TCA

The Canadian Amateur

Canada's Amateur Radio Magazine
La Revue des Radioamateurs Canadiens

MAY / JUNE 2014 – MAI / JUIN 2014

Big Signals, Big Ship

Christopher Friesen,VE4CWF, working SO-50 on a cold night.

Our YL Profile: Liel Shapiro, VA7LSH

PAUL PETERS
COWICHAN VALLEY REGIONAL DISTRICT

Paul Peters, VE7BZ – CrossBorder 2014

**RAC Annual
General Meeting
Sunday, July 27, 2014
New Westminster, BC**

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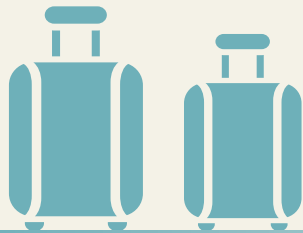- Convenient interest free payment options

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"Deep inside the battleship USS North Carolina, a radio operator concentrates intensely on the receiver in front of him. The state of the art, 22 tube, RCA receiver, known as an RBB, tunes from 4 to 18 MHz. The receiver, built in 1941, is connected to a large vertical near the smoke stack of the vessel." (see page 28)

"I was busy building a portable antenna for satellite operation, one that would shoot the five watts from my handheld transceiver into the five-hole of SO-50. To score that goal I needed to build an antenna that was lightweight and ergonomic and able to stand up to the extremely cold temperatures of my northern climate. The "Slap Shot" was the result." (see page 34)

"Liel loves to talk on the radio and – from what I gathered while talking to this young lady – she will make a great Amateur Radio operator." (see page 45)

"On January 11, 2014 at 1730z, one of the largest ever Amateur Radio Emergency Communications exercises was live on-air with 90 stations." (see page 49)

WHAT'S NEW ON THE "COMMUNICATIONS" FRONT AT RAC?

As mentioned in the last issue of TCA, Radio Amateurs of Canada has been making good use of both its social platforms as a communications medium to complement the website. I have been receiving significant positive feedback for the way in which we now have the ability to broadcast near spontaneous dissemination of information, news and bulletins.

As of this writing our Facebook membership has reached 3,000 and is growing at a fast pace. Once again, here is the address (URL): https://www.facebook.com/groups/2624005010/

Cognizant of the fact not everyone uses Facebook, we will continue to use our Twitter account (@RACTWEETS) despite its 140 character text limitation. Often, you will see our Twitter postings will link to another destination for the user to get all the details of whatever we broadcast.

Do you have any Amateur Radio news tidbits, pictures (ham shack, mobile/base antenna...), personal write-ups or bios, DX success stories and so on that you would like to share with RAC? Please send it to us by email or regular mail to the address provided below and we'll help find the best place to give you that opportunity to share it.

Vincent Charron, VA3GX/VE2HHH – RAC Director of Communications and Fundraising
720 Belfast Road, #217, Ottawa ON K1G 0Z5; Telephone: 1-877-273-8304; Email: raccomms@gmail.com

OPERATING

DEPARTMENTS

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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
PO Box 11156, Station H
Nepean, ON K2H 7T9
Telephone: 613-670-3230
Email: ve3exy@rac.ca

There are limits and restrictions for use of the Outgoing QSL Bureau. For more information, surcharges and card sorting details, visit http://www.rac.ca or http://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. (*Note: Method B is preferred).

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Sponsored by the Halifax ARC
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PO Box 8895
Halifax, NS B3K 5M5

VE2 Bureau (A, B)*
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VE3 Bureau (D)
QSL Manager
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Streetsville, ON L5M 2B8

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Weyburn, SK S4H 2M7

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VO Bureau (B, C)*
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St. John's, NL A1B 4J9

VY1 Bureau (A, B)
Hugh Henderson, VY1HH
Box 33062
Whitehorse, YT Y1A 5Y5

Silent Keys – In Memoriam

With regret, we record the passing of these Amateur Radio operators.
Nous avons le regret de vous annoncer le décès des radioamateurs suivants.

VA3AY – Bill Haskin, of Thunder Bay, ON , on February 16, 2014.
VA3WLA – Les Armstrong, of Burlington, ON, at age 80 , on January 24, 2014.
VA7ALS – Tom Jones, of North Vancouver, BC, at age 57, on January 19, 2014.
VE1ABV – Johnny Weir, of Marion Bridge, NS at age 90, on December 8, 2013.
VE1AOL – Eleanor Cottreau, of Upper Wedgeport, NS, at age 83, on January 16, 2014.
VE1EDT – Ed Turner, of Moser River, NS, at age 83, on March 7, 2014.
VE1FM – Woody MacDonald, of Trenton, NS, at age 86, on March 15, 2014.
VE1LR – Dick O'Connell, of Dartmouth, NS, at age 95, on December 18, 2013.
VE1MUS – Barry Hallett, of Lawrencetown, NS, at age 71, on December 27, 2013.
VE1QO – Art Crowell, of Yarmouth, NS at age 81, on January 22, 2014.
VE1VX – Mel Lever, of Dartmouth, NS, at age 84, on March 21, 2014.
VE1YE – Lelitia Wiseman, of Sackville, NB, at age 78, on February 20, 2014.
VE2BHW – Fred Lackstone, of Montreal, QC, on March 28, 2014.
VE2BLE – Richard Desforges (VE2DRD), of Gatineau, QC, at age 49, on March 19, 2014.
VE2CU – Michel St-Hilaire, of Laval, QC, at age 72, on March 23, 2014.
VE2DA – Gerald Groleau, of St-Joseph de Sorel, QC, at age 80, on March 7, 2014.
VE2JCG – Jean Claude Grenier, of Gatineau, QC, at age 81, on March 2, 2014.
VE2VCJ – Jean-Marie Jutras, of St-Edmond, QC, at age 76, on March 18, 2014.
VE3AUC – Doug Cormier, of Ottawa, ON, at age 69, on February 7, 2014.
VE3AUQ – Audrey Darlington, of Magnetawan, ON, at age 86, on December 7, 2013.
VE3BKK – Ken Brown, of Sarnia, ON, at age 85, on January 18, 2014.
VE3CAE – Bud Kern, of Perth, ON, at age 82, on August 20, 2013.
VE3EEK – Bob La Rose, of Ottawa, ON, at age 89, on December 25, 2013.
VE3ERB – Don Burgess, of Burlington, ON, 95, at age on February 23, 2014.
VE3ETT – Millie La Rose, of Ottawa, ON, at age 93, on November 14, 2013.
VE3FEM – Fred Foerter, of North Bay, ON, on February 24, 2014.
VE3FJH – Frank Horsfall, of Little Current, ON, at age 84, on November 16, 2013.
VE3FMT – Jim Trayes, of Toronto, ON, at age 85, on November 29, 2013.
VE3FXD – Francis Duck, of Simcoe, ON, at age 78, on February 26, 2014.
VE3GOV – Pat Owens, of Kitchener, ON, at age 80, on March 3, 2014.
VE3HLD – Hubert "Shot" Heath, of Oakville, ON, at age 85, on March 13, 2014.
VE3IJO – Werner Grewe (N4DYE), of Cape Canaveral, FL, at age 81, on January 14, 2014.
VE3JBX – Dave Hilborn, of Ottawa, ON, on February 9, 2014.
VE3JPN – Tom Bygnes, of Churchill, ON, at age 97, on February 6, 2014.
VE3ODT – Don Tyndall, of Etobicoke, ON, on November 25, 2013.
VE3RM – Don Dashney, of L'Orignal, ON , at age 95, on February 12, 2014.
VE3TEI – Harri Merivirta, of Sudbury, ON, at age 61, on March 22, 2014.
VE3TXN – Edward Joseph Fedorowski, of Mississauga, ON at age 68, on January 3, 2014.
VE3UB – Neal Moore (VE3LDU), of London, ON, at age 64, on February 6, 2014.
VE4FG – Ruth Christie, of Glenboro, MB, at age 80, on May 14, 2012.
VE4GF – Gord Finch, of Winnipeg, MB, at age 76, on January 28, 2014.
VE4GW – Bob Gillespie, of Gladstone, MB, at age 91, on February 15, 2014.
VE4IWB – Reg Jones, of Douglas, MB, at age 70, on August 12, 2013.
VE4JCM – Colin McBeath, of Winnipeg, MB, at age 90, on March 12, 2014.
VE4OB – Ed Funk, of Winnipeg, MB, at age 85, on January 28, 2014.
VE4PJ – Peter McArthur, of Winnipeg, MB, at age 81, on January 31, 2014.
VE4TI – Terry Herndon, of Rivers , MB, at age 69, on June 2, 2012.
VE4WAW – Bill Whiston, of Winnipeg, MB, at age 82, on November 27, 2013.
VE5BAL – Ed Gillis, of Brandon, MB, at age 89, on December 11, 2013.
VE5GE – Ed Berryere, of Saskatoon, SK, at age 82, on March 14, 2014.
VE5GES – Gertrude Story, of Weyburn, SK, at age 84, on January 18, 2014.
VE6ANO – Percy Webb, of Calgary, AB, at age 83, on January 20, 2014.
VE6CHO – Lewus Engler, of Olds, AB, at age 78, on March 13, 2014.
VE6HGR – Gerhard Roolker, of Lacombe, AB, at age 73, on March 23, 2014.
VE6JPN – Jerry Woelk, of Hanna, AB, at age 67, on March 4, 2014.
VE6WJ – Allan Johnston, of Big Valley, AB, at age 85, on February 16, 2014.
VE7AIL – Bob Heller, of Victoria, BC, on January 23, 2014.
VE7BK – Bill Killam, of Vancouver, BC, at age 101.5, on January 31, 2014.
VE7EQD – George Redpath, of Prince George, BC, at age 77, on February 8, 2014.
VE7EYU – Ivar Lorentzen, of Langley, BC, on February 26, 2014.
VE7GRT – Rai Thomas, of Sooke, BC, at age 84, on November 29,2013.
VE7MEN – Gus Ewing, of Delta, BC, at age 92, on January 21, 2014.
VE7TBG – Gunter F. Becker, of Creston, BC at age 79, on November 20, 2013.
VE7WTW – Wayne Withers, of Burnaby, BC, at age 75, on March 6, 2014.
VE9PV – Peter Haines, of Havelock, NB, at age 87, on March 1, 2014.
VE9WN – Weldon Turner, of Moncton, NB, on December 17, 2013.
VO1PJN – Paul Noonan, of Bay de Verde, NL, at age 69, on April 16, 2013.

The list of Silent Keys is prepared by volunteers at RAC Headquarters at <rachq@rac.ca>.

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For RAC Membership Inquiries and Change of Address please contact RAC HQ at: rachq@rac.ca

Join RAC or renew your membership at:
https://www.rac.ca/en/rac/membership/form/

Find us at @RACTWEETS on Twitter or search for "RAC" on Facebook.

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A MESSAGE FROM THE PRESIDENT / UN MESSAGE DU PRÉSIDENT

Geoff Bawden, VE4BAW
204-295-0714
ve4baw@rac.ca

I am hoping to see you at the 2015 RAC Annual General Meeting in New Westminster, British Columbia on Sunday, July 27. Please check the AGM notice on page 6. Not many national societies have an annual meeting and I hope that you take advantage of the opportunity. RAC has decided to travel the country with the AGM to meet with our members from coast to coast (and maybe in the future to our northern coast!).

You will recall that RAC has determined to increase our number of revenue sources and not be totally dependent on membership fees as we have been historically. This is designed to take pressure off potential membership increases. In that spirit we have entered into an agreement with RFinder and you will see the ad on the back cover of this issue of TCA . This partnership will provide an income stream to RAC as well as a profile for your national society.

We want to encourage new Amateurs to join RAC and are offering a free one-year basic membership (eTCA) to newly certified hams. We are encouraging clubs to tell persons in their courses that they will receive an offer from RAC for a free one-year membership when they receive their certification. They will receive a letter and "coupon" from RAC and all they have to do is send it to our office.

During 2014 we will launch a new program to provide an incentive to affiliated clubs to sign up members for RAC. Affiliated clubs signing up renewals and new members will receive a financial benefit. Stay tuned for the details!

I would be remiss if I didn't point out that we have started our rolling launch of our new website. A new feature of this site is the ability for members to download eTCA to mobile devices. We are proud of our steps to move further into the 21st century! Let us know how we are doing.

Once again, for our fourth year since 2011, RAC will have a profile at the Dayton Hamvention in Ohio. Come to Dayton, visit our booth BA0436 and talk to your RAC volunteers. Better yet contact us and volunteer to work at the booth by contacting RAC Headquarters at racgm@rac.ca.

I want to congratulate the American Radio Relay League (ARRL) – all Amateurs should congratulate them. This year is their 100th anniversary and RAC tips its hat to them and to their success. They will be having quite a celebration this year and you can help celebrate by visiting their website at http://www.arrl.org/. ARRL's past and ongoing contributions to Amateur Radio are undeniable. Ham radio would be very much poorer without their contributions.

We are looking for a location for future AGMs. We want to cross the country and meet as many hams as possible. There is nothing like the personal touch.

Take care. See you in Dayton!

Geoff Bawden, VE4BAW
RAC President and Chair

J'espère vous voir à l'Assemblée générale annuelle (AGM) 2015 de RAC à New Westminster, Colombie-Britannique, le dimanche 27 juillet. S.v.p., vérifiez l'avis à propos de l'AGM à la page 7. Il n'y a pas beaucoup de sociétés nationales qui tiennent une assemblée annuelle. J'espère que vous profiterez de cette opportunité. RAC a décidé de tenir l'AGM partout au pays afin de rencontrer nos membres d'un océan à l'autre (et peut-être dans le nord à l'avenir!).

Vous vous rappellerez que RAC est déterminé à accroître nos sources de revenus et de ne plus être totalement dépendant des frais d'adhésion des membres comme nous le faisions historiquement. Ceci afin d'enlever de la pression sur le besoin de croissance du nombre de nos membres. C'est dans cet état d'esprit, que nous avons conclu une entente avec RFinder. Vous le verrez en regardant l'illustration sur le couvert arrière du numéro actuel de TCA. Ce partenariat amorcera un mouvement vers RAC tout autant qu'il donnera un nouveau profil à notre société nationale.

Nous voulons encourager de nouveaux amateurs à joindre RAC et nous offrons un membership de base d'un an (eTCA) aux nouveaux amateurs certifiés. Nous encourageons les clubs à dire aux participants de leurs cours qu'ils recevront la proposition de RAC de devenir membre pour un an quand ils recevront leur certification. Ils recevront une lettre et un coupon de RAC à cet effet et tout ce qu'il restera à faire sera de les envoyer à notre bureau.

Au cours de 2014, nous lancerons un nouveau programme pour inciter les clubs affiliés à recruter des membres pour RAC. Les clubs affiliés qui feront signer des renouvellements et adhérer de nouveaux membres se mériteront des avantages financiers. Demeurez à l'écoute pour les détails!

Je serais négligeant si je ne mentionnais pas que nous avons débuté les travaux de lancement de notre nouveau site web. Une nouvelle caractéristique de ce site sera, pour les membres, de pouvoir télécharger eTCA sur des appareils mobiles. Nous sommes fiers de nos progrès à l'aube du 21ième siècle ! Laissez-nous savoir comment nous réussissons!

Un fois encore, la quatrième depuis 2011, RAC sera présent au Dayton Hamvention dans l'Ohio. Venez à Dayton, visitez notre kiosque BA0436 et dialoguer avec vos bénévoles. Encore mieux, communiquez avec nous et devenez un travailleur volontaire à notre kiosque en joignant le bureau chef de RAC à racgm@rac.ca.

Je veux féliciter les membres de l'American Radio Relay League (ARRL) – tous les amateurs devraient les féliciter. Cette année est le centième anniversaire de l'ARRL et RAC lève son chapeau devant son succès. Il y aura toute une célébration cette année vous pouvez aider à la célébration et visitant leur site web à http://www.arrl.org/. Les contributions passées et présentes de l'ARRL au radioamateurisme sont indéniables. La radio amateur ne saurait être aussi « riche » sans leurs contributions.

Nous sommes à la recherche d'un nouvel endroit pour nos futures AGM. Nous voulons parcourir le pays et rencontrer autant d'amateurs que possible. Il n'y a rien comme le contact personnel

Prenez soin de vous. Au revoir à Dayton!

Geoff Bawden, VE4BAW
RAC Président-directeur général

– Traduction par Claude Lalande, VE2LCF

TCA

— NOTICE —

RADIO AMATEURS OF CANADA INC.

The Radio Amateurs of Canada is pleased to hold its Annual General Meeting (AGM) in New Westminster, British Columbia. The AGM event will be hosted by the Orca DX and Contest Club and will be held in conjunction with the 59th annual Vancouver 2014 Pacific Northwest DX Convention which is being held at the same location. All RAC members are encouraged to attend the Annual General Meeting.

Date: Sunday, July 27, 2014 after the DX Convention.

Time: 1 pm

Place: The Annual General Meeting will be held at the Inn at the Quay, 900 Quayside Drive in New Westminster, British Columbia (see below for more information).

Agenda items will include:

* Report of the President
* Review of the 2013 finances
* Appointment of auditors for 2014
* Amendment to RAC Constitution (see the right column)
* Question and Answer period

This is your opportunity to hear what your representatives have been doing over the past year, to raise questions, and to make suggestions about how RAC is managed and where it is going in the future.

The meeting will be attended by some of the members of the RAC Board of Directors and Executive and is open to all RAC members. In addition there will be a planned Webinar which RAC members can attend remotely.

For more information on the Pacific Northwest DX Convention please see the article below or visit:

http://orcadxcc.org/vancouver2014/home.html

2014 PACIFIC NORTHWEST DX CONVENTION

The Orca DX and Contest Club is pleased to host the Annual General Meeting of Radio Amateurs of Canada as part of the **59th annual Vancouver 2014 Pacific Northwest DX Convention**.

The Convention will be held from July 25-27 at the beautiful Inn at the Quay in New Westminster, British Columbia, just 25 minutes by SkyTrain southeast of downtown Vancouver and 20 minutes north of the "Peace Arch" BC-Washington border crossing.

Highlights include:

* a great program of notable DXpeditioners
* a super prize package
* one of the most picturesque settings ever to host this annual gathering of DXers

The theme of the Convention is "**Remember the Magic**". Come to the event and reawaken the feeling of discovering Amateur Radio for the first time – and especially for DXers, the excitement of making contacts all over the world and the "magic" of how that actually happens.

The program is still being developed and will be updated regularly on our website. We are planning an extraordinary time for all attendees. DXers will enjoy a riveting lineup of presentations and seminars, and plenty of prizes to make things even more interesting. For your non-DXer companions, New Westminster offers a wealth of activities and sights to see, and downtown Vancouver is nearby.

For more information please visit:

http://orcadxcc.org/vancouver2014/home.html

CONSTITUTIONAL CHANGE NOTICE

The new *Canada Not-for-profit Corporations Act (NFP Act)* establishes a new set of rules for federally incorporated not-for-profit corporations in Canada. To make the transition to the *NFP Act*, a federally incorporated not-for-profit corporation will need to replace its letters patent, supplementary letters patent (if any) and by-laws with a Certificate of Continuance (attached to which are the corporation's articles) and new by-laws that comply with the *NFP Act*.

It is the recommendation of the RAC Board of Directors that:

Continuing the Corporation under the provisions of the *Canada Not-for-profit Corporations Ac*t and authorizing the Directors to apply for a Certificate of Continuance.

WHEREAS the Corporation was incorporated under Part II of the *Canada Corporations Act* by Letters Patent dated 2nd day of October, 1992; and

[WHEREAS those Letters Patent were amended by Supplementary Letters Patent dated 27th day of July, 2014; and]

WHEREAS it is considered to be in the best interests of the Corporation that it be continued under the *Canada Not-for-profit Corporations Act (NFP Act)* pursuant to section 297 of the *NFP Act*;

BE IT RESOLVED AS A SPECIAL RESOLUTION THAT:

1) The Directors of the Corporation are authorized and directed to make an application under section 297 of the *NFP Act* to the Director appointed under the *NFP Act* for a Certificate of Continuance of the Corporation;

2) The Articles of Continuance (transition) of the Corporation, which have been submitted to this meeting and are annexed to these minutes as Schedule A, are approved;

3) The general operating by-law of the Corporation (as amended) is repealed effective on the date that the corporation continues under the *NFP Act* and the new general operating by-law No. 1 which has been submitted to this meeting and is annexed to these minutes as Schedule B is approved and will be effective on the same date.

4) Any one of the officers and Directors of the Corporation is authorized to take all such actions and execute and deliver all such documentation, including the annexed Articles of Continuance (transition), the notice of registered office and of Directors in the forms fixed by the Director, which are necessary or desirable for the implementation of this resolution.

The undersigned, being the duly appointed (Secretary) of the Corporation, certifies that the above is a true and correct copy of a special resolution dated 27th day of July, 2014 by a majority of not less than two-thirds of the votes cast by the members of the Corporation who voted in respect of the resolution, and the resolution is in full force and effect, unamended as of the date below.

Dated this 27th day of July, 2014
Alvin Masse, VE3CWP, RAC Corporate Secretary

At the 2014 Annual General Meeting, RAC members who are in attendance will be invited to vote on and give final approval to the special resolution.

I look forward to your attendance.

Geoff Bawden, VE4BAW
President – Radio Amateurs of Canada

— AVIS —

RADIO AMATEURS DU CANADA INC.

Radio Amateurs du Canada est heureux de tenir son Assemblée générale annuelle (AGM) à Vancouver, Colombie-Britannique. L'hôte de l'AGM est le Orca DX and Contest Club qui organisera l'événement en collaboration avec la 59th annual Vancouver 2014 Pacific Northwest DX Convention laquelle se tiendra au même endroit. Tous les membres de RAC sont invités à participer à l'Assemblée générale annuelle.

Date : dimanche le 27 juillet 2014, après la convention DX.

Heure : 13 heures

Lieu : l'Assemblée générale annuelle se tiendra à l'Inn at the Quay, 900 Quai Drive à New Westminster, Colombie-Britannique (voir ci-dessous pour plus d'informations).

L'ordre du jour inclura :

- le rapport du président;
- la revue des états financiers de 2013;
- la nomination du vérificateur pour 2014;
- amendement à la Constitution de RAC (voir colonne de droite);
- période de questions et de réponses.

Voici votre chance d'entendre vos représentants vous dire ce qu'ils ont accompli au cours de l'année dernière, poser des questions, faire des suggestions sur la gestion de RAC et connaître ses intentions futures.

Plusieurs membres du Conseil d'administration et de l'Exécutif de RAC participeront à l'Assemblée, à laquelle tous les membres de RAC sont bienvenus. De plus, des membres de RAC pourront participer à l'assemblée à distance au moyen d'un Webinar prévu à cet effet.

Pour plus d'informations sur la Pacific Northwest DX Conference, s'il vous plaît voir l'article ci-dessous ou visiter:

http://orcadxcc.org/vancouver2014/home.html

59ième CONVENTION DX DU PACIFIQUE DU NORD-OUEST

L'Orca DX and Contest Club est heureux d'accueillir l'Assemblée générale annuelle de Radio Amateurs du Canada comme partie prenante de **la 59ième Convention DX (Vancouver 2014) du Pacifique du Nord-Ouest**.

La convention aura lieu du 25 au 27 juillet à la magnifique auberge Inn at the Quay à New Westminster, Colombie-Britannique, à seulement 25 minutes du sud-est du centre ville de Vancouver avec le SkyTrain et à 20 minutes au nord de "Peace Arch" à la frontière CB – Washington.

Les points saillants sont :

- une grande présentation par des DXpeditioners reconnus
- un super prix de présence
- un endroit des plus pittoresques pour accueillir le rassemblement annuel des DXers

Le thème de la convention est "**Souvenir magique**". Venez à la convention et réveillez en vous le sentiment relié à la découverte de la radio amateur des premiers temps – et spécialement pour les DXers, l'excitation de réussir des contacts partout au monde et la magie « du comment » cela se produit réellement.

Le programme est en développement et sera mis à niveau régulièrement sur notre site web. Nous sommes à planifier d'extraordinaires moments pour nos participants. Les DXers seront heureux d'une succession captivante de présentations et de séminaires, et de nombreux prix rendant les choses encore plus intéressantes. Pour les compagnes et compagnons (non DXers), New Westminster offre une pléiade d'activités et de lieux agréables à voir. Et le centre ville de Vancouver est tout près.

Pour plus d'informations, s.v.p. aller à : http://orcadxcc.org/vancouver2014/home.html

AVIS DE CHANGEMENTS À LA CONSTITUTION

La nouvelle *Loi canadienne sur les organisations sans but lucratif* (*Loi BNL*) a établi de nouveaux règlements pour les corporations fédérales à but non lucratif incorporés au Canada. Pour faire la transition à la *Loi BNL*, une organisation sans but lucratif incorporée au fédéral devra remplacer ses lettres patentes, lettres patentes supplémentaires (s'il y lieu) et les règlements du certificat de prorogation (auxquels sont joints les articles de la corporation) et les nouveaux règlements conformes à la loi sur les organisations sans but lucratif (*Loi BNL*).

Le Bureau des directeurs de RAC recommandent ce qui suit.

Maintenir notre corporation sous les dispositions de la *Loi du Canada sur des organisations sans but lucratif* et autoriser les directeurs à demander un certificat de prorogation.

QUOIQUE la corporation ait été incorporée selon la partie 2 de la *Loi des corporations du Canada* par lettres patentes en date du 2 octobre1992; et

QUOIQUE ces lettres patentes aient été amendées par des lettres patentes supplémentaires en date du 27 juillet 2014; et

QUOIQUE qu'il soit considéré qu'il est du meilleur intérêt de la corporation de poursuivre ses activités sous l'égide de la loi des organisations à but non lucratif selon la section 297 de la *Loi BNL*;

À TITRE DE RÉSOLUTION SPÉCIALE, IL EST DEMANDÉ QUE :

1) Les directeurs de la corporation soient autorisés et habilités à faire application sous la section 297 de la *Loi BNL* auprès du directeur nommé sous la *Loi BNL* pour obtenir un certificat de prorogation de la corporation ;

2) Les articles de prorogation (transition) de la corporation, qui ont été soumises à l'assemblée et annexées aux minutes selon la cédule A, soient approuvées;

3) Le règlement général de la Corporation (tel qu'amendé) est abrogé à la date à laquelle l'existence de la Corporation se poursuit sous la *Loi BNL*, et le prochain règlement général No. 1, qui a été soumis à cette assemblée et annexé aux présentes minutes selon la cédule B, est approuvé et entrera en vigueur à la même date.

4) Tout responsable ou directeur de la Corporation est autorisé à prendre toutes actions, d'exécuter et délivrer toute documentation, incluant les articles annexés à la prorogation (transition), l'avis du bureau enregistré et des directeurs dans la forme déterminée par le directeur, qui sont nécessaires ou souhaitables à la mise en application de cette résolution.

Le soussigné, dûment nommé secrétaire de la Corporation, certifie que ce qui précède est une copie conforme et correcte de la résolution spéciale du 27 juillet 2014 accepté à une majorité du deux tiers ou plus des votes exprimés par les membres de la Corporation qui ont voté pour la résolution, et la résolution prend plein effet, non amendée, à la date ci-dessous.

Le 27 juillet 2014
Alvin Masse, VE3CWP, secrétaire corporatif de RAC

À l'assemblée annuelle générale de 2014, les membres de RAC en attente seront invités à voter et à approuver la résolution spéciale.

Merci de participer à l'assemblée.

Geoff Bawden, VE4BAW
President – Radio Amateurs of Canada

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Merci de participer à l'assemblée.

Geoff Bawden, VE4BAW
President – Radio Amateurs of Canada

SIX METRES AND DOWN

Dana Shtun, VE3DSS/VE3KU
14 Ashwood Crescent
Toronto, ON M9A 1Z3
E: ve3dss@rac.ca
W: www.qsl.net/ve3dss

SUMMER DX

Sporadic E Rules

I'm writing this during a blizzard here in Toronto.

Despite being a skier and one who enjoys winter, really this is a bit much for March weather here in Ontario, but what can you do, eh?

Here is a quick recap for the OTs and newbies…

From early April through September the VHF bands, particularly 50 and 144 MHz, open via Sporadic E propagation quite often.

Now the normal propagation that you see is what is called "Single Hop" propagation where signals are reflected out over a distance of about 2,000 kilometres, and this is pretty normal on 50 MHz and can occur almost daily.

Some years, the band has been open to Florida on this mode daily.

Now you also can get what we call "Double Hop" Es where you have a group of ionization "clouds" lining up and allowing long haul propagation out beyond 4,000 kilometres, reaching the west coast of North America easily.

Rarer, but still often repeated are openings beyond that distance allowing propagation on 50 MHz into Western and Eastern Europe, Russia, the Middle East, the West coast of Africa, South America and Hawaii.

Even rarer, but appearing annually is a very long haul mode of propagation that permits contacts between Japan, China and Asia into North America. Now this mode is not well understood and there is discussion as to whether signals propagate in a waveguide type structure over that distance or if they actually reflect in a more traditional Es mode.

Whatever the actual mechanics are it's pretty exciting stuff. Given that, the F2 propagation just has not appeared with any constancy this solar Cycle Es and related propagation is our best bet for long haul DX on 50 MHz.
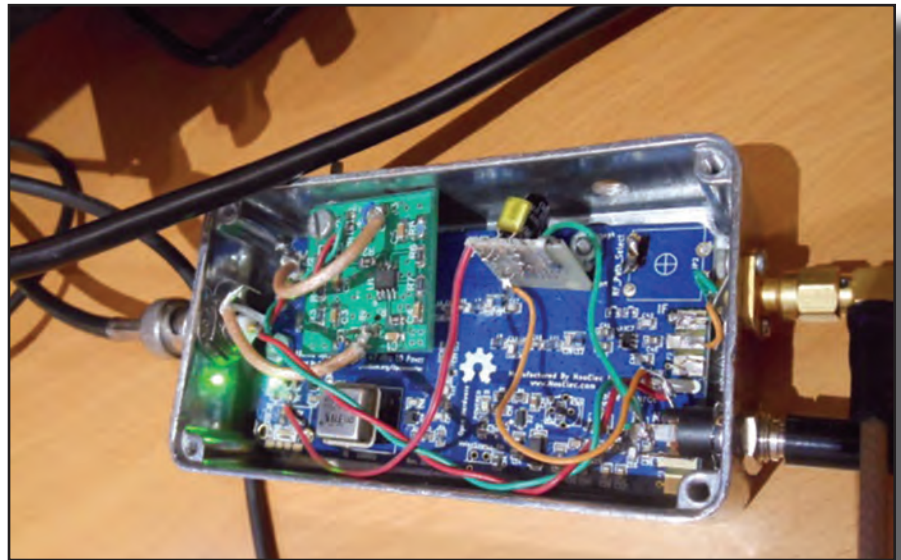
Now last summer was pretty quiet Es wise, and we have usually had one summer like that during each cycle so this summer should be much more active.

