Lance, W7GJ, on Clipperton Island, as part of the TX5K team. Photo by LouPhi Locke.

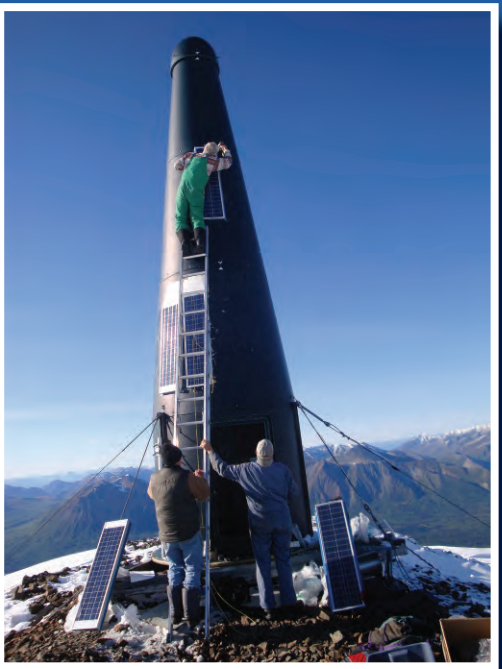
TCA

The Canadian Amateur

MAY / JUNE – MAI / JUIN 2013

Canada's Amateur Radio Magazine
La Revue des Radioamateurs Canadiens

In this issue...



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Registration # 09866

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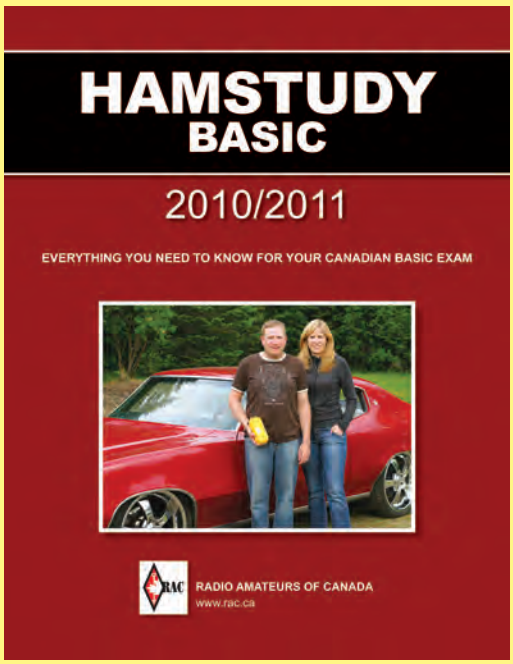

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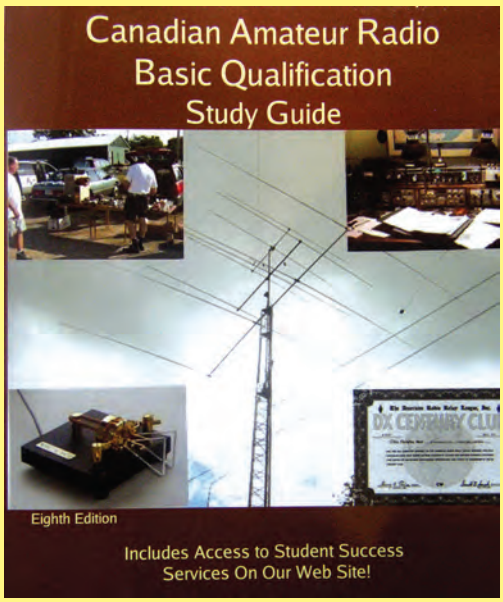

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MAY & JUNE 2013

TCA
The Canadian Amateur

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Canada's Amateur Radio Magazine
La Revue des RadioAmateurs Canadiens

VOLUME 41 NUMBER 3 – TCAMAG@YAHOO.CA – WWW.RAC.CA/TCA

OUR COVER: "THE TX5K TEAM ON CLIPPERTON ISLAND"

"Lance, W7GJ, packed up his gear and headed to Clipperton Island as part of the TX5K team. Lance uses an Elecraft K3 laptop for tracking and logging, an SSPA kilowatt amplifier (or KW), and an 8-element M2 yagi with a manual elevation system." – see page 10.

"We have hopes of spring, but it is –33 this morning, March 14, however the weather is crystal clear and you can see for miles. It's also the time of the year when some of our repeaters are coming back to life after a winter hibernation. Many of our units are at high elevation, snow is deep and covers solar panels." – see page 41.

"We arrived an hour after sunset so we had to put up with a third night on board, anchored near Bounty Bay, so we could disembark in daylight." – see page 36.

NATIONAL & INTERNATIONAL

TECHNICAL

NEWS FROM AROUND THE CORNER

DEPARTMENTS

**Please visit the Members Section of the RAC website for a full colour e-version of TCA!
An Adobe Flash Player mode of viewing is available in addition to a PDF version.**

OPERATING

ARTICLES WANTED: Please send your articles in now to <tcamag@yahoo.ca>.

PLEASE SUPPORT OUR ADVERTISERS

The Canadian Amateur is published in Canada six times per year to provide Radio Amateurs, those interested in radio communications and electronics, and the general public with information related to the science of telecommunications.

Articles, reviews, letters, features, suggestions, photographs and essays are welcomed. Manuscripts should be legible and include the contributor's name, call sign, phone number(s) and addresses (mail, email and packet, as applicable).

For a complete Author's Guide visit <www.rac.ca/authors_guide.htm>.

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The Canadian Amateur, publié six fois par an, est destiné à fournir aux radioAmateurs, à toute personne intéressée à la radio et à l'électronique et au grand public, des informations de toute nature relatives à la science des télécommunications.

Nous acceptons avec plaisir tout article, étude, suggestions, photos et lettres. Les manuscrits soumis doivent être lisibles et porter le nom de l'auteur, son indicatif, son ou ses numéros de téléphone ainsi que ses adresses postales, courriel et paquet s'il y a lieu. Si vous avez envie d'écrire pour *TCA* <www.rac.ca/fr/guide_dauteur.htm>.

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THE RAC QSL BUREAU SYSTEM

The **RAC Outgoing QSL Bureau** service is available to RAC members, RAC affiliated clubs (club call only) and QSL Managers who are members of RAC. Your RAC membership number must accompany each shipment of QSL cards.

RAC Outgoing QSL Bureau
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There are limits and restrictions for use of the Outgoing QSL Bureau. For more information, surcharges and card sorting details, visit <www.rac.ca> or <www.magma.ca/~ve3exy/bureau.html>.

The **Incoming QSL Bureau** service is a user-pay system, using one of four methods – (**A**) envelopes (**B**) credits (**C**) labels or (**D**) combination credit with labels – to get cards to you. For more information on the incoming system visit <www.rac.ca>.

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(*Note: Method B is preferred).

Silent Keys – In Memoriam

With regret, we record the passing of these Amateur Radio operators.
TCA regrette de vous annoncer le décès des radioamateurs dont les noms suivent.:

VA3KER – Keith Rupert, of Ottawa, ON, at age 90, on March 19, 2013.
VA6JJ – John Spenard (VA6JRS) of Calgary, AB, at age 71, on March 9, 2013.
VE1ALA – Hazel Brooks, of New Glasgow, NS, at age 100, on February 11, 2013.
VE1ATA – Muir Smith, of Halifax, NS, on February 8, 2013.
VE1AYP – Rod Nichols, of Berwick, NS, at age 87, on February 14, 2013.
VE1EM – Emile Pellerin, of Dieppe, NB, at age 85, on March 7, 2013.
VE2FLD – Grant McPhee, of Ottawa, ON, at age 77, on March 1, 2013.
VE2GW – George Wooley, of Montreal, QC, on January 13, 2013.
VE2PMR – Ken Matheson, of Pointe Claire, QC, at age 85, on March 12, 2013.
VE2PWT – Patrick Fortin, of Saint Jean Sur Richelieu, QC, at age 35, on February 19, 2013.
VE3AIH – Irwin Andrew, of Windsor, ON, at age 90, on February 23, 2013.
VE3AXB – Vincent (Babe) Graham, of Whitby, ON, at age 91, on January 14, 2013.
VE3CFX – Chris Farrar, of Mississauga, ON, in March 2013.
VE3CHM – Paul Modray, of Dunchurch, ON, at age 68, on February 24, 2013.
VE3DOH – Richard Howard, of Dunnville, ON, in March 2013.
VE3EVY – Al Pengelly, of Richmond Hill, ON, at age 92, on March 20, 2013.
VE3FOD – Roy Brockelbank, of Echo Bay, ON, at age 73, on November 17, 2012.
VE3GOI – Doug Shepherd, of Godfrey, ON, at age 95, on March 15, 2013.
VE3GTM – Dave Mann, of North Bay, ON, at age 92, on February 23, 2013.
VE3HPC – Harold Thomas, of Mississauga, ON, at age 72, on January 10, 2013.
VE3LWB – Grant Williams, of Burlington, ON, on March 20, 2013.
VE3PU – James Kenneth Pulfer (Ken), of Ottawa, ON, at age 80, on March 31, 2013.
VE3RRA – Bob Meilleur, of North Bay, ON, at age 79, on February 18, 2013.
VE3TED – Ted Barrette (VE3FK/VE3IMN), of Oshawa, ON, on March 22, 2013.
VE3VIA – Jacques d'Avignon, of Ottawa, ON, at age 78, on February 7, 2013.
VE4AB – Tex Galpin, of Winnipeg, MB, at age 92, on February 7, 2013.
VE4DDS – Doug Shewfelt, of Winnipeg, MB, at age 51, on February 10, 2013.
VE5ELB – Eddie Brown, of Saskatoon, SK, at age 78, on March 6, 2013.
VE5HS – Henry Stanley (VE5ACA*), of Baring, SK at age 88, on February 21, 2013.
VE6DJJ – David Junker, of Calgary, AB, at age 46, on March 21, 2013.
VE6JI – Ray Nunn, of Breton, AB, on March 9, 2013.
VE6JW – Jack Williams, of Namao, BC, at age 89, on February 27, 2013.
VE6LO – Lyndy Olson, of New Norway, AB, at age 76, on March 4, 2013.
VE6REF – Ron Foster, of Gibbons, AB, at age 54, on February 6, 2013.
VE7AIO – Steve Hand, of Abbotsford, BC, on August 5, 2012.
VE7AYD – Elma Puhl, of Abbotsford, BC, in January 2013.
VE7EGN – Jack Coates, of Oliver, BC, at age 103, on February 7, 2013.
VE9MAW – Lois Landry, of Campbellton, NB, at age 56, on December 18, 2012.
VO1BC – Ian Best, of Shoal Harbour, NL, at age 57, on October 2, 2012.

Correction: VE1BGV – Margaret Moran, of Fredericton, NB, at age 84, on January 15, 2013.

*Note: In the above list an * indicates a previous call sign or that a call sign has been reissued.*
The list of Silent Keys is prepared by volunteers at RAC Headquarters at <rachq@rac.ca>.

RAC INCOMING QSL BUREAU

Following changes made to the RAC QSL Bureau system, RAC members are reminded that all VE/VA cards to VE/VA Amateurs are to be sent to the RAC Incoming Bureau in Saint John, New Brunswick and not to the Outgoing QSL Bureau. This QSL service is only available to RAC members.

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For Section Reports see pages 57-62.

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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>.

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Deadlines for TCA
July-August
May 15
September-October
July 15

"TWO VOLTMETERS FOR AMATEUR RADIO STATIONS"

In his article (March-April 2013 TCA, p. 30), Allen Wootton, VE7BQO, describes the construction of two voltmeters, both of which are using a low-cost microcontroller.

I assume that the intent of the article is educational and mainly to introduce Amateurs to potential more sophisticated uses of these low-cost devices. I have seen similar articles in other publications, where a program is written to just flash a light on and off, which of course is for learning purposes.

While I agree with Alan that the audible voltmeter described may be a useful project for some (except I would prefer to have voice output!), I don't think it makes much sense for anyone to build the digital version for actual use around the shack.

The simple reason is that complete DVM (digital voltmeter) modules have become a component part, and can be had fully assembled and working, on eBay, for about $6 or less, with free shipping included.

For about the same price, one can also get a complete digital multimeter. Delivery is usually in two weeks or so.

If one insists on building it, DVM kits can be inexpensively purchased from suppliers like Qkits etc (www.qkits.com).

Don Dorward, VA3DDN

AN APPEAL TO LIFE MEMBERS

While I found the letter which appeared in the January-February 2013 TCA amusing in regards to life members knowing when "their" personal expiration date is up from the expiration date of TCA, I appeal to any remaining charter life members to do as RAC wrote us to do several years ago and start paying regular dues.

RAC has been unable to pay the expenses of their elected officials thus making office in RAC only open to those who have the ability to afford to pay their own way.

I would rather not see the expiration of RAC whose money troubles should be well known to any of the readers of TCA because they have been well covered in its pages.

Even though RAC's finances have improved of late, I ask any "life member" (the category can no longer be purchased) to do what the rest of us have done: give up their charter life membership and pay yearly dues to keep our national Amateur Radio association afloat.

I only wish I could be a Maple Leaf member and make donations to RAC which unfortunately at this point in time I cannot do financially.

Malcolm Timlick, VE4MG
McCreary, Manitoba

QSL CARDS

I was interested in the comments of VE3CUI/VE3XZ about the Logbook of The World (January-February 2013 TCA, p. 44) and its impact on the collection and display of QSL cards, and the article by VE7AS entitled "So Many QSL Cards: So Little Wall Space" (March-April 2013 TCA, p. 27).

My first visit to a DXer's ham shack (Cy West, VE3DDI) in 1954 led me into DXing and contesting precisely because of the impressive display of QSL cards on his wall.

Over the years I gathered my own collection of cards, partly for display, but mostly as proof of contact for a certificate or award.

Few of the cards are of artistic value but some contain interesting information. The cost, in terms of postage and time, to collect the cards was high. With the increasing cost of postage an electronic solution must surely be welcomed by most Amateurs, especially by those with limited means.

The choice to display cards, or not, is surely an individual one. VE7AS's digital photo-frame seems to offer a practical alternative.

However, many of us end up with shoeboxes full of QSL cards which, with rare exceptions, are of no value to anyone else. For example, Bill, VE4FT and I have tried, without success, to find a home for the QSL cards collected at the High Arctic station VE8MA.

Sadly, aside from a few special cards that show up on eBay, QSL cards eventually become just another item for disposal in the final estate sale. I wish it were otherwise.

John Gilbert, VE3CXL
Ottawa, Ontario

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. Traduction par Serge Langlois, VE2AWR.

AMATEUR RADIO EXAM QUESTION BANK REVIEW

In December of 2012 Industry Canada issued a Request For Proposals for a review of the Amateur Radio Question Banks for the Basic and Advanced certifications. A RAC team working over the holiday period prepared the successful proposal that led to a $20,000 contract with Industry Canada in January 2013.

Radio Amateurs du Quebec Inc (RAQI) was engaged by RAC to collaborate on the French language component of the contract. The resulting review team had experience not only in conducting Amateur Radio exams but also in designing and delivering Amateur Radio courses in both official languages. It was well qualified to deal with technical issues and assess clarity and grammar of the questions in both official languages.

Both RAC and Industry Canada had recognized for some time that a thorough review of the Amateur Radio exam questions was required. Last summer a RAC bulletin invited Radio Amateurs to provide comments and suggestions on the current questions by the end of August. Responses highlighted some incorrect questions and pointed out several others that were vague or confusing. These comments provided a good starting point for the current review. However no action on this issue occurred until December.

The curriculum will not be changed by the review. Prospective Amateurs still need knowledge of the same topics. However, changes are proposed to make all questions correct, clear, understandable and relevant to Amateur Radio in Canada today.

The review team examined more than 3,000 questions and the 12,000 possible answers: 965 questions in English and in French for the Basic qualification and 545 in English and in French for the Advanced qualification. Some current questions were revised in 2007 but many questions date from much earlier. The present work is the first comprehensive review in more than a decade.

Technical and linguistic accuracy were equally important in the review. Changes included correcting factual errors, replacing obsolete language and examples, making questions and answers more clear and addressing current Amateur Radio practices and regulations. The team accomplished most changes through editing of existing questions but also recommended that some obsolete questions be deleted and proposed new questions.

The review also assessed the complexity of questions and recommended where questions in one exam might be more appropriate to the other. It recognized current trends in learning and assessment. Rote memorization is no longer important in a society where detailed information is at everyone's fingertips. Understanding principles and concepts and where to find information are more important today. Several questions were modified to recognize this approach. The overall objective is to remove unintended barriers to participation in Amateur Radio and provide the basis for fair examinations of required knowledge.

RAC provided the first deliverable, a complete set of recommendations to correct and update the exam Question Banks on March 13. Following an Industry Canada assessment and reaction to these proposals, RAC will produce final comments based on the review by April 17.

The project led by Radio Amateurs of Canada with the assistance of RAQI will ensure that the experience of active Radio Amateurs will guide recommendations to improve the questions that will be used for Amateur Radio certification in the future.

Glenn MacDonell, VE3XRA, Project Manager, Question Bank Update Project and Deputy Director Ontario North East (ve3xra@rac.ca)

Geoff Bawden, VE4BAW – RAC President and Chair

HELP WANTED

Regulatory Affairs Officer

The Radio Amateurs of Canada is seeking an organized, knowledgeable and diplomatic individual to undertake the role of Regulatory Affairs Officer. This is a senior executive level position reporting to the President. The position has a key role in managing our relationship with Industry Canada. This includes monitoring and analyzing Industry Canada initiatives, generating policy options and advising Industry Canada of RAC's position on issues of importance to our members.

The core competencies for this position include: the ability to work effectively in a team environment; the ability to generate options and problem solve at a strategic level; and the ability to work successfully with government, our members and third parties in creating successful outcomes in a complex environment.

For further information or to apply contact the President at <ve4baw@rac.ca> with a copy to the RAC Office Manager at <racgm@rac.ca>.

Geoff Bawden, VE4BAW
RAC President and Chair

RAC Corporate Secretary

The Radio Amateurs of Canada is looking for a volunteer to fill the role of Corporate Secretary. This position reports directly to the RAC President with a primary function as Secretary to the Board of Directors and the Executive Committee. This requires high level multi-tasking, dealing with priorities, tracking issues and action items as well as preparing agendas and minutes of various meetings.

If you wish to assist your national organization, work with volunteers and have experience with full suite of Microsoft Office products we want to hear from you. Please express your interest to the Acting Corporate Secretary Linda Friars, VE9GLF, at <ve9glf@nbnet.nb.ca>.

Deputy Director

The position of Deputy Director was approved by the membership at the Halifax AGM in 2010 and subsequently approved by the federal government in February 2011. The Deputy Director position provides for continuity of organization and greater access by members. The Deputy differs form the position of Assistant Director in that the incumbent fullfills the duties of Director when the Director is not available and serves as an observer at Board meetings.

Please express your interest to the RAC President Geoff Bawden, VE4BAW, at <ve9glf@nbnet.nb.ca>.

RÉVISION DE LA BANQUE DE QUESTIONS POUR LES EXAMENS RADIOAMATEURS

En décembre 2012 Industrie Canada a émis une demande de proposition pour la mise à niveau de la banque de questions utilisée pour les examens radioamateurs de base et de niveau supérieur. Une équipe de RAC, travaillant durant des jours de congé, a préparé une proposition valable qui a conduit à un contrat de 20 000 $ avec Industrie Canada, en janvier 2013.

Radio Amateurs du Québec Inc. (RAQI) a été sollicité par RAC pour collaborer à la préparation de la partie francophone de la révision. L'équipe responsable de la révision a de l'expérience non seulement pour faire passer des examens aux radioamateurs mais aussi pour monter et donner des cours radioamateurs dans les deux langues officielles. Elle est qualifiée pour traiter les questions techniques et mesurer la clarté et la conformité grammaticale des questions dans les deux langues officielles.

Aussi bien RAC qu'Industrie Canada ont reconnu depuis un certain temps qu'une révision approfondie des questions était requise. L'été dernier, un bulletin de RAC invitait les radioamateurs à émettre des commentaires et des suggestions sur les questions actuelles avant la fin d'août 2012. Les réponses reçues ont mis en lumière certaines questions incorrectes et en ont pointé plusieurs autres qui étaient vagues ou portaient à confusion. Ces commentaires ont fourni un bon point de départ pour la révision actuelle.

Le programme ne sera pas changé par la révision. Les candidats radioamateurs devront posséder la connaissance des mêmes sujets. Cependant, des changements ont été proposés pour faire en sorte que toutes les questions soient correctes, claires, compréhensibles et pertinentes pour la radio amateur au Canada d'aujourd'hui.

L'équipe de révision a examiné plus de 3 000 questions et 12 000 réponses : 965 questions en anglais et en français pour la qualification de base et 545 questions en anglais et en français pour la qualification avancée. Certaines questions actuelles avaient été révisées en 2007, mais plusieurs autres datent de bien avant. Le travail actuel sera la première révision exhaustive en plus d'une décennie.

Les précisions technique et linguistique ont été également importantes dans la révision. Les changements ont corrigé les erreurs factuelles en remplaçant des expressions et des exemples désuets, en rendant les questions et réponses plus claires et en prenant en considération les pratiques et règlements actuels en radio amateur. L'équipe a effectué la plus grande partie de son travail en éditant les questions existantes, mais elle a aussi recommandé que certaines questions désuètes soient supprimées ; elle en a proposé de nouvelles en remplacements.

La révision a aussi porté sur la complexité des questions et a émis des recommandations lorsque des questions dans un examen auraient pu être plus pertinentes que d'autres. Ont aussi été prises en considération les tendances courantes d'apprentissage et d'évaluation. La mémorisation par coeur n'est plus aussi importante dans une société où l'information détaillée est à la portée de tous. Comprendre les principes et les concepts et savoir où trouver l'information est plus important de nos jours. Plusieurs questions ont été modifiées pour tenir compte de cette approche. L'objectif général est de supprimer des obstacles non voulus à l'accès à la radio amateur et de procurer les assises nécessaires à de justes examens basés sur les connaissances requises.

Radio Amateurs du Canada, le 13 mars 2013, a soumis à Industrie Canada un ensemble complet et détaillé de recommandations pour améliorer et moderniser les banques de questions.

Le projet mené par Radio Amateurs du Canada avec l'assistance de RAQI et bonifié de l'expérience de radioamateurs actifs, mènera à des recommandations de nature à améliorer les questions utilisées pour la certification en radio amateur dans le futur.

Glenn MacDonell, responsable du projet, « Question Bank Update Project », et assistant-directeur, Ontario nord-est, (ve3xra@rac.ca).

Geoff Bawden, VE4BAW – Président, Radio Amateurs du Canada

(Traduction par Serge Langlois, VE2AWR et Claude Lalande, VE2LCF)

RAC WILL BE AT DAYTON!

The Radio Amateurs of Canada will once again be at Dayton for Hamvention 2013 from May 17 to 19.

This is the third year in a row that Radio Amateurs of Canada will be operating a Booth at the Dayton Hamvention.

RAC officers, directors and many members will be there to meet and greet and tell you what Radio Amateurs of Canada has been doing for you lately.

Come visit, we're in the same area as the ARRL and the booths of other international Amateur Radio organizations such as the Qatar, Great Britain and Japan radio societies.

This is the 62nd year of the Dayton Hamvention, sponsored by the Dayton Amateur Radio Association.

Each year, a specific theme – such as Amateur Radio clubs, global friendship or the advent of digital modes – spotlights one of the many facets of the Amateur Radio Service. This year's theme "DX Hamvention" will reflect an important part of Amateur radio: the distant contact.

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, including advance ticket sales and motel accommodations, can be found online at: http://www.hamvention.org

So come visit the Radio Amateur of Canada booth BA0436; there may be a memento awaiting you.

Geoff Bawden, VE4BAW
RAC President and Chair

A MESSAGE FROM THE PRESIDENT
UN MESSAGE DU PRÉSIDENT

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RAC MANAGEMENT TEAM MEETING

Summer is approaching after a long and harsh winter – more like the winters that I remember as a child. In February, in the middle of this harsh winter, your Directors, supported by the Executive met in Ottawa to outline the organization's strategic direction for 2013-14. This was the first face-to-face meeting since our planning meeting in October 2010. That meeting was dominated by financial issues. There had been no recognition prior to 2010 of the dangerous financial position that the organization was in, its lack of solvency and the likelihood of bankruptcy in 2010 or 2011 at the latest. No plan was in place to save the organization from failure. The strategic direction decided upon by the Directors in 2010 was to clearly meet the fiscal issues head on and, by the second quarter of 2012, Radio Amateurs of Canada became solvent with the threat of bankruptcy fading into the past. It became clear in 2012 that we needed to develop a new strategic vision and direction for 2013-14.

Resources are still thin but they are growing. At the February meeting it was determined that the three major areas which will ensure the growth of both Amateur Radio and RAC – and thus areas where we need to increase our resources – revolved around the need to improve our communication and publication processes (both electronic and paper), the need to raise funds so that RAC has the resources to promote and protect Amateur Radio, and the need to ensure organizational continuity in the RAC office to ensure excellent service to our members.

Enhanced communication is required to support clubs, increase supports for new Amateurs, create an environment to promote the creation of new Amateurs, influence media and thus influence public opinion and the political environment.

More resources are required for RAC to represent Amateurs. We cannot expect our Directors and Executive to continue to fund the organization through "hidden subsidies". Mission critical functions should be accountable and paid for: this will enhance outcomes.

I made the point at the planning session that succession was one of the key issues that had plagued and disrupted RAC for the last decade: competent succession at the Presidential and office level is essential for the effective operation of Radio Amateurs of Canada. Failure to ensure succession and continuity at these levels will kill RAC as it nearly did in our recent past. Resources must be directed to ensure succession and continuity for both these positions. We need to secure depth in the RAC office in order to survive and grow.

RAC is prepared to make tough decisions with a view to its long-term growth as an organization and also for Amateur Radio in general. We are moving from protection (avoiding financial failure) to production (focusing on growth). Protection was necessary to prevent failure: we now must make investments in order to grow.

RÉUNION DE L'ÉQUIPE ADMINISTRATIVE DE RAC

L'été arrive enfin après un long et dur hiver semblable à ceux de mes souvenirs d'enfance. En février, au milieu du rude hiver, vos directeurs et le Conseil exécutif se sont réunis à Ottawa pour tracer les grandes lignes de la stratégie 2013-2014 de l'organisation. C'était la première rencontre face à face depuis la réunion de planification d'octobre 2010. La question financière était l'enjeu principal de la réunion. Jusqu'en 2010, il n'y avait pas eu de véritable prise de conscience de la situation précaire de l'état des finances dans laquelle l'organisation était plongée. Et de la possibilité d'une banqueroute en 2010 ou 2011 au plus tard. Aucun plan n'avait été prévu pour sauver l'organisation de la faillite. L'orientation stratégique décidée par les directeurs en 2010 était à l'effet de respecter l'enjeu fiscal en cours à ce moment-là et, au deuxième trimestre de 2012, de rendre l'organisation solvable et conséquemment d'éloigner Radio Amateurs du Canada du danger de faillite. Il était devenu évident en 2012 qu'il nous fallait développer une nouvelle vision stratégique et réorienter notre action pour 2013-14.

Les ressources sont encore modestes mais elles progressent. À la réunion de février il avait été décidé que les trois actions principales qui devront assurer la croissance du radioamateurisme autant que celle de RAC – il faut y accroître nos ressources – devraient graviter autour des éléments suivants : amélioration des communications et de leurs modes (électronique et papier); levée de fonds suffisante pour que RAC puisse protéger et faire la promotion du radioamateurisme; et pérennité assurée de l'organisation laquelle se doit de fournir un excellent service à ses membres.

Le renforcement des communications est un incontournable pour le soutien aux clubs, l'assistance aux nouveaux amateurs, la création d'un environnement propice à la venue de nouveaux amateurs, et pour influencer les médias, l'opinion publique et la classe politique.

Plus de ressources sont nécessaires à RAC pour soutenir l'action de ceux qui représentent les amateurs. Nous ne pouvons nous attendre à ce que nos directeurs et les membres de l'Exécutif continuent d'alimenter financièrement l'organisation via le non remboursement de leurs dépenses (une forme de subvention cachée). Il nous faut comptabiliser et payer les dépenses liées à leur fonction : ceci aura pour effet de renforcer leur capacité de rendement.

À la session de planification, j'ai fait le point sur la problématique de la succession des responsables au niveau administratif et sur des enjeux qui ont gravement perturbé la vie de RAC depuis une dizaine d'années. À savoir, la compétence au niveau présidentiel et clérical administratif dont dépend la bonne marche des activités de Radio Amateurs du Canada. Ne pas assurer une bonne relève à ces niveaux détruira RAC, comme ce fut presque le cas récemment. Des ressources doivent être allouées pour assurer une relève compétente à ces deux postes (présidence et chef de bureau). La survie et la croissance de RAC nécessitent une solide organisation de notre bureau.

RAC se prépare à prendre de difficiles décisions concernant une vision à long terme de l'organisation et du radioamateurisme en général. Nous sommes en train de passer d'un mode de protection (évitement de la faillite financière) à un mode de production (accent sur la croissance). La protection était nécessaire pour éviter la faillite. Il nous faut maintenant grandir par l'investissement.

We are arranging for a series of regional webinars to discuss where we have been and where we are going and we will be looking for feedback. We will be issuing invitations shortly.

I am pleased to advise that RAC will be back at Dayton this year. This is our third year – our previous two years was the simple statement “we are alive”. This year our unofficial theme will be “loud and proud”. We have many items that we have accomplished over the last few years: from distracted driving victories (all but two provinces are providing exemptions and those two allow mobile use in emergencies; there is more work to do); to creating acceptance for additional Amateur frequencies as a result of our participation in the World Radio Conference; to updating the Question Bank for Industry Canada.

Thanks to Alfa Radio (see their ad on our website!) we have an $800 antenna rotor to give away. If you renew any full personal membership at Dayton you will get two chances to win this rotor. All existing Maple Leaf Members are automatically entered with two chances – whether they go to Dayton or not – and they get an additional two chances if they renew and extend their Maple Leaf Membership at Dayton. Anyone renewing any full personal RAC membership in 2013 from January to October will get one chance to win the rotor (i.e., renew online, mail or office). The proud new owner of the rotor will be announced on November 1.

Come to Dayton, visit our booth BA0436 and talk to your RAC volunteers. Better yet contact us and volunteer to work at the booth – volunteers will be given two additional opportunities to win the rotor! Contact me at <ve4baw@rac.ca> (note: when sending emails to me please copy the RAC office at <racgm@rac.ca>).

You have probably been receiving bulletins on the progress of our contract with Industry Canada to update the Question Bank. We are very pleased to have won the contract with Industry Canada to update the database for the Amateur Radio exam and we are pleased that RAQI is collaborating with us on the French language component of this project. This is an important project for RAC and Canadian Amateurs (see page 6).

I was greatly saddened when I learned that a great Amateur Radio operator and RAC member, Ken Pulfer, VE3PU, had become a Silent Key. Anyone who had met him was impressed by his gentlemanly demeanor, strong intelligence and solid support of Amateur Radio. He was a pillar of RAC. He served for many years as a strong voice for Amateur Radio at the World Radio Conferences and was respected by Amateur Radio associations around the world.

It was often said to me by many people that Ken was the “brightest person that they had ever met”. He was too modest to acknowledge that accolade. He once told me that retirement was a truly great event in that it allowed him to do what he wanted to do – and fortunately for us one of the things that he wanted to do was to use his great skills to help Amateur Radio thrive. Please see the article on page 12 for a tribute to Ken.

I would like to take this opportunity to thank the membership and Executive of QCWA, Chapter 70 – Ottawa. In February they reached into their hearts and pocket book and donated $500 to RAC. Many thanks Chapter 70! Dick Bonnycastle, VE3FUA, Treasurer of Chapter 70, made my day with his letter and cheque on another cold February morning.

Take care. See you in Dayton!

Geoff Bawden, VE4BAW – RAC President and Chair

Dans le but de recueillir du feedback à cet effet, nous organisons une série de webinars régionaux pour discuter de nos actions passées et à venir. Nous lancerons nos invitations dans peu de temps.

Il me fait plaisir d’annoncer que RAC retournera à Dayton cette année. C’est notre troisième année – les deux précédentes ne visaient qu’à signaler que nous sommes toujours « vivants ». Cette année notre slogan sera “Fort et Fier”. Au cours des dernières années nous avons accompli plusieurs choses importantes : victoire en ce qui a trait à la conduite inattentive (toutes les provinces accordent une exemption à l’exception de deux (il nous faudra y travailler encore plus!) qui cependant seront autorisées à intervenir en mode mobile en cas d’urgence ; nouvelles fréquences reconnues pour les amateurs suite à notre participation à la conférence World Radio (WRC); et mise à niveau des banques de questions d’examens à la demande d’Industrie Canada.

Grâce à Alfa Radio (voir leur annonce sur notre site web!), nous offrons un rotor d’antenne de 800 $ en tirage. Si vous renouvelez votre carte de membre pour un an (full personnal) à Dayton, vous obtiendrez deux chances de gagner le rotor. Tous les membres actuels Maple Leaf sont automatiquement crédités de deux chances – qu’ils se rendent à Dayton ou pas – et ils recevront deux chances supplémentaires s’il renouvellent leur adhésion à Maple Leaf à Dayton. Tous ceux qui renouvelleront leur carte de membre de RAC pour un an en 2013, entre janvier et octobre, auront droit à une chance de gagner le rotor (i.e., en ligne, courriel ou au bureau). Le nom de l’heureux nouveau propriétaire du rotor sera annoncé le premier novembre.

Venez à Dayton, visitez notre kiosque BA0436 et discutez avec les bénévoles de RAC. Encore mieux, communiquez avec nous et proposez-vous comme bénévole pour travailler au kiosque – les bénévoles auront droit à deux chances supplémentaires de gagner le rotor! Communiquez avec moi à <ve4baw@rac.ca> (à noter : quand vous communiquez avec moi par courriel, mettez le bureau de RAC en copie à <racgm@rac.ca>).

Vous avez probablement reçu les bulletins relatifs à notre contrat avec Industrie Canada traitant de la mise à niveau des banques de questions. Nous sommes heureux d’avoir obtenu d’Industrie Canada ce contrat de mise à jour des examens radioamateurs. Nous sommes heureux de la collaboration de RAQI en ce qui a trait à la partie francophone du projet. C’est un important projet pour RAC et les amateurs canadiens (voir la page 7).

J’ai été très attristé d’apprendre qu’un de nos grands radioamateurs et membre de RAC, Ken Pulfer, VE3PU, compte maintenant parmi nos « clés silencieuses ». Ceux qui l’ont connu ont été impressionnés par ses manières de gentleman, sa grande intelligence et son soutien indéfectible à la cause radioamateure. Il était un pilier de RAC. Il a travaillé plusieurs années à titre de porte parole du radioamateurisme aux conférences de la World Radio. Il était respecté des associations radioamateures à travers le monde.

On m’a souvent dit que Ken était “la plus formidable personne qu’on ait jamais rencontrée”. Il était trop modeste pour accepter ce compliment. Il m’a dit une fois que la retraite était vraiment un grand moment qui lui permettait de faire ce qu’il voulait – et çà été tant mieux pour nous puisque parmi les choses qu’il voulait faire, il y avait ses grandes connaissances qu’il mettait au service du développement radioamateur. S’il vous plaît, lire l’article à la page 12 en hommage à Ken.

J’aimerais profiter de la présente occasion pour remercier les membres et le Conseil exécutif de QCWA, Chapter 70 – Ottawa. En février, ils ont fait preuve de générosité et pigé dans leurs ressources financières pour faire un don de 500 $ à RAC. Mille mercis au Chapter 70! Dick Bonnycastle, VE3FUA, trésorier du Chapter 70, a « sauvé ma journée » en me remettant la lettre et le chèque en cet autre matin froid de février!

Portez vous bien. Je vous attends à Dayton!

Geoff Bawden, VE4BAW – RAC Président-directeur général

– Traduction par Claude Lalande, VE2LCF

SIX METRES AND DOWN

SPORADIC E SEASON 2013...

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Hello to all and hopefully by the time this gets to you the weather here in Canada will be a bit more conducive to doing antenna work outside – without frozen fingers! We hope everyone's antennas survived intact over the rather long and stormy winter and that maintenance is minimal! Having said that, my rotor is reading off by about 20 degrees, but all else seems fine, touch wood!

SOLAR CYCLE 24

The cycle continues to waffle on us and has not shown any strong upward swing in solar flux over the last few weeks, but there has been some activity around the equinox resulting in some Aurora, a bit of Trans-Equatorial Propagation (TEP) and some transpacific contacts between the ZLs and the west coast of South and North America. Bob, ZL1RS, worked TI5KD with 579 signals on March 23. Hopefully this will continue!

EARTH-MOON-EARTH (EME)

Lance, W7GJ, packed up his gear and headed to Clipperton Island as part of the TX5K team. Lance uses an Elecraft K3 laptop for tracking and logging, an SSPA kilowatt amplifier (or KW), and an 8-element M2 yagi with a manual elevation system.

Just before we went to press Lance sent me the following report and two great photos. Below and on the front cover is a great photo of Lance's antenna on the island. It gives you an idea of the conditions out there.

The photo is a shot of Clipperton Island from the team's kite camera showing Lance's operating tent and, while hard to see, his 8-element yagi – not the rather rugged conditions!

You have to hand it to him as he's ready, willing and able to put rare DX on 50 MHz EME.

"The first HF camp is up by the clump of palm trees 360m to the NE, and the 160/80m camp is about the same distance further to the NE – right where the atoll starts bending to the left.

