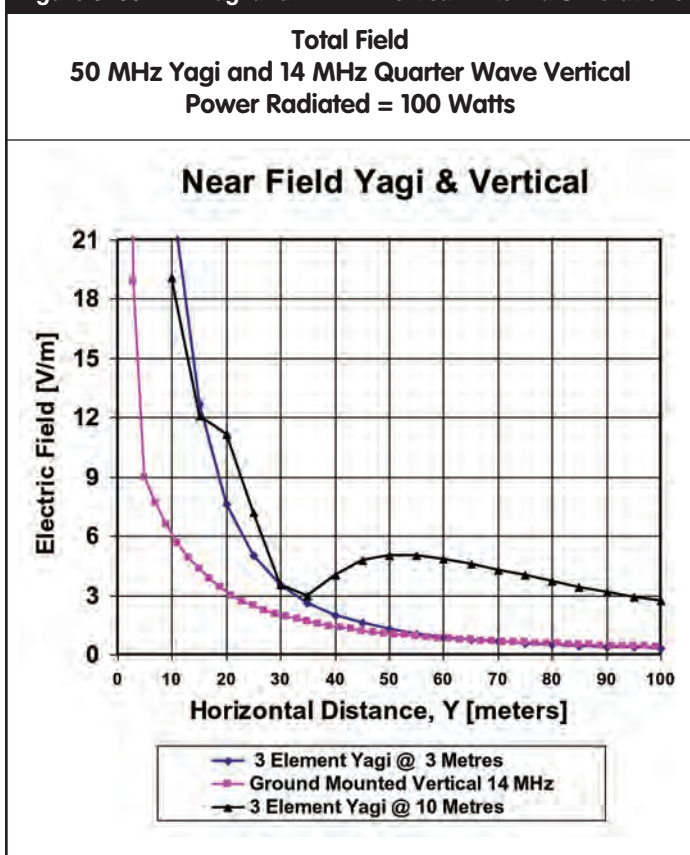
## CONCLUSIONS

This article has presented case studies of the near field produced by transmitting antennas in the frequency range from 1.8 to 430 MHz. The analysis is based on using the near field algorithm in EZNEC for ideal conditions. It was stressed that results are only to be used as guidelines since the apparatus exposed to the electric fields is usually housed in a building which cannot be modelled in any general case. Hence, the final test must be based on measurements. The article did not discuss safety issues so no judgments can be made here. Some important observations can be made.

They are:

- Generally, the electric fields near antennas increases with frequency. Hence, the fields are low for the 160 metre band and large for the 70 centimetre band under the assumption that the transmitted power is the same for all antennas.
- Ground has an impact on the fields but is not a dominant effect, especially for apparatus that is mounted close to ground.

Figure 6: 50 MHz Yagi and 14 MHz Vertical Antenna Simulations



- The analysis performed with EZNEC can only be used as a guideline because it is not practical to model buildings and their associated wiring.

## FURTHER STUDY USING TCA HOTLINKS

Further information is provided with TCA hotlinks which are easily accessed via the RAC website. For this information, please visit <[www.rac.ca/tca](http://www.rac.ca/tca)>.

Hotlinks make it unnecessary to type URL addresses into your computer and provide you with calculators and other support that demonstrates the ideas presented in the articles.

The following hotlinks for this article are available on the RAC website.

TCA hotlink1: EMCAB-2 Interference Criteria – <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01005.html>

TCA hotlink2: Antenna Field Regions – <http://www.antenna-theory.com/basics/fieldRegions.php>

TCA hotlink3: EZNEC Antenna Files under "TCA Files" – <http://ve3kl.com/> – scroll down to the May/June 2012 column.

## ACKNOWLEDGEMENTS

The author wishes to thank Norm Rashleigh, VE3LC, for his discussions and insight about near fields and interference issues.

— Until later, David, VE3KL





# REPORT ON WORLD RADIOCOMMUNICATION CONFERENCE 2012

## PREPARED AFTER CLOSING SESSIONS – GENEVA, SWITZERLAND

Bryan Rawlings, VE3QN  
Special Advisor – WRC-12  
Radio Amateurs of Canada

In my report in the March/April 2012 issue of TCA (page 18), I mentioned that the agenda for an upcoming World Radiocommunication Conference (WRC) is set at the previous Conference. As a result, we not only now know the proposed date of the next Conference (in the Fall of 2015), we also know what agenda items are to be considered.

This makes it possible for the ITU's structures of Study Groups, Working Parties and Working Groups to begin discussing and preparing the materials for the delegates to consider some four years hence including items for the agenda of the following Conference – currently scheduled for 2018.

We Radio Amateurs will be considering several initiatives, one of which may formalize for us a new HF band and several which have the potential to impinge on our use of some of our microwave bands.

The first – and at first glance the most intriguing – of the agenda items is the possibility of an ITU allocation to Amateur Radio in the vicinity of 5 MHz.

The Agenda Item reads, in part:

*“to consider possible new allocation to the amateur service on a secondary basis within the band 5250-5450 kHz ...”.*

The original proposal came from Cuba and it was facilitated onto the final agenda with the help of several administrations including the United States and members of CITEL, the telecommunications group of the Organization of American States.

A 60 metre allocation has had a troubled history at the ITU. Consideration of a possible 60 metre allocation at WRC-07 was largely eclipsed by the ultimately successful efforts to keep the spectrum in 40 metres taken from broadcasters in 2003.

Given that there are many other users in the 5 MHz part of the spectrum, the current proposal is by no means certain of success. It is not, as some might assume, certain to result in an allocation of any substantial size and, at that, even an allocation of contiguous spectrum.

There will be much to say in the coming months as to how Canada and Canadian Amateurs approach this particular agenda item.

Other agenda items for 2015 may strike some Amateurs as being of little interest. We should, however, always be cognizant that in earlier times delegates to WRCs might have felt the same way about our 2 metre and 70 centimetre bands – now a central part of modern Amateur Radio.

There are four proposals for additional spectrum in the vicinity of our 10 GHz, 24 GHz and 76 GHz Amateur allocations, viz...



- Agenda Item 1.6 seeks 250 MHz of new spectrum for the Fixed Satellite Service in the range 10 – 17 GHz (in ITU Region 1)
- Agenda Item 1.10 seeks possible additional spectrum for the Mobile Satellite Service in the range 22 to 26 GHz
- Agenda Item 1.12 seeks, among other things, a possible extension of up to 600 MHz to the existing allocations for the Earth Exploration Satellite Service. One of two possible locations for this additional spectra is quoted as 9.9 to 10.5 GHz.
- Agenda Item 1.18 seeks a primary allocation for automotive Collision Avoidance Radar systems in the range 77.5 to 78 GHz.

With respect to the foregoing, there are allocations to Amateur Radio at 10.0 to 10.5 GHz, 24.0 to 24.25 GHz and 77.5 to 81.0 GHz. Portions of the 24 GHz and 77 GHz allocations are primary.

None of this, you might think, is going to interfere with your enjoyment of 20 metre DX'ing or your 2 metre net.

That may be true; however, Radio Amateurs representing our interests at the upcoming WRC will be important – as they always have been – to the continued respect and prestige upon which the continuance of our pastime depends.

TCA

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# All Things Digital

## Amateur Radio for the 21<sup>st</sup> Century OO3

Robert C. Mazur, VA3ROM

E: [va3rom@rac.ca](mailto:va3rom@rac.ca)

W: <http://my.tbaytel.net/va3rom>



If you have been following my column, you've probably realized that APRS isn't your ordinary garden variety digital mode; while it's based on the much older packet radio system, they have rapidly diverged. I've been drilling down through the various layers and trying to keep things simple and in bite-sized pieces. I hadn't planned on writing a series of APRS articles but that's the way it turned out!

### APRS TRACKERS

Not everyone can afford those "all-in-wonder" APRS enabled radios or an iPhone (iPad or iPod Touch), but for a lot less money you can take any old 2 metre transceiver and connect it to a separate "black box" APRS tracker. There are several companies that sell these devices already built or as kits and I've picked two that are good representatives of the current state of the technology. A detailed list is provided at the end of this column.

I like kit building and "one-stop" shopping so my first choice would have to be a family-run company called "Byonics" <<http://byonics.com>> which is owned and operated by Byon Garrabrant, N6BG. His company provides everything that you need to get started with add-on APRS trackers and radio accessories.

The most well-known, of his products is the famous TinyTrak series, and it has evolved into a small but powerful device (TinyTrak4) combining an APRS tracker with a simple Terminal Node Controller (TNC) and a host of other features.

Its EEPROM chip can be flashed with new updates to add more features and functions; this has become very common so that something you buy today isn't obsolete by tomorrow.

You simply take your 2 metre transceiver and hook it up to any TinyTrak, with the proper radio interface cables, and an external GPS – all available from Byonics.



Figure 2: Fox Delta FoxView3

Fox Delta sells several variations of APRS trackers. The FoxView3 has a built-in TNC with a 4-line display. It can be used as a mobile tracker by attaching a GPS, as a stand-alone digipeater by connecting a transceiver, and can be connected to a computer for programming and monitoring. It's available as a kit (expert skills required) or already built. The photo is my slightly modified version. I highly recommend spending the few extra dollars and getting the built version as there's no "hand-holding" or incremental testing during the build; it will either work or it won't!

You do need to program it with your APRS parameters, but Byon is more than happy to help newbies get started and program one with your call sign and the most commonly used APRS parameters.

Besides being a smorgasbord of APRS delights, Byonics is also a very Ham friendly outfit and it's a rare thing when you can email or phone the Chief Design Engineer and CEO. Byon provides excellent customer service and doesn't mind answering the same-old questions over and over about how to do this or that. I bet that he's heard them all and probably knows most of the answers too!

My second pick is another family-run Ham shop, based in India, called "Fox Delta" <<http://www.foxdelta.com>> which is owned and operated by Dinesh Gajjar, VU2FD. Dinesh's shop caters more to DIY kit builders and experimenters (you can also buy ready built). His store is another virtual smorgasbord but covers a wider field of radio and electronics to include astronomy and meteorology which many Amateurs included in their radio hobby.

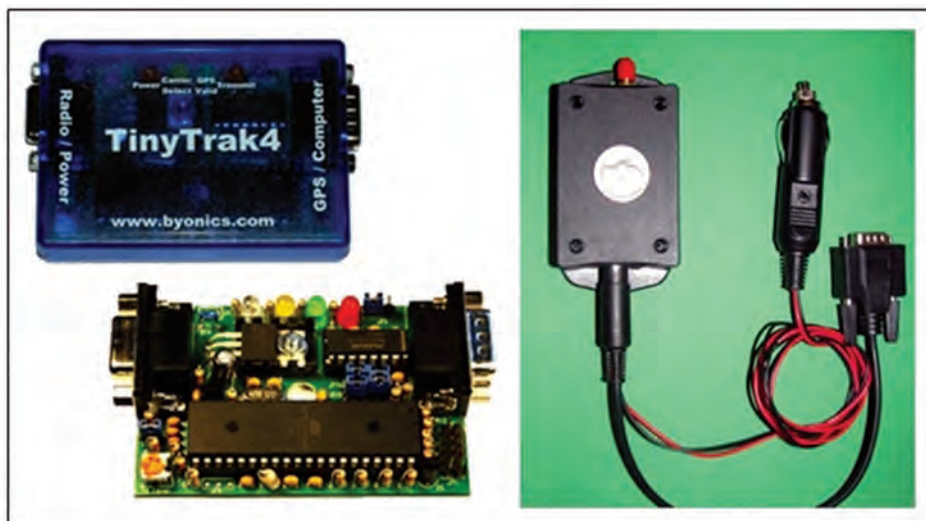


Figure 1: Byonics APRS Trackers (images used with permission)

Left is the TinyTrak4 in its plastic case and below is the stuffed circuit board. You can buy it in either kit form or already built; connect your transceiver (with appropriate cables) and external GPS. Right is the Micro-Trak RTG (Ready-To-Go) APRS transceiver; just add external antenna and GPS.



Because Fox Delta is based where it is, prices are incredibly low, but don't let that fool you into thinking that the quality isn't incredibly high. If you like to tinker and experiment, you can have a lot of fun with Fox Delta's offerings! Dinesh edits a website <[www.hamradioindia.com](http://www.hamradioindia.com)> that has a lot of information geared towards kit builders.

I bought the FoxView3 APRS tracker/TNC with display screen (kit and built versions available). It's much like the TinyTrak4 but with the added APRS packet display that shows the various APRS stations' ranges and bearings around your location. It can also act as a stand-alone or emergency digipeater when connected to a transceiver. You can hook it up to a scanner to just decode and display packets or to your computer. It's larger and heavier than the TinyTrak4 but the extra room, inside its metal case, allows you to add extra circuitry and make modifications.

## SOUNDCARD INTERFACES

There are various soundcard interfaces available and all are very good and easy to use. You can build (many designs can be found on the Internet) or buy one. Sure, you can get by with the basic acoustic coupling and patch cord method for decoding and even transmitting some modes, but you really want and need a device to handle transmit and receive switching between your computer and transceiver for serious digital work. Note: Most soundcard interface designs are trending towards VOX switching to activate the PTT versus the older serial keying PTT keying method.

**Build:** If you visit my website at <<http://my.tbaytel.net/va3rom>> you can download the latest quarterly APRS Thunder Bay newsletter and read about the KH6TY soundcard interface kit. It was designed by Skip Teller, KH6TY, of Digipan (which he wrote) and FLDIGI software (he's part of the design team) fame. The original schematic and build instructions can be found at <<http://sites.google.com/site/kh6tyinterface>>. It's a very simple and easy to build and use VOX based soundcard to radio interface. My revised build, operating notes, modifications and additions are available at <<http://tinyurl.com/84d3dkf>>.

**Buy:** There are many good commercial interfaces and all are affordable and do a good job, but one just stands out among all the others, especially when using Windows Vista/7 and the redesigned



Figure 3: Soundcard Interfaces

Left is the KH6TY SC interface (kit built). It uses your soundcard to create an audio VOX PTT via an onboard voltage doubler circuit. It's a passive device and requires no external power. The blue and yellow isolation transformers keep your radio and computer isolated from each other to prevent ground loops. Audio level control is via your computer's soundcard mixer. Inexpensive, very light and small, and with the added 5-pin DIN socket modification it's easier to swap-out different transceiver cables.

Right is the Tigertronics Signalink USB external soundcard and radio interface. It also provides an audio VOX PTT but draws power from your computer via a separate USB cable. It uses surface mount components and has internal isolation transformers, an onboard soundcard and audio amplifier and external transmit/receive level controls (doesn't use the Windows audio mixer) with variable PTT delay control. It has also been modified to use an external 5-pin DIN socket to avoid Tigertronics' cumbersome method of internal jumper wires. Larger and more expensive but with a metal case for added RFI shielding.

soundcard mixer interface. The Tigertronics Signalink USB external soundcard/radio interface solves a lot of interfacing problems <[www.tigertronics.com/slusbmain.htm](http://www.tigertronics.com/slusbmain.htm)> and I highly recommend it.

## ALTERNATIVE (CHEAPER) APRS

All of the previously mentioned devices have been commercial hardware systems as it's not very easy to design and build your own APRS trackers from scratch, unless you have a design engineering/programming background, but there is a software alternative. In my first column, I mentioned the new and free UZ7HO SCM (Sound Card Modem) program written by Andrei Kopanchuk, UZ7HO, which decodes and displays VHF/HF APRS/packet radio signals by connecting your receiver to your soundcard input. The older and therefore more popular program (also free) is called AGW PE (Packet Engine) <<http://www.sv2agw.com/ham/sc.htm>>. It was written by George Rossopoulos, SV2AGW, and is designed for both soundcard and hardware based APRS/packet radio. It's a bit harder to set up but much more powerful; however it lacks both a waterfall and text display so you need an external APRS/packet client program to display data. If you like

computer programming, the AGW PE API is available, along with George's tutorial on how to use AGW using Visual Basic, Delphi, etc, and I will talk about that in future columns. Both of these programs are called "middleware" and they act as software "translators" between your soundcard/radio interfaces and APRS/packet radio programs.

## WINDOWS (FREE) SOFTWARE

While your soundcard interface will be used for every digital mode under the sun, hardware based APRS devices may still be too expensive for many Amateurs so we also have an APRS (often free) software alternative. However, it isn't for everyone as it's like learning a foreign language and that's why I've left it for last.

Free is good, but there's a "price" to be paid and I've debated as to how deep I want to go with this method. It didn't take too long to realize that several more columns would be needed to cover this one topic. So, if getting into the nuts and bolts of computer software and/or hardware isn't your forte, then perhaps this is where you get off the APRS "train" and wait for the next column where a more typical (conversational) digital mode is covered.

I've only used one APRS software package, in my "career", but it must be the most popular; it's called UI-VIEW32 <<http://www.ui-view.org>>, or just UIVIEW to its many thousands of worldwide users. It was the creation of Roger Barker, G4IDE (SK), who was a brilliant computer programmer. While there are other programs out there (commercial and free), UIVIEW has set the standard that none have surpassed, in my opinion. For those of us who enjoy computer programming, Roger provided an API (Applications Programming Interface) to hook into UIVIEW and use its many internal functions and this has allowed for the creation of some amazing extensions to "plain Jane" APRS.

The best source and most up-to-date information to help you get started with UIVIEW can be found at <[http://wa8lmf.net/aprs/UIview\\_Notes.htm](http://wa8lmf.net/aprs/UIview_Notes.htm)>, written by Stephen, WA8LMF.

I don't recommend that you dive into UIVIEW or any other APRS client program unless you are willing to spend a lot of time and effort learning the ropes, especially if you want to setup a digipeater and/or I-Gate station.

For everyone else, I recommend starting with 2 metre transceiver plus add-on APRS tracker or an iPhone, etc., with Ham Tracker or other iAPRS app. The [aprs.fi](http://aprs.fi) <<http://aprs.fi>> or the [openaprs.net](http://openaprs.net) <[www.openaprs.net](http://openaprs.net)> websites can act as your client program until you decide just how deep you want to go.

It's also a very, very, very (and I do mean very!) good idea to join the Yahoo UIVIEW/APRS user support groups <<http://groups.yahoo.com/group/ui-view>> and <<http://groups.yahoo.com/group/APRS>>.

## MY FINAL

Whew! I really have to take a break from APRS and perhaps you do, too! APRS is a very powerful digital mode and system that just keeps growing and growing as more features are added to the basic packet radio substructure. As an automated system, it's there 24/7 when you can't be. Data is stored (often for years) within the APRS-IS and can be accessed for tactical, logistical and historical purposes by anyone. Later on, I'll drill down even deeper into the fascinating world of APRS.

The next column will look at a much older mode that was popular with the newswire service; it's a member of the continuous wave (CW) family of pseudo-digital or "fuzzy logic" communication modes that also includes Morse. — 73



Figure 4: UIVIEW Display

APRS view around the Thunder Bay area using dynamic maps created by the integrated Precision Mapping software. Upper left is my AIS ship tracking add-on program that sends data to the Firenet experimental server; lower left is the messaging screen for viewing/sending point-to-point and APRSLink SMS or "tweet" emails, texts, bulletins, etc. Center is an info box with details on APRS station VE3VAI-10. Upper right is my PWS weather data that is sent to both the APRS and CWOP (Citizen's Weather Observing Program) and Weather Underground servers; lower right is the 144.390MHz APRS radio real-time decode display. There's a lot more information that UIVIEW can display but I didn't want to clutter up the screen shot ;)

## ADDENDUM

The following are web links to various APRS hardware/software and soundcard interfaces. It's not a comprehensive list but will help steer you in the right direction if you want to get serious about APRS and/or the other digital modes.

### Various Hardware Add-On Trackers

Argent Data OpenTracker+ <[www.argentdata.com/products/otplus.html](http://www.argentdata.com/products/otplus.html)>

Byonics TinyTrak4 <[www.byonics.com/tinytrak4](http://www.byonics.com/tinytrak4)>

CCW Digi Tracker <[www.crosscountrywireless.net/aprs\\_tnc.htm](http://www.crosscountrywireless.net/aprs_tnc.htm)>

Fox Delta FoxTrak <[www.foxdelta.com/products/foxtrak.htm](http://www.foxdelta.com/products/foxtrak.htm)>

GCTelecomar Smart Tracker <[www.gctelecomar.com](http://www.gctelecomar.com)>

RPC RTrak <<http://rpc-electronics.com/rtrak-lite.php>>

Tigertronics TM-1/TM-1+ <[www.tigertronics.com](http://www.tigertronics.com)>

### Various Soundcard Interfaces

BUXCOMM Rascal <[www.packetradio.com/catalog](http://www.packetradio.com/catalog)>

DCC Donner <<http://tinyurl.com/7z2oxs3>>

KH6TY KH6TY SCM <<http://tinyurl.com/7kq5wbj>>

Tigertronics Signalink USB <[www.tigertronics.com/slusbmain.htm](http://www.tigertronics.com/slusbmain.htm)>

West Mountain RIGblaster <<http://tinyurl.com/86ha6kf>>

### APRS Software (Various Platforms)

<<http://info.aprs.net/index.php?title=Software>>

Note: Not all of the listed programs are in active use.





# RAC AFFILIATED CLUB PROGRAM

**Len Morgan, VE9MY**  
**Coordinator**  
**RAC Affiliated Club Program**

*Good News! Radio Amateurs of Canada has reached a milestone: 100 clubs have now joined the RAC Affiliated Club Program – an increase of over 20 clubs from 2011. Thanks to all those clubs who choose to support RAC by affiliating.*

*Clubs wishing to affiliate with RAC should go to <[www.rac.ca/en/rac/programmes/affiliated-clubs/](http://www.rac.ca/en/rac/programmes/affiliated-clubs/)> where information on requirements, benefits and an application form can be found.*

*One of the benefits of club affiliation is that the club is entitled to a RAC alias email address. Using the RAC alias makes it easy to have email redirected when club officers change and ensures that the club receives renewals and other correspondence.*

*RAC affiliated clubs using their affiliated club number are able to access the Member's only section of the RAC website where the RAC alias can be changed and the club profile updated. Since the RAC Affiliated Club Program and other RAC services are handled by volunteers, automating this and other processes will ensure better service to members and affiliated clubs.*

*If the affiliated club is not registered, go to the RAC homepage, click on "register", enter the club affiliation number and postal code, then username and password. If the club does not have the affiliated club number contact <[affiliatedclubs@rac.ca](mailto:affiliatedclubs@rac.ca)> and the number will be sent.*

*Clubs in past years were members of Radio Amateurs of Canada or were affiliated under an "old" program. Starting in 2010 clubs were required to complete an annual application/renewal form and pay the annual affiliation fee plus tax to remain affiliated.*

*RAC will continue to enhance the Affiliated Club Program by providing other benefits and services to affiliated clubs, so please consider affiliating with Radio Amateurs of Canada*

*A current list of affiliated clubs appears at <[www.rac.ca/en/rac/programmes/affiliated-clubs/listing/](http://www.rac.ca/en/rac/programmes/affiliated-clubs/listing/)>.*

*The following list of RAC Affiliated Clubs is current to March 5, 2012 when this article was prepared.*

**RAC is proud to recognize the following clubs which are participating in our Affiliated Club Program.**



Almonte Amateur Radio Club, Inc  
 Arrowsmith ARC  
 Barrie Amateur Radio Club  
 BC FM Comm. Association  
 Border City Radio Club Inc.  
 Brantford Amateur Radio Club  
 Brockville Amateur Radio Club  
 Bulkley Valley Amateur Radio Society  
 Burlington Amateur Radio Club  
 Burnaby Amateur Radio Club  
 Calgary Amateur Radio Association  
 Calgary Communications Club  
 Central Alberta Amateur Radio Club  
 Central Toronto (Centor) Amateur Radio Club  
 Charlottetown Amateur Radio Club  
 Chatham-Kent Amateur Radio Club  
 Coast Emergency Communications Association  
 Coquitlam ARES Society  
 CRA Capitale Nationale Inc.  
 Delta Amateur Radio Society  
 Festival City Amateur Radio Club  
 Foothills Amateur Radio Society  
 Fort McMurray (formerly Tarsands) Amateur Radio Club  
 Fredericton Amateur Radio Club, Inc  
 Georgian Bay Amateur Radio Club  
 Halifax Amateur Radio Club, Inc  
 Halton Amateur Radio Club  
 Hamilton Amateur Radio Club  
 Kamloops Amateur Radio Club, Inc.  
 Kingston Amateur Radio Club  
 Lake Simcoe Repeater Association  
 Lambton County Radio Club  
 Langley Amateur Radio Association  
 Loyalist City Amateur Radio Club  
 Mabuhay Amateur Radio Club  
 Manitoba Repeater Society  
 Manitoulin Amateur Radio Club  
 Maritime Contest Club  
 Melfort Repeater Group Inc.  
 Mercury Amateur Radio Association  
 Mississauga Amateur Radio Club  
 Moncton Area Amateur Radio Club  
 Montreal Amateur Radio Club  
 Niagara Peninsula Amateur Radio Club  
 North Bay Amateur Radio Club  
 North Central Alberta Amateur Radio Club  
 North Shore (ON) Amateur Radio Club  
 North Shore Amateur Radio Club (BC)  
 Northern Alberta Amateur Radio Club  
 North Okanagan Radio Amateur Club  
 Northern Saskatchewan Amateur Radio Club  
 Northwestern Ontario Senior Citizens Amateur Radio Club  
 Nortown Amateur Radio Club, Inc.

Oakville Amateur Radio Club  
 ORCA DX and Contest Club  
 Orchard City Amateur Radio Club  
 Orillia Amateur Radio Club  
 Ottawa Amateur Radio Club  
 Ottawa Valley Mobile Radio Club  
 Pathfinders Amateur Radio Club  
 Peace Country Amateur Radio Club  
 Peel Amateur Radio Club  
 Peterborough Amateur Radio Club  
 Playland Amateur Radio Rptr Association  
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 Prescott-Russell Amateur Radio Club, Inc  
 Prince Edward Radio Club  
 Quarter Century Amateur Radio Club  
 Quinte Amateur Radio Club  
 Regina Amateur Radio Club Inc.  
 Renfrew County Amateur Radio Club  
 Richmond Amateur Radio Club  
 Rideau Lakes Amateur Radio Club  
 Rose City ARC  
 Sask Alta Radio Club Inc.  
 Saskatoon Amateur Radio Club, Inc.  
 Scarborough Amateur Radio Club  
 Seaway Valley Amateur Radio Club  
 Shuswap Amateur Radio Club  
 Skywide Amateur Radio Club  
 Society of Newfoundland Radio Amateurs  
 South Pickering Amateur Radio Club  
 Southern Alberta Repeater Association  
 Southern Ontario Repeater Team  
 Sudbury Amateur Radio Club  
 Sun Parlour Retirees Amateur Radio Club  
 Surrey Amateur Radio Club  
 Terrace Amateur Radio Club  
 Three Hills Amateur Radio Club  
 Timmins Amateur Radio Club  
 Toronto Amateur Radio Club  
 Toronto FM Communications Society  
 Tri-County Amateur Radio Club, Inc.  
 Vancouver Emergency Community Telecom Organization (VECTOR)  
 Victoria Haliburton Amateur Radio Club  
 West Carleton Amateur Radio Club  
 West Island Amateur Radio Club  
 West Kootenay Amateur Radio Club  
 Westcumb Amateur Radio Club  
 White Rock Amateur Radio Club  
 Winnipeg Amateur Radio Club  
 Winnipeg ARES  
 Winnipeg Senior Citizens Radio Club  
 York Region Amateur Radio Club

# ONTARIO GUIDES AND ZL: D-STAR TO THE RESCUE

## Maurice-André Vigneault, VE3VIG

Once again we were happy to be able to host the Girl Guides on their Guides On The Air (GOTA) weekend at the Amateur Radio Exhibit station VE3JW located at the Canada Science and Technology Museum (CSTM) in Ottawa.

Thanks to Darin, VE3OIJ and Beth, VA3CEW, for setting up an excellent presentation for the Guides. This year, we were permitted to use the Auditorium to welcome the groups as the participants were numerous and space at the station is rather limited.

At the Auditorium, the Guides received instructions on radio in general and on Amateur Radio in particular, with the help of a PowerPoint presentation authored by Darin, while Beth, a Guide Leader herself, complemented the presentation by adding comments familiar to Guides.

In addition, they were taught to use the International Phonetic Alphabet and they were introduced to basics in radio communications procedure.

This year, two large groups had applied to participate in the annual event: one from Nepean (the 42nd Nepean Sparks/Brownies led by Pamela Christie); and one from Carp (the 1st Carp Girl Guides led by Sarah Smith) – both in Ontario. The groups were handled separately and each had their turn at the radio station.

It was a treat to hear these young Guides using the phonetic alphabet to spell out their name while introducing themselves on the air. At the end of their exchange on air, they had learned to indicate the end of their input by using the turn over signal "Over".

This excellent start in radio did not fail to impress the many contacts who volunteered their time to talk with our Guides and all those listening on frequency.

As a matter of fact, this year we reached out even farther than before with the help of the many facilities found at VE3JW.

**A Guide from the 1st Carp Girl Guides listening to Marlene in New Zealand.**

The 20 metre band was handled by Joe, VE3EUS and he fared well, while I was handling the 40 metre band which did not provide much in contacts.

All contacts made by the girls on 20 metres were with Amateurs in the United States who were more than happy to stay on the air as long as required.

In the past, we also used digital communications on HF to reach out and we found that some groups were using the PSK31 mode to get in touch. A couple of years ago the Guides introduced Internet communications in their program so we used IRLP to demonstrate this in Amateur Radio.

We now have D-Star, a digital mode (digital voice) and we use the Web to connect to faraway stations – combining digital and Internet. It consists of a web of repeaters and reflectors spread all over the world.

On Sunday, February 19, not hearing much action on the 40 metre band, I connected the D-Star facility to an international reflector and called for stations, indicating that we had Guides at the Museum.

It did not take long before we heard stations in the US, in England and Scotland respond to us, and they were very useful in helping out in the special event.



**Some of our guests at the CSTM/VE3JW station accompanied by Beth, VA3CEW.**

The Guides were all happy to talk with distant stations to people with different accents, in different locations – and in different time zones. In the United Kingdom it was already the evening.

But what stimulated them even more was when a station from New Zealand offered its help. They talked with Marlene, ZL1MYL, who was nearly at the antipode and was already in another day, that being Monday morning in New Zealand. Marlene had a charming accent for the girls to hear and she knew how to talk with them, having three daughters of her own.

It was a great experience for the Guides. It was also a valuable lesson in communications, geography and time-related events and in human relations. That's why we say that Amateur Radio is Educational.

You can help in the development of our young generations by participating when the event comes around again. Enjoy yourself by inviting the Guides in your area, through a contact with a Group Leader, to your radio station.

The payoff for me was seeing those young smiling faces and the proud look in their eyes for having completed their contact; and also when they gathered at the end and loudly chanted in unison:

"Thank you, Maurice-André!"

Big thanks also go to Darin, Beth, Joe, and to the Canada Science and Technology Museum for allowing the event and coordinating the venue.