BRIDGING THE ATLANTIC ON 144 MHZ

As mentioned in a previous column, over the last few years the Irish Radio Transmitters Society (IRTS) has had a Crystal trophy and plate available for decades now to be awarded to the Amateurs who are the first to bridge the Atlantic between North America and Europe on 144 MHz without using EME, Satellites, Aircraft reflection or other augmented means – in other words via Tropo, Sporadic E or Meteor Scatter or all three at once!

We have in Newfoundland, the ideal locations for Amateurs to make the grade, and a group of stalwart Canadians are making another attempt at it!

The press release from the group is included on the next page. Let us hope that the propagation – be it Tropo or Es, or meteors or all three – support this effort! The team's website can be found at http://brendanquest.org/home.html. Drop them a line of support!

Here is a shot of the NooElect Ham It Up upconverter running from 12V converting the K3 IF from 8.125 MHz up to 133.125 MHz, which then feeds into my RTL dongle and into SDR Console V2.

RTL MADNESS CONTINUES

I've been able to semi-integrate one of the NooElect Ham it Up HF Upconverters into a Hammond Diecast box and power it off of the K3 rather than the USB. In addition, I installed a Clifton Laboratories preamp into the unit that includes some filtering at the 8.125 MHz IF of the K3. The results are encouraging as the signal is cleaner with the shielding and running the board from the 12 V line of the K3. To do this I removed the SMA connectors and USB plug from the board, installed a 5 V regulator and with a bit of edge trimming was able to pop the entire board into the die cast box. The unit now sits behind the K3 with the output line going to the computer and RTL dongle. The next step will be to shield and filter the dongle. Now all I need is the software to allow the dongle to talk to PowerSDRIF stage for a nice package.

This project all started with the SDR from Tony Parks, but I wanted to enable a wider bandwidth, eliminate all the mess of cables and still have the advantage of a second receiver without shelling out big bucks for the second K3 receiver board or the Elecraft Panadapter. It's an interesting learning experience as well – and all for under $100 bucks… hihi. A photo of the setup is shown above.

Well that's it for now. Please let me know what you work on VHF/UHF and Microwave this spring and summer.

– 73, Dana, VE3KU/VE3DSS

TCA

CANADIAN HAMS ATTEMPT TO CROSS THE POND ON TWO METRES
Brendan Quest: Working NA to EU on 2 metres

A group of Amateur Radio operators from Atlantic Canada will operate from Pouch Cove, Newfoundland from July 4 to 12 in a bid to complete a 2 metre Trans-Atlantic QSO and claim the Brendan Trophy.

The expedition will operate from Maidenhead Grid GN37os on 144.270 MHz. It will run 750 watts into a 30 metre long rope yagi with a gain of more than 23 dB over a dipole.

The group will concentrate its efforts on JT65B, a digital mode that offers greatly enhanced performance over more conventional modes. It will have the capability to use other modes including CW and SSB if conditions warrant however.

The Brendan Trophy is a series of awards offered by the Irish Radio Transmitters Society to the first Amateur Radio operators to complete a 2 metre Trans-Atlantic QSO.

Details on the expedition can be found on the team's website: http://www.brendanquest.org

Real time information on operating modes and schedules will be posted during the expedition on the team's website, the ON4KST site and the G4CQM Shoutbox. Facebook users are also welcome to join the group's page "Brendan Quest" 2 metre Trans-Atlantic Attempt 2014.

Background Information:

2014 Transatlantic Two Metre "Brendan Quest" Objectives:

1) Complete one or more legal, confirmed, two-way QSOs between North America and Europe on the Amateur Radio 2 metre band using terrestrial propagation modes.

2) Complete such contacts using both "traditional" (CW or SSB) and "non-traditional" (JT65B or ISCAT) modes.

3) Failing the above, to be heard in Europe.

Operators (North America):

Fred Archibald, VE1FA; Helen Archibald, VA1YL; Al Penney, VO1NO; Rich Pieniaczek, VA1CHP; Roger, Sturtevant VE1SKY.

Operation: July 4 to 12

Call: A special call sign has been requested. In the event one is not issued, the group will use the call sign VO1NO.

Frequency and Modes: 144.270 MHz +/- 20 Hz operating 24 hours a day for the entire period, transmitting full legal power on even minutes and receiving on odd minutes using JT65B. Other modes may be attempted as required. Audible transatlantic JT65B reception and QSO will be followed by a CW attempt.

North America QTH: Pouch Cove, Newfoundland.

Latitude 47.76942° North, Longitude 52.76384° West

Elevation: 65 feet (20 metres) above sea level.

Grid Square: GN37os.

IOTA island NA-027.

Antenna height is 85 feet (26 metres) above sea level on a bluff on the edge of the Atlantic. There is no land between the transmit location and Europe through bearing range of 013 to 108 degrees True. The transmit location is 3040 km from the Irish coast, 3400 km from Poldhu, and 23 km from Marconi's 1901 reception site.

Antenna: A horizontally polarized "rope ladder" Yagi, with 43 elements consisting of one reflector, one driven element and 41 directors, suspended and aligned on two strands of Kevlar rope 65 cm apart. Its overall length is 30 metres. Because the ground slopes towards the ocean, the height of the antenna varies from 6 metres above ground at the reflector, to 8.5 metres at the opposite end. Its feedpoint impedance is 50 ohms, and it will employ a ferrite choke balun.

The SWR is 1.1 to 1.2. Forward gain is 23.9 dB over a dipole. The front to back ratio is 32 db, while the front to side ratio is greater than 25 db (270°). The takeoff angle of the main lobe is 4.5°. The beamwidth is 15.6° at the -3 db points, and beam thickness is 4.7° at the -3 db points. When driven with 750W, the Effective Radiated Power in the centre of the major lobe should be about 150 kW.

Antenna coverage in Europe at -3 db points: Based on an antenna azimuth of 062° True and a beamwidth of 15.8° at the -3 db points, the antenna beam width will be 069° to 054° True, so straight line propagation will cover all Ireland, the United Kingdom and parts of Norway, France and Holland. Of course propagation paths may be skewed.

RAC WILL BE AT DAYTON!

The Radio Amateurs of Canada will once again be at Dayton for Hamvention 2014 from May 16 to 18. This is the fourth 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.

This is the 63rd 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 "Makers: the Future of Ham Radio" will reflect an important part of Amateur Radio: "We in Amateur Radio are all 'makers' at heart."

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 and talk to your RAC volunteers. Better yet contact us and volunteer to work at the booth.

RAC Headquarters: racgm@rac.ca; 1-877-273-8304

Geoff Bawden, VE4BAW
RAC President and Chair

CANADIAN AMATEUR RADIO HALL OF FAME AWARD PRESENTATION

EARLE SMITH, VE6NM (SK)

At a rare dinner meeting of the Peace Country Amateur Radio Club (PCARC) on March 8, RAC Director J. T. (Mitch) Mitchell, VE6OH, presented the 2013 Canadian Radio Hall of Fame Award to Mrs. Barbara Smith, in recognition of her husband Earle Smith, VE6NM, who passed away in 2012.

PCARC Secretary Millie Lorenz, VE6KBN, provided the following report of the event:

"What a remarkable evening shared with the Barbara Smith Family, Mr. and Mrs. Mitchell and PCARC members, families and friends! It was an evening of honouring Earle, telling stories meeting new acquaintances, renewing old acquaintances and bringing together once more a club that is so family-based in their closeness to one another.

We shared an amazing RAC Hall of Fame presentation by Director Mitch. Rick Parsons, VE6CRE, President of PCARC, was Master of Ceremonies. As well, Mitch presented Barbara Smith and family with a beautiful bouquet of flowers. We enjoyed a lovely dinner of Chinese food that did not seem to end and the evening was an opportunity to visit with so many.

A huge thank you goes to John Gilje, VA6JG, George Simpson, VE6HX and Brian Nock, VE6NOC, who worked hard with me to make this evening special; as well to many others that helped."

The Peace Country ARC was formed over 30 years ago and has 26 members. In addition to a regular monthly Executive meeting, the members meet every Saturday morning for a "Hammy Breakfast". The club operates five repeaters, participates in the annual ARRL Field Day, and provided operators during emergencies such the Slave Lake Fires and the floods in southern Alberta.

A detailed account of Earle's achievements was published in the May-June 2012 issue of TCA magazine, following his death on February 24, 2012. In addition, the January-February 2014 issue of TCA carried the news of the appointment of Earle and Ken to the Hall of Fame.

The photos, taken by Lena Gilje, daughter of John Gilje, VA6JG, show RAC Director Mitch presenting a bouquet to Barbara Smith. The group photo includes Barbara's daughter Heather Stanley and son Ian.

Prepared by Ed Frazer, VE7EF
Chair, Board of Trustees, Canadian Amateur Radio Hall of Fame

KEN PULFER, VE3PU (SK)

On February 18, the quarterly dinner meeting of QCWA National Chapter 70 was the setting for the presentation to Mrs. Rolande Pulfer, VE3JKP, of the 2013 Canadian Amateur Radio Hall of Fame Award made to the late Ken Pulfer, VE3PU.

The luncheon for 25 attendees at Ottawa restaurant KS on the Keys was presided over by Chapter 70 President, Richard Ferch, VE3KI, who invited RAC Vice-President Glenn MacDonell, VE3XRA, to make the presentation.

Glenn recalled the extensive professional and Amateur Radio contributions made by Ken both in Canada and internationally. He then presented a Hall of Fame plaque and a bouquet of flowers to Mrs. Pulfer, who was accompanied by her two sons, Charles and James, who are in the information technology industry in Ottawa. Daughter Suzanne, a retired Vice-President of Oracle Canada, lives in Toronto and was unable to attend.

In accepting the award, Mrs. Pulfer noted how important to him were Ken's two pastimes: Amateur Radio and music. Charles also addressed the group, noting that while none of the children were Radio Amateurs, they were well aware of Ken's interest and contributions to Amateur Radio. A detailed account of Ken's achievements was published in the May-June 2013 issue of TCA magazine, following his death on March 31, 2013.

QCWA National Chapter 70 was founded in May 1974 by 21 charter members. Today there are approximately 83 members. Ken Pulfer, VE3PU, was an active member and served as Chapter Secretary from 2008 to 2010. The chapter holds four quarterly dinner meetings: February, May, September and November. The February meeting is a luncheon, which provided a convenient venue for the presentation, while the others are evening dinners. The May meeting is a spouse's night. Each dinner meeting features a guest speaker, who normally speaks on a facet of Amateur Radio, except that for spouses' night the topic is usually of more general interest although a feature of Amateur Radio may be included.

The photos, taken by John Barnhardt, show Charles, Rolande, and James holding the Award and RAC Vice-President Glenn MacDonnell, VE3XRA, presenting the plaque to Rolande.

Prepared by Jim Dean, VE3IQ

NEWS FROM INDUSTRY CANADA OF INTEREST TO RADIO AMATEURS
NOUVELLES D'INDUSTRIE CANADA À L'INTENTION DES RADIOAMATEURS

Norm Rashleigh, VE3LC

NEW MASTER BANK OF EXAMINATION Q&A AND EXAM GENERATOR RELEASED BY INDUSTRY CANADA

On March 6, 2014, Industry Canada released a new Amateur Radio Exam Generator based on revised questions and answers that were the product of a contract last year with Radio Amateurs of Canada to review and update the exam bank of questions and answers. RAC subcontracted Radio Amateur du Québec Inc. to provide the resources for the French language side of the project and the entire team worked together to produce the deliverables. It remained Industry Canada's responsibility to rule on proposed changes and publish the work.

The new exam generator is web-based and replaces the old exam generator that was hard coded with the old bank of questions and answers; this was a downloadable application program that would only run on Microsoft operating systems and was not consistent with Industry Canada's online policy moving forward. The old system was based on the former RIC-7 and RIC-8 Question Bank documents; these are now obsolete and have been removed from the Industry Canada site. The new Exam Bank of Questions and Answers documents for Basic and Advanced will no longer be referred as RIC-7 and RIC-8. Nonetheless, many of the old questions still remain as it was necessary to keep the same knowledge base and syllabus specified in RIC-3 and the international regulations for Amateur Radio.

The new Industry Canada webpage at http://www.ic.gc.ca/eic/site/025.nsf/eng/h_00040.html has links that provide a learning aid for prospective Amateurs and the necessary administrative tools for accredited examiners for both the levels of exam. The webpage provides:

- Study questions that can be subdivided into categories and scored by the student.

- An online practice exam of 100 Basic level questions and 50 Advanced level questions; both provide scoring feedback according to the subject category of the question.

- A printout (as a PDF document) of a practice exam watermarked with the word "Sample"; this is provided with an answer and scoring sheet similar to the official exam.

- An examiner can similarly print out an official exam with the necessary answer and scoring sheets. To access this printout, the examiner must log in with account ID, password and examiner ID number.

- Each sample or official examination has a unique serial number.

- Finally, for both Basic and Advanced, there are links to download, save, and print the PDF documents of the entire document masters of the Bank of Questions and Answers. Each new revised master copy will be dated and can be readily republished without fanfare or delay.

Also new is that each sample or official examination is generated with a random selection of questions from the Question Bank dispersed randomly throughout the exam paper. There is no longer a grouping of question categories on the exam as before; however, each category will still have an equal weighting of questions. In addition, the order of answers for each specific question is now randomly generated from one printing of the exam to another.

INDUSTRIE CANADA DÉVOILE SON NOUVEAU SITE WEB D'AIDE À LA PRÉPARATION DES EXAMENS

Depuis le 6 mars 2014, un nouveau site Web d'Industrie Canada permet de générer des examens de certification à partir d'une banque révisée de questions-réponses. C'est Radio Amateurs du Canada qui a été mandaté pour mettre à jour l'ancienne banque, et RAQI a été appelé comme sous-traitant pour la francisation. Le produit livré a été le résultat de leur collaboration. Industrie Canada conservait toutefois son droit de regard sur les modifications proposées et se trouve responsable du produit final.

L'ancien système de génération des examens consistait en une application qui incorporait directement les questions-réponses des documents CIR-7 et CIR 8. Comme on devait télécharger le programme et l'utiliser uniquement sur un système d'exploitation Microsoft, cette méthode ne satisfaisait plus les nouveaux critères des sites Web d'Industrie Canada. L'application Web incorpore la nouvelle banque de questions et remplace dorénavant les anciens documents CIR 7 (base) et CIR 8 (supérieur) qui ont été retirés. Toutefois, plusieurs des anciennes questions ont été conservées afin de couvrir les connaissances et les matières précisées dans le CIR 3, ainsi que la réglementation internationale.

La nouvelle page Web d'Industrie Canada http://www.ic.gc.ca/eic/site/025.nsf/fra/h_00040.html offre des liens pour l'aide à la préparation des candidats à l'examen de radioamateur pour les deux niveaux de certification, ainsi que les outils d'administration nécessaires aux examinateurs accrédités. En bref :

- Pour l'étude, des questions produites par sujets et corrigées interactivement par l'étudiant.

- Un examen d'essai de 100 questions pour le niveau de base et de 50 questions pour le niveau supérieur, chacun est interactif et produit une note par catégorie de sujet des questions.

- Un examen d'essai en format PDF où les pages sont filigranées « pratique » et qui vient avec un corrigé et une feuille-réponse semblable à celle de l'examen officiel.

- Un examinateur accrédité peut y générer un examen officiel accompagné de la feuille-réponse et du corrigé. Il devra d'abord entrer dans son compte (mot de passe) et fournir son identificateur d'examinateur accrédité.

- Chaque examen, qu'il soit d'essai ou officiel, porte un numéro de série individuel.

- Finalement, des liens permettent de télécharger les documents en format PDF de toutes les questions-réponses pour les deux niveaux de qualification. Comme chaque mise à jour comporte la date, des révisions pourront être publiées sans avis et sans perte de temps.

Ce qu'il y a aussi de nouveau, c'est que chaque examen (d'essai ou officiel) est composé de questions sélectionnées au hasard pour l'ensemble du document; il n'y a plus de regroupement par catégories comme anciennement. Cependant, chaque catégorie compte le nombre de questions prévu dans la pondération. De plus, l'ordre de présentation des réponses pour chaque question est aléatoire d'un examen à l'autre.

RAC's review of the newly published questions and answers on the Industry Canada site has identified the new text is not without error as it seems the publishing process created several transcription problems. Since its release, the Radio Amateurs of Canada team members on the project have been busy again going through the master question and answer banks dated February 24, 2014, to prepare and send an error report to Industry Canada. And aiding in this effort, we thank all interested members that submitted their comments in response to the RAC bulletin on the subject. We trust this work will result in a new posting of the corrected documents as soon as possible.

Notwithstanding the problems on the initial release of the updated Question and Answer Bank, RAC applauds Industry Canada for the good web-based presentation of the product and the opportunity to work with the Department on this important project. We are sure it will be well accepted by Canadian Amateur Radio students and examiners alike as we move forward.

INDUSTRY CANADA TOWER STRUCTURE CONSULTATION

As TCA readers may recall, on February 6, the Honourable James Moore, Minister of Industry, made a public announcement indicating the federal government would be making changes to the Antenna Tower Siting Policy mandating the requirement for public telecommunications carriers (cell towers proponents) to consult with municipalities and the public on proposals to install new antenna towers independent of height. This would do away with the exemption from public consultation by the federal government if the proposed structure was less than 15 metres in height as reflected in the current issue of CPC-2-0-03 – "Radiocommunication and Broadcasting Antenna Systems". The Minister's announcement and the press coverage that followed got many Amateurs concerned this new policy would apply to Amateur Radio antenna support structures as well. RAC was certain, however, that such a new policy would itself be subject to public consultation as is the practice of all changes to Industry Canada spectrum regulations. Indeed, such a consultation paper was posted on February 27, 2014 as Gazette Notice DGSO-001-14 – "Consultation on Amendments to Industry Canada's Antenna Tower Siting Procedures".

This Consultation paper can be seen at:

http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10786.html

Fortunately, the proposed amendments to CPC-2-0-03 requiring consultation with the Land Use Authority and the public did not indicate a change in the exemption for towers less than 15 metres in height, except if the undertaking is for the construction of a cell (public telecommunications carrier) or broadcasting tower structure, in which case even for towers less than 15 metres, consultation with the Land Use Authority and public would be mandated. And so, for Amateur Radio towers and for towers that are not for cell service or broadcasting, it seems the rules will remain the same. Nevertheless, Radio Amateurs of Canada has submitted a response to the Industry Canada consultation on amendments to CPC-2-0-03, before the March 31 deadline, for the main purpose of indicating to the Department and to the public in general reading this forum, that Amateur towers in residential areas are essential to the promotion of the Amateur Radio Service.

RAC's response made reference to the service Amateur Radio provides to the public by way of volunteer disaster relief and special event communications, and by way of technical and operational self-education in radio communications. This benefit has already been accepted by several municipalities in Canada

RAC a observé que les nouvelles questions-réponses publiées sur le site Web d'Industrie Canada comportent des erreurs, probablement de transcription. Depuis le lancement, les membres de l'équipe de RAC pour ce projet se sont remis au travail pour réviser les banques de questions du 24 février 2014 afin de fournir un erratum à Industrie Canada. Dans ce sens, nous remercions tous les membres qui ont répondu à l'appel à l'aide du bulletin d'information que RAC a émis à ce sujet. Nous croyons que ce travail permettra la publication des documents corrigés dès que possible.

Mis à part les problèmes signalés au lancement de la nouvelle banque de questions, RAC voudrait féliciter Industrie Canada pour la bonne conception de son site Web pour valoriser le produit, et pour nous avoir donné la chance de travailler sur cet important projet. Nous sommes persuadés que cet outil canadien sera bien apprécié tant par les candidats aux examens que par les examinateurs.

CONSULTATION D'INDUSTRIE CANADA SUR LES BÂTIS D'ANTENNES

Les lecteurs du TCA se rappellent sûrement de l'annonce faite le 6 février dernier par le ministre de l'Industrie, l'honorable James Moore, à l'effet que le gouvernement fédéral apporterait des changements à sa politique sur l'emplacement des pylônes d'antenne en exigeant que les entreprises de télécommunications (promoteurs de tours pour la téléphonie cellulaire) consultent les municipalités et le public à propos de leurs projets d'érection de nouveaux bâtis d'antennes, quelle qu'en soit la hauteur. Ceci mettrait un terme à l'exemption du gouvernement fédéral d'effectuer des consultations publiques quand la hauteur des bâtis est inférieure à 15 mètres, tel qu'énoncé actuellement dans la circulaire CPC 2 0 03 « Systèmes d'antennes de radiocommunications et de radiodiffusion ». Cette annonce a alerté plusieurs radioamateurs qui s'inquiètent que cette nouvelle politique s'applique aussi à leurs bâtis d'antennes. Radio Amateurs du Canada était cependant convaincu que la nouvelle politique serait elle-même soumise à une consultation publique comme c'est le cas d'habitude pour toutes les modifications à la réglementation de la gestion du spectre d'Industrie Canada. Effectivement, l'avis de la Gazette DGSO-001-14 intitulé « Consultation sur les modifications apportées aux procédures d'Industrie Canada régissant l'emplacement des pylônes d'antennes » a été publié à cet effet le 27 février dernier.

Voici le lien du document de consultation:

http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10786.html

Heureusement, les amendements proposés à la circulaire CPC 2 0 03 et qui requièrent une consultation auprès des instances responsables et du public ne mentionnent pas de modifications à l'exemption pour les bâtis d'antennes de moins de 15 mètres, à moins que l'ouvrage ne soit destiné à la téléphonie cellulaire ou à la radiodiffusion. Alors il semblerait que les règles applicables aux bâtis d'antennes, tours et pylônes à l'usage des radioamateurs demeurent inchangées. Néanmoins, RAC a envoyé ses commentaires sur les amendements proposés au CPC 2 0 03 avant la date de tombée du 31 mars afin d'indiquer au ministre, et à tous les intéressés en la matière, que la présence de bâtis d'antennes de radioamateurs dans les quartiers résidentiels est indispensable au développement du Service radioamateur.

Les commentaires de RAC mentionnent les services que les radioamateurs rendent bénévolement au public lors de sinistres et de catastrophes, et aussi pour les communications lors

with exemptions from consultation for Amateur Radio towers even higher than the 15 metre default exemption by Industry Canada.

The Radio Amateurs of Canada response should be available for viewing on the Industry Canada webpage associated with the URL mentioned above sometime after the close of comments to the Gazette Notice on March 31, 2014.

ONLINE ACCESS FOR AMATEUR RADIO OPERATOR CERTIFICATE SERVICES

Industry Canada has requested that RAC remind Canadian Amateurs about the online services of the Amateur Radio Service Centre. Industry Canada encourages Amateurs, who have not already done so, to create a User Account and use it to do online applications for new or replacement Amateur certificates, applications for additional call signs for special events or otherwise, change of call sign requests and notification of a change of address.

In addition, your personal account profile can indicate, if desired, a request to not publish your address information for the sake of privacy. Note that all accredited examiners must have a User Account to conduct their business.

For setting up an account and doing online services with the Amateur Radio Service Centre, please visit:

http://www.ic.gc.ca/eic/site/025.nsf/eng/home

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d'événements spéciaux, ce qui démontre la valeur de l'autoapprentissage en radiocommunications. Ce fait est d'ailleurs déjà reconnu par plusieurs municipalités au Canada qui donnent des exemptions à des bâtis d'antennes de radioamateurs bien au-delà de la hauteur de 15 mètres spécifiée par Industrie Canada.

Les commentaires de RAC devraient être affichés sur le site Web d'Industrie Canada à l'adresse URL mentionnée ci-dessus dès la fin de la période indiquée dans l'avis de la Gazette, soit le 31 mars 2014.

ACCÈS EN LIGNE AUX SERVICES DES CERTIFICATS D'OPÉRATEUR RADIOAMATEUR

Industrie Canada a demandé à RAC d'informer ou de rappeler à ses membres qu'il existe un centre de services en ligne pour les radioamateurs et invite ceux qui ne l'on pas encore fait, à ouvrir un compte d'utilisateur qui leur permettra de faire la demande de nouveaux certificats ou de certificats de remplacement; faire la demande de nouveaux indicatifs d'appel pour des occasions spéciales ou pour toute autre raison; faire un changement d'indicatif et pour signifier votre changement d'adresse.

De plus, vous pouvez indiquer dans votre profil que votre adresse ne soit pas révélée. Noter que tous les examinateurs accrédités doivent avoir un compte d'utilisateur pour effectuer leurs tâches.

Voici le lien pour ouvrir un compte et accéder aux services des certificats d'opérateur radioamateur :

http://www.ic.gc.ca/eic/site/025.nsf/fra/accueil

(Traduction par René Lévesque, VE2CNJ)

TCA

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. For the RAC Store visit: http://www.cafepress.ca/rac_radio
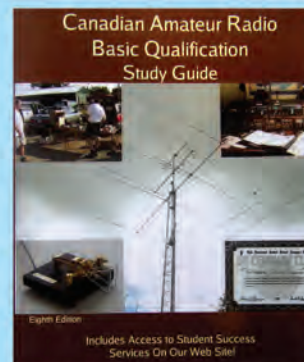
ANTENNAS & TRANSMISSION LINES

USING SIMSMITH FOR ANTENNA SYSTEM DESIGN
AN INVERTED DELTA LOOP EXAMPLE

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INTRODUCTION

This column provides an introduction to the use of a software program, SimSmith, developed by AE6TY (see TCA hotlink 1), that adds one more tool for developing antenna and transmission line systems. As the name suggests, the program is based on a graphical use of Smith Charts.

More importantly, the program links to antenna simulators – such as EZNEC (see TCA hotlink 2) – and collects data from our measurements made with network and impedance analyzers. It also uses transmission line data from TLDetails (see TCA hotlink 3). This represents a big step forward for Radio Amateurs who want to design, measure and evaluate their own antenna systems.

It makes it very easy to measure the impedance of an antenna at the far end of a cable (the radio shack) and then simply find the impedance at the actual antenna by inserting a

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.

cable of negative length in the software. As I write this column in January, the temperature in my backyard is – 24° C and I am not inclined to put my antenna analyzer outside and hook it up to the antenna terminals to accomplish the same task.

One use of SimSmith is simply that of a learning tool for those building their skills in the application of Smith Charts. This is useful in itself since these charts are used by many authors and appear in the ARRL antenna books. This learning tool is made possible by the use of drag and drop lumped element circuits (R, L, C, Transmission Lines and other components) to see their interpretation as viewed on the Smith Chart. No mathematics is used directly since SimSmith does it all for us. The catch is that we still have to understand the basics of reflection coefficient and its simple relationship to standing waves.

For most Amateurs who do not design their own antennas or antenna tuners, perhaps the most important use of SimSmith is that of evaluating their system. For example, if a system consists of a high grade transceiver and amplifier in conjunction with an antenna tuner, transmission line and a non-resonant antenna, then SimSmith can easily evaluate the impact of placing the antenna tuner at the transceiver instead of at the antenna. The total loss from transmitter to the load is also given. Previously this was a difficult calculation to perform and was seldom done.

This column does not provide a tutorial on how to use SimSmith as these are well covered in the SimSmith website. The purpose here is simply to show its use through examples and how beginners can get started with SimSmith as a learning tool. Please note that SimSmith is constantly being upgraded. I am currently using version 7.8. By the time you read this column, I am sure that a new version will be in use. The main impact is that some tutorials are based on older versions that have different graphics and functions so the tutorials have to be used as a guide only. To get started, download SimSmith and read the introduction tutorial that gives a tour of the main page and shows how to design some simple circuits.

This column includes:

1) Viewing simple circuits on SimSmith that include resistors, inductors and transmission lines.

2) A design example using a vertical inverted delta loop antenna (20 metre band) fed at the bottom. In particular, it is shown how to match the antenna for the 30 metre band which is quite far from the resonant frequency of 14 MHz.

BACKGROUND

The idea behind the Smith Chart and SimSmith is the reflection of waves from some point (usually but not always) at the load. In most cases, we want the reflection of a forward wave at the load to be small so that most of the power gets transmitted to the antenna or other load. The commonly used term Standing Wave Ratio (SWR) is directly related to these reflections. Below is the *basic* equation used internally in SimSmith.

$$\Gamma = \frac{Z_L - Z_0}{Z_L + Z_0} \quad \text{called reflection coefficient (a vector)}$$

Where:

Z_L is the load on a transmission line with characteristic impedance Z_0.