If you look very carefully, you can see the 160/80m camp operating tent. If you zoom in on the photo, you can see the verticals at the main HF camp, as well as the masked boobies all around the 6m operating tent.

The sleeping tents are for me and KF4ZZ, who worked a lot of the SSB TEP. The photo was by LouPhi Locke, who took the photo with a GoPro camera mounted under a kite!

Here is the summary:

318 total contacts: 212 SSB, 53 CW, and 53 JT65A (LU5FF via TEP and XE2AT via D layer scatter) and 51 stations worked via 6m EME. The very first contact from Clipperton was my contact with G8BCG via 6m EME at 0536Z on March 2!"

I only tried EME on March 2, 3, 4 and 7, 8 and 9.

Lance, W7GJ, operating TEP from his tent on Clipperton Island.

The EME conditions were the best on March 2 and I made almost half the contacts that first day.

Conditions were the worst of the month during the middle of the trip, and were just starting to improve again when we had to tear down after moonrise on March 9.

23 stations copied via EME but not worked.

51 stations worked via EME on JT65A (in order of being worked):

G8BCG, ON4IQ, S59A, S57RR, ON4GG, K2ZD, IW5DHN, OZ4VV, SM7FJE, SM7AED, OK7XX, G5WQ, K6QXY, GW4WND, WA4NJP, OZ1DJJ, N3XX, S51DI, G4IGO, GM4WJA, HA8CE, K6MYC, OZ1DJJ, OT4E, F6BKI, W6BBS, ZL1RS, N7NW, KH7Y, K7XQ, ZL3NW, FK8CP, ES6RQ, OZ7OX, OH6MIK, LA8AJA, OK1RD, UT7QF, SP3RNZ, N6RMJ, N3CXV, VE3KH, HA0DU, VE3MMQ, N8JX, W7MEM, N2TIN, K7CW, W7UT, W7IUV and N6BBS."

A shot of Clipperton Island by LouPhi Locke who took the photo with a GoPro camera mounted under a kite!

Among the successful EME contacts were Kevin, VE3KH and Bill, VE3MMQ, up here in Canada. Kevin was using his 4 x 5 element yagis and a KW, with elevation, and Bill was using a single M2 9-element yagi and KW. I did a lot of listening as well, but without elevation the local hydro noise was just too much for any weak EME, although we decoded the terrestrial pileup on Lance quite well: eight stations calling him during moonset! Seriously though, elevation is the way to go for EME on any band!

ST PATRICK'S DAY AURORA

March 17, 2013 Aurora: Finally, the sun woke up and sent a coronal mass ejection (CME) hurtling toward earth on March 15; and on March 17 we found the band open on Aurora. A quick call to Michel, VE2XK, was followed by contacts with N1BUG, W1MU, W1JJ, W3EP, VE3AAQ, K1AC, K2MUB, VA3KA and W8JX between 1828 and 1852 UTC. Signals ranged from S4 to 60 over 9 with Mario, K2MUB, absolutely pounding in! The auroral hot spot moved rapidly west with W9s and W8s in loudly, then shifted back eastward. Unfortunately, the aurora died before we had any long haul Auroral Es into Europe or into VE8-land this time.

Dave, VE3AAQ, in FN25, reported the following QSOs: VE2XK FN07, W1MU FN53, VE3KU FN03, K2MUB FN21, K1TEO, K8MD EN82, VE3FGU FN04, N1BUG FN55, N1SV FN42, VE9AA FN66, N8CJK EN84, KK2I FN03, K1UO FN54 and VE3MMQ FN14. This was all done with Dave's HF tribander and 200 watts! Dave promises to have some type of 6 metre antenna up this spring! The aurora extended up to 144 MHz as well with stations in W9 and W8 land worked from VE2 and VE3!

SPORADIC E SEASON 2013

Yes winter is finally gone, and by the time you read this the 2013 Sporadic E season will have arrived. Hopefully, we will have lots of DX to report in our next column. In the meantime, be aware that 50 MHz could open to Europe, Africa and the Far East via this mode, and on 144/222 MHz look for openings out 2300 km!.

CQ VHF 2012

Congratulations to Bill, VE3CRU, for placing *First In The World* in the CQ VHF Rover category! Bill's continuing efforts to activate a huge array of bands whilst being in his rover van is an example to us all. Not to be forgotten are the other keen rovers in Ontario! – VE3OIL, VE3RKS and VE3ELE – who all have braved nasty weather, cold, heat, bugs, mud and curious OPP officers to make grids active for us stick-in-the-mud home operators!

VE7DAY and VE3KZ placed 3rd and 4th in QSOs on 50 MHz, VE3CRU/r placed 5th! VE7JH placed 2nd in the Multi-Op QSOs category and VA7FC placed 3rd! VE7JH placed 5th in the Multi-Op 50 MHz Grids category, and VE3CRU/R placed 3rd in the Single Op 50 MHz Grids category, and 2nd in the 144 MHz Single Op category, with VE3ZV in 4th place! Nice to see so many Canadians across the land active and in contention!

Speaking of CQ VHF: If you are looking for a dedicated VHF/UHF Magazine, *CQ VHF* is one such. The magazine is published quarterly and is edited by Joe Lynch, N6CL. Articles cater to the full range of VHF/UHF life, DX, FM, Digital, Radiosport (RDF), Antennas, Ballooning, SETI, Propagation and more! CQ Also sponsors the WAZ (Worked All Zones) Award and they have a special WAZ for 50 MHz! Check out the CQ website at: http://www.cq-vhf.com

USB SDRs

Further to my last column, I've added another make of dongle to the mix here. This one uses the original E3000 tuner and covers about 50 to 2200 MHz! With a bit of work and connecting it to a good antenna we've been able to monitor 2m FM repeaters across Lake Ontario and into New York state, Toronto weather on 162.4 MHz, and other VHF/UHF mobile and fixed stuff. On SSB we've been able to copy Stan, KA1ZE/3's remote base. So far we have not been able to pull out the WA1ZMS beacon from FM07, but we will be trying it with a low noise preamp and bandpass filters shortly.

I also set the dongle to track aircraft at 1090 MHz via Automatic Surveillance Broadcast (ADS-B), using my 903 MHz loop yagi, and amazingly it all worked very well. We were able to track aircraft flying into and out of Pearson and out about 500 kilometres, with the flight track showing on Google Maps! This is like ham APRS but airborne! With the addition of an HF upconverter, you can even use these things to tune the entire HF band! I haven't tried it yet, but I heard from others that this works well. See the January 2013 issue of *QST* for an interesting article! A lot of fun for $20 to 30 bucks!

JUNE VHF QSO PARTY

Last but not least, if you have a VHF or UHF radio, get on for the ARRL's June VHF QSO Party this year from June 8 to June 10. The fun begins at 1800 UTC on Saturday and runs through 0259 UTC on Monday. The ARRL accepts paper logs or Cabrillo formats so please get on and give out contacts even if you are not "into" contesting! The exchange is your grid square so if you don't know, look it up or ask a VHFer for help – we are all approachable! Have fun!
See you next time!

Dana, VE3KU/VE3DSS

HELP WANTED

Treasurer

The Radio Amateurs of Canada is looking for a Treasurer who is a Chartered Accountant, Certified General Accountant or Certified Management Accountant.

A certification in Amateur Radio is optional. As RAC's financial advisor, we need someone to provide direction on the accounts and act as liaison with the external auditors. Experience with QuickBooks would be an asset.

Please speak with your friends, there must be a RAC member who either qualifies or can approach someone for this volunteer position. Certification in Amateur Radio is not a requirement for this position.

Interested parties please contact the RAC Corporate Secretary at:

ve9glf@nbnet.nb.ca

RAC Public Information Officer

The Radio Amateurs of Canada is seeking the services of a Public Information Officer (PIO).

This is a voluntary position operating at the national level. Candidates with the following knowledge, skills and abilities will be considered:

- Knowledge of the principles and methods of planning and conducting a public information program.
- Knowledge of the media used in public relations.
- Ability to plan and conduct a public information program.
- Ability to write and edit various forms of promotional and informational material and to develop and/or select other types of media such as films and exhibits.
- Ability to discern and collect newsworthy materials, to analyze and evaluate public relations media and methods, and to judge probable public reaction.
- Ability to speak effectively in public.
- Ability to work effectively with RAC Affiliated Clubs and the RAC national Bulletin Service.

Interested parties please contact the RAC Corporate Secretary at:
ve9glf@nbnet.nb.ca

Linda Friars, VE9GLF
RAC Acting Corporate Secretary

A TRIBUTE TO DR. JAMES KENNETH (KEN) PULFER, VE3PU

Ken Pulfer, VE3PU SK – 1932-2013

The Canadian Amateur Radio Service lost an icon when Ken Pulfer, VE3PU, passed away after a short illness on March 31, 2013 at age 80. He leaves a legacy of more than six decades of outstanding service and contributions to both Amateur Radio and engineering and science in Canada.

Ken was a modest, quiet, diplomatic and unassuming but very accomplished engineer, who credited his interest in Amateur Radio for starting him on his professional career. A native of Manitoba, Ken was licensed in 1949 as VE4KP while still at high school. He became VE3PU in 1954 on moving to Ottawa, Ontario to become a research officer in the Radio and Electrical Division of the National Research Council (NRC). Ken advanced steadily through the NRC hierarchy, becoming Director General Electrical Engineering and subsequently the Vice President Laboratories and then the Vice President Finance, which were Assistant Deputy Minister level positions. He was also at various times the NRC Secretary General and Comptroller.

Ken Pulfer, VE3PU and Jim Dean, VE3IQ, in Geneva at WRC-2007.

Ken's professional accomplishments were many and deserve recognition in this tribute to him. Ken was a leader and contributor in engineering research, particularly in the development of the field of human-machine interfaces as digital computer technology began its evolution in Canada, and which included the development of a device that is today in universal use as the computer "mouse". At one memorable meeting of the Ottawa Amateur Radio Club at the NRC in 1969, Ken, an accomplished musician, demonstrated his vision and ideas about the potential use of the computer human-machine interface for composing music.

Ken personally founded the Canadian Manned Space Program, including the very successful Canadian Astronaut program and the Canadian participation in the International Space Station. He was always a promoter and supporter of the development of Canada's space industry, including the development and manufacture of the successful, internationally-recognized Canadarm seen on the Space Shuttles and the International Space Station.

Ken was involved in establishing the programs of Amateur Radio communications between schools and space vehicles. He was a founding member and one of two Canadians on the Board for Amateur Radio on the International Space Station (ARISS). ARISS promotes communication between Radio Amateurs on the International Space Station and schools on earth to stimulate interest in space, science and technology.

As a volunteer for more than 15 years, Ken's vision and leadership directly enhanced the capability and reputation of the emerging computer industry in Canada through his contribution to the education, accreditation and performance standards for computer professionals. He initiated Canadian activities to promote international cooperation in computer science and technology research. For more than 20 years, Ken provided advice on science and technology to the federal and provincial governments as well as some Canadian and international organizations

In recognition of his pioneering efforts in computer research and technology and his distinguished achievements, in 1984 Ken Pulfer was awarded an Honorary Doctorate of Science in Electrical Engineering by his alma mater, the University of Manitoba.

Throughout his career at the NRC, Ken was an active Radio Amateur, and while the influence of Amateur Radio on his work was not always directly obvious, those who knew him were aware of its influence.

After his retirement from the NRC, Ken spent more than two decades as a volunteer in many fields, particularly in Amateur Radio.

From 1993 to 2006, he applied his technical and administrative expertise to the establishment and operation of Radio Amateurs of Canada (RAC), the national society serving the 69,000 Canadian members of the Amateur Radio Service. He served variously as Secretary, Treasurer, Vice-President Government Affairs, Vice-President International Affairs and as a member of numerous RAC committees, working groups and task forces, including the Amateur Delegation Working Group 1993-1997 that examined the possibility of RAC assuming the administration of the Amateur Service in Canada.

While he supported Amateur Radio in Canada through his involvement with RAC, Ken also served the worldwide Amateur community for more than 15 years variously as a Canadian representative and as an IARU Technical Representative to the technical meetings of the International Telecommunications Union (ITU) in Geneva, Switzerland, and the World Radio Conferences (WRCs). Ken was recognized for his diplomacy, technical expertise, professionalism, insight, positive attitude, honesty and integrity. Ken was also a linguist, which enhanced his effectiveness in international fora. Not only was he fluent in English and French, he had a capability in Russian, Portugese, Spanish and Chinese that he used to effect with delegates.

"When former ARRL Chief Technology Officer Paul Rinaldo, W4RI, retired in 2009, Ken took over as Chairman of the ITU Radiocommunication Sector's Working Party 5A Working Group 1, the 'home' of the Amateur and Amateur-Satellite Services in the ITU structure, culminating with the 2012 World Radiocommunication Conference (WRC-12)," the ARRL said in its notice of Ken's death.

"Ken's chairmanship capped a long professional and volunteer career in engineering and spectrum management," said ARRL Chief Technology Officer Brennan Price, N4QX. "His IARU career was marked by the successful effort to obtain a secondary international MF allocation for the Amateur Radio Service at 472-479 kHz".

Ken Pulfer, VE3PU, receiving the RSGB Calcutta Key Award.

Ken's work with the ITU was as an unpaid volunteer, and involved three or four meetings per year overseas. These meetings usually lasted three or four weeks and were a major commitment of time away from his family; they also demanded extensive preparation time in Canada.

As well as the success on the allocation at 472-479 kHz, Ken was a player in the successful expansion of the 40 metre band at WRC-2003 and the secondary international LF allocation for the Amateur Radio Service at 135.7-137.8 kHz at WRC-2007. ARRL Chief Executive Officer David Sumner, K1ZZ, recalled Ken's volunteer career with the IARU, noting his "extraordinarily patient and dogged effort to secure protections for the Amateur and Amateur-Satellite Service at WRC-03, where an allocation for spaceborne Synthetic Aperture Radars (SARs) was created at 432-438 MHz. Ken told the story in his own words in the September 2003 issue of QST. The constraints placed on SARs include significant protection for Amateur satellites – quite an achievement given that the allocation for Amateur satellites at 435-438 MHz is on a non-interference basis."

Ken retired from his volunteer work for Canada, RAC and the IARU on completion of WRC-2012. IARU President Tim Ellam, VE6SH, reported that "when Ken announced his retirement at the annual dinner of the International Amateur Radio Club during WRC-2012, he received accolades from many of those present, including ITU Secretary General Dr Hamadoun Touré, HB9EHT, and from the heads of a number of delegations. Ken Pulfer's keen intellect and support of the Amateur Radio Service will be missed."

In 2012, the Radio Society of Great Britain (RSGB) awarded Ken its prestigious Calcutta Key for his work on behalf of the IARU with the ITU. The key, a gift of the RSGB National Council, is awarded for "Outstanding service to International Friendship through Amateur Radio".

With Ken's passing, Canada has lost an outstanding engineer and Radio Amateur.

Ken is survived by his wife Rolande, VE3JKP, their daughter Suzanne, their sons Charles and James, and five grandchildren.

Rest in peace, old friend.

Jim Dean, VE3IQ

We would like to thank to the ARRL for providing some of the information used in this article.

ANTENNAS & TRANSMISSION LINES

EXPLORING WINDOW TRANSMISSION LINES (PART 1 OF 3)

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

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INTRODUCTION

Window/Ladder lines [1] have been a great favourite of Amateurs for many years. They have found their way into antenna designs and are used extensively as transmission lines, most notably for the G5RV antenna. Many of the claims about the performance of these lines are based on old models. This can result in overly optimistic estimates for the resulting system loss when used in real situations. The results presented in this series use modern loss models that include the effects of DC resistance and the impact of ice and snow on these systems.

Wes Stewart, N7WS (see TCA hotlink 1) provided most of the necessary background about Window line applications. He measured Wireman type 551 and others, both in dry and wet conditions, using an error-corrected HP vector network analyzer in the 50 to 150 MHz region. Wes also discussed new and old methods of employing Window line including the impact of antenna tuners and Baluns. In doing so he dispelled one popular myth "that the line attenuation is insignificant and isn't even a consideration in an antenna system". Several examples are discussed in these articles that clearly support the views of Wes.

Later, Dan Maguire, AC6LA, included the DC resistance for the models used for Wireman 551 and other transmission lines in his calculator, TLDetails (see TCA hotlink 2). If you use TLDetails, make sure to download the latest version which includes the HF and DC parameters for these lines. TLDetails calculation for Wireman 551 agrees quite well with the work of Wes Stewart at 50 MHz. The measurement gap between DC and 50 MHz is done through interpolation by TLDetails. To the best of my knowledge, no measurements (very difficult for Window line) have been reported for the HF bands.

This series of articles explores most of the good and bad things about these transmission lines and demonstrates practical examples of Window line antennas that I have designed, built and tested for the HF bands.

Part 1 of the series lays the groundwork for further study by applying well established principles for estimating how the overall loss of these systems is calculated. Several calculations are used to demonstrate the expected losses which in many cases are much higher than the matched loss of the transmission line.

Part 2 extends the discussion given in Part 1 through the use of Window line and coaxial cable used in the very popular G5RV antenna.

Part 3 concentrates on the design of antennas that use Window lines for antenna loading and radiation. A set of short HF dipoles that use Window line is presented along with experimental results and the wire lengths for these antennas in the HF band.

WHY USE WINDOW LINE

Steve Ford, WB8IMY (see TCA hotlink 3), wrote a fascinating article about a problem he was attempting to solve. He wanted to work most HF bands in a fairly restricted space and he did not want to annoy his neighbours with ugly looking antennas. He did not have enough room to put up a G5RV antenna so he looked at many antenna types and finally said:

"Perhaps I could string up a single dipole and feed it with coaxial cable".

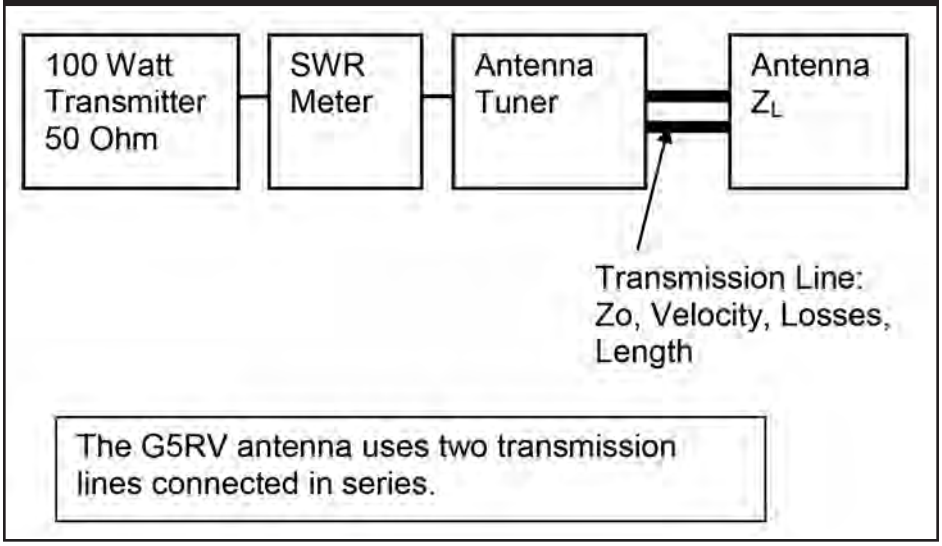
The cable that he selected only had a matched loss of approximately 0.3 dB at 10 MHz for a cable length of 15.2 metres (50 feet).

The dipole selected was resonant in the 40 metre band. It worked well in that band of course but gave great problems including arcing on other bands. He then found out that the system had a total loss of 26.9 dB (calculated by Dean Straw, N6BV) in the 160 metre band. It also had poor performance in several other bands.

A 100 Watt transmitter will only transmit 0.204 Watts under these circumstances. What can be done to improve the situation?

He then asked Dean what he could do. Dean suggested that he use Ladder line to feed the dipole.

Figure 1: Typical Transmission System including a Lossless Antenna Tuner



[1] *In this series, the term used for the transmission lines under study is Window Line. Many references use Window line, Ladder Line or Open Wire Line for the same general type.*

Steve implemented Dean's suggestion and this started a long and continuing study of the properties and uses of Window lines. This included other line types for a variety of interesting applications. Note that this trigger occurred long after the invention of the G5RV antenna by Louis Varney in 1946.

There are many questions to answer regarding Window lines:

1. Are losses for Window line always lower than losses for coaxial lines?
2. Do these lines cause more unwanted radiation than coaxial lines?
3. What happens when the Window Line is covered with Snow/Ice?
4. How can Window line be used to make antennas?
5. How does the skin effect impact the performance of these lines which are usually made from copper clad steel wires?

These and other questions are discussed if this series of articles.

TRANSMISSION LINE BACKGROUND

Although these articles focus on the use of Window lines such as Wireman 551, it is important to understand that these and coaxial transmission lines behave in the same fashion. Each has a certain characteristic impedance, velocity factor and losses but the method of using them is the same. In some cases, Window line has lower losses than coaxial cable but this is not a hard and fast rule. It depends on the line type, frequency and load impedance.

For example, consider Wireman 551 Window line, Zo = 400 Ohms nominal, and LMR400 coaxial cable, Zo = 50 Ohms nominal, operating in the 160 metre band. The matched line loss for Wireman 551 Window Line is 0.828 dB per 100 metres and the matched line loss for LMR 400 is 0.561 dB per 100 metres. However, Wireman 551 has a lower loss than LMR 400 at 28 MHz. Hence the answer to question #1 above is "no".

The system that we study in this series of articles is shown in Figure 1 (on the previous page) where a 100 Watt, 50 Ohm transmitter is connected to an SWR meter to monitor the performance of the system. The SWR meter is connected to an ideal lossless antenna tuner, a length of transmission line and a load that will generally not have an impedance equal to Zo. In Parts 1 and 2 of this series, we compute the power delivered to the load and the power lost in the transmission line as heat for several common situations including the G5RV antenna.

With regards to question #2 above: "Do these lines cause more unwanted radiation than coaxial cables?" Radiation from transmission lines is caused by unbalanced loads resulting in wanted or unwanted in-phase currents flowing on the transmission line pairs as seen in Figure 2. These currents are usually called common mode (radiation) and differential mode (no radiation, only transmission). In most cases, we want to suppress the radiating currents but as seen in Part 3 of this series, we enhance the flow of these currents for an antenna application.

The general situation is shown in Figure 2 where two cases are presented, both of which can occur on either Window or coaxial transmission line. The first case shows currents equal in magnitude but opposite in phase. This is the normal current that is wanted for ideal transmission lines. No radiation occurs because of the phase reversal of the currents. However, in the second situation, the currents are shown to be of equal

Figure 2: Transmission Line Current Flow

Equal In-Phase Produce Radiation
Equal Opposite Currents act as a Transmission Line Only

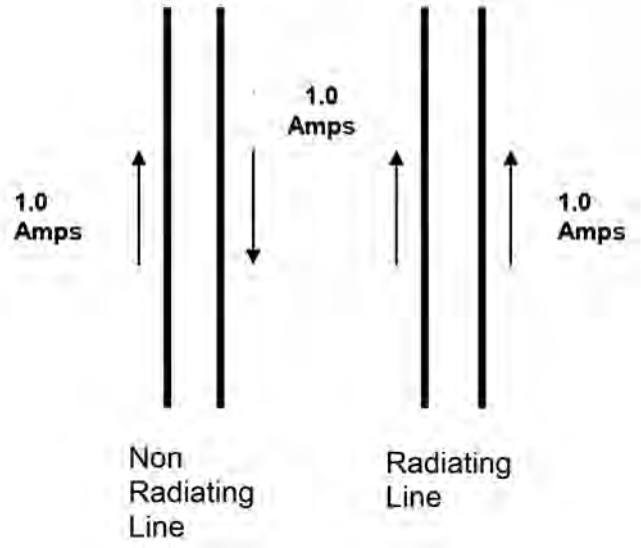
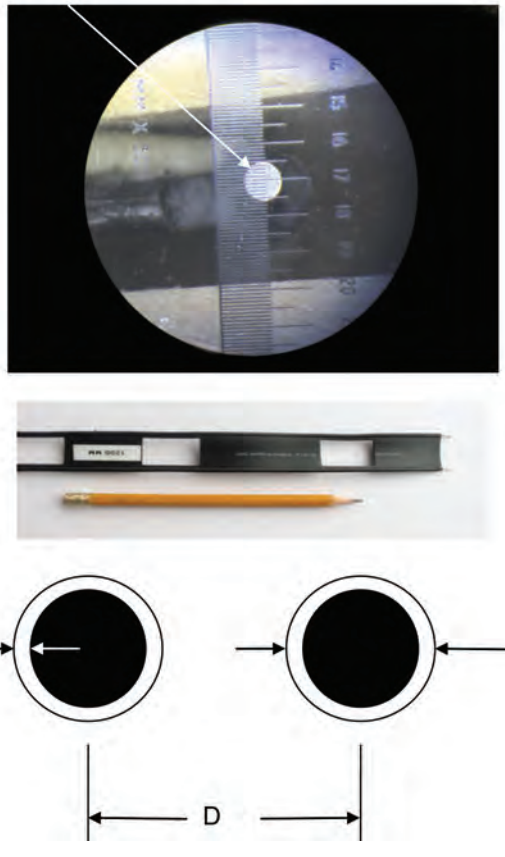


Figure 3: Physical Description of Wireman 551 Window Line

Window Line Cross-Section, JSC Window Line
Almost Identical to Wireman 551
Steel Core, Copper Clad
D = 21 mm, d = 1.1 mm, t = 65 um
1 mm per major division
Arrow points to wire cross-section
Thin layer of copper not seen at this magnification



Photograph courtesy of VE3CZO

amplitude and phase so radiation occurs. It is up to the designer of the overall system to control the current by using Baluns and/or balanced systems. Hence, if properly used, either coaxial cable or Window line can be used either as ideal transmission lines or as radiators. In the following discussion, we only consider the ideal situation where the lines do not radiate.

Physical Description of Wireman 551 Window Line

Wireman 551 Window line is a typical 400 Ohm transmission line as shown in Figure 3. The line is often referred to as 450 Ohm Window line but its actual Zo is close to 400 Ohms.

It consists of two steel core wires that are spaced by 21 mm and housed in a polyethylene jacket as shown. The diameter of the wires is 1.1 mm and they are clad with a thin layer of copper, 65 um thick, which is greater than the skin depth at 10 MHz (21 um). However, the cladding is not thick enough to give good performance in the 160 metre band. The steel core makes these lines quite strong and capable of surviving harsh environments, including strong wind and rain, without stretching too much or breaking. Other types of these lines use only copper such as the commonly used 300 twin lead used for television applications and by Amateurs.

A cross-sectional view of the steel/copper wire used is shown in Figure 3. The bright spot in the in the centre of the photograph is the wire cross-section (1.1 mm in diameter). Although not clearly visible in the photograph, the thin copper cladding was seen under the microscope and is estimated at being 65 um thick (not thick enough to give low losses in the 160 metre band).

Transmission Line Losses from Heating and Reflections

One of the most important parameters of transmission lines is the resistive loss which is usually measured in dB per 100 metres. In the mid-range of HF frequencies around 20 MHz, Window line is one of the very best. However, the situation radically changes when the line is covered with ice and snow. One of the best coaxial cables is LMR-400 precision coax which shows good insertion loss over a very wide range of frequencies. To study the performance of these systems I have used TLDetails, which I use for the evaluation of a wide variety of commonly used transmission lines.

Figure 4: Transmission Line Losses: Wireman 551 and LMR-400

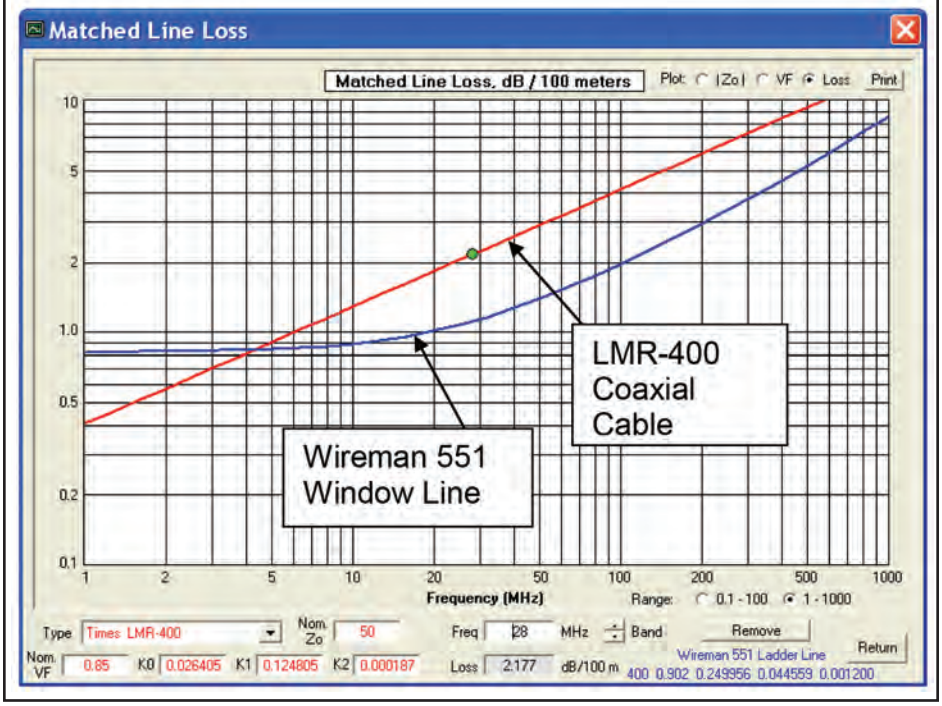
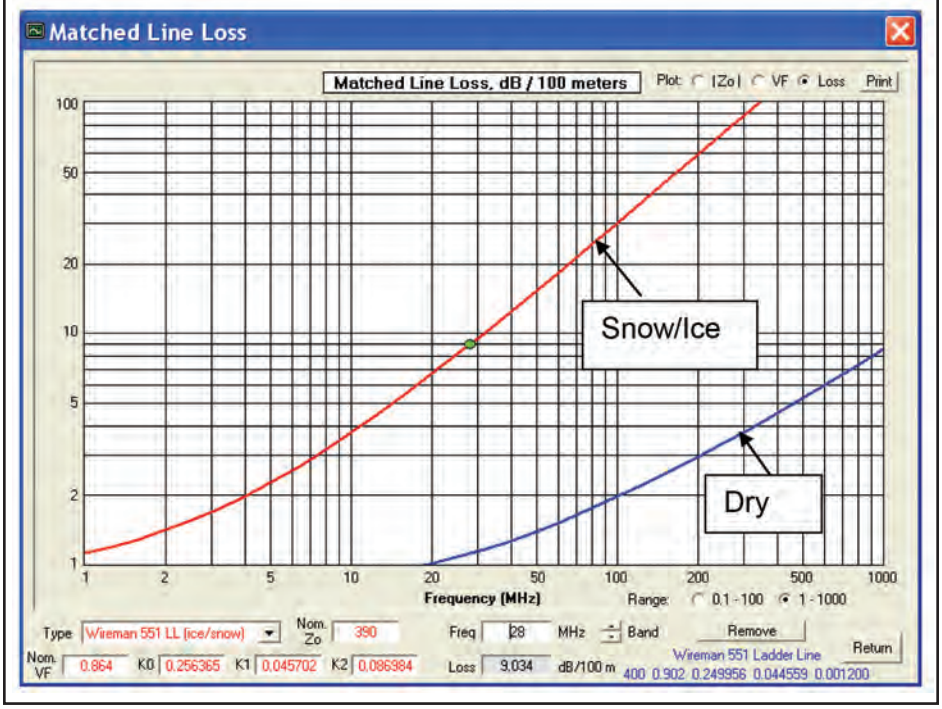


Figure 5: Transmission Line Losses: Wireman 551 (Dry and Snow/Ice Covered)



Another type of loss is that caused by reflections in transmission lines due to the mismatches at the load and generator. These losses can exceed the matched loss by more that 20 dB in some cases that we study in these articles. Here it is assumed that a lossless antenna tuner can accomplish an ideal match under very poor conditions. The worst case of course is to short circuit a transmission line on the load end and then adjust the tuner for a VSWR equal to 1.0. In that case all of the transmitter power goes into the transmission line and nothing is radiated. The assumptions of a perfect antenna tuner are not valid for cases of extremely high SWR. In that case total losses are a summation of reflection loss, dielectric loss, matched loss and tuner loss.

Losses in Wireman 551 and LMR-400

The loss characteristics of Wireman 551 and LMR-400 are presented in Figure 4 where the matched loss as a function of

frequency is shown. The important things to observe are:

- For high frequencies, the loss of both types of transmission lines is a straight line indicating that the losses are mainly due to skin effect losses.
- LMR-400 operates in the straight line mode for all frequencies from 1 to 1000 MHz. This indicates that it is manufactured using generous amounts (thickness) of copper and that the loss is dominated by skin effect for most practical frequencies.
- Wireman 551 deviates from the straight line region from 1 to approximately 20 MHz and becomes a constant for low frequencies. This is due to the thin region of copper clad material over the steel core. This is the price paid for using steel core wires which are very strong.
- The loss of these lines is equal at a frequency of 4 MHz: 0.8 dB per 100 metres.

Now look at Figure 5 where the loss of dry Wireman 551 is compared to snow/ice covered Wireman 551. Notice that the loss scale is from 1 to 100 dB per 100 metres.

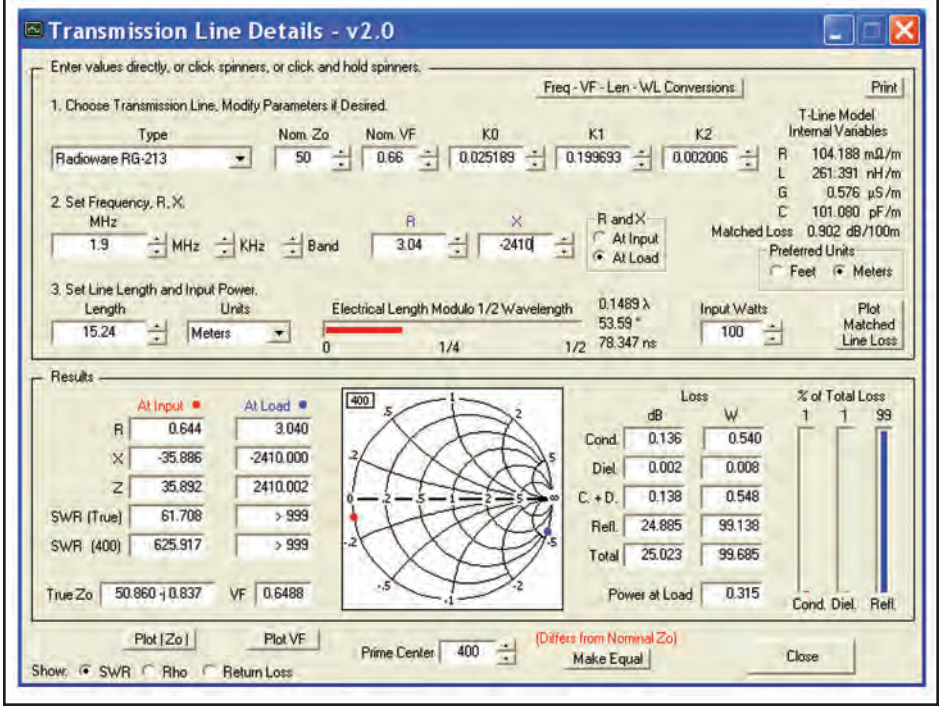
For example, the loss of this cable at 20 MHz is approximately 1 dB per 100 metres for dry conditions and 7 dB per 100 metres for snow/ice conditions. The extra loss is caused by the increase of dielectric losses while the copper loss remains unchanged. This loss difference can have a huge impact on the performance of your system. For example if you have an antenna tuner set to dry conditions, then the system can become completely detuned if it snows as well as being more lossy. Another change not shown on this graph is the fact that the velocity in the line changes as the line accumulates snow or ice. This means that its wavelength changes and will further detune any system where the line length is important – such as an antenna that uses Window line as one of its radiating elements.

STEVE FORD'S DIPOLE

We will conclude this article by analyzing the dipole that Steve Ford discussed in his *QST* article, before proceeding with the more complex discussion of the G5RV antenna and other antennas in Part 2. This analysis demonstrates the general process of evaluating antenna systems and also shows where all the power was lost in the system.

Figure 6: Steve Ford's Dipole Simulated at 1.9 MHz

Steve Ford's Dipole
1.9 MHz Simulation Using RG-213 50 Ohm Coax
Similar Results for RG-8 Type Coax



Steve used a 66 foot (20.1 metres) dipole mounted 30 feet (9.1 metres) above the ground. I assume that it was made from stranded copper. He then connected 50 feet (15.2 metres) of Belden 8124 (RG 8/U), similar to RG-213, to the antenna and used an antenna tuner to match the system to 50 Ohms. The analysis is conducted in the following order:

1. Use EZNEC or other antenna simulator to find the load impedance for the 50 Ohm cable. In this case the antenna impedance at 1.9 MHz equals 3.04 Ohms resistive and -2410 Ohm reactive (highly capacitive). This deviates a huge amount from the characteristic impedance of 50 Ohm for the cable. The SWR is approaching 100.
2. Now use TLDetails to complete the analysis. The procedure is very straight forward (see Figure 6). You select the type of transmission line, the frequency, load impedance and the line length.
3. TLDetails completes the work for you and displays the results in a "Results Box".