## WELCOME / BIENVENUE

*We wish to welcome the following new members of Radio Amateurs of Canada for February and March.  
Nous souhaitons la bienvenue aux nouveaux membres suivants de Radio Amateurs du Canada pour février et mars.*

Paul Alexander, VE7PCA  
Daniel Allen, VA7OHO  
Phil Anderson, VE3FAS  
Michael John Andrews, VE3PME  
Georges Ankenmann, VA3LZY  
Keith Antonelli, VE7EXH  
Kevin Boswell, VE8TLN  
Alexander Boswell, VE8SHP  
Robert Boswell, VE8BZ  
Jenny Lynd Boswell, VE8JL  
Richard James Bozec, VA3RBZ  
Bob Brennan, VE3ITW  
Steven Brown, VA6SMB  
Carmen Brown, VA6BBC  
Martin J. Brugmans, VA3MYB  
Ken Buehler  
Ian Thunder Burgess, VA6EMS  
Richard "Rick" J. Burgess, VE6PGU  
James Gordon Carless, VE7EOI  
Gary Allan Chase, VA3HP  
Doug Christian, VE6ALS  
Edward Earle Clapham, VE6AMR  
Ceri Cornwall, VA7CCT  
Alex Cosolapov, VE3VDX  
Steve Craggs, VE3KSC  
Travis Crawford, VE3TVS  
Arthur Kenneth Davies  
Warren Davies, VE3WDE  
Roger M. Delisle  
Jocsan Diaz  
Luc Doré, VA2KSH  
Bill Elliot, VE1MR  
Ryan Joseph Evans  
Sally M Finora

Susan Foster, KI4ZXL  
Jacques Gauthier, VE3WBT  
Thomas E. Gernon, VE3ETG  
Andrea L Goodman, VA7ALG  
J.G. Ross Grant, VA7JRG  
Hugh Harvey, VE7SSR  
Gordon Bruce Hastie, VE3GBH  
Rod Hembree, VE3TVG  
John Sanford Heppleston, VE6HEP  
Philip Frederick G Holland, VE7AKR  
Melissa Louise Hope, VA7MLH  
Gary Horne, VE6GD  
Walter Hrybko, VE7WDX  
Karel Jennings, VE6KLJ  
Walter D Johnston, VE3GE  
Janet Jones, VA7CBJ  
Oliver G. Jones, VE7OGJ  
Johan Jordaan, VE3XZS  
Gordon Kennedy, VE3GKN  
Richard Kennedy, VE3RHD  
Kelly Kienleitner, VE7KQW  
Gordon James Killally, VE5IRE  
Robert Neil King, VA7DX  
Steve Kiss, VA3SKC  
Claude Landry, VE9CYL  
Pierre A.J. Landry, VE2XPL  
Newmarket Public Library  
Glenn Richard Lindsey, VE7GRQ  
Paul David MacDonald, VA7ZZT  
Ian MacDonald, VY1IRM  
Fulop Casba Macska, VE7FIE  
James Richard Mann, VA7MJR  
Nehemias Medina, VA6MHZ  
Clinton Murray Millett, VE6CMM

Melvin Monit, VA3DBT  
Bernard Joseph Murphy, VE3FWF  
Ricky Myrick, VO1RJM  
Alexander Edward Neison, VA7NEI  
Lyndon Nerenberg, VE7TFX  
John Norris, VE3FOR  
Kevin Patrick O'Toole, VE6GUN  
Alsid Dafydd Prime, VA7ADP  
Mark Richardson, VA3OBO  
Louis Rocque, VE2LXR  
Mario Roy, VE2MRW  
Jean Maurice Sarrazin, VE3ZJS  
Joel Schiele, VE6ATE  
Harold Schulz, VA7GNR  
Joseph T. Scott, VE3ADB  
Todd William Semko, VE6TWS  
Veronica Shelford, VE7VMS  
Patricia Simone, VA3HIS  
Russell Smalley, VA7MTL  
Donald J. Stefanik, VA3KBC  
Philip Henry Storey, VE7YBH  
Robert Gregory Sutfin, VA7IIA  
Everett Tingley, VE7NPN  
Terrence M Todd, VA3UTC  
Cliff Tooher, VA2UTC  
Aron Tutschek, VE7CBQ  
Rufino Ulit, VE3RGU  
Gardina Verhesen, VE6MSV  
Roderick Paul Walker, VE3WRP  
Andrew Webb, VE6EN  
Ralph Welsh, VE3RWO  
Richard Ludwik Wodzianek, VA7RLW  
John Allen Hubert Woolfrey, VA3IAW

## HAMILTON AMATEUR RADIO CLUB HOSTS GUIDES ON THE AIR EVENT

The Hamilton Amateur Radio Club hosted a Girl Guides On The Air event on February 26 at the home of Tom, VA3TVW and Tracy, VA3CDU.

The event was a tremendous success and lots of fun was had by all. There were five girls involved with the event plus the Guide Leader. Mark, VE3RYI, was also present as usual doing everything possible for the club and the Guides.

The girls were in control of the ONTARS frequency between 2 and 3 pm on the Saturday with the base station. In addition to the ONTARS net, Tom and Tracy had them make contact with some US stations who set up a net for the girls. The girls then operated from Mark's mobile rig to make some more contacts.

In all, everyone had lots of fun. The event showed that the Hamilton ARC cares about the community and we are spreading the word about Amateur Radio. More events like this one are on the horizon as the spring and summer approach.



– submitted by Sherry Goeller, VE3DCU on behalf of Tracy, VA3CDU and Tom, VA3TVW, members of the Hamilton ARC [www.hamiltonarc.ca](http://www.hamiltonarc.ca)

# HKONA MALPELO ISLAND DXPEDITION

Steve Wright, VE7CT

It was sheer accident that upon hearing of a proposed DXpedition to Malpelo Island in 2012, via "The Weekly DX" publication, I decided to investigate via the Internet to see who was involved. To my surprise two of my friends' faces appeared as part of the team that originally was comprised of the Jumanji Contest Club of Colombia, Bob Allphin, K4UEE and Gregg Marco, W6IZT, both previous expedition companions.

I immediately emailed Bob (with whom I had been on four expeditions in the past) to ask rather indignantly why I had not been apprised of this situation and (in a more humble manner) should the team be expanded for any reason that I be considered as a potential member of the team. "Of course" said Bob, as if he were planning it all along.

That's where it all started and, due to the very nature of Malpelo Island and the difficulties to be faced, it was decided that indeed the team be expanded (at considerably more cost of course) so that an all out attempt be made to reduce the "wanted status" throughout the world from #12 to "off-the-charts" so that there would be no further requests for expeditions to the powers-that-be for many years to come.



Our team assembled in Bogota, Colombia on the evening of January 18 at the Capital Hotel. Several other HK Amateurs came to meet us and wish us a "Bon Voyage" over a drink or two. The following day saw us all back at the airport to take a Satena flight from Bogota to Buenaventura, a port city on the west coast of Colombia where we would board *The Sea Wolf* to take us to Malpelo Island.

Originally, it was planned that we would take ground transportation to Buenaventura but, due to the possibility of potential danger from rebels in the rural areas, we decided it would be wiser to fly.



The "Hammerhead" Team

When it came to check in time for the Dornier commuter type aircraft we were vastly overweight with our baggage and as a result we arranged to have it taken by truck to Buenaventura.

While on the way to the hotel from the Buenaventura airport some anxious moments occurred when it was found that a "protest" group had occupied and blocked the only bridge to the port and we were on the wrong side of it. After killing time at a roadside bakery/restaurant we finally had the go ahead to proceed to the hotel. Buenaventura, we were told, is an extremely dangerous city at night and especially where we had been delayed. After an hour or two we were able to continue to the coast.

We checked into the hotel preparing to leave early the next day, only to be asked to meet at the boat around midnight for a very early morning (4 am) start to our 28-hour trip in order to arrive early morning in daylight at Malpelo a day and a night later.

Malpelo Island lies some 300 miles off the west coast of the host country of Colombia and is only accessible by boat.

The marines climbing up from the water's edge.



It was formed volcanically some 18 million years ago and is basically the top of a mountain that stands some 4,000 metres above the sea floor with about 300 metres above sea level projecting up almost vertically from the shore. There are several sharp craggy adjuncts next to the Island that project upward to about 40 metres or so high. Some grasses are seen on these islets, but we saw none on the main Island itself due mainly to the masses of omnivorous land crabs.

Previous DXpeditions were confined to the Island's east side close to the water level since it is the only landing area – and most certainly never more than 100 metres upward to where now stand two small buildings on the only relatively level part of the east side of the Island.





The "Three Musketeers and D'Artagnan" rocks with antenna support (looks like a vertical but actually supports one end of a wire antenna).

This explains why it was difficult for areas west of the midwest USA and Asia to make contact with previous expeditions due to the shading by the mountain to all signals in that direction. The buildings and an original tangon (a horizontal type of fixed gantry just above sea level for access via rope ladder to shore) were built circa 1986 when the Colombian Navy established a small garrison to establish and enforce their sovereignty, as well as to protect fishing rights in a 20-mile radius of the Island and to connect the area to the Colombian territorial area off the coast of the mother country. A new tangon was constructed in 1999 and is the one existing today. Apparently, a newer one is still planned with a hoist to lift a fast pursuit boat off the water and out of reach from the sea.

The Navy marines number about eight and are rotated on a regular basis. A Navy vessel was in the area to constantly monitor and protect it from illegal fishing.

Diving tours from Colombia, Costa Rica and Panama are regular visitors, but only 25 people at a time are allowed to go to the area in order to

protect the marine environment and the boats on which they travel must be totally self-sustaining as shore landings are held to a minimum. The Island and surrounding marine environment is a Unesco World Heritage Site and is administered by the Parques Nacionales de Colombia.

There are many Nazca Booby Birds that dot the Island, breeding and raising their young. This particular species is found only in the Eastern Pacific and are recognized as a separate species from the Masked Booby Birds.

They can be very protective especially when they are hatching eggs or when their chicks are very young, as an advanced party of our team members from Colombia were to discover last October. In addition, we saw Magnificent Frigate birds as well as terns and a sandpiper-like bird at sea level.



Monitoring the team.



As previously stated, there are masses of land crabs that have voracious appetites and will literally eat anything and everything from coffee grounds to underwear and their dead buddies. They are relentless in pursuit of food. We were constantly kicking them out of the operating building and/or sleeping tents as they would show up in the strangest of places. There are three types of lizards endemic to the Island and all are quite willing to share any food we had after getting used to us. There was also a brutish looking salamander-type of lizard all over the Island within the porous openings formed in the lava flows and, like the lizards (or geckoes), became quite bold in our presence.

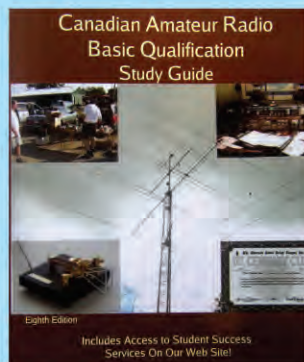
After it was decided to extend our team to 20 members, Bob, K4UEE, Gregg, W6IZT and George, N4GRN, flew down to Cartagena to meet with the Colombians to get a feel for what challenges would be in store for us and to determine the logistics necessary for a successful expedition. It was also decided that four of the Colombians (subsequently dubbed the "Fantastic Four") would depart for Malpelo at Christmas to begin assembling antennas etc and to install safety lines on the steepest parts of the ascent route from the shore up to the main operating area (where the buildings are) and then all the way up to the top of one of the mountain peaks from where a clear shot in all directions was possible. Further attempts to install antennas on the peak were foiled by heavy rains between Christmas and a week or so before the arrival of the rest of the team on the Island. Nevertheless, the



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Fantastic Four – made up of Bolmar, HK1MW, Jim, HK1N, Salim, HK1T and Faber, HK6F – did a magnificent job away from their families at a time when family is so important to help pave the way for the rest of the team to “hit-the-ground-running” and commence immediate operation.

The later arrivals consisted of: Jorge, HK1R, Pedro, HK3JJH, Pedro, HK1X, Franz, DJ9ZB, Manu, LU9ESD, Peter, PP5XX, Bob, K4UEE, Gregg, W6IZT, George, N4GRN, Ralph, K0IR, Jerry, WB9Z, Bob, N6OX, Gary, K9SG, Glen, W0GJ, Neil, VA7DX, myself Steve, VE7CT, our photographer Gustavo, HK3ORE, and of course Murphy himself.

No expedition is ever complete without Murphy who is a close relative of the poet Robbie Burns. You know, “*The best laid plans of mice and men...*”.

Murphy was to strike early and we were forced to operate our six stations at OP B (the lower and main operating site) and OP A (the mountain top with the capability of 4 stations) without the planned Wi-Fi networking system. Hence, the logs had to be downloaded from each position on a daily basis before uploading them for analysis and submitting to Bob, N2OO, our QSL manager for the “Club Log” online look up.

It also became apparent that our 160 metre antenna at OP A gave us some disappointing results. In addition, we had to contend with solar flares during the second week of operation that wiped out some of the high frequencies at certain parts of the day making it difficult to continue a good run of contacts.

All in all, when the dust settled after the expedition was over – and Gregg had an opportunity to examine the logs to merge and fill a few small holes (which he did) – we were blessed with breaking a world record for the Tent and Generator type of operation to the tune of more than 195,000 contacts. It did appear to us that



Steve Wright, VE7CT, operating from Op A.



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we were being heard perhaps better than we were hearing the "Deserving". If this was so I can only attribute that to the height above sea level and the steepness of the slope toward the ocean creating a lower angle of radiation for our antennas, hence a "skip" or two less than the received signals especially on the low bands. Our results will be published on the HKØNA website at <<http://hk0na.com/>> for all to view.

This record would have been absolutely impossible if it were not for the young marines and our boat crew faithfully doing the strenuous lifting and carrying our antenna equipment and everything else that was needed – drinking water, food, generators, fuel, operating tables and chairs etc – up the 60 to 70 degree slope from the tango in the hot muggy weather and also to supply our meals from the boat at least three times a day.

They allowed us to continue operating without skipping a beat; if we operators had to do everything, by the time we got set up to operate it would have been time to leave.

The pileups were indeed massive from all directions at the beginning and were still of decent size when the time came to disassemble the equipment in order to return to the mainland.

From the standpoint of degree of difficulty, Malpelo must be high on the list if not at the top from a physical aspect. Long before the expedition took place we were advised by the MD's in our group to get into shape from a cardiovascular standpoint in order to meet the expected

challenge and to keep well hydrated while there. I am lucky in that there are some challenging hills where I live and a two-month daily power walk for 45 minutes a day vastly helped me to be able to meet Malpelo on its own terms.

In retrospect, the climb from the tango up the first third of the slope to OP B was the most difficult due to the steepness and the larger steps needed to get up (and down). The climb up to the mountain peak, while appearing to be tough, was not as difficult as we could take smaller steps and take our time. The most challenging aspect to reach OP A was a 60-foot rope climb to get on top of the mountain using what footholds on the rock face we could find and often while carrying a backpack.



Once on top, it was well worth the trip to see the wonderful vista on the other side of the mountain with its islets. In addition, signals all around were very strong and we only required 100 watts output from that location.

A high point of the expedition was a tour around Malpelo Island itself in *The Sea Wolf's* zodiac. The caves carved out by the waves are truly spectacular and could have been traversed right through to the other side had there not been a heavy swell that would have made it dangerous at the caves' narrowest points to even consider trying it.

There are many people to thank for our success – equipment sponsors and DX Foundations in the US, Europe and Japan – all of whom are given exposure and credit on our website as well as a hundred or so DX Clubs.

In addition many individual DX-ers contributed support up-front prior to the operation. Without their equipment and monetary support the operation may well have been scaled back and that would mean fewer contacts for the "Deserving". We hope they all made it into our log.

It goes without saying (and I will), the Fabulous Four really went above and beyond – even after being on "The Rock" for six weeks they still had a cheery demeanor as if they had just arrived.

Gregg, W6IZT, also showed remarkable patience in helping to straighten out minor glitches we were all faced with: from the N1MM program to the highly driven menu system of the Elecraft K3 transceiver that some had little exposure to (if at all) prior to the operation.

Along with our QSL Manager Bob Schenck, N2OO, Gregg was also dedicated in merging and analyzing the logs to get things right.

I must also thank our pilots, San Hutson, K5YY and Col McGowan, MM0NDX, for their "fielding and relaying" expertise on our behalf.

Of course, all this would not have been possible without the Colombian Government and especially the Colombian Navy, Ministry of Technology, Information and Communications (Columbia) for the operating licence and also the Parques Nacionales Naturales de Colombia whose responsibility is the care and protection of the Island and its surrounding Marine Environment, a Mecca for diving excursions with its pristine waters and abundant sea life.

For our logo we chose the hammerhead shark that school in abundance around Isla Malpelo.





# QUA — A TOPICAL DIGEST

## RF "CURRENT" IN A WIRE

In a discussion on the Antenna-discussion forum about the paradox that in a transmission line the incident and the reflected "currents" apparently travel simultaneously in opposite directions without obstructing each other, and that the same thing appears to be happening in a wire that is carrying alternating current, KT4YE came up with this summary that is worth passing on.

*"Electrons move very slowly in a wire. You can walk faster than an electron can flow through a good conductor like copper.*

*So, how can we account for the fascinating fact that we can walk into a very large room, flip a switch and have a light bulb on the other side 'instantly' light up? Especially since we (not to mention any electron) could not possibly have walked over to the light bulb.*

*And, no, the electrons do not 'bump' into each other.*

*Instead, what is going on is that the energy to light the light bulb is in the field surrounding the conductor. And when you flip a switch, the new connection allows the (previously 'trapped') energy to be guided to the bulb where a portion is transformed into light and heat.*

*What about the voltage that will 'suddenly' appear across the light bulb and be measurable with a voltmeter? How does THAT get there so quickly?*

*Please recall that electrons are SLOW. But there are many free electrons in a conductor that are 'hovering' a VERY small distance below the surface. And when an electric field is guided over a conductor, the sub-surface electrons will be either attracted or repelled (depending on field polarity) to the conductor's surface where it can be measured."*

## ACTIVITY ON 136 KHZ

This posting from DK7FC on the RSGB LF Reflector, I assume of signals visible at the same time on a spectrum display, shows remarkably close spacing between the signals. If this number of signals can share that extremely narrow bandwidth, then indeed it would seem that there is virtually enough radio spectrum for everybody as technology improves.

- 136.1739 kHz: M0BMU
- 136.1737 kHz: EW6GB
- 136.1730 kHz: PA0A

- 136.1725 kHz: G3KEV
- 136.1720 kHz: DK7FC
- 136.1713 kHz: G3XDV
- 136.1702 kHz: PA3CPM

## LEAD-FREE SOLDER

A recent issue of "Contact", the newsletter of the North Shore Amateur Radio Club (North Vancouver) had this item on a possible disadvantage of lead-free solder:

*"Science or science fiction? Here is an article by Bonnie Crystal, KQ6XA. Being sceptical, we Googled the issue and came up with 'research' that supported her story as well as contradicted it. Read on, and decide for yourself:*

*"Your radio may be secretly growing whiskers inside it, if it was made after 2005. These tiny whiskers may eventually bring failure. Tin whiskers are in the news again now, because they were found to be the cause [problems with] the infamous Toyota runaway accelerator pedals in cars.*

*"Solder containing the element lead (Pb) has been eliminated from many electronics products due to ROHS (Restriction of Hazardous Substances)... a directive adopted by the European Union (EU) that took effect on 1 July 2006.*

*Even if you don't live in EU, this still can affect you, because most manufacturers in Asia adopted ROHS production processes in 2005 to enable their products to be sold worldwide. Solder made of lead and tin has long been used in electronics. One big advantage is the lower melting point, the components are not overheated.*

*Many experts warned EU that taking all lead out of electronics soldering could cause huge problems, and possibly even deaths due to the microscopic conductive whiskers that form on the surfaces and edges of the element tin (Sn). These tiny pointed strands grow when they interact with air... when they get long enough, they can short out across the air gap and insulators in components and printed circuit boards.*

*That's exactly what happened with the Toyota accelerator pedal. Perhaps it is happening right now inside the radio of your ham station. I think I will hang on to*



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*my out-dated radios with their old-fashioned lead solder. It seems like the value of them just went way up!"*

"With focus on the "Toyota accelerator pedal" reference, we Googled the issue and came up with <[http://nepp.nasa.gov/whisker/reference/tech\\_papers/2011-NASA-GSFC-whisker-failure-app-sensor.pdf](http://nepp.nasa.gov/whisker/reference/tech_papers/2011-NASA-GSFC-whisker-failure-app-sensor.pdf)> supporting the story and Wikipedia, <[http://en.wikipedia.org/wiki/2009%E2%80%932011\\_Toyota\\_vehicle\\_recalls](http://en.wikipedia.org/wiki/2009%E2%80%932011_Toyota_vehicle_recalls)>.

As well as <[www.thetruthaboutcars.com/2010/02/toyota-gas-pedal-fix-explained-with-exclusive-photos/](http://www.thetruthaboutcars.com/2010/02/toyota-gas-pedal-fix-explained-with-exclusive-photos/)> suggesting no truth to whiskers playing any part."

## EMERGENCY POWER

*Emergency Power for Radio Communications, 2nd edition 2011, Michael Bryce, WB8VGE, published by the ARRL, explores the generation and provision of electric power, from charging batteries to keeping the lights on. How to stay on the air when something causes a power outage.*

The 12 chapters and three appendices cover emergency lighting, solar power, charge controllers, gas, wind and water generators, battery systems and storage, inverters, instrumentation, safety, emergency practices, and some emergency power projects from the pages of QST.

WB8VGE writes with authority and in a down to earth understandable manner, pulling no punches, especially on the subject of batteries. For example:

*"Batteries don't store energy. They use a chemical process to produce electrical energy. A capacitor can store an electrical charge; a battery can't. When you discharge a battery, you convert the chemicals inside from one type to another type."*

He takes us through the history of the development of rechargeable batteries from NiCd through NiMH to Li-ion and the new nanophosphate Li-ion, followed by extensive discussion of his favourite

battery, the lead-acid. On the way he explains in detail the different way each kind of battery has to be handled and charged – differences that are very important but few people know about. These batteries are ideal for hand carried devices and tools, but one table shows how big a problem we have powering electric vehicles. Comparing how much power you can get per kg of mass:

- Li-ion nanophosphate, 160 Wh/kg
- Li-ion, 150 Wh/kg
- NiMH, 100 Wh/kg
- NiCd, 60 Wh/kg
- Lead-acid, 25 Wh/kg
- Diesel fuel, 12,700 Wh/kg

There is a lot of information about these things on the Web, but this book has the essence of it all in one place, and this is just one of the chapters.

The Coup De Fouet phenomenon in lead-acid batteries is discussed. This occurs at the beginning of the discharge of a fully charged lead-acid battery; there is a voltage drop of 10 to 30 mV per cell for a few minutes, after which the voltage recovers to a plateau that is slightly lower than the voltage measured before the discharge started. This measurement can be used to assess the performance of a lead-acid battery as shown in the Figure below.

One of the endearing qualities of WB8VGE's writing is the aside. For example he mentions something you may have experienced yourself; you have flooded your car engine, cranking and cranking until the battery dies.

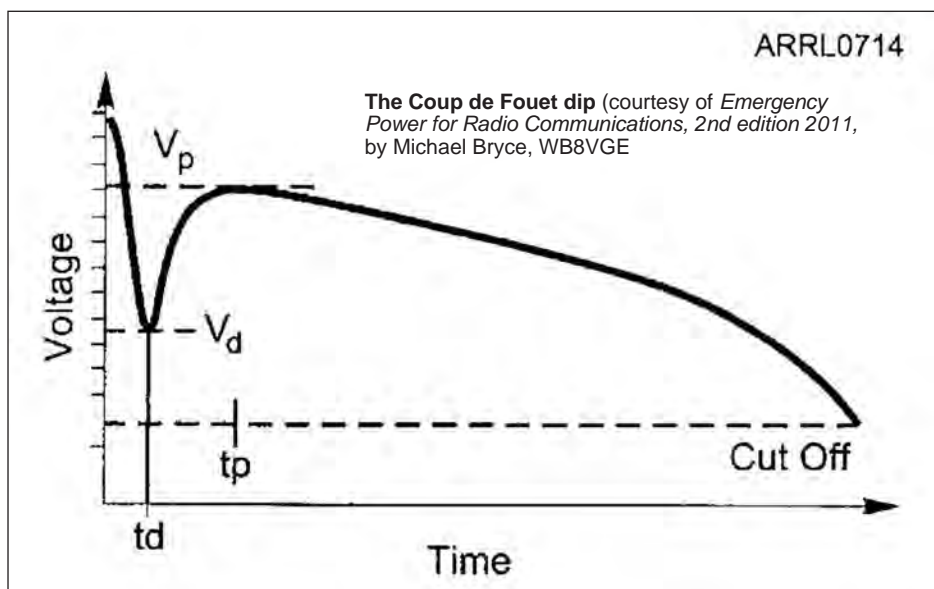
You make a phone call to AAA and come back five minutes later, to find the battery appears to have recharged itself! What happened? The heavy discharge turned the acid near the plates to water. The electrolyte could not get into the plates quickly enough to maintain chemical action, but while you were away it managed to do so. A sub-aside; you need one cold cranking amp for every cubic inch of engine displacement.

Another gem: When is a lead-acid battery considered discharged? The answer is quite simple. The battery is considered depleted when it can no longer run the load. You have to be careful here as some radios will quit working while the battery has plenty of power left. If you monitor the terminal voltage, it is considered discharged when its terminal voltage is 10.5V at rated load.

Another: Never set a battery on a cool damp cement floor. Water will condense on the top of the cooled battery; dirt and acid spray will combine to set up a nice conductive circuit between the terminals and the battery will self-discharge.

Published by the ARRL, #6153, US\$27.95.

(The comment that batteries do not store energy, whereas capacitors do, is interesting. Way back in my time in the UK we called lead-acid batteries "accumulators", implying that they store energy, and we called capacitors "condensers". The present Wikipedia definition of "accumulator" includes the statement that lead-acid batteries store energy. It may be just a question of semantics and "it depends on what you mean by . . ."



## IMEDION BATTERIES

Imedion NiMH batteries by Powerex have a remarkable capacity for their size. AAA, 800mAh; AA, 2400; C, 5000; D, 9500; 8.4V, 250; 9.6V, 230. (Note there are two "9V" to choose from). These batteries retain up to 85% of their charge after a year of storage at 20 degrees Celsius and are compatible with all Powerex chargers. They list at from \$12.95 for four AAA, to \$37.95 for two D. More information can be found online at <[www.mahaenergy.com](http://www.mahaenergy.com)>.

## CHECKING A BATTERY

The best way to test whether a battery will still do its job is to put an actual load across it and see how long it will provide current. A quick and easy way is to use incandescent lamps of appropriate wattage (an automobile headlight or tail light for example for a 12V battery), and you can then do something else while keeping an eye on the declining brightness.

## HF DIGITAL RADIO

*Get on the Air with HF Digital*, Steve Ford WB8IMY, 2011. Published by the ARRL.

This beginner's guide to PSK31, RTTY and more describes how to put together a radio, a computer and a device that ties them together to send PSK31, RTTY, JT65, MFSK, Olivia and PACTOR, plus an appendix with QST articles on Casual Contesting, Olivia, Reverse Beacons and a VOX sound card interface.

Besides the practical construction detail, there are explanations and examples of the operating practices used in the various modes, a list of the call signs and frequencies of Winlink 2000 RMS Radio Gateway stations as of December 2011.

Published by the ARRL, #6016, US\$25.95.

## ARRL 2011 PERIODICALS CD

This CD contains all the text of the 2011 issues of *QST*, *QEX* and the *National Contest Journal* (NCJ), on one CD. You can copy it on to your hard drive, or view the files direct from the CD ROM using Adobe Reader. You need a Pentium or equivalent CPU, 520 MB of RAM, 700 MB space on your HD.

In addition to the text of the publications, there is source code for projects and PC board patterns, Section News and Contest Soapbox and Results.

ARRL #5651, US\$24.95.





# BURNABY AMATEUR RADIO CLUB SWAP MEET

This year we had the privilege of holding our annual Swap Meet on Sunday, February 26 in the neighbouring city of Surrey, BC. Surrey will soon be larger in population than the City of Vancouver and has a fairly large population of Radio Amateurs. Along with its neighbour, Langley City, both have a very well organized Emergency Program. Their training is first class.



Thank you Icom and Com-West. Shown are Paul Veel, VE7PV, from Icom and Ed Sebulsky, VE7AFC and Stan Stefanik, VE7STN, from Com-West.

Since our usual hall in Queensborough was involved in reconstruction, we chose the Sullivan Hall in Surrey which is a historic building. Last year we sold 52 tables. This year we were able to crowd 31 tables into Sullivan Hall. This is due to the efforts of Ron Hill, VA7AUZ and Ted Edwards, VE7ZZU, who mapped out the table layouts.

Ron was also our table manager and I took on the job of selling the tables. For two years now, we insisted that all the tables be prepaid so we would not have to handle cash at the door. It certainly speeds up the unloading. Each table is named under the main holder of that table who is responsible for paying entry fees for his helpers or anyone sharing the table. We found that 90% of the tables were paid for by using PayPal connected to a Visa or Mastercard. We paid a small fee for this transaction.



Happy sellers. Shown are Paul Keenleyside, VA7KMG, Eric Stapleton, VE7EES, Keith Witney, VE7MID and Aiyana Markling, VE7KSS.



Bill Dick, VE7IKX of Fleetwood Digital Products with his imported radios.

We asked that all table reservations be handled by one person. That was me VE7CGE. All reservations were confirmed and the sellers were sent details of the event and informed that all payments were due prior to February 12. We were scrambling to have some folks share their tables as we sold out completely.



A happy Amateur with an Icom V82 handheld radio. Ian Procyk, VE7HHS, is at the far left and Erik Persson, VE7ZQ (grey hair) is at the right.

We worked through the 271 waiting buyers and collected their entry fee and stamped their hand to get in. We regard a Swap Meet as a social event. If you find a bargain or a great radio deal, that's a bonus.

All photos are by Karla Wakefield, VA7KJW. Thanks Karla!

– 73, Lou Beaubien VE7CGE

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# FRESH ON THE AIR

## — ADVENTURES FOR THE NEW AND BEGINNING HAM

### WHY NOT TRY SOME EXPERIMENTS?

One of the fundamental aspects of our hobby that I have discussed before, integrated so deeply in its history, is that of experimentation. We don't just have casual conversations or provide public service communications, we also reach out past the "now" and try to find new things for the future. Experimentation is what has driven our hobby to the state that it is in now.

That state, unfortunately, is one of "plug-and-play" equipment in which we rarely, unless working on a specific project, ever build anything from a kit or from scratch. As a new operator, you may find it odd that decades ago most Amateurs had to build some part of their equipment shack. Technology has jumped by leaps and bounds to the stage that a modern digital triband HT transceiver is about a quarter the size or more of a VHF handheld from the early eighties and has everything you need to operate.

So, what every new Amateur should try to do is build or experiment in something. It doesn't have to be elaborate, just functional for the hobby. Some readers have asked for some projects they can do, and here are three that are easy to try out.

### MAKE AN ANTENNA FOR YOUR HT

You will find many variations of HT antennas on the Internet that you can build to experiment with, such as the J-pole. But try this one. Get a length of coax with a BNC/SMA (whatever fits your VHF HT) connector on one end and nothing on the other. On the nothing end, cut both the outer and inner casings off so you have at least a 20-inch length of both inner copper radial and outer ground wires.