The Smith chart is simply a plot of the reflection coefficient on a polar graph with various overlays superimposed on the basic graph. This is analogous to the idea of layers used in photographic software editing packages but the basic graph (bottom layer) is always the reflection coefficient.
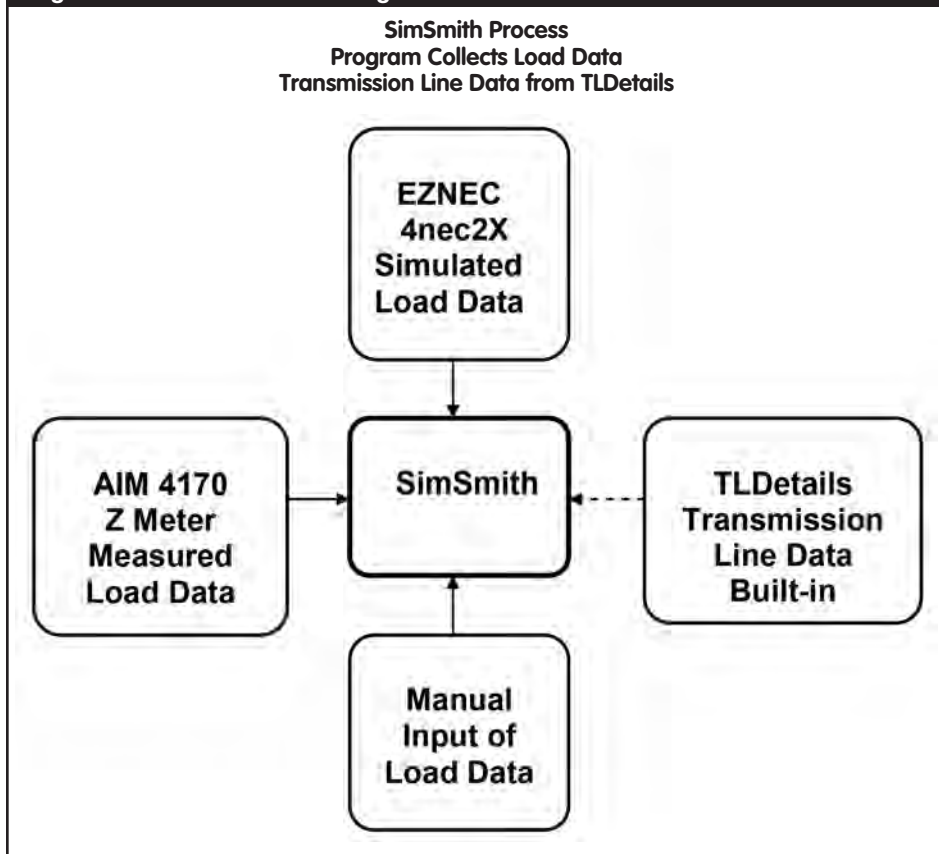
SimSmith does the calculations for you and displays the results using graphics. It is a great learning tool because you can try many examples quickly using the sweep (change) function to gain an understanding of the process that is involved. For example, you can set Z_0 to 50 Ohms and Z_L to 100 Ohms and SimSmith immediately shows you the value of the reflection coefficient while Z_L is swept over a range of values. The SWR is directly derived from the reflection coefficient as follows:

$$SWR = \frac{1 + |\Gamma|}{1 - |\Gamma|} \quad \text{where } |\Gamma| \text{ is the magnitude (Length) of } \Gamma$$

SWR is a good example of an overlay on the Smith Chart. Often, circles of constant SWR are used as one layer. I often plot an SWR circle of 1.5 on top of the basic plot.

The process used by SimSmith is shown in Figure 1 on the next page. The main calculator is shown surrounded by four blocks in this example.

SimSmith Process
Program Collects Load Data
Transmission Line Data from TLDetails

Figure 2: L Match 100 to 50 Ohms

Three of the blocks are used to input load data from either a vector impedance meter such as an AIM4170, an antenna simulator like EZNEC or manually from a keyboard. The fourth block shown is not an input block. It shows that real transmission line data is imported from TLDetails.

SIMPLE CIRCUITS

SimSmith is a fairly complex simulation program that is easy to use if you proceed one step at a time rather than attempting to deal with a complex analysis of a big antenna system. For this reason, I recommend that you start with simple circuits and add components and functions one at a time to create building blocks for further use. You can find simple circuits in the tutorials that are given on the SimSmith website.
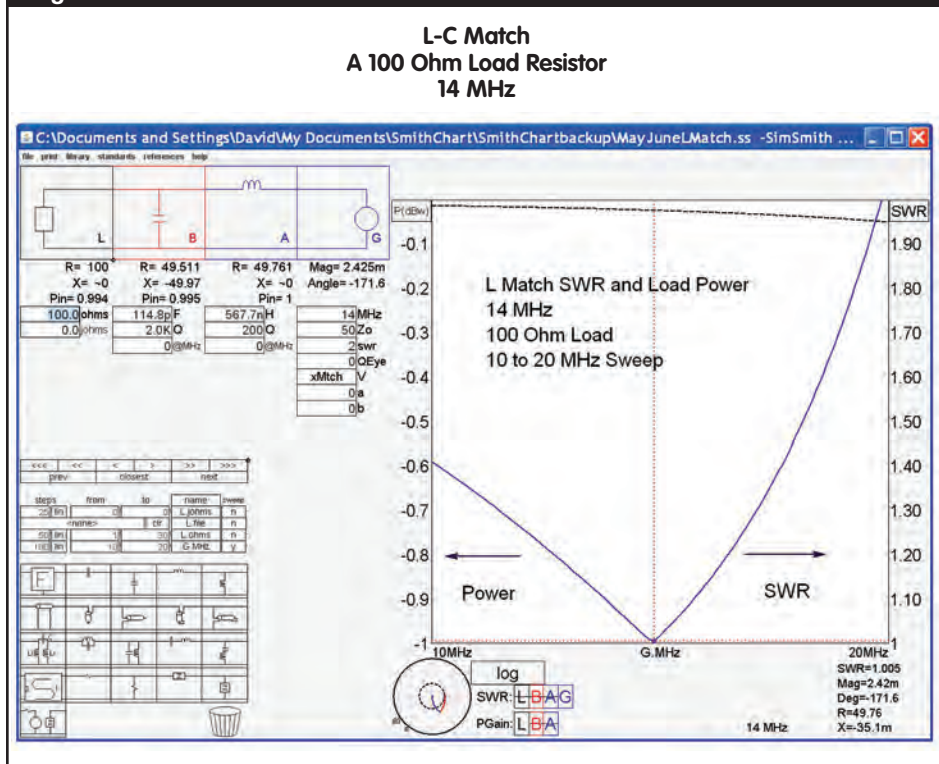
There is always a load impedance and a voltage generator as a source. A circuit can also be inserted between the load and generator by dragging and dropping elements from a selection at the bottom of the screen.

Circuit #1: An L-C Matching Circuit: 100 Ohm load

The first example is shown in Figure 2. The figure shows:

- The frequency response on the bottom right

- The matching circuit shown on the top left

- Drag and drop elements on the bottom left

- A box that toggles the display type. In this example the display shows the frequency response. The next example shows a Smith Chart display.

One possible circuit for matching a 100 Ohm load to a 50 Ohm transmitter is a shunt capacitor connected in series with a series inductor as shown in the diagram. There are other possible matching structures, one of which is shown in example two.

The graph shows both the SWR curve and the power delivered to the load. The SWR is equal to 1.0 at 14 MHz with a power loss (top dashed curve) less than 0.1 dB. The reason that the power loss is not equal to zero is because a Q of 200 is assumed for the inductor and 2000 for the capacitor. This matching circuit was matched (as shown in tutorials) by simply dragging a handle on the Smith Chart display to the centre of the chart. This is a very convenient and fast feature to have in the software.

The load in this simple case is a 100 Ohm fixed resistor with no reactive component. The value of 100 Ohms was typed into the parameter box manually. If you want to prove to yourself that this circuit actually works, try building it using a powdered iron inductor and a ceramic capacitor close to the design value. Here L = 568 nH and C = 115 pF.

Circuit #2

This circuit (see Figure 3) demonstrates the operation of the classic quarter wave transformer. Here I assume that the load resistance is 100 Ohms and that the characteristic impedance of the line is 70.7 Ohms with its length set to 90 degrees at 14MHz. The input impedance seen by the generator is 50 Ohms at 20 MHz according to the following basic equation:

$$Zin = \frac{Z_0^2}{Z_L} \ [Ohm] = 50 \ [Ohm]$$

So let's see if SimSmith agrees with the basic formula. To do this I dragged a transmission line into the circuit window and set its characteristic impedance to 70.7 Ohms with a length of 90 degrees at 14 MHz. Here, the loss was set to 0 and its velocity factor to 1 as seen in Figure 3. SimSmith agrees with the basic formula, as seen in the diagram. The load of 100 Ohms is transformed through a path which happens to be a circle that terminates in the centre of the Smith Chart.

You can experiment with this circuit in many ways such as increasing the transmission line loss or even selecting a specific transmission line such as a RG59 from the transmission line type parameter (Mdl) list under the transmission line symbol. You will then see that the load is not matched as well in this case.

AN INVERTED DELTA LOOP HF ANTENNA

The final example used in this column is an antenna that I am evaluating for use either as a portable or a base station HF antenna. This antenna is an inverted delta loop (see TCA hotlink 4) fed at the bottom which is designed to resonate at 14 MHz but operated at 10.1 MHz in an attempt to use it on different bands other than 20 metres.

The first thing to note (see the parameters under the Load L in Figure 4) is that the simulated input impedance using EZNEC is equal to 102 −j1080 Ohms at 10.1 MHz.

This capacitive reactance begs for the addition of a series inductor to bring the impedance close to the centre of the Smith Chart. This is shown on the inductance portion of the Smith Chart display. Then a shunt capacitance is added to bring the impedance to a resistive value with no capacitive or inductive reactance as shown. Finally a simple 4:1 transformer with losses brings the impedance to 50 Ohms as desired.

Figure 3: Quarter Wave Transformer Match
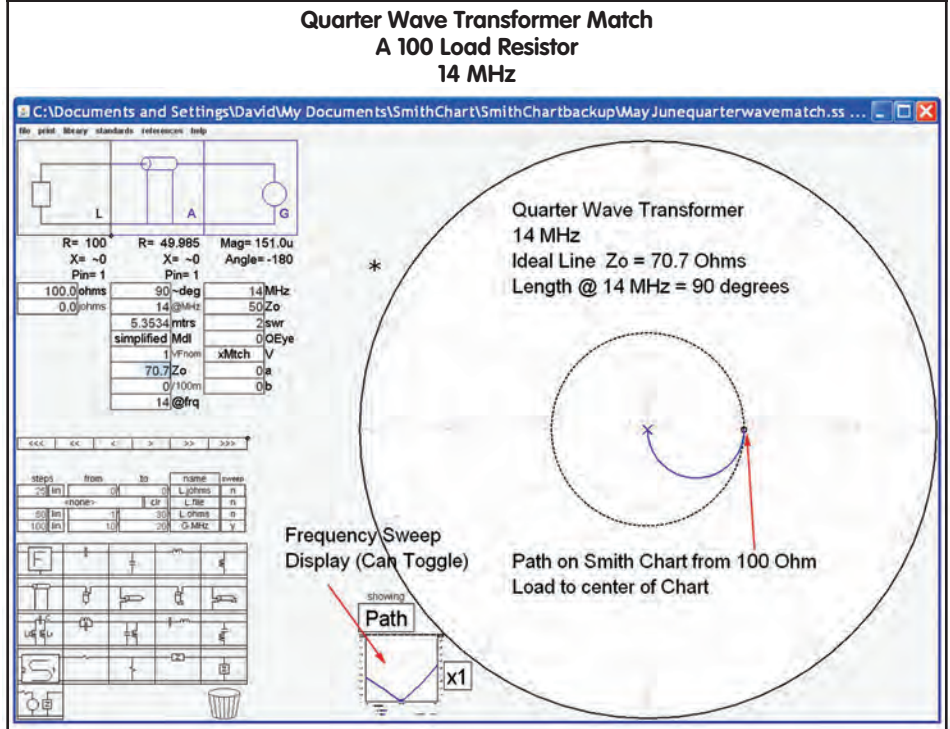
Figure 4: Inverted Delta Loop Antenna
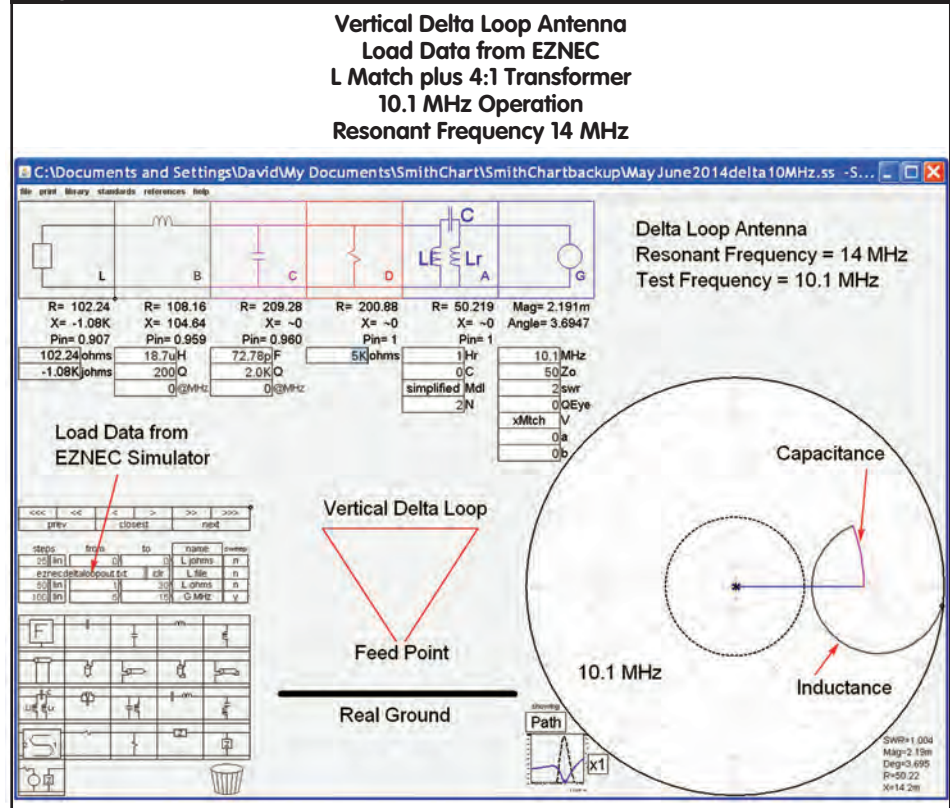
There is a lot of information available from the data given in Figure 4 above:

1) The input power is set to 1 Watt and the output power delivered to the antenna equals 0.907 Watts which translates to a loss of 0.4 dB.

2) The loss in the tuning inductor is 0.052 Watts (5.2 Watts for a 100 Watt Transmitter). This means that a fairly large powdered iron core will have to be used for the inductor. A large air core inductor could also be used.

3) The loss in the tuning capacitor is insignificant but its voltage is not yet determined.

4) The loss in the transformer is 0.18 dB (slightly optimistic).

The display can be toggled to see the SWR versus frequency using the display toggle button in SimSmith. I have found that the 1.5:1 SWR bandwidth for the antenna system is only 160 kHz as expected for this heavily tuned antenna.

In practice, I expect that an automatic antenna tuner will be used in conjunction with the LC network and transformer to make final corrections. It is obvious that there are many compromises associated with this non-resonant antenna as there are with most other multi-band, non-resonant systems such as a vertical antennas used with automatic tuners at the base.

CONCLUSIONS AND DISCUSSION

This column gave an overview of SimSmith as an addition to our toolkit of software design tools which we use to design transmission lines, matching networks and antennas. One of the big advantages of SimSmith is that it links to other software and measurement tools that are commonly used by Amateurs around the world.

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

TCA hotlink 1: SimSmith website – http://www.ae6ty.com/Smith_Charts.html

TCA hotlink 2: EZNEC Antenna Simulator – http://www.eznec.com/

TCA hotlink 3: TLDetails – http://www.ac6la.com/

TCA hotlink 4: Delta Loop Antennas – http://rsars.files.wordpress.com/2013/01/40m-10m-delta-loop-antenna-gu3whn-iss-1-3.pdf

ACKNOWLEDGEMENTS

I wish to thank Ward, AE6TY, for his help with the understanding and operation of SimSmith as I picked up the necessary skills to use the program efficiently and couple it to EZNEC, 4nec2 and my AIM4170 impedance meter.

– Until later, David, VE3KL

TCA ✦

RADIO AMATEURS OF CANADA PARTNERS UP WITH RFINDER "THE WORLDWIDE REPEATER DIRECTORY"

Radio Amateurs of Canada (RAC) and RFinder are excited to announce a new business partnership agreement effective March 1. RAC endorses RFinder as the official Worldwide Repeater Directory for all Canadian Amateur Radio operators.

The RFinder is a steadily growing worldwide repeater directory including IRLP, Echolink, AllStar, DStar, MotoTRBO, and even Winlink information. RFinder currently have over 175 countries in the directory.

Access to the World Wide Repeater Directory is provided by any version of the RFinder smartphone apps on Android, iPhone and iPad/iPod Touch. The same user-id enables access from any version of the RFinder app, the browser interface (web.rfinder.net), or through a growing list of third-party memory programming applications such as RT Systems radio programmers and CHIRP open source software. One subscription, access to worldwide repeater data from any computing device on Windows, Linux, OS X, web, Android iPhone and soon on Windows Phone!

Canadian Amateurs purchasing the RFinder application will financially benefit the Radio Amateurs of Canada through the terms of this new agreement.

"Obviously, going forward, we encourage all Canadian Amateurs to consider RFinder as their repeater directory provider. RAC staff and volunteers will proactively work with RFinder on providing repeater directory information updates for Canada as repeater directory information is a constantly changing environment" notes Glenn MacDonell, VE3XRA, RAC Vice-President.

Canadian RFinder users will see a new graphic feature; the RAC logo appearing on their app as well.

RADIO AMATEURS DU CANADA PARTENARIAT AVEC RFINDER "RÉPERTOIRE MONDIAL DES RÉPÉTEURS"

Radio Amateurs du Canada (RAC) et RFinder sont très heureux d'annoncer leur accord de partenariat lequel prend le 1er mars. RAC reconnaît RFinder comme le répertoire officiel mondial des répéteurs pour tous les radioamateurs canadiens.

RFinder est un répertoire mondial solide et en croissance qui inclut IRLP, Echolink, AllStar, DStar, MotoTRBO, et même l'information Winlinki. RFinder actuellement couvre plus de 175 pays.

L'accès au répertoire mondial des répéteurs est possible via toutes les versions du Smartphone apps (applications) sur Androïd de RFinder, iPhone et iPad/iPod Touch. Le même ID garantit l'accès à partir de toutes les versions de RFinder app, l'interface du fureteur (web.rfinder.net), ou encore via une liste d'applications de « RT third-party memory programming » et du logiciel CHIRP (chirp.danplanet.com). Une souscription permet l'accès aux données mondiales des répéteurs sur de tous les plates formes: Windows, Linux, OS X, web, Android iPhone et bientôt Windows Phone!

Les amateurs canadiens qui achèteront l'application Rfinder bénéficieront des avantages financiers de Radio Amateurs du Canada par le biais de cette nouvelle entente.

"De toute évidence, nous encourageons tous les amateurs canadiens d'aller de l'avant en considérant RFinder comme leur fournisseur du répertoire des répéteurs. Le personnel de RAC et les bénévoles travailleront de manière proactive avec RFinder en fournissant des informations à jour sur le répertoire des répéteurs pour la Canada du fait que les informations concernant le répertoire est en constant changement" nous fait part Glenn MacDonell, VE3XRA, RAC vice-président.

Les utilisateurs du RFinder canadien pourront voir un nouveau graphique: et le logo de RAC apparaîtra aussi sur leur applications (apps).

RAC: Vincent Charron, VA3GX/VE2HHH – raccomms@gmail.com

RFinder: Bob Greenberg, W2CYK – w2cyk@rfinder.net

(Traduction par Claude Lalande VE2LCF)

AMATEUR RADIO SATELLITES

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Corunna, ON N0N 1G0
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UO-11

In previous columns, I've been sharing information about the growing fleet of Amateur Radio satellites now in orbit and how you can receive their signals or, if properly licensed, actually work through them.

In this installment, I'll discuss yet another "oldie but goodie" in our Amateur satellite fleet as well as take a brief look back at some Amateur satellites that are no longer with us. I'll then discuss AMSAT's latest project called FOX-1.

UO-11 (also known as UoSAT-OSCAR 11, UoSAT-2 or UoSAT-B) was the second in a series of Amateur satellites built at the University of Surrey in England. It remains active, though unstable with irregular periods of transmission. The satellite was still heard transmitting telemetry throughout 2013, more than *29 years after launch!* It transmits a beacon on 2m, with inactive beacons on 70 cm and 2.4 GHz.

The satellite carried a so-called "Digitalker" (speech synthesizer) magnetometers, a CCD camera, a Geiger-Müller tube and a microphone to detect satellite vibrations caused by micrometeoroid impacts.

Portions of this article previously appeared as "Spotlight on UOSAT-2 (UO-11)" in the May 2012 edition of Monitoring Times Magazine). Thank you MT!

Like its predecessor, UoSAT-2 transmits telemetry data on the VHF beacon at 1200 baud, using asynchronous AFSK, although all its analog telemetry channels have long since failed.

A BRIEF HISTORY

UO-11 was launched on March 1,1984 from Vandenberg Air Force Base (AFB) in California with the aim of providing telemetry and other digital services for Amateur Radio and educational users.

During its many years of operation it has survived both long periods of eclipse and continuous full sunlight.

In 2002, its batteries began failing and, much like AO-7, it began operating principally with power generated from its solar panels – panels which were bought at a premium compared to those of UoSAT-1, the design having been space tested by its predecessor. The satellite's so-called "watchdog timer" (a device to reset the satellite's main computer if all contact with the ground is lost) started suspending activity for up to three weeks at a time following numerous power anomalies.

Then, in 2005, all the satellite's analog telemetry channels failed. Long solar eclipses also caused UO-11's watchdog timer to completely reset the satellite from time to time, switching it off for approximately 15 days.

In 2008, solar eclipses became a permanent feature of every orbit, sometimes causing the satellite to switch off after only one orbit.
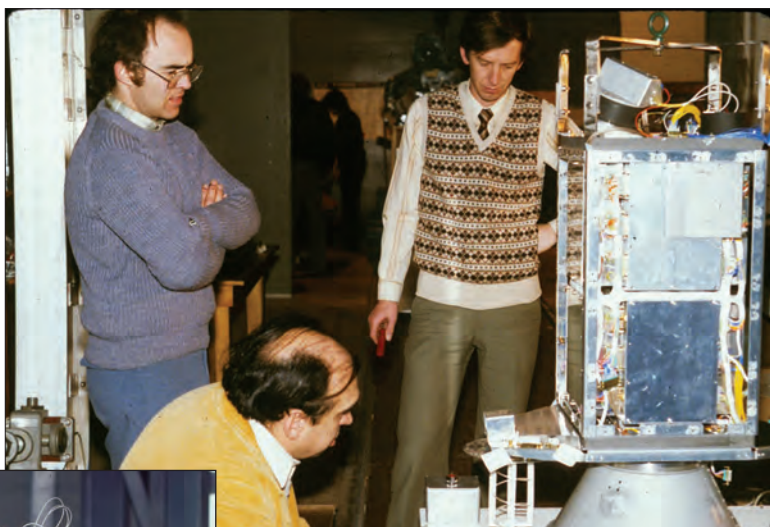
Professor Sir Martin Sweeting , G3YJO, the then Director of the University of Surrey's Space Centre in England (left) oversees the final assembly of UoSAT-2 which later became UO-11 on orbit. (Courtesy: AMSAT-UK/SSTL)
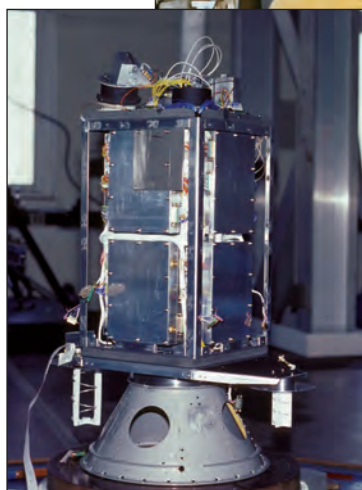
UoSAT-2 (UO-11) is shown on the left mounted on a "shake table" minus its solar panels. Satellites are regularly subjected to such "shake and bake" tests to insure they are able to withstand the harsh environment of space. (Courtesy: AMSAT-UK/SSTL)

At that time, the satellite was not expected to be heard from again for any continuous period until 2019, when there would be some eclipse-free periods. Miraculously, the satellite started transmitting once again in November 2008.

These transmissions continued until March, followed by yet more long periods of silence. Then, after another 21-month gap in observations, UO-11 resumed sending telemetry in December 2009 and it has apparently continued its watchdog timer-controlled transmission regime ever since although now on a 10-days-on, 10-days-off schedule.

Sadly, the satellite's orbital condition has not otherwise improved apart from a small recovery of its battery power, allowing some broadcasts to continue into partial eclipse.

As of late, the satellite has been heard reliably during its 10-day on/off transmission cycle. Excellent signals have been reported from stations located around the world, and some useable decoded telemetry frames have also been obtained.

UO-11 FREQUENCY AND MODE DATA		
Beacons (MHz)	**Mode**	**Status**
145.826	AFSK FM ASCII Telemetry	Semi-Operational
435.025		Non-Operational
2401.50		Non-Operational

WHEN AND WHERE TO LISTEN

UO-11's VHF downlink frequency is on 145.826 MHz, sending AFSK FM Telemetry in ASCII format. There are no uplinks. When last heard, the satellite was operating in its default mode, with a cycle time of 20.7 days; 10.35 days on followed by 10.35 days off.

The easiest way to check whether OSCAR-11 is operational is to look at Clive Wallis's extensive UO-11 status page at http://www.g3cwv.co.uk/oscar11.htm. I used the excellent information Clive has compiled about UO-11 on that page as background for this column.

Clive notes that OSCAR-11's VHF downlink has a unique sound, rather like a raspy slow Morse Code signal, sending "di di dah dah dah dah dah dah dah" over a period of five seconds. If you are receiving a very weak signal, Clive suggests you switch your receiver to CW or SSB. You should hear several sidebands around the carrier frequency and you should be able to hear the characteristic "Morse Code like" sound on at least one sideband. Clive also notes that you'll need a clean (that is "noise-free") signal to decode UO-11's downlink and your receiver must be set to NBFM mode for such a decoder to work. However, if you would just like to know what OSCAR-11's beacon sounds like so you'll know what to listen for, there's an audio clip of its beacon on Clive's UO-11 webpage at: http://www.g3cwv.co.uk/980214t.wav

AO-51 GOES SILENT

On November 27, 2011, AMSAT North America's Vice-President of Operations, Drew Glasbrenner, KO4MA, reported that after a long "illness" due to slow battery failure, AO-51, up to then, AMSAT's premiere FM "repeater in the sky" had ceased transmitting and was also not responding to ground commands. Drew noted that the last telemetry data indicated that the third of six batteries was approaching failure and other observations indicated that the voltage from the satellite's remaining three cells was insufficient to power the UHF transmitters.

Soon after AO-51 went silent, dozens of condolence messages were posted to the AMSAT Internet Bulletin Board (AMSAT-BB). Many people fondly remembered their many contacts via this FM "bird" and several thanked the AO-51 all-volunteer operating team for their work in keeping AO-51 alive for so long. Several posters also noted that AO-51 was the satellite that brought them into this part of our hobby.

Of course, there is always the possibility that a battery cell will "open" (similar to what happened to AO-7) so the command team will regularly attempt communications with the satellite over the coming months and years. Fingers crossed that it, too, may someday be restored to partial, "daylight only" use.

THE DEMISE OF ARISSAT-1

Early on the morning of Wednesday, January 4, 2012, reception reports indicated that ARISSat-1 had stopped transmitting and had apparently burned up soon thereafter in the atmosphere over the South Atlantic Ocean. The last full telemetry frames captured and reported to the ARISSat-1 Telemetry website at 06:02:14 UTC on January 4 were received from ground stations as the satellite passed over Japan.

Those telemetry reports showed that the temperature aboard ARISSat-1 had been steadily rising as atmospheric drag began to affect the satellite. Indeed, the last telemetry frames indicated that temperatures inside the satellite at the end of its life *well* exceeded 190 degrees Fahrenheit.

You will recall that Cosmonaut/Flight Engineers Sergei Volkov and Alexander Samokutyaev deployed ARISSat-1 from the International Space Station (ISS) on August 3, 2011 during EVA-29. The satellite carried a student experiment from Kursk State University in Russia which measured atmospheric density. Students from around the world provided the voices for the FM voice announcements.

During its brief lifetime, the Amateur Radio payload aboard ARISSat-1 achieved many "firsts" for Amateur Radio in space. These included the first test of an AMSAT Software Defined Transponder. That transponder transmitted an FM voice downlink that cycled between student messages, spoken telemetry and Slow Scan Television (SSTV) from several cameras on the space frame. The satellite also sported a 16 kHz bandwidth linear transponder, a CW beacon that contained spacecraft telemetry as well as the call signs of selected Radio Amateurs who have made significant contributions to Amateur Radio in space. ARISSat-1 also pioneered a robust, forward error correcting 1K bit rate BPSK downlink for the satellite's telemetry

ARISSat-1's ground team also developed and then later released a comprehensive piece of free software (ARISSat TLM) for both PC and Mac computers which allowed Amateur stations worldwide to reliably copy and then decode the satellite's BPSK and CW telemetry.
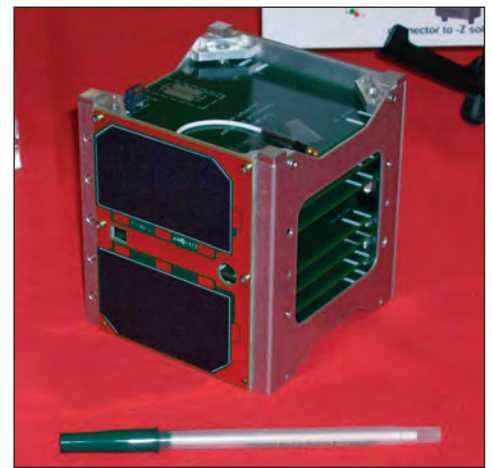
An early full-scale engineering model of AMSAT's FOX-1 satellite. Note the stacked internal arrangement of circuit boards. (Courtesy: Keith Baker, VA3KSF/KB1SF)
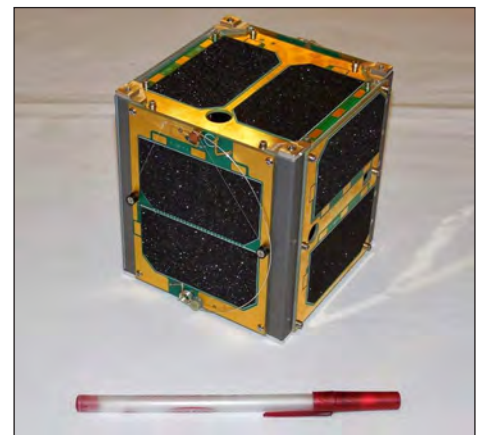
A later structural engineering model of FOX-1. Six ordinary, off-the-shelf, 1.2V Nickel Cadmium rechargeable batteries will power the satellite. However, the spacecraft is being specifically designed to keep working when it is in sunlight even if one or more batteries were to fail. (Courtesy: Keith Baker, VA3KSF/KB1SF)

The software also provided a way for those Amateurs to automatically upload the data received at their stations via the Internet to the ARISSat engineering team. Other "firsts" included a new main onboard computer and a new spacecraft power management system.