The results given are the SWR presented to the tuner, the cable conductor loss, the dielectric loss, the reflection loss (assuming a perfect tuner) and the total loss. A Smith chart is also included in the "Results Box".

In this example:

- The SWR = 61.7 in a 50 Ohm system
- The matched conductor loss = 0.1 dB (very small at 1.9 MHz)
- The dielectric loss = 0.002 dB (a very high quality dielectric is used)
- The reflection loss = 24.9 dB (due to the extremely high SWR)
- The total Loss = 25 dB

The above example represents an extreme case and Steve says that "I tried 160 metres, but that was pushing it a bit far for the tuner". In this example almost all of the power from the transmitter ended up heating the cable system if the tuner losses are ignored.

The same antenna fed with Wireman 551 Window line produces a total loss of 15.7 dB at 1.9 MHz which is considerably better but still not acceptable. The analysis presented in Steve's article indicated a loss of 8.62 dB at 1.9 MHz. The big difference is that the model used in TLDetails for the loss in Wireman 551 includes the effects of the DC resistance.

– continued on page 21

FRESH ON THE AIR

— ADVENTURES FOR THE NEW AND BEGINNING HAM

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CALLS, PRIVILEGES AND PHONETICS

I've recently had a few requests to expand on three aspects of our hobby: Call Signs, Certificate Classes and the Phonetic Alphabet. It seems that many new Amateurs are either not quite sure or are confused as to the use or understanding of these three elements of our hobby.

Canadian Call Signs

In Canada, Amateur Radio operators are assigned call signs that are unique to both the operator/station and the province, territory or area in which he or she lives. Call signs identify the station that is using a radio frequency. For instance, if you listen to a radio station or watch a television station, the broadcaster has a call sign that will identify it. CHUM, CKQT and CFTO are just some examples of radio and television station call signs. They are unique to the user and identify who they are.

In our hobby, call signs take the format of two letters, a number, then two or three letters. For example, my call sign VE3BOC means that I am in Canada (VE), I reside in Ontario (3), and my unique station identifier is BOC. Only I have this call and I am the only one authorized to use it. It identifies me, or my station, when I operate on the air.

Below are the prefixes for Amateur Radio call signs in Canada:

CY0 – Sable Island
CY9 – St Paul Island
VE0 – Stations at sea
VA1 – Nova Scotia
VE1 – Nova Scotia
VA2 – Quebec
VE2 – Quebec
VA3 – Ontario
VE3 – Ontario
VA4 – Manitoba
VE4 – Manitoba
VA5 – Saskatchewan
VE5 – Saskatchewan
VA6 – Alberta
VE6 – Alberta
VA7 – British Columbia
VE7 – British Columbia
VE8 – Northwest Territories
VE9 – New Brunswick
VO1 – Newfoundland
VO2 – Labrador
VY0 – Nunavut
VY1 – Yukon
VY2 – Prince Edward Island
VY9 – Government of Canada

Many times, new Amateurs will select an available call sign that is an extension of their personality. It might be their initials, such as TYK for Tanya Yolanda Kotsovitch, a phrase (NVY for Not Very Young), or another call that means something special to them. I chose BOC because I love the music of Bach and BOC is as close to that as I could get. It seems sort of like those vanity licence plates that no one can figure out.

As a new Amateur, your call sign is your identifier, the thing that makes you what you are in our hobby. Never be afraid to use it, and use it proudly. This is how people know you on the air.

Classes of Operating Certificates

There are essentially three qualifications you can have on your Certificate of Proficiency in Amateur Radio. The Basic qualification by itself lets you build and operate all station equipment except for "home-made" transmitters, grants access to all Canadian Amateur Radio bands above 30 MHz, and allows you to use a maximum of 250 watts DC transmitter input power.

Advanced certification is added to Basic and allows operating extras like access to all Canadian Amateur Radio bands below 30 MHz, using a maximum transmitter power of 1,000 watts DC input, building and operating all station equipment including transmitters, establishing and operating repeaters and club stations, and to remotely control fixed stations including using radio links.

If you achieved a score of 80% or greater on your Basic examination, your certificate will say "Basic with Honours". This qualification by itself, also permits access to all Amateur bands and modes.

The final qualification is a Morse Code endorsement on top of either a Basic or a Basic/Advanced Certification which also allows access to all Canadian Amateur Radio bands below 30 MHz even if 80% was not achieved on the Basic exam.

For many new Amateurs, Basic or Basic and Morse are the stepping stones into the hobby, with Advanced certification acquired at a later date. Some just get the Basic, others go for both the Basic and Advanced together, while a few get their Basic and Morse, or all three at once. It all depends what you want to do in Amateur Radio at the moment.

Phonetic Alphabet

In radio communications it is sometimes difficult to understand letters when they are spoken over the air. In Canada, many radio users in various services use the common Phonetic Alphabet below when saying letters.

A – Alfa
B – Bravo
C – Charlie
D – Delta
E – Echo
F – Foxtrot
G – Golf
H – Hotel
I – India
J – Juliett
K – Kilo
L – Lima
M – Mike
N – November
O – Oscar
P – Papa
Q – Quebec
R – Romeo
S – Sierra
T – Tango
U – Uniform
V – Victor
W – Whiskey
X – X-ray
Y – Yankee
Z – Zulu

As an example, when a police officer is requesting a check on a licence plate, they will use the phonetic alphabet to avoid any confusion as to what they are asking for. So the plate 3490-HRSV will be, "Can I get a check on 3490 Hotel Romeo Sierra Victor?" And for a person, "John Keele, first name Juliette Oscar Hotel November, last name Kilo Echo Echo Lima Echo". The dispatcher knows exactly what to key into the computer.

– continued on page 21

INTRODUCTION TO eQSL.cc – THE ELECTRONIC QSL CARD CENTRE

David Bell, VA3KAB

This article will give an introduction to the original, and still very popular, method of exchanging Electronic QSLs: eQSL.cc. Most Amateur Radio operators use electronic logging programs these days, and most can be configured to automatically upload QSOs to the eQSL.cc servers. It takes only minutes to register an account, and there is no cost involved to do so.

WHAT IS eQSL.cc?

eQSL.cc is the brainchild of Dave Morris, N5UP. Dave has 40 years of experience designing computer hardware and software systems, and has been involved in many pioneering software projects over the years. He experimented and developed the eQSL concept over a period of several years and the first generation website was launched on May 14, 1998. By the time of the 10 year anniversary in 2008, the system had grown to 122,000 members with over 92 million eQSLs in the database. The membership is still growing at a rapid rate. As I write this article, current membership is 208,256 with an average of 73 new accounts being created per day, and the total number of eQSL cards in the system is 285,540,350 with an average of 8,175 new cards being uploaded into the system per hour. There are 324 countries represented in the eQSL membership list.

eQSL.cc is unique in that it was designed from the ground up as a way for two Amateurs to exchange QSLs electronically. It's also the only system that, in addition to electronically matching QSOs, also allows cards to be exchanged.

The eQSL.cc servers are located in multiple state-of-the-art data centres in Dallas, Texas. These centres are certified SAS 70 Type II compliant, with raised floors, climate control, fire-suppression systems, UPS systems and standby power generators. The system is monitored 24 hours a day by two separate, redundant, network operations centres. The servers employ RAID 10 fault-tolerant hot swap disk technology. Partial backups are made every six hours; full backups twice a week. Backups are kept offsite.

HOW DOES eQSL.cc WORK?

Joining eQSL.cc is simple and regular membership is free. Follow the steps provided in the next few paragraphs and you'll be up and running with a functional account within minutes.

First, you need to sign up for an account by going to the http://www.eqsl.cc and clicking the "Register" link. You will be asked to enter your call sign and your email address. Once this is done, the system generates a unique signup code that is mailed to the email address that you provided. (Note: This step is to ensure that the user has entered a valid email address.)

The next step is to create the actual account. You'll sign in using your call sign and the signup code you received by email. You will then be prompted to enter your QTH details and create a password for the account. From that point on, you'll log into your account using your call sign and password.

Next, you should spend some time navigating the site. Read through the "Introduction to eQSL" document and have a look at the FAQ page. If you have never registered at eQSL before you should check your inbox, because if you're an active radio operator there's a good chance that there are already some eQSLs waiting for you. Have a look at the eQSLs you have received. The QSO details will be highlighted and you'll also see a display button. The display button allows you to view the actual eQSL card that you've been sent and you can print this card if you like.

At this point, you can also send eQSLs. There are a few ways to do this. You can either confirm the eQSLs in your inbox (or reject them if they are not in your log); use the manual log entry screen to key in the details of the QSO; or upload an ADIF file generated by your logger program. The ADIF file method is the most popular way to upload your QSOs. In addition, many logging programs these days can be configured to directly upload to eQSL.cc. You just need to configure your eQSL.cc details in the logging program, after which you can highlight the QSOs you want to upload and the logging program does the rest – there's no need to generate a separate ADIF file. The software I use here, HRD/DM780, can be configured to automatically upload the QSO to eQSL.cc as soon as I add it to the logbook.

Once a QSO has been uploaded to the database, an eQSL is automatically generated using the graphic that the user chose for his or her card and the QSO details.

A partial screenshot of my archive from last November is provided in Figure 1.

Note that in the "Actions" column you will see that the eQSL from SN1Z has the option to confirm or reject. I always upload my QSOs automatically and if there is a matching QSO no action is required.

In the case of SN1Z, that QSO is not in my log so I will reject the eQSL. All of the other ones have been matched automatically with entries that I have uploaded from my logging program.

I can also click the "Display" button to view each card I have received. Figure 2 on the next page shows the one I got from XE2YWH.

After you have registered on the site you can create as many attached accounts as you like, which is useful if you have more than one call sign or operate from more than one QTH.

LIMITS | 01Nov12 - 30Nov12

Action	Callsign	Date/Time	Band	Mode	Country	AG	Signal Report and Comments	Actions
DISPLAY MAIL	US-L-872	13Nov2012 18:02	12M	PSK31	UKRAINE	Y	599 You WKD with VP2MYL . PSE QSL TU 73!.	
DISPLAY MAIL	XE2YWH	14Nov2012 13:18	10M	PSK31	MEXICO	Y	599	
DISPLAY MAIL	YT5W	18Nov2012 12:35	15M	PSK63	SERBIA		599	
DISPLAY MAIL	RC3EPC	18Nov2012 13:02	15M	PSK63	RUSSIA (EUROPEAN)	Y	599 EPC20000	
DISPLAY MAIL	SN1Z	18Nov2012 14:28	15M	PSK63	POLAND	Y	599	
DISPLAY MAIL	SQ1EIX	18Nov2012 14:28	15M	PSK63	POLAND	Y	599	
DISPLAY MAIL	HA5KN	18Nov2012 14:46	10M	PSK63	HUNGARY	Y	599 TU 73 es best DX! Janos	
DISPLAY MAIL	ZR6Q	18Nov2012 17:03	15M	PSK63	SOUTH AFRICA		599	
DISPLAY MAIL	J69DS	18Nov2012 18:44	15M	PSK63	ST. LUCIA		599	
DISPLAY MAIL	UU9JQ	20Nov2012 14:26	10M	PSK31	UKRAINE	Y	599 TNX For QSO TU 73!.	
DISPLAY MAIL	PG4X	20Nov2012 14:55	10M	PSK31	NETHERLANDS	Y	599 Thanks for the QSO " KEEP IN TOUCH WITH THE DUTCH" '73 Dolf	
DISPLAY MAIL	G4ILO	20Nov2012 15:12	10M	PSK31	ENGLAND	Y	599	
DISPLAY MAIL	HB9DBK	20Nov2012 15:47	10M	PSK31	SWITZERLAND	Y	599 73 Hanspeter	
DISPLAY MAIL	LY2FN	22Nov2012 14:06	12M	PSK31	LITHUANIA	Y	599	

Figure 1: A partial screenshot of archive.

Figure 2: eQSL card from VE2YWH.

Figure 3: My special eQSL card for the Diamond Jubilee.

Each call sign can have its own eQSL card. For example, I recently created an attached account for CF3KAB for operating on December 29 and 30, 2012 for the Diamond Jubilee Year of Her Majesty Queen Elizabeth II and I also created a special card for this event:

WHAT IS AUTHENTICITY GUARANTEED?

The Authenticity Guaranteed (AG) program is a way of confirming the identity of the user that has the account and it is required for eQSLs in order to count for various awards. There are three different methods of getting AG status and it is totally free – unless you chose the postcard method, in which case you pay for postage.

By far the most popular method of getting AG is to upload a scan of your Amateur Radio Operator Certificate. Getting AG by the licence scan method typically takes a day or two and you will be approved as soon as someone has reviewed the Certificate.

Canadian and American Amateurs may also use the AG postcard method. When a request is made for an AG postcard, a unique AG code is generated and printed on a postcard. This postcard is then mailed to the address stored in the FCC or RAC database. This is the slowest method of getting AG, since the postcard is placed in the print queue along with all the eQSL cards members are getting printed out. It typically takes around four weeks.

The third method is via Logbook of the World (LoTW). If you have already registered with LoTW, eQSL can check that membership status and instantly approve you based on that.

HOW MUCH DOES IT COST?

The basic, or regular, membership is totally free. With the regular membership you can send and receive as many eQSLs as you like and create as many accounts as needed.

You can also design your own eQSL card using a wide variety of available graphics. You can also get AG status with the regular membership – once again, totally free. Users typically start out with a regular membership, and there is no reason to upgrade to one of the paid membership levels unless you want to participate in the awards program or design a fancier eQSL card.

The paid membership levels, from Bronze to Gold, give members a few more features including greater flexibility with eQSL card design (including the ability to upload your own graphic) and the ability to participate in the eAwards program. The lowest cost paid membership level only requires a donation of $5 once per year. All the details of the various membership levels can be found on the eQSL.cc website.

WHAT ARE eAWARDS?

eQSL.cc started its own award program, called eAwards, back in 2002 and it has become very popular. In order to participate in the eAwards program, users must have AG status and a membership level of Bronze or higher.

There are seven different eAwards, with more on the way.

The **eDX Award** is available to users who have contacted 25 or more countries, any mode, any band. Additional certificates are available in increments of 25 countries. This award is also available to SWLs.

The **eDX100 Award** is available to users who have proof of contact with 100 or more countries. Additional certificates are available in increments of 25 countries. In addition to the mixed mode eAward, the eDX100 has endorsements for modes SSB, CW, RTTY, PSK, JT65 and the 160m, 80m, 40m, 20m, 15m, 10m and WARC bands.

The **eGrid Satellite Award** requires proof of contact with 75 or more grid squares, any band, but all QSOs must be via satellite.

The **eGrid UHF Award** requires proof of contact using pure RF (no satellite, no Internet assisted) with 25 or more grid squares via UHF.

The **ePFX300 Award** is issued for successful two-way contact with Amateur Radio stations with 300 different call sign prefixes. Additional certificates are available in increments of 50 prefixes. In addition to the mixed award, this award has endorsements for PSK and JT65.

The **eWAS Award** is available for proof of contact with all 50 states of the United States of America. In addition to the mixed award, endorsements are available for Satellite, CW, SSB, RTTY, PSK, JT65, and the 160m, 80m, 40m, 20m, 15m, 10m, 6m and WARC bands.

The **eZ40 Award** is issued for successful two-way contact with all 40 CQ zones.

All of these awards are free, assuming a Bronze membership level or higher. Once an award has been achieved, the user can print off a certificate suitable for framing. Optionally, a walnut plaque can be ordered with prices ranging from $60 to $85, depending on the award.

EXTERNAL AWARDS PROGRAM

In addition to its own eAwards program, eQSL offers two external awards programs.

In January 2009, *CQ magazine* started accepting eQSLs for its awards program. The CQ Awards interface allows you to apply for the CQ WAZ, CQ WPX, CQ USA-CA and CQ-DX awards using credits obtained by eQSL. Once an application has been submitted, the manager of the CQ awards system is notified and will then download the credits into his own awards interface for checking. There is no fee charged by eQSL for this service, although standard CQ rates apply.

The DARC Award interface allows you to transmit eQSLs to the DARC Contest Log (DCL).

– continued on next page

Figure 4

Figure 5

PROPAGATION FORECASTER

Available at the Silver or Gold membership levels, the Propagation Forecaster tool is unique to eQSL. It is unique in that it works by plotting real-time QSO uploads from eQSL members, based on QSO time. Different options are available: you can specify the time frame you are interested in (QSO time) and specify by the band you are interested in. You can also specify if you are interested in just seeing propagation for your particular grid.

I generated the map shown in Figure 4 by specifying that I wanted to see conditions on all bands within the last 10 minutes. Moving your mouse over any of the station icons gives you the station details as shown in Figure 5. It shows you the call sign, eQSL card, the band, frequency, and mode, and also who the QSO was with. You can also move the centre of the map to the part of the globe you are interested in and zoom in to see all the stations clearly.

CONCLUSION

It only takes a few minutes to sign up for an eQSL.cc account and there is no cost involved in doing so. As the old saying goes: "Try it, you might like it!" If you decide that it is not for you, it's easy to unsubscribe from the service with only a couple of mouse clicks.

ABOUT THE AUTHOR

Dave has been interested in electronics and Amateur Radio since the late 1960s when he built a Heathkit Short Wave radio receiver and was able to tune in the Amateur frequencies. He is a strong advocate of the digital modes, particularly PSK, MFSK16, Feld-Hell, RTTY and Olivia. Dave first joined eQSL in 2005 and immediately fell in love with the entire eQSL concept. He joined the eQSL Advisory Board in 2011, where he does email support work and manages the popular eWAS award. Dave resides in Peterborough, Ontario.

– FRESH ON THE AIR, continued from page 18

In Amateur Radio, the phonetic alphabet is used mostly for emergency traffic relay to avoid confusion and save time in emergency communications situations. However, a quick listen to any repeater will demonstrate that the phonetic alphabet should be used when saying call signs. Since many letters sound the same, VE3BOC could sound like VE3DOG, or VA3BOC, two totally different operators altogether. In addition, far too many Amateurs have a habit of using only their identifying suffix – dropping the prefix entirely – despite the fact that it is against Industry Canada rules.

I never use VE3BOC as it is. I always identify as Victor Echo Three Bravo Oscar Charlie, and always use the phonetic spelling for stations I am talking to. Call me weird, old fashioned, or just a good operator, but personally I think that if you have any pride in your call sign and in the hobby, you should treat call signs with respect. As a new Amateur, use your whole call sign every time and use phonetics. Good operating habits start early. Make sure your habits start the very first time you get on the air.

Transmission Tidbit:

Observational Trivia: Did you know that some Amateur Radio mobile stations have more antennas on them than public service vehicles?

I would love to hear from our new female and very young Amateurs on your first impressions of the hobby, both positive and negative. Write me via the magazine; email me at phillipjboucher@gmail.com, or via my website at: http://www.phillipjboucher.com

– ANTENNAS & TRANSMISSION LINES, continued from page 17

CONCLUSIONS

Part 1 of this series laid the ground work for Parts 2 and 3. It compared the basic operation of Wireman 551 Window line and coaxial cable. Parts 2 and 3 continue the discussion through the analysis of practical examples including the G5RV and a set of loaded dipoles that I have designed and built.

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 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.

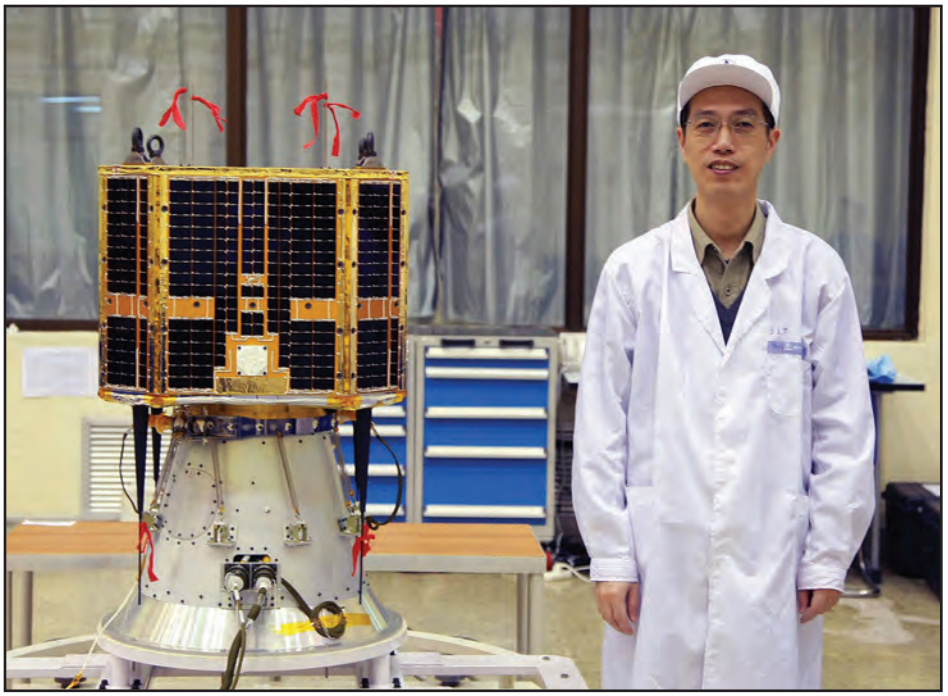
TCA hotlink 1: Wes Stewart, N7WS, "Balanced Transmission Lines in Current Amateur Practice", http://users.triconet.org/wesandlinda/ladder_line.pdf

TCA hotlink 2: Dan Maguire, AC6LA http://www.ac6la.com

TCA hotlink 3: "The Lure of the Ladder Line", Steve Ford, WB8IMY, *QST* December 1993, pp. 70-71. This link is for ARRL members only and can be accessed at: http://www.arrl.org/

– Until later, David, VE3KL

GETTING STARTED ON THE AMATEUR RADIO SATELLITES



Called XW-1 before launch, Hope OSCAR-68's project leader, Alan Kung, BA1DU, proudly stands beside his team's collective handiwork during the satellite's final ground tests. (Courtesy: CAMSAT)

In previous columns, I've been discussing ways to find, track, listen for, and then communicate through our expanding fleet of Amateur Radio satellites. In this installment, I'll be introducing you to another (non-FM) type of satellite transponder called a "linear" transponder that is carried aboard many of our current Amateur satellites.

You'll remember from previous columns that a *transponder* is the circuit in a satellite that receives an uplink signal and then retransmits what it hears via its downlink transmitter – much like your local FM repeater does. However, unlike your local FM repeater (and most of our FM satellites which have a specific input and output frequency) most so-called "linear" satellite transponders (sometimes also called "analog" transponders; the terms are used interchangeably) receive and then retransmit *a whole band of* frequencies commonly called a *passband*.

The bulk of this article was previously published as "How To Use Linear Amateur Satellite Transponders" in the November 2010 issue of Monitoring Times, Brasstown, NC 28902. Thank you MT!

What's more, linear Amateur satellite transponders come in one of two flavours. These transponders are usually classed as *inverting* or *non-inverting*. If the satellite has a non-inverting transponder, when an operator's uplink signal frequency is on the high end of the uplink passband, their downlink signal will also be in the high end of the downlink passband.

Conversely, in an inverting transponder, when an operator's uplink frequency is on the high end of the uplink passband, it will become "inverted" (hence the name) and come out on the lower end of the downlink passband. Put another way, inverting transponders make mirror images of the signals they pass.

This also holds true for the sideband sense as well. In a non-inverting transponder, the signals an operator sends up to the satellite (USB or LSB) will come out the same way on the downlink. However, in an inverting transponder, a USB uplink will be "inverted" and come out as LSB on the downlink. Conversely, an LSB uplink will be "inverted" and come out as USB on the downlink. The latter approach (USB signals on the downlink)

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OSCAR WHO?

Since 1961, some 60 plus "OSCARS" (short for Orbital (or Orbiting) Satellite Carrying Amateur Radio) have been built and launched by a number of Amateur radio related organizations worldwide. And just like their Hollywood counterpart of the same name, there are some very strict rules as to how our Amateur satellites get to be so honoured.

First, they have to be capable of transmitting and/or receiving in the Amateur Radio bands. They also have to successfully achieve orbit and be activated in space. And, lastly, the builders of the satellite have to formally request that an OSCAR number be assigned to their orbiting handiwork.

Today, by mutual agreement between AMSAT and the original Project OSCAR team who built and launched the very first OSCAR satellites, those formal requests all go to AMSAT founding member and Past President, Bill Tynan, W3XO, who then passes judgment on the "amateurness" of the payload before he officially assigns an OSCAR number.

Most Amateur satellites have other names prior to launch. For example, AMSAT-NA has chosen to use sequential alphabetic characters for their satellites. AMSAT's no longer operational AO-51 FM bird, AO-51, was dubbed "Echo" prior to its successful launch and activation on orbit. The next satellite in that series, "Fox" is now in the very early planning stages. The fleet of Japanese Amateur satellites uses "JAS" (Japan Amateur Satellite) followed by a sequential number for their Amateur satellites. Their currently active Amateur satellite, FO-29, was called "JAS-2" prior to its successful launch in 1996.

Usually, the "O" part of the on-orbit designator stands for "OSCAR", while the number following it is sequentially assigned by Bill, depending on precisely when the satellite's transponder is activated on orbit. However, the first letter of the OSCAR designator can stand for many things. That letter is usually suggested by the satellite's builders or sponsors and often gives a hint about its heritage.

is also what's most preferred by operators using our linear satellite transponders today. Fortunately, CW will be CW regardless of the transponder's variety!

Note that most linear-transponder-equipped satellites currently in orbit (including FO-29, VO-52 and HO-68) use inverting transponders. The one exception is our old AO-7 satellite that was launched back in 1974 and which is still "sort of" operational. It uses a non-inverting, linear transponder.

As with the FM birds, common operating practice on Amateur satellites with linear transponders is to first listen for your own signal on the downlink. You'll remember from my previous columns that working through a satellite transponder is a *full duplex* operation, much like talking on a telephone. This means that others can usually hear you as well as you are hearing yourself.

Finding your own signal in the downlink passband of a satellite with a linear transponder the first few times can be tricky. However, I've found that placing your transmit frequency somewhere in the middle of transponder's passband and then sending a few "dits" of CW while tuning your *receiver* to find your own downlink signal works best. Once you've located your own signal, you're ready to try making a contact. However, unlike the FM birds, calling CQ on these satellites *is acceptable* and you'll usually find the convention of CW operations in the low end of the passband with phone operation in the upper part of the passband (an arrangement common to High Frequency [HF] Amateur Radio operation) generally also holds true for satellite work as well.

As I have also noted in previous columns, since a satellite is a moving target, its downlink signals will exhibit a pronounced *Doppler shift*, just like the changing pitch of a train whistle as it approaches and then passes. During a satellite QSO, the "old" (that is, prior to computer frequency control) so-called "one true rule" of thumb for linear satellite operation is that if the uplink band is *higher* in frequency than the downlink, you should slowly shift your *transmit* frequency on the uplink as the Doppler effect changes the frequency of your downlink signal. Conversely, you should shift your *receive* frequency if the uplink band is *lower* in frequency than the downlink.

Or, to put it another way, the highest frequency band in use (uplink or downlink) is what you should shift as Doppler affects your signals. This approach will usually help prevent an inadvertent shift of your conversation into someone else's on the transponder. However, in the "heat of the moment" with everyone frantically searching through the passband for their own downlink signals, these conventions are often ignored.

KEEP THE POWER DOWN!

Because it is generated from the Sun, satellite power is a finite (and therefore scarce!) resource. That's why it is *very* important to use only enough power on your uplink transmissions to produce a readable signal on the downlink.

As I've said, you need to get used to the idea that satellite work is weak signal work. It's *not* like operating on HF (or terrestrial VHF or UHF) where the use of more power is usually "better". Besides being potentially harmful to a satellite's battery life by using more uplink power than is necessary, overpowering your uplink signal beyond the point of creating a discernible signal through the satellite's transponder on the downlink will *not* appreciably improve the overall strength of your downlink signal.

To the contrary, such activity will do little more than "pump" the satellite's automatic gain control as it tries to compensate for the onslaught you are creating with your overpowered uplink signal. Such activity will only gobble up yet *more* of the satellite's precious available power, not to mention limiting the overall downlink power available for others using the transponder.

Unfortunately, all it takes is one overpowered uplink signal in the passband to drastically cut the strength of everyone else's downlink signal. As you might expect, such activity will *not* make you a popular camper on the satellites for *crocodiles* – those who operate with "all mouth and no ears" – are about as welcome on the birds as *lids* are elsewhere in Amateur Radio.

FM IS PARTICULARLY UNWELCOME

In addition, because satellite power is such a scarce commodity, most linear satellite transponders are built to use the most efficient operating modes possible. Normally, this equates to Single Sideband (SSB) voice and/or Morse (CW).

Therefore, it should also come as no surprise that another big *"no-no"* is running FM through linear satellite voice transponders. FM signals occupy a much larger bandwidth and take a significantly greater portion of a transponder's precious output power to handle than do CW and SSB signals. And while some people have met with moderate success operating through linear satellite transponders by "simulating CW" – using the push-to-talk circuit on a 2 metre FM radio for example – this approach often produces a wide (and *very* "chirpy") CW downlink signal.

Either way, your FM signals will gobble up lots of downlink power and stick out like a sore thumb. Just imagine how obnoxious you'd sound running SSB signals through your local FM repeater and I think you'll agree that *all* use of FM should be avoided when operating through a linear satellite transponder.

WRAP UP

That's all for this time. In future installments, I'll be discussing some more interesting aspects of this unique part of the Amateur Radio hobby as well as to bring you up to date on the (hopefully!) pending launch and activation of some new AMSAT satellites in orbit.

For example, the "F" in FO-29 stands for "Fuji" (for "Fuji OSCAR") and the "H" in AMSAT-China's HO-68 satellite stands for "Hope". However, while the "A" in the (now defunct) AO-51 satellite stood for "AMSAT" (as in "AMSAT-OSCAR 51"), the "A" in AO-27 stands for "AMRAD", the suburban, Washington, DC Amateur Radio group that built the Amateur Radio satellite payload. AO-27 was later launched aboard its commercial host (called "EYESAT") in 1993.

To add to the confusion, the "S" in SO-50 stands for "SaudiSat" as a university team in Saudi Arabia sponsored the building and launch of that satellite. However, when it was launched, the "S" in the (now silent) SO-67 satellite stood for "SumbandilaSat". Sumbandila is a South African Venda word that means "lead the way". And the satellite's full name, when freely translated into English, meant "pathfinder" as more satellites of the same type were intended to follow.

Now, if this "alphabet soup" all sounds a bit confusing, that's probably because it is! Just remember that the letter "O" in a satellite's official, on-orbit name followed by a dash and then one or two numbers usually indicates that the satellite is one of our fleet of Amateur Radio (OSCAR) satellites.

RAC MAPLE LEAF OPERATOR MEMBERSHIP
ADHÉSION À "OPÉRATEURS MAPLE LEAF" DE RAC

David Argo, VE3NLZ
Trevor Arkell, VE3QXR
Adam Aultman, VA3AUL
Michael Aultman, VA3MPR
Gary Badcock, VO1GWC
A James Ballard, VE9AJB
Dennis Bancesco, VE6ATC
Doug Bannard, VE3SPF
Shawn Barnard, VE3KYQ
David C Barnes, VO1YA
Larry Barnett, VE6LGB
Bill Barrie, VE3AAS
Douglas Barry, VE7WLF
Michael Bell, VE3NOO
John R (Jack) Belleghem, VE3HD
Michael F Belliveau, VE6XZM
Bruce Bernard, VE1TIN
Larry Berta, VE3LXV
Serge Bertuzzo, VA3SB
Francois Berube, VA2RC
Brian Biggings, VE3XA
Christian Bisaillion, VE3CBK
Bill Boskwick, VE4BOZ
Terry Bosse, VE6LL
Robert Boyd, VE3SV
Robert Boyer, VE3XBB
Patrick Brewer, VE3KJQ
Michael Brickell, VE3TKI
Ronald O Brook, VE4RON
Mike David Brown, VA3GRL
O Ernest Brown, VA3OEB
Matthew Eric Brown, VE3OIC
P J Buckway, VY1PJB
Ian Thunder Burgess, VA6EMS
Paul Burggraaf, VO1PRB
Rick Burke, VO1SA
Clarke M Burnett, VE4MB
David Caddell, VA7VVV
Fred Cain, VE3JMJ
Ralph Cameron, VE3BBM
Mark Capewell, VA7MNV
Gilles Chevalier, VA2CG
Geoff Clarke, VE3JBD
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WELCOME NEW RAC MEMBERS!
BIENVENUE NOUVEAUX MEMBRES DE RAC!

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.

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John Alexandersen, VE5JJA
Brent Bauman, VE6BTB
Bernie Bedard, VE5BFB
Thomas Bernard, VA3TMB
Mark K Brown, VE3MBI
Scott Campbell, VA7WWZ
James Russell Canning, VE1RC
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Shannon Dale Coolican, VA3XRY
Jennifer Doubt, VA3MOS
Gregory Foster, VA3GGF
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Glen Hanscom, VE9GH
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Terrence Edward Hillier, VE3TEH
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Peter LaGrandeur, VA6RPL
Jean Lamouche, VA2IS
Daniel Myron Lazar, VE6EX
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Peter Evan Philip, VE7DNZ

David Keith Pitcher, VE3DPT
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Mark Pulciani, VA3MPT
Carlo Salvitti, VA3CSS
Mary Phyllis Scharf
William Ernest Scharf, VA3CBF
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John Gordon Skinner, VA3KX
Christopher Sokoloski, VA3OCT
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Malen Vidler, VA3VID
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Note: Please see page 34 for more information on the RAC Maple Leaf Operator program.

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- ✓ *The Canadian Amateur* magazine, filled with news, regulatory information and articles of current interest. TCA covers topics of interest to all Radio Amateurs, both newcomers and oldtimers alike.
- ✓ The *National Outgoing QSL Bureau*, for members only!
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Note: for more information on the benefits of becoming a Maple Leaf Operator please see page 34.

New pricing structure effective January 1, 2013:

Please add the applicable GST/HST for your province
- AB, BC, MB, SK, NT, NU, YT, QC, PE + 5% GST
- NB, NL, ON + 13% HST
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Please visit the RAC website for complete information on the pricing structure.

Just click "Join RAC" on the menu bar of the RAC website: www.rac.ca

Membership Type: Full Member

- Full – Regular (e-TCA) $48
- Full – Regular (paper TCA) $56
- Full – Family (e-TCA) $25
- Full – Blind (e-TCA) $25
- Full – Maple Leaf Operator (paper TCA) $100
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- Associate – Corporate International (paper TCA) $350

RANDOM THOUGHTS

Introducing a new column by Dirk Moraal, VY1NM

MORE ADVENTURES IN MOBILE RADIO NORTH OF 60°

When the TCA Editor called me in late February, I was unprepared for his offer to write a regular column for TCA. It is an honour to serve but it is also a responsibility. It is also a bit overwhelming as I now must watch my Ps and Qs, and be an acceptable scribe for all readers.

In introducing this new column I welcome all readers to my sometimes offbeat understanding of the Amateur world as I struggle to find my place in it. I hope I do not disappoint.

If the reader occasionally rolls the eyes, or for a brief moment lives vicariously the random adventures with the writer, then we can consider the job done. Hence the name of the new column: "Random Thoughts". Some random thoughts are epiphanies, some are observations on the daily vicissitudes of being an Amateur, and some will be tomfoolery: the intentions remains to entertain and produce a few smiles in an otherwise serious world.

As a small boy, I loved big words. Like *preposterous*, which I once used to good effect when a neighbour was stringing my father a line. I was four years old, so of course I had not the faintest idea what it meant. I just went about my boyhood busyness, savouring the word. That day I happened by just at the right time. Another word I liked was *conundrum*, which, oddly, I associated with the knobs on the family television set, a household novelty all those decades ago.

Conundrum, as defined in my dictionary is, a) a riddle whose answer is or involves a pun, b) a question or a problem having only a conjectural answer, c) an intricate and difficult problem. For good measure, I also looked up the word *conjecture*, which was a definition of vagueness, as was conundrum, with both certainly along the same line of thought.

A conjecture is, a) the interpretation of omens, b) a supposition, c) the inference from defective or presumptive evidence, d) a conclusion deduced from surmise and guesswork. I like that word. And I am sorry, but you will have to look up the other words yourself as I have taken up too much space with this already.

A conundrum came up during a QSO with Darlene, KL0YC, who lives west of Ketchikan, Alaska, some 572 kilometres away. Darlene hosts the northern portion of the Great Northern Boaters Net on 3870 kHz at 1430Z every morning during boating season. US, foreign and Canadian boaters (/MM) on Alaska's south coast (and the northern BC coast also) can call in with position reports or just to say hello. I think I may be the only landlocked Yukoner who does check in now and then, despite there being not much need to give your position from a small lake. Darlene is also net control on Friday for the Alaska Bush Net.

The Bush Net is on 7093 kHz at 2100Z (8 pm Alaska time), and it is a friendly "handshake across the border" affair open also to all Canadian Amateurs. Both nets are on for half an hour.

I have been calling Darlene from my mobile or from my boat when I move the radio over, and that is a source of merriment in itself, because the boat is usually parked in my driveway. Darlene always closes with "and that was Dirk on Tagish Lake with *A Little Nau-Sea*, (chuckle) 73," etc. etc. That really is the name of the boat, and a lot depends on how you pronounce it.

The conundrum was, with the boat on a trailer on dry land, could I correctly claim to be Mobile or was I Portable, and if the hull was wet, would I be Maritime Mobile. And if there was a ground wire from the rig to earth, are we still /M or are we /P.