Cut the wires so that they are both exactly 19 inches long. Separate the two types of wire so one goes left and the other goes right. Now orient the copper radial upwards and the ground downwards. Connect the antenna to the HT. Find a station and contact them. Boom, you're communicating with your very own home-made experimental quarter-wave dipole antenna.

Now, using your amazing knowledge of communications antennas – or the amazing knowledge of the Internet – experiment with a J-pole, a half-wave

dipole, or a through-the-glass base station antenna. And if you live in a community or an area that is hung up on aesthetics and won't let you hang up an antenna, build yourself a hidden or camouflaged stealth antenna.

### USE LOW POWER

You should always use the lowest output power possible when communicating with another station so you don't cause any interference to other users on the frequency. But how low can you go? Lower power output means shorter signal distance. Get together with some ham buddies and see just how low you can go (sorry Harry) and how far that will take you.

Do this on the ground. Do this with one of you on the ground and one of you up a few flights of a building, or on a bridge. Heck why not one of you on a mountaintop and others scattered around on other mountaintops or buildings? Try one of you in a hot air balloon and the other in the middle of a lake. Not in the lake, but on a boat on the lake.

See what configuration gives you the furthest distance for the lowest output power. Can you talk to your friend 15 kilometres away on that mountain while you are on the thirtieth story of an office building using only 300 milliwatts of power? Maybe, maybe not.

Try experimenting with low power but using antennas that are more efficient. Does a better antenna make a major difference for the same power output? Or maybe you can try handheld beam antennas pointed at each other. What do you think will happen then?

Want to reduce your output power even more than what's available on your radio? Simply put a large piece of aluminum foil in front of the direction that the other station is at. Can you hear them now?

Don't be afraid to experiment with extremely low-power communications. You'll learn a lot, especially that theory sometimes doesn't match reality.

### RING THE BELLS AND BLOW THE WHISTLES

Your modern-day HT, mobile, or base radio probably has more options and settings on it than a gaming-geek's



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[www.skyfoot-technical.nu](http://www.skyfoot-technical.nu)

computer. It might have receive and/or transmit battery saver, emergency message mode, CW training, narrow FM, or one of many other new and neat features that are appearing on today's Amateur radio rigs.

To demonstrate that experimentation need not be with a soldering iron and circuit board, simply experiment with the all the features that your radio has. For example, if your radio has a transmit time-out feature, set it to the lowest time possible and see if that curbs your tendency to talk on and on.

Some of us are not into CW. But why not try out the CW training feature? Who knows, you might find it entertaining as well as educational. Got DCS, or Digital Coded Squelch? Why not try that out with a buddy instead of using CTCSS? Who says digital Amateur communications has to be voice or mega-data specific?

Get off two metres and try another band if your radio has it. Listen to communications outside of the Amateur Radio spectrum. You and some friends should try communicating with narrow FM if your radios have the capability. See if you can tell any difference between narrow and normal FM bandwidth. Experiment with the different settings for each feature your radio has. Be bold and don't be afraid to try different settings from the norm.

Even if you never pick up a soldering iron, our hobby has much to offer in experimentation. All you have to do is take the plunge and start.

**Transmission Tidbit:** Send me your short humorous Amateur Radio jokes for this section.

Comments, questions, kudos, and complaints (if you must) are all welcome. Also, if you've sent me a message previously and have not gotten a reply, try me again. Email and such can get buried under a hectic day's activities. Write me via the magazine; email me at [phillipjboucher@gmail.com](mailto:phillipjboucher@gmail.com), or via my website at [www.phillipjboucher.com](http://www.phillipjboucher.com). New E-book to be available mid 2012, "The Complete Guide to Yaesu's VX-6R".





# FCC AUTHORIZES 70 CM SPECTRUM FOR IMPLANTED MEDICAL DEVICES

**Norm Rashleigh, VE3LC**  
**RAC Representative to the Radio**  
**Advisory Board of Canada**

Following a petition from the "Alfred Mann Foundation" and subsequent "Notice of Proposed Rule Making" (NPRM), the Federal Communications Commission (FCC) has authorized the addition of the 70 centimetre radio spectrum to the MedRadio Service.

The purpose of this new spectrum is to support the development and use of radio micro-transceivers that can be surgically implanted into a patient with input and output connections to the patient's nerves to transmit and receive signals that provide muscular motor control and sensory perception. Several implanted transceivers may form a "medical micro-power network" (MMN) within a patient's body that is used to convey nervous system signals around damaged nerve tissue pathways in a patient suffering paralysis. The system is managed and programmed by an external body-worn controller that is part of the network. Initial development of this type of therapy seems very promising.

Specifically, the new and additional spectrum for the MedRadio Service will utilize the following sub-band allocations: 413 to 419 MHz; 426 to 432 MHz; 438 to 444 MHz; and 451 to 457 MHz. These new allocations are in addition to the existing allocation of 401 to 406 MHz that was previously authorized to program and read data from devices such as an implanted pacemaker or cardiac defibrillator. The nature of the digital wideband modulation schemes that have been developed may utilize the full 6 MHz bandwidth of each allocation and thus

provide a radio link communication with very high tolerance to interfering signals.

In addition, the technology will use automatic interference avoidance techniques such as dynamic change of the sub-band allocation channel if the system receives a very strong external signal. The choice of this UHF spectrum wavelength was based on the favourable propagation characteristics of the 70 cm band that makes it well suited for implants within the human body. The implanted transceivers will operate at ultra low power of 200 microwatts or less in order to preserve the limited battery capacity of implanted devices and limit outbound interference.

During the NPRM consultation by the FCC, the American Radio Relay League (ARRL) challenged the use of the sub-bands that were within the 420 to 450 MHz Amateur Service allocation but, according to the FCC ruling document, the ARRL conceded that, because of the robust interference mitigation techniques of the technology, interference to or from the Amateur Service should not be a problem. Notwithstanding, the use of MedRadio Service devices are on a shared and secondary status basis and are of equal status to the Amateur Service in the 70 centimetre Amateur band. This means that both services are not protected against interference from each other or other users and both must not cause interference to primary status users of the spectrum. The Radio Location Service has primary status in the band 430 to 450 MHz in Canada.

Currently in Canada, implanted medical devices are allowed in the 401 to 406 MHz range and are governed by the Industry

Canada "Radio Standard Specification" (RSS) document RSS-243. Industry Canada confirms that they are studying the developments of these new allocations in the US and may authorize similar allocations in Canada. If so, the new devices will be covered by a new RSS document. We will follow these potential developments with interest through the RAC membership in the Radio Advisory Board of Canada.

## REFERENCES

Alfred Mann Foundation – <http://aemf.org>

US Federal Register, January 27, 2012 – <http://www.gpo.gov/fdsys/pkg/FR-2012-01-27/pdf/2012-1540.pdf>

Industry Canada, RSS-243, "Medical Devices Operating in the 401 – 406 MHz Frequency Band" – [http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/rss243.pdf/\\$FILE/rss243.pdf](http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/rss243.pdf/$FILE/rss243.pdf)

Radio Advisory Board of Canada (RABC) <http://www.rabc-cccr.ca/home.cfm>

*Note that RAC membership in RABC is a key component to the defence of domestic Amateur Radio spectrum and favourable regulations.*

*All active Canadian Radio Amateurs are encouraged to support RAC by membership so as to contribute to the important funding of RAC membership in the RABC that is currently costing \$4,250 (+ HST) in annual dues.*

*Please ensure that you maintain a current membership in RAC.*



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### VE3A SPECIAL EVENT STATION CELEBRATING THE DIAMOND JUBILEE OF HER MAJESTY THE QUEEN OF CANADA

Sponsored by Robert Emerson, VE3RHE

**Start Date/Time (UTC):** Thursday, May 10, 2012, 7:00

**Stop Date/Time (UTC):** Saturday, June 9, 2012, 19:00

**Frequencies:** All HF bands except no WARC bands. QSL via VE3RHE.

Send QSL request and two USD with a return envelope to Robert Emerson, VE3RHE, 6950 Summer Heights Drive, Mississauga, Ontario, Canada L5N 7E9.

Logbook of The World will also be available.

Please note we cannot use US postage stamps in Canada.

**Information:** Contact Robert by email at <ve3rhe@rac.ca>. Operating schedule information: VE3A on QRZ.com.

# YL NEWS AND VIEWS

## OUR YL PROFILES: VE3BRE AND VE7BAB

Hello Folks,

Well this time around I have two YLs that have short stories so I am going to introduce you to these lovely YLs.

**First off, is Shirley Grant, VE3BRE.**

Shirley starts by saying that she is one of the many lapsed Amateurs, one who was once very active but now is totally inactive.

Shirley is a life member of the Canadian Ladies Amateur Radio Association and she loves reading *The Clarion* which comes out bimonthly.

Shirley and her husband were living in Jamaica and they met a man who was in their scuba diving club. This gentleman worked for an American company who had sent him to Jamaica for a year. He had brought his Amateur rig with him. His wife, also a ham, decided not to join him; however she managed to get the loan of a rig from a friend. Shirley visited this man in his ham shack a couple of times and was positively intrigued that he could talk to his wife every evening at "NO COST!"

When Shirley and her husband returned to Canada, she had no idea how to become an Amateur as she knew no one in that fraternity. One day she spotted a newspaper article that mentioned an Amateur Radio club in Toronto. She swiftly contacted them, took the course and Presto! She became VE3BRE in 1971.

Her husband built her rig, a Heathkit HW-101 and she spent many hours on it. Shirley even developed cramps which the doctor determined was from all those hours on the key. She received her Advanced licence a year later.

As a side note, Shirley told me that she wrote a funny article about being in hospital in Toronto for 7 months.

She said she had a 2-metre rig at her bedside. She entitled the article "Ham Radio and Bed Pans" and I have included it later in this column. I hope you enjoyed it.



**Now we go over to the West Coast and meet Betty Ann Barton, VA7BAB.**

Betty Ann was licensed in 2004. She holds the Basic licence and is not on the HF bands.

She tells me that she has four grown children, eight grandchildren and six great grandchildren – and she is still only 22!

Betty Ann's interest in Amateur

Radio was brought about by her husband's (Norm, VE7BZC) involvement in the huge Interface Fire in the Okanagan in 2003. Norm was, and still is, the Communications Unit Coordinator for the local Central Okanagan District Emergency Operations Centre (EOC). She decided that she wanted to be able to help with future emergencies as a radio operator too! So she studied for and obtained her Amateur licence and became a member of this local EOC Radio Team of approximately 60 registered Amateurs.

Betty Ann got her first real Emergency Communications experience as a radio operator during the last big fire in her area, known locally as the 2009 Westbank-West Kelowna Interface Fire which lasted seven days.

Betty Ann's main Amateur Radio interest involves local emergency operations as a VHF radio operator and helping with the Radio Team's preparedness. She is also keenly interested in APRS mapping and tracking – again locally for emergency Radio Op deployments and for personal use.

She was a member of the organizing committee that arranged and hosted the 2006 BCLARA YL Conference which was held in the Okanagan Valley.

Her other hobbies include doing puzzles, bird watching, reading, beginner painting and baking. She has a wonderful friend Leona, VE7ONY, and her husband John, VE7ONX, who have been friends for years. John was her Designated Examiner.



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Thank you girls for sharing your stories, it's always nice to learn that we YLs are not the constant talkers that some folks think we are. We are very interested in our hobby and we are just as ready, willing and able to help out should disaster happen.

We have all seen those horrific fires in BC and it's nice to know that there are dedicated hams at the helm.

**Now for the saga of "Ham Radio and Bedpans" by Shirley, VE3BRE...**

"Have you ever been in the Isolation Unit of a hospital? It can be a very lonely place.

I had contracted staphylococcus during an operation in a small outlying hospital after a very serious car accident. I was shipped down to a Toronto hospital and into Isolation.

Luckily, though, I was a ham radio operator, with the call VE3BRE. What was even luckier, the sister of the hospital administrator was also a ham, so the administrator was reasonably familiar with the hobby. Thus he allowed me to have a small 2-metre rig in my room.

One night about 2 am, all alone in my isolation room in the hospital I was waiting, and waiting. First patiently, then impatiently for the night nurse to come and take away the bedpan. (What was she on her coffee break?)

In desperation I decided to try to lower it to the floor myself. The bed rails were up, but I thought that by leaning very carefully over the rail far enough, I could get it to the floor. So I tried out my plan.

But with a sudden frightening clank, the bed rail gave way and slid into the down position. That wasn't the only thing that slid down! I tumbled out of bed and literally into the bedpan!

The noise of the bed rail was loud enough to bring the night nurse running (a bit late, but running to my assistance).



# Radio Amateurs of/du Canada

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Sometime later when my heart had stopped thumping and I was back in bed in a clean dry nightgown, I began to see the funny side of it all. I was given a cup of tea to soothe my jangled nerves and I decided that it was so funny I wanted to share the whole episode with someone.

Well, I couldn't phone a friend at this time of night, but if I got on the air, and put out a call, it would only be heard by someone who was up and about himself. I say himself because about 90% of hams are men. So I did just that. After calling on every frequency, I finally made contact with a ham who was on his boat, moored at a dock in Buffalo, and feeling sleepless himself.

Knowing there was no one else on the air, I recounted my adventure, after receiving his solemn promise that he wouldn't tell another soul.

After a 5-minute conversation and a whole lot of laughs, I turned off my rig and went to sleep.

Next morning I turned on my ham radio, and to my horror and utter dismay, on every frequency I heard other hams roaring with laughter at the story of BRE falling into her bedpan. No matter where I turned the dial, the story was being recounted over and over again.

To this day, I haven't lived it down.

Do you wonder that I no longer put my faith in a MAN'S WORD?"

Thank you Shirley for this wonderful story, and yes, they say that we women are gossips (right – don't think so). Anyway, now you get to relive it all over again – but it is so funny and in this day and age we need something to smile about, and you certainly have given us reason to smile.

That's if for now folks. I hope you all have a wonderful spring. Summer is not that far off and I already have my camping site booked. I can hardly wait.

33, 73, 88 as the case may be... Val

TCA

# GETTING STARTED ON THE AMATEUR RADIO SATELLITES

(Portions of this column were previously published as "Working Your First Amateur Radio Satellite: It's Easier Than You Think" in *Monitoring Times* magazine, Brasstown, NC 28902.) Thank you MT!

Since we last met, I trust you have been doing some more Amateur satellite "homework" in preparation for your first contact via one of our so-called "EZ-sats".

In this installment, I'll share some more tips on how to program your radios to compensate for "Dr. Doppler" and also give you a better idea of how conversations flow on these "repeaters in the sky".

## SETTING UP YOUR RADIO

By now, you should be familiar with the times when AO-27 and/or SO-50 will be in range of your location and you have assembled the equipment and antennas needed for you to communicate through them.

You are almost ready to make your first contact, but first you'll need to program your radios so as to take into account the Doppler shift that I discussed in a previous column.

As I also discussed, if your radio has programmable memories, it's a good idea to program one or two additional frequencies into the memory bank above and below the published uplink and downlink frequencies. These can be used as the satellite first moves toward you and then away from you as it passes overhead.

For example, if the operating downlink frequency for AO-27 is listed in the satellite's operating schedule on the AMSAT website as 436.795 MHz, you should program

memories into your radio for around 436.805 and 436.815 on the high side and 436.790 and 436.785 MHz on the low side of the published downlink frequency. Likewise, if the uplink frequency is listed as 145.850 MHz, you should program memories for around 145.875 and 145.900 MHz on the high side and 145.775 and 145.750 on the low side of the published uplink frequency.

In addition, as I noted in my previous column, like many of today's terrestrial repeaters, a number of our FM satellites require a CTCSS tone for access be sent on the uplink so don't forget to determine if the satellite you want to use requires one and set your radio accordingly.

## PUTTING IT ALL TOGETHER

Now is a good time to visit the AMSAT website (if you haven't already) and download a set of current online pass predictions for AO-27 and/or SO-50 from [www.amsat.org/amsat-new/tools/predict](http://www.amsat.org/amsat-new/tools/predict).



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Corunna, ON  
N0N 1G0  
E: va3ksf@rac.ca

Keith Baker, VA3KSF/KB1SF

Select the satellite for the prediction (AO-27 or SO-50) and then enter either your Maidenhead Grid Square or your latitude and longitude into the online prediction tool. Then, click on "predict" and *presto!* a list of satellite pass dates and times (in UTC) and directions (in degrees) should pop up. You can also click the "view the current location of AO-27 (or SO-50)" link for a snazzy map-based view of each satellite's next few orbits.

In the table provided on the website, the acronym AOS stands for "Acquisition of Signal", which is the time when the satellite will first come over your horizon. The acronym LOS stands for "Loss of Signal", which is when the satellite will fall back below the horizon at your location. Both azimuth and elevation headings are expressed in the degrees of a 360 degree compass from your location.

You will also note that each of the satellite passes at your location follow a repeating pattern. As the satellite is in a near polar orbit (which means it orbits over the Earth's north and south poles), this means the satellite will be in view of every spot on the planet several times each day as the Earth (and you!) slowly rotate underneath. For AO-27, and most other polar orbiting satellites, you'll usually observe a string of three passes – one moving from north to south (or south to north) off to the east; one nearly overhead; and then one off to the west – with each pass spaced about 90 minutes apart. A similar string of passes will repeat some 12 hours later in the opposite north/south direction.

When you are first starting out, it's probably also best to pick a satellite pass that will put the satellite close to being nearly overhead (90 degrees) of your location. So look for those pass elevations in the table that are well above 45 or 50 degrees. These will be your "targets of best opportunity".

**AO-27 was successfully launched on September 26, 1993 aboard Arianespace V59 from the European Space Agency's Ariane launch facility in Kourou, French Guiana. (Arianespace Photo)**





## WHAT TO LISTEN FOR

Now it's time to actually listen for the satellite. At the appointed AOS time, step outside, turn your radio(s) on and set it (or them) for one of the frequencies on the upper side of what's published for both the uplink and downlink. Then, wait for the satellite to pop above your horizon.

If you are using a Yagi antenna of some sort, aim it at the horizon in the direction of the AOS prediction and start sweeping the antenna back and forth horizontally. Be sure to turn the radio's squelch on the downlink frequency off and (carefully!) listen for the radio to quiet. Once it does – congratulations, you'll be listening to an Amateur Radio satellite in orbit some 500 miles above Earth!

You may want to practise tracking the satellite with your antenna and simply listening for the rest of that satellite pass (or a few more) to get a better idea of how the conversations flow on the "bird".

It is also important to remember that, not only is the satellite rapidly moving toward and away from you (which is causing the observed Doppler shift in frequency) the satellite is also slowly tumbling in orbit. So, at multiple times during each pass, its transmit and receive antennas will be cross-polarized with yours, which, in turn, will create a significant loss in signal strength.

If the satellite signal fades (or the downlink gets garbled) try switching downlink frequencies on your radio up or down. Twisting or moving your antenna around to better match the satellite's changing antenna polarization with yours should also help.

During the pass, you'll probably hear one or more Amateurs simply saying hello or exchanging their Maidenhead Grid Square numbers. Indeed, most conversations on AO-27 are usually very brief "hello- and-goodbye" exchanges similar to an HF DX exchange so as to give the many others listening in a chance to work the bird. As you might guess, long-winded ragchews are not welcome on the FM birds.

## IT'S SHOWTIME!

When you've gathered up enough courage to actually try your hand at making a contact (and if you are using the same radio in full duplex mode on the uplink and downlink), you also need to make sure you are using a speaker separated from your microphone. This can be an earpiece or an external speaker of

some kind. In full duplex mode, using a microphone and a speaker located right next to each other (such as on a handheld) will cause howls of feedback through the satellite! Needless to say such activity will not make you a popular camper on the bird, either!

However, once you are ready to try your luck at actually making a contact, simply wait for a pause in the action and then (quickly!) drop your call sign in between contacts. Hopefully, you will immediately hear your own signal on the downlink, a discovery that will provide immediate confirmation that you are, indeed, getting in. But, please refrain from calling CQ because, just like causing long distance feedback and ragchewing, calling CQ on the FM birds is considered another Amateur satellite protocol "no-no".

But regardless of how, where and when you do it, the first time you hear your own voice coming back down from a satellite (or someone answers your call), the thrill will be much like your very first Amateur Radio contact, shaking hands, sweaty palms and all!

It was for me and I'm sure it will be the same for you.

## WHAT IS AMSAT?

The Radio Amateur Satellite Corporation (AMSAT) is a worldwide organization made up of enthusiastic individuals who design, build, launch and then operate most of the world's Amateur Radio satellites as a part of a continuing, non-profit program of space education and space science.

Most satellite operators usually think of AMSAT much like their local repeater group. Indeed, those of us who have used VHF or UHF FM repeaters for a while know that it takes resources – time, effort, and *money* – to keep the local machine up and on the air. An Amateur Radio satellite is, in many ways, simply another repeater. However, these space-borne "repeaters" are placed on a lot higher "ground" and take hundreds, if not thousands, of hours of donated effort and resources by hundreds of people to build and launch one satellite. And even though much of the labour and materials to put an Amateur satellite together are donated to the cause, launch costs are now being measured in the millions of dollars.

*That's where AMSAT comes in.*

While Amateurs by no means must be members of AMSAT to use any of the birds (AMSAT puts them up there for *all* of

us to use and enjoy), it follows that if you become a regular satellite user, then you should feel the obligation to share the burden of their birth and upkeep. Unfortunately, satellites in orbit don't last forever. As a result, a continuing membership in AMSAT is the single best way to ensure new birds will be built and launched in the future.

In addition, AMSAT publishes a wealth of knowledge in printed and digital form as well as offering deep discounts on computer software programs for its membership. Put another way, if you enjoy operating via satellite, the nominal yearly cost of an AMSAT membership is a small price to pay to help perpetuate an activity that's, quite literally, out of this world!

As AMSAT's current Treasurer, I'm often asked, "Where does my membership money go?" The answer is that, the North American AMSAT group (AMSAT-NA: a not-for-profit organization based in Washington, DC) employs only one, full-time paid staff member. The rest of us, from the President and Board of Directors right on down to the people building the space hardware and programming the space software in their garages and basements, are all volunteers. This means that the bulk of AMSAT's operating revenue goes directly into building, launching and operating our satellites.

More information on becoming an AMSAT member can be found at <[www.amsat.org/amsat-new/membership](http://www.amsat.org/amsat-new/membership)>.

## WRAP UP

I hope these first few columns have been helpful in giving you some tips on how to make your very first contact through an Amateur Radio satellite. It may take some time, effort, a bit of patience, and a nominal investment to get your first satellite station up and running. However, as you've probably also seen by now, you may have some (or most) of it assembled if you already have some dual-band VHF/UHF equipment in your "shack" or car.

I also hope you've learned by now that it doesn't require a degree in "rocket science" to use the OSCARs. Rather, a little patience and a desire to learn new ways of doing things will be more than enough for you to be successful.

In future columns, I'll be passing along some more useful, in-depth tips on how to optimize your ground stations to use the birds even more effectively.

See you then!



## INTRODUCTION

What an exciting time to be hamming! The diversity of digital modes with their fascinating traits attracts Amateurs, both new and veteran. While some rely on known modes, others essay novel ones. All the activity suggests that it is apt to consider digital operating tips.

This article mainly refers to keyboard-to-keyboard modes ("digimodes") such as Phase Shift Keying (PSK) and Radioteletype (RTTY), wherein the information exchange is unstructured, like a conversation. A structured mode is included for contrast and for its special features. Operating challenges, references and links conclude the article.

## IT'S YOUR RIG AND SIG

The digimode transceiver (XCVR) gets a workout being pressed to produce stable, accurate, effective and clean emissions often for hours on end.

Starting with stability, rigs with significant frequency drift are not going to function well on most digimodes. Check your rig's stability against WWV or CHU. Does it drift more than a few Hertz per hour? If so, then a more stable rig needs to be employed.

What about accuracy? Most digimodes are located in very small frequency band segments. Typical XCVRs have no problem being tuned to the segment, but make sure that receiver incremental tuning (RIT) and transmitter incremental tuning (XIT) are "Off". The rig usually is

Figure 1: Tuning a PSK Signal

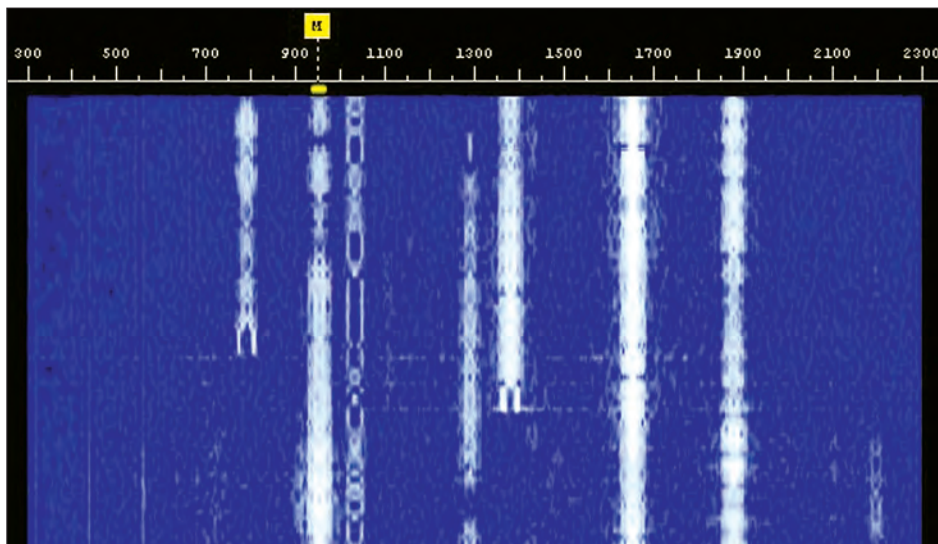
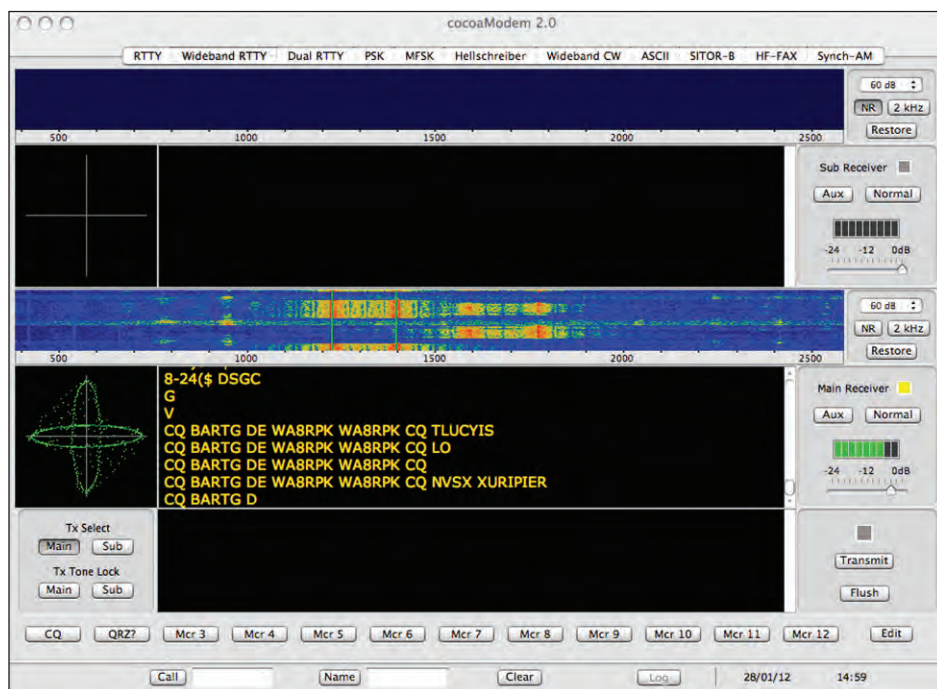


Figure 2: Tuning an RTTY signal



tuned to a frequency where digimodes concentrate. These are published in band utilization charts while some programs have them preloaded. Table 1 on the next page shows some digimode frequencies.

Take an example of working a binary phase shift keying (BPSK) station on 20 metres as shown in Figure 1. Select upper sideband (USB), tune the XCVR to 14.070 MHz and lock the dial to prevent inadvertently changing frequency. Choose the particular signal by clicking its waterfall trace, by clicking its printout in the signal browser, or whatever method

your modem software offers. If available, activate the software's automatic frequency control (AFC) so that, if the other Amateur drifts, your decoding will continue. The transmit/receive frequency is the base frequency plus the waterfall audio frequency or, in this case, 14.070.950 MHz.

The actual radiated digital signal is a single sideband one, but which one? The convention is becoming USB for most digimodes, on all bands, even below 10 MHz where lower sideband (LSB) would be usual. RTTY tends to use LSB on all bands but you will see Europeans using USB.

A similar tuning technique is used for RTTY (see Figure 2). RTTY stations spread out over a lot more bandwidth than PSK so unless you have a wide band receiver (meaning over 20 kHz of received bandwidth), you will have to tune around the RTTY segment. Notice the "scope" on the left. It shows an ideal "crossed bananas" display indicating that the signal's mark and space tones are precise and that they are optimally tuned in.

To be effective, rein in your power! You do not need more than your colleagues. Using more can drive down everyone's Automatic Gain Control (AGC) and – in the absence of other measures such as filtering – make it difficult to detect weaker signals.



Controlling your power will protect your rig. The digimode duty cycles range from 80% to 100%, much more than the CW duty cycle of around 44% and the SSB duty cycle of 20% (uncompressed) to 40% (compressed). While present day XCVRs nominally can produce “100 watts” output, that specification is for CW and SSB. The digital power output for many transceivers needs to be one-half, one-third, even one-quarter of the nominal rating. Check the instruction manual for the power rating for digimodes and RTTY (both FSK and AFSK) but, if the manual is silent on the topic, cut power to one-quarter of maximum, 25 watts for that “100 watt” rig.

How do you establish 25 watts? For many rigs, adjust the radio frequency (RF) drive to maximum and set the audio drive into the XCVR to produce 25 watts output while sending idle tones, no data. Do this into a dummy load or on a “dead” band.

After a half-hour of QSOs, feel the rig’s heat sink. Can you comfortably grasp it? If not, then you may still be running too much power for the rig and ambient temperature. As a contester, you will be on-air more than usual. The heat sink will get very hot. A further power reduction likely will not match your competitive instincts! What to do? A fan blowing across the heat sink fins works for many.

A clean signal, one of minimal bandwidth for the mode and free of spurious frequencies, is essential. Figure 3 shows an average strength signal, at 1475 Hz, but notice that the signal is wider than others and shows visible sidebands. This is over-modulation producing spurious emissions called “splatter”. The signal is interfering (QRM-ing) with the signal to the left.

How can you prevent excess bandwidth and splatter? Watch your XCVR’s automatic level control (ALC) display. If it is indicating, while working into a reasonably matched load, then you probably are splattering and wrecking QSOs for others. Make sure that compression and other audio processing are “Off”. A small reduction of audio drive likely will solve the problem.

Most rigs have the audio channel tailored for voice. The audio bandpass might roll off below 300 Hz and above 2500 Hz; it might have a peak at 1200 Hz; it depends on the rig. This means that, as you emit a digital signal at different frequencies in the bandpass, the output will vary. An eye on the power output will let you get the most out of the rig.