Soon after ARISSat-1's demise, AMSAT President Barry Baines, WD4ASW noted that ARISSat-1 was the prototype for a completely new satellite design that also captured the attention of national space agencies around the world for its unique educational contributions.

He said that, "By designing an educational mission aligned with NASA's Science, Technology, Engineering and Mathematics (STEM) goals, Amateur Radio operators around the world were able enjoy a brand new Amateur Radio spacecraft in orbit for just the cost of building (versus the cost of building and launching) the satellite."

And although ARISSat-1 has long since burned up in the atmosphere, the good news is that ARISSat-1 was just the first of four ARISSat space frames built by AMSAT-NA volunteers. What's more, there are a number of other (US-based) providers now vying for the chance to transport both cargo and humans up to the ISS so the future looks bright for similar follow-on launch opportunities. AMSAT remains in contact with those potential launch providers and (hopefully) may be able to negotiate another free "lift ticket" along with a deploying "spacewalk" for one or more of their three remaining ARISSat spacecraft down the road.

AMSAT'S NEXT PROJECT: FOX

Clearly, these two events – the demise of AO-51 and the fiery re-entry of ARISSat-1 – were proof that, in order for Amateur Radio to remain in space, AMSAT groups need to keep building and launching new satellites.

After a great deal of discussion, AMSAT's experimenters decided to split their planned replacement satellite for AO-15 (called "FOX") into two parts. The first satellite (dubbed FOX-1) will contain a simple, hardware controlled FM "bent pipe" transponder. That is, anything sent up to the satellite (in whatever emission mode) on the uplink, will be sent back down through the "bent pipe" in exactly the same mode on the downlink. It will also sport a simple onboard computer for telemetry and control along with non-deployable solar panels. Such a simple design was predicated on the need for a rapid, on-orbit replacement for AO-51 which, before its demise, was one of AMSAT's most popular satellites to date.

In the above photo (Courtesy: AMSAT-NA), I am holding the latest engineering model of AMSAT's FOX-1 satellite at the November 2013 AMSAT Annual Meeting and Space Symposium in Houston, Texas. AMSAT's experimenters are now building this spacecraft to operate in an approximately 650 kilometre (400 mile) circular, sun-synchronous orbit. This somewhat lower orbit will create less path loss for the satellite's uplinks and downlinks. FOX-1's transponder is also now being built to operate in Mode U/V (the old Mode B), which will make it easier for most people on the ground (especially beginners) to use.

What's more, the spacecraft will be designed for so-called "Zombie Sat" operation, similar to AO-7's current status. That is, when FOX-1's battery finally fails, the spacecraft will be "hard wired" to accept ground commands as well as to operate its FM transponder using power solely derived from its onboard solar panels. Transponder power output is expected to be in the 400-500 Milliwatt range, which would be similar to the nominal output of previous FM spacecraft like AO-27 and AO-51.

A follow-on mission, dubbed "FOX-1B" or "FOX-2" will tentatively sport a software defined transponder (similar to that carried aboard ARISSat-1), a more powerful and programmable main computer, somewhat higher RF output, deployable solar panels,

and – if a suitable (spelled "affordable") launch can be found – a somewhat higher (800 km) Low Earth orbit.

In November 2011, AMSAT applied to NASA's ElaNa (Educational Launch of Nanosatellites) program for a possible reduced cost launch for FOX-1 via one of their boosters in the 2013-2014 time frame. The good news is that, in early 2012, AMSAT's FOX satellite was selected for an ElaNA launch out of Vandenberg AFB later this year (2014).

The even better news is that a follow-on FOX mission has also been selected for yet another ElaNA launch. However, the specific launch vehicle (and date) for that launch have yet to be determined. In the interim, I suggest you stay tuned to the FOX page on the AMSAT website at http://ww2.amsat.org/?page_id=1113 for all the very latest developments about the FOX project.

WRAP UP

That's all for this time. In future columns, I'll bring you up to date on the progress of the FOX-1 effort as it nears launch as well as the status of our other Amateur satellites still in orbit. I'll also highlight some other Amateur satellite projects that are on the drawing boards of other AMSAT groups. See you then!

TCA

RANDOM THOUGHTS...

GRAND IDEAS...

Dirk Moraal, VY1NM
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Tagish, YT Y0B 1T0

During my lifetime I have had a few moments of brilliant thought and survived them.

Like the time I made a scuba tank out of a one-quart juice can. It worked, for one gulp of air, but I could have blown my lungs if I had been at any depth over waist deep in the ocean.

I was seven years old. I had never heard of radio, or I probably would have tried to use one underwater.

A guy doesn't have to try to get himself into trouble. It comes naturally. It has to do with that old and satisfying tradition of experimentation – and the empirical approach to the problem at hand. Curiously, at the moment I can't think of any YLs who are prone to this behaviour.

So once again I resort to the "Big Book of Words", and look up "empiric".

I find that it means:

a) one who relies on practical experience

b) Charlatan

The latter definition hurt my feelings but after a spell of sulking I was OK, and I turned to "empirical", which is a much more satisfying word, as amongst the various meanings I found *"originating in or based on observation, or experimentation"*. Hah! Just what I wanted.

The early great inventors used the empirical method a lot, though one might take that fact with a few grains of salt. Edison may not have invented the light bulb after all, since he is said to have bought the patent. Marconi of course did not invent radio – and may or may not have heard three little dits that day on Signal Hill – but my guess is he would have heard them anyway because he was predisposed to. Not to mention the fact he was also focused on commercial ventures. Personally, I would be more inclined to believe if there had been a word or two to go with that single faint letter "S". (But I am glad he did. Or didn't)

Peary did not have an HT or APRS in his parka pocket when he claimed the North Pole, and though he said he had been there, we can't really prove it. I and most other sentient beings do not quite believe he could have made the whole trip, based on his sparse navigation log and the astoundingly short time it took him to make the long, long return trip unaided.

With radio we would have known for sure. And there was no radio aboard the first recorded flight test in the Middle Ages when a monk launched himself off a cathedral spire (the tallest structure then available) with some homemade wings. It was a good show. Any landing you walk away from is a good landing. But our monk did not make a good landing. Still, from his sick bed he had ample time to deduce that he would need to build a tail on his glider for directional control. His bishop forbade any further such experiments and thus aviation (and its need for radio) was put on the back burner for another 600 or 700 years.

But they tried. They carried the known a bit further into the unknown. And they did experiment. Regardless, these successful inventions and firsts were the culmination of years if not centuries of hard work, empirical research and hope; until one day someone had an epiphany and the last piece of the jigsaw puzzle fell into place. Radio history proves it.

Experimentation in itself is a long and winding road, and one is better off having a goal to achieve rather than just starting out by shorting a 12 volt battery with two wrenches and hoping radio will come of it. (Actually it did, sort of. Remember those spark gap transmitters?) But that is no reason not to try.

TCA ♦

– HELP WANTED –

LETHBRIDGE, ALBERTA AND AREA: ARES VOLUNTEERS NEEDED

ARES is currently recruiting volunteers in the Lethbridge and surrounding area.

Please contact Rob, VE6XMB, the ARES Lethbridge Region Emergency Coordinator, at 403-752-3772.

Curtis Bidulock, VE6AEW
RAC Section Emergency Coordinator

ONTARIO EAST: TWO ARES DISTRICT COORDINATORS NEEDED

Wanted: Radio Amateurs with experience in ARES leadership are needed. The Ontario East Section is looking for two ARES District Coordinators.

An ARES District Coordinator is needed for the Loyalist District. There is a very strong group in Frontenac County and there exists two other groups that can benefit from District support and leadership.

An ARES District Coordinator is also needed for the Severn District, which is an area that also includes the city of Peterborough where there is a strong ARES group. This District has not had a District Coordinator for several years and would greatly benefit by having an active DEC. More groups are needed there for a stronger District where groups can help each other out in times of EmComm emergencies.

Both of these Districts are in need of someone to step up and invest some time and effort to provide the necessary leadership that will enable the groups within to work together. Establishing a functional Mutual Aid for ARES would provide for a stronger District.

As a District Coordinator you will receive my full support and guidance. Interested individuals with ARES leadership experience are asked to contact Ontario East SM Michael Hickey, VE3IPC, at VE3IPC@rac.ca or call 613-679-4472.

Michael Hickey, VE3IPC
RAC Ontario East Section Manager

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Gary Badcock, VO1GWC
Dennis Bancesco, VE6ATC
Doug Bannard, VE3SPF
Shawn Barnard, VE3KYQ
David C Barnes, VO1YA
Bill Barrie, VE3AAS
Douglas Barry, VE7WLF
Geoff Bawden, VE4BAW
Michael Bell, VE3NOO
Michael F Belliveau, VE6XZM
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Terry Bosse, VE6LL
Allan Boyd, VE3AJB
Robert Boyd, VE3SV
Robert Boyer, VE3XBB
Harold Braun, VE3CD
Patrick Brewer, VE3KJQ
Michael Brickell, VE3TKI
Ronald O Brook, VE4RON
Matthew Eric Brown, VE3OIC
Mike David Brown, VA3GRL
O Ernest Brown, VA3OEB
Vern Brownell, VE7MCC
P J Buckway, VY1PJB
Ian Thunder Burgess, VA6EMS
Paul Burggraaf, VO1PRB
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William J Bush, VE3BXI
Gary Butler, VE7OQ
David Caddell, VA7VVV
Fred Cain, VE3JMJ
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Mark Capewell, VA7MNV
Gilles Chevalier, VA2CG
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John Connor, VE3TG

Guy A Costanzo, VA7GAC
K James Couprie, VE6IG
Donald Courcy, VE3PU
David Coutts, VE3KLX
Robert Cove, VO1REC
Paul C Cragg, VE3AXT
Ron Cross, VA3WWE
William R Cunliffe, VA3WRC
Francois Daigneault, VE2AAY
Renze Dam, VE6DC
Rick Danby, VE3BK
George Davis, VE3OGP
Frank Davis, VO1HP
James Dean, VE3IQ
Julio Cesar Diaz, VA3JCL
D Howard Dickson, VE1DHD
Richard J Dion, VE3LAD
Ian Drinkwater, VA3UM
George S Duffield, VE3WKJ
Robert Dyer, VE3KTY
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Doug Elliott, VA3DAE
Darayus J Engineer, VA3AHI
Edward Evanko, VE4EDE
David Evans, VE6DXX
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David Gerrard, VE3VID
Gordon Gibson, VE3NQK
Paul Giffin, VE7IPM
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Dave Gillis, VE7BX
Bill Gipps, VE7ISV
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DA (Sandy) Haggart, VE3HAZ

Colin Haig, VE3MSC
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Don Hamilton, VA7GL
Gordon Hamilton, VE7ON
Garry Hammond, VE3GHP
Garry V Hammond, VE3XN
Richard Hanishewski, VE5RH
Martin Hann, VE9PLS
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Harm Hazeu, VE4HAZ
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Robert Henderson, VE7HBG
Hugh Henderson, VY1HH
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Doug Henry, VE4TG
Howard Hepburn, VE6GT
William Hicks, VA6RQ
Dallas Edward Hinton, VE7FKH
Peter K Hodgson, VA3PKH
David Hodson, VA3UL
G Bruce Hollett, VE1MLW
Henry Charles Hollinger, VA6HBY
John Hood, VE3VJH
Clare Hopkins, VE7IBK
Joseph Hopkins, VE7BYF
David Hopkinson, VA7FTW
Gabor Horvath, VE7DXG
Mark Alexander Humenyk, VE3HMK
Gordon Hungerford, VE6TI
A Graham Ide, VE3BYT
Robert J Ireland, VE9KM
Lorne S Jackson, VE3CXT
Gordon J Jacques, VA3GJJ
Peter W Jago, VA3PJ
Brian Janzen, VE7CTH
Aaren Jensen, VA7AEJ
Gordon Jewsbury, VE4OK
Doug Johns, VA3DLJ
Dave Johnson, VE7VR
Walter D Johnston, VE3GE
Sam Jones, VE3LCK
Beckett Jubb, VE6JUB
Janet Jubb, VE6VED
W.J. Karle, VE4KZ
Eric Kehler, VE7EGK
Thomas V Kennedy, VA3TVK
E Kenward, VE7BYK
Stephen Kern, VE7HSK
Stephen Kerridge, VE9HZ
Kelly Kienleitner, VE7KQW
Melvin Killens, VE3MLK
Robert Neil King, VA7DX
David Kingsland, VE3MDX
Bill Kirby, VO1BB
David Klatt, VE5GN

Walter Kohler, VE7SM
Boris W Kohut, VE4BG
Gordon R Kosmenko, VE6SV
Jerry P Krayco, VE7NX
David LaHay, VE7FVW
Benoit Laprade, VE2LSF
Harvey AA Larabee, VA3LHA
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Stan Leschinsky, VE3TW
Allan E Lett, VE3TYT
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David Liddell, VE7QR
John Kingsford Lockwood, VE9KC
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Gerald Lutley, VE1GPL
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Glenn MacDonell, VE3XRA
Ian MacFarquhar, VE9IM
John MacKay, VE7EEX
Jim MacKenzie, VE5EIS
R K Mackenzie, VA3RKM
Neil Macklem, VE3SST
Daniel Madden, VA3RRJ
Mark Magner, VE3CT
Pierre Mainville, VA3PM
Alan Mallett, VA7AWM
Eric G Manning, VA7DZ
Tom Martens, VE6TRM
Greg Mason, VE4AMN
Martin Matheson, VE6GE
Gabriel Mazzeo, VA3CWT
Philip Alexander McBride, VA3QR
Don McCallan, VA3GFD
Duncan A McCansh, VE3OM
Bernard McCoy, VE6HFD
Arthur McDougall, VE7CFU
David McKinlay, VA3IR
L David McLennon, VO1LM
Malcolm R McLeod, VE5ZG
Chris McMullan, VA3CMJ
Alan McPhee, VE3ZTU
Donald McPhee, VE3REO
Doug Mercer, VO1DTM
G R (Rick) Michowicz, VE3TYP
Eric Mills, VE1AST
Micheal Misiwich, VA6MIS
Lenard Moen Sr, VA3HBR
Marcel D. Mongeon, VA3DDD
George Morgan, VE3GM
Byron Morse, VA3BMO
Bob Morton, VE3BFM
Wilfried Mulder, VE7OHM
Alexander Wade Mullaly, VA7AZE
Hammond Museum of Radio, VE3BJ
Mike Myers, VA3MPM
Garry Naylor, VE6FGN
Jim Nelson, VE6ACR
A L Nelson, VE7WC
Patricia Nordin, VE3RPP

Brett North, VO1BBN
Kevin Patrick O'Toole, VE6GUN
R Oakenfold, VE5RO
Stephen Olesen, VE6SLP
Sheldon H Olmstead, VE3XI
Keith D Olson, VE4VO
Dennis Paganin, VA3DTP
James Park, VE7IW
Bill Parker, VE1VP
Joseph G Parkinson, VE3JG
Gordon Passmore, VA7GAP
Brad Paterson, VA6AKF
Colin Pavey, VA3FP
Doug Peckhover, VE3ATP
Johan A Pedersen, VE0NLI
Tim Pekkonen, VE3UO
Steve Pengelly, VE3STV
Mark A Perren, VE6IHS
Brent Petersen, VE9EX
Ron Philip, VE7NS
Murray K Pierce, VE3IFP
Robert W Piggott, VE7CYU
Dale Pilsworth, VE6DAP
Gary Pollock, VA3GMP
Harold J. Porter, VO1JA
Terry Potts, VE3TEP
John Walter Potts, VE6JWP
Everett Price, VO1DK
Byron Pulsifer, VE9BUB
Tim Pychyl, VA3PYC
Devon Racicot, VE5DWR
Marty Raine, VE1AE
Norm Rashleigh, VE3LC
Bryan Rawlings, VE3QN
Steve Regan, VA3MGY
Gilles Renucci, VE2TZT
Earl Richardet, VE7QJ
Dennis G Ritchie, VE3DXZ
Jeff Robbins, VE3JTR
Ed Roberts, VE3KSW
Bernie Roche, VE3OTR
Peter Rogers, VE3ETR
Bruce Roney, VE3BER
Donald Rowed, VE3KII
Gerry Saelens, VE7DCW
Edward Samborski, VE3TAS
Patrick Sandi, VE7SDI
Bill Scholey, VE7QC
David Scott, VE3ZZU
Joseph T Scott, VE3ADB
John D Scott, VE1JS
Ellis Seddon, VE4AJO
Ian Seddon, VE3HUT
Bill Sheldrick, VE6ILE
Kieran Shepherd, VA3KS
Robert A Shkuratoff, VA7DIV
Chad Shoaf, VA6TT
George B Simpson, VE6HX
Gary W Skett, VE7AS
Ihor Skotar, VE3GXV
William E W Skuta, VA3WEW
Robert A Smith, VE3RSG
Ian Snow, VA3QT
Dave Snydal, VE4XN
John Sobkowicz, VA6GEO
Margaret Somerleigh, VE3OWL

Patrick Speer, VE7PJS
Mark Spencer, VE7AFZ
Harry H Splett, VE3HHS
Noel T St-Amand, VA3TS
Mike Stafford, VE6MEX
Alan Steele, VA3STL
Rob Steenweg, VE1CHW
Dean Stennes, VE7NEW
Al Stephens, VE3NXP
Jeff Stewart, VA3WXM
Jack Summers, VA3XR
Neal L Sunderland, VA6NLS
Hiroshi Takahashi, VA7LET
Ann Tekatch, VA3NOE
Yori Tsuji, VE4ACX
Ian Graham Turnbull, VE7TGI
Al Tyson, VE3EXE
WL Underwood, VE1WLU
Bill Unger, VE3XT
Henry Urbanowicz, VE3OEO
Ronald Vadeboncoeur, VE3REV
A E Vaillancourt, VE3DPZ
Hudson C Vallieres, VE9HCV
Todd Van Norman, VE7GBO
Bernie Van Tighem, VE7BVT
Marinus Vanderminnen, VA6OPA
Robert Vanderminnen, VA3RMV
Maurice-André Vigneault, VE3VIG
Ron Vollick, VE3GGX
James A Webb, VE3WA
Andrew Webb, VE6EN
Albert Morris Webber, VE4AMW
Joel Weder, VE6EI
Andrew C Wells, VE3WEL
Randy Mark Westby, VE6DFC
Fred Westlake, VE3FEW
Garth Wetherall, VE3YC
Peter Wetton, VA3PRW
John E White, VA7JW
Kyle White, VE9KTW
Chris K. Wiesner, VA3SM
Brice Wightman, VE3EDR
James A Wilkins, VE7UVL
Ken Williams, VE9KW
Brian Williams, VE3KNE
Wayne F Willis, VE5WFW
Harold H Wirth, VA3HHW
John Wiseman, VE7BVS
K Scott Wood, VE1QD
Timothy Wood, VA7TIW
Allen Wootton, VE7BQO
James E Wyse, VO1CPZ

NEW RAC MEMBERS
NOUVEAUX MEMBRES RAC
Barry Appel, VE7ATV
Joel Bastarache, VE6JOL
Jamie Bastien, VE3UBJ
Keven Belanger, VE2TMZ
Gary A Bell, VA3FV
Terry Bendell, VE3TKB
Mike Beniuk, VA6MB
David Bennett, VA3DMW
Doug Blanchard, VA7DEJ
Barry Brousseau, VE3SLD
Bob Brown, VA7GMG
Joseph Caberlin, VE1EJ
Teresa Caron, VY2TC
Real J O Caron, VY2ROC
Gord Caswell, VE4JHJ
Michel Maurice Chartrand, VA3MCX
Luc Chouinard, VA3LCQ
Michael Clegg, VE7MOC
Ruwirrino Colminas, VE7REO
Brent G Currie, VE8BC
David Dell, VE3GUD
Alain Desjardins, VA2RXM
Scott Dexter, VA3DEX
Edward K Doig, VE3TDY
Jean Drolet, VA2JN
Brian Ellis, VE7ELS
André J Emmell, VE2AJJ
Christopher John Engel, VE3SZH
Gethin Evans, VA7GTE
Ryan Falkenberg, VA6REF
Denis Fortier, VE2TTH
Leon Willem Fourie, VE5LWF
Roger Edward Frost, VA7TWS
Clint Joseph Gauthier, VE7CGX
Glen George, VE3EYW
Ari Giligson, VA7ARI
Marc-André Gingras, VE2EVN
Dennis Giraud, VA7DDG
Bob Greenberg, W2CYK / RF
Gary Greenblatt, VA3WBW
Hugo Guérard, VE2HGZ
Louis Guerra, VA3JAZ
Steven Gunson, VA7GRX
Travis Hatch, VA6TLT
Mark Hill, VE3YRY
Douglas Michael Hoyte, VE3HOY
Larry J Keating, VA7OLK
Joel William Keeler, VE6KEE
Gordon James Killally, VE7IRL

Glen Kim, VE3HGK
Warren Kinsey, VA7WLK
Mary E Kirkpatrick, VA7MEK
Gaétan Lamontagne, VE2VEI
Ted Edward Lee, VE7LEE
Raymond David Leivo, VE6ID
Charles Levasseur, VE9CEL
Jonathan Lévesque, VA2LOJ
Adrian Liggins, VA3NNA
Ryan Lippert, VE3KEI
Rui Liu, VE4KOA
Gregory P Loewen, VA6GTR
Colin Grant MacArthur, VE3CWQ
Gordon George MacDonald, VE1GGM
Thomas Maclean, VE3OYL
Joseph John Maniate, VE3SGU
Shayn Daniel McAskin, VA7SDZ
John Frederick McGrath
Marc-Olivier Messier, VE2ZRX
Gil Nadon, VA2AGN
Corneliu Nitu, VE3EVB
Peter Nordstrom, VA7VMY
Ahmet Ozguder, VA3TUR
Linda M Peterson, VE7LMP
Nick Piluso, VA7NPI
J Bruce Prior, VE7HR
Alexander Rowsell, VA3XMR
Karl Saindon, VA3OKP
Denis Samson, VA2DSZ
D Sandison, VA3XL
Kevin Sharp, VA6KHS
Paul Siniak, VE7WRL
Joseph Skrypka, VE3UKY
Eric Sladic, VE3XXE
Tom Smith, VA3AKB
Andrew Sutherland, VA7HDT
Benjamin Swayne, VE7FDE
Andrew Michael Taylor, VA7AMT
Gerald Thorne, VO1WCW
Albert Vergara, VE7CTG
Sheldon Ward, VA7XNL
Debra Lynn Watson, VE3DBW
Kimberly Watson, VE3KMW
David Harold H Webber, VY1WWW
Liz Whiles, VE7BNM
Lee Williams, VE9LJW
Stephen C Wilson, VE6AAW
Rick Wismer, VE7XVM
Jon Wright, VA6ZG
Christopher Yelinek, VA4SKY

QUA – A TOPICAL DIGEST

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INNOVATIVE USE OF MORSE CODE

The transcript of Terry O'Reilly's "Under The Influence" program on CBC Radio1 can be found at: http://www.cbc.ca/undertheinfluence/season-2/2013/01/26/radio-is-dead-long-live-radio-1/

At least it was there when I wrote this column but who knows whether you can still find it.

Among several examples of the innovative use of radio broadcasting, it included a description of the way a message was sent to kidnapped soldiers in Colombia by embedding, in a music program, a Morse Code message "19 people rescued, you're next, don't lose hope" (I doubt the punctuation symbols were actually sent).

73 MAGAZINE ARCHIVE

This being the 100th year of the American Radio Relay League (ARRL), I have been wallowing in history (not that unusual for me) and I noticed in "Contact" – the newsletter of the North Shore Amateur Radio Club in North Vancouver – this reminder that you can still find on the web the text of issues of "73" of 50 years ago.

Wayne Green was a quirky character with a somewhat inflated ego, and did not hesitate to print articles of dubious technical validity, but every issue had lots of interesting stuff, and the mass of material in the archives is well worth an extended look. "73" is part of our history for sure.

The NSARC newsletter said:

"**Nostalgia Corner:** 73 Magazine (also known as 73 Amateur Radio Today) (OCLC 22239204) was a United States-based Amateur Radio magazine that was published from 1960 to 2003. It was known for its strong emphasis on technical articles and for the lengthy editorials in each issue by its founder and publisher, Wayne Green. Archives can be found at http://archive.org/search.php?query=collection%3A73-magazine&sort=-publicdate&page=1."

NSARC also noted that the fattest knight at King Arthur's Round Table was Sir Cumference. He acquired his size from too much pi. Sorry, that piece of circular trivia snuck in there – all I intended to add was that the ARRL have produced a 30-minute video that traces the evolution of Amateur Radio. It is well worth a look: http://www.southgatearc.org/news/2014/february/a_century_of_ham_radio_video.htm

There is also another link to ARRL's history at: http://www.eham.net/articles/31685

USE OF _ . _ . _

My notes about Morse Code prosigns and my memories of the use of _ . _ . _ in the RAF, brought reams of information from Rob, VA3ROM. He sent me the text of Article 25 of the ITU London Conference 1912, which included the stipulation that _ . _ . _ had to be sent as an alert that someone (or anyone, or everyone) was about to be called. We were in the midst of an exchange of emails relating to the history of development of the code for maritime radiotelegraph operation when the reminder came from the editor that our columns for this issue were due. Rob, being an ex Radio Officer, has lots of information from personal experience and from his collection of documentation references. I haven't got far past first base in sorting it out, so undoubtedly there will be more to say later on the introduction of CQ etc and the dropping of QST.
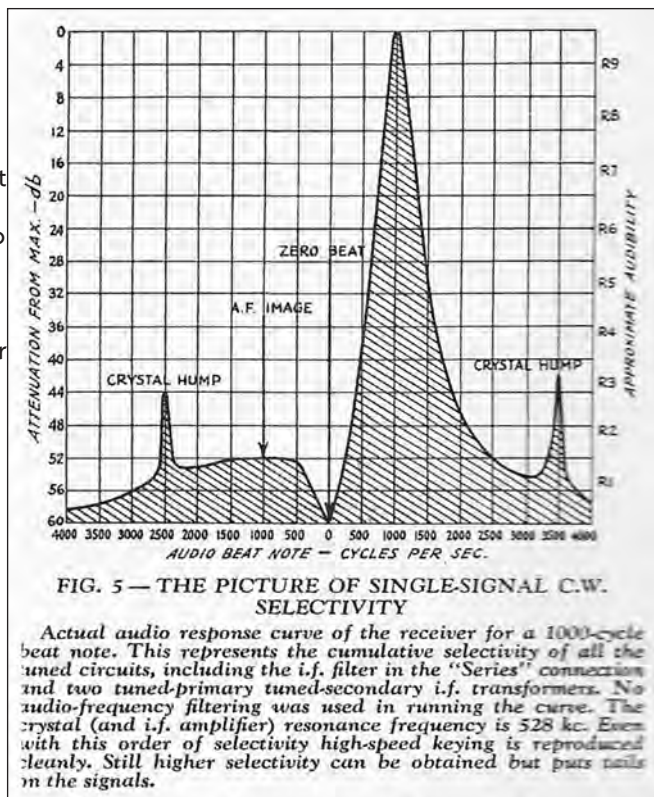
Meanwhile, VE3ZI also responded to this item:

"I recall BQ – a short message between two stations. This was used for informal minor messages – an important message would use a service telegram.

RQ – request for repeat. This was (much) later extended to ARQ for Automatic RQ as used by TOR (Teleprinter over Radio) systems, and is now generic for just about any error correcting system.

CQ – message to all stations. So not quite the same meaning as our CQ but very similar."

SINGLE-SIGNAL CW FILTER

Relating to the discussion about the single-signal filter in the HRO, here is the response of the similar filter described by Jim Lamb in his August 1932 *QST* article "Short-Wave Receiver Selectivity to Match Present Conditions":

FIG. 5 — THE PICTURE OF SINGLE-SIGNAL C.W. SELECTIVITY

Actual audio response curve of the receiver for a 1000-cycle beat note. This represents the cumulative selectivity of all the tuned circuits, including the i.f. filter in the "Series" connection and two tuned-primary tuned-secondary i.f. transformers. No audio-frequency filtering was used in running the curve. The crystal (and i.f. amplifier) resonance frequency is 528 kc. Even with this order of selectivity high-speed keying is reproduced cleanly. Still higher selectivity can be obtained but puts tails on the signals.

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CIRCUIT SIMULATION AND ANALYSIS

The book, *Circuit Simulation and Analysis* (ARRL 2013), by Dr Saeid Moslehpour provides an introduction to computer-aided circuit design using PSpice software.

This book is intended for people already skilled in circuit design. PSpice software, derived from the long-established SPICE program developed in the 1980s in Fortran, is now promoted by Cadence Design Systems in two forms, Cadence SPB and OrCAD. Demo versions are available from http://www.cadence.com/products/orcad/pages/downloads.aspx that can be used to explore the examples in the book. Some modeling files are also available from http://www.arrl.org/circuit-simulation.

The book is essentially tutorial, with complete exploration of principles of design, simulation and testing, and hundreds of illustrations. It is not a guide for the construction of circuits for specific projects. The reader needs at least the demo software handy to follow along with a study of the book.

ARRL #0055, US$27.95.

A HISTORY OF *QST* VOLUME 1: AMATEUR RADIO TECHNOLOGY

Edited by N0AX and published as part of the celebration of the 100th year of the ARRL, this is a selection of keynote articles from *QST* and other ARRL publications, each illustrating important advances of the state of the art, decade by decade, from spark through to the present day.