I will now confuse the issue by wondering about using the mobile radio from the old Cessna, and what to call it if the plane is still on the ground. *Serendipity*, for such I have named the old plane, was rescued from the junk heap and brought back to flying condition years ago and now and then also gets a chance to play radio. With a Transport Canada blessing for the project, and under strict conditions, I use the abandoned ADF antenna as a random wire, and make the odd QSO whilst at a safe altitude above the mountains. There was an early pause in the project while I sorted out what call to use. Transport Canada said I should use the airplane letters of the mark, and Industry Canada said I should use my Amateur call sign. Transport Canada capitulated. I combine both.

That famous philosophical posit, Occam's razor, could be explained in everyday language as: "The simplest option is probably the correct one". Or in other words, k.i.s.s.

So, I conjecture, if the radio is in the airplane and the airplane is in the air, then it is /A. If on dry land, no matter what the mode of transportation, then I use /M. If out of the vehicle and in use, then call it /P, and if in a boat, and that boat is wet, then it is /MM. I don't mind moving the radio around. It is all hobby busy-work.

"The best part of mobile radio is just messing around with the radios...and the old boats...and the old planes...and the old trucks...."

Dirk Moraal, VY1NM, was born in Victoria, British Columbia and almost grew up in Chile. After his return to Canada he travelled widely and had careers in mineral exploration and aviation.

He has a wide range of interests of which Amateur Radio has been a recurrent theme. Licensed in 1999, another hiatus occurred until he "retired" a few years ago and took up Amateur Radio seriously.

He enjoys being QRM from the Yukon Territory using minimal equipment and low power/QRP. DX on mobile radio is his current pursuit.

He can be reached at:
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MONITOR AND TRACK WATERCRAFT USING THE AUTOMATIC INFORMATION SYSTEM (AIS)

Portions of this article are from my 2006 web publication "Monitor and Track Ships via 2m Packet Radio". Air and marine radio communications are conducted using internationally standardized analog AM/FM and MF/HF voice and digital data systems. The term "watercraft" is used to refer to a wide range of self-propelled nautical craft: ships, boats, hovercraft, etc. ***Note****: In Canada, any person can (for legal purposes) intercept and make use of AIS signals as they are not encrypted and are considered broadcasting.*

To see larger, colour versions of the Figures in this column please visit my website.

FROM THE MAILBAG

To start off, I want to express my thanks to everyone sending in comments as they are much appreciated and I also want to mention a couple of reader's emails. Regarding my columns on MCUs (Microcontroller Units), David, VE7SST, mentioned that the ARRL has an Amateur orientated PIC training course on their website (manufactured by Cana Kit) and I asked David to consider writing a hands-on review. The ARRL also sent an announcement about a new publication: *Ham Radio for Arduino and PICAXE* and my order was in before the ink was dry on that email!

Don, VA3XFT, wrote to suggest a possible column topic on DMR (Digital Mobile Radio) and included a link to the VA3XPR website (see Resources and References).

I've heard about D-STAR (Digital Smart Technologies for Amateur Radio) but don't know if DMR is similar or compatible; having no way of experimenting with DMR (or D-STAR), I asked if Don could contribute an article (or two) based on his expertise.

A BIT OF BACKGROUND

Most Amateurs enjoy scanning the radio spectrum from "DC to light" and sharing any collected information with others. Given the variety of radio modes, it's not very easy to focus on more than a handful and we tend to pick and choose the ones that appeal to us for as many reasons as there are modes! Many of us live on or near the Great Lakes, St. Lawrence Seaway or other coasts and enjoy watching and following the big freighters sailing by. If you are also a boater, you'll really appreciate the collision avoidance and other features of AIS.

Using a 2m VHF FM radio (packet data port required) or a scanner (with discriminator tap) or a dedicated AIS receiver plus some decoding software, you can monitor and track commercial watercraft in and around the major waterways. Even with only Internet access, you can still get started using free AIS websites or programs developed for handheld iDevices (see Figures 1 and 2).

People are often amazed to learn that commercial watercraft can't go "willy-nilly" from point A to point B, especially when crossing international borders. We have ATC (Air Traffic Control) to control aircraft and we have VTS (Vessel Traffic Services) to regulate watercraft. Worldwide shipping routes, lanes, zones and CIPs (Calling-in-Points), etc., have been created and are printed on nautical charts along with international regulations or "rules of the road" for mariners to use and follow.

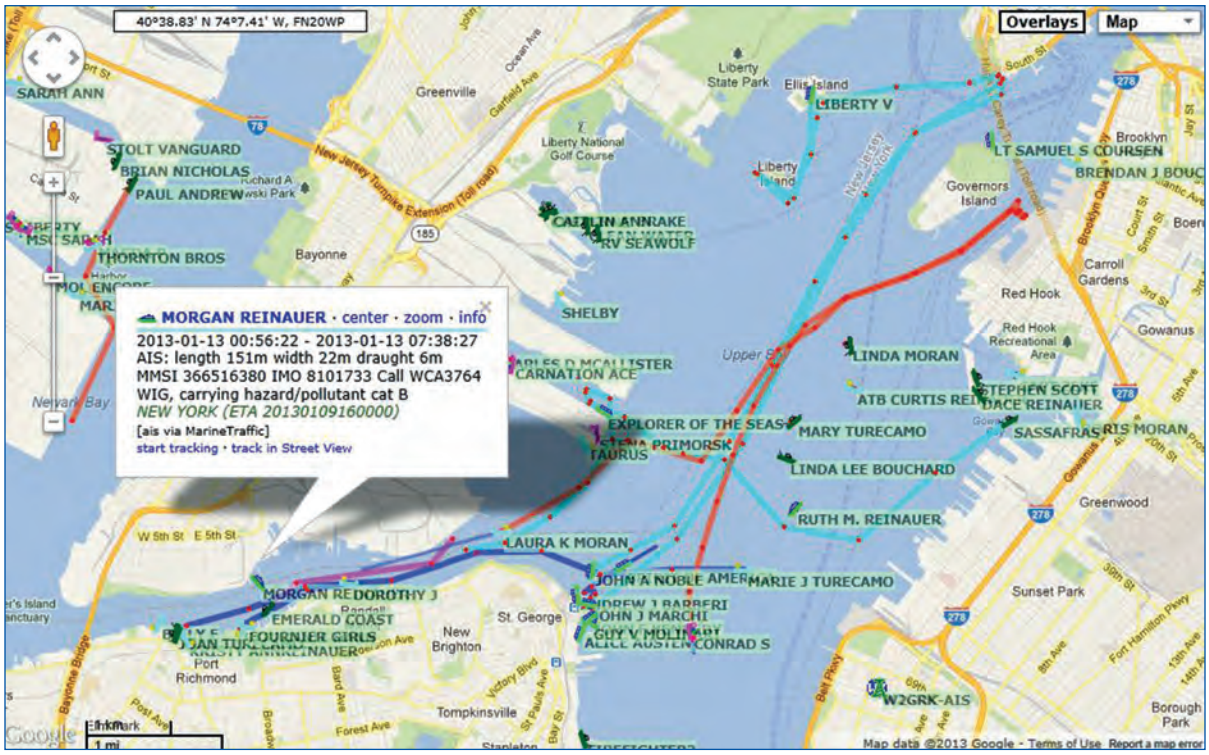


Figure 1: AIS in New York Harbour
This image is from the APRS.FI website displaying a few hours (mid-January) of watercraft tracks throughout New York Harbor. The dots on the tracks represent a unique AIS packet position report that you can click on for more details.

Figure 2: New York Harbor via iDevice AIS
AIS software is available for handheld iDevices; in this image, Ship Finder (free version) displays watercraft in New York Harbor – a very handy tool for a visiting "Boatnerd"!

WHAT IS AIS?

Initially called the Universal Shipborne AIS or 4S-Transponder System (Ship-to-Ship and Ship-to-Shore), AIS is a two-way maritime VHF (FM) packet radio, transponder (transmitter-responder) based, digital data communication system that enables watercraft and land units (collectively called "stations") to identify and monitor other AIS equipped stations.

It is a "black box" system that collects telemetry from various sensors and continuously transmits and receives data using two separate frequencies. It is a mandatory carriage requirement for most commercial watercraft based on various factors of gross tonnage, classification and size, and is designed to enhance the international maritime service SOLAS (Safety of Life At Sea) program, improve safety, security and efficiency in navigation and protect the environment. All AIS transponders use a unique 9-digit MMSI (Maritime Mobile Security Identity) number that allows you to digitally contact or look up information about a specific watercraft.

This number is also used by another international maritime two-way VHF/MF/HF packet radio distress, messaging and paging system called DSC (Digital Selective Calling).

Figure 3: AIS Transmitted Data
Warning: Sometimes mariners may not program their AIS transponder properly and parts of the above information can be missing, incorrect or out-of-date.

Static Information	Dynamic Information	Voyage related information
Name	Position (To 1/10,000 of a degree)	Destination
Type of Ship	Speed Over Ground (SOG)	Depth
Call Sign	Course Over Ground (COG)	ETA
MMSI number	Rate Of Turn (ROT)	Navigational Status
IMO number	Heading (HDT)	Size

A (BRIEF) TECHNICAL DESCRIPTION OF AIS

Both AIS and DGPS (Differential Global Positioning System) use devices that are often called "NMEA talkers" or "NMEA listeners" because their technical standards are defined by the National Marine Electronics Association (NMEA).

AIS messages are encoded into binary packets (bits of 0s and 1s) and transmitted at 9600 bps (bits per second) using GMSK (Gaussian Minimum Shift Keying) with a channel bandwidth of 12.5 kHz to 25 kHz. At the receiving end, the NMEA listener converts the binary packets back to the original message. GMSK is just a fancy form of FSK (Frequency Shift Keying) which is widely used in commercial digital communications because the transmitter can operate at full power and adjacent channel interference is minimized.

Two dedicated marine channels, called AIS1 and AIS2, are used – 87B (161.975 MHz) and 88B (162.025 MHz) – providing dual channel redundancy (the same data transmitted alternately on each channel).

Depending on the height of the AIS antenna above the water, nominal line-of-site range is 10-20nm (Nautical Miles) between watercraft. The signals ride and hide in the background noise and they sound like quick, sharp clicks popping in and out of the ether. An open squelch receiver must be used, extracting the wide bandwidth signal from the receiver's IF (Intermediate Frequency) or discriminator stage.

***Note:** AIS is classed as NFM (Narrow FM) but we can't take the output from the audio stage because it will be mangled and distorted.*

Transmitted information consists of three types: Static, Dynamic and Voyage related (see Figure 3). Dynamic information (position, speed, heading, etc) is transmitted every two to 10 seconds, depending on the speed and maneuvers of the watercraft. Static and voyage related information (type of ship, size, cargo, destination, ETA, etc) is transmitted every six minutes or upon request by other stations, and every eight minutes when anchored or docked. Depending on the "action" around you, it can take a few

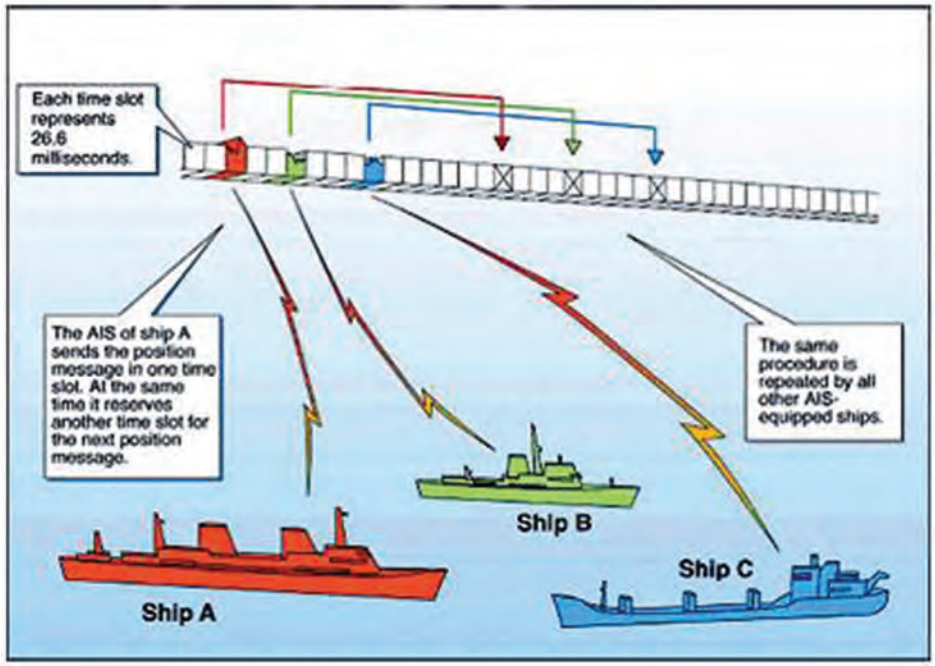


Figure 4: SOTDMA Example
Image courtesy of the United States Coast Guard.

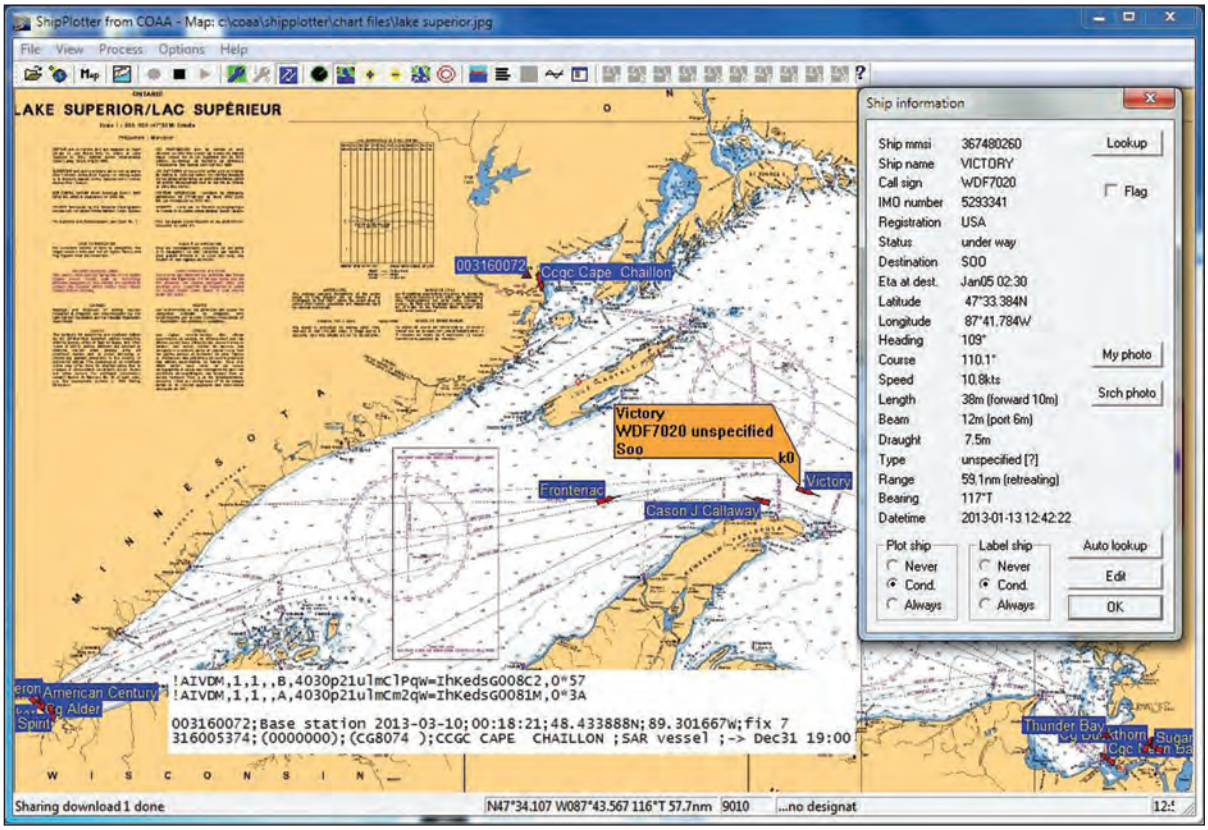


Figure 5: ShipPlotter AIS Display
This ShipPlotter image is a composite of watercraft displayed using a raster chart (a scanned image of the paper chart) of Lake Superior in January, at the end of the marine season, with overlaid samples of raw NMEA (!AIVDM) received packets and text decodes.

minutes before a complete picture of all the AIS equipped watercraft traffic is received.

To prevent local reception interference, all AIS transponders (see Figure 4) "talk" among themselves and arrange the timing of their beacons using a technique called SOTDMA (Self-Organized Time Division Multiple Access). Because of this and dual channel redundancy, the system can be overloaded 500% and still provide almost 100% message handling capability between ships closer than 8nm. In overload situations, the system automatically selects the more important closer-in beacons.

Note: *There are two types of AIS transponders. Class-A (commercial watercraft) that use a 12.5 watt transmitter and Class-B (pleasure watercraft) that use a 2 watt transmitter. Manufacturers are including built-in AIS receivers (with radar-like displays) on some VHF marine transceivers. Military SAR (Search and Rescue) aircraft are usually equipped with Class-A transponders to provide information directly to a JRCC (Joint Rescue Coordination Centre).*

AIS QUICK START

1) **Internet Method:** Point your browser to any free AIS website – that's it! Lots of Amateurs are "Boatnerds" and feed their AIS data to the MarineTraffic.com server and the Amateur Radio APRS.FI server takes those and adds it to other Amateur Radio packet data and displays everything on a Google Maps based website.

If you prefer, download and try the various free iDevice programs (Android or Apple) for handheld AIS. But, what to do when you lose your hardwired or Wi-Fi Internet connection?

2) **Radio Method:** In my opinion, there are only two suitable (Windows-based) AIS programs that can do the job (I have no access to Linux or Apple computers). One is a commercial program (very affordable) called "ShipPlotter" (SP) by COAA (*Centro de Observação Astronómica no Algarve*). The other is a free program called "SeaClear II" (SC2) by "Sping". SP provides Internet file sharing of data (that's how many AIS websites get their data), supports soundcard DSP (Digital Signal Processing) of the IF/discriminator output packet signal as well as serial port (RS232/USB) dedicated AIS receivers, plus it has an excellent API (Application Programming Interface) for computer programmers, along with other "advanced" features for the serious hobbyist.

SP comes with a 21-day trial, but there's no file sharing until it's registered. Detailed instructions and an excellent Yahoo user group will help you get started.

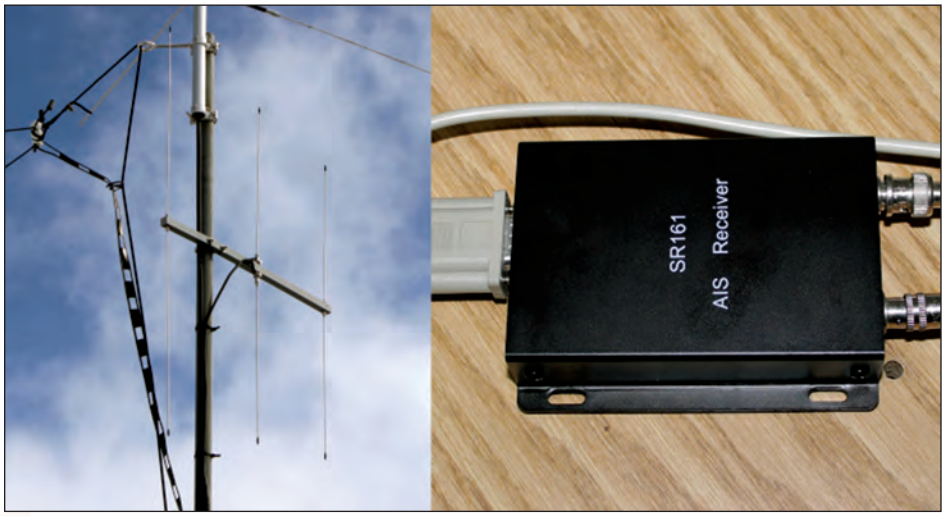


Figure 6: My AIS Antenna & Receiver
This is composite image of my AIS 3-element marine band Yagi and dedicated "black box" receiver. The beam is aimed down the shipping lanes to/from the Port of Thunder Bay, and nominal range is 80nm (centerline) and 40nm off the sides. The surrounding geography dictated the use of a beam over a vertical.

SC2 is free, but designed from the point of view of the mariner as a standalone charting and navigation system. It only supports serial port AIS dedicated receivers and has no Internet file sharing capability or API. I only mention it for those boaters looking for something free and easy to use because SC2 can hold its own against commercial programs such as Chart Navigator, Regulus or Fugawi.

SP suited my "landlubber" needs and I started out using both my 2m mobile transceiver (with 9600 bps packet radio port) and Realistic 2004 scanner (with added IF/discriminator tap) plus a VHF multiband vertical antenna. Their packet radio data outputs were connected to my computer's soundcard input (line or microphone). Eventually, both were replaced by a dedicated AIS receiver/antenna to free them and my soundcard for other digital radio "jobs" (see Figures 5 and 6 on the previous page).

CHARTS AND MAPS

SP can download simple satellite maps for plotting received AIS signals and you can also download detailed nautical charts from NOAA (National Oceanic and Atmospheric Administration). NOAA provides free download US charts (raster or vector) and these work for most of us near the border waterways. Another option is the phenomenal SAILWX.INF website that can create custom "plain-Jane" SP calibrated maps (small to large scale).

Note: *CHS (Canadian Hydrographic Service) sells charts through commercial dealers and doesn't provide a download service.*

MY FINAL

Okay, I have to stop and let everyone catch their breath! In the next column, I'll discuss receiving commercial aircraft ADSB (Automatic Dependent Surveillance Broadcast) transmissions using another COAA program (and others) with inexpensive RTL (Realtek) USB DVB/DAB (Digital Video and Audio Broadcasting) receiver dongles. It was discovered that these are easily reprogrammed into wide-frequency, multi-mode SDRs (Software Define Radios).

For those who just can't wait, the article that told me all about this is "Cheap and Easy SDR" by Robert Nickels, W9RAN (*QST*, January 2013, p. 30) and there's more information on Robert's website. – 73.

REFERENCES AND RESOURCES

AIS
http://tinyurl.com/bk4v3zg
http://tinyurl.com/b5sgm4h

Charts, Hardware, Software & Other Information
http://sailwx.info
http://www.milltechmarine.com
http://www.siitech.com

Cheap and Easy SDR (Robert Nickel, W9RAN)
http://tinyurl.com/blsg2or

Digital Mobile Radio (DMR)
http://tinyurl.com/bccmtwh

MMSI
http://www.ccg-gcc.gc.ca/e0003845
http://tinyurl.com/bbyydzg

Software (Android Market & Apple iTunes)
Just a few of many: AIS Mobile, AIS Radar, Boat Beacon, easyAIS, iAIS Plotter, MarineTraffic, mAIS, Ship Finder, VesselTracker, etc., etc.

Software (Windows)
http://www.coaa.co.uk.shipplotter.htm
http://www.sping.com/seaclear
http://tinyurl.com/ads3ruo

SOLAS
http://tinyurl.com/a7dmq2n

Ship Tracking Websites (Just a Few)
http://aprs.fi
http://ais3.siitech.com/VTSLite/AView.aspx
http://www.marinetraffic.com/ais
http://sailwx.info
http://www.vesselfinder.com

VA3ROM: All Things Digital
http://tinyurl.com/d8nle3l

60M REVISITED BY THE MARCONI RADIO CLUB OF NEWFOUNDLAND ARE YOU READY FOR THE NEW 5 MHZ BAND YET?

Joe Craig, VO1NA

The Marconi Radio Club of Newfoundland (MRCN) 60m experiment concluded in 2007 when VO1MRC made its final transmissions on 5 MHz (see pages 33-34 of the November-December 2010 TCA). Our members operated on 60m with a Marconi CH-150 fitted with crystals generously provided by VO1DI and VO1FB. VO1HP had used an FT-1000MP with his 160m inverted L to put VO1MRC on the 60m airwaves and had many contacts on the eight spot frequencies, including those for which we had no crystals.

Towards the end of the experiment, our founding member, the now late VO1BL, suggested we try to make a VFO as a club project. A frequency synthesizer evolved from a direct digital synthesizer (DDS) chip and computer. Although it was awkward, it gave us flexibility to operate on all eight of the 60 metre frequencies.

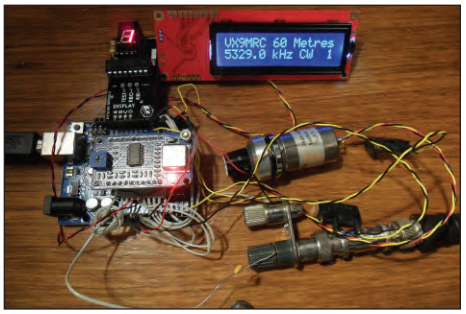
Last winter, acting on a request from Radio Amateurs of Canada, Industry Canada (IC) agreed to let Canadian Amateurs use five frequencies in the 5 MHz range under Developmental licences. Special VX9 call signs were to be used on CW, SSB and digital modes and the power was limited to 100 watts. Comments were invited by IC on making 5 MHz available to Canadian Amateurs through a public consultation. Radio Amateurs of Canada and some prominent clubs and Amateurs across the country sent in favourable comments on the proposal. These can be seen online at: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10418.html

We approached the regional office of Industry Canada to have the VX9MRC 600m licence endorsed for 60 metres and this was cheerfully granted. Unfortunately, we did not have crystals for the new frequencies and the computer/DDS system, though it worked well, was a nuisance to set up and use.

Some of our members, like VO1XP, are fond of microprocessors and we discussed linking DDS with PIC chips to come up with a more elegant solution and perhaps a club project. Yours truly, being very much in the analogue world, was quite daunted by microprocessors until another enlightening trip to Memorial University.

A few winters ago, after I gave a lecture for the Physics Department, a faculty member approached me concerning my talk and mentioned he and other profs had been using Arduino microprocessors in their labs, so I jotted this in my notes and followed it up with an Internet search. It seemed this little contraption was ideally suited for the 60m experiment and a means to avoid the inconvenience of using USB-serial cables, a cheeky operating system, and having to deploy a computer just to get on the air. Perhaps the Arduino could act as a crystal bank and selector switch.

When XYL Michelle, VO1RL, asked her OM what he wanted for Christmas last year, the logical choice was a couple of Arduino boards and display module.



Amazingly the package arrived without being held for ransom by a duty broker. It ended up in the shack in very short order. With minimal colourful language (which could have been precluded with a more judicious choice of PC operating system), a little LED was flashing on the Arduino board.

Little snippets of code from the Unix machine at Memorial University were added and soon three LEDs were made to flash in arbitrary sequence. It was then quite simple to get a pretty HF sine wave from one of the tiny AD9850 frequency synthesizer boards that are very popular on eBay. A straightforward programming effort saw the Arduino toggle through the different 60m frequencies using microswitches with the frequency, mode and channel number being shown on the display board. Using a microprocessor was not at all as difficult as anticipated. In fact it was a great deal of fun.

Once again our old 60 metre standby, the Canadian Marconi CH-150 transceiver – which was donated to the club thanks to the efforts of VO1VX – was called back into service. With the DDS/Arduino combination in place, VX9MRC was QRV on 60 metres.

Many QSOs followed on CW and USB on the five channels with the United Kingdom, the United States, Iceland, Norway and several others. Good DX propagation is seen at night, while local propagation in the daytime covers several hundred kilometres. We have used vertical and long wire antennas. A dipole 87.5 feet long is also a good option.

Sixty metres will soon be available to all Canadian Amateurs, thanks to the Radio Amateurs of Canada and local clubs and individual Amateurs who contributed to the experiment. We are hopeful that 5329 kHz will be available to Canadian Amateurs with fewer restrictions on power and bandwidth. This channel will not be a shared one with American Amateurs unlike the other five.

If you have an old crystal rig and would like to try this idea to get on 60m, please visit the VO1MRC webpage at http://www.ucs.mun.ca/~jcraig/mrcn.html for more details on our projects. Good luck and we hope to see you on 60 metres soon.

Note from Radio Amateurs of Canada:

Joe's enthusiasm illustrates the interest by Canadian Amateurs in getting active on 60 metres. We at Radio Amateurs of Canada are anxiously awaiting the decision on the 5 MHz channels consultation initiated as a petition to Industry Canada by RAC.

It is disappointing that Industry Canada has not been able to do the review of comments and sanction operation on the proposed frequencies up to this time. However, when viewing the other consultations involving the opening up and auctioning of new spectrum for commercial cell operations, the work required with World Radiocommunication Conference (WRC) proceedings, past and present, and the challenges of downsizing the federal public service, it is reassuring that the Amateur Radio Service remains well positioned on Industry Canada's agenda.

We have been following the update reports on consultation and decision status made by Industry Canada through RAC's attendance at the Radio Advisory Board of Canada (RABC) quarterly meetings and we can advise the decision on the Amateur Service consultation for 5 MHz channel allocations remains an active file in progress. From sources at Industry Canada, we remain hopeful of a positive outcome by this summer; however, no date can be given as nothing is official until there is a formal Canada Gazette release of information. When the decision is made it should be published online at: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10580.html

Norm Rashleigh, VE3LC
RAC representative at the Radio Advisory Board of Canada

YL NEWS AND VIEWS

OUR YL PROFILE: JEAN HAWKINS, VE3BVJ

Hello and happy spring to all. I say that with tongue in cheek as Saskatchewan is under a Winter Storm warning while I write this column. Oh the joys of living on the Canadian Prairies. We have had very nice weather for the past couple of weeks, but now we need to make sure we don't put our winter parkas away just yet.

Now on to our next YL. She had sent me her story a while ago and, yes, I forgot I had it until she reminded me. So without further delay, I present Jean Hawkins, VE3BVJ.

Jean was born on a farm in Kintore, Ontario. She developed polio in 1926 and her parents thought she would die. She survived but was left with a pair of legs that did not work. As she got older a local Minister, Keith Love (then VE3CI but now an SK), thought that Amateur Radio would be a great hobby for her. As she grew to be a young girl, the Morse Code seemed to come easy to her. She would translate signs on the street into code as she saw them – and in fact she still does the same. Jean says that she was ready to write her DOC exams before the war, but of course that was put on hold for a while.

Jean learned her speed in Morse Code at Wolseley Barracks along with other perspective Amateurs in London, Ontario. She used a straight key when she tried her exam in front of the Radio Inspector in London. In those days, you were unable to pick a special call sign but had to take the next in line. When her licence and call sign arrived, she was very disappointed with VE3BVJ, but then she realized that no one else had even had the call sign and she thought it had a certain swing on CW – especially when she started to use a bug.

Jean received her licence in January 1948. Her first station was on her father's farm, where her shack was an upstairs room.

Her father put up two tall poles and strung a long wire antenna, very high. She had a converted army surplus BC-458 transmitter and a Hallicrafter receiver (very inexpensive) and a straight key to start with and she had to listen a long time on 80 metres before calling a CQ. Jean still has that first QSL card.

At this time Jean was living in London and coming home to Kintore on weekends. She worked for the Northern Life Insurance Company for a whole $40 a month.

One day a friend of hers whom she had met in Toronto, Elliot Lloyd, VE3DD (SK) called Jean. He was the Superintendent of Communications for the Ontario Department of Lands and Forests (L & F) and he asked her if she wanted a job as a radio operator in Northern Ontario that paid $5 an hour with a guarantee of a 40-hour week. Offered that kind of money, Jean accepted immediately, left her job in London and was on the train to Geraldton the next week to use the skills of the hobby that she loved so much.

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While working in Geraldton for the L & F, the operators were all male with Second Class Certificates. She went on the air to acknowledge the position of one of the aircraft and the operator in Port Arthur, Ontario suggested she go back to her pots and pans. It scared the wits out of her, but by then her speed had reached 25 to 30 wpm. A pair of operators were talking about her on CW so she broke in and told them to speed up if they did not want her to hear what they were saying. They all laid bets on how long she would stay and they made it very hard for her.

One morning when she was first on duty, she opened the station and realized she was on the wrong frequency. The night before the operator had changed the crystal to fool her. Jean, of course, was smarter than they thought and she checked, changed the crystal to the correct one and just carried on.

The "good ole boys" did not get rid of Jean. This is just one of the few things that Jean now sits and laughs about.

Jean Hawkins, VE3BVJ, at the mike at the Ontario Department of Lands and Forests.

Jean says she has good memories of her life in 1945. The best part was when she met her husband Jack, VE3BXO (SK). He was an officer in charge at the Geraldton Station.

Jack took a position with the Canadian Broadcasting Corporation in Toronto and they moved to Milton, Ontario. Jean was in her glory and she and Jack built a Heathkit station with a Comanche Receiver and Cheyenne Transmitter and she could "ham" all day. Jean said that she never bothered to get her Advanced, as she loved CW. However, in 1980 she was persuaded to get it via the grandfather clause. Of course, Jack kept the station in top condition.

Upon Jack's retirement from CBC in 1987, Jean and Jack moved to St. Catharines and bought a house on the Welland Canal where Jack could watch the ships from all over the world. Jack had been in the Navy during the war. Jean operated from there for 16 years. She always took an hour on the TP net on 40 metres, worked the net on 20 metres for the YLs, and joined in the Valentine Day net when all the girls worked one hour, on the air during the day.

Jack and Jean had two sons, Rob and Tom, both of whom are engineers but neither of them are Amateurs.

When Jack became a Silent Key in 2002 and post polio set in, Jean realized she could not live alone and so moved to the Longworth Retirement Residence in London. Much to her disappointment, she could not have an antenna as it spoils the outside look of the building with no balcony. So ended her beloved hobby.

Jean says she has had a marvellous life. She has a computer, but does not use Echolink – she says she doesn't know how – but she is licensed to do so. She uses Skype to keep track of her great-grandchildren who live in Texas. She thanks God every day for all of her blessings.

One of Jean's most exciting contacts was when she made contact with the Russian Space Ship *Mir* as it passed over St. Catherines. The operator not only acknowledged her but also asked her name and then asked if she was a YL. Jean said her favourite part of Amateur Radio is not the awards or the contests but just ragchewing.

Jean says now her "hamming" comes from reading TCA, she still loves the hobby and she is a CLARA member.

CATHY HRISCHENKO VE3GJH MEMORIAL YL AWARD

The Award is open to all YLs up to the age of 19 who:

- Have passed an Amateur Radio exam after January 1, 2013
- Have received an Amateur Radio call sign from Industry Canada
- Have operated an Amateur Radio station and made at least 10 contacts

Applicants should send George Hrischenko, VE3DGX, a copy of the list of 10 contacts. Please note: if you have made five CW contacts please list the contacts in your email message.

If you are a successful applicant and are a recipient of the new Award please send a picture of yourself at your station and a brief bio to the YL columnist (currently VE5AQ) for potential use in *The Canadian Amateur*.

To apply for the Award or to obtain more information please contact:

George Hrischenko, VE3DGX – dgxgeo@hotmail.com

I want to thank Jean for this story. It is simply awesome as the young folks say today. I really find that the people who run nursing homes today have absolutely no concept of hobbies that the folks had before they had to retire to nursing homes.

I know of several YLs and OMs who must give up something they really enjoy because an antenna is so "ugly and it destroys the beautiful design of the building". People like Jean would still be on the air chatting away with YLs and OMs around the world and keeping her mind sharp and alert because, as we all know, CW is another language and we are told by doctors to keep the brain active and sharp. What better way is there for keeping the mind sharp than the use of CW?

Ladies, don't forget to send me your stories and photos. Be proud of what you have achieved and let the world know that you are an Amateur Radio operator and best of all a YL. Please check out our CLARA website at http://www.clarayl.ca. If any YL has any pictures or adventures you would like to have put on the site, please send the information to me. You do not need to be a CLARA member; we would love to have you join us, but it is not a must.

Thanks for taking the time to read my column. I always enjoy the feedback that I receive so please keep them coming. That's it for now folks, hope you have a wonderful summer. Please stay safe out there and we will catch you in the next issue.

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

Val, VE5ACJ

NEW GAME FOR AMATEUR RADIO IN SPACE

As time moves on, so does Amateur Radio. From the wonders of two-way radio communications in its infancy – when it was a game to assemble various components – to the wonders of the complexity of Amateur Radio satellites now in space, it is a glorious road stretching over a century of experimentation, discoveries, inventions and innovations.

In a new century, Amateur Radio is entering a new phase of its existence. Where the service/hobby had been a self-centred community – interested mostly in recruiting new members, in improving and innovating in our domain, in forming a community of worldwide communicators talking with each other – we are now reaching outward.

We have seen this trend in Emergency Radio Service, where we are concerned about interoperability with other Service Agencies for a more coordinated effort during these tasks. We have seen it with clubs reaching out to local communities offering their services during public, not-for-profit events, parades, races and so on.

NEW PHASE

Now we have entered a most significant phase of this new direction: a link between Amateur Radio and Education. Although we have been making ARISS contacts for a while, they were never more than a 10-minute opportunity for students to talk with a human in space.

In order to secure funding for NASA, its Educational Office proposed an educational program called “Teaching from Space” (TFS) that would be open to all learning institutions and at every level. Among the many aspects of TFS, let’s talk about the ones connected to Amateur Radio.

AMATEUR RADIO ON THE INTERNATIONAL SPACE STATION

For schools to obtain an ARISS contact with the International Space Station, they now have to present a solid educational proposal to be implemented prior to the contact, and to provide regular follow ups after the contact.

Amateur Radio coordinates this requirement through ARISS International by ensuring that all applications for a contact are accompanied with a viable educational proposal which includes STEM subjects: Science, Technology, Engineering and Mathematics.

Although the ARISS program’s objective is to encourage students to consider STEM as a career path, all students benefit from the program.