**Table 1: Typical Digimode Frequencies**

Amateur Band (metre)	Popular Modes* (MHz)	“Emerging” Modes** (MHz)	RTTY (MHz)	JT65A (MHz)
160	1.807 1.838	1.835	1.800	1.838
80	3.580	3.582	3.590	3.576
40	7.030 EU 7.035 NA	7.037	7.025 7.080	7.039 EU 7.076 NA
30	10.140	10.142	10.120	~10.139
20	14.070	14.072	14.080	14.076
17	18.100	18.102	18.103	18.106
15	21.070 NA 21.130 EU	21.072	21.080	21.076
12	24.920	24.922	24.910	24.917#
10	28.120	28.122	28.080	28.076

**Notes:**

NA = North America; EU = Europe

\*Principally BPSK-31 and some QPSK-31

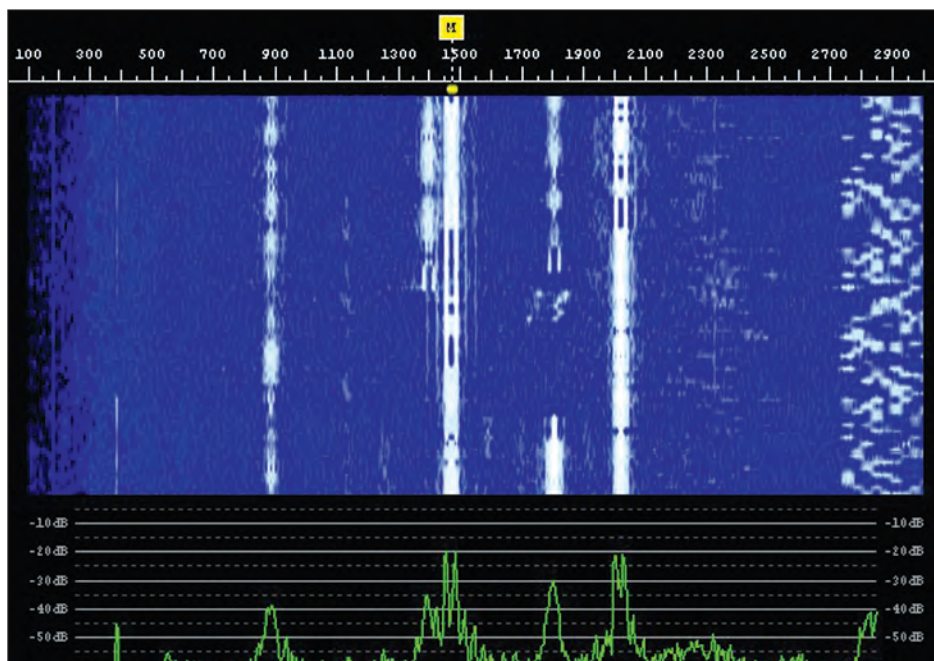
\*\*Wider bandwidth versions of BPSK and QPSK; plus Olivia, Contestia, DominoEX, Thor, Throb, etc.

#Changed from 24.920MHz in Fall 2011.

AFSK type RTTY uses LSB on all bands.

Other modes use USB even on low bands (below 10 MHz)

**Figure 3: Splatter+QRM**



**BE A TOP OP**

Tailor your mode to the ones around you or, if available, to band plans. At least, use a narrow-band mode among other narrow-band modes. Before you transmit, consider what’s happening on the waterfall and text screen. Do you need any of those stations? If so, call when the station is free. If not, find a clear spot. Watch it for a minute or so and, if clear, commence calling “CQ”.

When you start a transmission, such as a “CQ” or an “over”, send one or two blank lines. When received at the other station, your copy gets separated from any previous text on that op’s screen. This practice stems from time-tested RTTY operations.

The plethora of digimodes sometimes makes it difficult to determine which mode is spilling down your waterfall. That is where the Reed-Solomon Identification

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(RSID) codes are handy. Most modes have one. When activated, the RSID is attached to the beginning of your transmission. If stations that are able to copy you have their software set to decode RSID, then they see an indication of your emitted mode and frequency (see Figure 4). They can set their mode and frequency to yours and attempt to work you, often with a single mouse click. Some software provides "Video Identification", also visible in Figure 4.

You need not send the RSID or Video ID for common modes – such as BPSK31, CW and RTTY – since most operators know their appearance. As well, disable these features once communication is established: you may be annoying other Amateurs should you not.

Top ops copy what is transmitted. Many operators sadly are not copying what is sent, but are getting information from local or online databases. The strict might claim that, since the traditional information (signal report, location, etc.) has not been exchanged, the QSO is incomplete. That's for others to consider. It fundamentally is rude to ignore what your QSO partner sends. Figure 5 on page 44 shows poor copy.

Top ops appropriately use macros. They are good for constant information (name, QTH, rig, and so on) and for contest and DX pileup exchanges. Macros make less sense in a ragchew.

### MAKE BETTER QSOs

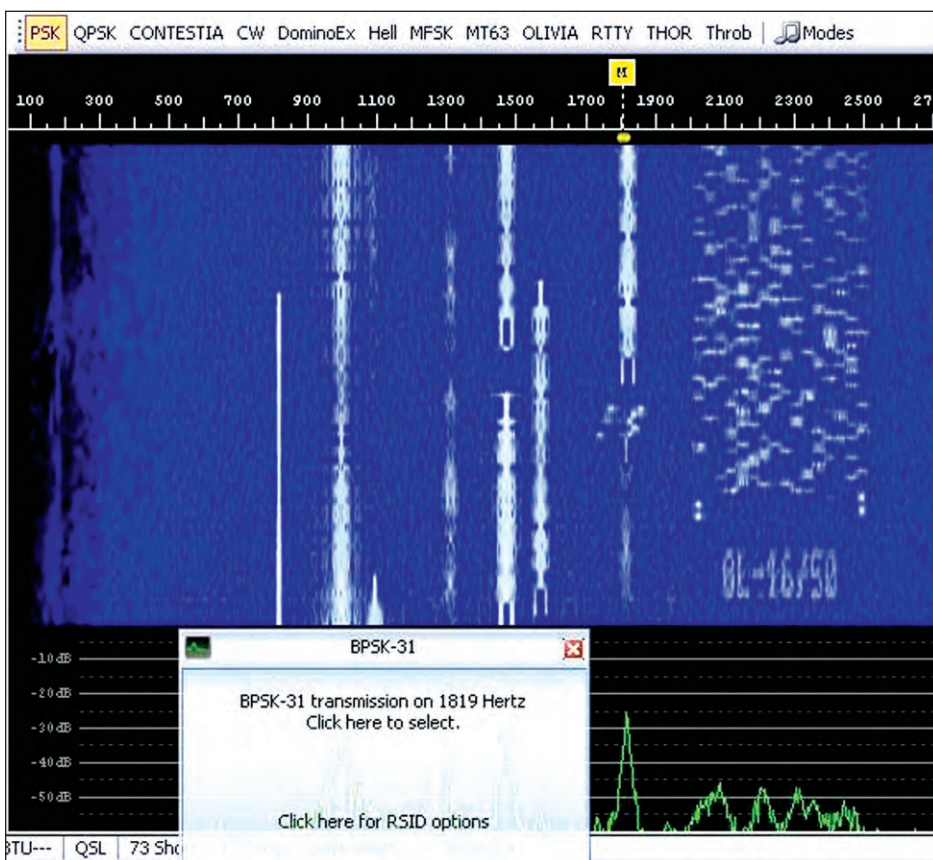
Digimodes offer special ways to maximize information value and to improve each other's operation and station.

Take signal reporting. Use the Readability Strength and Quality (RSQ) system (see Table 2 on the next page) not the Readability, Strength, and Tone (RST) system. Quality considers the cleanliness of the signal. Learn how to give useful Quality reports.

Table 2: RSQ System

<b>Readability</b>	
R5	>95% readable
R4	>80% readable
R3	>40% readable
R2	>least 20% readable
R1	not readable
<b>Strength</b>	
S9	Very strong trace
S7	Strong trace
S5	Moderate trace
S3	Weak trace
S1	Barely perceptible trace
<b>Quality</b>	
Q9	Clean signal; no visible unwanted sidebands
Q7	One barely visible pair of unwanted sidebands
Q5	One easily visible pair
Q3	Multiple visible pairs
Q1	Splatter over much of the spectrum
– per VK3BGH	

Figure 4: RSID+Video



Look at the waterfall and notice whether or not excess sidebands are visible. If visible, Q is not "9". It takes guts to report a sub-par signal but, done gently, it will improve everyone's hamming and allow more signals per band.



For enhanced quality reports include the inter-modulation distortion (IMD) and Signal to Noise Ratio (SNR) values if your software calculates either or both. Be aware that the automatic IMD measurement might be erroneous when taken under modulation or with very weak or very strong signals.

If you receive a few poorer IMD reports, investigate your station: rig-to-computer connections, ground loops, audio drive, RF drive, processing, SWR, etc. Learn how to monitor your signal with a separate XCVR. Why bother? NM1R told this writer, "I have had operators tell me when things don't look right and I appreciate it. It is how we learn."

On slow modes like Olivia, keep your messages shorter than those used on fast modes. It is tedious to watch a long-winded message printing when a shorter one will do. Set up macros for slow and for fast modes. Use CW abbreviations on slow modes.

While we are used to providing a QTH in CW and SSB modes, digimode operators like to include the Maidenhead Grid Locator. It is a good idea to send the grid twice just in case the transmission gets garbled: it is difficult to guess grid designations! Send the more accurate six-character grid such as EO10ro. Some programs use locator information to map the QTH and to trigger the antenna rotator, to name only two.

If conditions are bad, send abbreviated versions of your messages and send them twice. For example, instead of "RIG is", "ANTENNA is", etc., send:

"35 watts + dipole // 35 watts + dipole"

## WIDEN YOUR HORIZONS

Try the many modes. Neophytes start with BPSK-31: it is widely deployed, works well and suits both slow and fast typists. Having a go at the other modes puts a little of the experimenter back into the ham. Table 3 shows features of some modes.

Afraid that you need high power to work RTTY? Contemporary XCVRs, excellent modem programs and good antennas will net you Qs even at 30 watts. BPSK-31 signals not cutting the QRN and QRM? Try Olivia. This writer easily works a ZL friend on 20m Olivia even when the signal is almost invisible on the waterfall and BPSK does not function. BPSK part of the band is too crowded? Slide up a couple of kilohertz

**Table 3: Features of Digimodes**

	Mode	Approx. Speed (WPM)	Bandwidth (Hz)	Notes
Phase Shift Keying Modes	BPSK 31	50	62.5	Very popular. Performance similar to CW. Fair QSB tolerance. Use either sideband.
	BPSK 63	100	125	Same as above but more through-put.
	QPSK 31	50	62.5	Includes error correction. Good QSB tolerance. Convention is USB. Tuning is critical. Stability is crucial.
	QPSK 31	100	125	Same as above but more through-put.
Frequency Shift Keying Modes	RTTY 45	60	270	Very popular for digital DX-ing. Good for rapid turn around QSOs. Low QSB tolerance if both tones fade. Use LSB.
	Olivia 4-250	20	250	High QSB tolerance. Copy signals with SNR as low as -12dB.
	Olivia 8-250	15	250	Same as above plus copy signals with SNR as low as -14 dB.
	Contestia 4-250	40	250	Similar to Olivia 4-250 plus more through-put.
	Contestia 8-250	30	250	Similar to Olivia 8-250 plus more through-put.
	JT65-HF	2.5	175	Very high QSB tolerance. Very low through-put. Copy signals with SNR as low as -30dB. Structured mode.
Comparisons	CW	40	150 at 35-60 WPM	QSB and signal detection depend on operator's skill, can be high QSB tolerance and low SNRs. Good for rapid turn around QSOs.
	SSB Voice (no compression)	100 - 150	<3000	QSB and signal detection dependent on operator's skill, can be moderate QSB tolerance and SNR +3dB or better. Good for rapid turn around QSOs.
For sources, please see the References at the end of the article.				

and check the rarer and wider bandwidth modes. Consider a low speed form like Olivia if you type slowly or employ speech-to-text software.

Dare yourself to operate at half of your normal power. Notice that your results are still good. Challenge your skills at 5 watts. These excursions to newer "ham-scapes" will reveal how well your station and you function in novel situations.

For amazement, try JT-65HF, a weak signal modem software for the HF bands, developed by Joe Large, W4CQZ and based on earlier work of Joe Taylor, K1JT (see Figure 6 on the next page).

Signals suffering fading (QSB) and buried tens of decibels in the noise may be copied. Do *not* radiate more than 20 watts. This cannot be overly stressed: weighing in at 50 watts will lose you JT65 friends. Running very low power (QRP), with a good antenna, makes international communications nearly routine. There are other versions for earth-moon-earth (EME), meteor-scatter, and for V/UHF communications.

Operators of weak signal modes know that timing is crucial. Your computer's clock must be accurate to the minute plus/minus one second or better. You must periodically calibrate the clock against an online or on air source.



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- New TCA Author's Agreement

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Notice the buttons in Figure 6. Each button, except one, is a macro for stock information exchange. "CQ" sends the general call, with your station identification plus your Maidenhead Grid Locator. "Report" transmits the other station's call, your call, and an automatically generated signal report ranging from zero dB (very strong) to -26dB (about 400 times weaker). The non-stock message allows for only 13 characters.

Observing the lower left panel in Figure 6, and reading from bottom to top, you can see a QSO advance between AE5UV and KD8EZZ. AE5UV calls "CQ" and includes the locator in time slot 21:30. AE5UV is called by KD8EZZ from FM09 at 21:31.

EZZ replies to UV with a signal report of -08 at 21:32. The next minute was not grabbed so we do not know how the QSO ended.

Notice that several signals were decoded in each time slot. The waterfall shows the signals. Try mapping the difference frequency in the lower left panel ("DF") to a plus/minus difference from the waterfall centre. See the almost invisible trace at 711Hz? That's KJ6CC and VE3KAO carrying on a QSO, each with very weak signals at their respective QTHs.

Timed transmission mode operators are wise to listen for two time slots, an odd and an even one, before calling CQ since it often doubles the chances of finding a calling station.

Another idea is to vary your CQ pattern: calling CQ only on even minutes makes it likely that you will miss stations that are transmitting in the same slot.

Still thinking widely, the software developers among us can try developing new, or improving existing, digital modes. With ever higher barriers to RF emissions and stricter interference standards, Amateurs can enjoy "last laugh" success, similar to when Amateurs were banished to "200 Meters [sic] and Down". Work the world in a stealthy fashion!

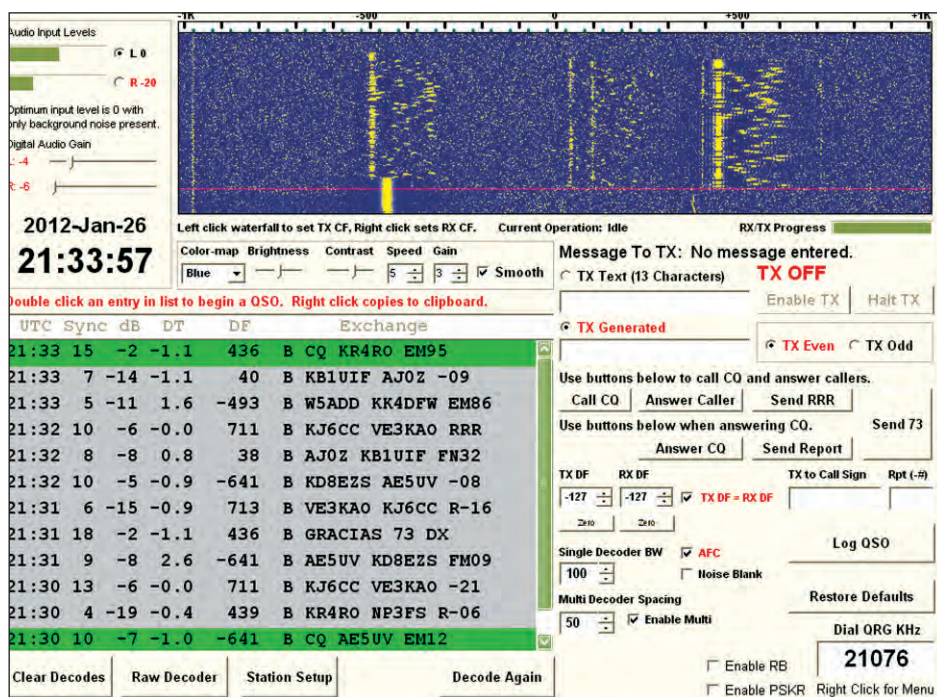
Figure 5: Poor Copy

```
W de EA
Hi <his:Name> ← empty variable in macro
Report : 599 599
Name : Sonny ← (name changed by author for privacy sake)
QTH: : Tenerife (Canarias)
Locator: IL18rk IL18rk
BTU <his:Name> ← empty variable in macro
W de EA pse kn

EA EA de W W

***Hello José-Francisco and nice to meet you...Thanks for the
↑ erroneous name in macro
contact. ***
RPT: 599 599
```

Figure 6: JT65HF



## WRAP IT UP

Keep your QSO ending short. Who needs to know the QSO was number "n" in your log? When you send "CL" or "SK", you are done; you need not send something when the other Amateur ends the QSO.

The final courtesy of a QSO is the exchange of QSLs. So many Amateurs are connected to the Internet that it is easy to QSL using N5UP's eQSL or the ARRL's Logbook of the World (LOTW).

## CONCLUSION

This article offered an overview of several digital modes. The emphases were on basic and more advanced operating techniques coupled with an invitation to experiment with the range of digital modes. Readers are invited to broaden the application of these modes and to refine operating practices. I will be glad to receive your inputs about digital operating.



## LINKS

### BAND UTILIZATION:

[http://www.30mdg.net/30\\_Meter\\_Band\\_INFORMATION\\_Aug\\_2010\\_002.pdf](http://www.30mdg.net/30_Meter_Band_INFORMATION_Aug_2010_002.pdf)

[http://homepage.ntlworld.com/wadei/160m\\_band\\_utilization.htm](http://homepage.ntlworld.com/wadei/160m_band_utilization.htm)

<http://www.rac.ca/en/rac/services/bandplans/hf/hfplan-20080711.pdf>

### DESCRIPTION OF SEVERAL MODES:

Go to <http://www.w1hkj.com/FldigiHelp-3.20/Modes/index.htm>.

Select a mode. Scroll down the page and click on "Description of the Mode"

### JT-65HF mode:

[http://ve3bux.com/files/JT65\\_Operator\\_Guide.pdf](http://ve3bux.com/files/JT65_Operator_Guide.pdf)

### Olivia mode:

<http://www.oliviamode.com/>

### Reed-Solomon Identification Codes:

[http://www.w1hkj.com/RSID\\_description.html](http://www.w1hkj.com/RSID_description.html)

### RSQ signal reporting system:

<http://www.rsq-info.net/>

### Inter-modulation Distortion (IMD):

<http://www.rsq-info.net/IMD-Measurement.html>

### RTTY Mode:

<http://www.aa5au.com/rtty.html>

### WSJT mode:

<http://www.physics.princeton.edu/pulsar/K1JT/wsjt.html>

## REFERENCES

*The ARRL Handbook for Radio Communication*, 88th edition. The American Radio Relay League, Inc., Newington, CT, USA, 2010; especially Chapter 8, "Modulation" and Chapter 11, "Digital Modes".

Steve Ford, WB8IMY. *ARRL's HF Digital Handbook*. Newington, CT, USA: The American Radio Relay League, Inc., Newington, CT, USA, 2007.

W. J. Karle. "Digi-mode: PSK." *The Canadian Amateur*, March/April 2011, pp 35-38.

Doug Leach (ed.), VE3XK. *The RAC Operating Manual*, second edition. Radio Amateurs of Canada, Inc., Ottawa, ON, Canada, 2001.

## ABOUT THE AUTHOR

Bill Karle, continuously licensed since 1957, has held calls K8QGT, VE2ECW, 4S7KZG and, for the previous 25 years, VE4KZ.

Bill is a Certified Emergency Coordinator. His radio interests include antennas, propagation, digimodes and DXing. He is retired following a career in international consulting and university teaching and administration.



## RAC YOUTH EDUCATION PROGRAM

Brian Jackson, VE6JBJ – RAC Youth Education Program Coordinator

### Calling VA3OOG...

In late December this year, Canadian astronaut Chris Hadfield, VA3OOG, will launch to the International Space Station (ISS) aboard a Soyuz rocket for a six-month stay. While he is on station, his time will be spent with scientific experiments, station maintenance activities and radio contacts with student groups on the ground. The ARISS (Amateur Radio on the International Space Station) program would like to give you the chance to talk to Colonel Hadfield while he is on the ISS. There are three ARISS mentors in Canada who would love to mentor you through one of these once-in-a-lifetime contacts. If you are a part of a school or community group or know of someone in your area that has a special interest in the space program, we would love to hear from you.

- Wayne Harasimovitch, VE1WPH, can be reached in Halifax at <ariss@eastlink.ca>
- Steve McFarlane, VE3TBD, can be reached in Toronto at <ariss@rogers.com> or 613-913-0946
- Brian Jackson, VE6JBJ, can be reached in Alberta at <ve6bjb@rac.ca>

### CW and the Military Museum

I want to share the details of a very important program that is being run by Amateur volunteers in Calgary. For the past four or five years, as student groups come to The Military Museums of Calgary, they have an opportunity to try their hand at sending and receiving a CW message with a partner. Ken Oelke, VE6AFO, says that the program has been successful so far. Initially started as a joint project between the Calgary Communications Club (CCC) and the Quarter Century Wireless Association (QCWA) Wild Rose Chapter 151, this program provided the money needed to purchase the practice kits. Since then, hundreds of groups have had the chance to learn CW in a 30-minute session. Groups from all around the province of Alberta, and even an air cadet group from Saskatchewan, have had the chance to learn CW. With a heavy emphasis on the hands-on activities, this program has been effective in teaching an important skill in the life of Amateur Radio.

### IRLP A to Z

My class and I have started a new radio challenge called "IRLP A to Z". The purpose of this is to make contact with a city or town starting with each letter of the alphabet. Coming via IRLP on node 1860 in Airdrie, Alberta, my students will work through their recess breaks and noon hours to contact these locations. Please listen in for our call on your local IRLP node and let us know you're there.

### Donations to the RAC Youth Education Program

Are you able to help set up and/or operate a school station? Is your club able to support the work of the RAC Youth Education Program in terms of cash donations or equipment? Check out this page on the RAC website: <[www.rac.ca/en/rac/programmes/youth-education/help/](http://www.rac.ca/en/rac/programmes/youth-education/help/)>.

### School Programs?

Calling all school radio programs! If you are supporting or running any radio-related programs or activities, I would love to hear from you! If you have helped introduce anything related to radio to students in your area, I would love to share this with TCA readers. Please send me a note at <VE6JBJ@rac.ca> or call me on IRLP node 1860. My radio is on all the time during the school day in my classroom. I look forward to hearing the great things you are doing to introduce this wonderful hobby to students from coast to coast.

# PUBLIC SERVICE / ARES

Recently, the RAC Ontario Restructure Commission submitted their final report that recommended that Ontario be divided into four Sections, each carrying its own Section Manager and Secretariat to help manage the Section.

This Public Service / ARES column features an article by Ontario Section Manager Allan Boyd, VE3AJB, that discusses this topic.

If you reside in Ontario I would encourage you to support this project to ensure that RAC members are given the highest possible level of service from HQ, and that communication loops up to and down from the RAC Executive and the RAC Board continue to improve.

Every month I receive updates and news from your Sections that is shared with our members in this publication, the RAC Report and on the RAC website. Please keep it coming! No matter how small or large a piece of news may be, send it along.

*Doug Mercer, VO1DTM – RAC Chief Field Services Officer*



Doug Mercer, VO1DTM  
Box 1042  
84 Main Road  
Goulds NL A1S 1H2  
T. 709-364-4741  
E: vo1dtm@rac.ca

As your present Ontario Section Manager, the CFSO has asked me to complete my current mandate and become the inaugural Ontario North Section Manager, the new Section in which I reside.

The CFSO has also asked me to administer the process of accepting candidates for appointment to the other three Sections: Ontario East, Ontario South and the Greater Toronto Area. Following the precedent set by the Restructure Commission, I am looking to the Clubs and ARES groups to nominate appropriately skilled and capable candidates.

It is important to take into consideration that the role of the Section Manager has changed. As most of you know I am a firm believer in face-to-face contact – something that I was unable to do as Section Manager for the entire province of Ontario given its size. This is why I am excited about the new focus on developing a two-way relationship between the Section staff and the clubs. Developing this new partnership calls for leadership and innovation on the part of the Section Managers, their volunteer staff and the Club Executives.

A new job description for the Section Managers under the new Field Organization has not yet been developed. This task will take place within the CFSO Council once the Ontario Transition Council is operational and the Ontario Section Managers have joined the CFSO Council.

A provisional job description has been provided by the CFSO as an interim guide. The scope of responsibility has increased, but under the new Field Organization structure there are new administrative support mechanisms at Section level to conduct the work. In particular, the role of four of the new Section component heads combine to facilitate a communication loop between the Section Manager and the Club Executive. The job description highlights the importance of selecting a candidate with the personal and leadership attributes required to guide the introduction of the Field Organization at Section level.

## MESSAGE TO ALL AMATEURS ON THE ONTARIO SECTION RESTRUCTURE PROCESS

*Allan Boyd, VE3AJB  
RAC Ontario Section Manager*

As you are aware significant changes are coming to Ontario in terms of the way RAC affairs will be managed. In the past the Ontario Section has been served by one elected official – the Section Manager – who was responsible for the operation of a Field Service.

For the last six years I have had the honour and pleasure of serving as the Ontario Section Manager overseeing the Amateur Radio Emergency Service, the National Traffic System, the Official Bulletin Service and the Official Observer Service on your behalf.

I have had the opportunity to work with many wonderful and knowledgeable assistants and Amateurs in these services, and the wealth of experience in the province is second to none.

However, it has been recognized for some time now that a communications gap exists between RAC as an organization and the Clubs and individual Amateurs that it aims to serve.

An extensive analysis resulted in a recommendation from Doug Mercer, VO1DTM, the RAC Vice-President Field Services (now Chief Field Services Officer) recommending to the RAC President the implementation of a full Field Organization containing both administrative support functions to the Clubs as well as the established Field Service.

With 60% of Canadian Amateurs resident within the province of Ontario, it was also recommended to the RAC President that Ontario be restructured to improve representation. The Ontario Restructure Commission consulted with the Clubs and individuals and brought forth a recommendation to divide Ontario into four Sections (see RAC Bulletin 2012-006E): Ontario North, Ontario East, Ontario South and the Greater Toronto Area.

The RAC Board of Directors approved both the Field Organization and reorganization recommendations and the RAC Chief Field Services Officer (CFSO) has initiated the restructure process effective immediately (see RAC Bulletin 2012-007E) for the overall transition plan. The purpose of this article is to add more information on the inaugural Section Manager Appointment process within that plan.

The transition process is now in progress. The first step is to select and appoint the four new Section Managers with a target date of May 1, 2012. The four Section Managers will then form a Transition Council which, with the advice and support of the CFSO, will guide the remainder of the transition process.

The Transition Council will become the Ontario Provincial Council on September 1, 2012 when the new Section structure becomes official. During the transition period the new Section Managers will participate in a CFSO-led training period, establish provisional Section operating procedures and recruit section staff. In the meantime, the Ontario Section will continue official operations until it is stood down on August 31, 2012.





On October 22, 2011 a crew got together at the Alberta Emergency Management Agency Provincial Operations Centre (AEMA POC) for some much needed antenna repairs.

Following the ARES activation for the Slave Lake fires, it was determined that the HF antennas needed some TLC.

The Antenna repair crew consisted of: VE6DXX – EC ARES Edmonton; VE6DHS – AEC ARES Edmonton; VE6SRV – AEC ARES Edmonton; and VA6KM – EC ARES Wood Buffalo

– Submitted by Curtis Bidulock, VE6AEW

Following the principles of the election process described in the RAC Administration Manual, nominations were required to be in the form of a nomination letter signed by 10 Full RAC members, covering a biography of the nominee, as well as a letter from the nominee accepting the nomination. Given that this is a unique circumstance, in which a club nomination is arrived at by consensus or vote, a nomination letter signed by the Club President was deemed to be acceptable (this is not restricted to Affiliated Clubs).

A Selection Committee, composed of both Ontario Directors (Bill Unger, VE3XT and Jeffrey Stewart, VA3WXM) and myself as Chair, is to be convened in early April as soon as copies of the documents can be distributed.

The recommended candidates will be proposed to the CFSO for approval and the RAC President for confirmation. It is important to know that as a Section Manager for the new Ontario North Section, I do not have a vote on who is selected as the other Section Managers. This is to be completed by the Directors for Ontario and the CFSO. The nominees will be informed first of the final result, followed by an Ontario Bulletin with the official announcement.

I invite all Ontario Amateurs, Clubs and ARES groups in the new Ontario East, South and Greater Toronto Area Sections to discuss the issues and nominate a candidate who you feel has the initiative and leadership skills needed to create a Section

team, implement the new Field Organization structure, and initiate the consultation mechanisms between the Clubs and the Section Manager.

As the current Ontario Section Manager for the past six years, I want to take this opportunity to thank everyone who has supported me and my Field Services members over the years. Your commitment to the program has been proven many times over.

I look forward to serving the members of Ontario North as your Section Manager until the end of my term at which time an election will be held.

As always I am open to any questions or concerns that you may have. Please feel free to contact me at anytime. I look forward to this new process and the exciting times ahead for Field Services and RAC in general.

### **DO YOU HAVE QUESTIONS ABOUT EXAMINATIONS, CALL SIGNS?**

**Industry Canada Amateur Radio Service Centre**  
**PO Box 9654, Postal Station "T",**  
**Ottawa, ON, K1G 6K9**  
**<spectrum.amateur@ic.gc.ca>**  
**1-888-780-3333 (Toll free)**  
**Fax: 1-613-991-5575**

# THE OLD TIMERS CLUB

The Old Timers Club was founded in 1965 by Wimpy Mills, VE1NZ, in memory of Bert Whittaker, VE1RT, who was the founder of the Old Timers Net in 1960, some 52 years ago this year. The club is an on-air club with no other meetings held. Its sole purpose is camaraderie among the participants and good-fellowship. It is always interesting and a delight to participate in it.

Members checking in are primarily from the Atlantic provinces – New Brunswick, Prince Edward Island, Newfoundland and Labrador and Nova Scotia – but membership is not restricted to these areas as we have members in Quebec, Ontario, the USA, Bermuda and even Brazil.

Nets have been held continuously since 1960 on Sundays at 8 am Atlantic Time on a frequency of 3.750 MHz, using the call letters of our late net founder VE1RT. Nets usually run to 9 am or a bit later depending upon checkin numbers. The last call-up includes future members as well as certified members.

Applicants for membership are required to have at least 20 years as an Amateur or Professional Radio Operator. An application form for membership is required as well as a one-time fee of \$8 and these are mailed to our Secretary/Treasurer, Roger Belliveau, VE1RV, who confirms the 20-year requirement and accepts the fee.