Each article is preceded by an introduction explaining its significance and relevance. The material is sorted into categories – circuits, propagation, antennas, receivers etc – and beautifully printed from original plates. For example, Beverage's original description of the "Wave Antenna" and Lamb's article introducing the famous Single-Signal filter that became a central feature of the HRO are here in their full glory, not as photocopies. A must for the history buff. ARRL #0003, US$34.95

A HISTORY OF *QST* VOLUME 2: ADVERTISING

Edited by K9OCO, a companion volume to the one on Technology, this is a nostalgic look at the equipment, activities and interests of our hobby, seen through the medium of advertisement pages of each decade of the first 100 years of *QST*.

Each chapter is introduced with editorial that summarizes the essence of the decade covered, with relevant notes and bibliographies pertaining to the period. Superb illustrations of individual models and the interesting and sometimes amusing hyperbole that often graced the ads in the early days.

How about this natural loudspeaker horn? One of the ads from Volume 2.

SEA HORN LOUD SPEAKERS
NATURE'S PERFECT AMPLIFIER
THE BEST AMPLIFYING HORN OFFERED
SPLENDID DEFINITION

INTERNATIONAL MUSEUMS WEEKEND

The International Museums Weekend is an annual event in which museums from all over the world participate in two weekends of special event operation on the Amateur Radio bands.

This year the event will take place on the weekends of June 15-16 and June 21-22. Over 270 different museums have participated over the years.

For the purposes of the event, the word "museum" is loosely interpreted and they have included ships, castles, air museums, Napoleonic forts, pumping stations, wireless museums, racing museums and many others.

There really is no shortage of venues in which such an event can be staged, no matter where in the world you might live.

This could be a good opportunity to promote Amateur Radio to the public at large and to provide some live exhibits at local museums.

Online registration is free and full details can be found at: http://www.museumsonair.org/IMW/index.htm

What a wonderful idea this is for oldtimers and newcomers alike. A perfect coffee-table book and conversation piece.

ARRL #0048, US$34.95

2014 ARRL COMMEMORATIVE CALENDAR

As you might expect, this year's calendar is heavily historical, laced with photos of personalities, stations and gear from 1830 to 2014.

Each month has also notes on noteworthy things that happened during that month over the years, and a reminder of events scheduled for this year. At the end, the usual summary of member services is offered by the League.

ARRL #0062, US$12.95

DARF IS THE DEFENCE OF AMATEUR RADIO FUND

It is a Trust Fund established in the early 90s by the Canadian Radio Relay League to provide financial support for research, and to defray travel expenses of a delegate to World Radio Conferences to defend the Amateur Radio bands.

The Fund is maintained by Donations from individual Canadian Amateurs and from Canadian Amateur Radio Clubs. Donations are deposited in the trust fund account and the fund is administered by the three DARF Trustees.

The trust is entirely separate from, and cannot be used for, RAC financial transactions. Donations may be made by cheque only. Cheques should be made out to "The Defence of Amateur Radio Fund" and may be sent by mail to:

"Defence of Amateur Radio Fund", 720 Belfast Road, Suite 217, Ottawa K1G 0Z5

Visit <darf.rac.ca> for more information.

FRESH ON THE AIR
— ADVENTURES FOR THE NEW AND BEGINNING HAM

Phillip Boucher, VE3BOC
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www.phillipjboucher.com

Where Have all the VHF/UHF Call Channels Gone?

In today's Amateur Radio world of high tech and the proliferation of VHF and UHF repeaters, most Amateurs who operate two metres or 70 centimetres seem to always have their radios tuned to the local repeater, either seeking a random QSO or waiting for a specific operator. The local repeater now seems to be the place where everyone tends to hang out.

However, a few years ago, if you wanted to get a hold of another Amateur Radio operator, you would go on one of the dedicated simplex call frequencies on the band you were operating on.

Once you established communications on this frequency, you would move over to another simplex or repeater frequency so as not to tie up the calling frequency. It was the place to find every local Amateur who was not engaged in conversation elsewhere, including repeaters. It was the channel for initial contact and emergency communications.

So what went wrong? Nowadays, the call channels sit silent, barely a person on them. And if you do happen to find Amateurs on them, they are usually talking to each other at length, using the call channels not for what they were intended. 146.520 MHz and 446.000 MHz were the places to be, to hang out, to monitor, to make contact, to get help. So what went wrong?

A major reason seems to be the proliferation of repeaters. Most new Amateurs get on their local repeater right away once they get their ticket. And why not? The repeater covers a large area and lets non-local Amateurs talk to each other. Simplex is limited in range. So why use the call channels anyway? Tradition? Nostalgia? Good and consistent operating practice?

As a new Amateur, you can keep the call channels active while still using your local repeater. Most Amateur rigs let you monitor two channels at once, either directly or via a Priority setting. Why not make either 146.520 or 446.000 your priority channel and your local repeater your operating channel? This way, you will hear all the calls on your local repeater and you will also be able to hear any calls on the calling frequency. Get your friends to do the same thing. And if you are local to your friends or other Amateurs, encourage them and insist on using the calling frequency to establish communications first, then move over to the repeater. In our hobby, the adage of "use it or lose it" is a vulture that circles our allotted spectrum constantly. Use the call channels to make initial contact and then move over to another frequency. Monitor the call channels for emergency traffic. Keep the call channels active and available and useable. As a new Amateur Radio operator, you *do* have the power and influence to keep frequencies alive.

MINI REVIEW: NAGOYA UT-108UV MAGNETIC MOUNT MOBILE ANTENNA

Last year, I purchased and tried a UT-108 dual-band mobile magnetic mount antenna from Nagoya, a little black whip that retails for around $11 to $12 on eBay. I wanted a mobile antenna that was extremely portable for use with my VX-6R HT so I didn't have to keep one attached to the car. I compared the performance of this antenna against two precision-cut quarter wave mobile whip antennas: one cut for exactly 146 MHz and one cut for exactly 445 MHz. These quarter wave whips are made of thick steel on a magnetic base. During testing, each antenna was mounted in the middle of the car's roof.

At first glance, the UT-108 looks very much like a child's toy. It is made of thin black steel with a small magnet on the bottom with a very thin coaxial cable. The radiating element is around 20 inches long with a small coil near the bottom.

In fact, one reviewer on the Internet said they were afraid to send a signal through the antenna in fear of damaging their radio. I have to admit, I was quite disappointed when I opened the package and saw the tiny antenna and magnetic base. I was sure the antenna was probably non-functional and the magnetic mount would release in the wind as soon as I got to highway speed.

The actual testing involved trips around town and between three distant cities, each with a couple of repeaters in them. Transmit output power was five watts from my VX-6R HT. My goal was to see just how well the Nagoya antenna compared to the precision-cut quarter wave whips. The precision-cut whips themselves have always performed very well. Within a city, I can always hit the local repeaters; and on the highway, I can usually start using repeaters within 20 kilometres of the city limits. Therefore, I had a benchmark to follow.

To my utter amazement, the magnet is quite strong and held on at highway speeds with no problem at all. The fact that the antenna is thin and low profile results in little wind resistance so there is virtually nothing to pull the magnet off the car while driving. Even in a blizzard and a torrential rain and windstorm, the UT-108 held on tight. Furthermore, I was shocked, impressed and very surprised that the UT-108 performed so close to the single-band precision whips, that, in all honesty, the difference is negligible.

Of course, the UT-108 or any quarter wave whip can't compare to the performance of a 5/8 dual-band whip. However, it performs just as well as any quarter wave. And one neat feature I really like about the antenna is that due to its low-profile design and jet black colour, unless you are right up near the vehicle in the daylight, you can't even tell that the antenna is there.

At night, it looks like it doesn't even exist. Great stability, excellent performance and stealth profile makes this antenna a real little gem to have.

Transmission Tidbit: Confusion says, Amateur Radio a hobby, but most Hams more professional than those paid for same activities.

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. It's here! It's here! "The Almost Complete Guide to Yaesu's VX-6R" is now available in PDF for $14.95. Visit http://www.phillipjboucher.com to order.

TCA

Us "Old Geezers"…

I don't think that anybody who has been into Amateur Radio for more than a few years has to be told that friendships are formed, sometimes halfway around the globe, which last a lifetime. More often though, they are closer to home.

I was reminded of this truth when running our Fundy Amateur Radio Club's weekly Wednesday night net on 2 metres. One of our "regulars" failed to check in and further down the log somebody else noted that, and yet another member said that he had heard "Leo, is not feeling that good these days".

That's a scenario a lot of us can relate to…

It's no secret that XYL's, sitting close by, and those monitoring the ham bands, often hear QSOs about "health and welfare". Some of course are beyond the pale and in vivid detail as Amateurs share their aches and pains in boring detail for minutes, long rambling minutes, at a time!

But that's not the real gist of the human dynamic taking place here. We are sharing our lives with friends, near or far, and we have an honesty that is reflective of the basic nature of Amateur Radio. Why else, for instance, do we not acknowledge lofty titles added to our names, and everybody is on a first name footing and have been since the early days of Amateur Radio? Doctor or Prime Minister or Chicken Farmer, (sorry!) we are all equal when we press the mike button or pound brass.

We share our beliefs, observations, and opinions, and hobbies, and life's trials, and we care about those who we "see" through the airwaves of the Amateur Radio bands. Hey! You got Cairn terriers!? I've got Cairn terriers! Love those little nurdy, hole digging dogs with attitude! And there begins many a conversation that can last for minutes; or more often, on a regular basis for years. How's your Nessie or Bertie this week?

Our club, here in Nova Scotia, at the inspiration of our President Mason, VE1MUT, late last year engaged in a mailout of some 62 letters to former club members, asking them to "get active again". They are known to older members of the club, still have their licences, but have not been heard of for months or years. Neither have they checked into our club's Wednesday net for months or years. The letter stressed not only their companionship, but by "dusting off their microphones" they can again become resources to their home communities in times of natural disasters.

Leo's "non-participation", when I later called him on the "twisted pair", turned out that he had had a nasty bout of the flu which left him hacking and coughing for two weeks. I can relate to that – I had one of those bouts some 10 years ago while living in Hamilton. No Fun!

I wish he had tried to check in and shared his plight with the rest of us. That was his choice obviously. But the rest of us cared!

Us "Old Geezers" have our aches and pains, don't we know it, and life being what it is we should not be too proud that we cannot share that with our friends. That's what friends are for, eh? Who else can we call "Stinky" or remind them of that time they had their heads in the toilet on high school graduation night so many years ago?

When I run one of our club's nets, and before I finally sign off, I try to encourage the "shy ones" – and I know they are out there – to press the button again and check into the net. Human nature being what it is, some of our ham friends want to keep their life's pains and ills and losses to themselves. OK. But I do wish they would rather "share".

Andy Neimers, VA1FJT – Digby, Nova Scotia
(Former "Friendly Jungle Telegraph" TCA columnist)

"An Interesting Visit"

From left: Ron McFadyen, VY1RM, Griebel, EA8BFK/DJ9PC and David Musselwhite, VY1XY.

Each Saturday, Yukon Amateur Radio Association members and friends gather for breakfast to discuss ham radio items and other stuff.

Recently, Peter Griebel, DJ9PC/EA8BFK, joined us for food and friendship. Both he and his wife (also an Amateur) are world travellers and they were in Whitehorse for the conclusion of the Yukon Quest, International Sled Dog Race (http://www.yukonquest.com/).

Peter has an advanced education in electronics and was showing us how he operates HF remote.

He set up his laptop, and turned on his station in the Canary Islands.

The super op, turned on station, rotated beam, set linear output then promptly worked a station in Scotland, via the Internet.

To say the least we were all impressed.

He has several video cameras on the property so he can see rotor and linear settings etc (and the sandy beach). Wow! It was quite the eye opener.

I recently worked Peter from my home station on 15 metres; 4x4 direct to Germany, then 5x7 to the Canary Islands through the remote base.

Peter has great pictures on his site at QRZ.com.

Ron McFadyen, VY1RM – Whitehorse, Yukon
(Past and founding President of the Yukon Amateur Radio Association)

TCA

Big Signals, Big Ship

Ron Walsh, VE3GO

The following article is dedicated to Bill Usher, AG4PA, who devoted many hours to the restoration of the radio equipment aboard the USS North Carolina. The article was previously published in Monitoring Times and is being reproduced here with our thanks.

Deep inside the battleship *USS North Carolina*, a radio operator concentrates intensely on the receiver in front of him. The state of the art, 22 tube, RCA receiver, known as an RBB, tunes from 4 to 18 MHz. The receiver, built in 1941, is connected to a large vertical near the smoke stack of the vessel. He carefully tunes the bands, checking several known frequencies, until he comes on the frequency 6.070 MHz. He carefully tunes in the signal and listens intently. The voice on the radio is giving target information. The signal content is written down so an accurate reception report can be made. You can almost feel the huge 16-inch guns turn to be ready to fire at the targets.

Just then a touch on the shoulder from Allan Pellnat, KX2H, reminds me that the year is 2013 and I am a guest aboard the battleship memorial. The station is CFRX, the shortwave service of CFRB from Toronto, Ontario and, ironically, the target information is actually a news article about the Target chain of stores coming to Canada this year. We are not in the south Pacific but in the harbour of Wilmington, North Carolina.

I had been waiting for over a year to visit the radio rooms on the battleship to see areas not usually open to the public. Allan and I had corresponded and set up an opportunity for me to visit during the North Carolina QSO Party and also to come back again to gather details for this article. The honour to actually operate from this museum ship was one I was not going to pass up. You do not often get the chance to see and actually use some of the original equipment from World War II. For a marine history enthusiast and a radio enthusiast, this was a chance of a lifetime.

I met some of the volunteers last year and they put me in contact with the Azalea Coast Amateur Radio Club who maintain the communication equipment aboard the ship. I had three purposes in mind as I went aboard. I wanted to actually see the original radio rooms and operate aboard. Second, I wanted to write an article about

the ship and the communications that were used in the 1940s.

However, my third purpose was the most important to me. Don Cudney, VE3WDC, had given me a flash proof WWII Navy Morse key for helping him with his equipment.

I could think of no better place for the key than aboard this naval memorial ship in a restored radio room. Allan had already told me they would love to have the key for the ship and had done some research about it. I also had a collection of old, black, radio knobs, of various sizes, that I thought they might be able to use. Allan is involved with the Antique Wireless Association and he is sure they will find a home.

THE SHIP'S HISTORY

The *USS North Carolina*, BB55, has quite a history and is a fitting memorial to the brave sailors of World War II. Her keel was laid in October 1937 and was the first US battleship constructed in 16 years. Along with her sister ship *USS Washington*, BB56, they comprised the North Carolina class of battleship.

The ship was commissioned on April 9, 1941 and was considered the world's greatest sea weapon.

She was armed with nine 16-inch guns, 20 5-inch guns and many anti-aircraft weapons.

She carried a crew of 144 officers and 2,195 enlisted men which included about 100 marines.

She started in the Atlantic but was transferred to the Pacific theater of operations. She participated in every major Pacific naval offensive and received 15 battle stars.

She was in action from the Guadalcanal landings of August 7-9, 1942 to the bombardment of the Japanese Home Islands from July 10 to August 15, 1945. She was reported sunk by the enemy six times but she survived many close calls and near misses. On September 15, 1942 she sustained her only hit of the war. A torpedo hit the port side. Ships repair crews kept her with the fleet. By the end of the war she had only suffered 10 casualties and had 67 of her crew wounded.

However, as most people know, the era of the battleship had come to an end in this war and the aircraft carrier had become the main weapon of the navy. The ship served as a training vessel for midshipmen but was decommissioned on June 27, 1947.

The ship was in the Inactive reserve Fleet at Bayonne, New Jersey until 1958. When the scrapping announcement was made, a state-wide campaign was launched by the citizens of North Carolina to bring the ship back home. The Save Our Ship (SOS) campaign saved the vessel and on October 2, 1961 she was taken to her present berth in Wilmington. The ship was dedicated on April 29, 1962 as North Carolina's memorial to its World War II veterans and the 10,000 residents of North Carolina who died in the war.

VE3GO, KI4YSY, KX2H and WD4OIN in Radio Room 2.

MUSEUM

The ship is a self-sustaining museum and receives no tax money. Their multimillion dollar a year budget is all raised by the staff of the memorial. The majority of this comes from the more than 200,000 visitors who cross her gangplank every year.

Having had a chance to talk to Kim Robinson Sincox (Director of Museum Services) and Heather Loftin (Promotions Director), I am impressed by the effort that goes into financing this well maintained memorial. They run many extra tours that illustrate the firepower, power plants and damage control aboard the ship. Twice a year they conduct the "Hidden Battleship" tour in which visitors can see parts of the ship not open to the public. This includes the radio rooms where members of the Azalea Coast Amateur Radio Club explain the workings of the radio equipment.

If anyone is interested in donating to the hull restoration of the vessel, you may make a donation through the Friends of the Battleship North Carolina organization. All donations are tax deductible as allowed by law. Their mailing address is PO Box 480 Wilmington, NC 28401. You can phone 910-251-5797 extension 2045 or you can donate online at http://battleshipncfriends.org/Friends-Donation-P24.aspx. If you particularly want the donation to go to radio restoration you can indicate this when you make your donation.

As an example, the Forestry Minister of Mynamar (Burma) visited the ship and, seeing its importance, arranged a donation of two tractor-trailer loads of the finest teak as well as eight trailer loads at a low price to restore the decks of the ship. A local company, Dean Hardwoods, dried and prepared the wood for the operation.

Many people have donated time and money to keep this ship in superb shape. You have to congratulate all the people who work behind the scenes.

RADIO OPERATIONS

The number of volunteers who help this ship is amazing. For example, one group that has contributed greatly to the ship is the Azalea Coast Amateur Radio Club. Their members have restored the radio rooms and much of the equipment to the state they were in when the ship went into service. What they refer to as Radio 1 was where the banks of receivers were. Radio traffic was heard here and passed on to the cryptographic room which is right next door. Several restored original receivers (such as the RBC receiver shown below) can be seen as you tour the ship.

Each desk has a switch and a Morse key which were used to activate the transmitters which were kept in what is referred to as Radio 2. Transmitters lined both sides of this room when the ship was operational. The club has restored several transmitters along one wall. The transmitters were powered by their own generators which are in a room nearby. Again these have been and are being restored so the original equipment can be

put on the air. I hope I can get my hands on the Morse Code key when they are back on the air. The generators were used to produce the 3,000 volts which was needed on the plate of the 861 transmitting tubes. As far as they know, this is the only museum ship to use the original transmitters on the air.

I met several members of the club but mainly spoke to Allan Pellnat, KX2H, Jack Jacobs, WD4OIN and Norman Clements, KI4KSY. They have quite the story to relate about the restoration of the radio rooms on the ship.

The club originally had an R-7 vertical on the stack and operated special events from the bridge area. Since this was part of the public tour, Kim Robertson Sincox suggested they might want to restore the actual radio rooms. The club took on the challenge and they tried to activate the original antennas.

Trying to connect to 60-year-old wiring was quite a challenge. There is a huge patch board that would allow any antenna to be connected to any of the radio centres on the ship. Although there are two main setups, there were others throughout the ship in case the main centres got damaged so that communications could be maintained.

For some reason, many of the transmission cables were cut off at the smoke stacks so a lot of tracking had to be done.

As Allan said, they have no idea of the impedance of these old lines but they do work well. The coaxial cable used is different from today's RG-2123 etc. The dielectric is not solid but is actually bakelite beads. They had quite a time getting connectors on the cables.

Their latest project, according to Norm, is to connect across two feedlines so a long wire can be brought into use. The modern transceivers work well on the old antennas as you will see later in this article.

Jack, along with Carl Filipiak, started the work and Allan, Norm and the late Bill Usher joined them. The TBM4 transmitter was the first item they undertook to restore.

Checking wiring for bad insulation, cleaning all the switches and contacts, and reseating all the plug-in components, like resistors, was a major undertaking. The generators had to be lubricated as well as having brushes and armatures tested. It took over a year, with several failures, until the transmitter was functioning. The first signal went out on November 27, 2001.

The most memorable contact with this transmitter took place on January 28, 2002. They worked W1SRR using the TBM. This was Richard "Mac" McCullough who was a Plankowner and a radio operator on the ship. A Plankowner is someone who joined the ship when she was commissioned. This was the first contact on the equipment in 60 years.

On May 30, 2006, the TDE transmitter was activated. This is a smaller unit that was put on the ship in 1944. Many of you may remember the famous DXpeditons of Iris, W6QL and Lloyd Colvin, W6KG. According to Allan they had a TDE transmitter onboard their boat.

Once again the first contact was with W1SRR. You have to respect these hardworking gentlemen as they arranged for Mac's son to bring him to the battleship. Allan said they almost had to carry him down the ladders, but they got him to the radio rooms where he could actually make some contacts on the restored equipment. You can still see the smile on their faces as they remember Mac operating the sets. There is an original chalkboard in Radio 2 that still has the dates of the contacts with Mac. Unfortunately, Mac became a Silent Key a few years ago. The TBK-7 transmitter was brought to life in 2009.

Several of the RCA receivers have been restored. There are three types you can use. The RBA was for 500 kHz and below, the RBB was for 500 kHz to 4 MHz and the RBC was for 4 to 18 MHz. These rigs were restored in Arizona and work well. I was surprised at the sensitivity and selectivity of the radios. In fact, their analog calibration was quite accurate. I guess I will always be an SWL as I could not keep my hands off the receiver. When I get back there I plan to do some real listening on these sets.

Norm, KI4YSY, Bob, KK4KSY and Bill N2COP (South Carolina Section Manager) working 40 metres.

As stated earlier I listened to CFRX as well as CHU on 7.850 and 14.670 MHz. I never hear the 14.670 signal at home. The story of moving this 100-pound receiver from Radio 1 two decks above is well worth hearing.

The generators are the problem at the present. They are down so the original transmitters are silent for a while. A local repair shop has done many hours of work on these – at very low financial return – to get them back into working condition. They even sent one armature to Florida to be rebuilt. They want the station to be run as original.

You have to respect the ingenuity that the Amateurs have used to restore this setup. They had a problem replacing brush caps on these generators. They could not get them, but a local community college, Cape Fear Tech, had their students make many of them as a project. One of the field pots had the ceramic break and they had no replacement. A local Amateur made replacements out of wood.

As you look around you see many vintage pieces of equipment. A three-foot high TDQ transmitter grabs your attention. This was the VHF unit used. I sure would not want to run this mobile in my car. Nearby, there are Hallicrafters S20R and S27 receivers. The S27 was the VHF receiver while the S20R was similar to the rig used by the original holder of my call, Chuck Millar, VE3GO.

On the 65th anniversary of the signing of the surrender documents in Tokyo Bay, the USS North Carolina used their original transmitter to make a contact with the USS Missouri on which the document was signed. The operator Charlie Vaughn, K4UWH, is the son of an operator from the North Carolina. The operator on the Missouri was the son of a

man who went ashore under the covering fire of the North Carolina. Charlie is currently the President of the Azalea Coast club.

Norm, Jack and Allan have many stories about the work they did on the ship. They usually stop working on the ship in late May and return in October, as the ship has no air conditioning and you can imagine how hot a steel ship gets in the North Carolina sun. Jack told me about the time they thought they would get some air by forcing air through the ducts. He said the radio room was a mess and it took them a long time just to clean it. They turned on the fans and the dust that came out of there was so bad they had to abandon the room. He said it took two weeks to clean the room.

Allan, Jack and Norm are ex-ATT employees so they also undertook to repair the paging system on the ship. It took them two years to rewire the hundreds of speakers on the ship. However, now people can be paged and authentic period radio programs are played over the system. They also used their knowledge and repaired the ship's telephone system. You can now call around the ship using the original phones.

I could have spent days talking to these three gentlemen, hearing their tales of the work on the ship. Allan has a vast knowledge of radio history as well.

QSO PARTY OPERATIONS

The team consisted of:

Jay Barton, N3QH; Allan Pellnat, KX2H; Ron Walsh, VE3GO; Bill Morine, N2COP; Bob Kiehlmeier, WA3IRG; Bob Froelich, KK4KSY; Jack Jacobs, WD4OIN; Norman Clemmons, KI4YSY; Jim Kapetski, K3DEP; Jeff Wingfield, KI4JDE; and Dean Webb, KK4DRQ.

My day began with an invitation to join the Azalea Club at the K&W Cafeteria in Wilmington for breakfast. I enjoyed meeting Allan and others who I had corresponded with.
I passed the promised Morse key to Allan. The operating group met in the ship's cafeteria and then proceeded to the ship.

The battleship is impressive as you make the turn off highway 17. Her size and camouflage paint scheme captures your attention immediately.

Restored receiver setup in Radio Room 1.

I was pleased to have a guide as we wove our way through doors and decks. I was shown Radio 1 and 2 as well as the generator room. The time for the contest to begin meant returning to Radio 1 where the 20 metre SSB station and the cryptographic room for the 40 and 15 metre operations took place. Some test calls were made on 20 metres and then the contest began. The ship uses the call NI4BK on the ham bands. NIBK was the original ship call sign.

As I was watching the operation, the second 20 metre contact was VE3BRK. This was my late father's call and my brother Bert, VE3KBW, now holds that call. He asked if I was there and they turned the mike over to me. It was a thrill to work Bert from the ship. He was coming to Myrtle Beach in March and I got to go back to the ship to show him the station. I am sure he enjoyed seeing the equipment as much as I did. About an hour later, I was operating and VE3GHK called me. George and I have been radio enthusiasts since we were in high school. I then took a break and had lunch.

After lunch I went with Allan to Radio 2 where the CW station was set up. It was great to connect my key to the transceiver and operate CW from the ship. I made about 20 contacts including some DX in Europe. I returned to the SSB setup and did some more contesting. I was happy to work many stations including Bill, VE3CLQ, Tim, VA3TIC and Dave, VE3DZE, from Kingston, Ontario. The old verticals work very well and it is great to be in a pileup trying to work me for a change.

Once the ship signs on there are always plenty of stations who want the contact. The team made 592 contacts on the Saturday, 72 of which were on CW. While taking a break form operating I had fun showing the radio rooms to some of the people touring the ship and explaining what the club was doing.

I was also pleased to meet Bill Morine, N2COP, the North Carolina Section Manager for the American Radio Relay League.

I certainly would enjoy talking to him again as well. He is a very active Section Manager and it was great to see him operating in the contest.

I was also pleased to see the President of the Grand Strand Amateur Radio Club, Bob Froelich, KK4KSY, there. I have enjoyed working with this Myrtle Beach Club and I volunteer for their marathon communications. He was enjoying operating and I am sure more of their members will be operating from the ship in the future.

You can be a guest operator onboard the ship. The only thing they ask is that you pay an admission to the ship to help out. In fact, if your club wants to operate there it can be arranged.

As luck would have it, Jeff Wingfield, KI4JDE, was also part of the group. He just happens to be the Rear Commander of the Waterway Radio and Cruising Club. They operate the Waterway Net on 7.268 at 0745 Eastern Time every day. It was their 50th anniversary and I got a lot of information for my July column in *Monitoring Times*. You never know who you will meet at an Amateur Radio gathering.

The contest ended near supper time and I reluctantly took leave of the group and the ship. Believe me I could have spent a long time there and I will certainly be back.

HOW YOU CAN HELP

If you have any radio artifacts from the WWII era, please be sure to contact the Azalea Coast Amateur Radio Club to see if they can be used on the ship. The club is in particular need of 861 transmitting tubes. Their supply is running low and any help obtaining some would be appreciated.

I have already contacted the Military Communications and Electronics Museum here at the Canadian Forces Base in Kingston to see what we can find.

You can find out more about the ship at their website at: http://battleshipnc.com

Below: Norm, KI4KSY, showing the generator that they are trying so hard to restore.

The Azalea Coast Amateur Radio Club can be found at http://ac4rc.org. Using Google or similar programs you can search "Radio Restoration *USS North Carolina*" for many sites giving information and photos.

Amateur Radio operators are known as a friendly group and the Azalea Coast Amateur Radio Club certainly exemplify that. I applaud their efforts to keep the battleship *USS North Carolina* on the air and maintain the original equipment of the ship.

Do not pass up a chance to tour the ship and also take the opportunity to operate from aboard. You will surely enjoy the experience.

I was thrilled to sign the call NI4BK – and to do so once again on February 23 of this year when I operated 20 SSB and CW. This year, 10 stations from the Kingston area contacted the ship. I have also made arrangements to be on the air next year from the *USS Yorktown*, an aircraft carrier near Charleston, Virgina.

Don't forget to look for the *USS North Carolina* on Museum Ships Weekend on June 7 and 8. I will be trying to add VE3GO to their list of contacts. I will also be trying for an SWL report using my old Hallicrafters S38 and a long wire.

I have been an SWL since 1959 and a licensed Amateur since 1976. I was originally VE3IDW and now hold the call VE3GO. I am a retired teacher. I have been a Great Lakes ship enthusiast for over 50 years and hold a Minor Waters Masters certificate. I have retired from running Thousand Island tour boats and working as an officer on the Canadian Empress. Combining my two hobbies with marine photography led to writing for Monitoring Times and now The Spectrum Monitor.

TCA

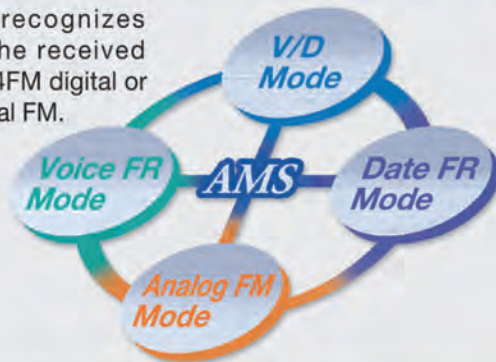# System Fusion

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FM
FM
FM
Digital
Digital
AMS transmit
Digital
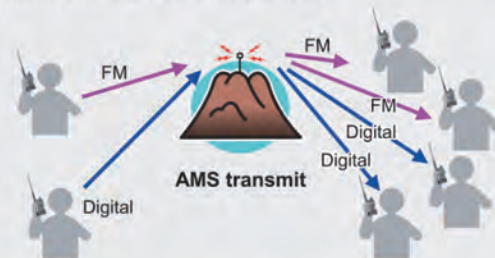
New Functions Enabled by C4FM Digital Communication

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Building The Slap Shot: A Hockey Stick Satellite Antenna

Christopher Friesen, CET, VE4CWF

2013 began with the National Hockey League (NHL) in a labour lockout and, while most Canadians were lamenting the loss of their favourite winter sport, I was not. I was busy building a portable antenna for satellite operation, one that would shoot the five watts from my handheld transceiver into the five-hole of SO-50. To score that goal I needed to build an antenna that was lightweight and ergonomic and able to stand up to the extremely cold temperatures of my northern climate. The "Slap Shot" was the result. A portable, cross-polarized VHF/UHF antenna, designed specifically for working Low Earth Orbit (LEO) Satellites, using a plastic floor hockey stick for the boom.