CUBESATS

Our Amateur Radio satellite program has entered a higher level of involvement into education. In the past, we have built and put in orbit many satellites of different sizes and uses: from the Phase-1A Oscar-1 to the Phase-3D Oscar-40, the largest Amateur Radio satellite ever built.

We have learned from these past experiences and we now build on the knowledge we have acquired. ARISSat-1 is a prime example of a new design, housing multi-function modules such as Telemetry, SSTV, Recordings, SDR and more.

The development of “Cube Sats” by the Amateur Radio community is now being copied by government and military agencies because of its miniaturization of components, small size and efficiency, and lower cost. The single unit “CubeSat” is only 10 cubic centimetres.

The CubeSat program is now a university program in which students build their own mini-satellites for their specific tasks and experiments. This university program has always been connected to Amateur Radio because it uses our part of the Frequency Spectrum.

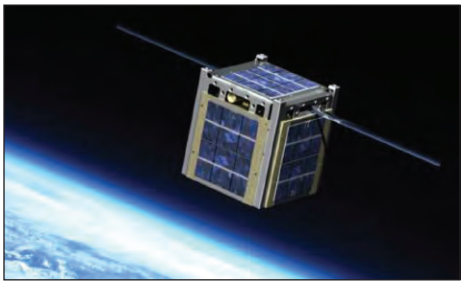
NASA supports the CubeSat program through their TFS program. Amateur Radio provides the basic knowledge, drawings and sometimes the satellite parts for universities; and universities in turn compete for space on a NASA launcher by providing their best entry project.

Launching opportunities are accessed through a NASA project called Educational Launch of Nanosatellites (ELaNa). Universities, or other organizations such as AMSAT, vie for entry into the ELaNa program by presenting and outlining the educational value of their project. The best ones get the nod.

These mini-satellites are to be put into orbit by a university-built P-POD (Poly-Picosatellite Orbital Deployer) which is a carrier that, once detached from the main thruster, will deploy the several CubeSats that it carries.

As our AMSAT President, Barry Baines, WD4ASW, said in an interview for the Amateur Radio Network: “A solid educational project is the ticket to ride”. Our own FOX-1 CubeSat Project has been accepted by NASA for an ELaNa launch. You can find the 60-minute interview with WD4ASW at:

http://arvideonews.com/hrn/HRN_Episode_0019.html



A 10cm Cube Sat courtesy of AMSAT and NASA.

REMOTE CONTROL RADIO

For universities, there is another door to space through Amateur Radio. It consists in developing space-based satellite relays to control robots on earth or on other spacial bodies (think Mars rover). The frequencies in use are located in the Amateur Radio spectrum.

Think about the possibilities this opens. A group of students in one school will be able to control, via satellite, a robot located in another classroom hundreds and thousands of miles away. That can lead to many other experiments and research.

If you asked “Where is Amateur Radio going?”, you can see that the direction is reaching outward into this second century, in order to keep our service/hobby thriving, by steering youth towards STEM subjects, having them participate in the building of space communications, and possibly having them seek an astronaut’s job. By the way, most of the astronauts are certified Amateur Radio operators.

You too can also reach outward by developing an interest in radio communications at your nearby school or university by inviting them to come on board and explore space through Amateur Radio.

Such a new direction will require help from all of us to coordinate the link to education, to make available to teachers and schools lesson material, diagrams, and tools to help them achieve their goals, to provide proven equipment certified by our excellent track record in space, and to develop new techniques for the advancement of Amateur Radio in space.

Visit hppt://ww2.amsat.org/ and join in as a volunteer.

Welcome aboard!

Maurice-André Vigneault, VE3VIG
AMSAT Canada Delegate
ARISS International Working Group and School Selection Committee

AN EXPEDITION TO THE PITCAIRN ISLANDS

Gilles Renucci, VE2TZT

This article was first presented in French in the January-February 2013 TCA. We are pleased to offer it in English thanks to the translation by Alan Bulley, VA2UK. Thanks Alan!

One morning in July 2011 I received a brief email from Jacques, F6BEE: "Interested in an expedition to Pitcairn?"

My immediate response: "Of course!"

Six months of Internet and Skype messages later and there were the five of us – F6BEE, F4BKV, FM5CD, G3TXF and VE2TZT – in Tahiti carefully weighing and adjusting the contents of our suitcases to keep them below the international size and weight standards for Air Tahiti's inter-island flights. While 130 kg of antennas and coax was already waiting for us in Mangareva, the second-last stop of our trip, uncertainty hovered over 100 kg of excess baggage right up until the last moment.

A 6 am breakfast at the airport and then we left gray and rainy Tahiti for the Gambier Archipelago 1,500 kilometres to the east. After a four and a half hour flight in the small twin-engine plane, we finally saw the bright colours of the lagoon with all its shades of blue to emerald green. Now we really felt as though we were at the heart of the Pacific! Just a brief crossing by shuttle boat and we were met on Mangareva's small dock by Françoise and Bernard who took us to Pitcairn aboard the 15m yacht aptly named "Pitcairn."

The length of time to make the crossing depends a lot on the weather. The wind was not favourable on the trip out, but the unusually calm sea didn't stop several of us from suffering seasickness during the 50-hour crossing. We arrived an hour after sunset so we had to put up with a third night on board, anchored near Bounty Bay, so we could disembark in daylight.

After a few S-9 but R-1 exchanges on the marine frequencies with the land, two small boats left the pier and headed toward us at high speed. It was an easy landing on a fairly calm sea and we were met by a large and friendly welcoming committee. If Pitcairn was a thing of curiosity for us, it seems that we were a bit of a curiosity for the Pitcairn Islanders too.

After our passports were stamped with a fairly rare stamp, we all rode in the back seats of a caravan of four-wheelers at full speed up the steep concrete road from the port. Although we were all going to the same place, the four-wheelers negotiated the hill in a ballet that seemed perfectly orchestrated.

Part of the path was done solo, passing through tunnels of vegetation and tropical waterfalls, only to have all the vehicles suddenly fall into their original line in the home stretch. In the space of 1.5 km, the group and 320 kg of luggage climbed 250m in altitude. It was now January 20, 9 am local time or 17:00 UTC (local time is the same as for the American West Coast).

The takeoff from the site was exceptional. HFTA ground simulations gave us a figure of more than 6dB better than flat ground, not to mention a seawater ground plane of 5,000 to 10,000 km all around.

Once the cloud of four-wheelers left, we were already unpacking and installing the antennas. The weather was beautiful, perhaps a little too dry, but better to enjoy it because the season doesn't last long.

We made the first QSO on January 21 at 4:15 UTC, some 11 hours after our landing, with eight bands and four stations operational. We didn't want to start transmitting before tuning all the antennas to avoid frying our only measuring device. Next day we installed the 26m-high mast for 160m and the two beverages the day after that.

We used monoband verticals with at least 16 aluminum radials each for 160m to 30m. On the higher bands, we had two five-band Spiderbeams. So that we could use the four stations on any of the higher

bands at any time, we added two-element wire verticals for 12m and 17m and the 40m vertical worked fine on 15m without any changes.

Even though we had four 500W amps with us, the site takeoff was so good that we often had huge pileups on the higher bands while running less than 50W, which eliminated interference between stations.

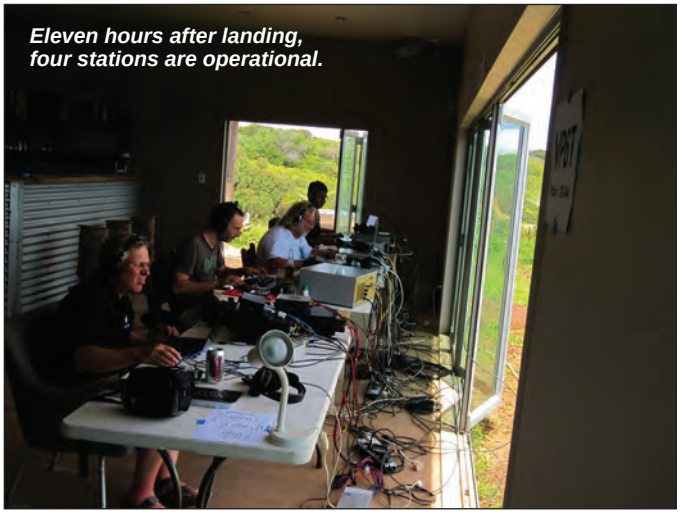
The downside of the takeoff were the steep slopes and the limited amount of flat land. As a result, the antennas were a little too close to each other and the beverages – only 120 metres long because of the thick bush, the many four-wheeler trails to cross and the steep slopes – had reduced efficacy. On storm-free days, reception on the 160m vertical was almost as good as on the beverages. On 80m, the difference was significant.

Four stations were not too many and even a fifth station would have been useful at certain times. Early afternoon was a slack time with nothing happening below 15m.

For the record, although we hadn't planned for 6m, we found a five-element 6m antenna left 10 years earlier by the last OH2BR expedition. The gamma match was in poor condition but we gave it a shot after a strong solar event. After 10 minutes of CW calls without much hope, a call from XE1FAA surprised us with very clear signals. All the same, we were using 400W and the Elecraft's 6m preamplifier. After that, nothing at all for 60 minutes of calling, apart from the same Mexican station who called 15 minutes later for the fun of it, with a signal that was already much weaker. More tests a few days later yielded no results at all. The summary for 6m: one QSO and a double ...

Our goal of 50,000 QSOs was reached sooner than expected and we could probably have hit 60,000 if we hadn't been forced to leave a day early because of the weather. So the counter stopped at 56,300 contacts a few hours before our departure. Demand remains strong for VP6 and the proof was the ongoing pileup on 17m that we had to abandon to tear down the stations. Even though we were still contacting new stations in the last few minutes – "uniques" – we believed we had satisfied a lot of the global demand.

We made a special effort to reach the more distant regions such as Europe, where VP6 is needed much more than it is in the Americas, for example.



Eleven hours after landing, four stations are operational.

Like many expeditions, there were two factors that slowed traffic. The first of these is the lack of discipline among many European operators who seem unable to understand that it's useless to transmit while we're working a specific group of call letters that isn't theirs. These people seem to think that we're going to change our minds and answer them just because their signal is overpowering the station we're trying to pull out of the hubbub. The best they'll get is that we'll change the continent we're calling or change bands altogether. Several times we were so frustrated by the unacceptable behavior of some that we gave them a signal report without logging them, hoping they'd get the message when they searched in vain the next day for their confirmation in the online log.

The other factor that slowed traffic was the double repetition of six-character call signs by the vast majority of Japanese operators. When we transmit a call sign followed by 59 or 599, we expect to receive a message like "QSL 59 thank you" or "599 TU" and nothing else. If the station repeats his call we think he's telling us that we've made a mistake. Imagine the tension we feel when instead of this short confirmation message – with hundreds of stations waiting to contact us – someone answers with "QSL", repeats his five-letter call sign twice and then gives a number followed finally by "59". He has just eaten up the time for another QSO and, because of him, someone else will miss the chance to contact us before the expedition ends.

We want to thank the stations of the American and Asian continents for the discipline they showed when we repeatedly asked them to standby so we could contact regions with a less favourable propagation path such as Africa, Europe or Zone 16.

In general, except for 160m where the effects of the rise in the solar cycle were beginning to be felt – and sometimes on 80m because of storms – we had excellent propagation conditions.

We had good weather at the start of our stay on Pitcairn but rainy periods became more and more frequent. The squalls were quite impressive and from our location overlooking the ocean we could see them arrive like walls of water. On departure day, the rain stopped right at the breaking point – we thought until the last moment that we would be dismantling the antennas under a waterspout!

The return boat on Mangareva was extremely painful. Our departure was moved up one day due to the arrival of a storm which caught up with us along the way. Due to headwinds, the trip lasted 60 hours with a good part of the trip through 4 metre swells. I felt like I was inside a rugby ball during a championship match – except that the match lasted 60 hours. It took three days on land before the ground stopped moving for some of us...

Given that flights are infrequent, it took a week to gradually return to Montreal.

All in all it was a wonderful time, both in terms of radio and of human experience. We especially thank our host Andy who received us with great kindness and who looked after our hotel logistics with great effectiveness and excellent cuisine.

ABOUT THE AUTHOR

Gilles started in Amateur Radio in 1977 with the call sign F6FFM. His passion for radio led him to obtain an engineering diploma from the École Supérieure d'Électricité in Paris in 1984 and, with the addition of an MBA, to pursue a career in high tech.

Since ending his professional activities in 2004, he lives in Montreal where he devotes much time to Amateur Radio as VE2TZT and, more recently, VA2EW. His main areas of activity include experimentation, DX and HF contesting with a preference for CW and 160m.

QUA — A TOPICAL DIGEST

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PAT HAWKER, G3VA – SK

Pat was a veritable giant, the epitome of our hobby and a fount of knowledge, before, during and after World War Two. During that war he was deeply involved in communications, especially of the clandestine variety, and he was an authority on the "agents' sets" produced at Whaddon Hall. Some time ago I reviewed in this column Pat's "A Bit of Controversy: Pat Hawker – a Radio Life", which is available as an audio CD from the Radio Society of Great Britain (RSGB). With it you can settle down for an hour or so and listen to reminiscences in Pat's own voice.

When, 20 years or so ago, I was invited to write a column in TCA, I sought to emulate Pat's "Technical Topics" that was a popular feature in the RSGB magazine (I don't remember whether it was still the "T & R Bulletin" or had evolved into the present "RadCom"). I can't equal Pat, but I always have his format in mind.

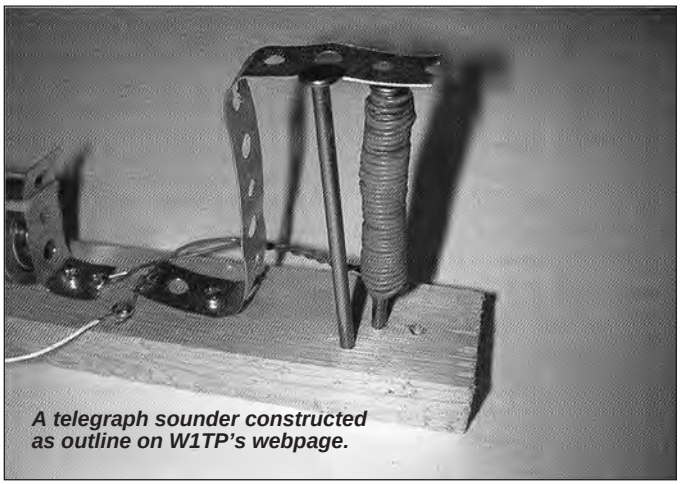
Pat retired from "Technical Topics" some time ago, but his spirit will be with us for a very long time, and his musings and recollections in hard copy and in voice are there for us to browse on. Rest in peace old son; we miss you.

TOM PERERA, W1TP

Tom is very much alive and is another Radio Amateur who is foremost in his own fields such as telegraph keys and the Enigma machine. ZL1AN consulted Tom about the origin of the Camelback keys and found that Tom started with a WWII surplus J-38 straight key; when he went to buy a Vibroplex bug, the salesman insisted that he first get to 15 wpm before acquiring a Vibroplex!

Tom now has over 3,000 photos and descriptions of keys in his online museum at http://w1tp.com, and he has written a telegraph collectors book and price guide. Also interested in education, he put together a simple telegraph kit to introduce students to the art which is available online at http://w1tp.com/perbuild.htm. It really is simple as you can see from the picture of a telegraph sounder: a couple of nails, a length of perforated strap, some bell-wire. The photo is from *Break-In* magazine.

Also on Tom's webpage you will find links to all his documentation on Enigma, movies of the machine in use and references to his books on the subject.



A telegraph sounder constructed as outline on W1TP's webpage.

8877 FILAMENT VOLTAGE

In a discussion about the life of power amplifier tubes, W0RI said:

"The 8877 has a 5 volt filament. The 3CPX1500A7 has a 5.5 volt filament. Many have been running the 8877 and 3CPX1500A7 with a Peter Dahl transformer at over 4kV and they work fine. Eimac says that the filament should be 5.0 volts +/- 5% or 4.75 to 5.25 volts.

This should be measured with a True RMS voltmeter. A friend had high line voltage and his actual filament voltage was 5.5 volts. He had lost several tubes with an open filament. After he lowered the voltage to 5.0 volts he has not lost a tube. He used a Varistor in the secondary to each tube. The 77SX has two filament windings."

HAND CAPACITY AND FERRITE CORES

On the Antenna-Discussion Forum, G3RBJ made the following observation:

"One aspect of ferrite antennas not discussed recently was what might be called the 'hand effect'. This effect is most obvious with a high Q mobile whip antenna having a low loss loading coil, where the tuning can be easily upset by the proximity of the hand or body or other object. In contrast, a high Q ferrite antenna is almost immune to this effect, and of course this makes it very useful for portable radios."

TAPING CONNECTORS

VE5TLW writes:

"Just a comment concerning the item submitted by KV4FZ on protecting connectors. I agree with him on putting a layer of electrical tape on the connector before applying the Butyl tape. However, the layer of electrical tape should be applied with the sticky side out. This will still provide a seal if the other layers are properly applied, but will make removal very easy as nothing is stuck to the connector.

I was employed by a Telco for 31 years, and learned of this technique from professional riggers. This was employed on connectors used for microwave and cellular systems. Connectors that were sealed in this manner were opened after decades, with no sign of water migration in evidence."

160 METRES PROPAGATION

This is always a mystery to most, and very difficult to forecast.

K9LA has been investigating galactic cosmic rays for some time, and on the Topband Reflector he wrote:

"When you look at ionization at night in the upper D region/lower E region (where absorption occurs at night), there's not much difference between solar max and solar min. In other words, solar ionizing radiation doesn't change at night between solar max and solar min.

During the day is another story that we understand well.

But there's another source of ionization that likely affects absorption at night – it's galactic cosmic rays (GCRs). Bob, NM7M (SK) believed this to be an important issue for 160m propagation – especially for extremely long distance QSOs. But GCRs appear to affect 160m in a more fundamental manner.

GCRs are mainly very energetic protons arriving from all directions day and night. They cause ionization down to extremely low altitudes by creating a shower of secondary particles. At solar max, when the Sun's magnetic field is strong, GCR's can't impinge on the Earth as much as at solar min, when the Sun's magnetic field is weak. So this suggests solar min will have more ionization at the low altitudes due to GCRs, which is detrimental to 160m propagation.

Now we just went through the deepest solar min in our lifetimes – which also means we were hit with more GCRs than ever in our recorded history (about 19% more than anything we've seen in the past 50 years). So it very well could be that this solar min was too quiet, geomagnetically speaking – and it still is very quiet with Cycle 24 headed towards being an underachiever. What this implies is more absorption than the last solar min.

I think if we understand the processes in the atmosphere, 160m will slowly give up its secrets. This isn't going to happen overnight, as there's hardly any research down at the altitudes that impact 160m propagation.

I've always believed that if science and observations are in agreement, then we probably know what's going on. I see much science with respect to antenna topics on this reflector – I hope this catches on for propagation, too."

We sure miss the scientific contributions of NM7M to the Topband Reflector (VE7BS).

CHOICE OF WIRE FOR A BEVERAGE ANTENNA

Another perennial topic on the Topband Reflector is the Beverage receiving antenna, and a recent thread was on the best choice of wire type for a two-wire (direction-reversible) Beverage.

W8JI commented:

"A two-wire Beverage operates in two modes, common mode (antenna) and differential (transmission line) mode.

The common mode works correctly and non-critically no matter what we do, and is pretty much independent of what type of wire is used or how the wire is used. The differential mode is the more critical issue, because differential mode and the transformer system at the far end supplies termination impedance to the far end.

While almost anything will 'work' to the extent of making some happy, the transmission line impedance of some twisted pairs can change by 50% or more when wet compared to dry. Also, if the line adds significant signal transmission loss in reverse mode, flaws in line balance become more apparent. This is because differential loss increases while antenna mode losses do not.

This doesn't mean it quits working; it just won't have the front-to-rear ratio of a good installation. I looked at this in the late 1970's and early 1980's, and sometime after that I wrote an article detailing a system using ladder line (which was the best wire) in an obscure northern Ohio newsletter called the 'Amp Letter'. I used real 450 ohm air line in that antenna.

I've never looked at the case of wide-spaced wires close to earth. The closest I've looked at was a 1500 foot long air insulated transmission line with just under 3" wire spacing here at my QTH. With under 3" spacing and 8 to 10 feet height, loss and impedance was stable under all weather conditions. Without twists in that line, it had noticeable signal leakage on mid HF and higher. With twists every 20 feet, it was only a problem up near ten metres. On lower bands, it was almost like coax for ingress.

I'm not sure what, if any, problems would appear in other line configurations. I suppose results would depend on how fussy you are and what is around the antenna.

Antenna results are a mixture of many things. While they work the way they work, we often 'invent' or exaggerate some positive or negative aspect.

If we want stable coax-like performance, the balanced line mode has to act like an acceptable transmission line in all weather. It stands to reason the very worse lines are twisted pair lines with fibrous coverings. The water easily fills the area in the line between and around conductors, and it stays there. Wider spaced lines, especially those that push the water away from conductors and between conductors, are much better. Open wire lines (real ones) are better yet, because there is not very much for water to collect on.

I think 300 ohm or 450 ohm transmitting twinlead (which is never 450 ohms, and actually has more loss than the ARRL claims) is a good compromise, but almost any type of line can be made to 'work'. It is all in the degree of what we look for..."

AMATEUR RADIO FAR FROM DYING

VK6AU (founder of the Ex-D Association – non-German Radio Amateurs licensed to operate in Germany after WWII) came across a statistic that puts the lie to the idea that the Amateur Radio Service is on the way out in the US.

He says: "According to the latest numbers from the National Association for Amateur Radio, there were 704,236 Amateur Radio licence holders in the US as of March 2012, an all-time high. That figure is up from 662,600 in 2005."

One of his members, KT0H, draws attention to an interesting short video about NS0W which is found online at http://www.timescall.com/news/ci_22410766.

If you are interested in the Ex-D Association, contact John at <bushcarp@westnet.com.au>.

STEPHEN HAWKING AND MORSE CODE

G3WGV, a member of First Class CW Operators' Club (FOC) came across an article in *The Times On Line*, and quotes from it:

"For the past decade, he (Stephen Hawking) has composed sentences one letter and word at a time, by using a twitch of his cheek muscle to stop a cursor moving across text on a screen. His sentences are then read out by a computerised speech device, producing his distinctive robotic voice.

But the degenerative motor neuron disease from which he suffers has made it harder to control the twitch, and one of science's quickest minds had been reduced to typing only one word a minute.

Now, scientists working with Professor Hawking believe they have created a device that will restore his ability to compose five words a minute, or even increase it to as many as ten.

...by creating two different signals to express himself, Professor Hawking would be able to communicate using Morse Code, which would be a great improvement."

PUBLIC SERVICE / ARES

As evidenced by Vice-President Paul Wagon, VE7TL, of the Coquitlam Amateur Radio Emergency Services Society, Amateur Radio again rises to the occasion. We all know that radios don't communicate, but the people who are trained and experienced using these radios make for more effective communications as will soon be witnessed by the West Vancouver Yacht Club. As Radio Amateurs we are all up for new challenges, and we wish everyone great success in this new partnering for better communications.

And speaking of partnering, from Paul Giffin, VA7MPG's report, we find the many agencies all working together to bring about the great repeater systems for use by the many folks travelling to the great north. Ron McFadyen, VY1RM, has been a leader in many of these partnering ventures. I for one will look forward to using these systems, as provided for by Yukon Amateur Radio Association and all of their partners, while I make my way "North To Alaska" for this year's summer vacation. I do need to keep whittling away at my bucket list, and this is one of them!

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Martin, VE7HYD, logging.

COQUITLAM AMATEUR RADIO GROUP PROVIDES COMMUNICATION FOR SAILBOAT RACE

Paul Wagner, VE7TL
Vice-President, Coquitlam Amateur Radio Emergency Services Society

On Easter weekend for 44 years, the West Vancouver Yacht Club (WVYC) has run the Southern Straits of Georgia Race. The course length is about 132 Nautical miles with several Classes running different legs rounding islands, rocks and navigational buoys.

Communication is difficult due to VHF limited coverage of ranges exceeding 50 miles and islands blocking line of sight. In addition, many boats have deck mounted antennas with limited range to the horizon.

Compounding this is the highly variable and often dangerous wind and sea conditions occurring at this time of year. Cold Easter winds pack more of a punch than warm summer winds and seas of over 15 feet are not uncommon.

These conditions have caused a number of blown out sails, rigging failures, dismasting, rudder damage and even crew being washed overboard. Proper operation of marine VHF sets is not always provided by some race crews which further degrade communication capability.

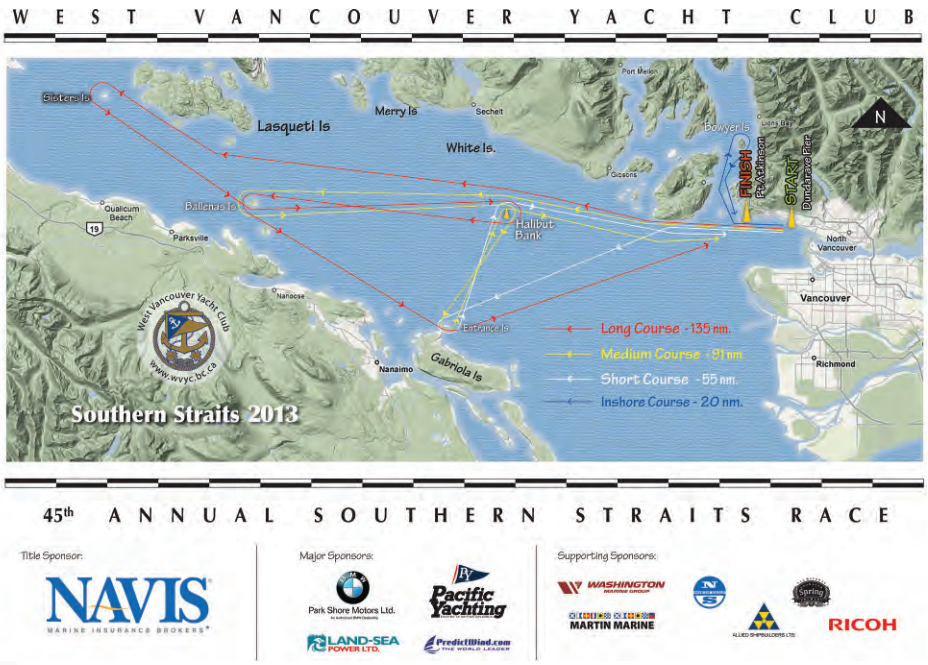
In 2010, a sudden and violent unpredicted storm hit the fleet causing many of the above problems. Communications was run by the club volunteers, most of who were not as competent as Amateur Radio operators and they had great difficulty handling the volume and intensity of distress communications and keeping up with status reports of the participants.

All participants are required to radio in their time of rounding all marks of the race and they often bunch up at the rounding marks causing intense communication demand over a short period. Recognizing this liability, they requested the Coquitlam Amateur Radio Emergency Services Society (CARESS) to operate their shore station which was in effect a net control station.

Having participated in this race many times in the past 40 years, I recognized the need and organized a 24/7 watch, keeping participation by CARESS members. Some were not familiar with sailing matters and marine communication so I gave a brief training session. Our ability to provide more professional voice procedure, control, logging and message handling was much appreciated, both by the WVYC organizers and the families of those involved.

After the first year of operation in 2011, we recognized some limitations in the WVYC base station. Operating on Marine VHF Channel 73 (156.675 MHz) for race communications and Distress and calling frequency Channel 16 (156.800 MHz), the antenna was a simple 6 dB gain vertical mounted about 15 feet high on the roof.

A large cliff to the West also blocked some of the coverage. An audio recording of transmit and receive was acoustically



performed at the operator position and intended for possible post race analysis in case of an incident. This proved to be less than desirable due to conversations in the operating area. Recognizing these limitations, for 2012 we ran a VHF Radio Operator's course, which was provided by a representative of the Canadian Power Squadron, and graduated over 10 students, making the Amateur Radio operators even more proficient in Marine communications. We also hoisted a Marine VHF band J Pole 45 feet up in a nearby tree for extended communications range but with mixed results. We also had access to a receiving site on a tower at the University of British Columbia and club members set it up for continuous recording of all signals on Channel 73 with remote Internet access to the recordings at any time.

Club members who participated in 2012 were: Paul, VE7TL, Martin, VE7HYD, Phil, VE7YBH, Marci, VE7JT, Alsid, VA7ADP, Dave, VE7DRS, Ravi, VA7RVS and Carlos, VE7CFK.

For this year's race, we are planning to remote all transceiver operations from the 17th floor of a tower at UBC which will give us clear coverage of the complete course. Through the WVYC Ethernet connection we will be able to remotely operate at the club. Connections at UBC will be with an IRLP system designed and installed by Geoff, VE7KA and Dave, VE7LTD, all coordinated by Ian, VE7HHS.

As a result of this volunteer work, the recognition of professional operation of radio communications by Amateur Radio operators has been enhanced.

YARA SOLAR PANEL UPGRADE

By the time you read this it will be spring. May this article serve as a reminder when we in the south complain we should ask ourselves "Do we really have it that bad?" The temperatures and the conditions these Amateurs regularly work in would shut most of us in the south down in short order. Thanks YARA.
Paul Giffin, VA7MPG, RAC BC/Yukon SM

We have hopes of spring, but it is –33 this morning, March 14, however the weather is crystal clear and you can see for miles.

It's also the time of the year when some of our repeaters are coming back to life after a winter hibernation. Many of our units are at high elevation, snow is deep and covers solar panels.

Here is an example of an upgrade to solar panels and batteries at Mount Klukshu, about 40 miles south of Haines Junction, at 7,000 feet, and just inside Kluane National Park and Reserve, south of Haines Junction which is about 100 miles west of Whitehorse (see the Yukon Amateur Radio Association site map at http://www.yara.ca).

Ron, VY1RM, just as the work party began.

The repeater is 147.060 + and 100 tone. Parks Canada is also a YARA partner. This repeater is part of the linked UHF/VHF drop system WAN owned and operated by the YARA.

There are two repeaters, both from Daniel's Electronics at Victoria, Sinclair duplexers for VHF and UHF, Sinclair Com-Shell (heavy duty). Elevation is confirmed by Ron's (VY1RM) IC-92AD with GPS mic attached as shown in the photo below.

Many of our repeaters have had battery upgrades this past year; the cost is about $6,000 each. The above photo shows Tom, VY1TL, on the left and repeater guru Jeff, VY1JS, on the right. The new batteries, 600 lbs, are lifted by a Jet Long Ranger high altitude helicopter from Trans North Air.

The Yukon ARA is also pleased to announce a partnership agreement with Northwestel

YARA has equipment in some of its sites and the phone company also offers technical expertise when necessary, especially with our D-Star unit and Marine Distress System.

– submitted by Ron McFadyen, VY1RM, BC Yukon Assistant Section Manager

MESHING AROUND IN YORK REGION

Steve Brady, VA3SRV

The York Region Amateur Radio Club (YRARC) was recently awarded a Trillium grant that allowed them to acquire a D-Star Repeater system. One of the key things that sets a D-Star system aside from a regular digital repeater is having Internet access.

Radio clubs benefit from the generosity of some of the Comm tower companies across the country, but getting a "good price" for the required Internet access is sometimes next to impossible to attain. YRARC Vice-President (Chris, VE3NRT) has a day job in the IT world and was responsible for setting up the D-Star gateway and, while looking for ways of getting Internet to a proposed D-Star site, he stumbled on to an Amateur-supported Mesh network project that could potentially solve the club's needs as well as open up many other possibilities.

High Speed Multi-Media MESH (www.hsmm-mesh.org) is a project that originated with the American Radio Relay League (ARRL) which took advantage of existing open software architecture on the WRT54Gx models of Linksys routers.

These routers can be found for as little as $30 (there is a hardware compatibility list that should be referenced) and the firmware installation is painless with an easy to follow tutorial that lives on the main site.

In short, the firmware is based on "open-WRT" and has a "MESH" layer added to it that gives the "magic" that makes it work. Except for changing the Node name to include your call sign, there is little else to be done – the moment any of these "modified" routers come within range, they will automatically connect to each other.

That doesn't sound much different than a regular wireless network, but it is!

What sets a Mesh network aside is the auto-traffic routing that it performs. The routers automatically take the most effective path to its destination and, should any router fail, the network survives as it re-directs to the nodes still online. And so, in the end, the more stations in range the better!

These same routers have removable antennas with RP-TNC connections that allow for higher gain or directional antennas to be used! So the creativity can pour forth into the metal wands we stick in the air.

Images courtesy of Matt, VA3MGN, and Brad Fowles, VE3HII

An old satellite dish refurbished for use on the MESH system; Image courtesy of Brad Fowles, VE3HII.

Sounds great, but are there drawbacks? Yes, the issue is that with 2.4 GHz signals, it is *very important* to have a direct line-of-site between nodes. So, terrain plotting programs (i.e., Splat, Radio Mobile, etc.) were used to determine if paths existed between different QTHs. This helped with determining where the terrain prevented a path and where directional antennas should be used, but it does *not* take into account foliage, condos, etc, so it is only used as a guide.

York Region, north of Toronto, is a large geographically diverse area of over 2,100 square kilometres, slightly larger than the country of Israel! Our club is centrally located in the Newmarket/Aurora area in an undulating bowl completely cut off from the Greater Toronto Area (GTA) due to the Oak Ridges Moraine (it would be great to put a site up on the top of the Moraine to help bridge the region). My QTH is further removed, within the Holland Marsh, and I'm eagerly awaiting a viable link to point my Yagis at!

MESH network routers can be built into an enclosure and mounted up on your tower. Power can be passed through an ethernet cable using Power-Over-Ethernet (POE) breakout cables or power can be run directly from batteries or solar panels via a small charge controller.

To assist with event coverage, they can also be mounted onto a transportable tripod and can be deployed with a battery fairly quickly.

In true Amateur fashion, there are folks repurposing old digital satellite dishes for use on their systems. It takes a bit more work to make sure the focal point is set, but there are lots of web references to assist. In addition, the DIY'er can play with Cantennas and Pringle's cans to see what luck they have. The routers will only talk to each other so don't expect to connect to them with your laptop/smartphone, though you can still see their SSID name. The easiest way to connect is to plug your LAN cable into the router. This does offer some security from the conventional user.

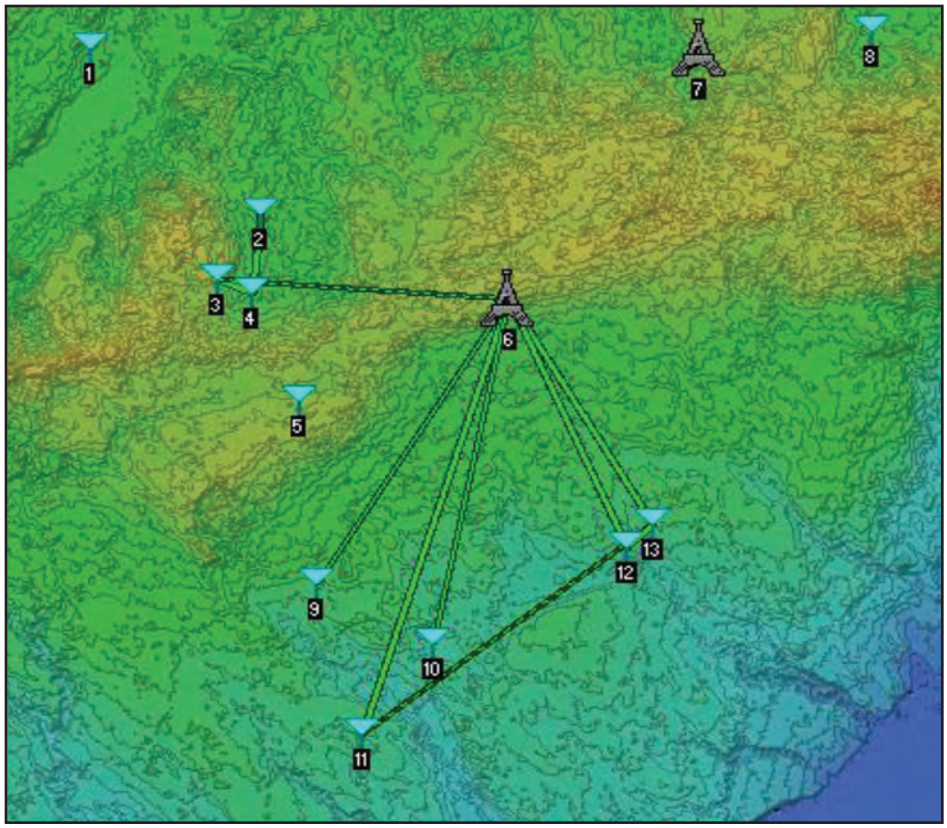
At our recent hamfest, I was able to cludge together a demo that consisted of a few updated routers and Raspberry Pi's running USB webcams. It's all eye-candy, but it demonstrated some of the basic functions to be explored. You can run an FTP server, which is a simple way to exchange/retrieve files during deployments (emergency or event based).

There's also the ability to have text-based "IRC chatrooms" where everyone can share information – and there's work underway on VOIP-type software as well. Really, just about anything you can do on your home/Internet network can be done on the HSMM-MESH network. The routers allow port forwarding as well as "advertised services" assignment. So a basic functioning webpage can be built on each router that could link to FTP servers, imagery and so on. So, in the true spirit of Amateur Radio, this is a way to play, learn and play some more!