The current Executive consists of three members as shown in the above photo (from left): Secretary/Treasurer Roger Belliveau, VE1RV; Webmaster Jim Cleveland, VE1CHI; and President Bill Anderson, VE9UH. Roger is holding a photo of the club's founder VE1RT. As President, Bill looks after arranging the roster of net controllers, mailing out the "suitable for framing" certificate and other enclosures one receives as a member, and looking after sympathy card mailouts when members or their immediate family members pass away or are ill.

Roger looks after qualification checking with Industry Canada and the club finances. Jim established a "web presence" for the club in January 2006 and continually keeps the website up to date. The URL is <[www.oldtimersclub.byethost31.com/](http://www.oldtimersclub.byethost31.com/)>. Here you will find a more detailed club history, an application form and a club brochure as well as welcome messages for new members, memorials for Silent Keys, an "Active Membership List" and reports on fleamarkets. Photos are used on the website wherever possible to add interest.

We try to attend the various local Amateur Radio fleamarkets such as those held in Halifax, Greenwood, St. John and Shediac throughout the year, with a table set up at each one attended to by volunteers or Executive members. Our club brochure and application forms are handed out along with lots of chin-wagging.

Once a year in January, the Executive puts together an "Annual Report" for the members and this is placed on the website. Each Executive member contributes to this and it is assembled so that it never exceeds two pages in length. A printable pdf file of this report is always on the website as well as reports from past years.

On Sunday, March 21, 2010 the club held its 50th Anniversary Net which was conducted by Roger, VE1RV and recorded by both Bill and Jim. Later, the recording was placed on two CDs and made available to anyone at the fleamarkets and to others upon request. During this special net, President Bill had lined up several members to relate stories about VE1RT and the early days. It was a great net in the history of our club.

If you are interested in our OTC net, simply tune in to 3.750 MHz on any Sunday morning at 8 am Atlantic Time. If you wish to join us, the application form is on our website.

All are welcome to join. We are always looking for new and interesting members.

– 73 from the OTC Executive: Bill, Roger and Jim



## CJ3 AND CK3: THE 100TH ANNIVERSARY OF CITYHOOD FOR KITCHENER, ONTARIO

The City of Kitchener located about 100 kilometres (60 miles) west of Toronto Ontario, is the largest municipality in the Region of Waterloo. First known as Berlin, the town was elevated to city status on June 10, 1912.

In 1916, amidst the background of WWI, and with growing animosity against the city's German heritage, the name was changed to recognize the British Lord Kitchener.

More information on the city and its history can be found on the City of Kitchener website <[www.kitchener.ca](http://www.kitchener.ca)>, and on the city's anniversary website at <[www.kitchener100.ca](http://www.kitchener100.ca)>.

Special Event call sign prefixes have been issued valid for the period of June 12 to June 26, 2012 for use by all operators residing in the Region of Waterloo. They are: **CJ3** for use with the operator's suffix for those holding VA3 call signs; and the **CK3** prefix for operators with the VE3 call sign.

Please QSL via the VE3/VA3 operator by e-QSL, mail or your QSL bureau.

*Peter Bon, VA3PTB – Club Secretary*

*Rick Goetz, VE3ZUP – Special Events Call Sign Trustee*

## VC390IC: 90TH ANNIVERSARY OF THE KITCHENER WATERLOO ARC

The KWARC (Kitchener Waterloo Amateur Radio Club) will be celebrating its 90th anniversary by operating with a special event call sign between June 18 and July 2. The VC390IC commemorative call sign will be used for this year's event.

We will be communicating on a vintage Viking Pacemaker transmitter/Gonset G63 receiver on SSB – 40 and 80 metre bands. Other equipment will be use on higher frequencies.

Please QSL via. Gordon Gibson, 102 Grand River Boulevard, Kitchener, Ontario, Canada, N2A 2T1.

If you wish to receive our special four-sided commemorative QSL card, please send a self-addressed envelope and \$2 if outside Canada.

Note: Canada SASE. US stamps are not usable in Canada.

*Al Macdonald, VA3TET  
Submitted on behalf of the  
Kitchener-Waterloo ARC  
([www.kwarc.org](http://www.kwarc.org))*



# 2012 RAC CANADA DAY CONTEST / CONCOURS DE LA FÊTE CANADA RAC 2012

Each year on July 1, the anniversary of Canada's Confederation, Radio Amateurs of Canada sponsors the Canada Day Contest. Amateurs all over the world are invited to Canada's Birthday Party on the air.

**Contest Period:** 0000 UTC to 2359 UTC July 1, 2012.

**Bands and Modes:** 160, 80, 40, 20, 15, 10, 6 and 2 metres, CW and phone (SSB, FM, AM, etc.).

**Suggested frequencies:** CW – 25 kHz up from the band edge and for SSB – 1850, 3775, 7075, 7225, 14175, 21250, 28500 kHz. Check for CW activity on the half-hour.

**Exchange:** Stations in Canada send RS(T) and province or territory. VEØs and stations outside Canada send RS(T) and a serial number.

**QSOs:** Contacts with stations in Canada or VEØs are worth 10 points. Contacts with stations outside Canada are worth 2 points. Contacts with RAC official stations are worth 20 points. RAC official stations are: VA2RAC, VA3RAC, VE1RAC, VE4RAC, VE5RAC, VE6RAC, VE7RAC, VE8RAC, VE9RAC, VO1RAC, VO2RAC, VY0RAC, VY1RAC and VY2RAC. You may work any station once on each of the two modes, on each of the eight contest bands.

It is **prohibited** to make CW contacts in the conventional phone sub-bands and phone contacts in the conventional CW sub-bands. Contacts or soliciting QSOs through a repeater during the contest period is not allowed.

**Multippliers:** Thirteen in total, Canada's 10 provinces and 3 territories. Each multiplier may be counted once on each mode on each of the eight contest bands. The multipliers, with their postal abbreviations and prefixes are: Nova Scotia [NS] (VE1, VA1, CY9, CYØ); Quebec [QC] (VE2, VA2); Ontario [ON] (VE3, VA3); Manitoba [MB] (VE4, VA4); Saskatchewan [SK] (VE5, VA5); Alberta [AB] (VE6, VA6); British Columbia [BC] (VE7, VA7); Northwest Territories [NT] (VE8); New Brunswick [NB] (VE9); Newfoundland and Labrador [NL] (VO1, VO2); Nunavut [NU] (VYØ); Yukon [YT] (VY1); and Prince Edward Island [PE] (VY2). Certain special Canadian prefixes in use at the time of the contest may also apply; however there may be no more than 13 multipliers on each band/mode. Please use the multiplier abbreviations, in square brackets, noted above.

**Final Score:** The total QSO from all bands multiplied by the total number of multipliers from all bands.

**Categories:** The following 9 categories are eligible for plaque's or certificates as detailed in the Awards section of the rules.

- Single Operator All Bands High Power (>100 Watts) – **Radioworld**
- Single Operator All Bands Low Power (max. 100 Watts output) – **Contest Club Ontario**
- Single Operator QRP (max. 5 Watt output) All Bands & Single Band \*\* – **QRP Canada**
- Single Operator All Bands CW only, any authorized power – **Maritime Contest Club**
- Single Operator All Bands PH only, any authorized power – **Saskatchewan Contest Club**
- Single Operator Single Band, any authorized power \*\*\* – **Elkel Products**
- Multi-Operator Single Transmitter High Power (>100 Watts) \* – **Alfa Radio**
- Multi-Operator Single Transmitter Low Power (max. 100 Watts output) \* – **Tony Allsop VE3FTA Memorial by the Mississauga ARC**
- Multi-Operator Multi-Transmitter, any authorized power – **Radioworld**

For the Canada Day Contest a special trophy is awarded for the highest Single Operator (no power classification) Foreign Entrant – **Larry Kayser VA3LK Memorial by Alan Goodacre, VE3HX.**

Special thanks to our sponsors for their support of the RAC contests.

Le premier juillet de chaque année, l'anniversaire de la confédération du Canada, Radio Amateurs du Canada parraine le concours de la fête du Canada. Les amateurs du monde entier sont invités à y participer.

**Durée du concours:** 0000 UTC à 2359 UTC le 1<sup>er</sup> juillet 2012.

**Bandes et modes d'émission:** 160, 80, 40, 20, 15, 10, 6 et 2 mètres, en CW et/ou en phonie (BLU, FM, AM, etc.).

**Fréquences suggérées:** CW – 25 kHz au dessus de la limite inférieure de la bande. BLU – 1850, 3775, 7075, 7225, 14175, 21250 et 28500 kHz. Vérifiez aux demi-heures pour l'activité en CW.

**Échange:** Les stations au Canada envoient un rapport RS(T) ainsi que leur province ou territoire. Les stations VEØ et les stations à l'extérieur du Canada envoient un rapport RS(T) ainsi qu'un numéro séquentiel.

**Les QSO:** Les contacts avec des stations au Canada ou des stations VEØ valent 10 points. Les contacts avec des stations à l'extérieur du Canada valent 2 points. Les contacts avec des stations officielles de RAC valent 20 points. Les stations officielles de RAC sont: VA2RAC, VA3RAC, VE1RAC, VE4RAC, VE5RAC, VE6RAC, VE7RAC, VE8RAC, VE9RAC, VO1RAC, VO2RAC, VY0RAC, VY1RAC et VY2RAC. Vous pouvez contacter une station une fois dans chacun des modes, sur chacune des huit bandes du concours.

Il est défendu de faire des contacts en CW sur les parties des bandes normalement réservées à la phonie, et vice versa. Il est aussi défendu de faire ou de solliciter des contacts via un répéteur pendant le concours.

**Multiplicateurs:** Treize au total, les 10 provinces canadiennes et les 3 territoires. Chaque multiplicateur peut-être compté une fois pour chaque mode sur chacune des huit bandes du concours. Les multiplicateurs, avec leur abbréviation postale et leur(s) préfixe(s), sont: Nouvelle-Écosse [NS] (VE1, VA1, CY9, CYØ); Québec [QC] (VE2, VA2); Ontario [ON] (VE3, VA3); Manitoba [MB] (VE4, VA4); Saskatchewan [SK] (VE5, VA5); Alberta [AB] (VE6, VA6); Colombie-Britannique [BC] (VE7, VA7); Territoires du Nord-Ouest [NT] (VE8); Nouveau-Brunswick [NB] (VE9); Terre-Neuve et Labrador [NL] (VO1, VO2); Nunavut [NU] (VYØ); Yukon [YT] (VY1); Ile-du-Prince-Edouard [PE] (VY2). Certains préfixes canadiens spéciaux en usage pendant le concours peuvent aussi s'appliquer; cependant, il ne peut y avoir plus de 13 multiplicateurs pour chaque bande/mode. Veuillez s'il-vous-plaît utiliser l'abréviation du multiplicateur, entre crochets, telle que notée ci-haut.

**Pointage final:** Le total des des QSO obtenus sur toutes les bandes, multiplié par le nombre total de multiplicateurs obtenus sur toutes les bandes.

**Catégories:** Les neuf catégories suivantes sont éligibles pour des plaques ou des certificats, tel que détaillé dans la section Prix des règlements du concours.

- Opérateur unique, toutes bandes, haute puissance (>100 Watts) – **Radioworld**
- Opérateur unique, toutes bandes, basse puissance (max. 100 Watts à la sortie) – **Contest Club Ontario**
- Opérateur unique QRP (max. 5 Watts à la sortie), toutes bandes et bande unique \*\* – **QRP Canada**
- Opérateur unique, toutes bandes, CW seulement, toute puissance autorisée – **Maritime Contest Club**
- Opérateur unique, toutes bandes, phonie seulement, toute puissance autorisée – **Saskatchewan Contest Club**
- Opérateur unique, bande unique, toute puissance autorisée \*\*\* – **Elkel Products**
- Opérateurs multiples, émetteur unique, haute puissance (>100 Watts) \* – **Alfa Radio**
- Opérateurs multiples, émetteur unique, basse puissance (max. 100 Watts à la sortie) – **Trophée mémorial Tony Allsop VE3FTA par le CRA Mississauga**
- Opérateurs multiples, émetteurs multiples, toute puissance autorisée – **Radioworld**

## Category notes:

1. The contents of a log that is submitted for a specific category must reflect that category. In the event of a conflict between the actual content of the log and the stated category in the Cabrillo header or contained in other elements of the entry material, the actual contents of the log will be used to determine the category of entry where possible. In the event this cannot be determined or in the event where a log does not identify the entry category, the entry will be classified into the Multi-Operator, Multi-Transmitter, any authorized power category.

Any entrant who wants to enter a specific category (i.e., Single band entry) but who also worked additional contacts outside that category **may** submit those additional contacts in a **separate** check log file. Do not include them in the main entered category log file.

2. Where the categories have a power class and the submitted log does not clearly identify the power class entered, then the log will be treated as if the highest power class for that category was entered.

3. Single operators who receive assistance from a DX spotting system, including Skimmer and similar technologies or any type of Packet Cluster network during the contest must classify themselves as Multi-ops.

4. \* In the Multi-Single category only one transmitter and one band are permitted during the same time period (defined as 10 minutes). Exception: One, and only one, other band may be used during any 10-minute period, if and only if the station worked is a new multiplier. In other words the Multi-Single Transmitter class allows a second station to "hunt" and work multipliers only on a single separate band during any 10-minute period.

5. Multi-Multi category stations may operate on several bands simultaneously.

6. \*\* Although there is only one QRP category, which qualifies for a plaque or certificate, it is intended that the published results would show All Bands or the Single Band of operation. To facilitate this break out of the listings, your entry should indicate the band(s) or mode(s) operated.

7. \*\*\* Although there is only one Single Operator Single Band category that qualifies for a certificate or award, it is intended that the published results would show High Power or Low Power. To facilitate this break out of the listings, your entry should indicate the power class you used.

## BRIT FADER SCHOLARSHIP TRUST ANNOUNCES CALL FOR APPLICATIONS

The Brit Fader Scholarship was established in 1993 by the Halifax Amateur Radio Club and endowed through the generosity of Club members and Radio Amateurs throughout the Maritime Provinces of Canada. This scholarship is intended exclusively for postsecondary educational use, to provide assistance with the cost of tuition, room, board, books and/or other fees essential to the advanced education of the recipient. The amount of the 2012 award will be \$1,000.

An applicant must be a citizen of Canada, but without regard to gender, race, national origin, handicap status or any other factor and must be performing at a high academic level.

An applicant must hold an active Basic Class or higher grade of Canadian Amateur Radio licence.

This Scholarship will be provided for attendance at an accredited Canadian postsecondary technical school, college or university, with preference given to applicants who have been accepted into a program in the field of electronics or electrical engineering.

Application submissions must be postmarked no later than July 15, 2012. A zipped application package (Criteria; Application Form; Reference Form) is available for downloading from the HARC website at <[www.Halifax-arc.org](http://www.Halifax-arc.org)>. Follow the link to the Brit Fader Scholarship from the Home Page under "Education".

*D. Howard Dickson, VE1DHD  
For the Brit Fader Scholarship Committee*

Pour le concours d'hiver du Canada, un trophée spécial est décerné au participant étranger (opérateur unique, sans classe de puissance) ayant obtenu le plus haut score – **le trophée mémorial Larry Kayser VA3LK par Alan Goodacre, VE3HX.**

Nous tenons à remercier nos commanditaires pour leur appui aux concours de RAC.

## Notes sur les catégories:

1. Le contenu d'un journal de bord soumis dans une catégorie spécifique doit refléter cette catégorie. Dans le cas d'un conflit entre le contenu réel d'un journal de bord et la catégorie inscrite dans l'entête Cabrillo ou contenue dans d'autres éléments de la soumission, le contenu réel du journal sera utilisé pour déterminer la catégorie de l'inscription. Dans le cas où celle-ci ne peut être déterminée, ou si le journal de bord n'identifie pas la catégorie de l'inscription, celle-ci sera classée dans la catégorie opérateurs multiples, émetteurs multiples, toute puissance autorisée.

Tout participant désirant s'inscrire dans une catégorie spécifique (par exemple bande unique), mais ayant aussi établi des contacts additionnels hors de cette catégorie **peut** soumettre ces contacts additionnels dans un journal de bord **séparé**. Ne les incluez pas dans le journal de la catégorie principale dans laquelle vous participez.

2. Dans le cas où les catégories ont des classes de puissance et que le journal soumis ne l'identifie pas clairement, celui-ci sera traité comme si la classe de puissance la plus élevée pour cette catégorie a été inscrite.

3. Des opérateurs uniques qui reçoivent de l'aide d'un système de repérage DX, comme Skimmer et des technologies similaires, ou n'importe quel type de réseau « Packet Cluster » pendant la période du concours, devront s'inscrire dans la catégorie opérateurs multiples.

4. \* Dans la catégorie opérateurs multiples, émetteur unique, un seul émetteur et une seule bande sont permis durant la même période de temps (définie comme étant 10 minutes). Une exception est cependant tolérée: une seule autre bande peut-être utilisée pendant cette période de 10 minutes, seulement si la station contactée est un nouveau multiplicateur. En d'autres mots, la classe opérateurs multiples, émetteur unique permet à une seconde station de « chasser » et contacter des multiplicateurs sur une seule autre bande dans une période de 10 minutes.

5. Les stations participant dans la catégorie opérateurs multiples, émetteurs multiples peuvent opérer sur plusieurs bandes en même temps.

6. \*\* Même s'il n'y a qu'une seule catégorie QRP qui soit éligible pour une plaque ou un certificat, il est prévu que que les résultats publiés afficheront soit toutes bandes, soit la bande unique d'opération. Afin de faciliter la publication des résultats, votre entrée devrait indiquer le (les) bande(s) ou mode(s) opérés.

7. \*\*\* Même s'il n'y a qu'une seule catégorie opérateur unique, bande unique, qui soit éligible pour une plaque ou un certificat, il est prévu que les résultats publiés afficheront soit haute puissance, soit basse puissance. Afin de faciliter la publication des résultats, votre entrée devrait indiquer la classe de puissance utilisée.

**Prix:** Des plaques seront remises aux participants ayant obtenu le plus haut score dans chaque catégorie, telle que notée ci-haut dans la liste des catégories. Nous tenons à remercier nos commanditaires pur leur support continu! Des certificats seront remis aux participants ayant obtenu le plus haut score dans chaque catégorie se situant dans chacun(e) des:

- Provinces et territoires canadiens;
- Districts d'appels des États-Unis continentaux, W0 à W9, et aussi pour l'Alaska et Hawaii. Les Commonwealths américains, territoires et possessions tels que Porto Rico, les îles Vierges américaines, etc, seront considérés comme étant équivalent à un pays DXCC; et
- Pays DXCC, excluant le Canada et les États-Unis.

Afin de faciliter l'attribution des certificats, toutes les stations américaines participantes devraient indiquer leur réel district d'appel américain basé sur leur adresse réelle, telle que fournie dans l'entête Cabrillo, s'il diffère de celui indiqué par le préfixe de leur indicatif. Les stations DX devraient indiquer leur réel pays d'opération s'il diffère de celui indiqué par le préfixe de leur indicatif.



**Awards:** Plaques will be awarded to the top-scoring entrants in each category, as noted above in the category list. Special thanks to our sponsors for their ongoing support!

Certificates will be awarded to the top-scoring entrant in each category in each of:

- Canadian provinces or territories;
- Continental US call districts, W0 through W9 as well as Alaska and Hawaii. US Commonwealths, Territories and Possessions such as Puerto Rico, US Virgin Islands, etc will be treated as equivalent to a DXCC country; and
- DXCC country, excluding Canada and the US.

To facilitate the proper allocation of certificates, all US stations should indicate their actual US call district based on their actual address, as provided in the Cabrillo header, if different than indicated by their call prefix. DX stations should indicate the actual country of operation if different than indicated by their call prefix by indicating the country as part of the portable call sign designator.

RAC stations will compete and be considered the same as any other entrant for eligibility to plaques and certificates.

**Results:** Will be published in The Canadian Amateur magazine published by the Radio Amateurs of Canada. The results will also be published on the RAC website at <[www.rac.ca](http://www.rac.ca)> in the contest section.

**Entries:** All entries (electronic or paper logs) must be postmarked or electronically submitted by **July 31, 2012**. Electronic entries will be confirmed by return email.

Send email entries to: <[canadaday@rac.ca](mailto:canadaday@rac.ca)>

Send paper entries to: Radio Amateurs of Canada  
720 Belfast Road, Suite 217  
Ottawa, Ontario, Canada K1G 0Z5

We will be publishing a list of logs received and the categories entered on the RAC website during and/or after the submission period after the cut off date to assist in correcting any entry categorizations.

Paper mail entries must contain a summary sheet showing score calculation, a dupe sheet listing calls worked on each mode on each band, a multiplier check sheet and log sheets. Log sheets must show time, band, mode, call of station worked, exchanges sent and received and claimed for each QSO. New multipliers must be clearly marked in the log. Contest entry forms are also available on the RAC website at <[www.rac.ca/en/rac/programmes/contests](http://www.rac.ca/en/rac/programmes/contests)>.

Any entry with 100 or more contacts should be submitted in digital form, either submitted by email or mailed in via 3.5" MS-DOS/ Windows formatted diskette. The preferred electronic format is the RAC Cabrillo format. The files must be submitted in plain ASCII/Text format. While the contest committee prefers Cabrillo formatted submissions, we will continue to accept electronic logs from older versions of contest software, but your file must be in ASCII/Text format and have all the required information. Given there are several free programs that support the RAC contests and generate an acceptable Cabrillo entry, we encourage you to seek out one of these programs. The RAC Cabrillo format is described and its detailed layout is shown on the RAC website at <[www.rac.ca/en/rac/programmes/contests](http://www.rac.ca/en/rac/programmes/contests)>.

Electronic logs that do not have a complete Cabrillo header should provide a summary sheet with the same information as shown for the paper log entries. The standard summary sheet provided by the typical logging program is generally acceptable, but you should confirm that it contains the same information as shown for paper log entries.

A properly filled out Cabrillo header section will be a sufficient substitute for a summary sheet for logs submitted in that format. Please ensure that you review the header for accuracy and that it is completely filled out. Name your file with your Call Sign and the file extension .LOG (e.g., yourcall.LOG). If you email your log, please send the file(s) as **attachments**. Do not paste the log file into the text of your message as there may be issues with the formatting making it difficult to properly extract the log. Large files may be zipped if necessary.

**If you need help with preparing or emailing your log, please contact Bart Ritchie at <[ve5cpu@rac.ca](mailto:ve5cpu@rac.ca)>.**

For the previous year's contest results, visit the RAC website ([www.rac.ca](http://www.rac.ca)) in the contesting section.

Les stations officielles RAC compétitionneront et seront considérées comme étant pareilles à tout autre participant en ce qui concerne l'éligibilité aux plaques et certificats.

**Résultats:** Ils seront publiés dans la revue The Canadian Amateur, publiée par Radio Amateurs du Canada. Il seront aussi publiés sur le site web de RAC au <[www.rac.ca](http://www.rac.ca)> dans la section "concours".

**Soumission des inscriptions:** Toute inscription (électronique ou papier) doit porter un cachet de la poste, ou être soumise par courriel, pour le **31 juillet 2012**.

Les soumissions électroniques seront confirmées par courriel.

Envoyez vos inscriptions par courriel à : <[canadaday@rac.ca](mailto:canadaday@rac.ca)>

Envoyez vos inscriptions papier à :

Radio Amateurs du Canada  
720 ch. Belfast, suite 217  
Ottawa, Ontario, Canada K1G 0Z5

Nous publierons une liste de journaux de bord reçus avec leur catégorie sur le site web de RAC pendant et/ou après la période de soumission et après la date limite afin d'aider à corriger toute erreur de catégorisation des inscriptions.

Les inscriptions papier envoyées par courrier doivent contenir une feuille sommaire démontrant le calcul des , une feuille indiquant les indicatifs contactés dans chaque mode sur chacune des bandes (dupe sheet), une feuille indiquant les multiplicateurs utilisés et le journal de bord. Le journal doit montrer l'heure, la bande, le mode, l'indicatif de la station contactée, les rapports échangés et les revendiqués pour chaque QSO. Les nouveaux multiplicateurs doivent être clairement indiqués dans le journal. Des formulaires d'inscription sont aussi disponibles sur le site web de RAC au <[www.rac.ca/en/rac/programmes/contests](http://www.rac.ca/en/rac/programmes/contests)>.

Toute inscription contenant plus de 100 contacts devrait être soumise sous forme numérique, soit par courriel, soit sur une disquette 3.5" formatée pour MS-DOS/Windows et envoyée par la poste. Le format électronique préféré est le format Cabrillo RAC. Les fichiers doivent être soumis en format text/ASCII. Bien que le comité du concours préfère les soumissions en format Cabrillo, nous continuerons à accepter vos journaux de bord électroniques générés par des versions antérieures de logiciels de concours, mais votre fichier doit être en format text/ASCII et contenir toutes les informations requises. Comme il existe plusieurs logiciels gratuits supportant le concours RAC et pouvant générer un fichier Cabrillo acceptable, nous vous encourageons à en utiliser un. Le format Cabrillo RAC est décrit et sa disposition est illustrée en détail sur le site web de RAC au <[www.rac.ca/en/rac/programmes/contests](http://www.rac.ca/en/rac/programmes/contests)>.

Les journaux de bord soumis sous forme numérique mais ne possédant pas d'entête Cabrillo complète devraient fournir une feuille sommaire avec les mêmes informations que pour les soumissions papier. La feuille sommaire standard fournie par les logiciels courants est généralement acceptable, mais vous devriez confirmer qu'elle contienne les mêmes informations que pour les soumissions papier.

Une entête Cabrillo correctement remplie se substitue à une feuille sommaire pour les journaux soumis dans ce format. Veuillez s'il-vous-plait vous assurer que vous vérifiez l'exactitude de l'entête et qu'elle soit complètement remplie. Nommez votre fichier avec votre indicatif et l'extension de fichier .LOG (par exemple votreindicatif.LOG). Si vous envoyez votre journal de bord par courriel, veuillez inclure le(s) fichier(s) en pièce(s) jointe(s). Ne copiez pas le fichier dans le texte de votre message, étant donné qu'il pourrait y avoir des problèmes avec la mise en page, rendant la tâche d'extraire votre journal plus difficile. Les gros fichiers peuvent être compressés en format .ZIP si nécessaire.

**Si vous avez besoin d'aide avec la préparation ou l'envoi de votre journal par courriel, veuillez contacter Bart Ritchie at <[ve5cpu@rac.ca](mailto:ve5cpu@rac.ca)>.**

Pour les résultats des éditions précédentes du concours, visitez le site web de RAC ([www.rac.ca](http://www.rac.ca)), dans la section concours.



# RAC CONTEST ENTRY FORM / FORMULAIRE D'INSCRIPTION AU CONCOURS DE RAC

☐ **Canada Winter Contest / Concours hiver Canada**  
Entry deadline: January 31 – date limite: 31 janvier

☐ **Canada Day Contest / Concours fête du Canada**  
Entry deadline: July 30 – date limite : 31 juillet

- ☐ Single Operator All Band High Power (>100W output) / opérateur unique, toutes bandes, haute puissance (>100W)
- ☐ Single Operator All Band Low Power (max 100W output) / opérateur unique, toutes bandes, basse puissance (max 100W à l'antenne)
- ☐ Single Operator QRP (max 5W output) – All Band or Single Band / opérateur unique, toutes bandes ou bande unique, QRP (max 5W à l'antenne)
- ☐ Single Operator All Bands CW only, any authorized power / opérateur unique, toutes bandes, CW seulement, toute puissance permise
- ☐ Single Operator All Bands PH only, any authorized power / opérateur unique, toutes bandes, phonie seulement, toute puissance permise
- ☐ Single Operator Single Band, any authorized power / opérateur unique, bande unique, toute puissance autorisée
- ☐ Multi-Operator Single Transmitter / opérateurs multiples, émetteur unique
- ☐ High Power / haute puissance
- ☐ Low Power / basse puissance
- ☐ Multi-Operator Multi-Transmitter / opérateurs multiples, émetteurs multiples, toute puissance autorisée

Call Sign / Indicatif : \_\_\_\_\_

Name / Nom : \_\_\_\_\_

Address / Adresse : \_\_\_\_\_

Code / Code : \_\_\_\_\_

## Score Calculation / Calcul des

Canada QSOs (excl. RAC): \_\_\_\_\_ x 10 = \_\_\_\_\_

RAC QSOs: + \_\_\_\_\_ x 20 = \_\_\_\_\_

DX QSOs: + \_\_\_\_\_ x 2 = \_\_\_\_\_

Sub-Total / Sous-Total : = \_\_\_\_\_ QSOs = \_\_\_\_\_ Pts

Multiplier / Multiplicateur : \_\_\_\_\_ x \_\_\_\_\_

Claimed score / Points revendiquées : = \_\_\_\_\_

Who were the operators? / indicatif des opérateurs?

\_\_\_\_\_

\_\_\_\_\_

Comments / Remarques : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## MULTIPLIER CHECKLIST / LISTE DES MULTIPLICATEURS

Check off each multiplier worked / Cochez chacun des multiplicateur contacté

	VE1 NS	VE2 QC	VE3 ON	VE4 MB	VE5 SK	VE6 AB	VE7 BC	VE8 NT	VE9 NB	VO NL	VY0 NU	VY1 YT	VY2 PE	TOTAL
1.8 CW														
1.8 PH														
3.5 CW														
3.5 PH														
7 CW														
7 PH														
14 CW														
14 PH														
21 CW														
21 PH														
28 CW														
28 PH														
50 CW														
50 PH														
144 CW														
144 PH														



# THE SPORTS PAGE

## — THE CANADIAN CONTEST SCENE

### THESE THINGS INTRIGUE ME

#### The Effect of QSB

One can often observe that a station is running QRP by the fades into the noise that occur. Stronger signals may exhibit the same depth of fade but it goes unnoticed by the receiving operator. On the other hand QSB is the QRP operator's friend. If Mr. QRO is fading between S5 and S9 and Mr. QRP is fading between S2 and S6, it is obvious that, with no correlation between fades, Mr. QRP will be stronger than Mr. QRO part of the time.

#### The Inter-relationships between Antenna Vertical Patterns

A given propagation path can often support more than one mode of propagation. I recall one instance illustrating this some years ago when listening to JAs on 40 metres. I had a rotary 40m dipole and also a 40m inverted vee dipole. Most JA signals were virtually uncopiable on the inverted vee but crisp and clear on the horizontal antenna. There was little difference in the strength but the inverted vee was picking up a number of different modes arriving at different angles, whereas the horizontal with a sharper pattern appeared to be locked onto one predominant mode and vertical angle. Are there times when it is better to have a low antenna when the station at the other end is also using a low antenna and thus producing relatively high angle radiation? The opposite is certainly true! Anyone with a high antenna (or lives on a high hill) knows that QSOs can keep on coming with the other tall tower types long after the others have disappeared.

#### The Opening and Closing of Bands

I have noticed over many years phenomena associated with these two events. Both events are usually associated with low angle antennas, often verticals. I remember working a European tourist in the Canary Islands using a simple vertical mounted on the hotel balcony. He and several other EA8s were coming through just opening the band to the east. An hour later I heard him again, very weakly working back into Europe, however the other EA8s were now booming in at S9 or more with the band fully open.