DESIGN PARAMETERS

The antenna itself is not original. I used the "Cheap Yagi" dimensions found on Kent Britain's, WA5VJB, website. His design and construction methods are readily available as a PDF download from his website. I chose to build the 2 metre portion with three elements and the 70 centimetre portion with 5 elements. Britain's design uses half-folded dipoles for the driven elements. This design is easy to construct and easy to feed with coax. The shape of the driven element is shown in Figure 1 and the element lengths and spacing I used are shown in the Tables below. Other than the hockey stick boom, the Slap Shot is a junkbox antenna. For my prototype, the elements and mounting hardware were all derived from salvaged parts.

WHY A HOCKEY STICK?

Floor hockey sticks have several advantages for antenna construction. They are made from rectangular, tubular plastic which provides nice flat surfaces for mounting antenna elements. The plastic provides an insulated lightweight boom, accepts wood screws without requiring pre-drilling
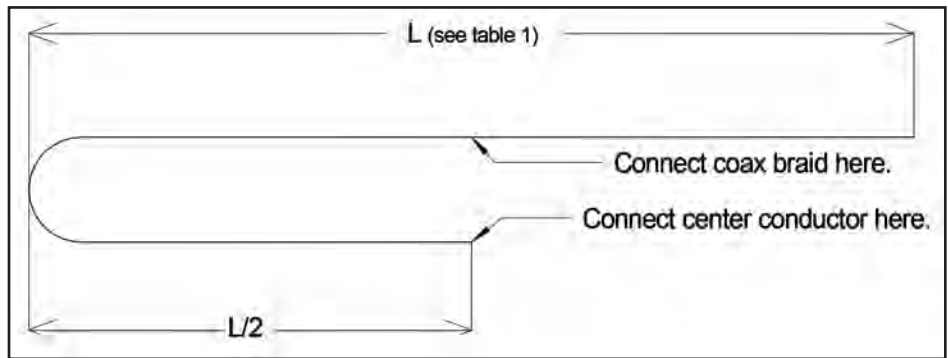

Figure 1: Cross-section of a half-folded dipole driven element.

and is workable with simple hand tools. Cross sectional dimensions of 1 1/8" x ¾" provide the perfect spacing for the folded dipole design and, at a price of $5.49, well within the budget of the thriftiest Amateur. The blade of the hockey stick provides a convenient point to rest the antenna at the hip, providing a pivot point to rapidly change polarity while supporting the antenna with only one hand.

CONSTRUCTION

Build the 70 cm Elements

The 70 cm elements were made using #10 AWG bare copper wire originally used to make decorative garden ornaments. Any stiff wire, rod or small diameter tube can be used for these elements provided it is long enough and pliable enough to form the half-dipole on the driven element. I used a broomstick to form a one-inch radius in the wire.

Build the 2 metre Elements

The 2 metre elements were built using salvaged parts from old TV antennas. Figure 2 shows the hockey stick boom laid out next to salvaged elements and mounting hardware, along with my prototype UHF receiving antenna built on a wooden boom. The TV antenna elements were not long enough on their

own so I inserted tubular aluminum, held in place with stainless steel hose clamps, to provide the correct length and some adjustability. The 2 metre driven element was built from one-half of a VHF folded dipole so there was no need to create a bend in the aluminum. If you are unable to find a similar antenna for use in your project, you can build a gamma-matched driven element, or use brass rods for the 2 metre elements.

Mark the Boom and Drill all Necessary Holes

The length of hockey stick will affect the size of the finished antenna so choose element quantity and spacing with that in mind. Remove the blade from the hockey stick and, using the design dimensions, mark it with the locations of the elements. Drill appropriately sized holes; this is best done with a drill press as it ensures the holes through the boom will be perfectly aligned. Hand drills will also produce acceptable results.

Install the 70 cm Elements

The 70 cm elements can be pushed through the holes, centred and held in place with the adhesive of your choice. I used hot glue, but thermal cycling from bringing the antenna outside in winter, then back inside, causes the elements to expand and contract and break free from the glue.

ELEMENT DIMENSIONS

2 metre Dimensions

Element	Reflector	Driven (L)	Director
Length	40.5" (1029 mm)	38.5" (978 mm)	36.5" (927 mm)
Spacing	0.0	8.5" (216 mm)	19.75" (502 mm)

70 CM DIMENSIONS

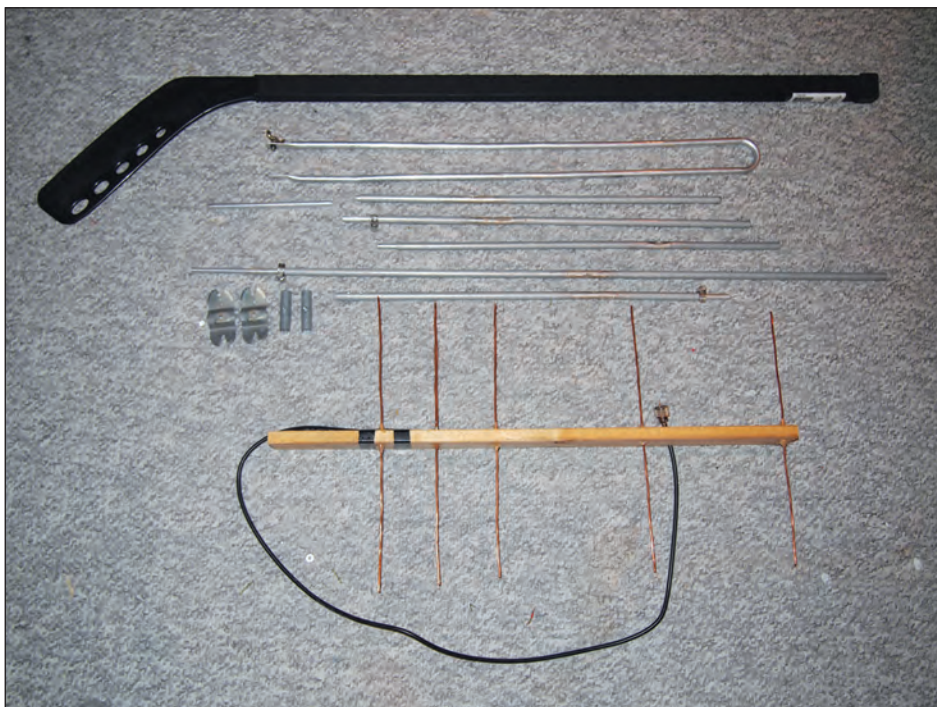| Element	Reflector	Driven (L)	Director 1	Director 2	Director 3
Length	13.5" (343 mm)	13.0" (330 mm)	12.5" (318 mm)	12.25" (311 mm)	11.75" (298 mm)
Spacing	0.0	2.5" (64 mm)	5.25" (133 mm)	12.0" (305 mm)	18.5" (470 mm)

Figure 2: Antenna components before assembly.

Epoxy might work better, but future builds will employ the method used for securing the 70 cm driven element.

The driven element is the only element that is not secured with adhesive. I soldered ring terminals onto the end and midpoint, being sure to subtract some length for the width of the boom. Figure 3 shows the ring terminal configuration fastened to the finished antenna. The ring terminals provided a place to secure the element to the boom and they make convenient points to attach the feedline coax. Any future build will use this method to secure the parasitic 70 cm elements as well.

Install the 2 metre Elements

The 2 metre reflector and director used the mounting hardware from the original TV antenna and a bolt through the boom as shown in Figure 4. I did not have a third bracket from the old TV antenna and running a bolt through the boom would have shorted the driven element to itself so it is attached with separate, short wood screws at the top and bottom. Both locations in the element were pre-drilled with clearance holes and I used a vice to flatten the tubular aluminum to provide flat mounting surfaces. Once constructed I found the 2 metre driven element did not remain square to the boom so I added a plastic angle bracket to the boom and used electrical tape to secure the element to it.

FEEDING THE ANTENNA

Coax Feedpoint Connection

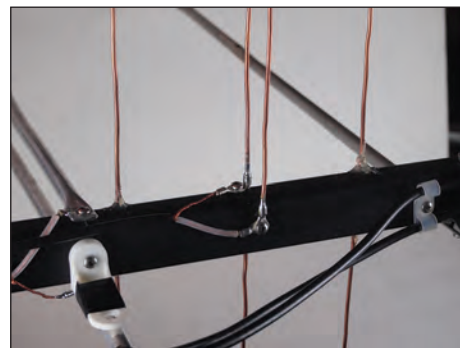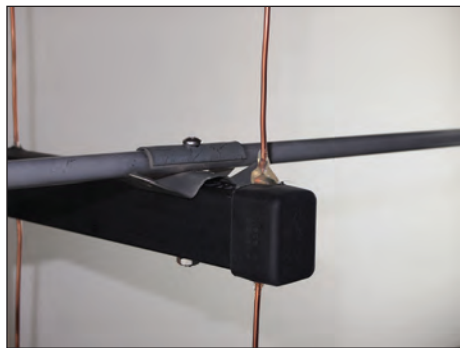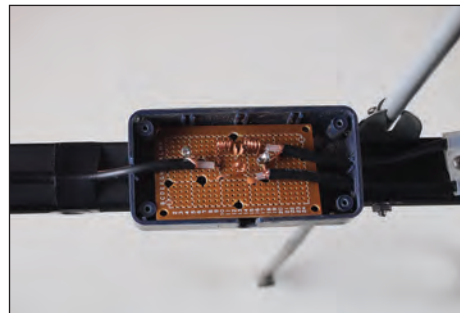To feed the antenna, simply attach coax to the centre of the driven element and the end of the half-folded dipole as shown in Figure 5. Note that the braid of the coax is connected to the centre of the driven element and the centre conductor is connected to the end. The centre of the element is a voltage null and feeding thusly eliminates the need for fancy gamma matching. The standing wave ratio (SWR) can be checked for each frequency and, if necessary, adjusted by trimming the open end of the driven element. If you don't have the means to check SWR, don't worry; building the antenna to the dimensions given should provide a very close match and the true test will come when you actually operate.

The Diplexer

Satellite antenna's are crossband antenna's that require a diplexer to split the frequencies to ensure the radio frequency (RF) energy goes to, or comes from, the intended portion of the antenna. To split the frequency, diplexers are installed in the feedlines between the radio and the two antennas. Diplexers use a combination of high pass and low pass filters to split the frequencies. Figure 6 shows a typical diplexer circuit using inductors and capacitors (L and C) based on values that I had available.

While designing my diplexer I found very little information to help me. Fortunately Dale Heatherington, WA4DSY, has a calculator application on his website for designing LC low pass and high pass circuits, which simplified the process. I emailed Dale to find out if he could clear up some of the mystery surrounding filter design. He told me that he originally programmed the calculators for his own use because manually calculating filter component values was labour intensive.

Figure 3: 70cm driven element mounting.

Figure 4: Typical 2m element mounting.

Figure 5: Diplexer mounted to antenna.

"Writing a program to work the formulas and tables was a great time saver," he said. "I wrote them as web-based apps so I could use a web browser and make them available to anyone with Internet access."

Heatherington's calculator requires several inputs from the user: design cutoff frequency, number of poles and characteristic impedance.

Cutoff frequency is the point at which the filter has attenuated the incoming signal to the half-power point or three decibels (dB). Since satellites operate with an uplink frequency around 144 MHz and a downlink frequency around 430 to 450 MHz, a cutoff frequency anywhere from 225 to 375 MHz should produce acceptable results. I used a design cutoff frequency of 300 MHz. Heatherington cautions that the calculator produces component values that are ideal, not necessarily values that you will find in your parts box. "Users have to tweak the parameters until they get a compromise between rational parts values and performance," he said.
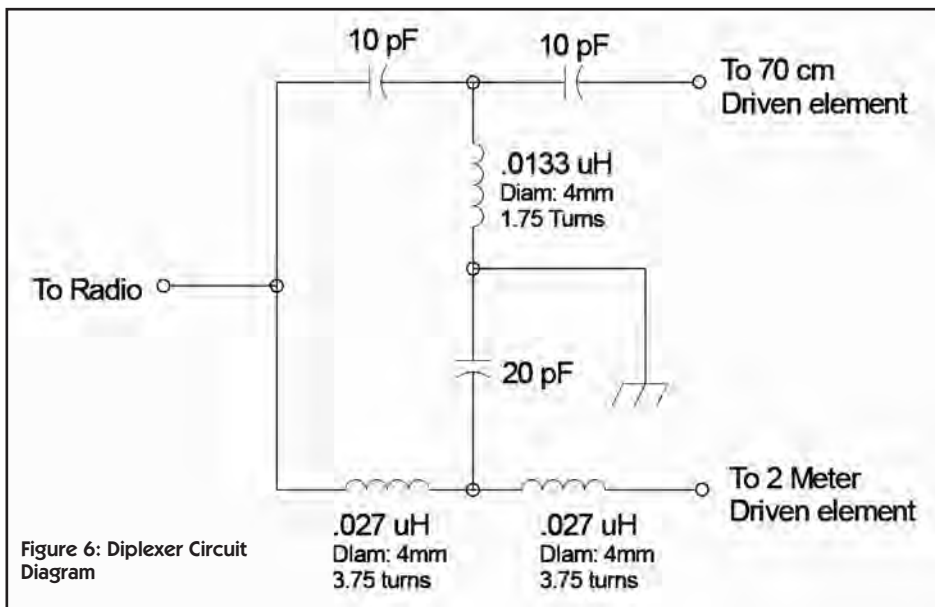
Figure 6: Diplexer Circuit Diagram

Figure 8: VE4CWF working SO-50 on a cold night.

As for the design impedance, Heatherington says: "Set the I/O impedance to match the transmission line you are using." In my case that was 50 Ohm RG-58 cables.

The last parameter to consider is the number of poles. For simplicity, I chose a three-pole design as shown in the schematic. Heatherington says additional poles can improve the performance of the filter.

"More poles improve the stop band rejection," he said. "Adding poles reduces the unwanted signals." But there is a compromise as increasing the number of components will increase the signal loss through the filter. Something I didn't want to risk when receiving weak signals from a distant satellite.

Once the design parameters have been entered into Heatherington's calculator, it will output two different circuit configurations, complete with diagrams, and three sets of component values for Chebyshev, Butterworth and Bessel style filters. Heatherington says Butterworth is the most popular.

"It has flat response in the pass-band and fairly good roll-off into the stop-band," he said adding that all styles have advantages and disadvantages. "Chebyshev gives you steeper roll-off in the stop-band at the expense of ripples in the pass-band. The least popular is the Bessel which has poor roll-off and stop-band rejection but has linear phase in the pass-band."

I tweaked the filter design parameters enough to produce capacitor values close to values I had available. I then used another web-based calculator – located online at http://hamwaves.com/antennas/inductance.html –
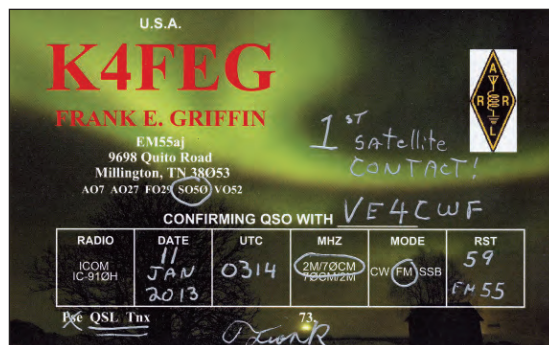
to design air wound inductors with the correct inductance. I had to tweak the length of the coil and number of turns until I found a design that was a close match to the calculated values.

I built the diplexer on a piece of circuit board and installed it in a box on the side of the antenna, making the coax connections directly to the filter, again to reduce any insertion loss. The finished diplexer is shown in Figure 7. Note the two 10 pf capacitors in parallel to produce the 20 pf needed for the circuit.

FINISHING TOUCHES

Once the antenna was built, I mounted the diplexer box and neatly clamped the cables to the boom. Then I reinstalled the blade of the hockey stick. I have no means of checking SWR so I went straight to the field test.

HE SHOOTS, HE SCORES
(Testing and Operation)

The VE4MAN repeater is about 70 kilometres (45 miles) from my home QTH, and on my first key-up I was able to hit the repeater while standing on the deck in my backyard. Darcy Wilson, VE4DDW, who was mobile at the time, gave me a report of full quieting. With his help I was also able to check the UHF portion of the antenna on transmit and receive.

Figure 7: K4FEG QSL card.

With these promising preliminary results, it was time to try the antenna on a high satellite pass.

On January 10, four days after the NHL lockout ended, I walked out into the field next to my house and made my first contact via the SO-50 satellite. Figure 8 shows the QSL card I received from Frank Griffin, K4FEG, a 1600 km (1000 mile) QSO. Since then I have made numerous other contacts, received my Satellite Communicator's Club award from AMSAT and collected nine other cards on my way to the next award.

Satellite SO-50, I'm told, can be a tricky bird to work. But with AMSAT working on two new satellites – and plans to deploy them in the next few years (see page 20) – now is the time to build a satellite antenna and begin operating. It need not be costly or complicated; just use what you have available and use some innovative thinking and, hopefully, I will hear you scoring goals the satellites too.

RESOURCES:

Cheap Yagi Antenna Design: http://www.wa5vjb.com

Filter Design: http://www.wa4dsy.net/filter/filterdesign.html

Inductor Design: http://hamwaves.com/antennas/inductance.html

Floor Hockey Sticks: http://www.canadiantire.ca

Christopher Friesen recently received his Advanced class Amateur Radio licence. He writes and blogs about radio at: http://radiofrequencyinternational.wordpress.com/

TCA

All Things Digital

Amateur Radio for the 21st Century
O13

Robert C. Mazur, VA3ROM

E: va3rom@gmail.com
W: http://my.tbaytel.net/va3rom

THE BROADBAND HIGHSPEED AMATEUR [RADIO] MULTIMEDIA NETWORK (BBHN HAMNET)—PART 1

What do hydro smart-meters, cellular phone systems, and the BBHN have in common? They are all examples of wireless mesh (like fishing nets or gauze bandages) networks, very intelligent and autonomous, but not quite self-aware like "Skynet" (from the Terminator movies) – yet! Mesh networks are used anywhere you need to provide wireless fidelity (Wi-Fi) or wireless local area network (WLAN) digital communications.

NETWORKS: INTERNET VS MESH

The Internet is a "hub-and- spoke" or "star" network. There's a central hub (server) with "spokes" (like a wheel) that radiate out (like a star) to individual users (clients). The spokes are combinations of transceivers, landlines and other "black box" technology connecting an Internet Service Provider (ISP) to your router (node). Star networks are fixed in place and are not very easy to move, but they can exchange huge amounts of high-speed digital data between any node and vice versa; plus you don't have to worry about nodes affecting things as they come and go. However, and this is the 800 pound gorilla in the room, if the spoke between you and the ISP fails, you're cut off from cyberspace. Even worse, if the hub fails, everything, everywhere stops, and all nodes are cut off! (see Figure 1 below)

On the other hand, a Mesh network has no central hub or specific routing to/from nodes and is very portable and malleable. A commercial version was brought in after the 2010 Haitian earthquake to re-establish digital communications in the Port-au-Prince area.

A Mesh network uses Open Shortest Path First (OSPF) routing whereby all nodes are in constant communication with each other to move data (video, audio, pictures, text, email, files, etc.) efficiently and expeditiously. More importantly, any node can act as an ad hoc server – for example, a webmail server with Winlink 2000 (WL2K) radio email connectivity – or act as a stand-alone digipeater to fill in wireless blind spots, or when paired with another node, provide a wireless Access Point (AP) (see Figure 2 on the next page).

A Mesh network is self-organizing and self-healing. If a node leaves or joins the network, the Mesh automatically reorganizes the OSPF routing, and a node only needs to "see" its next node neighbour to have access to the entire Mesh. As long as you don't overload it (multiple nodes streaming HDTV video isn't a good idea), a Mesh network can move large amounts of high-speed data, but it has one major weakness because you need several nodes to establish it and more to expand it. However, it is well-suited for specific and/or essential tasks such as public service events or emergency communications (EmComm) covering a local area when/where commercial systems are not available.

*Note: A node can also act as an Internet Gateway for the entire Mesh, but providing Internet connectivity is **not** the primary purpose of the BBHN since it's usually deployed when you don't have Internet access.*

Node A can communicate directly with node D and vice versa, or via any other nodes if that connection is lost. For example: A to B to D and vice versa.
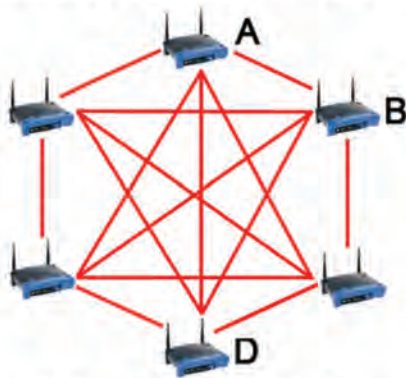
Fully Connected Mesh Network

Node F can communicate with node D via node E and vice versa. If that link is lost, then via nodes A and B and vice versa.
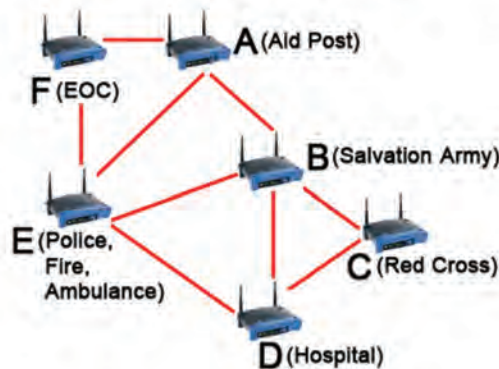
Example EMCOMM Mesh Network

Node A can only communicate with node C via hub H and vice versa, but NOT through other nodes. If hub H is lost, all communications is lost with all nodes. Nodes cannot communicate directly or reroute communications.
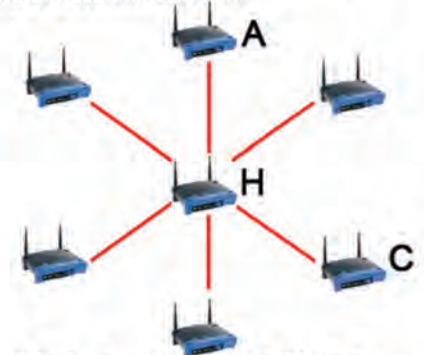
Hub-and-Spoke/Star Network

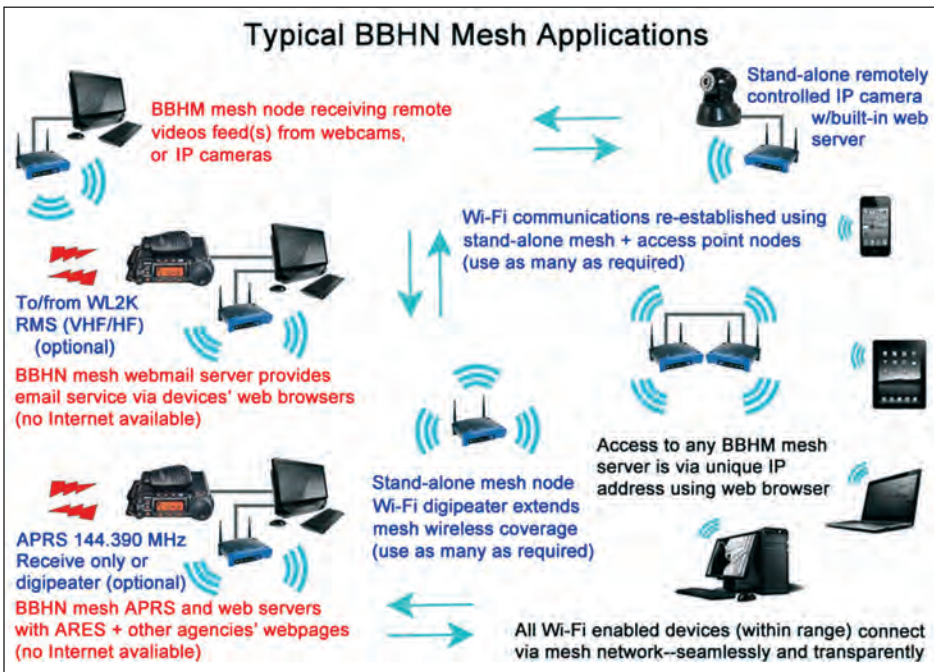Figure 1: Mesh & Hub-and-Spoke (Star) Networks

Figure 2: Typical BBHM Mesh Features

THEN

The first wireless star network (ALOHAnet) was developed by Professor Norman Abramson (Hawaii, 1971). Using UHF packet radio (only) and seven computers spread across four islands, he communicated directly with a central computer. Shortly thereafter, Canadian Amateurs (first in British Columbia and then in Quebec) developed the first Amateur Radio packet radio network systems to send/receive email and data files – this is another story for another time.

Decades later, Dr. Winrich Roseheit (Cologne, 1997) created a new kind of network called Digital Inter Relay Communications (DIRC) based on a different topology, more secure, intelligent, portable, and less vulnerable to catastrophic failure. Soon, military DIRC (Mesh) networks evolved for tactical "command and control" of the battlefield.

Mesh networks may have remained for military/government or commercial only use, if it hadn't been for an unintended "Whoops!" by Linksys. In December 2002, the company released the (now famous) WRT54G router (see Figure 3) supporting the new high-speed 2.4 GHz, 54 Mbps

(802.11g) wireless protocol, but it didn't take too long before crackerjack hackers stunned everyone by revealing the router used Linux firmware! Some operating systems are proprietary (like Windows), but Linux isn't and Linksys had to release the source code to the public. Many third party firmware additions/enhancements followed quickly, including code written by Hams for Hams creating the "Hinternet" (Ham Internet). Later, Linksys reduced the memory and dropped Linux, so version 5 (and up) routers can't be reprogrammed ("flashed") with BBHN firmware.

Initially, there was tremendous Hinternet interest, but just as quickly as it came into the limelight, it exited stage right. By the end of the 1990s, the Internet buried most Amateur Radio packet radio networks (except APRS) so putting more money, time and effort to build a short

range microwave version probably didn't appeal to most Amateurs – except for a dedicated few. Visit the British Columbia Wireless Amateur Radio Network (BCWARN) website and you'll discover a 21st century integrated network system.

NOW

In the summer of 2013, the HSMM network was rebranded as the Broadband Hamnet (BBHN) with enhanced router firmware, and small groups of Amateurs are still tinkering, stumbling along the way as most do. While BBHN and HSMM articles say you can do this and you can do that, step-by-step instructions are often lacking, out-of-date, or confusing/difficult to understand. What is needed is "BBHN Mesh Applications for Dummies" (as I call it) because most of us aren't networking experts or speak TCP/IP!

AMATEUR RADIO SERVICE USE

WRT54G routers operate in a small segment of the 13 cm band, using non-overlapping wireless channels 1 and 6, **centred** on 2412 and 2437 MHz. We are secondary users and share with licensed primary users, the Amateur Satellite Service, and the licence-exempt, low-power public wireless service (see Figure 4).

This is a line-of-sight microwave band where the antenna type, height, location and the surrounding terrain are far more important than raw power.

Standard Amateur Radio operating rules apply (RBR- 4, former RIC-2 refers):

1) Station identification required (digitally transmitted at regular intervals).

2) No commercial or inappropriate use.

3) No (non-public) encryption methods to hide contents of transmitted data.

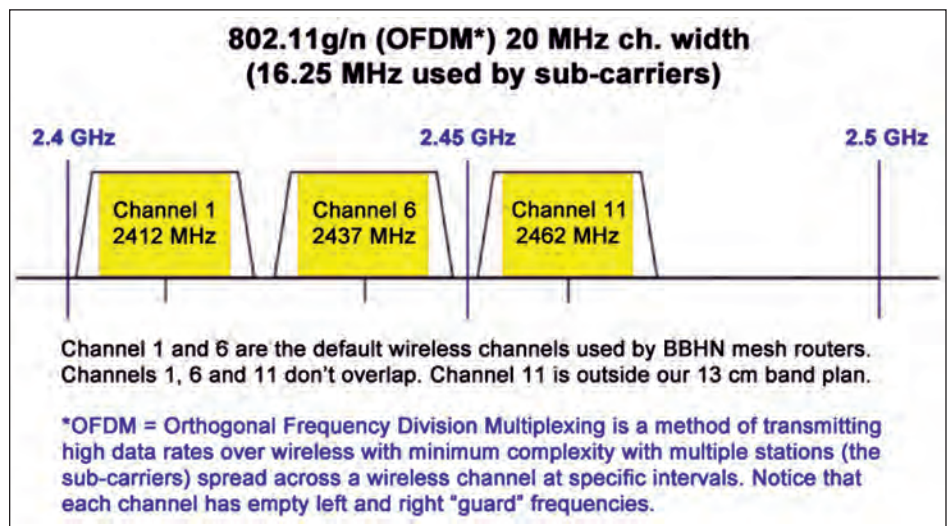Figure 3: WRT54G (The Little Router that Can).

Figure: 4 BBHN Mesh 2.4 GHz Mesh Wireless Channels

4) No interference to primary users or unnecessary interference to other users.

5) Use the minimum power needed to make and hold contact.

Note: IC documents RSS-Gen and RSS-210 refer to operation in this band segment and I'm paraphrasing the regulations.

1) For licence-exempt, low-power wireless devices, the peak power to the antenna shall not exceed 1 watt with no more than 4 watts effective isotropic radiated power (EIRP), unless used as a fixed point-to-point link where EIRP can exceed 4 watts through the use of gain antennas but not increased peak power (RSS-210, A8.4 refers).

2) To use commercially manufactured external RF amplifiers with licence-exempt, low-power devices, both of the following conditions must be met (RSS-Gen, 7.1.1 refers):

a) It must be certified for use with the device, and the amplifier-device combination can't exceed any of the limits specified for the device alone.

b) It must have the following statement on the packaging and in the user manual:

"Under Industry Canada regulations, this radio frequency power amplifier (insert Industry Canada certification number of radio frequency power amplifier) may only be used with the transmitter with which the amplifier has been certified by Industry Canada. The certification number for the transmitter with which this amplifier is permitted to operate is IC:XX…X-YY…Y."