The diagram at the right is a plot of potential links within the YRARC Mesh Network. As of December 13, 2012 several stations were on the air but no links were achieved. Note the East/West ridgeline transmitting site 6; this would make for an excellent "over the hill" linking stations.

For community events, or emergency callouts, there can be occasions when you need to bridge geographic gaps between areas. Sending an outfitted person can be a waste of resources so why not deploy a standalone MESH Node!?

PLOT OF POTENTIAL LINKS WITHIN YRARC MESH NETWORK



Matt, VA3MGN, surprised me at our hamfest MESH Demo by bringing in his newly built transportable Node shown above. It's similar to other ideas on the Internet, but I got to look at this one in person. He made use of a directional antenna and an omni (the Yagi would link in to an active Mesh node and the omni would provide local coverage), but this can be easily converted to two Yagis if the true intent was to link the gap between two distance nodes.

The tripod is a re-purposed camera tripod, which makes for a light base. An adjustable vertical leg extension can fit over a ground stake to help secure the station in a wind. Another option for a stand could be a surveyors tripod.

Ultimately, this is a nice/clean way of building a transportable node where the item costs were just over $350. There are ways to cut costs, but in the end the main costs will be your antennas and router.

Some other transportable nodes:

Kitty Litter "Go" Box – http://www.hsmm-mesh.org/images/stories/KittyKontainerKitRev2.pdf

PVC Electrical Enclosure "DropBox" – http://www.hsmm-mesh.org/documentation/121-drop-boxes.html

The enclosure was a re-purposed sprinkler timer control box that already had the waterproof gaskets and the bonus of a locking latch for security. Three holes were cut into the bottom with PL259 bulkhead connectors for the antennas and one feedthrough connector for network/power. There is plenty of room in this box without having to use a ratchet clamp to close the lid!

It could be an old cooler, storage tote, backpack.... or a couple of pipes jammed into the ground with wire ties and duct tape (think of it as art!), but in the end you have an effective way to bridge any service gaps for your event.

If you are in the region and have interest, please join the conversation on the club bulletin board or send me an email at <va3srv@rac.ca>.

WEBSITES OF INTEREST:

Main website: http://hsmm-mesh.org/

Google Map of HSMM nodes: http://www.hsmm-mesh.org/googlemapped-mesh-nodes.html

General Info: http://www.n5oom.org/hsmm/

Facebook group: http://www.facebook.com/groups/105333036166026/

York Region ARC Info page: http://www.yrarc.org/index.php/interest-groups/hsmm-mesh

Other websites:
http://www.w5adc.com/HSMM.htm
http://www.hsmm-mesh.org/
http://www.n5oom.org/hsmm/

Steve Brady, VA3SRV, has been an Amateur since 1998 with Basic/Advanced and has become active in the York Regional Amateur Radio Club in the last few years. He supports their project night and any other technical project he can get his hands on… but has become known as the Field Day Chef! He works for Environment Canada in maintaining their network of Weather Radars.

RAC CANADA DAY CONTEST 2013 / CONCOURS DE LA FÊTE CANADA RAC 2013

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, 2013.

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.

Multipliers: Thirteen in total, Canada's 10 provinces and three 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 1er juillet 2013.

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'abbréviation 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 seulment, 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 Produits**
- 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.

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
- 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> in the contest section.

Entries: All entries (electronic or paper logs) must be postmarked or electronically submitted by **July 31, 2013**. Electronic entries will be confirmed by return email.

Send email entries to: **<canadaday@rac.ca>**

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

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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 soummission, 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 additionels 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 soummis 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 iles Vierges américaines, etc, seront considérés comme étant équivalent à un pays DXCC; et
- Pays DXCC, excluant le Canada et les État-Unis.

Afin de faciliter l'attribution des certificats, toutes les stations américaines participantes devraient indiquer leur réel district d'appel américain basé sur leur addresse 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.

– continué à la page 48

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 31 – date limite : 31 juillet

Call Sign / Indicatif : _____

Name / Nom : _____

Address / Adresse : _____

_____

Code / Code : _____

❑ 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

Score Calculation / Calcul des points

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														

Multiplier total / Multiplicateur total _____

CLUB CORNER

— NEWS FROM AND ABOUT CLUBS

Ralph Webb, VE7OM
15613 18th Avenue
Surrey, BC V4A 1X3
E: <ve7om@rac.ca>

Thanks to the TCA editor, I was able to take some time off just as this column was needed for the last issue. Due to a death in my family, I had numerous things to attend to so I was unable to complete the column in time.

Here on the "wet" coast things are now greening up and gardening seems to be something we can no longer put off, and our thoughts turn to outdoor Amateur events and changes we can make to our home installations. I hope that we can get to all of our antenna projects and put them into action soon.

As many of you know, or can surmise, I spend a lot of my time on CW. I enjoy working that mode as it doesn't really disturb the household too much. This year I participated in the ARRL Straight Key Night (SKN) for the first time. What a great experience it was reliving some very pleasant hours that I had in my early days as an Amateur.

While I was unable to get an old tube rig going in time, I resorted to my "daily driver" ICOM. I still had a blast spending more than five minutes exchanging name and RST with other stations, and coming away feeling somewhat lacking. Being able to have more than one or two "overs" was a real pleasure, and I would encourage us to spend more time trying to get to know the Amateur we are contacting and less time chocking another "one" up in the log!

I had a fun time remembering the comments that my Morse Code instructor told me about sending from the wrist, and not the fingers, and keeping things loose less the dreaded "glass arm" syndrome should attack!

For those of you who have obtained their Amateur operating certificate since the removal of the Morse Code requirement, the operation on that mode perhaps has not been of importance. You will note, however, that a good portion of most bands is unusable by you and you could be missing out on a lot of the fun. Go down into the CW portion of most bands during almost any contest and there is hardly room to fit in (who says that Morse is dead).

In any case, I was interested to read in the Halifax ARC newsletter, "Reflector", that Gary Barlett, VE7RGB, has volunteered to conduct Morse training from his home using the Koch method as employed by G4FON. Participants need to download and use a Morse tutor program, while Gary will be overseeing the training and providing extra practice and encouragement as necessary. I hope that many Amateurs can open up their experience to Morse and enjoy that extra bandwidth that is theirs for the using.

In the West Island ARC's "Bulletin", Ken Fraser, VE2KLF, shares an interesting segment about the January 26 episode of the Terry O'Reilly CBC radio show "Under the Influence" which was called "Radio Is Dead. Long Live Radio". Ken draws our attention to a section where the Columbian government uses Morse Code hidden in music programming to communicate with kidnapped soldiers. You can hear the episode at http://www.cbc.ca/undertheinfluence/season-2/2013/01/26/radio-is-dead-long-live-radio-1/. The section on Morse Code starts at 18:50. The episode is 27 minutes and 33 seconds in total.

I notice that a number of recent newsletters are mentioning the upcoming Field Day. This year's event will not take place on the last weekend in June as usual, but the one just before, that is on June 22-23. Just so that you don't show up a weekend too late this year!

I received a great photo and a writeup (see below) from John Noakes, VE7NI, who recently built an Electraft K1 in order to take it to some SOTA heights this coming season. SOTA stands for Summits on the Air and it encourages Amateurs to carry (primarily) light equipment up to various summits and "activate" them for other summit "hunters". While not a SOTA site, John's QRP radio success is noted below the picture. Good on ya John!

The photo shows one of the configurations heading up to a few of the local summits this spring to activate them for "Summits On The Air". SOTA has a great website at http://www.sota.org.uk/ and an increasing number of Amateurs taking up the "sport".

I was pleased to receive a couple of copies of a newsletter that is new to me. Called "SPARKS", it is the newsletter of the Winnipeg (MB) Senior Citizen's Radio Club (VE4WSC). I can see why it is called that as the seniors in the very colourful photo spreads all seem to be pretty happy and upbeat. Maybe its because they were all shown at a Christmas party and filling their faces with good food and enjoying each other's company. Who says that us old guys can't be "sparky"!

"Here is the newly-built Elecraft K1 shown just after making a contact with LY2XW (Vygis in Lithuania) Saturday morning. The output power at this end was 3 watts on 14.0244 MHz using Morse. The 12 volt supply was a group of eight AA alkaline cells housed in a pair of 4-cell holders purchased from The Source (ex Radio Shack). The Morse paddles are one of my Begali iambic paddles. The LY2XW station had a very strong signal (S9) and he gave me a signal report of 589." – John Noakes, VE7NI

I would certainly like to be at the March meeting of the Surrey (BC) ARC as their featured speaker will be John White, VA7JW, who will give a talk on stealth antennas. The February edition of the club's newsletter, "Communicator", gave an overview of what John's thoughts were regarding the basis for limited RF access and hidden antennas. While most of us do live in a private residence or some place that towers and beams may be erected, for some of us – particularly if we are young and starting out or older and "condensing" – even limited access to the HF bands is a real struggle. I'll be looking forward to an overview of the talk if it is in the next edition of their newsletter.

Last, but not least, I had an email from Gord Maybee, VE7WXA (blindgordie@gmail.com), the editor and operator of the Weather Newsletter Net on IRLP reflector 9038 and Echolink 591897 VE3ZHR-L on Saturday evenings at: 8:30 pm NST, 8 pm AST, 7 pm EST, 6 pm CST, 5 pm MST and 4 pm PST. He tells me that there have been very few, if any, checkins west of Ontario. He would enjoy hearing from anyone who has the capability of getting on the net. For more information on the Maritime and weather nets, Gord hosts a webpage at: http://www.freewebs.com/ve1jbl/weatherradio.htm

That's it for this time. I hope that everyone enjoys the coming spring and summer with all their attendant Fleamarkets, Hamfests, and of course Field Day.

73, Ralph, VE7OM

TCA

CHANGES TO ADDRESS/PHONE NUMBER/EMAIL

Every month RAC sends out renewal notices to members whose membership are to expire in a month. Every two months *The Canadian Amateur* magazine is mailed to RAC members. However, members sometimes move without sending a change of address notice to RAC Headquarters or do not update their information online on the RAC website, including phone numbers and email addresses.

You can update your address in the "My profile" area in the member section of the RAC website so that we can keep your copies of TCA magazine going to your correct address. You can also send a change of address notice to RAC Headquarters at <rachq@rac.ca>.

Canada Post charges us for returned mail and members do not get their renewal notices or their TCA magazine if their address is incorrect.

If you know a RAC member who has moved in the last year please remind them to make these changes.

Frank Greene, RAC Office Manager

CONCOURS DE LA FÊTE CANADA RAC 2013,

suite de la page 45

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> dans la section "concours".

Soummission des inscriptions: Toute inscription (électronique ou papier) doit porter un cachet de la poste, ou être soummise par courriel, pour le **31 juillet 2013**.

Les soummissions électroniques seront confirmées par courriel.

Envoyez vos inscriptions par courriel à : **<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 soummission 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 sonts aussi disponibles sur le site web de RAC au **<www.rac.ca/en/rac/programmes/contests>**.

Toute inscription contenant plus de 100 contacts devrait être soummise sous forme numérique, soit par courriel, soit sur une disquette 3.5" formattée pour MS-DOS/Windows et envoyée par la poste. Le format électronique préféré est le format Cabrillo RAC.
Les fichiers doivent êtres soummis en format text/ASCII. Bien que le commité du concours préfère les soummissions en format Cabrillo, nous continuerons à accepter vos journaux de bord électroniques générés par des versions antérieurs 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>.

Les journaux de bord soummis sous forme numérique mais ne possédant pas d'entête Cabrillo complète devraient fournir une feuille sommaire avec les mêmes informations que pour les soummissions 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 le les soummissions papier.

Une entête Cabrillo correctement remplie se substitueras à une feuille sommaire pour les journaux soummis dans ce format. Veuillez s'il-vous-plaît vous assurer que vous vérifiiez 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 : ve5cpu@rac.ca

Pour les résultats des éditions précédentes du concours, visitez le site web de RAC (http://www.rac.ca), dans la section concours.

CANADA IN THE ARRL FIELD DAY 2012

Bob Nash, VE3KZ

VE3XR, the Peel Amateur Radio Club, operated four stations to post an impressive 9,118 score based on 2,539 QSOs. The Mississauga ARC led five groups scoring in the six thousands. Of the more than 2,000 total participants, the Winnipeg Club, using VE4BB, had the most participants with 87. The best QRP entry was VA3DF, placing fourth overall. The best Single Transmitter entry was from the Alberta Clippers Contest Club using a shift of four operators.

Note for 2013: Be prepared for the new Ontario Sections, ONE, ONN, ONS and GTA.

The Categories:

Class A stations are clubs or a non-club groups of three or more persons set up specifically for Field Day. Score listings are grouped according to the number of transmitters in simultaneous operation.

An additional B indicates operation by a power source other than commercial power mains or motor-driven generator, usually batteries.

Class B stations are portables manned by one or two operators.

Class C stations are mobiles.

Class D stations are home stations using commercial power.

Class E stations are home stations using emergency power.

Class F stations are Emergency Operations Centres (EOC) stations.

Regional High Scores for Portable Stations in 2012 Field Day

Call	Category	Name
VO1VON	2A	Society of Newfoundland Radio Amateurs
VE1FO	2A	Halifax ARC
VE9ND	3A	Not named
VE2ARC	1A	Montreal ARC / West Island ARC / Concordia University ARC
VE3XR	4A	Peel ARC
VE4BB	3A	Winnipeg ARC
VE5NN	3A	Regina ARA
VE6TL	1A	Alberta Clippers CC
VE7LSY	3A	SEPAR / LARA / SARC
VE8YK	2AB	Yellowknife ARS
VY0/ K9DXA	1B1C	Not named

Some Class A and F entries whose transmitter classification is two or more transmitters also operated one additional HF station known as the Get-On-The-Air (GOTA) station, a chance for inactive Amateurs to get on the air.

Call	Category	Pwr Mult	QSOs	Score	Participants	Club	GOTA Call
VA3LNZ	1A	2	64	228	3	Victoria Haliburton ARA	
VA3WG	1A	2	258	666	3	South Point ARC	
VE2ARC	1A	2	1,224	4,688	25	Montreal ARC / West Island ARC / Concordia University ARC	
VE2UMS	1A	2	636	2,490	25	Union Metropolitaine des Sans-filiste de Montreal	
VE2CLM	1A	2	431	1,776	15	CRA Rive-Sud Montreal	
VE2CYH	1A	2	239	1,160	20	Covey Hill ARC	
VE3JJF	1A	2	212	1,204	8	LOWARS	
VE3LCA	1A	2	412	1,862	5	Lanark and North Leeds ARES	
VE3OD	1A	2	249	1,602	10		
VE3PRD	1A	2	201	1,114	10	Prescott-Russell ARC Inc.	
VE3SDF	1A	2	28	56	8	St. Marys ARC	
VE6TL	1A	2	1,289	5,664	4	Alberta Clippers CC	
VE6FT	1A	1	723	1,646	11	Mayerthorpe Flying Tigers	
VE7NA	1A	2	212	990	26		
VE7IHL	1A	2	157	514	3		
VE8NE	1A	2	81	704	3	Inuvik AR Group	
VO1BRK	1A	2	67	248	8	Baccalieu AR Klub	
VE2CBS	1AB	5	112	1,125	12	CRA Sorel-Tracy	
VE3CJ	1AB	5	212	2,225	10	Burlington ARC	
VE7BQO	1AB	5	114	1,365	5	Terrace ARC	
VO1MRC	1AB	5	17	1,025	9	Marconi RC of Newfoundland Signal Hill Splinter Group	
VA4PAR	1AC	2	964	2,278	10	Pathfinders ARC	
VE3AR	1AC	2	55	260	7	Sudbury ARC	
VA2NU	1B1	2	55	460	1		
VE3EDX	1B1	2	102	642	1		
VE3FME	1B1	2	40	360	1		
VE6ZC	1B1B	5	55	755	1		
VE6SKY	1B1B	5	29	245	1		
VE5KC	1B1C	2	57	164	1		
VY0/AH6EZ	1B1C	1	315	501	1		
VY0/K9DXA	1B1C	2	139	704	1		
VE3EEE	1B2	2	105	656	2		
VE6KC	1B2	2	956	4,074	2		
VA3DF	1B2B	5	670	6,360	2		
VA3YV	1B2B	5	438	3,805	2		

Call	Category	Pwr Mult	QSOs	Score	Participants	Club	GOTA Call
VE3RCN (+VE3WIZ)	1B2C	2	275	960	2		
K2NV/VE3	1C	2	244	1,026	1		
VA7ANI/MM	1C	2	56	162	1		
KD2HE/VE3	1D	2	186	744	1		
VA2RIO	1D	2	40	80	1		
VA3ATT	1D	2	245	1,030	1		
VA3FN	1D	2	192	818	1		
VA3IC	1D	2	262	904	1		
VA3PAW	1D	2	35	120	1		
VA3RJ	1D	2	4	66	1		
VA3SB	1D	2	74	296	1		
VA3TQX	1D	2	71	192	2		
VA7LBE	1D	2	1	52	1		
VA7ST	1D	2	531	2,274	1		
VE1BZI	1D	2	37	180	1		
VE1RGB	1D	2	560	2,290	1		
VE2KOT	1D	2	84	336	1		
VE2XL	1D	2	92	184	1		
VE2PIJ	1D	2	3	56	1		
VE3KP	1D	2	711	2,994	1		
VE3RSA	1D	2	94	426	1		
VE3TU	1D	2	61	220	2		
VE3XAT	1D	2	172	736	1		
VE3XB	1D	1	555	1,160	1		
VE3ZW	1D	2	51	102	1		
VE9HF	1D	1	1,435	1,616	1		
VY2DM	1D	2	155	620	1		
VA5LF	1E	2	416	1,602	1		
VA7HZ	1E	2	56	176	1		
VE2AWR	1E	2	352	1,400	1		
VE2CKM	1E	2	9	118	1		
VE3KI	1E	5	581	6,060	1		
VE3VID	1E	2	69	400	1		
VE5JZ	1E	5	168	1,880	1		
VE5MX	1E	1	165	380	1		
VE6AO	1E	1	1,307	1,461	7		
VE7NI	1E	5	315	3,720	1		
VE1WRC	1F	2	181	628	9		
VE3BA	1F	2	160	320	6		
VA2CMQ	2A	2	238	1,392	55	Club Radio Amateur Matane VA2CMQ	
VA3NRR	2A	2	103	756	18	Renfrew Cty ARC	
VE1FO	2A	2	1,149	3,980	40	Halifax ARC	VE1TRI
VE2CQ	2A	2	717	3,084	45	Club Radio Amateur de Quebec	
VE2CRS	2A	2	810	2,968	82	Club Radio Amateur Saguenay-Lac-St-Jean	
VE2CRB	2A	2	566	2,854	5	Club Radio Amateur de Beauce	
VE2CVR	2A	2	531	2,110	12	Club Radio Amateur de la Vall du Richelieu	
VE2CUR	2A	2	406	1,462	10	VE2RMP Radio Group	VE2BRO
VE2RAE	2A	2	248	846	15	Club Radio amateur de l'Estrie	VA2MZ
VE2NVS	2A	2	106	562	4	RDG2 / NVIS Comm ARC	
VE3GCB	2A	2	346	1,692	19	Barrie ARC	
VE3LC	2A	2	358	1,376	3	X Mounties Ottawa Group	
VE3RAM	2A	2	208	1,114	17	Ottawa Valley Mobile RC	
VE3RC	2A	2	796	3,982	75	Ottawa ARC	VE3NCR
VE3RL	2A	2	487	1,668	15	Quinte ARC / Prince Edward RC	
VE3SAR	2A	2	569	2,700	22		VE3CGC
VE3SGB	2A	2	1,332	3,964	16	South Georgian Bay ARC	
VE3SOO	2A	2	605	2,364	3	Algoma ARC	
VE3VSW	2A	2	121	542	12	Seaway Valley ARC	
VE4MEC	2A	2	527	1,644	18	Mobile Emergency Communication	
VE5LA	2A	2	108	750	8	Wolseley Repeater Group	
VE5MA	2A	2	428	1,358	9		
VE7PCE	2A	2	1,013	3,096	25	EPCOM	
VE7RAR	2A	2	659	2,978	25	Richmond ARC	VA7ODY
VE7UT	2A	2	341	2,130	18	Kamloops ARC	
VE7NSR	2A	2	469	2,016	31	North Shore ARC	
VE7OGO	2A	2	427	1,674	12	Orchard City ARC	
VE7RC	2A	2	148	1,016	10	Shuswap ARC	
VE9CRM	2A	2	162	624	24	Club de Radio Amateur du Madawaska	

Tracy, VA3CDU, on 20 metres. Photo by Dan, VA3DJ.

Mardy, VE3QEE, intent on log at 80m. Photo by Richard, VE3BK.

Call	Category	Pwr Mult	QSOs	Score	Participants	Club	GOTA Call
VE9EMM	2A	2	379	1,880	30		VE9DDK
VO1VON	2A	2	143	1,436	9	Soc Of Newfoundland Radio Amateurs	
VA3OVQ	2AB	5	122	1,970	5	Ottawa Valley QRP Soc	
VE3LM	2AB	5	220	1,915	3	Head Lake Group	
VE8YK	2AB	5	66	1,590	10	Yellowknife ARS	
VE3DTI	2B2B	5	27	385	2		
VA7MM	2E	2	399	2,004	5		
VA3CTA	3A	2	333	1,564	35	Central Toronto ARC	VE3FVU
VE2CRO	3A	2	892	2,634	45		
VE2CSP	3A	2	207	1,408	20	ARA de Portneuf	VE2ER
VE3AIR	3A	2	226	1,102	4	Manotick ARG	
VE3HB	3A	2	1,540	6,442	17	Oakville ARC	
VE3RB	3A	2	1,010	3,018	20	Peterborough ARC	VE3KRG
VE3TNC	3A	2	601	2,660	25	Toronto ARC	VE3BGD
VE4BB	3A	2	523	2,292	87	Winnipeg ARC	
VE5NN	3A	2	386	1,732	29	Regina ARA	
VE7LSY	3A	2	1,227	5,536	30	SEPAR / LARA / SARC	
VE7SCC	3A	2	1,229	4,418	40	Coquitlam/Burnaby/New West ARCs	
VE9ND	3A	2	445	2,286	22		
VA3AAR	3AC	2	422	1,146	11	Almonte ARC Inc	
VE3OSR	3AC	1	238	413	12	Georgian Bay ARC	
VE6MRF	3AC	1	50	532	10		
VE3YAA	3E	2	1,229	4,642	8		
VE3DC	4A	2	1,599	4,384	62	Hamilton ARC	VE3DF
VE3NAR	4A	2	590	1,230	8	Nortown ARC	
VE3ORF	4A	2	963	3,500	15	3730 GROUP	
VE3XR	4A	2	2,539	9,118	55	Peel ARC	VA3SOP
VE6WP	4A	2	541	1,730	10	Sask Alta RC	
VE7VCC	4A	2	551	2,794	14		
VE7CMR	4A	2	612	2,636	12	Maple Ridge ARC	VE7CML
VE3RSE	4AB	5	251	3,165	10	Elgin ARS	
VE7CVA	4F	2	1,230	3,798	27		
VE3LON	5A	2	630	2,490	26	London ARC	
VE3OW	5A	2	1,585	4,286	30	SPRARC / BCRC	
VE3SPC	5A	2	940	3,792	15	South Pickering ARC	
VE3SWA	5A	2	950	4,242	5	Cambridge ARC	
VE3YRA	5A	2	1,273	5,232	78	York Region ARC	VE3YRK
VE3FRG	5AC	2	684	2,090	5	Hay Bay ARC	
VC390IC	6A	2	1,116	3,954	29	Kitchener Waterloo ARC	CK3IC
VE3NSR	6A	2	700	3,556	20	North Shore ARC	
VE3QDR	6AB	5	374	4,095	6	Durham Region QRP Club	
VE3VM	7A	2	1,863	6,008	40	Niagara Peninsula ARC, Inc.	VA3NRS
VE3WE	7A	2	294	1,544	12	Scarborough ARC	
VE7SUN	8A	2	378	2,460	17	Delta ARS	
VE3MIS	11A	2	1,689	6,736	65	Mississauga ARC	VE3ETG

RAC CANADA DAY CONTEST RULES, continued from page 45

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. Logsheets 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>**.

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>.

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.

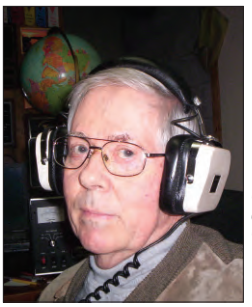
A properly filled out Cabrillo header section will be a sufficient substitute for a summary sheet for logs submitted in that format. Please ensure that you review the header for accuracy and that it is completely fill out. Name your file with your Call Sign and the file extension .LOG (e.g., yourcall.LOG). 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: ve5cpu@rac.ca

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

THE SPORTS PAGE

— THE CANADIAN CONTEST SCENE



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Contest results courtesy of the Maritime Contest Club team

In my last column I promised to include an item on the Reverse Beacon Network and the use of Skimmers and I invited readers to submit information. I want to thank the several readers who also volunteered to supply a write up on the RBN network, Eric, VA7DZ, Tony, VE3RZ and Bill, VE3XT. The earliest response was from Rich, VE3KI, who supplied this comprehensive description. Rich has used the RBN in several contests such as: SS CW 2011 and 2012 (Unlimited class), CQ WW CW 2011 and 2012 (SO Assisted), and the ARRL 160 and CQ 160 CW (multi-op). The following is his account of how one uses the RBN.

THE REVERSE BEACON NETWORK

Richard Ferch, VE3KI

The RBN is a network of CW skimmers at stations around the world (see http://www.reversebeacon.net). Each of these skimmers can simultaneously decode all of the CW signals on an Amateur band, and most of them can determine with considerable accuracy which call signs are *calling* CQ vs those that are *responding* to CQs.

At any time, there are at least several dozen of these skimmer stations networked, many of them operating skimmers on all bands from 160-10m. If you call CQ in CW and if your signal is getting out well, then within a few seconds you can just about count on being heard and spotted to the network by some of these stations. Even if your signal is weak (QRP, for example), there should be enough skimmers within range of you that at least one or two of them should hear you; if not, you can expect to have difficulty holding a run frequency!

Once you have been spotted by a particular skimmer station on a given frequency, it will keep on re-spotting you every 10 minutes for as long as it hears you CQing on that frequency. The RBN network aggregates all of these spots from the various skimmers and reports them through a standard DX Cluster port. For more on skimmers see VE3NEA's site: http://www.dxatlas.com/cwskimmer/

The RBN is a valuable tool for any CW operator, even if you don't use it for spotting assistance. Whether you used the RBN during a contest or not, you can learn all sorts of interesting things after the contest about how well you (and other stations) were being heard. For example, you can go to http://www.reversebeacon.net/analysis/, select a date, choose a skimmer station that was active on that date, enter your call sign (and other call signs for comparison), and see how well you (and your competition) were being heard by that skimmer. Instead of using the online analysis tool, you can download raw data for more sophisticated analysis in a spreadsheet. You can use the RBN in real time for antenna tests as well.

There are two RBN cluster nodes, one using DXSpider software and one using AR-Cluster v6 software. You don't need to use one of these RBN cluster nodes though. There are several nodes on the regular DX cluster network that carry RBN spots as well as traditional spots, using either VE7CC, AR-Cluster or DXSpider software. A good example is the K1TTT cluster node. All of these nodes report the same spots. The RBN folks encourage you to use one of these regular cluster nodes; you can set filters to report only RBN spots, only traditional spots, or both.

The full RBN spot load is huge (just think of how many stations are calling CQ at once in a major worldwide CW contest), and the flood of spots can overwhelm your logging program. Logging software programmers like the N1MM Logger team work hard on improving performance under extreme spot loading conditions, but there is only so much they can do. To use the RBN most effectively, you should apply filtering at the node.

The syntax of filter commands differs between the different cluster node programs. One way to cope with this is to use VE7CC's CC User software, but the following description assumes you are not doing that. The filters I use with AR-Cluster are of the general form: set dx filter (A or B or C), where A, B and C are logical expressions.

Expression A is simple: (call = {mycall})

One of the advantages of using the cluster network is that it lets me know when I have been spotted – and I want to know about that no matter who does the spotting (skimmer or human). N1MMLogger displays this information in the bottom half of the Info window.

The second Eepression, B, is one I would only use in a DX contest, and not always even then:

(not skimmer and spottercont = NA)

This one selects traditional spots made from stations in North America. Assuming I am in assisted class of course, if someone in North America spots a rare multiplier I might want to know about it even if it hadn't been picked up by any skimmers (for example, because the DX station was never sending CQ – some stations seem averse to sending their own call signs, but that's a whole other discussion!)

I don't use this expression in the Sweepstakes; I'm not interested in traditional spots there. It's true that traditional spots might include the section, whereas skimmer spots do not, but in the Sweepstakes I'm not primarily using the RBN to find multipliers. I use it mainly to let me know which of the signals on the band are from stations I haven't worked yet, and I let the multipliers take care of themselves.

The third expression, C, is the one that's directly related to the RBN:

(skimmer and unique>2 and (spotterstate=MA or spotterstate=PA or spotterstate=OH or spotterstate=NH or spotterstate=NY or spotterstate=QC))

This selects RBN (skimmer) spots only, and only if they have been spotted by more than two of the RBN skimmers (unique>2); this is to weed out busted spots. Yes, skimmers bust spots too, but at least they don't perpetuate each other's mistakes the way human spotters do!

The rest of the expression, within the nested parentheses (spotterstate = ...), limits spots to spots from skimmers that are relatively near to me. The list of states above is long enough to include a dozen or so skimmers, all of them close enough to me that: (a) if I can hear a station, several of the skimmers in the list probably can too, and they will spot it; and (b) if a station is heard by at least three of these skimmers, there is a very good chance I will be able to hear it too. The appropriate list of states in this expression depends on your location.

Spots of stations I can't hear are just clutter on my bandmap, unless they are really rare multipliers that I want to keep tabs on as propagation changes. That's what I use expression B for (traditional spots) in contests like CQ WW where multipliers matter, but not in a contest like CQ WPX, where multipliers are a dime a dozen.

You'll notice that there is no ON in my list of nearby states/provinces; there are no RBN skimmers that I know of in Ontario (hint, hint!), and only one in Quebec, VE2WU (that's the closest one to me, although it's on 20m only). There are a few in Alberta and British Columbia, such as VE6AO and VE7AB.

I minimize the telnet window while I am operating. I let the logging program put the spots into the bandmap and the Available window (N1MM Logger feature). If you are using both RBN and traditional spots, you can tell skimmer spots from other spots quite easily. A skimmer spotting station is marked with a "#"; for example, "K1TTT-#", and the spot notes include a signal-to-noise ratio and a CW speed. The # shows up on the N1MM Logger bandmap, and the other info appears in the Available window.

Once your bandmap is populated with new stations to work, you can search and pounce them efficiently without touching the tuning knob on your radio. In N1MM Logger, Ctrl-Up/Down arrows jump you up or down the bandmap to the next workable station. You can listen there for a few seconds and, if he's nearing the end of a QSO, hang around until it's over and drop your call in.

If you can't hear him, or if he's at the beginning of a QSO, or if there is a large pileup, you might be better off just jumping to the next signal, especially if he's not a new multiplier. It's very easy to jump back in a few minutes so you shouldn't worry too much about missing an opportunity to work him. Even if he would be a new multiplier, it does not pay to hang around too long hoping to work him. Early in the contest, if you don't get through in one or two tries, you should probably move on. You can zip up and down a band very quickly this way and, depending on how loud you are and how full the band is, you may be able to achieve a quite respectable QSO rate, at least for a short while, despite the fact that you are S&Ping; maybe not quite as good as a good CQ run, but certainly better than you are likely to achieve without the assistance of the cluster.

N1MM Logger's Available window tells you how many new stations and new multipliers there are on each band, which is a valuable aid in deciding when to change bands. It also displays spots, sorted the way you prefer.

You can set it up so it displays only spots on the current band, and you can limit the list in the Available window to new multipliers only (the bandmap shows everything including stations you have already worked).

Early in the contest, you will probably want to limit the list to multipliers. Later on, when the list of workable stations starts to shorten, you may want to show all of them in the Available window. You can sort the Available window by the time of the spot with the freshest spots right at the top, and then use the mouse to pounce on newly spotted stations before the competition finds them.

One phenomenon that seems to be aggravated by the RBN is that of a DX cluster pileup, when everyone who calls the CQing station is on exactly the same frequency. In CW, unless you are quite a bit louder than everyone else in the pileup, calling on exactly the same frequency as other stations is not a good way to get heard. You might want to adopt a tactic of deliberately calling slightly off-frequency, perhaps by 50-100 Hz (you don't want to be so far off that you are outside the other station's filter bandpass). There are various techniques that can be used for this; one of the simplest is to turn XIT on when you are jumping between spots and have it offset from your receive frequency by, say, 50 Hz.

If you are using two radios (SO2R) or a dual-receiver radio (SO2V), you can also use RBN or cluster spots in the S&P radio (SO2R) or VFO (SO2V) while you carry on CQing on the main VFO. The RBN makes this considerably more efficient than it is without assistance.

Why use the RBN in preference to traditional spots from human operators? In my view the most important reason is completeness. The RBN spots everyone, not just rare multipliers or the spotter's friends. In addition, it spots them more often (basically once every ten minutes, almost like clockwork). For this reason, it is especially useful in "rate" contests, where your primary goal is to work everyone you can hear without much regard for their multiplier status.

A second reason is that the RBN is less likely to make the BY-in-place-of-6Y types of errors that are so prevalent with traditional spots, especially when you use the (unique>2) filter.

Lastly, you can limit the spots to only include stations you are very likely to be able to hear and work, both by ensuring that several stations have heard them (unique>2 again), and by limiting the spotting stations to ones close to you. This latter kind of filtering doesn't work so well with traditional spots because traditional spots are usually not frequent enough to make this strategy pay off. In addition, the RBN is immune to abuses like self-spotting, malicious spoofed spots, non-spots posted as spots, and so on.

So far, the RBN has mainly been of interest to CW operators, but DL4RCK has been developing a skimmer for RTTY so I won't be surprised to see the use of this technology expand into RTTY contesting. There are equivalents to the RBN for a couple of other digital modes as well, but these modes aren't used much for contesting. Don't expect to see this in SSB any time soon, though!

Thanks Rich. To all the TCA readers, enjoy Field Day and see you also on Canada Day. I hope you all enjoyed this article but don't forget that using RBN to hunt QSOs on Canada Day will put you in the Multi-op category!

73 Bob, VE3KZ

TCA would like to welcome a new advertiser.

"Fleetwood Digital Products is a family owned and operated business in operation since 2009, with a combined Amateur Radio experience of over 50 years. Located in Surrey, British Columbia we are proud to feature one of the largest selections of Wouxun and TYT radio products in North America."