When operating contests another phenomenon I have observed is working mobile after mobile in Europe just before the band closes down. Those vertical antennas have the whole show at this time.

Going way back to the AM days I recall a QSO on 15 metres. Now with AM you can see QSB directly as the meter moves smoothly. From a steady S9, the needle started to swing up and down for about 20 seconds. When the path was about to disappear, the signal swung up to its highest point and then dropped to zero. The signal was totally gone!

#### Speed and Readability

Over the last several years I have observed that a number of very successful operators operate at higher speeds than the average. This is most noticeable when a World Radiosport Team Championship (WRTC) event is on. These competitors, using low power and relatively simple antennas, are actually identifiable by their high speed! Using this observation as a hunting technique I have a number of certificates from various WRTCs to confirm its worth.

After listening to such as VE3EJ, VE1OP and VA3DF at work on the band, I came to the conclusion that I was sending too slowly. Doug, VA3DF, works QRP but sure doesn't sound like a typical QRS station. What counts when you call a station? The other station wants your complete call. Sending slowly, the chances of another signal QSBing up over you are greatly increased. If you send your call in a QRQ burst – even if you are not received the first time – you will be noticed and either received or ask for a repeat. It is in the other station's best interest to work you quickly and move on to the next.

This technique works best with experienced operators at the other end, but it also works just fine in general for both running and S&P. When running, slower operators will identify you when they hear your call several times. I have had a lot of success in the US

*TXQP Plaque: "A nice trophy for chasing mobiles on CW all around Texas", courtesy VE3KZ.*



Bob Nash, VE3KZ  
5260 14th Sideroad, RR6  
Milton, ON L9T 2Y1  
Tel. 905-878-7382  
Email: ve3kz@rac.ca

*Contest results courtesy of the Maritime Contest Club team*

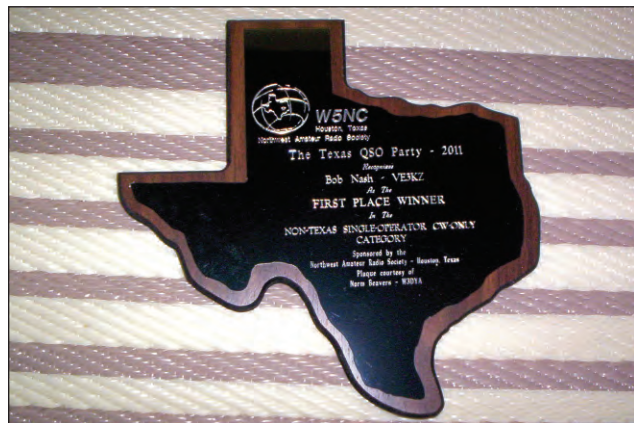
QSO Parties lately. I have successfully implanted a 35 WPM VE3KZ burst in most of the operators' memories in these states, particularly the mobiles!

#### MARITIME QSO PARTY

It's time for the second running of this event sponsored by the Maritime Contest Club (MCC). Be prepared to point your antennas east on June 2. You could be in line for one of these plaques or certificates. Check out the MCC website. Those within the Maritimes should also make note of the Acadia – New Scotland (ANS) annual awards. Bruce, VE1NB, searches all contest results for VE1/VE9/VY2 participants – whether they are MCC members or not – and sends each of them a classy certificate at the end of the year on behalf of the MCC, recognizing their participation in contesting in the Maritimes.



*MQP Sample Plaque: "A nice trophy for being a mobile pursued in the Maritimes" courtesy of the MCC website.*



His wife, Anna, VE1NAG (she's an artist) letters the call signs on those certificates using calligraphy. There is also a plaque presented within ANS for best score by an MCC member.

## OUT-OF-BAND REVISITED

I received a note from Tom, VE3CX, who sat in on a discussion at Dayton's Contest University (CTU) on the subject of US stations working outside their band. The major opinion among these serious testers seemed to be "just work them". Some testers will work US stations out of the band as it is not illegal for us to do so. Its not "our" problem – it's the US operator's problem, and it is between him and the Federal Communications Commission (FCC).

On the other hand my personal experience has been predominantly with US stations with newly issued calls who may need my advice concerning their frequency. Of course if I don't "work" him/her I might place second in the contest! How serious are you?

## CANADA DAY

I'm looking forward to another big get-together on July 1. It's a Saturday night and Sunday on the calendar this year and that should be ideal for some big scores. Good luck and see you there!

73 Bob, VE3KZ



### CQ WPX CW 2011

Stn Call	QSO	Mult	Score	Category
VY2ZM (K1ZM)	2,889	922	9,552,842	AB HP Unlimited
VY2TT (K6LA)	2,770	942	8,722,920	AB HP Unlimited
VE3JM	2,134	810	5,707,260	AB HP Unlimited
VC7M**	2,536	655	4,807,700	MM
VA2EW	1,826	731	4,502,229	AB HP Unlimited
VE7SV***	1,911	730	4,497,530	MS
VE7GL****	1,677	685	3,715,440	MS
VA2WA (VA2WDQ)	1,617	653	3,505,304	AB HP Assist
VE2XAA	1,432	638	3,001,790	AB LP Assist
N2WQ/VE3	1,285	640	2,496,640	AB HP Assist
VA7RR	1,349	648	2,030,832	20M HP Unlimited
VE3RZ	1,072	543	1,948,827	AB HP Assist
VA1MM	1,100	514	1,836,008	AB HP Unlimited
VE9ML*	914	569	1,552,801	M2
VE1NB	685	446	1,457,528	40M LP Unlimited
VE3EJ	723	390	1,052,610	AB HP Unlimited
VA7ST	805	396	968,616	AB LP Assist
VE1RGB	468	362	818,844	40M LP Unlimited
VA7KO	844	342	771,210	AB HP Unlimited
VO1HP	623	371	759,066	AB LP Assist
VA3SB	612	351	661,986	AB QRP Unlimited
VE4EAR	618	347	594,064	AB HP Unlimited
VE9HF	623	334	562,790	AB HP Unlimited
VE2AWR	542	289	509,218	AB LP Unlimited
VE3KAO	524	283	489,024	AB LP Unlimited
VA3AR	475	281	406,326	AB HP Unlimited
VE3GFN	476	270	388,260	AB LP Unlimited
VE4YU	485	277	357,053	AB LP Unlimited
VE3TG	421	322	330,372	20M LP Unlimited
VE3RSA	389	236	315,296	AB QRP Unlimited
VE3IAE	311	229	305,486	40M LP Unlimited
VE5MX	455	291	297,402	AB HP Assist
VE3FH	408	230	290,950	AB LP Unlimited
VE3EY	402	248	281,728	AB LP Unlimited
VE3GSI	348	210	241,500	AB LP Unlimited
VE1ZA	339	227	237,896	AB LP Unlimited
VE3GTC	376	218	236,094	AB QRP Unlimited
VE6AO****	418	254	230,632	MS
VE2FK	315	220	230,120	AB HP Unlimited
VE3FJ	311	260	199,680	20M LP Unlimited
VE1DT	193	174	176,958	40M HP Unlimited
VE7JKZ	298	191	175,147	AB HP Unlimited
VE7XF	310	226	152,324	15M HP Unlimited
VE2SG	260	186	150,846	AB LP Unlimited

VE1JBC	283	207	150,696	AB HP Unlimited
VE3OM	255	185	135,975	AB LP Unlimited
VE7MID	282	218	132,544	20M LP Unlimited
VE3FWA	237	179	126,553	AB LP Unlimited
VE6SQ	295	174	123,018	AB LP Unlimited
VE3NR	195	157	108,644	AB LP Unlimited
VE3WT	149	129	82,689	40M HP Unlimited
VA3XOV	204	139	80,620	AB LP Unlimited
VE3LC	197	133	71,155	AB QRP Unlimited
VA7DZ	212	163	70,742	AB HP Unlimited
VA3RKM	191	141	69,513	AB QRP Unlimited
VA3EC	178	139	69,500	AB LP Unlimited
VE6TL	212	139	63,801	20M HP Unlimited
VE3RCN	169	139	63,384	AB LP Unlimited
VE2HLS	174	149	58,408	20M LP Unlimited
VY2LI	149	129	56,115	AB LP Unlimited
VA2TTA	130	98	52,822	AB LP Unlimited
VA3FN	157	118	51,684	AB LP Unlimited
VA6XDX (VE6LB)	127	99	48,708	40M HP Assist
VE3DZ	127	95	43,320	AB LP Unlimited
K2NV/VE3	119	100	42,400	AB LP Unlimited
VE2FXL	129	108	39,960	AB HP Assist
VE3SMA	110	97	32,689	AB QRP Unlimited
VE5AE	128	94	31,208	AB QRP Unlimited
VA7CPC	124	101	30,502	AB LP Unlimited
VE3CWU	111	104	29,432	AB LP Assist
VE3CX	117	107	28,676	20M HP Unlimited
VA3ATT	117	93	26,319	AB LP Unlimited
VE3XAT	97	89	19,402	AB LP Unlimited
VY1EI	111	81	17,172	20M LP Assist
VE2KOT	64	62	10,664	AB QRP Unlimited
VE3DUS	46	46	10,442	40M LP Unlimited
VE7MR	42	42	8,400	40M LP Unlimited
VE7BGP	72	53	8,374	AB LP Unlimited
VA7MM	56	54	5,832	20M LP Unlimited
VA5LF	50	49	5,390	AB LP Unlimited
VE2QV (VE2FFE)	42	41	4,305	AB LP Unlimited
VE3AUO	45	43	3,870	20M LP Unlimited
VE3IQ	29	27	2,079	10M HP Assist
VA3RJ	24	23	1,173	20M QRP Unlimited
VA6MM	24	24	840	20M LP Assist
VE3AJ	12	12	324	20M LP Assist
VE6DJT	7	7	98	20M LP Unlimited
VE3HG	3	3	27	40M QRP Unlimited

\* VE9BK, VE9ML

\*\* VA7RN, VE7AX, VA7DX, VE7IO, VE7UF, @VE7UF

\*\*\* 5B4WN, VE7AHA, VE7CC, VE7DZO

\*\*\*\* VE7GL, VA7AO, VA7OO, VA7VZZ

\*\*\*\*\* VE6TC, VE6KC, VE6BIR

### VOLTA RTTY CONTEST 2011

Call	QSO	Mult	Score	Class
VE7CC	771	182	2,034,248,034	SO
VA2UP	813	180	1,817,689,140	SO
VY2LI	326	116	189,911,952	SO
VA7ST	274	105	139,361,880	SO
VE2FK	242	70	64,880,200	SO
VA3PL	158	53	22,743,784	SO
VE3GSI	136	81	18,815,328	SO
VA3XH	144	70	18,587,520	SO
VE5MX	167	57	17,829,087	SO
VE3FH	99	59	7,651,710	SO
VE2FXL	109	47	6,050,263	SO
VE3AJ	98	47	4,928,420	SO
VE3KAO	57	38	1,544,358	SO
VE3IAE	46	18	352,728	SO-40
VE6DJT	16	13	50,752	SO
VA3FN	5	4	1,100	SO-20
VE2CLM	3	3	144	MO

### IN QSO PARTY 2011

Call	QSO	Mult	Score	Class
VE2AWR	50	36	3,096	SO LP
VE4EAR	30	28	1,148	SO LP
VA7ST	21	18	756	SO LP
VE3SB	16	16	512	SO LP
VE2FXL	19	15	495	SO HP
VE3AUO	3	3	9	SO LP



**7TH CALL AREA QSO PARTY 2011**

Call	QSO	Mult	Score	Class
VE4EAR	326	87	69,861	SO LP Mix
VE7CV	226	82	48,790	SO LP Mix
VA7ST	166	63	31,374	SO LP CW
VE3EK	102	52	14,768	MS LP
VA1CHP	98	50	14,700	SO LP CW
VE2AWR	102	42	11,886	SO LP Mix
VE2EZD	81	39	9,360	SO HP Mix
VE7RSV	52	42	4,368	SO LP SSB
VE3TG	42	29	3,654	SO LP CW
VE2FXL	42	29	3,480	SO HP Mix
VE7BGP	40	31	3,100	SO LP Mix
VE9HF	32	28	2,688	SO HP CW
VO1TTT (VE9AA)	30	21	1,890	SOAB Mobile LP
VE3YF	31	23	1,817	SO LP Mix
VY2LI	33	23	1,541	SO HP Mix
VE3HUR	25	17	1,275	SO QRP CW
VA7CPC	21	17	1,071	SO LP CW
VE5BCS	22	20	880	SO LP SSB
VE3IAE	21	17	714	SO LP SSB
VE3AUO	19	15	570	SO LP SSB
VA3WPV	8	7	112	SO HP SSB
VE3AJ	2	2	8	SO LP SSB

**NEW ENGLAND QSO PARTY 2011**

Call	QSO	Mult	Score	Category
VA1MM	183	48	13,680	SOHP
VE2AWR	141	40	9,240	SOLP
VE4EAR	110	40	7,520	SOLP
VA7ST	94	30	5,640	SOLP
VE6TL	69	34	3,706	SOHP
VE3KPP	88	39	3,432	SOHP
VE3YF	41	30	1,830	SOLP
VE2FXL	42	23	1,656	SOHP
VE2KOT	42	23	1,656	SOQRP
VA3FN	35	22	1,540	SOLP
VE3IAE	29	19	551	SOLP
VA3WPV	27	20	540	SOHP
VE3HUR	15	13	390	SOQRP
VE5BCS	5	5	25	SOLP
VE3AUO	5	4	20	SOLP

**MARITIME QSO PARTY 2011**

Call	QSO	Mult	Score	Class
VE9ML	582	190	324,330	MO HP
VA1CHP	301	133	158,270	SO LP
VE9MCC	485	182	154,154	SO HP
VE1DT	244	138	148,488	SO HP
VE1RGB	267	132	135,168	SO LP
VE1NB	212	122	111,508	SO LP
VE1SKY	371	96	102,144	SO LP
VE9AA	244	101	88,880	/M
VE1AL	171	96	88,608	SO LP
VA1MM	131	89	80,100	SO HP
VY2MCC	528	135	72,495	SO HP
VA1GE	184	54	62,100	/M
VE1OP	123	68	30,056	SO HP
VE1RSM	116	61	26,108	SO LP
VE3YF	53	33	25,905	SO LP
VE1ZD	335	62	20,770	SO LP
VA1MCC	112	62	15,190	SO LP
VE3ZZ	35	21	9,555	SO HP
VA3GKO	16	13	9,217	SO LP
VA3RKM	32	20	7,060	SO QRP
VE7CV	18	13	5,538	SO HP
VE2FK	24	12	4,104	SO LP
VA1MCC	34	24	3,864	/M
VE3TW	15	10	3,210	SO LP
VE3KZ	12	8	1,760	SO HP
VE9OA	11	7	833	SO HP
VE1JF	3	2	208	SO HP

**2011 ARRL JUNE VHF QSO PARTY**

Call	QSO	Mult	Score	Class
VE3NPB/R	329	179	112,770	R
VE3SMA/R	291	148	87,912	R
VE3WCC	351	155	86,335	M
VA3ZV	408	173	74,909	A
VA6AN	477	152	72,808	A
VE5UF	431	167	71,977	B
VE4EAR	399	166	66,234	A
VE3KZ	340	147	51,744	A
VE3FGU	361	142	51,262	B
VE4TV	311	137	42,607	A
VA3ST	239	129	42,312	B
VE7SCC	261	130	33,930	L
VE7DXG	296	100	32,000	R
VA7FC	224	109	24,525	A
VE3EJ	217	107	23,219	M
VE6AO (VE6TC)	214	101	22,018	L
VA3DX	210	104	21,840	M
VE3EK	169	94	15,886	M
VE3CX	142	77	10,934	A
VE3TU	134	72	9,648	A
VE9AA	109	82	8,938	M
VE6TL	122	61	7,442	M
VE7TK	113	60	6,780	M
VE3OJN	89	60	5,760	B
VE3CVG	89	44	4,708	A
VA2WA (VA2WDQ)	82	54	4,428	A
VE7FYC	79	41	4,059	A
VE6SH	68	48	3,264	A
VE3GFN	63	40	2,520	A
VE2HAY	63	38	2,470	A
VA3ZDX	51	42	2,184	A
VE1SKY	50	42	2,100	A
VE2DC	43	32	1,376	M
VE3KLE	35	31	1,085	A
VE3RKS/R	34	28	952	RL
VE3TLT	34	28	952	A
VE3RCN	33	25	850	A
VE3MSC	34	21	798	A
VA7ST	29	21	609	A
VY2SS	28	21	588	A
VE7JR	27	18	486	M
VO2MK	28	11	308	A
VE3HHT	16	11	198	A
VE3VCF	11	10	120	A
VE2KY	12	7	84	A
VE3GTC	10	8	80	A
VE3IGJ	8	6	54	A
VE6SKY	8	6	54	A
VE7JRX	6	5	40	A
VA3RKM	5	3	18	Q
VE7BGP	1	2	2	R
VA5LF	1	1	1	A
VE2PIJ	-1	0	0	B

A - Single Op Low  
 B - Single Op High  
 Q - Single Op Portable  
 L - Limited Multiop  
 M - Multi Multi  
 R - Rover  
 RL - Limited Rover  
 RU - Unlimited Rover

**ARI INTERNATIONAL 2011**

Call	QSO	Mult	Score	Class
VE2XAA	293	112	137,872	SOCW
VE2CQF	163	84	79,296	SOMIX
VE2AWR	85	58	32,770	SOMIX
VE2HAY	52	47	20,398	SOSSB
VE3FJ	76	44	19,228	SOCW
VA2WA	94	42	18,396	SOCW
VA3TTU	60	43	15,695	SORTTY
VE1ZA	53	41	12,792	SOCW
VE3OM	24	19	4,560	SOCW
VE3AUO	24	19	3,325	SOMIX
VE3BK	23	13	1,690	SOSSB
VE3AJ	15	13	1,079	SOMIX
VA3WPV	9	9	684	SOSSB

## CONTEST CALENDAR FOR MAY, JUNE AND EARLY JULY 2012

Contest Name	Start	End	Web Address
ARI DX Contest	1200z May 5	1159z May 6	<a href="http://www.ari.it/images/stories/ContestHF/">http://www.ari.it/images/stories/ContestHF/</a>
7QP QSO Party	1300z May 5	0700z May 6	<a href="http://www.codxc.com/new/page.asp?content=start">http://www.codxc.com/new/page.asp?content=start</a>
10-10 Int. Spring CW	0000z May 5	2359z May 6	<a href="http://www.ten-ten.org/">http://www.ten-ten.org/</a>
Microwave Sprint	0600 Local May 5	1300 Local May 7	<a href="http://www.svhfs.org/">http://www.svhfs.org/</a>
Indiana QSO Party	1600z May 5	0400z May 6	<a href="http://www.hdxcc.org/inqp/index.html">http://www.hdxcc.org/inqp/index.html</a>
New England QSO Party (Pt 1)	2000z May 5	0500z May 6	<a href="http://www.fara.org/neqp/rules.html">http://www.fara.org/neqp/rules.html</a>
New England QSO Party (Pt 2)	1300z May 6	2400z May 6	<a href="http://www.fara.org/neqp/rules.html">http://www.fara.org/neqp/rules.html</a>
CQ-M Int. DX Contest	1200 May 12	1159z May 13	<a href="http://www.cq-m.andys.ru/">http://www.cq-m.andys.ru/</a>
Volta WW RTTY Contest	1200z May 12	1200z May 13	<a href="http://www.contestvolta.com/">http://www.contestvolta.com/</a>
50MHz Sprint	2300z May 12	0300z May 13	<a href="http://www.svhfs.org/">http://www.svhfs.org/</a>
FISTS Spring Sprint	1700z May 12	2100z May 12	<a href="http://www.fists.org/sprints.html">http://www.fists.org/sprints.html</a>
NAQCC Sprint	0130z May 17	0330z May 17	<a href="http://naqcc.info/">http://naqcc.info/</a>
King of Spain Contest CW	1200z May 19	1200z May 20	<a href="http://www.ure.es/">http://www.ure.es/</a>
CQ WW WPX CW	0000z May 26	2400z May 27	<a href="http://www.cqwpw.com/rules.htm">http://www.cqwpw.com/rules.htm</a>
ARCI Hootowl Sprint	2000 Local May 27	2400 Local May 27	<a href="http://www.qrparci.org/">http://www.qrparci.org/</a>
Maritime QSO Party	1200z Jun 2	0300z Jun 3	<a href="http://www.maritimecontestclub.com/">http://www.maritimecontestclub.com/</a>
Alabama QSO Party	1600z Jun 2	0400z Jun 3	<a href="http://www.alabamagsoparty.org/">http://www.alabamagsoparty.org/</a>
Portugal Day Contest	0000z Jun 9	2400z Jun 10	<a href="http://www.rep.pt/portugal_day_contest/rules.html">http://www.rep.pt/portugal_day_contest/rules.html</a>
WW South America CW	1500z Jun 9	1500z Jun 10	<a href="http://www.wwsatest.org/">http://www.wwsatest.org/</a>
ARRL June VHF QSO Party	1800z Jun 9	0300z Jun 11	<a href="http://www.arrl.org/june-vhf-qso-party">http://www.arrl.org/june-vhf-qso-party</a>
NAQCC Sprint	0030z Jun 13	0230z Jun 13	<a href="http://naqcc.info/">http://naqcc.info/</a>
West Virginia QSO Party	1600z Jun 16	0200z Jun 17	<a href="http://www.qsl.net/wvsarc/wvqp/wvqp.html">http://www.qsl.net/wvsarc/wvqp/wvqp.html</a>
All-Asia DX Contest CW	0000z Jun 16	2400z Jun 17	<a href="http://www.jarl.or.jp/English/0-2.htm">http://www.jarl.or.jp/English/0-2.htm</a>
ARCI CW QRP Shootout	1800z Jun 16	2100z Jun 16	<a href="http://www.qrparci.org/">http://www.qrparci.org/</a>
ARCI SSB QRP Shootout	1800z Jun 17	2100z Jun 17	<a href="http://www.qrparci.org/">http://www.qrparci.org/</a>
SMIRK 6m Contest	0000z Jun 16	2400z Jun 17	<a href="http://www.smirk.org/contest.html">http://www.smirk.org/contest.html</a>
NAQCC Milliwatt Sprint	0030z Jun 20	0230z Jun 20	<a href="http://naqcc.info/">http://naqcc.info/</a>
ARRL Field Day	1800z Jun 23	2100z Jun 24	<a href="http://www.arrl.org/field-day">http://www.arrl.org/field-day</a>
King of Spain Contest SSB	1200z Jun 23	1200z Jun 24	<a href="http://www.ure.es/">http://www.ure.es/</a>
Canada Day Contest	0000z July 1	2359z July 1	<a href="http://www.rac.ca/service/infocont.htm">http://www.rac.ca/service/infocont.htm</a>
DL-DX RTTY Contest	1100z July 7	1059z July 8	<a href="http://drcg.de/index.php?lang=en">http://drcg.de/index.php?lang=en</a>
Venezuelan Independence Day	0000z July 7	2359z July 8	<a href="http://www.radioclubvenezolano.org/rules.htm">http://www.radioclubvenezolano.org/rules.htm</a>
IARU HF World Championship	1200z July 14	1200z July 15	<a href="http://www.arrl.org/iaru-hf-championship">http://www.arrl.org/iaru-hf-championship</a>

Check these online sites for more contest information: <[www.hornucopia.com/contestcal/weeklycont.html](http://www.hornucopia.com/contestcal/weeklycont.html)>; <[www.contesting.com](http://www.contesting.com)>; <[www.sk3bg.se/contest/](http://www.sk3bg.se/contest/)>; <[www.arrl.org/contests/calendar.html](http://www.arrl.org/contests/calendar.html)>; <[www.arrl.org/contests/rate-sheet/about.html](http://www.arrl.org/contests/rate-sheet/about.html)>; and <[www.cq-amateur-radio.com/awards.html](http://www.cq-amateur-radio.com/awards.html)>.

\* The "Contest Calendar" is presented as a guide only. RAC and TCA do not necessarily endorse or support any of the above contests or the accuracy of the information. Bands: The 30, 17 and 12m bands are never used in any contest.

## NEW RAC ONLINE STORE: RAC – CAFÉPRESS SITE

[http://www.cafepress.ca/rac\\_radio](http://www.cafepress.ca/rac_radio)





# SECTION NEWS

## THE RAC FIELD ORGANIZATION FORUM

### MESSAGE FROM THE RAC CHIEF FIELD SERVICES OFFICER

As the warm days of summer approach, our focus changes from being ready for the inevitable ice storms and the inherent confusion that follows, to memories of Field Days of the past and the anticipation of great band conditions, great food and fun, and the camaraderie that is always present when Amateurs gather.

This year's Field Day will mean different things to different Clubs, but the common thread that holds us all together is a love of Amateur Radio. So get out and enjoy yourself!

#### ARES Merchandise

I am now putting together an order of ARES merchandise that will be available to ARES members. We currently have on hand ARES vests, 6" ARES crests, 12" ARES decals, 12" ARES door magnets and ARES lapel pins.

New to our list of items are ARES black V-neck T-shirts, ARES black polo shirts, ARES denim dress shirts and ARES black ball caps. All items will be embroidered with the ARES logo. If there are other items that you would like to see, please let me know.

#### ARES ID Cards

All outstanding ID cards should now be in your possession. If that is not the case please let me know.

We now print these cards with our own printer which makes turnaround time very fast. If you have an expired card, simply go to the RAC website and apply for a new card. Make sure you include an up-to-date picture.

#### Custom ID Cards

The card printer that we now use gives us the option of printing completely customized cards. As a service to our members and Affiliated Clubs, we are pleased to provide this service.

If you would like to provide your Club members or ARES Group members with a unique card sporting your Club/Group logo just let me know. There is no set up charge and cards are \$5 each.

#### Ontario Section Restructuring

Recently, the Ontario Restructuring Commission submitted their final report that recommended that Ontario be divided into four Sections, each carrying its own Section Manager and Secretariat to help manage the Section.

The Public Service / ARES column on page 46 features an article from Section Manager Allan Boyd, VE3AJB, that discusses this topic.

If you reside in Ontario I would encourage you to support this project to ensure that RAC members

are given the highest possible level of service from HQ, and that communication loops up to and down from the RAC Executive and the RAC Board continue to improve.

#### Recruit a RAC Member Today

The level of service and the benefits that you receive as a RAC member improve as our membership numbers increase.

At your next Club meeting why not promote our Organization and encourage each of your members to recruit one new RAC member this month.

Our membership stats are steadily improving, as is our financial picture, so let's keep the trend going.

I would like to thank each of you who email notes of encouragement.

The Field Organization Review Project, as well as the Training Specification Working Group and the Mission-Vision Working Group, are all working to evolve a new full Field Organization and it has presented challenges.

Your kind words are appreciated!

To the volunteers who continue to support these projects and give freely of your personal time, many thanks. It's appreciated!

*Doug, VO1DTM CEC  
Chief Field Services Officer*

Rescue and RAC. The meeting focused on enhancing service delivery by the Provincial Emergency Communications Service (PERCS). I was honoured to attend the meeting and see some old friends and meet some new ones.

This weekend also served to remind me of the dedication of the Amateur Radio community to emergency service in the Province, as well as the importance of the partnership with Emergency Management British Columbia. A busy weekend, but time well spent. For photos and more information please go to <[www.va7mpg.ca](http://www.va7mpg.ca)> and review the information posted on February 10 entitled Emergency Management British Columbia and Amateur Radio.

On February 12, the Coast Emergency Communications Association held a Simulated Emergency Exercise. The scenario involved an earthquake on Gabriola Island that occurred along a previously unknown fault. Several aftershocks also provided some "excitement and challenges" for the 20+ Amateur operators who participated.

Stations were established in Nanaimo, Parksville, Comox and North Vancouver. In addition the Emergency Management British Columbia radio room in Victoria was activated. The exercise lasted about four hours, and was deemed to have been a success. While all these events reveal some issues that need addressing, overall the communications exercise was a success.

Members of the Kamloops Amateur Radio Club announced they had scored a provincial high in the Canada Day Contest Multi Operator Single Transmitter Low Power. This score was the third highest in the category. Congratulations to all involved.



**CHIEF FIELD SERVICES OFFICER**

Doug Mercer, VO1DTM  
Box 1042  
84 Main Road  
Goulds NL A1S 1H2  
Tel. 709-364-4741  
Email: vo1dtm@rac.ca

I have received the following information from Rebecca Kimoto, VE7BEC. A great job by the organizers of this event; congratulations.

The BCQP 2012 log deadline isn't until March 31, but even from the logs received so far, there are obvious year-on-year improvements. While the figures may seem low in comparison to other QSO parties, the progress made this year was really amazing. In fact, BCQP 2012 was a success if for no other reason than it achieved its primary purpose: to get BC stations on the air.

Participation soared to an all-time high. About 120 VE7/VA7s were on the air, either alone or as members of multi-op teams. This is about three times higher than in 2011.

The federal electoral districts – BCQP multipliers – activated in 2012 reached 26, up from 15 in 2011.

The number of logs is now at 61, already twice that of the previous year, with 25 from BC and 36 from outside BC.

The number of BC logs with more than 100 QSOs has tripled, to 11, out of the 25 logs submitted so far.

The average number of QSOs in non-BC logs has doubled, to eight, substantiating the fact that there were more BC stations on the air for a QSO.

Please keep in mind these are not the final results. You have until the end of March to submit your logs.

While I was not able to attend the Burnaby Swap Meet all reports received indicate this event was very successful. See page 33 for more information.

### BRITISH COLUMBIA:

SM Paul Giffin, VA7MPG  
A/SM Ron McFadyen, VY1RM  
A/SM Neil King, VA7DX  
STM Al Ross, VE7WJ  
SEC (Yukon) Terry Maher, VY1AK  
OBM Bill Foster, VE7WWW

### JANUARY-FEBRUARY 2012 SM REPORT:

In late January, Ron McFadyen, Assistant Section Manager for the Yukon, advised that Terry Maher, VY1AK, had

accepted the position of Section Emergency Coordinator – Yukon. Terry has been active with the Yukon Emergency Measures Organization as well as the Yukon Amateur Radio Association. Welcome aboard Terry.

In early February, the members of the Yukon Amateur Radio Society reminded me of their IRLP nodes. VY1YC is node 1500 in Whitehorse and VY1RM is node 1662

located in Haines Junction. Why not give them a try?

On the weekend of February 3 & 4, Emergency Management for British Columbia hosted a meeting at their Victoria HQ. Present at the meeting were Amateur Radio operators involved in emergency communications from all regions of the Province, non-government organizations and representatives from local authorities, Search and

Speaking of swap meets, The Arrowsmith Amateur Radio Club of Port Alberni has a swap meet planned for June 2. Details are on the Section website at <www.va7mpg.ca>.

I should also mention the Amateurs in BC who are participating in the National Training Specification group discussions. They are Hugh Lines, VA7HU and AJ Bryan, VE7KSN. These are the folks who are working on a new ARES manual for us. The group encompasses Amateurs from across the country and is one more example of a lot of hard work that is done behind the scenes in the ongoing effort to improve RAC and the services the organization delivers. Thank you to this entire group.

Al Ross, VE7WJ, advises that he is available to instruct in NTS messaging to any group in the Lower Mainland of British Columbia. Al is the net manager of the BC Yukon Traffic Net, the provincial NTS net. Al can be contacted at <ve7cyy@telus.net>.