Note: Operating under Canadian Amateur Radio Service rules, the power limits don't apply because Amateurs can use higher peak input power with unlimited EIRP unless otherwise stated (as for the 60m and 30m bands), up to the maximums allowed by their Amateur Radio certificate class. However, Industry Canada pointed out Radiocommunication Act, section 9(1) (b): "No person shall (b) without lawful excuse, interfere with or obstruct any radiocommunication."

Even if we can run higher power (peak input or EIRP) we must be very careful not to interfere with others, regardless if they are licensed primary or licence-exempt users.

GETTING MESHED

The Broadband Hamnet website has the latest BBHN information and firmware, and there are some excellent YouTube videos available. In hindsight, start with the videos first because they will save you a lot of wasted "meshing" around time!
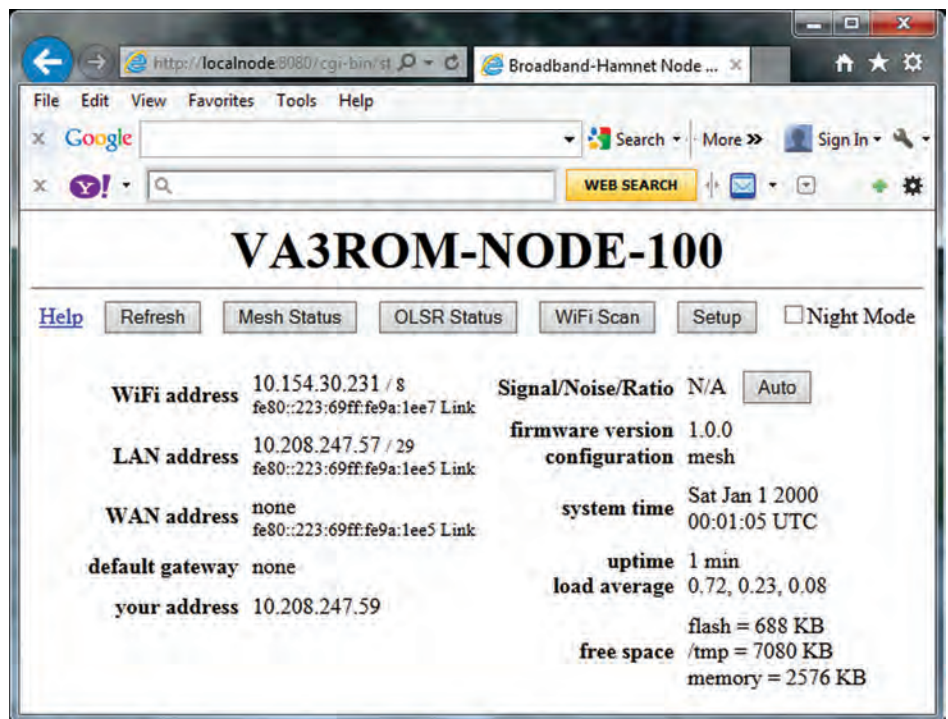
Figure 5A: Mesh Node Main Screen.
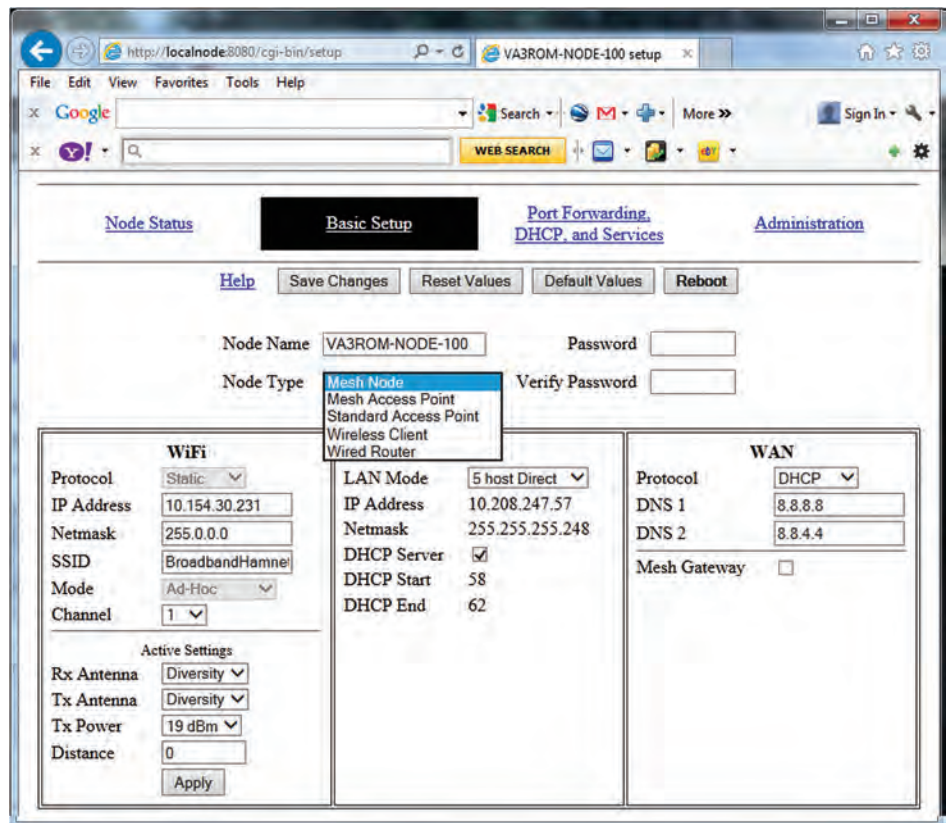
Figure 5B: Mesh Node Setup Screen.

THE HARDWARE

1) At least two flashed routers do a Mesh network make. I bought mine on eBay (WRT54GL's and 54G's), but many such routers are collecting dust in ham shacks or elsewhere.

2) One Windows (XP or later) or Linux based computer with a 10/100 Ethernet port connected to the router with Ethernet cable.

THE FIRMWARE

1) Download the specific router model firmware from the BBHN website.

2) Have a good read of the flash instructions – it's not easy to undo a "Whoops!"

3) Most importantly, always turn off your computer's internal wireless before you connect the router because it controls IP (Internet Protocol) addressing/routing and wireless connection to/from the Mesh network.

ROUTER ACCESS & PROGRAMMING

Once flashed, you configure the router's Mesh node operating parameters (call sign, SSID, type, etc). All nodes are accessible to each other using web browsers and you can remotely reconfigure/flash your own or someone else's node. To modify settings, you need the node's IP address, user name (always "root") and password (default "hsmm" or "admin").

Note: Most Amateurs change the password to prevent someone from changing their node's settings.

Normally, a node stays tethered to its host computer and is accessed by the host using IP address http://localnode:8080 or http://127.0.0.1:8080. The "127.0.0.1" is the local (to you) network "phone" number and port "8080" the network "area code". When connected to the BBHN, nodes (tethered or stand-alone) transmit unchanging (static) Mesh IP addresses starting with "10", and this means you can always "dial" the same number (using your browser or third party software) to access the same node (see Figures 5A and 5B on the previous page).

The BBHN is an open or public network and your firewall software must be set accordingly, especially when using third party programs. Sometimes the firewall prompts you for access permission, but at other times it just blocks a program without any notice, so check your firewall settings if you have connection problems.

MY FINAL

In Part 2 in my next column, we'll set up a BBHN webmail server with WL2K VHF/HF two-way connectivity because it's very useful for EmComm, but not easy (for most) to set up. But, to get you Meshing, I've written three tutorials (posted on my website) covering easier to implement and practical BBHN applications. – 73

REFERENCES AND RESOURCES

2.4 GHz Wireless Channels
http://tinyurl.com/2hkg2c

ALOHAnet
http://tinyurl.com/kw9s6

BBHN Website
http://tinyurl.com/lxsra2s

Brown County ARES/RACES BBHN Mesh
http://tinyurl.com/qhkms65

BCWARN
http://bcwarn.net/

Brown County ARES/RACES BBHN Mesh
http://tinyurl.com/qhkms65

Industry Canada
http://tinyurl.com/ogpcalg

Mesh Networking
http://tinyurl.com/4s6m6n
http://tinyurl.com/j864h

Shiawassee HSMM-BBHN Information
http://tinyurl.com/ll6w3oh

WRT54G Router
http://tinyurl.com/2cxec8

YouTube BBHN Introduction Videos
http://tinyurl.com/ndyuxpx
http://tinyurl.com/kxedh5n
http://tinyurl.com/kxn89wx

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

CANADA IN THE ARRL FIELD DAY 2013

– Prepared by Bob Nash, VE3KZ

VE3XR, the Peel Amateur Radio Club, repeated their top place score with four stations, a score of 8,334 based on 2,406 QSOs. The Durham Region QRP Club once again climbed into the top three using the QRP multiplier to produce a score of 7,845 from 759 QSOs. The Mississauga ARC went big time this year with 12 stations taking third spot from 4 other groups scoring in the seven thousands. Their score was 7,496 based on 1,882 QSOs. This year VE7VCT, Vancouver Emergency Community Telecom Organization, had the largest number of participants with an even 100.

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 the 2013 Field Day		
Call	**Category**	**Name**
VO1AA	2A	Society of Newfoundland Radio Amateurs
VE1FO	2F	Halifax ARC
VE9EMM	3A	MAARC / Tri-Co ARC
VE2FET	1A	Not named
VE3XR	4A	Peel ARC
VA4PAR	3A	Pathfinders ARC
VE5NN	3A	Regina ARA
VE6EX	1AB	Alberta Clippers
VE7SAR	3A	Surrey ARC / SEPAR
VE8YK	2AB	Yellowknife ARS

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	Section	Club
VE2FET	1A	2	1,103	4,778	4	QC	
VE2CWI	1A	2	766	3,284	22	QC	
VE3SGB	1A	2	937	2,982	11	ONS	South Georgian Bay ARC
VE6NQ	1A	2	580	2,622	9	AB	
VE2UMS	1A	2	670	2,336	40	QC	Union Metropolitaine des Sans-filistes de Montreal
VE2CRB	1A	2	300	1,726	5	QC	Le Club Radioamateur de Beauce
VE2CLM	1A	2	325	1,562	14	QC	
VE6FT	1A	1	434	1,068	12	AB	Mayerthorpe Flying Tigers
VE7NA	1A	2	191	996	20	BC	Nanaimo ARA
VE9CRM	1A	2	181	612	15	MAR	Club de RA du Madawaska
VE3SDF	1A	2	22	344	5	ONS	St. Marys ARC
VE3RAB	1A	2	21	292	3	GTA	Burlington ARC
VE6EX	1AB	5	315	3,520	5	AB	Alberta Clippers
VE3CJ	1AB	5	172	2,055	5	GTA	Burlington ARC
VE2CAM	1AB	5	45	885	12	QC	Club RA de St-Hyacinthe
VO1MRC	1AB	5	6	510	8	NL	Marconi RC of Newfoundland – Signal Hill Splinter Group
VE7JKZ	1B1	2	396	1,734	1	BC	
VE3RCN	1B1	2	217	734	1	ONS	
VA2NU	1B1	2	73	496	1	ONE	
VE2AHH/VO1	1B1	2	32	328	1	NL	
VE7USX	1B1	2	3	256	1	BC	
VE3SB	1B1B	5	237	2,620	1	GTA	
VE2EZD	1B1B	5	218	2,530	1	QC	
VE3MGY	1B1B	5	100	1,450	1	ONS	
VE3EDX	1B1B	5	116	1,410	1	ONN	
VE3UZ	1B1B	5	85	1,100	1	ONS	
VE3WDM	1B1B	5	50	750	1	ONE	
VE3AAQ	1B1B	5	46	710	1	ONE	
VE6ZC	1B1B	5	55	655	1	AB	
VE7BQO	1B1B	5	19	435	1	BC	
VA3CME	1B1B	5	21	355	1	ONE	
VE5JZ	1B1B	5	25	350	1	SK	
VE7HLW	1B1B	5	4	70	1	BC	
VE6GD	1B1C	2	85	184	1	AB	
VA3DF	1B2B	5	499	5,530	2	GTA	

VA3DF and VE3CR at Rattlesnake Point courtesy of VA3DF.

Call	Category	Pwr Mult	QSOs	Score	Participants	Section	Club	GOTA Call
VA3YV	1B2B	5	367	3,515	2	ONS		
VE6AB	1C	2	43	136	1	AB		
VE1AO	1F	2	239	874	12	MAR		
VE3RC	2A	2	844	3,852	65	ONE	Ottawa ARC	VA3BIT
VE7NSR	2A	2	1,049	3,722	28	BC	North Shore ARC	VE7WRS
VE7PCE	2A	2	1,043	3,036	25	BC	EPCOM	
VE2CRS	2A	2	625	2,938	7	QC	Club Radioamateur Saguenay-Lac-St-Jean	
VE2CQ	2A	2	716	2,904	43	QC	Club RA de Quebec	
VE7RAR	2A	2	554	2,806	27	BC	Richmond ARC	VA7ODY
VE3SOO	2A	2	598	2,336	14	ONN		
VE7UT	2A	2	358	1,938	27	BC	Kamloops ARC	
VA3CTA	2A	2	360	1,540	25	GTA	Central Toronto ARC	
VE7NOR	2A	2	195	1,496	10	BC	North Okanagan RAC	VA7XN
VE3RAM	2A	2	227	1,416	9	ONE		VE3ZZU
VE3GCB	2A	2	243	1,406	25	ONS	Barrie ARC	
VA5DR	2A	2	285	1,330	9	SK		
VA2CMQ	2A	2	243	1,318	7	QC	Club Radio Amateur Matane	
VO1AA	2A	2	96	1,212	18	NL	Soc of Newfoundland Radio Amateurs	
VE3VSW	2A	2	262	1,072	7	ONE	Seaway Valley ARC	
VE7RC	2A	2	89	978	13	BC	Shuswap ARC	
VE7MIR	2A	2	109	934	10	BC		
VA3NRR	2A	2	74	498	14	ONE	Renfrew Co ARC	
VE3STP	2A	2	36	452	3	ONE	Champlain Regional Rep Assn	
VE6ARC	2A	2	56	362	3	AB	Peace Country ARC	
VE3KAR	2A	2	99	248	8	ONE	Kingston ARC	
VA3TOP	2AB	5	154	2,305	11	ONN	Elliot Lake ARC	
VE8YK	2AB	5	42	1,270	10	NWT	Yellowknife ARS	
VA3OVQ	2AB	5	39	980	6	ONE	Ottawa Valley QRP Soc	
VE2CVN	2AB	5	72	525	3	QC	Club radioamateur de la Visitation	
VA4PAR	2AC	2	800	1,850	15	MB	Pathfinders ARC	
VE3OSR	2AC	2	323	1,406	16	ONS		
VE6YOD	2AC	2	326	822	4	AB	Cold Lake ARS	
VE3GBY	2D	2	214	592	7	ONS		
VE3LC	2E	5	516	4,875	3	ONE		
VA7MM	2E	2	367	1,980	3	BC		
VE1FO	2F	2	1,873	7,396	30	MAR		VE1QD
VE7SAR	3A	2	1,689	7,262	30	BC	Surrey ARC / SEPAR	VE7HME
VE3HB	3A	2	1,749	7,160	18	GTA	Oakville ARC	VE3HG
VE2CVR	3A	2	882	3,594	28	QC		
VE7SCC	3A	2	847	3,246	35	BC	Coquitlam/Burnaby/,NewWest ARCs	
VE3RL	3A	2	808	3,036	25	ONE	Quinte ARC / Prince Edward RC	
VE3SAR	3A	2	665	2,966	24	ONS	Lambton Co RC	VE3CGC
VE2CSP	3A	2	477	2,566	24	QC	Association Radioamateur de Portneuf	
VE7VCT	3A	2	366	2,308	100	BC	Vancouver Em Community Telecom Org	VA7VCT
VE3NSR	3A	2	420	2,290	12	GTA	North Shore ARC	
VE9EMM	3A	2	402	2,040	15	MAR	MAARC / Tri-Co ARC	
VE9ND	3A	2	344	2,032	20	MAR		
VE5NN	3A	2	434	1,858	26	SK	Regina ARA	
VE2CRO	3A	2	575	1,800	21	QC	Club de Radio Amateur de l'Outaouais	
VE4BB	3A	2	422	1,446	67	MB	Winnipeg ARC	
VA5AA	3A	2	302	1,374	12	SK	Sask-Alta RC	
VE7OGO	3A	2	290	1,288	20	BC	Orchard City ARC	
VE1ARC	3A	2	188	1,238	12	MAR	Greenwood ARC	
VE2CWQ	3A	2	211	1,194	20	QC	Canwarn Quebec	
VE3AIR	3A	2	127	1,004	4	ONE		
VE2RAE	3A	2	175	876	22	QC	Club Radio Amateur de l'Estrie	
VE2MO	3A	2	122	876	18	QC	Assn Radio Amateur de la Mauricie	
VE3LNZ	3A	2	118	686	25	ONE	VHARA	
VA3AAR	3AC	2	289	892	6	ONE	Almonte ARC	
VE3XR	4A	2	2,406	8,334	37	GTA	Peel ARC	VE3AZA
VE3RB	4A	2	1,298	4,696	30	ONE	Peterborough ARES	VE3KRG
VE3ORF	4A	2	1,174	4,404	40	ONE	3730 Group	

Above: VE3JG and VE3KJQ at Ottawa Valley QRP Society's VA3OVQ courtesy of VA3RKM. At left: The Hamilton Amateur Radio Club's VE3DC, courtesy of VE3BK.

Call	Category	Pwr Mult	QSOs	Score	Participants	Section	Club	GOTA Call
VE3DC	4A	2	914	3,504	45	ONS	Hamilton ARC	VE3HTF
VE7VCC	4A	2	470	2,118	25	BC	West Coast Ara	
VE3NAR	4A	2	553	1,646	8	ONS	Nortown ARC	
VE3IC	4A	2	380	1,530	25	ONS	Kitchener-Waterloo ARC	
VE3RSE	4AB	5	167	2,085	10	ONS	Elgin ARS	
VE7CVA	4F	2	863	2,722	32	BC		
VE3YRA	5A	2	1,240	4,686	69	GTA		
VE3OW	5A	2	1,480	4,182	23	ONS		
VE3SWA	5A	2	493	1,810	5	ONS	South Waterloo ARC	
VE3QDR	5AB	5	759	7,845	5	ONE	Durham Region QRO Club	
VE3YAA	5E	2	1,185	4,512	10	ONS		
VE7RAC	5E	2	649	2,508	9	BC		
VE3TNC	6A	2	718	3,740	16	GTA		VE3BGD
VE3SME	6A	2	322	1,770	12	ONS	Norfolk ARC	
VE3LON	7A	2	458	2,444	50	ONS		
VE3BA	7A	2	415	1,738	11	ONS	Brantford ARC	
VE3VM	8A	2	2,359	7,394	48	ONS	Niagara Peninsula ARC, Inc.	VA3ROW
VE7SUN	8A	2	703	3,480	17	BC	Delta Amateur Radio Society	
VE3MIS	12A	2	1,882	7,496	20	GTA	Mississauga ARC	VE3RCX
VA7ST	1D	2	404	1,666	1	BC		
VA7OM	1D	1	600	1,180	1	BC		
VE3XAT	1D	2	135	588	1	ONE		
VE7CA	1D	2	125	500	1	BC		
VE2KOT	1D	2	50	200	1	QC		
VE3RSA	1D	2	33	182	1	GTA		
VE2CEV	1D	2	29	166	2	QC		
VE3CV	1D	2	54	158	1	ONS		
VA3FN	1D	2	26	154	1	ONS		
VE3EEE	1D	2	26	150	1	ONE		
VE2XL	1D	2	57	114	1	QC		
VE2KY	1D	2	31	112	1	QC		
VA7HZ	1D	2	18	106	1	BC		
VE3TW	1D	1	40	80	1	ONE		
VA7YJJ	1D	2	8	66	1	BC		
VE7NI	1E	5	205	2,400	1	BC		
VA3KAI	1E	5	169	1,840	1	ONE		
VE2AWR	1E	2	356	1,430	1	QC		
VE3PYG	1E	2	179	988	1	ONE		
VE6AO	1E	1	814	964	12	AB		
VE3MCF	1E	2	20	314	1	ONE		
VE3CQH	1E	5	8	230	1	ONS		
VA2RIO	1E	2	52	204	1	QC		
VE7TJL	1E	2	18	186	1	BC		
VE3VID	1E	2	29	158	1	ONE		
VA4CQD	1E	2	13	76	1	MB		
VE7MRP	1E	2	12	74	1	BC		

VE3MM at the Niagara Peninsula ARC VE3VM courtesy of VE3MM.

VE3JW CELEBRATES 40 YEARS

March 2014 marked the 40th year of Amateur Radio operations from the Canada Science and Technology Museum (CSTM) in Ottawa. Industry Canada authorized a special Amateur Radio call sign, VC3S, especially to commemorate this occasion.

For four decades, licensed Amateur Radio operators from the Ottawa Valley Mobile Cub (OVMRC) have interpreted, for the visiting public, the evolution of radio technology and its continuing strategic importance to everyday life. They have used various analog and digital radio communications modes to illustrate how Radio Amateurs "talk" to each other locally and around the world.

During the weekend of March 15 and 16, volunteer Amateur Radio operators demonstrated various aspects of radio technology and Amateur Radio communication techniques at the Amateur Radio station, VE3JW, located at the Museum. Among those who attended the weekend demonstrations was the family of Jim Cotter – including Jim's daughter, Mrs. Peggy Jefferson, grandsons, great-grandsons and newest/youngest great-granddaughter – along with many related family members.

The public was invited to attend the regular general meeting of the club on March 20 at the Museum to learn more about the evolution and importance of Amateur Radio. Speakers interpreted the history of radio communications and of Amateur Radio for today's technology savvy users.

HOW DID VE3JW GET STARTED?

The call sign, VE3JW, was originally held by Jim W. Cotter, an early Radio Amateur who did not have the gift of sight because of an unfortunate childhood accident. He became a Silent Key in 1969 at the age of 67.

Jim was a personal friend of Ed Morgan, VE3GX. When Jim's call sign became available, Ed had the idea of a demonstration Amateur station in the communications section of the National Museum of Science and Technology in Jim's memory and also for the many other early radio pioneers. Ed reserved the vacated call sign, sold the idea to the Museum's exhibit curator, and got an equipment supplier on board – all of which he was able to accomplish with backing of the OVMRC.

The equipment supplier was the Heath Company branch in Mississauga who made a long-term loan of kits that were assembled by club members.

The station operation was inaugurated on the evening of March 19, 1974, with Jayne Arbuckle, the 9-year-old granddaughter of Jim Cotter, sending the first signal with a 10-inch spark coil transmitter, the one used by the first transatlantic station, VAS, at Glace Bay, Nova Scotia.

VE3JW is staffed by volunteers who are Amateur Radio operators from the Ottawa/Gatineau region and the station is available to any licensed Amateur.

The original VE3JW station in 1974.

The VE3JW station at present day.

Over the years, the station was moved and rebuilt a few times within the museum, and the guiding vision that contributed to the present station is that of Jerry Wells, VE3CDS (SK):

"This station will be used to educate the visiting public about radio communications in general and the various facets of Amateur Radio in particular. We intend to demonstrate all modes of Amateur Radio communications available today so that young and old alike may explore the wonders of speaking with people from around the world on HF or via satellite, using Amateur communications to transmit data and images (including television) and capture satellite imagery and telemetry."

You will find all that at the present VE3JW Amateur Radio Exhibit station for your enjoyment and as an Amateur Radio front window to the public.

Sandy Haggart, VE3HAZ
President, Ottawa Valley Mobile Radio Club

TCA

YL NEWS AND VIEWS

OUR YL PROFILE: LIEL SHAPIRO, VA7LSH

Val Lemko, VE5ACJ
1125 Iroquois St. W.
Moose Jaw,
Saskatchewan
S6H 5C1
E: ve5aq@sasktel.net

Hello to all. The young lady I am going to write about is just that a "Young Lady".

Ladies and Gentlemen, I am pleased to introduce you to Liel Shapiro, VA7LSH. Our YL today is 12 years young. Gosh do any of us remember being that young?

I first learned about Liel from George Hrischenko, VE3DGX. As you may remember, George decided to start a Memorial YL Award in memory of his late wife Cathy, VE3GJH (former YL columnist) who passed away in March 2009.

Liel lives in Kelowna, British Columbia and is in Grade 7. She loves school and loves learning new things. I really don't know where to start with Liel. Apart from being the youngest YL I have written about, her achievements and attitude are just amazing. Liel attends the new Dr. Knox Middle School, which also houses a radio station as you can see in the photos.

Liel lives with her mom (Mila) and dad (Israel, VA7LSH) and got interested in Amateur Radio when her dad decided to get involved and was taking classes.

Liel is an Honour student and excels in Science. She loves everything about electronics.

When taking her Amateur Radio class, her instructor asked her to please teach the class about *Omh's Law* because she actually knew it better than the instructor did. Wow!

Liel is fluent in two other languages besides English. She can speak Hebrew and Russian, and soon will know Morse Code as she is working on it for Amateur Radio. She is a busy young lady.

She participates in Taekwon-Do and has her green belt. She loves reading books about romance, animals, the classics and Greek mythology. Her other extracurricular activities include dance: Jazz, Hip Hop and Ballet. Liel also plays the piano and this year is learning to play the guitar.

Liel loves to talk on the radio and – from what I gathered while talking to this young lady – she will make a great Amateur Radio operator. She loves helping with antennas and she so wants to climb and be more useful when helping with them, but because of her age no one will let her climb. They say, "Sorry Liel. You can hang onto the ropes". So she will have to be content with that for now.

This past winter, Liel was a volunteer with the Orchard City Amateur Radio Club at the Big White Winter Rally that took place in Kelowna on December 8. She was one of the blockers. A blocker monitors the rally stage at various locations to make sure that no unauthorized vehicles or persons enter the stage unexpectedly. Blockers also report back to the rally radio controller of any accidents and provide a progress update and so on. It is so nice to see that Liel is a valued part of the club.

Liel is the first recipient of the Cathy Hrischenko (VE3DGX) Memorial Fund. She was given $100 to buy her first 2 metre radio.

Now as to Liel's ambitions, she has every intention of becoming a pilot in the Israeli Air Force. With her knowledge, drive and four languages (English, Hebrew, Russian & Morse Code) I am certain that this Young Lady's dreams will come true. Whoever said that a woman's place was in the kitchen? Obviously they don't know the modern woman.

I want to wish Liel all the best as she strives ahead in school and in her future. I sure hope she keeps in touch with me.

Thank you Liel for talking to me and giving me your story. You not only make your parents proud of you, but you also make the rest of the YLs very proud too. I hope this article is an eye-opener for other young girls and

their parents, that Amateur Radio is an excellent hobby. One that everyone can participate in regardless of age or gender.
If we want to keep the hobby alive, we must continue to include young people.

That's it for this time around. I hope everyone is ready for summer; I know I am. I am still looking for YLs to send me your phone numbers or email addresses so that I can give you a holler and put your story in this column. We women have to stick together and allow our accomplishments and goals to be told.

Women in Amateur Radio have done and will do great things to promote the hobby. From young girls like Liel to our elder YLs like Ethel Williamson, VE3DTW (SK). Our numbers only can get stronger as we let the younger generation know that Amateur Radio has a place for us. We have done our service during WWII and beyond. Let's keep up the good work and convince more YLs to get into this wonderful hobby.

Please be sure to check out our website at http://www.clarayl.ca – and if you have photos or stories you would like to share on the site, please send them to me.

I hope everyone has enjoyed this column

33, 73, 88 or whatever the case may be…
Val, VE5ACJ

RAC CANADA DAY CONTEST 2014 / CONCOURS DE LA FÊTE CANADA RAC 2014

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, 2014.

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 *** – Pending new sponsor

- 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 2014.

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 *** – En attente d'un nouveau commandintaire

- 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.

8) Operators who have participated in any multi-operator category entries may not contact the station they have participated in if they were to operate as part of another entry in the same contest. In addition, guest operators at any station regardless of entry category may not claim contacts with the station host owner or host station mobile call for points or multipliers.

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 **http://www.rac.ca** in the contest section.

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

Tout participant désirant s'inscrire dans une catégorie spécifique (par exemple bande unique), mais ayant aussi établi des contacts 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.

8) Des opérateurs ayant participé à quelconque entrée dans la catégorie opérateurs multiples ne peuvent pas contacter la station à laquelle ils ont participé s'ils devaient opérer en tant que membre d'une autre entrée lors du même concours. De plus, des opérateurs invités d'une station, peu importe la catégorie, ne peuvent pas revendiquer de contacts avec le propriétaire de la station hôte ou avec l'indicatif d'appel mobile de la station hôte pour des points ou des multiplicateurs.

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.

Entries: All entries (electronic or paper logs) must be postmarked or electronically submitted by **July 31, 2014**. 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

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:

http://www.rac.ca/en/rac/programmes/contests

Any entry with 100 or more contacts should be submitted in digital format. 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. However ".adi" files are not acceptable.

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: **http://www.rac.ca/en/rac/programmes/contests**.

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

A properly filled out Cabrillo header section will be a sufficient substitute for a summary sheet for logs submitted in that format. Please ensure that you review the header for accuracy and that it is completely 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.

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.

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 **http://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 2014**.

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: http://www.rac.ca/en/rac/programmes/contests

Toute inscription contenant plus de 100 contacts devrait être soummise sous forme numérique. 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. Par contre, les fichiers ".adi" ne sont pas acceptables.

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 : **http://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.

TCA

PUBLIC SERVICE / ARES

In this Public Service / ARES column, Co-Chair Paul Peters, VE7BZ, describes a cross-border exercise held for the first time ever. Emergency communications taking place across borders is becoming the norm. The Canadian Forces Affiliate Radio System (CFARS) has been doing cross-border communication tests with the Military Auxiliary Radio System (MARS) network in the USA, which takes place every other weekend.

After reading "CrossBorder 2014", you will note how keeping things on the KISS principle can make life much easier when communicating with several networks. Ron McFadyen, VY1RM, is no stranger to emergency preparedness and it is great to see the support from the Yukon Territory.