CQ WPX CW 2012

Call	QSO	Mult	Score	Category
VY2TT/K6LA	3,932	1,155	14,249,235	SO HP ALL
VE7UF*	3,913	1,195	13,448,530	MULTI-MULTI
VC3O/VE3AT	3,228	1,044	10,752,156	SO HP ALL
VE3EJ	3,180	1,033	10,684,319	SO HP ALL
VC3T**	2,776	994	8,475,838	MULTI-ONE
VE7SV/VE7CC	2,551	951	7,499,586	SO HP ALL
VC2W/VA2WDQ	2,376	919	7,141,549	SA HP ALL (T)
VE9HF	2,291	976	7,014,512	SA HP ALL
VE3YAA***	2,024	854	5,316,150	MULTI-ONE
VE3TA	1,720	794	4,395,584	SO HP ALL
VE2OXA/OZ7AM	1,556	784	4,050,144	SO HP ALL (T)
VE1OP	1,580	843	3,473,160	SA HP 15M (T)
VE3CX	1,348	758	2,757,604	SA HP 15M
VE3RZ	1,207	663	2,679,183	SO HP ALL
VA7ST	1,274	667	2,449,224	SO HP ALL
VE6EX	1,181	556	1,753,068	SO LP ALL
VE3EY	980	549	1,598,688	SO LP ALL (T)
VE2AWR	993	467	1,503,273	SO LP ALL
VE1ZJ	888	488	1,502,552	SO HP ALL
VE3UTT	658	448	1,412,992	SA HP 40M
VA7KO	960	476	1,257,116	SO HP ALL
VA3DF	809	472	1,214,928	SO QRP ALL
VE6TL	787	502	1,112,934	SO HP ALL
VE5ZX	788	533	1,076,660	SO HP 15M
VE3EK	817	465	1,012,305	SA HP ALL
VE7XF	746	527	1,009,732	SO HP 15M
VE2EZD	785	417	1,008,306	SA HP ALL
VE3CR	550	387	980,271	SO HP 40M
VA1MM	698	437	863,075	SO LP ALL
VE3FH	656	385	786,170	SO LP ALL
VE3IAE	653	466	780,084	SO LP 20M (T)
VE2FK	635	356	738,344	SA HP ALL (T)
VF2A/VY2SS	599	383	659,526	SO HP ALL (T)
VE4VT/VE4EAR	514	385	562,485	SA LP ALL
VA5LF	532	368	550,528	SO HP ALL (T)
VA2EW	426	276	529,368	SO HP 80M
VE3TW	506	342	509,238	SO LP ALL (T)
VE6BMX	535	378	484,974	SO LP 15M
VE1JBC	491	354	480,732	SO HP ALL
VE5KS	514	354	468,342	SO LP ALL (T)
VE3CWU	487	343	464,765	SA LP ALL
VA2EU	392	308	380,996	SO LP ALL
VE6LB	400	321	374,607	SA HP ALL (T)
VE7CV	402	305	353,495	SO LP ALL (T)
VA3XOV	401	296	334,480	SO LP ALL
VE1RGB	283	239	333,166	SO LP 40M
VE3FJ	416	309	328,467	SO LP ALL
K2NV/VE3	390	264	304,920	SO LP ALL
VE3RSA	354	274	301,948	SO QRP ALL
VE3XAT	361	278	268,548	SA LP ALL
VE4YU	359	278	265,768	SO LP ALL
VY1EI	340	294	236,082	SO HP 15M (T)
VE7MID	362	288	235,296	SO LP 20M (T)
VE2LX	361	254	221,488	SO LP ALL (T)
VE6SQ	335	266	217,854	SO LP ALL (T)
VA7RN	309	265	211,205	SA LP ALL
VE3GTC	288	256	194,560	SO QRP 15M
VA7DZ	294	233	193,390	SA HP ALL
VE9AA	309	239	185,942	SA HP 10M
VE7JKZ	290	217	185,318	SO HP ALL
VE6WQ	289	247	174,876	SO QRP 15M
VE1RSM	245	199	149,250	SO LP ALL
VO1MP	245	200	134,600	SO HP 15M
VE7MR	177	159	124,815	SO LP 40M
VA3EC	227	199	117,211	SO LP 20M
VE3UZ	229	196	116,816	SO LP ALL (T)
VA3AMX	218	193	107,115	SO QRP 20M
VE3MGY	168	141	97,713	SO QRP 40M (T)
VA3ATT	193	153	87,516	SO LP ALL
VE5UO	223	171	87,210	SO LP ALL
VE2KOT	196	159	84,111	SO QRP ALL
VA3RKM	191	148	79,032	SO QRP ALL
VE1AYY	177	155	71,765	SO LP 20M
VA2AM	146	132	63,360	SO HP ALL
VE3RCN	152	129	60,243	SO LP ALL (T)
KD2HE/VE3	123	115	35,420	SO LP 15M
VE1DT	99	92	33,212	SA HP ALL
VE5MX	127	102	30,804	SA HP 15M
VO1BQ	101	92	28,612	SO LP ALL
VA3WR	93	92	25,944	SO QRP ALL
VE3MO	93	81	20,412	SO QRP ALL
VO1TA	88	83	19,588	SO LP 15M (T)
VE2QV/VE2FFE	89	77	18,018	SO LP ALL
VE9OA	78	73	14,746	SO LP ALL
VE2HLS	70	69	12,351	SO LP 20M
VE3MDX	61	58	9,280	SO LP ALL
VE2JR	56	54	7,236	SO LP ALL
VE3IGJ	45	42	5,712	SO QRP ALL
VE2FXL	47	44	5,280	SA HP ALL (T)
VE8RT	46	42	3,738	SO QRP ALL (T)
VE7BGP	44	40	3,440	SO LP ALL (T)
VE7YU	38	33	2,970	SO LP 10M
VE3GSI	33	33	2,871	SO LP 15M
VA3FN	30	30	2,280	SO LP ALL
VY2LI	24	21	1,344	SO LP 10M (T)
KB5JO/VE3	23	23	874	SA LP 20M
VA3RJ	14	14	476	SO QRP 10M
VE3IQ	12	12	396	SA HP ALL
VE3CV	3	3	42	SO LP 160M

Operators:
* VA7DX VE7ACN VE7AX VE7FO VE7IO VE7JH VE7UF
** VE3DZ VE3XB
*** VA3DDX VE3DQ VE3FJ VE3FWA VE3KAO VE3MA VE3NFR

VOLTA RTTY 2012

Call	QSO	Points	Score	Class
VA2UP	626	8960	914,260,480	SO
VE7CC	399	6580	349,180,860	MO
VE2FK	126	1833	11,547,900	SO
VE2EBK	107	1704	8,934,072	SO
VE3FJB	103	1150	6,040,950	SO
VE3FH	95	1022	5,145,770	SO
VA7ST	68	908	2,778,480	SO
VE3MCF	42	601	681,534	SO-20
VE2FFE	41	363	357,192	SO
VE3AJ	42	348	336,168	SO
VA3FN	35	325	295,750	SO
VE2KY	13	214	30,602	SO-20

7TH CALL AREA QSO PARTY 2012

Call	QSO	Mult	Score	Class
VE7JH	394	94	71,910	Single-Op LP
VE7CV	355	101	68,882	Single-Op LP
VE4VT/VE4EAR	359	82	57,810	Single-Op LP
VE5KS	217	61	25,803	Single-Op LP
VE9AA	178	49	18,963	Single-Op CW
High				
VA7ST	140	51	13,617	Single-Op LP
VA3GKO	154	51	10,506	Single-Op LP
VE1RGB	118	40	9,360	Single-Op LP
VE2AWR	114	40	8,600	Single-Op LP
VA3GUY	98	43	7,095	Single-Op LP
VE2EZD	68	23	3,105	Single-Op CW
High				
VE3BK	76	32	2,816	Single-Op LP
VE7BGP	67	26	2,782	Single-Op LP
VE3FAL	51	21	1,890	Single-Op QRP
VY2LI	53	22	1,364	Single-Op HP
VA2UTC	48	21	1,134	Single-Op LP
VE3MCF	46	21	1,134	Single-Op LP
VE5BCS	39	16	784	Single-Op LP
VK4TT	16	8	192	Single-Op LP
VE2KOT	12	6	108	Single-Op LP
VE7GM	12	6	72	Single-Op LP
VE2GLA	10	5	60	Single-Op LP
VE2PIJ	1	1	2	Single-Op LP

NEW ENGLAND QSO PARTY 2012

Call	QSO	Mult	Score	Category
VE4VT	174	51	14,229	SOLP
VE5KS	139	45	10,890	SOLP
VE2AWR	69	36	4,176	SOLP
VE9AA	60	31	3,720	SOHP
VE2FK	39	29	2,262	SOHP
VE2EZD	44	25	2,200	SOHP
VE2KOT	34	27	1,836	SOLP
VA2UTC	50	33	1,650	SOLP
VA3FN	28	19	1,064	SOLP
VE9CX	33	25	825	SOLP
VA7ST	21	16	672	SOLP
VY2LI	21	17	357	SOLP
VA3OR	15	12	276	SOLP
VE2PIJ	15	12	180	SOLP
VE3AD	13	11	143	SOLP

ARRL JUNE VHF QSO PARTY 2012

Call	QSO	Mult	Score	Class
VE3WCC*	757	288	278,496	M
VE3CX	764	172	131,408	L
VA6AN	609	214	130,968	A
VE3NPB/R**	409	175	107,100	R
VE1SKY	651	153	99,603	L
VE5UF	513	189	96,957	B
VE3ZV	338	169	82,641	B
VA3ZV	406	163	74,980	A
VA7FC	386	144	56,304	B
VE1ZJ	402	132	53,064	B
VE9MY	451	116	52,316	B
VE3KZ	294	152	47,424	A
VE4EAR	348	115	40,020	A
KC8QVO/VE3	304	127	38,608	A
VE3EK	279	136	37,944	M
VE9AA	267	124	33,108	M
VE1AHM	294	100	29,400	A
VE2EBK	306	86	26,316	A
VE7DAY	266	90	24,750	A
VE7JH/R	247	85	24,735	RL
VA2WA (VA2WDQ)	233	89	20,737	M
VE3RX	221	91	20,111	A
VE3TU	197	85	16,745	A
VE3EJ	162	102	16,524	M
VE5MX	185	88	16,280	M
VE1ZA	186	85	15,810	A
VE2JCW	212	72	15,264	A
VE6KC	146	92	13,892	A
VE3SMA	127	74	12,728	A
VE3IAE	157	79	12,403	A
VE3GTC	162	76	12,312	A
VE3KI	150	81	12,150	A
VA2EW	152	78	11,856	B
VE2NGH	163	68	11,084	A
VA3DX	126	80	10,080	B
VO1DJT	191	52	9,932	A
VE7SCC***	126	76	9,576	M
VE3KU	112	79	9,480	B
VE7TK	137	67	9,179	M
VE1NB	124	74	9,176	A
VA3ELE/R	117	51	6,732	RL
VE3AD	100	51	5,100	B
VE2HAY	93	45	4,500	A
VE3RCN	76	51	4,080	A
VE3MSC	73	44	3,564	A
VO1KVT	96	36	3,456	B
VE1AI	68	43	2,924	M
VE3RKS/R	63	42	2,856	RL
VO1TA	58	31	1,798	A
VE1BVD	52	33	1,716	L
VE6BMX	55	31	1,705	A
VA3VFO	49	34	1,666	A
VA7ST	54	29	1,566	A
VA7DZ	53	27	1,431	A
VE3IQ	48	29	1,392	M
VA7MM	39	26	1,092	A
VE3HHT	36	28	1,036	A
VA3UG	36	27	972	A
VE2PIJ	34	23	782	B
VE1JF	27	24	648	L
VE3VCF	26	21	546	A
VE3NYZ	20	14	532	A
VE3KGC/R	16	10	270	RU
VA3WR	15	14	210	Q
VE6CPP	15	13	195	A
KD2HE/VE3	16	10	160	M
VE3MM	13	8	104	A
VA3RKM****	8	7	63	M
VE7JRX	9	4	40	A
VE3BJY	4	3	18	A
VE3RTE	2	2	4	A
VE2HFX	2	2	4	A

* (+ VO1NO, VA3KA, VE3XRA, VE3MMQ, VA3FMN, VA3BVV, VE3ARL, VE2ZAZ, ops)
** (+ VE3OIL)
*** (+ VE7WNK, VE7HHS, VE7TL, VA7NSA, VE7STK, VE7FET, VA7LNX + ops)
**** (+ VA3AMX)

MARITIME QSO PARTY 2012

Call	QSO	Mult	Score	Class
VA1MCC	291	154	90,028	MOMIX
VE1DT	271	138	75,796	SOCW
VY2MCC	430	145	67,860	SOMIX
VE9ML	187	143	44,186	MOMIX
VE1SKY	307	139	42,673	SOSSB
VE9AA	207	92	38,728	Mobile
VE1ZD	203	62	12,686	SOSSB
VE9MCC	119	44	10,828	Rover
VE9OA	79	60	10,120	SOMIX
VE1AI	105	49	9,606	Mobile
VE3KZ	59	52	6,400	SOMIX
VE9CRM	79	41	3,772	MOMIX
VE3CRU	34	33	2,552	SOMIX
VE3CWU	27	25	1,850	SOMIX
VE2FK	26	21	1,792	SOCW
VA3GKO	36	29	1,444	SOSSB
VE9HF	24	21	1,208	SOCW
VE3YF	17	17	1,044	SOMIX
VE5KS	17	17	844	SOMIX
VY2SS	17	16	796	SOMIX
VE1QT	29	23	767	SOSSB
VE1AL	17	17	589	SOMIX
VA3ATT	7	7	398	SOCW
VA7KO	8	8	396	MOMIX
VY2MP	16	14	324	SOSSB
VE9MY	16	14	224	Mobile
VE2KOT	6	6	172	SOCW
VE9LMN	7	8	56	SOSSB

ARI INTERNATIONAL DX CONTEST 2012

Call	QSO	Mult	Score	Class
VE9HF	283	119	157,675	SO MIX
VE2EBK	152	90	87,390	SO MIX
VE3FH	111	89	69,687	SO MIX
VE2FK	109	61	34,709	SO MIX
VE2HAY	52	45	19,305	SO SSB
VE3KAO	69	53	18,444	SO RTTY
VE2AWR	47	44	13,332	SO MIX
VE1ZA	35	32	7,808	SO MIX
VE3IAE	38	29	6,815	SO MIX
VE3TL	27	26	5,330	SO RTTY
VA2UTC	20	20	3,720	SO SSB
VE3TW	19	18	3,420	SO MIX
VO1NM	21	19	2,508	SO MIX
VE3AJ	15	13	845	SO MIX
VE9BWK	5	5	250	SO MIX
VE3MCF	47	34	11	SO MIX

ALL ASIAN DX CW 2012

Call	QSO	Mult	Score	Class
VE7CC	1234	396	531,036	A
VE6EX	244	113	27,685	A
VA7ST	181	87	15,747	A
VE1ZJ	117	93	10,881	A
VE1DT	112	87	9,744	A
VA2WA	111	73	8,103	15
VE3TA	82	65	5,330	15
VE9HF	80	64	5,120	A
VA3AR	43	40	1,720	A
VE3FJ	43	37	1,591	15
VE9OA	43	37	1,591	A
VE5KS	37	28	1,036	15
VE1OP	33	30	990	A
VE6BMX	37	24	888	15
VE1AL	31	23	713	20
VE3EK	24	23	552	A
VE3OM	19	18	342	A
VE3DZ	16	16	256	A
VE3CX	14	12	168	A
VE1ZA	10	9	90	A
VE2FXL	2	2	4	20
VE2KOT	2	2	4	A

CONTEST CALENDAR FOR MAY, JUNE AND EARLY JULY 2013

Contest Name	Start	End	Web Address
ARI DX Contest	1200z May 4	1159z May 5	http://www.ari.it/index.php?option=com_content&view=category&layout=blog&id=250&Itemid=270&lang=en
7QP QSO Party	1300z May 4	0700z May 5	http://www.codxc.com/new/page.asp?content=start
10-10 Int. Spring CW	0000z May 4	2359z May 5	http://www.ten-ten.org/
Microwave Sprint	0600 Local May 4	1300 Local May 4	https://sites.google.com/site/springvhfupsprints/home
Indiana QSO Party	1600z May 4	0400z May 5	http://www.hdxcc.org/inqp/index.html
New England QSO Party (Pt 1)	2000z May 4	0500z May 5	http://www.fara.org/neqp/rules.html
New England QSO Party (Pt 2)	1300z May 5	2400z May 5	http://www.fara.org/neqp/rules.html
NAQCC Sprint	0130z May 9	0330z May 9	http://naqcc.info/
CQ-M Int. DX Contest	1200z May 11	1159z May 12	http://www.cq-m.andys.ru/
Volta WW RTTY Contest	1200z May 11	1200z May 12	http://www.contestvolta.com/
50MHz Sprint	2300z May 11	0300z May 12	https://sites.google.com/site/springvhfupsprints/home
FISTS Spring Sprint	1700z May 11	2100z May 11	http://www.fists.org/sprints.html
King of Spain Contest CW	1200z May 18	1200z May 19	http://www.ure.es/
CQ WW WPX CW	0000z May 25	2400z May 26	http://www.cqwpx.com/rules.htm
ARCI Hootowl Sprint	2000 Local May 25	2400 Local May 25	http://www.qrparci.org/
Maritime QSO Party	1200z Jun 1	0300z Jun 2	http://www.maritimecontestclub.com/
Alabama QSO Party	1600z Jun 1	0400z Jun 2	http://www.alabamaqsoparty.org/
Portugal Day Contest	0000z Jun 8	2400z Jun 9	http://www.rep.pt/portugal_day_contest/rules.html
GACW WW South America CW	1500z Jun 8	1500z Jun 9	http://www.wwsatest.org/
ARRL June VHF QSO Party	1800z Jun 8	0300z Jun 10	http://www.arrl.org/june-vhf
NAQCC Sprint	0030z Jun 12	0230z Jun 12	http://naqcc.info/
West Virginia QSO Party	1600z Jun 15	0200z Jun 16	http://www.qsl.net/wvsarc/wvqp/wvqp.html
All-Asia DX Contest CW	0000z Jun 15	2400z Jun 16	http://www.jarl.or.jp/English/0-2.htm
ARCI CW QRP Shootout	1800z Jun 15	2100z Jun 15	http://www.qrparci.org/
ARCI SSB QRP Shootout	1800z Jun 16	2100z Jun 16	http://www.qrparci.org/
SMIRK 6m Contest	0000z Jun 15	2400z Jun 16	http://www.smirk.org/contest.html
NAQCC Milliwatt Sprint	0030z Jun 20	0230z Jun 20	http://naqcc.info/
ARRL Field Day	1800z Jun 22	2100z Jun 23	http://www.arrl.org/field-day
King of Spain Contest SSB	1200z Jun 22	1200z Jun 23	http://www.ure.es/
Guadeloupe 10m SSB Champ.	0100z Jun 29	2300z Jun 29	http://rc-fg5kc.over-blog.org/
Canada Day Contest	0000z July 1	2359z July 1	http://www.rac.ca/service/infocont.htm
DL-DX RTTY Contest	1100z July 6	1059z July 7	http://drcg.de/index.php?lang=en
Venezuelan Independence Day	0000z July 6	2359z July 7	http://www.radioclubvenezolano.org/rules.htm
IARU HF World Championship	1200z July 13	1200z July 14	http://www.arrl.org/iaru-hf-championship

Check these online sites for more contest information: <www.hornucopia.com/contestcal/weeklycont.html>; <www.contesting.com>; <www.sk3bg.se/contest/>; <www.arrl.org/contests/calendar.html>; <www.arrl.org/contests/rate-sheet/about.html>; and <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.

The following results of the CQ WW WPX SSB 2012 Contest were missing from the March-April 2013 TCA:

CQ WW WPX SSB 2012

Call	QSO	Mult	Score	Category
VE9HF	2,639	1,059	8,789,700	SA HP ALL
VE3CX	1,592	796	3,325,688	SA HP 15M
VA3YP	1,119	641	1,689,035	SA HP 20M
VE7XF	898	574	1,373,582	SA HP ALL
VA7BEC	846	495	1,073,655	SA LP ALL
VY1EI	1,005	401	917,889	SA HP 15M (T)
VA7OM	687	512	843,776	SA HP 20M
VE2EBK	631	410	756,040	SA LP ALL
VC2W (VA2WDG)	533	394	693,440	SA LP ALL
VY2MGY/3 (VE3MGY)	637	281	685,640	SA LP 40M (T)
VE1BVD	574	363	657,030	SA LP ALL
VE3MV	550	334	553,104	SA HP ALL (T)
VA3DX	333	274	327,430	SA HP ALL
VO1DJT	357	284	272,640	SA LP ALL
VE9ML	234	213	255,387	SA LP 40M
VE6FI	353	279	227,106	SA LP 15M
VE7AX	233	213	133,551	SA HP ALL
VA7FC	244	179	115,455	SA HP ALL (T)
VE3JSQ	160	134	59,362	SA LP ALL
VE7TG	116	106	32,330	SA HP 15M
VE3TL	85	85	20,740	SA LP 20M
VE2FXL	9	9	243	SA HP ALL (T)
VA7HZ	8	8	192	SA LP 20M

SECTION NEWS

THE RAC FIELD ORGANIZATION FORUM

MESSAGE FROM THE RAC CHIEF FIELD SERVICES OFFICER

I hope that spring has arrived in your area and that this winter's snow is a distant memory. This time of year in Newfoundland brings fog, drizzle and freezing rain. The warm beautiful beaches of Cuba will be a welcome change three weeks from now.

NTS and NTS Digital

The Council of Section Managers recently met to consider a suggestion that we revisit our support of the National Traffic System (NTS).

Following a review of the program, it's relevance to today's Emcomm needs and the requirements of our customers, it was felt that the NTS, including NTS Digital, is still the best system to meet our needs: it is tried and tested and is accessible for "long haul" traffic when that requirement presents itself.

To ensure interoperability between groups, the use of Winlink 2000 is encouraged. In addition, from time to time please try to test out the system by sending some traffic to help handlers stay sharp.

The Council also reinforced that the RAC Field Organization ARES, supports ICS/IMS doctrine, and the RAC Certified Emergency Coordinator program as basic training requirements for all ARES members.

ARES ID cards

A reminder, if you have an expiring card please go to the RAC website and apply for a new card including a current photo.

ARES Vests

We have just received a new order of ARES Deployment vests and they are still just $34.99. Please contact me if you or your group would like to order some.

Other ARES ID items

We still have available ARES/SURA crests, lapel pins, 12-inch ARES stickers and will soon have the 12-inch ARES door magnets. Please let me know if you wish to purchase any of these items.

ARES Brochure and Video Library

I am in the process of compiling brochures and videos from ARES groups from across the country to form a library that will be accessible to all ARES groups. If you have some on hand that you would like to share, please send them to me at <vo1dtm@rac.ca>. Thanks!

I hope that each and every one of you enjoys a safe and happy summer and please keep the news items coming.

Doug, VO1DTM CEC
Chief Field Services Officer

CHIEF FIELD SERVICES OFFICER
Doug Mercer, VO1DTM
Box 1042
84 Main Road
Goulds NL A1S 1H2
Tel. 709-364-4741
Email: vo1dtm@rac.ca

BRITISH COLUMBIA/ YUKON:

SM Paul Giffin, VA7MPG
A/SM Ron McFadyen, VY1RM
A/SM Neil King, VA7DX
STM Al Ross, VE7WJ
SEC Fred Orsetti, VE7IO
SEC (Yukon) Terry Maher, VYIAK
OBM Bill Foster, VE7WWW
OOC: Dennis Wight, VE7IJJ
ACC: Karla Wakefield, VA7KJW

JANUARY-FEBRUARY 2013 SM REPORT:

In early February all the Ground Search and Rescue teams on Vancouver Island met in Parksville, British Columbia. The purpose of this meeting was to review communications during searches. The terrain on Vancouver Island presents many communication challenges. Amateur Radio and the Emergency Management frequencies are being used in searches. (All involved with the Amateur Radio side of the house hold valid Certificates of Proficiency).

Also in attendance were members of Emergency Management British Columbia and several Amateurs. The day was full of presentations and much information was shared. Overall it was a successful day.

Congratulations to John Adams, VE7DAY, from Campbell River. John is usually active on 6 metres, but he did very well in the CQ WW VHF contest. Nice work John.

Port Moody resident. John White, VA7JW, and co-author Ken Tapping, have won the Cover Plaque Award from the ARRL for the February *QST*. These authors wrote an article entitled "The Penticton Solar Flux Receiver", which appeared on pages 39-46 in the February 2013 *QST*. Congratulations to both gentlemen.

On February 22, kids at Uplands Elementary School in Penticton had a contact with the International Space Station. The contact lasted 11 minutes and was made possible by the volunteer efforts of many people. Commander Hadfield has made contact with many schools across the country from the Space Station. Thanks to all those involved in these events; the kids love them.

The Orca DX Club held their annual BC QSO Party on February 2 and from all reports the event this year was better than last year. Congratulations! Hopefully, we will have more information in the next dispatch.

This year the Great BC Shakeout will be held on October 17. Let's see if we can break last year's record number of 500 Amateur Radio participants. Don't forget to register at the BC Shakeout website. This is a great SET for ARES groups.

Field Day and the World Amateur Radio Day in April also provide good events for a SET. This year the theme of World Amateur Radio Day is Emergency Communications.

"Why slow slip can portend a major earthquake. We need to be prepared. The article in *Science News* is interesting and informative. Some think Cascadia is due or overdue for a very large quake. This would impact Washington State as well as British Columbia. There is a theory the effect would be felt well inland. This is yet another reason to be prepared at home and in your ARES unit. To read this informative article go to http://www.sciencenews.org/view/feature/id/348786/description/Quakes_in_Slo-Mo

By the time you read this it will be spring. Hopefully, some of you will have the opportunity to travel to the Yukon and meet wonderful people while seeing amazing scenery. This scenery provides untold challenges for radio communication. Did you know that Marine Distress calls are, in some areas, routed through the Yukon Amateur Radio Association repeaters? In the Public Service / ARES column on page 41, you will find an article about some of the challenges that YARA faces in their repeater maintenance. The next time we here in the south complain about bugs or snow while working on repeaters just think of the gang in the Yukon and you will soon realize we don't have it so bad.

Recently, a meeting was held at Industry Canada's Ottawa headquarters, a follow up to last year's Canadian Amateur Radio Advisory Board (CARAB) where an offer to meet on operational issues was made. Information on this meeting and other noteworthy events can be found in the RAC Bulletins on the RAC webpage.

I mention this last item because RAC has tried over the last while – and is continuing to try – to get the organization to work from the ground up. The days of being dictated to are over. Having said that, if you, the membership, don't contact members of the Section Secretariat (they are listed at the top of each dispatch) about your concerns and wishes, the organization will be run by the "chosen few". This is your organization, you need to speak up. I can't promise every issue will be resolved to your satisfaction, but I can promise you will be heard. Some folks like to slam the organization while others remain silent. That's the easy way. The amount of volunteer hours put in to run RAC would stagger the average member. How long would it take you or your group to send along comments, concerns, suggestions or maybe even a compliment? It is your organization; if you remain silent you have no right to complain about what it is doing or how it is run.

Public Service Honour Roll
January 2013:
VA7MPG 188; VE7GN 160, VE7WJ 100 and VE7WWW 113.
February 2013:
VA7MPG 226; VE7GBO 78; VE7GN 150; VE7WJ 100 and VE7WWW 103.

– 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 2013 SM REPORT:

ARES Alberta
SEC Curtis, VE6AEW

I would like to welcome Kerry Atkinson, VE6KGA as the new EC for ARES Edmonton.

ARES Cold Lake
EC Gary, VE6FGN

The Cold Lake Amateur Radio Society is currently conducting an Advanced class with eight students registered. Our regular Saturday morning breakfasts are well attended, with ARES training sessions conducted afterwards. The City of Cold Lake has shown their appreciation of our community service by offering the club the use of

their 200-foot tower for a repeater for both club and ARES use. We anticipate having both VHF and UHF repeaters installed sometime this summer, possibly linked into the Vermillion repeater system. The club voted to extend our service to the Municipal District and we are conducting negotiations with the MD for an MOU as we speak. We do have sad news: our club lost a long-time member and friend, Bill, VE6DBA. Bill was as generous in his passing as he was in life, willing his repeater and call sign to our club. RIP Bill, you will be missed.

ARES Peace Country
AEC Sean, VE6SAR

I had a very good meeting this morning; the Director of Emergency Services for the County of Northern Lights, Rodger Smiley, gave me the grand tour of their Council Room / ECC.

They have a room approximately 30' x 10' attached to the ECC that was originally built as an "In Camera" room for council but apparently it's not used at all by the councillors. Rodger would like a permanent station set up in there.

We talked about what capabilities they would like us to have and at minimum there will be an IRLP node and a VHF station. Possibly even a full HF station.

What he would like me to do is make up a proposal for the station with three scenarios (required, nice to have, all out) and send it to him and he would take it up the line and see which scenario the upper management at the county would be willing to pay for.

He even mentioned that installing a tower would definitely be in the cards if required. He would also like me to draft an MOU between Peace Country ARES and the County of Northern Lights.

Thanks one and all for the reports this month. Central Alberta is once again looking forward to the next Red Deer Picnic scheduled for June 14-16 where the third annual provincial ARES conference will be held. There has been good information exchanged and ideas brought forward at the previous meetings so the idea has become welcomed at the picnic. ARES DEC Doug, VE6CID, showed his working portable repeater and other items for response and the last session.

For more information about the picnic please see http://www.caarc.ca.

The Southern Alberta Repeater Association Annual General Meeting will also be held on the Saturday at the picnic as well. Visit http://www.saralink.ca for more information.

– Garry Jakobs, VE6CIA

SECTION MANAGER ELECTION NOTICE: BRITISH COLUMBIA SECTION

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 British Columbia Section

_____ (place & date)

RAC Chief Field Services Officer
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, 2013. 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, 2013. Return of ballots by 1600E September 20, 2013 and will be counted after September 21, 2013.

A Section Manager elected thus will serve a two-year term which begins on November 1, 2013. If no valid petition is received, the Section will be resolicited in *The Canadian Amateur*.

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 Wlliscroft, VE4QE (Selkirk and District); Bill Boskwick VE4BOZ for RM of Grey, RM of Dufferin & Town of Carman

JANUARY-FEBRUARY 2013 SM REPORT:

It is the end of winter and now comes flood season. It is always a threat in Manitoba but all we can do is hope Mother Nature is kind to us. Our education guru David Rosner, VE4DAR, is officially retiring and handing over the reins to Ryan Evans, VA4MAC and Mark Havens, VE4MWH. I wish them success. Congratulations to the eight newly graduated Advanced Amateurs. And thank you to Peter Toth, VE4TTH and his team of instructors.

Winnipeg ARES
Jeff Dovyak, VE4MBQ

Alison Sass, the Volunteer Coordinator for the Community Collaborative Rain Hail Snow Monitoring Network (CoCORaHS) gave us a detailed presentation at our January General Meeting on what the CoCoRaHS Network is about, what the volunteer commitment is and how this online program works. It was great to hear that ARES members who are volunteering for this program can get the CoCoRaHS Starter Equipment Package at no cost! There is a very good chance that Alison will be staffing a CocoRaHS information booth at the WARC Flea Market on April 14. Their website is at: http://www.cocorahs.org.

Welcome to Scott Lightfoot, VE4STL, who recently joined Winnipeg ARES. By the time you read this, Scott, VE4STL and Ryan, VA4MAC, should have completed the Winnipeg Emergency Management (WEM) Course offered by the City of Winnipeg Emergency Preparedness Program.

Our February General Meeting focused on the Scouts Canada Klondike Derby. The speakers were:

Tom Hansen – Klondike Derby Committee;

Jeff Dovyak, VE4MBQ – ARES Role & Equipment Required;

Glen Napady, VE4GWN – Crossband Re-Transmit;

Richard Kazuk, VE4KAZ – Equipment Required & Site Expectations;

Bob Poole, VE4MAQ – ARES at Klondike Derby Photo Presentation.

Wayne Warren, VE4WR, ARES-Manitoba, DEC for the North Region and Special Projects, reports the following items

1) VE4PSC, the ARES emergency station at Public Safety Canada has been relocated to a new location on the 6th floor at 363 Broadway. The temporary operating mode will use limited antennas and reduced power until the rooftop preparations and cabling have been completed.

2) If you are equipped for UHF operation, try out the VE4ARES repeater (443.225 MHz with +5 MHz offset and 127 Hz tones. Recent readiness tests demonstrated good mobile UHF FM voice coverage from near Carman, near Morris, near St. Pierre and at least 50 kilometres NE along Highway 59.

3) The VE4WRS IRLP VHF repeater is being relocated and is temporarily out of service.

4) Our Manitoba ARES regular monthly readiness nets will continue in 2013 on the usual date, 4th Sunday each month, unless otherwise advised.

– Jan Schippers, VE4JS

Traffic Totals
January: 16
February: 17

ONTARIO NORTH:

SM: Al Boyd, VE3AJB
Email: ve3ajb@vianet.ca
STM: Pat Dopson, VE3HZQ
Email: dopsonp@vianet.ca
SEC: Dave Hayes, VE3JX
Email: ve3jx@bell.net
OBM: Paul Caccamo VA3PC
Email: va3pc@ciinet.org
Website: http://ontario.racares.ca

JANUARY-FEBRUARY 2013 SM REPORT:

OPN Manager Appointed

Greetings All these past months have been very quiet due to DECs and ECs spending time in the sunny south. The Ontario North section is growing strong with many groups getting organized for the year to come and a busy spring is planned.

Albany District
DEC Dave Hayes, VE3JX

Both Sault & Echo Bay areas have new ECs installed so those individuals are just getting used to their new responsibilities.

Elliot Lake lost one of its members when Serita Chiswell, VA3VKP, became a Silent Key. Our thoughts go out to her friends and family.

Amethyst District
DEC Fred Lesnick, VE3FAL

Fred reports active ARES nets in the Thunder Bay region using voice (both VHF & 80m) and PSK31. There are also SATERN nets using various modes as well.

Killarney District
DEC Stiig Larson VE3LBX

Manitoulin and North Shore
Preparations have been made and an information session will take place on Saturday March 2 for the new and interested Amateurs to learn all about D-Star, IRLP and programming their radios, as well as the virtues of serving as ARES members for their respected communities.

Our Manitoulin ARES group has been asked to assist one of the townships with the upcoming RCMP Musical Ride in June and we have accepted the challenge as it is good "hands on" training for the members. Our ARES group has kept pace with the emergency management community on Manitoulin Island at large as we have embraced the latest digital modes, more training and exposure as we provide a valuable service to our neighbours, our served agencies and indeed our own Amateur Radio community.

SEC Report
Dave Hayes, VE3JX

I was on vacation for most of the January/February period, enjoying some warmer weather in the south, and I was able to attend two days of the Orlando HamCation. Friday was a "window shopping" day as I was able to visit the booths of various manufacturers and dealers, as well as take a tour through the outside fleamarket.

Saturday was devoted to enjoying various forums and several were related to ARES. One forum highlighted the use of Winlink and the presenter was Rick Muething, KN6KB, a member of the Winlink Development Team (WDT). Another was an introduction to D-Star, which included such notables as Robin Cutshaw, AA4RC, the creator of the DVAP & DV Dongle. With him was John Davis, WB4QDX, DEC/EC for Georgia ARES.

My favourite was entitled: "D-Star & D-Rats EmComm Application in Florida". It highlighted the value of D-Rats, a program developed by Dan Smith, KK7DS, of Oregon. The program utilizes the low-speed data stream that is part of the D-Star signal. It includes the ability to send error-free email, including IMS-213R formatted messages, via the Internet.

An example was mentioned of using simplex connections to send such a message via another station who had access to a gateway repeater, thus showing how a D-Star station is not necessarily cut off from sending email just because his local gateway may be down. Both D-Star and Winlink performed well in a recent Florida statewide Emcomm exercise.

These texting methods are important for heavy traffic handling during emergencies. All groups are encouraged to pursue acquiring such capabilities.

Killarney District

Stiig reports net activity in the Sudbury area, both a local ARES VHF net, and participation in the ARES and Procomm nets.

Sudbury

Alan Viitala VA3AJV, EC for Sudbury and area, reports that they will be training on their go-kits in March. His future plans include setting up a packet or Winlink network locally between kits and the EOC to transfer data with digital modes. He hopes to equip their EOC with a TNC and Winlink also.

– Al Boyd, VE3AJB

DECs reporting:
VA3s: PC.
VE3s: LBX, JX, FAL.
ECs reporting:
VA3s: AJV, and SPT.
VE3s: LJM, SUT, RQR, JX, MXJ
Official Bulletin Stations
OBM Brad Rodriguez, VE3RHJ
January-February 2013:
VA3BIX, VA3RRZ, VA3STG, VE3GIO, VE3JUZ, VE3KII, VE3SHM, VE3VBR and VE3VY.
Official Observer Report
Norm Bell, VE3XRC
January-February 2013:
Total hours monitoring: 22

ONTARIO SOUTH:

SM: Ian Snow, VA3QT
SEC: Scott Carter, VE3CGN
SBM: Brad Rodriguez, VE3RHJ
STM: James Davidson, VE3TPZ
Website: http://ontario.racares.ca

JANUARY-FEBRUARY 2013 SM REPORT:

Now eight months into the job I find that the old axiom that the more you learn, the more you realize what you don't know is absolutely true. Much time has been spent with SEC Scott preparing for an ARES leadership seminar that will have taken place in London and Barrie EOCs in April. I am particularly grateful to Assistant London Community Emergency Management Coordinator, Dave Colvin and Barrie CEMC, Bruce Griffin, who are supporting the Section team in this endeavour.

Scott has also been developing a software application to facilitate EC reports and I've asked him to adapt it to totalize statistical data to quantify the value of our volunteer's contribution. This is valuable information when promoting our public service activities to external agencies and government officials.

James Davidson, VE3TPZ, has joined the management team as the STM. The Niagara Peninsula club initiated a new biweekly GWEN EMCOMM HF net spanning length of the 401 (see http://www.nparc.on.ca/gwen/GWEN_niagara.html for details).

Well done and thank you to President Kevin Smith, VA3KGS, for taking the initiative to send your announcement to all the ONS club presidents. The Field Service has officially adopted the Winlink 2000 Global Email by Radio System for ARES and NTS digital operations. Have a packet TNC or digital interface? Go to http://www.winlink.org, join in the fun, and be part of this essential EMCOMM communications tool.

Of note, Mike Moreau VE3LKI, of Port McNichol on Georgian Bay (va3lki@winlink.org), has been one of the major beta testers for the completely new suite of software including the virtual TNC WINMOR application available for the cost of a small donation. One caution though, you need a high quality interface such as the SignaLink SL-1 if you are taking the WINMOR route.

Finally, the International Telecommunication Union is conducting its five-year review of its *Handbook on Emergency Communications*, with a major update of the Amateur Radio section in the works. A Section contribution was forwarded through Chief Field Services Officer.

Dufferin ARES reported that they are holding weekly nets and their February meeting was spent organizing two public demonstrations.

Kitchener-Waterloo ARC/ARES reported that they are preparing to support the S-W St. John Ambulance Marathon in April. Niagara ARES held a Winlink workshop on February 19 at the Regional Municipality of Niagara headquarters, convened by VE3DVE, with 17 volunteers and six others attending. The group reports that it will begin including the local hospitals in their weekly nets.

Congratulations to SEC Scott Carter VE3CGN for completing the EMO EM-225 Exercise Program Management Course. Scott met with the EMO Community Officer and the Middlesex and Elgin County Emergency Management Coordinators, and is participating on the Middlesex County Exercise Design Team planning a Fall 2013 exercise.

– Ian Snow, VA3QT

DECs reporting:
VE3s:VE3RHJ.
ECs reporting:
VA3s: AJV, and SPT.
VE3s: WWM, LGN, EQV, CPP, BTC, DPG and TMY.
Official Bulletin Stations
January-February 2013:
VA3BIX, VA3STG, VE3GIO, VE3JUZ, VE3KII, VE3SHM, VE3VBR and VE3VY.
Public Service Honour Roll
January 2013:
VE3RHJ 73, VE3TPZ/VA3WR 18.
February 2013:
VE3RHJ 20, VE3TPZ/VA3WR 62.