Bill Foster, the Section Bulletin Manager, continues to work on expanding the delivery of Section and RAC bulletins. February saw over 150 deliveries of bulletins. If you are interested in assisting in this area please contact Bill at <ve7www@rac.ca>.

It's time to start thinking about Emergency Preparedness Week and Field Day. Don't wait until the last minute; start making your plans now. If you like something added to the Section website please let me know.

#### BC Public Service Honour Roll January 2012:

VE7DXD 160, VE7GBO 100,  
VE7MPG 172 and VE7WJ 97.

#### February 2012:

VE7DXD 170, VE7MPG 262 and  
VE7WJ 120.

— 73, Paul, VA7MPG

#### ALBERTA:

SM: Garry Jacobs, VE6CIA  
SEC: Curtis Bidulock, VE6AEW  
STM: Jack Humphries, VE6JRH  
OOs: Tom Martens, VE6TRM  
Don Momen, VE6JY

#### JANUARY-FEBRUARY 2012 SM REPORT:

On October 1 an open house for the North Central Alberta Amateur Radio Club was held in Morinville. I was asked to make a presentation on ARES and our response to the Slave Lake Fires earlier in the year. For more information please visit: <<http://morinvillemews.com/2011/10/02/amateur-radio-hams-work-the-bands-in-morinville/>>.

On November 7 & 8, the Alberta Emergency Management Agency (AEMA) held their annual Stakeholders Summit in Calgary. On the first day I had the opportunity to speak on a panel regarding the response to the

## SECTION MANAGER ELECTION NOTICE: NEWFOUNDLAND AND LABRADOR

You are hereby solicited for nominating petitions pursuant to an election for Section Manager. The name of the incumbent appears on **page 4 of this issue of *The Canadian Amateur***. A petition, to be valid, must carry the signatures of five or more full members of RAC residing in the Section concerned. It is advisable to have more than five. Photocopied signatures are not acceptable. Signatures must be on the petition. Petition forms are available from RAC Headquarters but are not required.

The form below is acceptable:

### Second Notice to all RAC members in the Newfoundland and Labrador Section

(place & date)

RAC Vice-President Field Services  
720 Belfast Road, Suite 217  
Ottawa, ON K1G 0Z5

We, the undersigned RAC Full members residing in the **British Columbia Section**, hereby nominate

(name & call sign)

as Section Manager for this Section for the next two-year term of office.

(signatures & call signs)

(addresses with postal codes)

A Section Manager must be a resident of his or her Section, a licensed Radio Amateur holding an Amateur operator's Certificate (or equivalent as stipulated by the *Radiocommunication Regulations*) and should always operate radio equipment only within the limits and privileges of the certificate and qualification held, and have been a RAC Full Member for a continuous term of two years at the time of nomination.

Petitions will be received at the RAC Headquarters office until 1600E on July 10, 2012. If only one valid petition is received, the person nominated will be declared elected. If more than one valid petition is received, a balloted election will take place. Ballots will be mailed from RAC Headquarters on or about August 1, 2012. Return of ballots by 1600E September 15, 2012 and will be counted after September 16, 2012.

A Section Manager elected thus will serve a two-year term which begins on November 1, 2012. If no valid petition is received, the Section will be resolicited in *The Canadian Amateur*.

Slave Lake Fires and how ARES was involved. On the second day I was asked to give a general overview of ARES in Alberta. This gave the opportunity to discuss our resources and capabilities to a number of agencies from all over the province. To kick off the presentation, I utilized our provincial linking system (SARA) and linked up the entire province, with my handheld at the podium. I then asked for checkins from any of our ARES ECs. Lethbridge, Edmonton and Peace River responded to the checkin. One of the comments from the audience was, "Why can't we do that!". This helped to give a live demonstration of one of our capabilities.

At the AEMA Summit, I was approached by the County of Two Hills asking to integrate ARES into their disaster plan. Tony, VE6MVP, AEC with ARES Lloydminster, came forward to work one on one with the County.

I would like to pass thanks for the excellent work of two ARES members in Warner County. Larry, VE6LGB and Forbes, VE6FMP, have been working with the County on integrating ARES in to their disaster plan. After the recent wildfires in the area, it was determined that communications was an important issue and ARES was contacted to provide future support.

I would also like to welcome Bryan, VE6BYN, as our ARES member in Hardisty. Bryan was an active member with ARES Edmonton and upon moving has gotten involved with the Town of Hardisty. The town is anxious to integrate ARES into their disaster plans.

#### ARES Alberta Reports SEC Curtis Bidulock, VE6AEW ARES Edmonton:

A couple of years ago, the group was involved in a 5-part video series on the City of Edmonton EOC. Video 5 EOC-Logistics, Finance, and Administration highlights ARES integration for EOC activation. The link to the video is <[www.edmonton.ca/for\\_residents/emergency\\_services/eoc-logistics-finance-and-administration.aspx](http://www.edmonton.ca/for_residents/emergency_services/eoc-logistics-finance-and-administration.aspx)>

Edmonton has a new AEC, Terry VE6LL. Terry lives in Leduc and has been working on establishing a relationship with the City of Leduc. Recently, a request from the Town of Millet was received wishing to integrate ARES into their disaster plan. Considering the proximity to Edmonton and the need for resources, Terry was appointed as an AEC and to be the prime liaison for the Leduc Region.

#### ARES Lloydminster:

A new repeater is on-air near Vermilion, VE6YVG 147.315+.

It has a full-time link to the Lloydminster repeater VE5RI.

#### ARES Red Deer:

Work has progressed in the filling of the empty Secretariat positions for Alberta. Thanks to Doug, VO1DTM, for the bulletin to Alberta making the call for help in filling those positions.

I held an Amateur class on February 18-19 in Edmonton for the Red Cross office. We had nine people write the exam and eight passed. Further progress will be sure to follow in getting the Red Cross Edmonton station VE6RCE back up and operating in that city.

A new repeater for Fort MacMurray area is on the air as VE6TRC 147.000+. Plans exist to get it linked into the Southern Alberta Repeater Association system in the future.

The Central Alberta Amateur Radio Club 42nd annual picnic is planned once again for June 15-17. The usual Fathers' Day weekend event. Visit <[www.caarc.ca](http://www.caarc.ca)> and click on "Picnic" for further details or see the Coming Events on page 63.

Another successful Southern Alberta Repeater Association fleamarket took place February 4 with 223 registered in Edmonton. Lots of good fleas exchanged hands at the annual event. The next one is planned for October 13.



## REPEATER CHANNELS MAY NEED TO BE SHARED BC Amateur Radio Coordination Council Annual General Meeting

Despite the fact that one can scan the 2 metre, 220 MHz and 440 MHz bands and not hear any signals for much of the day and night, the demand for repeater channels continues to grow. The southwest part of British Columbia (Greater Vancouver, Fraser Valley and Vancouver Island) features over 220 coordinated repeaters, with 30 new repeaters being coordinated in the last year. Obviously, hardly anyone is using most of them, but the Coordination Council continues to receive requests for new repeater channels.

Perhaps it is time to review our coordination policy, and encourage sharing of channels, especially for repeaters with little or no traffic. How else can Amateurs and clubs experiment with some of the new technologies such as D-Star, digital repeaters and other narrow-band equipment.

These issues will be discussed at the Annual General Meeting of the BC Amateur Radio Coordination Council on May 27 in North Vancouver, BC.

BC Amateur Radio Coordination Council  
Annual General Meeting  
Sunday May 27, 2012 at 9 am  
North Shore Emergency Management Office  
147 E. 14th Street, North Vancouver, BC

For more information visit <www.bcarcc.org>.

Secretary Ed Frazer, VE7EF <ve7ef@rac.ca>

See the newly updated site at  
<www.saralink.ca> for details.

Thanks one and all for the  
contributions for this report.

73, Garry Jacobs, VE6CIA

### MANITOBA:

SM: Jan Schippers, VE4JS  
STM: Jan Schippers, VE4JS  
SEC: Vacant  
DECs: Jeff Dovyak, VE4MBQ (Capital Region and CanWarn); Gord Snarr, VE4GLS (South-East Central Region / South-West Region); Wayne Warren, VE4WR (North Region and Special Projects); Vacant (North-Eastern Region); Vacant (North-West Region).  
EC Ron Willisroft, VE4QE (Selkirk and District)

### JANUARY-FEBRUARY 2012 SM REPORT:

Spring is around the corner in Manitoba and our ever present threat of floods are approaching. This year it looks like this threat will not happen unless Mother Nature plays a fast one on us. David Rosner is hosting an Introduction to Amateur Radio for Cadets. This is not for a licence but as an interest course. So far it seems to be a success.

#### Winnipeg ARES Jeff Dovyak, VE4MBQ

Our January General Meeting featured Dr Gordon Giesbrecht, aka "Professor Popsicle", who spoke about Surviving Cold Water Immersion. For more information visit <www.beyondcoldwaterbootcamp.com/>.

Darcy, VE4DDW and Tedd, VE4VID, attended the Winnipeg Emergency Management (WEM) Course from January 17-19. Jim, VE4GZ is

scheduled for the mid-March session.

Our February General Meeting featured a presentation on "Call-Outs and Equipment". A PDF copy of the presentation was distributed by email after the meeting.

Approximately 12 ARES members will be providing volunteer Amateur Radio communications on March 3 & 4 MAR for Klondike Derby at Camp Amisk. Some additional event information is available at <http://klondike.shawwebpace.ca/asset/view/49764/41st\_klondike\_derby.pdf>.

We need additional ARES members to volunteer as CanWarn Net Controllers – that position does require ARES membership and a federal security clearance (which is facilitated by Environment Canada). One-on-one mentoring is available for new CanWarn Net Controllers.

The Amateur Radio briefing for the 2012 Manitoba Marathon will be held on Tuesday, June 12 at Norwood Community Club, 87 Walmer Street, Map 17 C8.

The 2012 Manitoba Marathon will be held on Father's Day on Sunday, June 17.

#### Manitoba ARES:

Jeff Dovyak, VE4MBQ, reported the status of VA4DIG has not changed. Special Projects DEC is waiting for Government Services to drill some holes on the elevator penthouse and install masts.

#### Traffic Totals

January: 11  
February: 10

### ONTARIO:

SM: Allan Boyd, VE3AJB  
Email: ve3ajb@vianet.ca  
SEC: Scott Carter, VE3CGN  
Email: ve3cgn@gmail.com  
ASM: Michael Hickey VE3IPC  
Email: ve3ipc@aol.com  
STM: Glenn Killam, VE3GNA  
Email: ve3gna@xplornet.ca

### JANUARY-FEBRUARY 2012 SM REPORT:

As mentioned in previous RAC Bulletins the Ontario Section of Field Services is in for a big change. I ask all of you to take the time and please read the article in the Public Service / ARES column on the transition phase and the job descriptions for the new positions. I am looking for some interested, dedicated and knowledgeable operators out there. I know you are there because I have spoken with many of you over the years and I'm sure there are others out there that I have not met yet.

As your Ontario Section Manager for the last six years it was evident that changes were needed and many of you who attended the meeting on Orillia in 2005 knew this needed to be done. This transition is going to make RAC and the Field Services accessible to all the operators out there thanks to your input. This is your opportunity to nominate good people within your Section and to get the ball rolling.

The Section Manager's position requires that the SM be accessible to each Amateur in the Section and I have tried to do the best job possible from my location to serve all of Ontario. Unfortunately, one person cannot not be in all places in the province to service your needs as required by a National Organization like RAC. This proposal will allow for greater representation. Please read the article carefully and if you have any questions please feel free to contact me. I want to thank you all for your continued support and trust as we now go through one of the most important phases in the Field Services restructuring in RAC's history.

### ACTIVITIES

#### GTA District (GTA West – Grand North):

Rick Harrison, VA3NV, reports that the January 2 Oakville ARES net set a new record for number of checkins with 21 stations. Congratulations to NCS Jeff, VA3CQC.

VA3NV and VE3JUZ represented Oakville ARES at the January 25 meeting of the Halton Region Emergency Communications Team.

Oakville ARES participated in SPAR Winter Field Day on January 29 and 30 and operated from a

trailer located in the parking lot of the Region of Halton's headquarters building in Oakville. Power was supplied by several generators. With the aid of several heaters we were able to keep the temperature in the trailer around 10 degrees Celsius despite the cold, wind, rain and snow outside.

Thanks to VE3DDL for providing the trailer. The following Oakville ARES members took part: VE3OGP, VE3DDL, VA3PRE, VA3SBB, VA3NV, VA3BL, VE3MVW, VE3RHF, VA3DDA, VA3JDA, VA3ROR and VA3PRS.

A voice and packet radio station, similar to the one we have stored in the Oakville Red Cross has been installed at the Milton Red Cross.

#### Burlington ARES Report EC Kevin Andrews, VA3KRA

EC Kevin, VA3KRA, attended the following: the Burlington ARC General Meeting on Thursday, January 5; the Halton Region Emergency Communications Team meeting (HRECT) on Wednesday, January 25; the VR Pro Committee meetings on January 17 and January 26 for the organization of the Chilly Half Marathon Run / Walk & Frosty 5K Run; the Burlington ARC Board of Directors meeting on Thursday, January 26.

Oakville ARES: A meeting of GTA West ARES ECs and the DEC took place on February 24 at 7 pm in the Region of Halton's Emergency Operations Centre at 1151 Bronte Road in Oakville. Representatives from Oakville/Milton ARES, Burlington ARES, Peel ARC ARES, and Mississauga ARES were in attendance. Thanks to the Region of Halton's Emergency Planning Department for arranging the meeting location.

DEC Rick Harrison, VA3NV, reports that the Halton Red Cross Disaster Services placed ARES groups in Burlington and Oakville on standby for the train derailment in Burlington on February 26. ARES Emergency Coordinators and Assistant Emergency Coordinators met on the Oakville 2m repeater and shared information until the stand down. We weren't actually deployed but it's nice to know that the notification system works.

On Sunday, February 12, Burlington & Oakville ARES with TBRC provided communications for the Valentine's Day Singles & Couples 5k races. Thanks to Kevin, VA3KRA, Stan, VA3SBB, John, VA3BL, Peter, VA3PRE and Alan of TBRC for their participation.

Burlington ARES participated in four of the Halton Region Emergency Communications Team (HRECT) nets for the month of February.

## Capital/Seaway District:

The Renfrew County West (RCW)-ARES Group meeting was held in Petawawa on January 30. The date turned out to be a poor choice as a number of members were unable to attend. The purpose of the meeting was to review the operation of Outpost and to introduce the ICS-213 forms feature of Outpost. Some of the planned demos were thwarted by the intermittent operation of the Petawawa Library Wi-Fi. This demonstrated that if the use of the ICS-213 forms was important, a backup WIFI router would be a good idea. The normal operation of Outpost does not use Wi-Fi.

The Ottawa (EMRG) ARES group repeater test was conducted by Dave, VE3KMY, on Wednesday with a good turnout. Thanks to the participants Ron, VA3ACZ, Bob, VA3QV, Arthur, VA3BIT, Sandy, VE3AAC, Mike, VE3KOY and Barney, VA3BGB. The report from Dave is that all repeaters are operating normally. In addition the EMRG's Winlink and BBS systems, and the Ottawa ARC repeater, VE2CRA, were tested and found to be working.

The Collegeville EOC and Incident site courses were conducted at the Canadian Emergency Management College in Ottawa on February 8 and 9. Mike, VE3FFK, Coordinator for the Amateurs, is happy to report that he had a full slate of volunteers for the exercises.

The Renfrew County West (RCW)-ARES group provided safety communications for two ski races this February. The first was the annual Silver Spoon Ski Race in Deep River on February 11. The minimum temperature for the start of this race has recently been set as -18, and on race day, the temperature got to -17 by the 11 am start time. The cold made it interesting for those of us on the course to keep notes, shuffle papers and radio bib numbers to the base. As last year, we were not providing split times, so we were able to have four checkpoints reporting to two base stations instead of our usual two checkpoints and two base stations. For a number of years now, we have used VHF for one base station and UHF for the other, with a strategically located mobile with crossband repeat so all the checkpoints used VHF, either direct or through the mobile repeater. Mike, VE3ODJ and Dale, VA3DNA, operated the base stations. Yvonne, VE3RYA and Bernie, VA3SUR, were at the 5K checkpoint. Chris, VA3CRL and Dom, VE3DGZ, were at the 10K checkpoint while Ron, VE3ZRV and EC Bob, VE3YX, were at two different safety points.

The second ski race for the RCW-ARES Group was the

EOSSAA Eastern Ontario Secondary School Athletics Association race in Pembroke on February 15. The temperature had warmed up in the four days since the Silver Spoon and the race was run in above zero temperatures. That was more pleasant for Dale, VA3DNA, at the checkpoint, and Yvonne, VE3RYA and EC Bob, VE3YX, in Gear Head's bike trailer / base station.

The RCW-ARES Group provided radio volunteer operators Dom, VE3DGZ, Yvonne, VE3RYA and EC Bob, VE3YX, at what might be the last course due to more budget cuts at the CEMC Canadian Emergency Management College in Ottawa on February 8 and 9. We were glad to have such a unique experience and hope that there will be more opportunities in the future.

Ten members of the RCW-ARES Group have so far indicated an interest in attending a radiation course that would be provided by the AECL for people who could have responder duties in the event of a nuclear emergency at Chalk River. Members of our group would not normally be anywhere near areas that could have significant radiation, but an understanding of the principles could be useful for radio communicators.

The RCW-ARES Group held an unusual amount of five ARES nets in this leap year month.

The Ottawa (EMRG) ARES Group conducted its usual monthly test of their repeaters in East, Central, West and South Ottawa, plus UHF in central Ottawa and the Ottawa ARC Club repeater VE2CRA. The voice repeater tests were headed by Dave, VE3KMY, with the participation of Ron, VA3ACZ, Bob, VA3QV, Arthur, VA3BIT, Sandy, VE3AAC, Mike, VE3KOY, and Barney, VA3BGB. The BBS and Winlink VHF gateways were also tested and found to be operational.

Another set of exercises was conducted on February 8 & 9 at the CEMC Canadian Emergency Management College in Ottawa, which is tailored for the EOC Management / Incident Site Management course students. As usual there were Radio Amateur volunteers in the EOC and at the Incident Site handling radio traffic and other duties in support of the students experiencing the two-day course exercises. While showing municipal officials from across the country what Amateurs can do for them in an emergency situation, the Amateurs got some exposure to operating conditions in a set of well simulated emergency exercises. As of now, the College's website does not show any more courses. I'm keeping my fingers crossed until the federal budget comes out. Participating volunteers this time were: Tyler, VA3DGN;

## RAC WILL BE AT DAYTON!



The Radio Amateurs of Canada will be at Dayton for Hamvention 2012 from May 18 to 20.

Last year, after a decade-long wait, the Radio Amateurs of Canada operated a Booth at the Dayton Hamvention. RAC officers and RAC members met with many existing members, signed up new members, introduced themselves to soon-to-be members, and spoke to Amateurs from the United States and around the world including China, Qatar, Germany, Japan and Great Britain.

This is the 60th year of the Dayton Hamvention, sponsored by DARA (Dayton Amateur Radio Association). As has been the case for many years, this year's Hamvention will be at the Hara Arena Complex on the north side of Dayton, Ohio. Further information on Hamvention 2012, including advance ticket sales and motel accommodations, can be found online at <www.hamvention.org>.

RAC is returning to Dayton for 2012 and will be at Booth BA0436. We are once again looking for volunteers to operate the Booth from May 18 to 20. Last year we organized a single three-hour slot for each volunteer. Your availability will determine your slot and flexibility is the watchword.

Please forward your contact information and availability by email to <ve4baw@rac.ca> with a copy to our office at <rachq@rac.ca>.

Looking forward to seeing you in Dayton!

*Geoff Bawden, VE4BAW – RAC President*

Tracy, VA3TXN; Michel, VE2BCW; Jean-Paul, VE2JPV; Dominic, VE3DGZ; Volunteers Coordinator AEC Mike, VE3FFK; Yvonne, VE3RYA; EC Bob, VE3YX; with Ron, VA3ACZ and Gord, VE3XGP, on standby if needed. (Since it is February and several of the Amateurs are from a distance away, having standby operators is always a good plan.)

The big event of the month (of the winter, in fact) was the Canadian Ski Marathon, an annual cross-country ski event covering about 160 kilometres over two days, with about 1,500 participants, of which over 100 camp out over night between days of skiing. Much of this event takes place beyond cellphone coverage range. Even satellite phones have difficulty in the valleys under the snow covered pines. Amateur Radio provides both safety and logistical communications for the event. Many of the safety personnel must have qualifications in skiing, first aid and Amateur Radio, not necessarily in that order. Days start early and run long. Many of us are down range on the Friday, getting set up at locations such as the dormitory and the headquarters/net control location. Traffic started on Saturday before 3:30 and tapered off between 18:30 and 20:00. This year the number of Amateur volunteers was down, but still included at least 44 of us. It is often said by the volunteers to be one of the most challenging and rewarding events they have helped with. Special thanks to AEC Harold, VA3UNK and EC Richard, VE3UNW, for spearheading the

Amateurs for the logistics and safety teams respectively.

Thanks go to all Canadian Ski Marathon Amateur Radio operators for 2012: Clarence, VA2SLB, Arthur, VA3BIT, Ken, VA3BKT, Dean, VA3CDD, AEC Tyler, VA3DGN, Marc, VA3DRV, Jonathon, VA3GDG, Jamie, VA3JME, John, VA3JO, Normand, VA3NHK, Janice, VA3PAX, Peggy, VA3PGY, Peter, VA3PJS, Kevin, VA3PSL, Bob, VA3QV, AEC Harold, VA3UNK, Margaret, VA3VXN, Francois, VE2AAY, Souly, VE2FFS Ray, VE2HMA, Stéphane, VE2STQ André, VE2WER, Duncan, VE3BDC, Clayton, VE3CBJ, Bill, VE3DW, AEC Mike, VE3FFK, Ken, VE3GWN, Harrie, VE3HYS, Gaëtan, VE3IET, Ian, VE3IGJ, EC Earle, VE3IMP, John, VE3JKG, Eric, VE3KIH, Dave, VE3KMY, Neil, VE3PUE, Bob, VE3SFW, Alan, VE3TSD, Mike, VE3UMC, EC Richard, VE3UNW, Gord, VE3XGP, Glenn, VE3XRA, Greg, VE3YTZ, Robert, VE3ZRG and Alan, VE3ZTU.

Next year the event runs on February 9 and 10. See you there. (Report submitted by AEC Mike Kelly, VE3FFK, for EMRG/Ottawa-ARES EC VE3UNW)

The Lanark North Leeds (LNL)-ARES Group held the weekly breakfast meetings in Perth. Group members VE3VY, VE3OJC, VE3GXW and VE3GWS were active conducting tests using the Winmor and the Paclink systems. All is working well.

The LNL-ARES group conducted an unusual amount of ARES Weekly Net due to leap year.

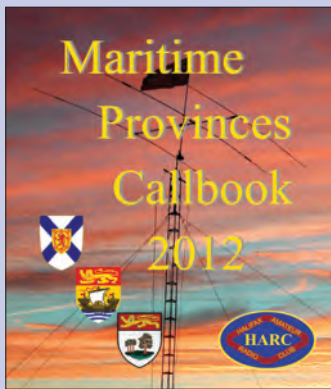


## MARITIME PROVINCES CALLBOOK 2012

The 2012 edition of the Maritime Provinces Amateur Radio Callbook will be available for sale (\$15/copy) at the Down East Flea Market in Halifax on Saturday, May 26. Copies can also be purchased by contacting Fraser MacDougall, VE1WO, by email at <VE1WO@RAC.ca> and he will be happy to mail one to you (\$15 + postage).

The 2012 edition contains a complete listing of all licensed Radio Amateurs in NB, NS and PEI sorted by call sign, name and location. In addition, the Callbook includes original technical and general interest articles written by Halifax ARC members including but not limited to:

- Operating Digital Modes
- Vertical Antennas – recent developments
- Operating Maritime Mobile – tips from an expert
- Getting the most out of your receiver
- Operating Etiquette
- Teaching Morse Code
- Emergency Preparedness for Radio Amateurs
- Maritime Repeater Linking System
- Maritime Repeater Maps and Tables of Frequencies
- IRLP / APRS / EchoLink
- Maritime Club Listings
- Maritime Flea Markets & Ham Coffee Stops



### Bruce District:

**Bruce County:** The monthly ARES meeting was held on Tuesday, February 21 in Port Elgin, with three Amateurs, including myself, participating. This was a "business" meeting with no scheduled presentation. There was a brief report on the Ontario Section restructuring. Via Grey County ARES, we have been invited to take part in the Bruce Safety Festival on May 3 and we will provide volunteers and equipment for that public awareness event. The group continues to participate in the weekly Port Elgin ARC net.

**Dufferin County:** No formal report received. However, via the Dufferin ARES email list I was notified that an election for EC was to be held on March 2. I've been informed that there was insufficient attendance to hold the election so Alex Giger, VE3LFF, continues as the EC.

### Killarney District: Manitoulin and North Shore:

Presentations were made by Al, VE3AJB and Jim, VE3LJM, to area DSSAB EMS managers in Espanola outlining the benefits of ARES during times of any unplanned event or a crisis situation.

A complete "Grab & Go" VHF/UHF station is available and ready for implementation when required.

The radio at Billings EOC was reprogrammed and the incoming cable was in need of repair. It is possible that a contractor changing windows in the building may have damaged it.

**Sudbury:** It's been a very busy few months for Sudbury ARES EC Alan, VA3AJV and members of the Sudbury ARES unit. Since Field Day 2011 was held at the Sudbury EOC, ARES locally has generated more interest from Greater Sudbury Emergency Management staff and local organizations. Talks started with the CEMC during and after Field Day 2011 to get upgrades to our EOC radios and antennas and also to get some equipment to make EmComm Go-Kits for our ARES unit. I am very happy to report that we now have a new Icom 2820 D-Star radio and Diamond dualband antenna for our radio room at the EOC. In addition, there is a new tower installed for the antenna and the existing HF dipole has been moved to the new tower to give us more height and better performance. Also purchased was equipment for six EmComm kits, each with an Icom ID-880 dualband, Icom 2m handheld,

portable antenna, battery pack, solar charger and rolling tool chest.

Now the fun begins with putting together the kits and installing and programming the new radios, and also training and getting to use the new equipment! In the months to come the kits will evolve and I'm sure they will be upgraded as needs arise. We will be experimenting with new modes and ways to communicate between each kit and the EOC to determine the best mode for our situation.

Sudbury ARES has also started a new 2 metre net, held every first and third Monday of every month usually on the VE3RVE machine at 147.210+. We may sometimes change frequencies or go simplex depending on the need or exercise. The purpose of the net is to get newer members on the air and also for all Amateurs to practise traffic handling and discuss anything about emergency preparedness and communications. I also want members to rotate being net control so that they can gain experience in controlling a net.

Many thanks to all who helped me with these projects and also a huge thank you goes out to the Greater Sudbury Emergency Management office for their continued support!

### DECs reporting:

VA3s: NV,  
VE3s: LBX, IPC and RHJ.

### ECs reporting:

VA3s: AJV, KRA, KU, MED, OW, PB, and SPT.  
VE3s: BQP, DPG, HCB, HEG, ILA, JSQ, LJM, SLQ, SUT, RXE, RQR, TLT, UNJ, UR, VAC and VI.

### Ontario Traffic Total STM Glenn Killam, VE3GNA

**January 2012**  
VE3NDJ 0; VA3QV 0; VE3HMS 0;  
VE3KII 11; VE3GNA 1071; VE3PSV 32;  
VE3RHJ 0; VE3WKJ 3; VE3TPZ 104;  
VA3PB 60; and VE3ESX 0. Total 1294.  
**February 2012**  
VA3QV 0; VE3HMS 0; VE3KII 3;  
VE3GNA 799; VE3PSV 20; VE3RHJ 11;  
VE3WKJ 0; VE3TPZ 0; and VA3PB 0.  
Total 833.

### Official Observer Report:

Norm Bell, VE3XRC

#### January:

# of hours monitoring = 15  
# of Advisory Notices sent = 0  
# of Good Op Notices sent = 1

#### February:

# of hours monitoring = 18  
# of Advisory Notices sent = 0  
# of Good Op Notices sent = 3

### Official Bulletin Stations

OBM Brad Rodriguez, VE3RHJ

#### January-February 2012:

VA3BIX, VA3KR, VA3RRZ, VA3STG,  
VE3GIO, VE3JDK, VE3JUZ, VE3KII,  
VE3VBR, VE3VY and VE3XTA.

### Ontario Public Service Honour Roll

#### January 2012:

VE3GNA 40, VA3PB 14, VE3TPZ 305,  
VA3PM 0 and VE3RHJ 21.

#### February 2012:

VE3GNA 40, VA3PB 0, VE3TPZ 0,  
VA3PM 0 and VE3RHJ 23.

73, Allan Boyd, VE3AJB  
Ontario Section Manager

## MARITIMES

SM: Jim Langille, VE1JBL

ASM: Al Thurber, VE1AKT

### JANUARY-FEBRUARY 2012 SM REPORT:

On Saturday morning January 21, members of the Queens and Shelburne County ARC's put the VE1BBY repeater 147.360+ Granit Village online. This will fill some bad areas in the western part of Queens County (Broad River area and Port Mouton) and for the Shelburne County, Lockport area, Sable River and Jordan Falls.

Here is a reminder about the Red Cross Net held each Thursday at 12:30 pm on the MAVCOM system throughout the Maritimes. Net controllers include Peter Hebb, VE1SM, Herb Doane, VE1HTD and Andy Speelman, VY2AS. There is also an HF net that follows at 1 pm on 3.770 MHz.

Several Red Cross buildings across the Maritimes now include an Amateur Radio station at their locations. During the net, these stations are called in first and then the net is opened up for anyone that would like to check in.

The 2012 Downeast Fleamarket will be held on May 26 in Halifax. The new Maritime Callbook should be available at the fleamarket this year. For complete details, go to <www.halifax-arc.org/>.

The results are in for the 2012 Atlantic White Cane Contest that was held on February 5. There were 17 entries this year, 4 White Caners and 13 Non-White Caners. First place in the White Caners was Normand Richard, VY2NR, from Wellington PEI and the top Non-White Caner was Darrell Ward, VE1ALQ, from Grandbay-Westfield NB. Congratulations to both. For more complete details on the contest, go to the Yarmouth ARC website at <http://ve1yar.com/ve1gx/>.

The NSARA contests have come and gone for another year. For complete details on the winners, go to <http://nsara.ve1cfy.net/>.

Al Cyples, VE1CYP, provides the following report: "I'm pleased to advise that the first D-Star repeater in Nova Scotia is now operational in Lunenburg County. The installation was completed on February 18 and is located at a power site located at Church Lake, NS (N 44 32 40 W 64 36 53). Frequency is 145.290 (-.600). The call sign is VE1DSR."

This will be my final report for the Maritimes. I have had a great time as RAC Section Manager for the Maritimes and bringing the news to you over these past four years.

Thanks to all who have helped me out over these years.

## 75TH ANNIVERSARY OF LOYALIST CITY ARC

The Loyalist City Amateur Radio Club of Saint John, NB celebrated the 75th anniversary of the club's formation on March 10, 2012. The club was formed in February 1937.