ONTARIO EAST:

SM: Michael Hickey, VE3IPC
Email: ve3ipc@gmail.com
SEC: Vacant
OBM: Brad Rodriguez, VE3RJH
Email: ve3rhj @ rac.ca
OBS reporting: VA3BIX, VE3KII, VE3VY
Website: http://ontario.racares.ca

JANUARY-FEBRUARY 2013 SM REPORT:

I wish to start by giving my thanks to Scott Carter, VE3CGN, for having been the interim SEC. Effective immediately, SEC Scott Carter, VE3CGN, has stepped down as the interim SEC for Ontario East (ONE) Section. Scott indicated that he now needs to fully focus on the growing ARES activities in the Ontario South Section. I wish to thank Scott for the time he has given that allowed me to settle into my new job. I am now able to look for a replacement SEC. I know that finding a good SEC with experience and dedication is no easy task and I appreciate the help that Scott has given this Section. With that said, this now leaves me as the "de facto SEC" and I will be looking for someone to take on the SEC position for Ontario East Section as soon as possible. Please see the Help Wanted ad at the right for complete details.

I am also seeking applicants for two Assistant Section Manager positions. I need someone for the management position of the Affiliated Club (Liaison) Coordinator and for the Technical Coordinator. Full details on these three positions for the Ontario East Section can also be found in the Help Wanted ad.

As the now de facto SEC, I will make myself available for all ARES group coordinators (ECs) and District group coordinators (DECs) within ONE Section. I want you to feel free and at ease in contacting me anytime if you have any group or District concerns or ideas that you would like to discuss or seek counsel on.

My ARES management experience spans some 14 years and I can tell you that I have learned much from the school of hard knocks without much District or section support or guidance in my time. As a group EC then, I felt as if I was on an island and very much on my own in building an ARES group. I felt very much on my own also when building a new District until I worked my way through that experience and later gained the trust of all the ECs to build a functioning District together, one step at a time. I don't wish for you to feel that you need to work on your own if you are in need of help and guidance.

Yes, Amateur Radio is a wonderful hobby, but ARES is a commitment, a responsibility where one becomes trained and exercised, gaining the needed experience to be able to serve our clients with confidence. That is how we can keep the promise made to our municipal and or NGO clients, by ensuring that our ARES group and or District is able to provide effective emergency radio communications, when they need us the most. So yes, this takes time, tools and dedicated work on your part, which is very much needed and appreciated.

If I can help you with having an easier time in building and maintaining your ARES group and or District, and with having a warmer relationship with your clients, please don't hesitate to contact me.

With the warmer weather and summer in sight, this is when many groups and clubs will be in their full planning stages for Field Day 2013. I wish you all a wonderful Field Day experience with valuable lessons learned and much memorable camaraderie. Inviting youth groups and municipal officials to your site will help bring better awareness of the wonderful hobby of Amateur Radio in the 21st Century. I will acknowledge every Field Day site packet messages that I receive at my email address.

Peterborough ARES group

EC Terry Mackey, VA3MTT

The Peterborough ARES group conducted radio checks at the EMS building and in the Mobile Command Vehicle, the portable antenna was set up and tested with several repeaters with tests done by Robert, VE3KEA, Rick, VE3IQZ and EC Terry, VA3MTT.

A new system of communications has begun with the local EMCOMM team and a very productive meeting was held with the City and County representative with a goal in mind for future expansion of our cooperation on several fronts. Robert, VE3KEA and the group's EC were in attendance. This was reported back in November, however a follow up meeting was held to confirm the purchase of two new Yaesu radios and power supplies along with two new tri-band antennas for the new fire hall in Peterborough. There are now two new antennas on order to replace ones that have been damaged for a short while.

Each ARES members has received the City of Peterborough ID Badges as issued by the local Emergency Manager official with an updated expiration changed.

Rick, VE3IQZ, has taken on the position of the Official Bulletin Station (OBS) for Peterborough ARES and has been reading them on our weekly Wednesday night net on 146.625 MHz at 7 pm. We received good feedback from members and non-members regarding the Ontario bulletins.

HELP WANTED: ONTARIO EAST SECTION LEADERSHIP MANAGEMENT POSITIONS AVAILABLE

Section Emergency Coordinator (SEC): The Ontario East Section Manager (SM) is looking for someone with previous experience as a District Emergency Coordinator (DEC). The ideal candidate will be someone who has been a DEC and was also an EC before that with several years of experience. Consideration will also be given to an experienced and dedicated ARES group coordinator (EC) who understands the bigger picture of ARES and who lives within this Section.

This position requires someone with leadership skills, self-motivated, personable and is at ease with contacting the DECs and ECs by phone and/or by email from time to time as required. This position requires some administration and organizational abilities. As the new ARES SEC you will benefit from the work already done by the previous SEC and from the SM's years of ARES management experience. Much of the groundwork has been done, but more work is needed. Interested applicants regarding this responsible ARES leadership position should contact the SM directly at 613-679-4474 or <ve3ipc@gmail.com>.

In addition, the Ontario East Section Manager is looking for two candidates to become Assistant Section Managers: one as the Section Affiliated Club (Liaison) Coordinator and one as the Section Technical Coordinator.

The **Affiliated Club (Liaison) Coordinator** management role will be to assist clubs with internal administration advice where appropriate and consistent with the Affiliated Club President's Workbook, assist club's with keeping club contact information current on the RAC website, promoting joint club activities and programs across the Section, and encouraging clubs to join RAC as an Affiliated Club. As the Club (liaison) Coordinator you will seek to promote and work with each club liaison in each club within this Section as each club liaison volunteer is identified and comes on board.

The **Technical Coordinator** management role will be to facilitate club and local Technical Specialist involvement in RAC technical committee activities, to facilitate responses to Industry Canada papers and enquiries, and to assist with questions of spectrum management or interference.

For more information regarding the SEC position or the Assistant Section Management (ASM) positions, please contact SM Michael Hickey at <ve3ipc@gmail.com>.

– Michael Hickey, VE3IPC, Ontario East Section Manager

Ottawa ARES/EMRG group

ARES AEC Mike Kelly, VE3FFK

The **Ottawa ARES/EMRG group** did not have much activity this January. The monthly repeater test was conducted by Dave, VE3KMV, with the participation of Mike, VE3FFK, Stuart, VE3SMF, Arthur, VA3BIT and Ron, VA3ACZ. The packet BBS and Winlink node are operating and were given a thorough workout while helping a newcomer get up to speed on the ins and outs of 1200 baud packet.

The **Ottawa ARES/EMRG group** had a very busy month in February. Forty-four Amateurs, both local and from some distance away, assisted with safety and logistics communications for the Canadian Ski Marathon, a 160-kilometre, two-day ski through the rural Quebec countryside.

The volunteers were:
Roland, VA2BRD, Robert, VA2DRU, Carole, VA2NDJ, Clarence, VA2SLB, Ron, VA3ACZ, Arthur, VA3BIT, Dean, VA3CDD, Tyler, VA3DGN, Marc, VA3DRV, Jonathon, VA3GDG, Jamie, VA3JME, John, VA3JO, Craig, VA3KRT, Georges, VA3LZY, Peggy, VA3PGY, Theresa, VA3TGS, Harold, VA3UNK, Christine, VA3VAK, Margaret, VA3VXN, François, VE2AAY, Malcolm, VE2DDZ, Souly, VE2FFS, Ray, VE2HMA, Normand, VE2NHK, Stéphane, VE2STQ, Duncan, VE3BDC, Wayne, VE3CZO, Bill, VE3DW, Mike, VE3FFK, Gord, VE3FRB, Harrie, VE3HYS, Gaëtan, VE3IET, Ian, VE3IGJ, Earle, VE3IMP, Luc, VE3JGL, John, VE3JKG, Lynda, VE3JRL, Erik, VE3KIH, David, VE3KMV, Neil, VE3PUE, Richard, VE3UNW, Gordon, VE3XGP, Greg, VE3YTZ and Alan, VE3ZTU.

Meanwhile back in town, Peter, VE3BQP, has done more work on the radios in the local Ottawa Red Cross HQ office. He has put in a lot of effort both there and at the Barrhaven repeater site. In addition to the 2m repeater rack relocation announced in December, there is now also a 1200 baud packet node and a UHF repeater running at that site. The batteries have been replaced on schedule. This time with more but smaller batteries, so they can be carried more easily as getting to the rack now involves a climb up a ladder. Some antenna work is still required in the spring, and packet connectivity tests between the Red Cross office and their counterparts in neighbouring areas still needs to be carried out.

Speaking of testing, the normal monthly testing of our voice repeaters, Winlink 2000 and BBS hardware was carried out by Peter, VE3BQP, Mike, VE3KOY, Sandy, VE3AAC, Harold, VA3UNK, Arthur, VA3BIT, Bob, VA3QV, Tim, VA3PYC and Roger, VE3NPO, led by Dave, VE3KMV. AEC Mike, VE3FFK and Tim, VA3PYC, gave the digital hardware a workout. All was running nominally. Next month the new UHF voice and VHF packet hardware in Barrhaven will be added to the tests.

Lanark/North Leeds ARES
AEC Norm Hagan, VE3VY

The Lanark/North Leeds ARES Group has had five weekly nets and five weekly get-togethers for Saturday Breakfast at Michaels in Perth. They have also been actively searching for an EC to replace Barrie, VE3BSB.

Installation of a new digipeater, VE3LCA-7 at the Westport Hill, Lions Club RV site, was made in late December. This allows connection on 2m to VE3KER-3 Node in Kingston. This link provides email access through either VE3VY-10 in Westport, or VE3FRG-10 in Kingston. The VY and FRG stations have Internet connections allowing forwarding of email messages worldwide. Regular automatic polling in both directions has shown the path to be viable. Six stations are using Paclink and/or RMS Express to make these connections. A few Paclink suitcase stations are available for deployment. Winmor, FLdigi and Pactor are also being used by several stations for email over HF radio. Those involved in these activities include: VE3GWS, VE3VJF, VE3KFS, VE3DZE, VE3GXW and VE3VY.

The Almonte Amateur Radio Club held its third annual banquet at the Almonte Branch of Royal Canadian Legion on Saturday, January 12. Forty people attended comprising club members, “hams” from the local area and “significant” others. Rob Webb, VE3UIX, club President said, “this was the best banquet we have had up to now. We changed the format a bit this year and started the evening off with ‘hors d’ oeuvres’ while attendees socialized before dinner”. A highlight of the evening was a presentation by Ed Carew and Doug Wilger of the Mississippi Radio Control Club who brought along some model aircraft and described the technology on how the models operated and flown. The culmination of the presentation was the flying of two small helicopters in the banquet room.

A number of organizations sponsored the event by supplying door prizes and thanks go to Icom Canada, the Almonte Riverside Boutique and Kitchen; Levi Home Hardware of Almonte and E N H Electric Ltd of Nepean for providing door prizes.

More equipment has been installed in the EOC at the Almonte General Hospital (AGH) and the D-Star ID-1 (Digital Data) radio is now up and running allowing Internet connection via the repeater site. Point to point 5.8 GHz equipment has been acquired to provide wide band digital two-way communication between the AGH and Municipal EOC at the Almonte Fire Hall.

Renfrew County West group
EC Bob Howard, VE3YX

The Renfrew County West (RCW)-group provided radio communications for the 41st Silver Spoon Ski Race on February 9 and 210 participants, aged 8 to over 70, competed in 27 categories over distances ranging from 1.5 to 15 kilometres. This was the 40th year that the RCW-ARES has been involved with the race.

The following group members have provided communications for the event: AEC Dom, VE3DGZ, AEC Richard, VA3BIX, Norm, VE3UE, Rob, VA3AGN, Alan, VA3HTO and Ron, VE3ZRV. Our communications plan included a base station at the Start line and two checkpoints along the course.

We equipped the Base station with an ICOM IC-28A, and a 5/8 whip with ground plane on a pop-up mast for 2m communications, and a Yaesu FT-60R with a Pryme AL-800 2m/70cm High Gain Antenna for 70cm communications. Our VHF link also made use of the Renfrew County ARC’s Laurentian Hills repeater, VA3RBW. The 5km checkpoint (furthest from the start line) operated on 2m through the repeater, while the 10km checkpoint operated on 70cm simplex.

As per the established Silver Spoon emergency plan, messages related to potential emergencies would have been directed to the various safety crews and to the event controller by cellphone. Luckily, no incidents were reported this year.

There is one new member with the RCW-ARES group: Garrett Modren, VA3GBM. Welcome aboard. Congratulation goes to Dom, VA3DGZ, who has accepted the appointment as AEC replacing Bernie, VA3SUR.

Stormont Dundas & Glengarry ARES Group
EC Earl DePass, VE3IMP

The Stormont Dundas & Glengarry (SD&G)-(ARES) Group’s close association with the Seaway Valley ARC continues. Our January 30 meeting featured presentations from two members from the Red Cross in Cornwall with whom we have a close association and a very good working relationship. These presentations showed firsthand some of the devastation caused by Hurricane Sandy and also outlined some of the local services the Red Cross offers.

The ARES Group continues to read the ARES bulletins on Mondays at 7 pm local on the club’s local 2m net on VE3SVC (147.180 MHz+). The net has now been expanded to include checkins on VE3MTA (UHF) and our D-Star repeater. This process confirms the serviceability of several of our repeater systems at least once a week should they be required by ARES.

The Group’s expansion to “SD&G ARES” from the former “City of Cornwall ARES” continues. Following the removal of the transmitting equipment on August 29, 2012 from the City of Cornwall EOC, we signed a Communications Service Agreement with the Township of South Stormont on September 26, 2012. At the request of the CEMC from South Dundas, Bill Shearing, VE3UTG, we provided a presentation to the United Counties Annual Emergency Management Meeting in Cornwall on November 23, 2012. That presentation in turn facilitated requests for presentations to the Township of North Stormont on December 18, 2012 and the Township of South Glengarry on January 28, 2013. Both presentations yielded very positive results with both Townships requesting Communications Service Agreements. This has several benefits; it raises the profile of ARES and formalizes our willingness to provide ARES services to these townships should they be required.

Some members of the SD&G Group joined with other Amateurs in eastern Ontario and western Quebec to provide communications for the Canadian Ski Marathon (CSM) on February 10.

SD&G operators are planning to provide communications for the Raisin River Canoe Race on April 7 which goes from St. Andrews to Williamstown.

Prescott-Russell ARES Group
Jim Thiessen, VA3KV

The Prescott-Russell ARES Group had three members who travelled down to the Orlando HamCation in mid-February while on vacation in the area: Lance, VA3LP, Jim, VA3KV and Jeff, VA3ISP. This year’s HamCation was a success as the number of Amateurs attending has increased once again. Most of the major purveyors of Amateur Radio equipment were there and many of the dealers throughout the southeastern US. Other than a smaller venue, HamCation provides all the same possibilities as you would find at Dayton including a very good indoor and outdoor fleamarket. At this time a KPC3+ packet controller was acquired and will be placed in service as an ARES digipeater and BBS back in Prescott-Russell. Also 100 Anderson Powerpoles were

RAC FIELD ORGANIZATION REPORTS

National Traffic System (NTS) Net Reports

January 2013:

Net (Manager)	Sessions	QNI	QTC
Alberta ARES	12	–	15
Alberta Aurora (VE6TRM)	30	–	0
APSN (VA6IX)	30	1201	0
BCEN (VE7XLH)	31	211	21
BCYTN (VE7WJ)	31	580	58
CECA (VE7GN)	5	47	14
MEPN (VE4LB)	30	639	6
MMWXN (VA4GD)	31	651	5
MRS (VE4HK)	9	319	0
MSMN (VE4AEW)	23	670	0
OLN (VE3SHM)	31	375	33
OPN (VE3XRC)	31	158	54
February 2013:			
Alberta ARES	12	–	–
Alberta Aurora (VE6TRM)	31	1639	0
APSN (VA6IX)	31	1371	11
BCEN (VE7XLH)	28	168	16
BCYTN (VE7WJ)	28	545	76
CECA (VE7GN)	4	52	8
MEPN (VE4LB)	28	595	11
MMWXN (VA4GD)	28	537	3
MRS (VE4HK)	8	288	1
MSMN (VE4AEW)	20	582	0

purchased for distribution at home. The group continues with their weekly nets on Tuesday evenings on the VE3PRV and VA3PRA repeaters.

The month of March will find the group preparing for the upcoming Clarence-Rockland Classic Bike race on Sunday, April 7. This race covers 85 kilometres on the back roads of the City of Clarence-Rockland.

73, Michael Hickey, VE3IPC

QUEBEC:

SM: Gilles Larivière, VA2SGL
SEC: Normand Pitre, VE2NHK

I'm sorry we missed the last issue, but here are a few items that happened during that period.

On November 7, SEC Normand, VE2NHK, who is also a member of a Search and Rescue group, was invited to a workshop which was presented by ROHCMUM – a Coalition of humanitarian agencies and community emergency preparedness in Montreal – where several NGOs were preparing an emergency plan. When VE2NHK talked about Amateur Radio it raised lots of questions.

On November 28, SEC Normand, VE2NHK, did his first ARES. presentation at the Montreal Amateur Radio Club (MARC) meeting and the attendees were very interested.

The Santa Claus Parade in Deux-Montagnes was held on December 2. Volunteers were: Carole, VA2NDJ, Hugues, VE2SSV, Elisabeth, VA2ZUT, Jean-Pierre, VA2JPY, Gilles, VA2TK, Yann, VE2YYH and Normand, VE2NHK.

The 47th Canadian Ski Marathon was held on February 9 and 10 and it went from Lachute to Buckingham. It was supervised by Ottawa ARES/EMRG group. Volunteers were: Stéphane, VE2STQ, Ray, VE2HMA, Normand, VE2NHK, Carole, VA2NDJ, Malcolm, VE2DDZ, Roland, VA2BRD, François, VE2AAY, Souly, VE2FFS, Robert, VA2DRU and Clarence, VA2SLB.

All of them giving roughly between 850 to 1,000 volunteering hours.

Désolé de vous avoir manqué à la dernière edition, mais nous re-voilà.

Le 7 Novembre votre Coordonateur d'urgence Sectorielle Normand, VE2NHK, fesant aussi parti d'un groupe de recherché et sauvetage a été invite a un atelier organise par ROHCMUM (Regroupement des organismes humanitaires et communautaires pour les mesures d'urgence à Montréal) qui venais en aide a des différent organismes à but non lucratifs à preparer un plan d'urgence. Quand Normand, VE2NHK a mentionner la radio amateur ça a sussiter beaucoup d'attention.

Le 28 Novembre votre Coordonateur d'urgence Sectorielle Normand, VE2NHK, a donné sa première presentation SURA. L'audience fût très interesser.

Le 2 Décembre fût la parade du Pere Noël à Deux-Montagnes, gerer par le groupe VA2RPP. Les bénévoles étaient : Carole, VA2NDJ, Hugues, VE2SSV, Élisabeth, VA2ZUT, Jean-Pierre, VA2JPY, Gilles, VA2TK, Yann, VE2YYH et Normand, VE2NHK

Les 9 et 10 Février étais le Marathon de ski Canadien, depart de Lachute et arrive à Buckingham. Les communications fût sous la supervision du groupe Ottawa ARES/EMRG les bénévoles present sont : Stéphane, VE2STQ, Ray, VE2HMA, Normand, VE2NHK, Carole, VA2NDJ, Malcolm, VE2DDZ, Roland, VA2BRD, François, VE2AAY, Souly, VE2FFS, Robert, VA2DRU et Clarence, VA2SLB.

Qui ont totaliser environ 850 à 1000 heures de bénévolat.

– Normand Pitre, VE2NHK

MARITIMES:

SM: Craig Seaboyer, VE1DSS

I am looking forward to the first spring fleamarket of our season on June 1 in Halifax hosted by the Halifax Amateur Radio Club (http://www.halifax-arc.org/node/46/html_links.htm#Down East Flea Market).

It is somewhat difficult to think of spring with yet another day of snow flurries outside.

We have three fleamarket venues this year again, Halifax (NS), Greenwood (NS) and St. John (NB).

For a great central location to find out all the latest news from our area, please check out the Maritime Amateur website (http://ve1jbl.webs.com/) maintained by former SM Jim Langille, VE1JBL.

Other news includes a great opportunity at my old high school, Charles P. Allen High School in Bedford, Nova Scotia, when students were able to chat with Canadian astronaut Chris Hadfield, VA3OOG, who is on the International Space Station.

More information can be found online at: http://thechronicleherald.ca/metro/383650-astronaut-students-share-final-frontier.

– 73, Craig Seaboyer, VE1DSS

UCOMING SPECIAL EVENTS

Special Event Station GS3PYE/P from the Isle of Mull
Camb-Hams will be operating GS3PYE/P from the Isle of Mull (EU-008) from May 10-16. The Camb-Hams have been activating the Scottish Isles each year since 2008 and will be returning to the Isle of Mull in 2013. Thirteen operators will be active on all bands and many modes from 2m to 160m. They will also be active on 472 kHz for the first time.
Contest operations will take place in 70 MHz CW on 12 May and 432 MHz UKAC on 14 May.
For complete information visit: http://dx.camb-hams.com

CK3C: 100th Anniversary of the Canadian Arctic Expedition 1913-1916
Sponsored by Robert Emerson, VE3RHE
Date: Saturday, June 1 to Monday, July 1.
Description: CK3C Special Event Station.
Frequencies: All HF bands (no WARC bands)
QSL via VE3RHE (Bureau or Direct). Send Direct QSL request and Canadian stamps (or green stamps) with a return envelope to:
Robert Emerson, 6950 Summer Heights Drive, Mississauga, Ontario, Canada L5N 7E9; Logbook of The World will be available.
Information: ve3rhe@rac.ca.
Operating schedule information: CK3C on QRZ.com

Grey Point Fort: GB0GPF – GN0URN – MN0GPF "A Moment of Remembrance"
A group of Radio Amateurs restoring Grey Point Fort, a WWI Coastal Defence Fort located in Helen's Bay, Crawfordsburn, Northern Ireland.
This is a 48-hour special event starting at 1700hrs UTC on May 31 to 1700hrs UTC on June 2.
An award certificate is available for contact with all three special event stations (see the sample on the website).
For more information contact <greypointfort@hotmail.co.uk>
The Special Event is under the heading
Website: http://www.greypointfort.magix.net/public

GB2BCN: Birmingham Canal Navigations and Pelsall Canal Festival
To celebrate the continuing existence of the historically significant 200-year old canals which thread the large plateau of land forming the UK West Midlands, this Amateur Radio Station will accompany the 100 or so narrow boats which will rally together at the Pelsall Canal Festival.
Date: June 15-16; GB2BCN Station On-Air: June 13-18;
HF (80 - 10), VHF (2 & 70), PMR (446: Ch 59)
For more information visit: http://www.qrz.com/db/GB2BCN

XL3S: Bicentenial of Laura Secord during the 1812-1814 conflict
Special Event sponsored by the Niagara Peninsula ARC Celebrating "200 Years of Peace and Friendship between Canada and the United States of America.
Date: June 15 to July 15. There will be other historic locations in Niagara that will have operations.
Frequency: 80 through 10 metres, CW, SSB, digital modes, WARC bands as well especially during June 22 and 23 (18.130 MHz)(10.130 MHz)
QSL: Dave Digweed, VE3FOI, 4117 Hazelnut Court. Vineland will handle the QSL cards. A special historic printing press will be used by John, VE3JWH, to print the QSLs. QRZ.com will have all the information as the special event is underway. Direct QSL cards please send $2 for outside Canada postage. We will be using the new Laura Secord postage stamp when mailing out the QSL cards for those of you that are stamp collectors.

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 XIII)
Sponsored by the New England Amateur Radio Festival, Inc.
Date: Friday, May 3 to Saturday, May 4.
Time: Gates open at 9 am Friday for sellers and buyers.
Place: Deerfield, NH, USA; the Deerfield Fairgrounds is located on Route 43 approx. 15 miles NE of Manchester NH. GPS: N42d 5m 57.4" W71d 14m 33.5s.
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>
Webpage: http://www.near-fest.com/

MAPLE RIDGE SWAP MEET
Sponsored by the Maple Ridge ARC
Date: Sunday, May 5.
Time: Vendors 7:30 am; Public at 9 am; Open for pancake breakfast 8 am.
Place: Pitt Meadows, British Columbia; 12460 Harris Road one Block South of the Lougheed Highway In the old REC Building.
Description: Ham Radio & Computer Swapmeet. The largest in the Fraser Valley. Great prices lots of stuff.
Cost: Tables $20 Includes one entry and a chance to win a radio; Public $4 includes a chance to win a radio.
Talkin: 146.800 -600 + Tone 156.7
Information: Contact Nick 604-465-9476 or <ve7te@mrarc.net>.
Webpage: http://www.mrarc.net

RIDEAU LAKES ARC 29TH SMITHS FALLS FLEAMARKET
Sponsored by the Rideau Lakes ARC
Date: Saturday, May 11.
Time: Vendors: 7 am; Public: 9 am.
Place: Smiths Falls, Ontario; Smiths Falls Curling and Squash Club (same location as last year), Old Sly's Road. Check our website for a site map.
Description: Our 29th Annual Fleamarket of Amateur Radio equipment includes: a large number of Commercial & Private Vendors; a Canteen; and a Consignment Table.
Cost: General Admission $5 (includes a door prize ticket);
Youth under 16 admitted Free of Charge;
Vendors: Tables (Approximately 2 1/2 X 5 ft) $10 (includes one admission.
Talkin: VE3RLR on 147.21 MHz+.
Information: For more information or reservations, contact the RLARC at <ve3rlr@yahoo.ca> or visit our website.
Webpage: http://ve3rlr.dyndns.org

BC AMATEUR RADIO COORDINATION COUNCIL ANNUAL GENERAL MEETING
Sponsored by North Shore ARC
Date: Sunday May 26.
Time: 9 am.
Place: North Shore Emergency Management Office, 147 E. 14th Street, North Vancouver, BC.
Information: Secretary Ed Frazer, VE7EF <ve7ef@rac.ca>.
Webpage: http://www.bcarcc.org

STREETSVILLE BREAD AND HONEY FESTIVAL SPECIAL EVENT STATION
Sponsored by the Mississauga ARC
Date: Saturday, June 1 to Sunday, June 2.
Time: The special event station will operate from 1400z to 2000z both Saturday and Sunday.
Place: Mississauga, Ontario.
Description: This is a special event station only. The Mississauga ARC operates a special event station at the festival for QSL & certificate collectors. Operating times are 1400 to 2000 UTC on each day. SSB frequencies are 7.300 and 14.240 MHz +/- QRM. Requests for QSL cards to MARC, c/o Michael Brickell, VE3TKI, 2801 Bucklepost Crescent, Mississauga, ON L5N 1X6 Canada, with an SASE. Please note: we cannot use US stamps for return mail from Canada to the USA. However, green stamps will be gratefully received.
Information: <dgoodier@gmail.com>
Webpage: http://www.breadandhoney.ca/index.php and http://marc.on.ca/marc/events/events_bread_honey.asp

CENTRAL ONTARIO HAMFEST & FLEAMARKET
Sponsored by the Guelph ARC & Kitchener-Waterloo ARC
Date: Sunday, June 2.
Time: Vendors 7 am; Public 9 am.
Place: Cambridge, Ontario; Waterloo Regional Police Association Recreation Centre; RR 2, 1128 Rife Rd. North Dumfries Township beside Hwy 401, between exits 268 & 275;
Location: 43.344939, -80.418376.
Watch for the signs.
Description: 39 years and still going strong- bringing together Amateur Radio operators, hobbyists and enthusiasts just before Field Day and the summer heat. Indoor tables and tailgating; major vendors, loads of collectibles; free prize draws, tasty refreshments. Easy parking.
Cost: General Admission $7 (under 12 free).
Talkin: VE3KSR 146.970 (-) tone 131.8 and 146.520 when you're nearby
Information: Contact: info@hamfest.on.ca
Webpage: http://www.hamfest.on.ca

QUEBEC PROVINCIAL HAMFEST
Sponsored by the Sorel-Tracy ARC
Date: Sunday, June 2.
Time: Exhibitors 6 am; Early bird admission 6 am; General admission 9 am.
Place: Sorel-Tracy, Quebec; Colisée Cardin de Sorel-Tracy; 200, rue Victoria, Sorel-Tracy (Québec) J3P 7K1
GPS: 46.2.40N 73.6.28W
Description: Commercial exhibitors: Ham radio, electronics, computers. More than 100 tables. Prizes starting at 10 am.
Cost: Tables $15 includes one admission; Early bird admission $15;
General admission $8.
Talkin: 145.370MHZ- T 103.5
446.25000MHz -5.000 D-Star
Information: Luc Leblanc, VE2DWE, PO Box 533 Sorel-Tracy (Quebec) J3P 5N9; ve2cbs@raqi.ca or 450 743-8676.
Webpage: http://www.hamfest.qc.ca

LONDON VINTAGE RADIO CLUB FLEAMARKET
Sponsored by London Vintage Radio Club
Date: Saturday, June 8.
Time: 7 am for public and vendors alike.
Place: Guelph, Ontario; East side of the parking lot of Hammond Manufacturing, 394 Edinburgh Road North (at corner of Speedvale and Edinburgh).
Cost: $10 for vendors; no charge to public.
Description: 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. Bring your own table. The Hammond Museum of Radio on Southgate Road will be open for visitors in the afternoon.
Information: <larry.asp@sympatico.ca>
Webpage: http://lvrc.homestead.com/fleamarket.html

CENTRAL ALBERTA ARC 43RD ANNUAL PICNIC AND HAMFEST
Date: Friday, June 14 to Sunday, June 16.
Time: The event starts on Friday at 9 am and ends at 8 pm on Father's Day Sunday.
Place: Red Deer, Alberta; Shady Nook Hall, 52°13'53.79"N 113°56'48.58"W.
Information: Visit our website or contact Geoffrey Norris, VE6TAC, at 403-346-3077 or by email at <ve6tac@rac.ca>.
Webpage: http://www.caarc.ca

50TH INTERNATIONAL HAMFEST
Sponsored by International HamFest Inc
Date: Friday, July 12 to Sunday, July 14.
Time: Friday 6 pm; Saturday 9 am; Sunday 7 am.
Place: Boissevain, Manitoba; at the US Lodge in the International Peace Garden south of Brandon, MB on the Canadian/US border.
Description: Fleamarket, Rabbit Hunts, Mobile Judging, Homebrew Contest, Prizes, Food Concession, Sat night Dance with Dakota Rose Band, Free Sunday Breakfast for those registered.
Cost: $13 per registrant for the event.
Talkin: VE4IHF 146.85- no tone.
Information: Contact <ve4qk@mts.net>.
Webpage: http://www.mts.net/~holderr/ihf.htm

ONTARIO HAMFEST
Sponsored by the Burlington ARC
Date: Saturday, July 13.
Place: Milton, Ontario
Time: Robert St Gate – Inside & Commercial Vendors 7 am and Tailgate Vendors 8 am;
Public: Thomas St Gate *only* 9 am.
Cost: Public: $7; Tables: $14 each; Tailgate Permit: $7 per space.
Talkin: 146.520 –.
Information: Co-Event Coordinators: Chuck Wilson, VE3IUO; Herb Teather, VA3HRB; Email: barc.ontariohamfest@gmail.com. Mail Vendor reservations to: Norm Freidin, VE3CZI, 2129 Larabee Court, Burlington, ON L7P 3S3, 905-335-8962 <barc.ontariohamfest@gmail.com> or <ve3czi@arrl.net>.
Webpage: http://www.barc.ca/Ontario%20Hamfest.htm

OTTAWA (CARP) 17TH ANNUAL HAMFEST
Sponsored by the Ottawa ARC
Date: Saturday, September 7.
Place: Ottawa (Carp), Ontario; at the Carp Agricultural Fairgrounds (W. Erskine Johnson Arena); 3832 Carp Road (near Falldown Lane).
Time: Building Vendor Setup: 7:30 am to 9 am; Tailgaters Open: 8 am; Indoor Fleamarket Open: 9 am to Noon.
Cost: $6 General Admission, $12/table (plus admission), $5/tailgate (plus admission).
Talkin: VE2CRA, 146.94–, 100 Hz.
Description: The region's largest fleamarket and hamfest. Major door prize draws!
We also have onsite Amateur Radio licence exams! Get your licence or upgrade during the hamfest!
Information: Ed Sich, VE3WGO, 613-667-2752; or contact <fleamarket at oarc.net>.
Webpage: http://www.oarc.net/fleamarket

KARC HAMFEST 2013
Sponsored by the Kingston ARC and the Military Communications & Electronics Museum
Date: Saturday, September 14.
Place: Kingston, Ontario; at the Military Communications & Electronics Museum, 95 Craftsman Blvd, Kingston, ON K7K 1A1.
Time: Vendors at 7:30 am; Public at 9 am.
Cost: Tables are $10 each; admission is a *donation* to the Museum.
Talkin: VE3KBR 146.940-, 151.4Hz tone.
Information: Douglas Richards, VE3FFR, Terry Barret, VA3KLG, Steve Cutway, VE3KC; contact: <hamfest@ve3kbr.com>
Webpage: http://www.ve3kbr.com

LARC 36th ANNUAL HAMFEST
Sponsored by the London ARC
Date: Sunday, September 22.
Time: Vendors: 8 am; Public 9 am to 12 noon.
Place: Hellenic Community Centre, 133 Southdale Road W (new location!).
Description: Commercial dealers, Free Parking, air conditioned, wheelchair accessible with handicap washrooms.
Cost: Tables $20;
Public $8 (age 10 and up).
Talkin: VA3LON, 147.060, PL 114.8.
Information: Contact: Ruth Dahl, VE3RBO, 519-455-9465 or larchamfest@gmail.com. See website flyer for info and directions.
Website: http://www.larc.ca

HARC HAMFEST 2013
Sponsored by the Hamilton ARC
Date: Saturday, October 5.
Time: Vendors 7 am; Public 9 am.
Place: Ancaster, Ontario; the Concession Building at the Ancaster Fairgrounds, 630 Trinity Road, Ancaster, L0R 1R0.
Description: An Amateur Radio, computer, and electronics fleamarket with parking and Snack Bar onsite.
Cost: General Admission: $7 per person.
Talkin: 146.76 (-) with tone 131.8 VE3NCF
Information: General info: John Boswell, VA3BOZ, <va3boz@hamiltonarc.ca> or at 905-227-0155. Vendor liaison: Mardy Eedson, VE3QEE <ve3qee@hamiltonarc.ca> or 905-648-0187.
Mail payment to: The Hamilton ARC, 117-350 King Street East, PO Box 75073, Hamilton, Ontario L8N 4G6.
Tables are reserved upon receipt of payment on a first come basis. Please book in advance to avoid disappointment.
Webpage: http://www.hamiltonarc.ca/index.php?module=htmlpages&func=display&pid=38

MONTREAL SOUTH SHORE HAMFEST
Sponsored by the Club Radio Amateur Rive-Sud de Montréal
Date: Saturday, October 19.
Time: Vendors 6 am; Visitors 9 am.
Place: Longueuil, Quebec (10 minutes from downtown Montreal); Place Desaulniers, 1023 Taschereau Blvd Longueuil.
Description: The biggest Hamfest in Quebec. Accessible to handicapped persons. Restaurant. Free parking
Cost: Table $10 (individual entry not included); Visitors $7.
Talkin: 145,390 (-) ctcss 103,5 MHz, VE2RSM
Information: Martin Fournier, VE2DNF, 450-466-2810 or <hamfest@ve2clm.ca>. François Drien, VE2FDA, 450-672-9994 or <ve2fda@ve2clm.ca>.
Webpage: http://www.ve2clm.ca/articles.php?lng=fr&pg=120

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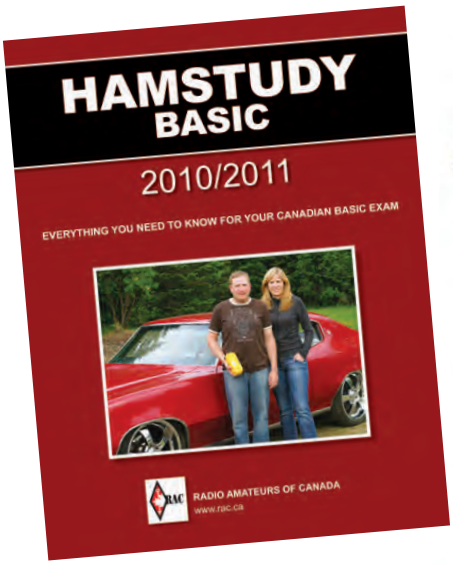

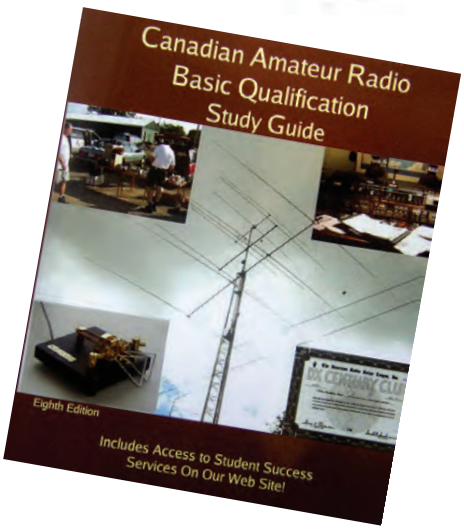

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FT-450 Automatic Antenna Tuner ATU-450 optional

FT-450AT With Built-in ATU-450 Automatic Antenna Tuner

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Specifications subject to change without notice. Some accessories and/or options may be standard in some areas. Frequency coverage may differ in some countries. Check with your local Yaesu dealer for specific details.

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