The only surviving member of the group that formed the club in 1937 is J. Malcolm Redding, VE1IZ. Malcolm became an Amateur in 1936 and for some years was a radar technician in the Royal Canadian Air Force. He completed his career as an engineering technician with the NB Telephone Company before retiring.

Malcolm was a RAC member for many years, is a life member of the LCARC, but at the great age of 92 and due to failing health has not been able to participate in any activities of late.

He was very disappointed at not being well enough to attend the 75th anniversary banquet so he was presented with a certificate for 75 years of membership in the club by Club President Phil Cyr, VE1PGC and anniversary chairman Len Morgan, VE9MY, along with several other members of the club at a later date.

To keep up with all the news, emergency communications, Silent Keys, new hams, exercises and more from the Maritimes, go to The Maritime Amateur website at <www.maritimeamateur.ca>. If you would like to become a member of the MA website, click on "Members" from the homepage and follow the instructions. I send out a monthly newsletter to all members with updates to the site and any news of importance. At the time of this writing (March 14) there were over 100 members.

Special thanks to Alan Griffin, Editor, The Canadian Amateur magazine for helping me along the way with these reports.

(Thanks Jim. It has been a pleasure working with you. Ed.)

—73 Jim, VE1JBL

### NEWFOUNDLAND-LABRADOR

SM: Charles Marsh, VO1VZ  
ASM: Wayne Smith, VO1TA  
SEC: Rendyl Godwin, VO1RYL  
A/SEC: Dave McLennan, VO1LM  
OBM: Ira Stacey, VO1IRA  
STM: Joe Earles, VO1BQ

### JANUARY-FEBRUARY 2012 SM REPORT:

From time to time I like to publicly recognize the unsung heroes within the NL Section; the ones who do the necessary work behind the scenes that keep the Section humming along.

A public thank you to Rick Burke, VO1SA, for running the NL QSL Bureau for us. At times we bug him somewhat when looking for QSL cards. I know Rick well from conversations at Saturday morning coffee at The Mall Food Court, and I must admit, at times he deserves it :)

He is doing a great job, sometimes a thankless one, so let's make his life easier by making sure he has an ample supply of self-addressed envelopes along with enough money to look after the postage. And, if you don't want QSL cards through the bureau, let your contact on the other end of the transmission know that so the bureau doesn't get cluttered with unnecessary cards. So again, thank you Rick.

I also want to recognize Joe Craig, VO1NA, and the experimental work he does on other bands. I recently read a RAC Bulletin announcing the acquisition of a new Amateur band in the 500 kHz spectrum. Well done Joe as I'm sure your efforts in this area were instrumental in the procuring of this frequency range for Amateur use.

While I'm at it, what a great job A/SEC Dave McLennan, VO1LM, and his sidekick Mike Pardy, VO1MPP, are doing with respect to the ARES program and getting emergency station VO1EMO at Fire and Emergency Services – NL in topnotch working order. I got a call from Dave last week; he wanted to run something by me. I was very busy at the time with no time to chat so he said "I'll do what I want to do and ask for forgiveness after". That is what I call taking charge!

Also a pat on the back to Ira, VO1IRA, who, despite his back issues, always gets the energy to help the two boys out with antenna building and procuring tower climbers. All NL Amateurs should be aware of the new restrictions in place with respect to tower climbing; you must be safety certified.

I just got an official invitation to Government House to meet with Lieutenant Governor John and Mrs. Crosbie at the official opening of the Titanic 100th Anniversary. Dave Myrick, VO1VCE, has put much effort into planning for this anniversary at Cape Race where the distress call from the Titanic was heard and relayed to the rest of the world. Dave has close ties to Cape Race with a family history of radio operators at the Marconi Station that was built there.

Congratulations to the ARCON Club, based in Gander, on the election of Ken Tucker, VO1KVT, as their new President. As far as I'm concerned, they have made a good choice in leadership. Ken, along with a few local Amateurs, are spearheading the effort to link VO1ADE repeater into the existing network of linked repeaters. They have also approached their local Member of the House of Assembly, Minister O'Brien, for some funding to get some new equipment for their ARES response station so as to react to any emergency in the area either environmental or technical. It's good to see the Gander group get new energy.

I've become aware of a military exercise with respect to testing radio intraoperative ability issues which will take place in August at sites in Happy Valley – Goose Bay and the Cartwright areas in Labrador.

Amateurs in the Big Land are asked to take note of this. We are unsure if Amateur Radio is going to be asked to get involved, but we have received some preliminary email.

I want to thank Ken Whalen, VO1ST, for organizing the Amateur Training course on behalf of SONRA. There are 14 persons enrolled in this course so we should soon have 14 new Amateurs – well 13 new Amateurs and one with full HF endorsement. One of these students is a 16 year old female. And who said we are a group of old fogies?

In closing, on behalf of the NL Section I would like to express our condolences to RAC VPFS Doug Mercer, VO1DM, on the loss of his mother and brother in such a short time. I bet he misses the family get-together every Saturday dinner time (lunchtime for you mainlanders) at his mother's house for the pea soup and dumplings.

—73, Charlie, VO1VZ

**ECs Reporting:**  
VO1IRA, VO1DM and VO1LM.

**Nets**  
Thanks to OBM Ira, VO1IRA:

**January:**  
Cod Jigger 335  
Evening Net 768

**February:**  
Cod Jigger 282  
Evening Net 371  
VHF Caribou Net 491



### RAC Field Organization Reports National Traffic System (NTS) Net Reports

#### January 2012:

Net (Manager)	Sessions	QNI	QTC
BCEN (VE7XLH)	31	148	23
BCYTN (VE7WJ)	31	335	46
CECA (VE7DXD)	4	65	13
OLN (VE3SHM)	31	321	33
OPN (VE3TPZ)	31	132	73

#### February 2012:

APSND (VA6IX)	29	1503	7
ATN (VE6JAZ)	29	285	10
BCEN (VE7XLH)	29	123	16
BCYTN (VE7WJ)	29	407	45
CECA (VE7DXD)	4	56	12
OLN (VE3SHM)	30	284	31

### Service & Specialized Nets:

#### January 2012:

Net (Manager)	Sessions	QNI	QTC
BCA (VA3RMU)	4	36	0
COMSNT (VE3KII)	31	1024	8
LN (VE3PSV)	31	756	0
KWWN 2m Net (VE3PSV)	5	11	3
Maritime Net (VE1PJS)	31	1237	0

#### February 2012:

Net (Manager)	Sessions	QNI	QTC
Alberta ARES (VE6AGH)	16	199	41
Alberta Aurora (VE6TRM)	29	1337	0
COMSNT (VE3KII)	29	945	3
KWWN 2m Net (VE3PSV)	5	11	3
LN (VE3PSV)	29	69	2
Maritime Net (VE1PJS)	29	1159	0



# COMING EVENTS

## THE HAMFEST AND FLEAMARKET CALENDAR

The following events are listed by date. Some dates and details are tentative.

### NEW ENGLAND AMATEUR RADIO FESTIVAL (NEAR-FEST XI)

**Date:** Friday, May 4.

**Time:** Gates open at 9 am Friday for sellers and buyers.

**Place:** Deerfield, NH, USA; the Deerfield Fairground is located on Route 43 approximately 15 miles NE of Manchester NH. GPS coordinates: N42d 5m 57.4" W71d 14m 33.5s (Lat 43.099286 Lon -71.242663).

**Description:** In addition to the hundreds of hams "tailgating" in the fleamarket there will be three huge buildings full of commercial vendors and dealers offering everything from the latest in radio equipment, books, accessories and who knows what else?

**Cost:** \$10 per person and \$10 per vehicle into the fleamarket. Camping fees to be announced. **Talkin:** K1JEK/RPT 146.700 MHz (-600 PL 88.5) 146.52 direct. 3.885 MHz. Tune your car radio to FM 95.1 or AM 650 for continuous hamfest news and entertainment.

**Information:** <W1RC@near-fest.com>

**Website:** www.near-fest.com/

### LOYALIST CITY FLEAMARKET

Sponsored by the Loyalist City ARC

**Date:** Saturday, May 12.

**Time:** Vendors 8 am; Public 8:30 am.

**Place:** Millidgeville-North End Lions Club 61 Elgin Street, Saint John North.

**Description:** Amateur Radio Fleamarket, Display of LCARC 75th Anniversary memorabilia, RAC table, Social and Canteen. **Cost:** General admission \$3, tables free.

**Talkin:** VE9SJN 147.270 (+) ((PL 100.0)).

**Information:** Phil Cyr, VE1PGC, 506-633-1384 or <pdccyr@nbnet.nb.ca>.

**Website:** www.lcsrc.ca

### RIDEAU LAKES ARC 28TH SMITHS FALLS FLEAMARKET

Sponsored by the Rideau Lakes ARC

**Date:** Saturday, May 12.

**Time:** Public 9 am; Vendors 7 am.

**Place:** Smiths Falls, Ontario; Smiths Falls Curling and Squash Club, Old Sly's Road. Note: this is a new location.

**Description:** Our 28th fleamarket of Amateur Radio equipment. A large number of commercial and private vendors will be in attendance. Canteen and Consignment Table available.

**Cost:** Admission \$5 (includes door prize ticket); Youth under 16 admitted free; Tables (2.5' x 5') \$10 (includes one admission).

**Talkin:** VE3RLR on 147.21 MHz+.

**Information:** For info or reservations contact the RLARC at <ve3rlr@yahoo.ca>.

**Website:** http://ve3rlr.dyndns.org

### HALIFAX DOWNEAST FLEAMARKET

Sponsored by Halifax ARC and the Dartmouth DARC

**Date:** Saturday, May 26.

**Time:** Vendors 7 am; Public 9 am.

**Place:** Halifax Forum, Bingo Annex, corner. Free parking, entrance: off Windsor at Almon Street.

**Cost:** Admission \$4; Tables free but it is best to reserve. Last year we had 106 tables.

**Talkin:** 147.270 +.

**Information:** Table Reservations & information contact David, VE1NN at 902-462-3945 or by

email at <dnimmo@bellaliant.net>.

**Description:** Friday Night: Social in local pub, TBA; Saturday Morning: Breakfast in Steak & Stein. Admission tickets available at breakfast. Snack bar onsite.

**Website:** www.halifax-arc.org

### ANNUAL GENERAL MEETING

BC Amateur Radio Coordination Council

**Date:** Sunday, May 27.

**Time:** 9 am.

**Place:** North Shore Emergency Management Office, 147 E. 14th Street, North Vancouver, BC

**Information:** Secretary Ed Frazer, VE7EF <ve7ef@rac.ca>.

**Website:** www.bcarcc.org

### ANNUAL STREETSVILLE BREAD & HONEY FESTIVAL

Sponsored by VE3MIS, Mississauga ARC

**Date:** June 2 and 3.

**Time:** 1400Z - 2000Z.

**Place:** Streetsville, Ontario, Canada

**Description:** Annual Streetsville Bread & Honey Festival. 14.240, 7.230 MHz. For certificate send QSL request with a return envelope and \$2 USD to Michael Brickell, VE3TKI, 2801 Bucklepost Crescent, Mississauga, Ontario, Canada, L5N 1X6. Please note we cannot use US postage in Canada.

**Website:** www.marc.on.ca

### CENTRAL ONTARIO HAMFEST & FLEAMARKET

Sponsored by the GARC & KWARC

**Date:** Sunday, June 3.

**Time:** Vendors 7 am; Public 9 am to 12 noon.

**Place:** Cambridge, Ontario; Waterloo Regional Police Association Recreation Centre, RR2, 1128 Rife Road. North Dumfries Township beside Highway 401, between exits 268 & 275, 43.344939, -80.418376

**Description:** 38 years and still going strong; bringing together Amateur Radio, hobbyists and enthusiasts just after Dayton and before Field Day and the summer heat. Indoor tables and tailgating; major vendors, loads of collectibles; free prize draws.

**Cost:** Public \$7 (under 12 free).

**Information:** Contact <info@hamfest.on.ca>.

**Website:** www.hamfest.on.ca

### LONDON VINTAGE RADIO CLUB FLEAMARKET

Sponsored by the London Vintage Radio Club

**Date:** Saturday, June 9.

**Time:** Public and vendors 7 am.


**Place:** Guelph, Ontario; Hammond Manufacturing, 394 Edinburgh Road. North, Guelph (at corner of Speedvale and Edinburgh)

**Description:** This fleamarket is an annual club event, held outdoors at the Hammond Manufacturing Ltd parking lot in Guelph. Bring your own table. You will find antique and vintage radios, Amateur Radio equipment, tubes, radio collectables, parts, magazines and all sorts of radio goodies for sale, trade etc. The Hammond Museum of Radio will be open for visitors in the afternoon.

**Cost:** \$10 for vendors, no charge to public.

**Information:** Contact <larry.asp@sympatico.ca> or visit the club website.

**Website:** http://lvrc.homestead.com/fleamarket.html



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### RED DEER ANNUAL PICNIC AND HAMFEST

Sponsored by Central Alberta ARC

**Date:** June 15-17.

**Time:** Friday 3 pm to Sunday 12 noon.

**Place:** Shady Nook Hall, 4 miles west of Red Deer; 52°13.904 N -113° 56.823 W

**Description:** Friday June 15 registration; Saturday activities; Sunday draws and send off. Activities will include: Fox Hunt (Please bring your DF gear!); Ladies Time Out; Tailgate Fleamarket; QCWA Meeting; SARA dogs, sponsored Weiner Roast by main Hall; SARA Meeting; and ARES Meeting.

**Cost:** Weekend Family pass \$40; Single \$25; Day Family pass \$20; Single \$10; Raffle tickets \$5.

**Talkin:** VE6QE 147.15 - simplex 146.520

**Information:** Contact any Executive member.

**Website:** www.caarc.ca

### 49TH INTERNATIONAL HAMFEST

**Date:** July 13-15.

**Place:** Beausejour, MB; US Lodge in the International Peace Garden. PO Box 1011, Beausejour, MB R0E 0C0.

**Description:** Fleamarket, Rabbit Hunts, Mobile Judging, Homebrew Contest, Prizes, Food Concession; Saturday night Dance; Free Sunday Breakfast for those registered Campers, identify yourself at the gate for special camping rates. Next year is the 50th anniversary so be sure to put it on your calendar for July 12-14, 2013.

**Cost:** Public \$13 per person.

**Information:** Richard Holder, VE4QK, or <ve4ihf@mts.net> or 204-268-1702.

**Website:** www.mts.net/~holderr/ihf.htm

## SPRING SPECIALS

**R8 8 Band HF Vertical \$539**  
**A3S 3 El HF 10-15-20 Metre \$599**  
**A4S 4 El HF 10-15-20 Beam \$739**  
**13B2 13 El 2 Metre Beam \$239**  
**Hy-Gain 153BAS 3 El 15 Metre \$259**  
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**RG-8X Coax .60 Ft 200 Feet \$99**  
**RG-213 Coax .95 Ft 200 Feet \$179**  
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**<www.macfarlaneelectronics.on.ca>**

### ONTARIO HAMFEST

Sponsored by the Burlington ARC

**Date:** Saturday, July 14.

**Time:** 7 am Inside & Commercial Vendors (Robert St Gate); 8 am Tailgate Vendors (Robert St Gate); Public 9 am (Thomas St Gate only).

**Place:** Milton, Ontario

**Cost:** Public \$6; Tables: \$14 each; Tailgate Permit: \$6 per space.

**Talkin:** 146.520 -.

**Information:** Event Coordinator Tom Montgomery, VA3TM; <barc.ontariohamfest@gmail.com>. Mail Vendor reservations to: Norm Freidin, VE3CZI, 2129 Larabee Court, Burlington, ON L7P 3S3, 905-335-8962 <ve3czi@arll.net>. Email contact: <barc.ontariohamfest@gmail.com>.

**Website:** www.barc.ca/Ontario%20Hamfest.htm

### SASKATCHEWAN HAMFEST 2012

Sponsored by the Saskatchewan Amateur Radio League

**Date:** Saturday, July 28.

**Time:** Vendors 7:30; Public 9 am.

**Place:** Watrous Saskatchewan; Manitou Spring Hotel and Convention Centre. Manitou Beach, Saskatchewan.

**Description:** Fleamarket, AGM, DXpedition film, ladies program and lots of wonderful door prizes.

**Cost:** Fleamarket tables \$5 each. Entrance fee, SARL members (valid) free, everyone else \$5. Contact Val at <ve5aq@sasktel.net> for table reservations.

**Information:** <ve5aq@sasktel.net>

**Website:** www.sarl.ca

### OTTAWA AMATEUR RADIO CLUB 16TH ANNUAL HAMFEST

Sponsored by the Ottawa ARC

**Date:** Saturday, September 8.

**Time:** Building Vendor setup: 7:30 am to 9 am; Tailgaters Open: 8 am; Indoor Fleamarket Open: 9 am to Noon; RAC and Technology Forum: Noon to 3 pm.

**Place:** Ottawa (Carp), Ontario; Carp Agricultural Fairgrounds, 3832 Carp Road (near Falldown Lane), into the W. Erskine Johnson Arena.

**Description:** The region's largest fleamarket and hamfest. Major doorprize draws! We will also have on-site radio licence exams!

## 2012 RAC CONVENTION



The 2012 RAC Convention is coming to Edmonton, Alberta on **August 10, 11 and 12.**

The kick-off on Friday will be the RAC Forum where you can hear what is happening with RAC and Industry Canada. Please bring your questions and share your concerns.

On Saturday morning you will be able to see and hear "What's New" at a special forum where manufacturers will present their new products.

There will be a solid program of speakers covering all aspects of Amateur Radio. For example Dr. Gordon Rostoker will explain the solar-terrestrial interaction and how that leads to both aurora and large scale electric currents in the ionosphere and magnetosphere. There will also be Technical Talks under various themes such as true digital modes, P25 and variants; contesting and DXpeditions; EME and weak signal work; ALE; APRS and Ballooning; Commercial AM and FM Broadcasting technical discussion; and RAC Field Services – Amateur Radio Emergency Services.

Throughout the weekend you will be able to see Dealer Displays, Exhibits and Projects by clubs and fellow Amateurs. Some of the local clubs supporting this convention and partnering with us include the Northern Alberta Radio Club, the Eagle Hills Amateur Radio Club, the Radio Amateur Educational Society and the Quarter Century Amateur Radio Club. The QCARC will be hosting the fleamarket on Saturday.

The Keynote Speaker at the Saturday night Banquet will be Tim S. Ellam, VE6SH, the President of the International Amateur Radio Union.

We will have a field trip on Sunday to one of the premier Amateur Radio stations in Canada. The VE6JY site has 80 acres of pure ham radio – some 24 vertical towers. This is a must see.

The preliminary Convention website is at <http://convention2012.rac.ca/>. Program schedules and registration information will be posted as details are finalized. Keep checking for updates over the next few weeks, but in the meantime please set aside those dates! The Convention organizers can be contacted by email at <convention2012@rac.ca> or by telephone at 780-466-5779 for more information. Please do not contact the main RAC office as all communication will be handled by the RAC Convention committee in Edmonton.

We look forward to your attendance.

*J. T. Mitchell, VE6OH – RAC Director AB, NT, NU*

Get yours or upgrade during the hamfest! Following the fleamarket, the OARC is proud to sponsor the RAC Forum and Technology Update.

**Cost:** Public \$6; Tables \$12 (plus admission); Tailgate \$5 (plus admission).

**Talkin:** VE2CRA, 146.94-, 100 Hz.

**Information:** Ed Sich, VE3WGO, 613-667-2752 or <fleamarket@oarc.net>.

**Website:** www.oarc.net/fleamarket

### MONCTON AREA ARC FLEAMARKET

**Date:** September 15 (3rd Saturday of September)

**Time:** Vendors 8 am; Public 10 am.

**Place:** Riverview Lions Club, 701 Coverdale Road, Riverview, NB; please note this is a new location.

**Cost:** \$4 per person; Tables: No Charge; Coffee, Pop and Sandwiches available on site.

**Information:** Contact Charles Levasseur, VE9CEL at <ve9cel@rogers.com>.

**Talkin:** 147.090 +

### LARC 35th ANNUAL FLEAMARKET

Sponsored by the LARC

**Date:** Sunday, September 23.

**Time:** Vendors: 7:30 am; Public 9 am to 12 noon.

**Place:** London, ON at the Western Fair Grounds; Special Events Building, 900 King Street.

**Description:** Free Parking, air conditioned, Commercial dealers, snack bar, wheelchair Accessible with handicap washrooms.

**Cost:** Tables \$10; Public \$6 (age 10 and up). Vendor discount if booked before August 1.

**Talkin:** VA3LON, 147.060, PL 114.8.

**Information:** See website flyer for info and directions. Contact Ruth Dahl, VE3RBO, 519-455-9465 or <larchamfest@gmail.com>

**Website:** www.larc.ca

### SARA FLEAMARKET

Sponsored by the Southern Alberta Repeater Association

**Date:** October 13, 2012.

**Time:** Vendors 10:00 am; Public 11:00 am  
**Place:** Calgary, Alberta; Eastside City Church, 1320 Abbeydale Drive SE, Calgary, Alberta T2A 7L8; Map: <www.eccab.ca/locate\_eastside.html>.

**Description:** Free Parking; Free Coffee; Snack Bar with Famous SARA Dogs; Commercial Dealers.

**Cost:** Vendors & Public \$5; Tables \$10 each  
**Talkin:** 146.610 -600

**Information:** To reserve tables, call Ken Oelke, VE6AFO at 403-226-5840 or <ve6afo@cia.com>.

**Website:** http://saralink.ca/

*Don't forget to visit the RAC website for more Coming Events. Deadline for next issue is May 15.*



# RAC MAPLE LEAF OPERATOR MEMBERSHIP PROGRAM

Radio Amateurs of Canada would like to thank the following RAC Maple Leaf Operators:



Michael Aultman, VA3MPR  
 A James Ballard, VE9AJB  
 Dennis Bancesco, VE6ATC  
 Shawn Barnard, VE3KYQ  
 David C Barnes, VO1YA  
 Larry Barnett, VE6LGB  
 Bill Barrie, VE3AAS  
 Douglas Barry, VE7WLF  
 Michael Bell, VE3NOO  
 John R. ( Jack) Bellegheem, VE3HD  
 Bruce Bernard, VE1TIN  
 Larry Berta, VE3LXV  
 Serge Bertuzzo, VA3SB  
 Robert Boyd, VE3SV  
 P J Buckway, VY1PJB  
 Paul Burggraaf, VO1PRB  
 Gary Burgin, VE7FZZ  
 David Caddell, VA7VVV  
 Ralph Cameron, VE3BBM  
 Geoff Clarke, VE3JBD  
 Francois Daigneault, VE2AAY  
 Frank Davis, VO1HP  
 James Dean, VE3IQ  
 Julio Cesar Diaz, VA3JCL  
 George S Duffield, VE3WKJ  
 Tim Ellam, VE6SH  
 Richard Ferch, VE3KI  
 Terry Finn, VA6TF  
 JAMES W FISHER, VE1JF  
 Bunny Forsyth, VE7BFF  
 Jim Forsyth, VA7FJE  
 Richard Francis, VE3OXX  
 Edward J Frazer, VE7EF  
 Paul Giffin, VE7IPM  
 John Gilje, VE6KJG  
 Dave Gillis, VE7BX  
 Bill Gipps, VE7ISV  
 Thomas Godden, VE3TWG  
 Mitchell Goodjohn, VE6SM  
 Dave Goodwin, VO1AU  
 Richard Govoni, VE3SHL  
 Richard Grantham, VE1AI  
 Scott Gregory, VA3NMI  
 Tom Haavisto, VE3CX  
 Kelvin Hall, VA7KPH  
 Karl Hamilton, VE3RRP  
 Don Hamilton, VA7GL  
 David W. Hamilton, VE6DWH  
 Garry Hammond, VE3GHP  
 Garry V Hammond, VE3XN  
 Jean-Guy Hardy, VE3YOS  
 Brad Harris, VE3MXJ  
 Kevin Hastings, VA3PSL  
 Derek Hay, VE4HAY  
 Peter Hebb, VE1SM  
 Jean Paul Henault, VE2JHP  
 Peter W. Henry, VA3PWH  
 Howard Hepburn, VE6GT  
 Peter K. Hodgson, VA3PKH  
 John Hood, VE3VJH  
 Joseph Hopkins, VE7BYF

Clare Hopkins, VE7IBK  
 David Hopkinson, VA7FTW  
 Mark Alexander Humenyk, VE3HMK  
 Lorne S Jackson, VE3CXT  
 Doug Johns, VA3DLJ  
 Dave Johnson, VE7VR  
 Sam Jones, VE3LCK  
 W.J. Karle, VE4KZ  
 Eric Kehler, VE7EGK  
 Stephen Kerridge, VE9HZ  
 Melvin Killens, VE3MLK  
 Robert NEIL KING, VA7DX  
 David Kingsland, VE3MDX  
 David Klatt, VE5GN  
 Jerry P. Krayco, VE7NX  
 David LaHay, VE7FVW  
 Daniel Lamoureux, VE2KA  
 Harvey A.A. Larabee, VA3LHA  
 Allan E. Lett, VE3TYT  
 Joel Levis, VE3CJJ  
 David Liddell, VE7QR  
 Gene R Lutes, VE7IMP  
 Ian MacFarquhar, VE9IM  
 John MacKay, VE7EEX  
 R K Mackenzie, VA3RKM  
 Neil Macklem, VE3SST  
 Mark Magner, VE3DA  
 Eric G. Manning, VA7DZ  
 Noel Marcil, VE2BR  
 Gabriel Mazzeo, VA3CWT  
 Duncan A McCansh, VE3OM  
 Arthur McDougall, VE1CFU  
 David McKinlay, VA3IR  
 L. David McLennon, VO1LM  
 Malcolm R McLeod, VE5ZG  
 Chris McMullan, VA3CMJ  
 Eric Mills, VE1AST  
 Lenard Moen Sr, VA3HBR  
 George Morgan, VE3GM  
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 Byron Morse, VA3BMO  
 Bob Morton, VE3BFM  
 Hammond Museum of Radio  
 Jim Nelson, VE6ACR  
 A L Nelson, VE7WC  
 Patricia Nordin, VE3RPP  
 Richard Novek, VE7RNZ  
 R Oakenfold, VE5RO  
 Jean Ouellette, VE3OKK  
 Dennis Paganin, VA3DTP  
 Charles J Palmer, VE3AZA  
 Joseph G Parkinson, VE3JG  
 Colin Pavey, VA3FP  
 Geddie Pawlowski, VE3CJX  
 Steve Pengelly, VE3STV  
 Murray K Pierce, VE3IFP  
 Robert W Piggott, VE7CYU  
 Byron Pulsifer, VE9BUB  
 Don Quenneville, VE3KUP  
 Devon Racicot, VE5DWR  
 Norm Rashleigh, VE3LC  
 A.E (Tony) Ratcliffe, VE6AER  
 Bryan Rawlings, VE3QN  
 Steve Regan, VA3MGY  
 Jeff Robbins, VE3JTR  
 Bernie Roche, VE3OTR  
 Peter Rogers, VE3ETR  
 Bruce Roney, VE3BER  
 Donald Rowed, VE3KII

## RAC CORPORATE MEMBERS

Bibliothèque et Archives nationales  
 Canada Science and Technology  
 Museum Library, VE3JW  
 Cowichan Valley Regional District, VA7ECT  
 Diefenbunker Cold\_War\_Museum, VE3CWM  
 Edmonton Public Library  
 Industry Canada Library  
 Larry Lowry Ham  
 Museum of Military Communications, VE3RCS  
 Mississauga Library  
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 Ottawa Public Library Materials Centre  
 Periodicals Calgary  
 Sydney Amateur Radio Club, VE1VAS  
 Toronto Reference Library  
 TWOS Edmonton, VE6SSC  
 University of Saskatchewan Library  
 Victoria Amateur Radio Packet, VE7VBB  
 West Side Radio Club, VE3JJ



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 John D Scott, VE1JS  
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 Mark Spencer, VE7AFZ  
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 Chris K. Wiesner, VA3SM  
 Brice Wightman, VE3EDR  
 Ken Williams, VE9KW  
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 REGULAR, MAPLE LEAF AND CORPORATE!**



# A Radio For Every Need Yaesu VHF/UHF Handhelds & Mobiles

## Commercial Grade Field Radio Submersible Construction



5 W Submersible  
Full Featured 2 m Compact  
FM Mono Band HandHelds  
**FT-270R** 2 m  
Mono Band

**IPX7**  
Submersible  
3 feet (1m) for 30 min.

5 W Submersible  
Full Featured 2 m Compact  
FM Mono Band HandHelds  
**FT-277R** 70 cm  
Mono Band

**IPX7**  
Submersible  
3 feet (1m) for 30 min.



5 W Ultra-Rugged, Submersible  
6 m/2 m/70 cm Tri-Band FM Handheld  
**VX-7R/VX-7Rb** 6 m / 2 m / 70 cm  
Tri-Band  
(220 MHz: 300 mW)



5 W Heavy Duty Submersible  
2 m/70 cm Dual Band  
FM Handheld (220 MHz: 1.5 W)  
**VX-6R** 2 m / 70 cm  
Dual Band



5 W Heavy Duty 2 m/70 cm  
Dual Band FM Handheld  
**FT-60R** 2 m / 70 cm  
Dual Band



1.5 W Ultra Compact 2 m/70 cm  
Dual Band FM Handheld  
**VX-3R** 2 m / 70 cm  
Dual Band



5 W Full Featured 2 m Compact  
FM Mono Band HandHelds  
**FT-250R** 2 m  
Mono Band

## Heavy-Duty FM Dual Band Mobile with Exceptionally Wide Receiver Coverage\*



\*108 to 520 MHz/ 700 to 999.99 MHz  
(Cellular blocked)

**DUAL BAND** 50 W 2 m/70 cm Dual Band FM Mobile  
**FT-7900R**



50 W 2 m/70 cm\*  
Dual Band FM Mobile  
**FTM-10R** \*70 cm 40 W  
**DUAL BAND** **IP57**  
Submersible  
3 feet for 30 min  
Front panel



50 W 2 m/70 cm\*  
Dual Band FM Mobile  
**FTM-350AR** \*70 cm 7 W  
**DUAL BAND** **IP57**  
Submersible  
3 feet for 30 min  
Body/Front panel



50 W 10 m/6 m/2 m/70 cm\*  
Quad Band FM Mobile  
**FT-8900R**  
\*70 cm 35 W

**DUAL BAND  
DUAL RECEIVE**



55 W 2 m Ultra Rugged VHF FM Mobile  
**FT-1900R** 2 m Band

75 W 2 m Heavy-Duty FM Mobile  
**FT-2900R** 2 m Band



50 W 2 m/70 cm\* Dual Band FM Mobile  
**FT-8800R** \*70 cm 35 W

For the latest Yaesu news, visit us on the Internet:  
<http://www.yaesu.com>

Specifications subject to change without notice. Some accessories and/or options may be standard in certain areas. Frequency coverage may differ in some countries. Check with your local Yaesu Dealer for specific details.

**YAESU**  
Choice of the World's top DX'ers<sup>SM</sup>

**Vertex Standard U.S.A. Inc.**  
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