The Elgin Amateur Radio Society is not a large club, yet they demonstrate how teamwork and collective cooperation can get things done. I am sure we can all learn from this club's efforts in how they went about acquiring a new trailer to store their gear. A visit to their website (http://elginradio.wordpress.com/) will show many other pictures of their new trailer. Congratulations to all Elgin ARS members for a job well done.

Ken Oelke, VE6AFO – RAC National Emergency Coordinator

On our side of the border, the CrossBorder 2014 team (at net control station VA7ARE) consisted of Paul Peters, VE7BZ, Cathy McPherson, VA7FRA, Bob Bartlett, VE7CPO, Ken Ward, VA7KYZ and Ed Gorse, VE7ED. The images are screen shots from the video that CTV ran the day before the event and are being used with their permission. Thanks CTV!

Cathy McPherson, VA7FRA

CrossBorder 2014

Prepared by Paul B. Peters, VE7BZ
Canadian Co-Chair for the Cross Border Communications Group

On January 11, 2014 at 1730z, one of the largest ever Amateur Radio Emergency Communications exercises was live on-air with 90 stations. The exercise called CrossBorder 2014 brought together radio operators from three provinces (British Columbia, Yukon Territory and Alberta) and five states (Alaska, Oregon, Idaho, Washington and California).

CrossBorder 2014 was organized by a four-member design team from the Cross Border Communications Group (CBCG) which is a well-organized group of high profile community-based Amateur Radio operators from Southwest British Columbia and the multi-county area surrounding Bellingham, Washington to the Canada / USA border. Formed in 2008, this group meets quarterly to discuss ways Amateur Radio resources can be coordinated cross-border during an emergency or disaster in our respective areas.

PAUL PETERS
COWICHAN VALLEY REGIONAL DISTRICT

The development and maintenance of our cross-border working relationships are critical to the ongoing success of the group and its objectives. The mission statement of the group is as follows:

"We stand ready to provide interoperable backup communications services to our stakeholders when normal systems are overloaded or have become inoperative."

The primary focus of CrossBorder 2014 was a collaborative exploration of radio communication connectivity between hospitals and government emergency operations centres (EOCs) in the multiple jurisdictions on the west coast of North America. The event demonstrated how well prepared radio operators (in both Canada and the USA) were to support both local emergency programs and/or a medical facility in their region.

The result of the exercise would become part of each stations preparation for a large scale disaster such as an earthquake, tsunami, plane crash, etc. This was not a "concept of operations" based exercise.

Bob Bartlett, VE7CPO

Ken Ward, VA7KYZ

Ed Gorse, VE7ED (at right shown with VE7CPO)

Most of the exercise participants live in jurisdictions covered by the Pacific Northwest Emergency Management Arrangement (PNEMA) – a mutual aid agreement between the USA and Canada for the purpose of coordinating preparedness and response efforts during disasters – and the Pacific Northwest Border Health Alliance, a collaborative group of healthcare disciplines forming mutual assistance agreements for resources and planning.

More than 75 Amateur Radio operators participated in this exercise from the three provinces and five states. A primary net control station was established by VA7ARE located near Duncan, British Columbia; and a supporting net control station (AA7SB) operated from the Veterans Affairs Hospital in Seattle, Washington. These stations coordinated communications between hospitals and EOCs by passing messages and situation reports between the numerous locations, using HF in tandem with both VHF and UHF local repeaters for both voice and digital message traffic. The purpose was to identify repeater frequencies and digital communication paths that will allow messages to be sent between stations in diverse areas.

The Washington State Patrol and the Washington State Guard also participated in the exercise. Emergency Management agencies – including Homeland Security (DHS) and the Royal Canadian Mounted Police "E" Division Headquarters in the five states and three provinces – watched this exercise because it was a textbook example of emergency communications deployment across a diverse geographic area that would be in place during a large scale disaster.

CrossBorder 2014 was a wonderful learning experience. With upwards of 90 stations spread along the western coast of North America, this very ambitious undertaking was delivered in four months. Admittedly, there were certain aspects of the event that didn't work well so the exercise itself taught the design team valuable lessons. In looking back at the event, the things that worked well included the following key points:

- The exercise took place on a weekend in which there were no major HF (SSB) contest events focused on North America. This in turn dramatically reduced the potential for band congestion during the exercise.

- HF communications easily linked Net Control with stations in the Yukon, AK, CA, ID and OR.

- Participant information was managed using an Excel spreadsheet and the same data was used as input to the

This picture of my station was published in the recent CrossBorder Exercise which was done on the West Coast.

The following is a list of Amateur Radio Stations contacted by me during the CrossBorder Exercise. I was in a perfect spot to relay messages from southern stations into the net control on Vancouver Island. By way of explanation, on high frequency radio, some stations are too close to each other to communicate effectively, therefore a relay is necessary.

My Amateur Radio station was at the ready at 9 am on Saturday, January 11. I relayed contact information to the net control VA7ARE from: VE7NEZ, Nelson BC, AC6VV Southern Pasadena Medical Center in California, K7ARE, VE7WJ, W7OM, VE7GYR Nanoose Bay, VE7SWF, VE7KFM, VE7PEP BC Emergency Preparedness station, KC7GX, VE7KAZ Kamloops, VE7EDK, VE7VEP Emergency Radio operator in his car in Victoria, AC6VV, K6ARN a Hospital Centre in San Diego, KE7BLC, Blaine Washington, VE6DCD, VE6JRS Calgary, N9YQ Vancouver Washington, AA7PT Deer Island, K7EAJ Oregon, VE7KAZ again Kamloops, WA7TC, K7TRP Hillsborough, VE7SCC Coquitlam and an unusual call from WGY920 A FEMA station in Boise Idaho.

During this time I relayed these calls to the net station VE7ARE. Overall about 25 contacts were made back and forth during the exercise. I also received mail from the Winlink system, recently installed, using the Internet. While this worked well, one may suspect it will fail because of infrastructure problems during a real emergency.

I operated from my home station which consists of an HF Tri-Band beam at 70 feet and an Icom 7600. I also contacted net control in Whitehorse on VHF and had the ability to contact any Yukon Community on the Yukon Amateur Radio Association terrestrial VHF/UHF linked network which includes Atlin in British Columbia and Skagway, Haines and Juneau in Alaska.

We also have an IRLP VHF node number 1500 which is located at Yukon College.

I can appreciate all the effort which went into staging a huge exercise such as CrossBorder and appreciate in being asked to participate.

Ron McFadyen, VY1RM
(Past and founding President of the Yukon Amateur Radio Association)

Depiction software models created for the exercise.

- HF Pactor produced good results.

- Winlink traffic was continuous throughout the exercise with just short of 100 messages being passed.

- The RCMP "E" Division Headquarters (VE7HQE) and WSP (Washington State Patrol), KF7RHQ linked their agencies (for the first time) via Amateur Radio during the exercise.

- Twitter was used before, during and after the exercise with good success.

- The exercise was the first time in Amateur Radio history that all PNEMA signatories were linked during any form of communications test event.

- The Red Cross in western WA-state ran a very successful (in-house) test event behind the scenes of CrossBorder 2014 and were delighted with the overall result.

There were of course certain aspects of the exercise that didn't work well. Each point is food for thought that will be added into the planning for future events. The key points that need our attention include:

- The use of tactical call signs (versus Amateur Radio call signs) to identify a station was a new concept for this type of exercise.

- Some participants weren't aware of their Winlink address and had challenges in the field of digital messaging.

- Some participants had a very local "closed loop" perspective to emergency preparedness and didn't share a "big picture" approach in their planning.

- While digital message client software varied amongst participants, some groups appeared not to be keeping pace with the larger EmComm user community selection of RMS Express as the standard.

- The planning team was continually surprised by a belief that groups don't need a communications plan beyond their local jurisdiction.

- While the exercise appeared very complex on paper, the (two) net control stations were given a relatively simple set of instructions to follow. Regrettably, divergence from the exercise instructions resulted in problems from the outset.

- While HF band conditions on 20 metres were good for stations more than 750 miles from VA7ARE, we didn't consider how important 40 and 80m would be in terms of working EMBC or perhaps WA stations.

- Several stations reported computer problems that impacted their packet messaging capability.

- While Twitter was used before, during and after the exercise, the core group of "followers" was relatively small which suggests Amateur Radio might be missing a social network opportunity.

If the design team was to host the same exercise again, we would definitely make some changes. The areas that would get the most attention would include:

- Reducing the written complexity of the event

- Use only one net control station

- Have two support stations on HF (one in the Yukon and the other in OR) for running 40 and 80m within BC and WA-state

THE NEW ELGIN ARS EMERGENCY TRAILER

Al McRorie, VE3GAM

Warren Doan, VE3EGQ, was a long-time member and colleague of the Elgin Amateur Radio Society (EARS) in St Thomas, Ontario.

He generously allowed our club to use his trailer for many years to store the antennas and towers for Field Day.

When Warren became a Silent Key in 2012, the club needed to find a replacement trailer to store the antennas and towers and our other Field Day supplies.

One of our club members, John Hetherington, VE3IZM, acquired a trailer from someone who donated it to the club. It was in rough shape but workable. Once the club had a trailer to use for antennas and towers, it needed to be refurbished, repainted and fixed up.

Many club members dove into the project to fix up the trailer. It was refurbished, repainted and our club name and website address were painted on each side.

We were not done with the trailer yet. Our club meets at the Elgin Regiment building each month. At our December club meeting, Worth Chisholm, VE3BTC, gave a brief description of modifications underway to the club trailer which would enable us to install a 30-foot aluminum club tower on the trailer for emergency use. Modifications include outriggers, trailer jacks, hinge plates, gin pole, power and manual winches. Work on the modifications to the trailer was completed by the end of February.

The completed trailer has the ability to mount a 30-foot tower. The outriggers were then added to the trailer for stability, and a winch system was installed which can be used to raise the tower. It is loaded and ready for action.

On April 2, five of our club members were out on a sunny but very cold morning. As can be seen in the above photo, the tower went up like a charm. It will be used when we demonstrate Amateur Radio for the Elgin Regiment one Thursday night in May. It will also be used at our Field Day operation in Shedden, Ontario later this year.

Thanks to the following club members for their contributions to the new trailer: Worth Chisholm, VE3BTC, Bill Park, VE3WMP, Dave Tilley, VA3TD, John Hetherington, VE3IZM, Dietmar Fichter, VE3CG, Mike Lukasik, VA3MD, Rick, Peterson, VE3FMC, Harold Tuthill, VA3KQ, Keith Beaty, VA3ZKB and Al McRorie VE3GAM.

If you have any questions or want more information, please contact Worth, VE3BTC at worth@rogers.com or check the club's website at http://elginradio.wordpress.com.

- Focus more effort on communicating with stations in a manner that eliminates the use of repeaters

- Eliminate or dramatically reduce the use of Internet as a transport pipe for digital messaging. Request all stations route P2P messages to a local pre-arranged HF Pactor message hub station which would in turn deliver messages to Net Control

- In addition to extra support stations on HF, the net control voice and data portion of HF would be split between two stations (at different locations) to allow for continuous mode operation

- Create a PIO position within the planning team to manage and expand overall media coverage for the event

In spite of some minor problems, CrossBorder 2014 was a success well beyond our expectations. With relative ease, Amateur Radio systems worked smoothly and seamlessly to interconnect dozens of stations in three provinces and five states. From Alaska to the Yukon and south into British Columbia, Washington, Oregon, Idaho and California – Amateur Radio made it look easy to communicate internationally between numerous emergency program jurisdictions and medical facilities.

CrossBorder 2014 now has the distinction of being the first Amateur Radio exercise to have successfully linked all six of the PNEMA (Pacific Northwest Emergency Management Agencies) signatories in one on-air event.

Yes, there were operational errors in the delivery of the exercise, but each one served to validate the overall success and value of the exercise as a learning experience for Amateur Radio operators. We can learn a great deal from our mistakes because they teach us more than what we think we learn from success in life.

The size and scope of the exercise continued to surprise many participants. In some cases there was criticism the organizing community had allowed the event to grow on a daily basis well in excess of what many thought was a usable catchment area for testing our critical Amateur Radio infrastructure. In response, the organizing committee asserts the test area might very well mirror reality in an actual Pacific Northwest emergency.

The good news here is that we now know a large percentage of the key players in many community emergency programs – and have their contact information to add into our local communications plan. Likewise, every participant in the exercise now knows a little more about their "beyond arms reach" mutual aid emergency partner.

SABLE ISLAND, PARKS CANADA AND THE CY0P PROJECT

Aaron Carpenter, VA1AXC, is now active from Sable Island, CY0.

Aaron is one of two Operations Coordinators for Parks Canada at the new Sable Island National Park Reserve. Aaron has been a licensed Amateur Radio operator for about eight years but is new to HF radio operating.

He works a rotating schedule for Parks Canada, which consists of approximately two months on the island, then two months back in Halifax, Nova Scotia with his family. His schedule on the island keeps him very busy, but when he is "off duty", he does have some time for getting on the radio.

Aaron was a tremendous asset to the CY0P DXpedition team (Murray, WA4DAN, Rick, AI5P and Gary, VE1RGB) during their October 2013 DXpedition to Sable. The CY0P team worked closely with him on flight scheduling, accommodations, placement of antennas, location of the three stations and other logistical matters. As the DXpedition progressed, the team was able to instruct Aaron during his off-times on some of the intricacies of DX operating. Even though HF operating was new to him, he seemed very interested and asked many questions. The CY0P team and Aaron became quick friends.

We were so appreciative for the opportunity to visit Sable Island and conduct our DXpedition that we began to think how to contribute something back to this wonderful hobby and Parks Canada. After discussions with Parks Canada, and upon the successful completion of the CY0P DXpedition, the CY0P team donated all of the antennas, antenna masts, coaxial cables, etc to Parks Canada and the Sable Station.

Weeks after the DXpedition, we also obtained and shipped a Yaesu FT-897 HF transceiver to Parks Canada. The above photo shows Gary Bartlett, VE1RGB (on the right) presenting the receiver to Aaron on behalf of the CY0P DXpedition. The site of the presentation was the citadel on Citadel Hill in Halifax where Parks Canada has its offices and where Aaron works when he is not on Sable Island.

Since then, Aaron has been able to experience the thrill of being DX and the CY0P team has further agreed to provide Parks Canada with an Icom all band, all mode HF transceiver, a Heil Pro Headset, a Tokyo 1.1 solid state amplifier and a new all band antenna (antennas corrode very quickly in the salt spray on Sable). All of this gear will be made available to future DXpeditions and guest operators who obtain permission to visit Sable Island.

Please listen out for VA1AXC on the HF bands and congratulate him as an up-and-coming DX'er!

Interestingly, one after action report actually focused on the value of the CBCG (with respect to a local jurisdiction) and in turn has now formalized a procedure in their communications plan for future events that might include contact with a CBCG Net Control station. This is a very positive step!

Based on what the exercise design team learned in both preparing for and delivering this event, we would have no hesitation hosting a similar event with even less lead time at some point in the near future. We're simply ready to do it again!

Paul Peters, VE7BZ, would be happy to receive comments or questions from other areas along the Canada / USA border that might be interested in starting a cross-border organization. He can be reached at:radio@cvrd.bc.ca

TCA

THE SPORTS PAGE

— THE CANADIAN CONTEST SCENE

Bob Nash, VE3KZ
5260 14th Sideroad, RR6
Milton, ON L9T 2Y1
Tel. 905-878-7382
Email: ve3kz@rac.ca

SPORTS PAGE INFO:

The contest results provided in this column are courtesy of the Maritime Contest Club team:

Gary Bartlett, VE1RGB
Scott Nichols, VE1OP

For more contest information check out these sites:

http://www.hornucopia.com/contestcal/weeklycont.html

http://www.contesting.com

http://www.sk3bg.se/contest/

http://www.arrl.org/contests/calendar.html

http://www.arrl.org/contests/rate-sheet/about.html

http://www.cq-amateur-radio.com/awards.html

http://www.arrl.org/files/file/DXCC/2013%20DXCC%20Current_a.pdf

The "Contest Calendar" at the end of this column is presented as a guide only.

RAC and TCA do not necessarily endorse or support any of the contests or the accuracy of the information.

Bands: The 30, 17 and 12m bands are never used in any contest.

COUNTRY MULTIPLIERS

Dirk, VY1NM, has asked about country lists. The most common one is the official ARRL DXCC list that is used by a large number of contests and is also the basis of the ARRL DXCC award. It can be found online at http://www.arrl.org/country-lists-prefixes.

A number of contests use the augmented German DARC "Countries List" for European entities, modifying the ARRL list. This can be found at http://www.darc.de/referate/dx/contest/waedc/en/rules/.

For a little more detail on countries, I suggest one of these "CTY" files available at http://www.country-files.com/. These are the files that the various logging programs use to identify country multipliers. If you run across a call that really has you stumped the last resort file is the ITU prefix list at http://www.arrl.org/international-call-sign-series.

Even then calls such as the "TO" and "TX" series often show up on "whatever French island" unannounced. Luckily the contest sponsor will know where they were and score your log correctly. Dirk, this may be more than you were looking for but I'm always ready to help VY1 activity!

CW OR DIGITAL CW?

There was a time when operating CW as a Non-Assisted operator was very straightforward. One needed receiver(s), transmitter(s), antenna(s), keying device(s) and a set of headphones. Although technology has advanced relentlessly this combination is still what defines this operating category.

There is very little controversy concerning memory keying. Changing from paper to electronic duping isn't a concern. The problems arise on the receiving side. Surely having devices in your shack that read the code and even find where the station is on the band change the operating category to something different, maybe Digital CW?

If Non-Assisted CW consists of finding the target station by tuning a band of frequencies and the operator copying the call, what category are you in when using a Skimmer to do all of that? It isn't Assisted because there was no outside help.

Do we need a separate category to keep traditional CW from becoming an obsolete endeavour?

AND NOW PHONE

Somehow phone contests are much less complicated. A division between Assisted and Non-Assisted can easily be understood. The lack of frequencies and the often outrageous signal widths are our major challenges mixed in with a potpourri of accents.

In the last issue, Derek, VE7RE, rightly championed use of the standard phonetic alphabet for phone operation. The ICAO phonetics can work very well in many instances, but what happens when your best attempt at making a call known just isn't working? We tend to fall back on international place names when the going gets rough due to signal strength or language problems.

Charles, HS0ZCH, had some very interesting things to say about optimizing your use of place-name phonetics under these conditions. He suggests using the common place names with equally stressed syllables, thus we have America, Boston, Canada, Denmark, England, Florida, Guatemala, Honolulu, Italy, Japan, Kentucky, London, Mexico, Norway, Ontario, Pacific, Quebec, Radio (of course), Santiago, Tokyo, United (as in States), Victoria, Washington, X-Ray (what else), Yokohama and Zanzibar.

The ICAO phonetics that tend to fail most often are Golf, Uniform and Zulu. VE3KZ would be lost without Zanzibar. There is no way you can stress Zulu to make it as potent as Zanzibar. Much the same can be said for Uniform and regarding Golf: was that a letter or did you cough into the mike?

CANADA DAY

Good luck to all on July 1. I hope to get enough RF back on the air after the several months in the grip of December's record ice catastrophe to work you all! I know I am not alone after following the weather across this county during this interminable winter.

73, Bob Victor Echo three Kentucky Zanzibar, ex-Victor Easy three Baker How Sugar

For the RAC Store visit:
http://www.cafepress.ca/rac_radio

CQ WPX CW

Call	QSO	Mult	Score	Category
VY2ZM	3153	958	10,350,232	SO HP ALL
VY2TT	3392	1,009	10,312,989	SO HP ALL
VC7M	3380	913	9,206,692	MULTI-MULTI
XL3T	2913	947	8,603,495	SO HP ALL
VB2T	2608	899	7,729,602	SO HP ALL
VE3JM	2543	902	7,165,488	SO HP ALL
VE3EJ	2391	977	7,127,215	SA HP ALL
VE9ML	1710	809	4,557,906	MULTI-TWO
VE7GL	1861	741	4,534,920	MULTI-ONE
VE3YAA	1919	742	4,221,238	MULTI-TWO
VE7SZ	1327	646	1,973,530	SO HP 20M
VA2WA	1029	505	1,652,360	SA LP ALL (T)
VE7XF	987	524	1,472,964	SO HP ALL (T)
VY2SS	947	514	1,368,782	SO HP ALL (T)
VE3RZ	855	500	1,334,500	SA HP ALL
VE3EY	895	462	1,290,366	SO LP ALL (T)
VA7KO	905	432	1,120,608	SO HP ALL
VE3GFN	806	402	996,156	SO LP ALL (T)
VE2FK	688	372	801,288	SA HP ALL
VE3CR	601	476	734,944	SO HP 20M (T)
VE3TA	570	395	727,985	SA HP ALL
VE3TW	601	357	684,012	SA LP ALL
VA3ATT	639	335	672,345	SO LP ALL
VE5MX	704	355	624,445	SA HP ALL
VE2AWR	594	345	591,330	SO LP ALL
VE9HF	533	333	539,460	SO LP ALL
VE3FH	543	305	503,555	SO LP ALL
VE1RSM	499	294	459,522	SO LP ALL
VO1MP	481	357	456,246	SO HP ALL
VE9AA	535	369	456,084	SO HP 15M
VE3XAT	405	365	435,445	SA LP ALL
VA3SB	483	318	423,894	SO QRP ALL
VA2SG	506	295	423,325	SO LP ALL
VE1OP	510	339	417,648	SA HP ALL
VE2EZD	451	256	393,984	SA HP ALL
VA7ST	558	252	376,992	SO LP ALL
VE7CV	422	283	357,995	SO LP ALL (T)
VE3GTC	429	277	340,987	SO QRP ALL
VA2ES	391	273	335,244	SA LP ALL
VE7SV	499	234	327,600	SA HP ALL
N2WQ/VE3	426	310	310,310	SO HP 15M
VE6BMX	467	298	299,788	SA LP 20M (T)
VE6EX	478	294	294,588	SO QRP 20M
VE1RGB	267	221	283,543	SO LP 40M
VE4YU	422	241	259,316	SO LP ALL
VE3NE	291	209	256,234	SO HP ALL (T)
VE3OM	331	221	219,674	SO LP ALL
VE3YT	339	232	203,464	SO HP ALL
VE7IO	386	229	188,696	SA HP ALL
VE3UZ	296	214	175,480	SO LP ALL (T)
VA7XB	306	202	145,036	SA LP ALL
VE1ZA	230	175	116,025	AQ ALL (T)
VA3EC	201	160	100,800	SO LP ALL
VE3CX	230	161	84,686	SA HP ALL
VE3HEU	186	141	73,461	SA LP ALL
VE5KS	192	168	73,248	SO LP 15M
VE3SMA	163	150	73,200	SO QRP ALL
VE3IAE	192	160	71,360	SO LP 15M (T)
VE3FJ	175	156	64,740	SO LP 15M
VE3XD	174	151	59,796	AQ 15M
VE7DDG	191	150	56,550	SO LP ALL (T)
K2NV/VE3	140	123	53,505	SO LP ALL
VE4VT	158	120	51,720	SO HP ALL
VE6LB	113	99	46,332	SA HP 40M (T)
VE7SQ	146	121	42,229	SA HP ALL
VE2KOT	148	109	42,183	SO QRP ALL
VE4EA	111	93	41,106	SO LP 40M (T)
VE1ZAC	111	92	28,980	SO HP ALL
VE6HPT	120	98	26,460	SO LP ALL
VE3KAO	100	85	21,760	SO LP ALL
VE3HG	80	78	15,366	AQ 20M
VE7YU	73	54	15,012	SO LP 80M
VE3RCN	75	69	14,628	SO LP ALL (T)
VY1EI	75	72	11,088	SA LP 15M (T)
VE6SQ	82	64	10,688	SA LP ALL (T)
VA3GUY	70	69	10,350	SO LP 15M (T)
VE3MGY	75	67	9,983	SO QRP 20M (T)
VE9OA	65	62	9,238	SO LP ALL
VY2LI	62	51	8,619	SO LP 10M (T)
VE7BGP	56	47	5,217	SO LP ALL
VA3FN	43	39	4,914	SO LP ALL
VE1DT	35	32	2,624	SA LP ALL
VE3EXW	31	25	2,450	SA LP ALL
VA7BWG	27	27	1,431	SA LP 15M
VA5LF	17	17	1,054	SO LP ALL
VA3DBT	22	20	900	SO LP ALL (R)
VE3CFK	15	14	756	SO LP 160M
K8GU/VE5	20	19	741	SO LP 20M
VE3VSM	17	17	629	SO LP 20M
VA3RJ	15	15	495	SO QRP 15M
VE3DTI	10	10	250	SO QRP ALL

RSGB BERU (corrected QSO numbers)

Call	QSO	Mult	Score	Power	Section
VO1RAC	886	113	8,010	700	HQ
VE9ML	695	125	7,075	100	Multi-Op

VOLTA RTTY

Call	QSO	Points	Score
VA7ST	358	117	299,694,330
VE2FK	405	127	296,111,295
VE2EBK	263	107	106,823,236
VE2AXO	191	86	40,145,144
VE3KAO	182	79	34,981,674
VE2SG	92	57	6,429,144
VE3VID	77	50	4,827,900
VE2NMB	65	39	1,842,945
VY2LI	72	27	1,681,560
VE7BGP	29	21	356,265
VA3FN	33	21	298,683
VE3RCN	38	25	258,400
VE7HBS	42	17	210,630
VE7FCO	25	17	158,525
VE2QV	25	18	111,600
VE9AA	22	15	72,600
VE6KAD	9	8	5,400

7TH CALL AREA QSO PARTY

Call	QSO	Mult	Score	Class
VE4VT	313	108	82,944	SO MIX LP
VE7CV	316	97	82,256	SO MIX LP
VE5KS	293	96	75,456	M/S LP
VE3KP	198	68	37,060	SO MIX HP
VE9AA	108	46	14,904	M/S HP
VA7ST	73	49	10,731	SO CW LP
VY2LI	81	44	9,284	SO MIX HP
VE2AWR	61	33	5,874	SO MIX LP
VE9OA	47	38	4,522	SO MIX LP
VE7RSV	48	43	4,128	SO SSB LP
VE7IO	37	26	2,886	M/S HP
VA3GUY	41	35	2,870	SO SSB LP
VE7BGP	30	23	1,978	SO MIX LP
VE3MGY	29	21	1,827	SO CW QRP
VA3GKO	24	19	912	M/S LP
VE5BCS	20	18	720	SO SSB LP
VE3DQN	13	12	468	SO CW QRP
VA2UTC	14	12	336	M/S LP
VE3HUR	7	7	147	SO CW QRP

ARI INTERNATIONAL DX CONTEST

Call	QSO	Mult	Score	Class
VE9ML	550	225	704,250	MOP
VE3FH	192	125	135,625	SO MIX
VE2AWR	103	75	47,550	SO MIX
VE2FK	129	68	42,568	SO RTTY
VE9BWK	82	49	22,785	SO MIX
VA2ES	57	45	13,095	SO CW
VE3KAO	64	44	11,880	SO MIX
VE9AA	56	40	9,360	SO CW
VE3FJ	49	33	9,141	SO CW
VE2EBK	51	31	7,750	SO RTTY
VE2KOT	32	30	6,990	SO CW
VE5MX	26	24	4,512	SO CW
VE3IAE	34	24	3,984	SO CW
VE7JH	29	22	3,938	SO MIX
VE3JM	22	18	2,538	SO MIX
VA7ST	16	15	1,635	SO CW
VA2UTC	14	12	1,380	SO SSB
VE3MGY	47	2	126	SO CW
VE3EXW	4	4	24	SO CW

ARRL JUNE VHF QSO PARTY

Call	QSO	Mult	Score	Class
VE3WCC	649	181	194,575	M
VE3OIL/R	425	154	141,372	R
VE3SMA/R	384	135	116,775	R
VE3ZV	331	130	70,980	B
VE3WJ/R	222	99	52,074	R
VE7JH	326	102	41,412	B
VA3ST	238	102	34,578	B
VA3ZV	185	79	16,985	A
VA6AN	148	71	10,863	A
VE7DAY	132	58	7,888	3B
VE3KZ	120	53	7,102	3B
VE7SCC	111	49	5,537	M
VE5UF	86	52	4,472	B
VE3GJ/R	91	30	3,240	RL
VE4EAR	52	32	1,664	A
VE6BMX	56	29	1,624	A
VE3CX	54	27	1,458	M
VE3EG	50	25	1,275	L
VE6KC	43	19	988	A
VE1SKY	28	25	725	L
VE5MX	32	22	704	B
VE9AA	33	21	693	L
VE2HAY	29	18	684	A
VE3EJ	34	20	680	B
VE3NYZ	22	11	473	B
VE3RCN	35	11	418	A
VA3KA	25	13	338	A
VA7ST	21	15	315	A
VE7AFZ	20	10	270	A
VE6CCL	15	11	242	FM
VE3RKS/R	16	12	192	RL
VE7BGP	13	10	150	A
VE2JCW	13	6	78	A
VE6AO	9	6	72	M
VE3GFN	11	6	66	A
VE6HWE/R	9	7	63	R
VE3VCF	9	5	55	A
VE3IAE	6	4	24	A
VA3RKM	5	3	18	L
VE3RX/VE7	4	4	16	A
VE7IHL	3	3	9	3B
VE3FU	2	1	2	3B

MARITIME QSO PARTY

Call	QSO	Mult	Score	Class
VE9MCC	700	185	155,800	SOMIX
VE1OP	243	113	55,818	SOCW
VY2MCC	311	131	49,556	SOMIX
VE1ZAC	226	43	19,536	ROVER
VE9AA	122	46	11,358	ROVER
VE9ML	89	63	10,958	MO
VE1DT	58	47	5,705	SOMIX
VA1MCC	58	40	4,740	MO
VE1SKY	96	40	3,940	SOSSB
VE1AI	54	35	3,805	ROVER
VE9CRM	37	30	2,000	MO
VE1RGB	27	24	1,396	SOCW
VE3CRU	17	14	1,092	SOMIX
VE3FU	16	13	677	SOMIX
VE6AO	10	9	462	SOMIX
VE3MGY	6	5	455	MO
VA3GKO	12	10	420	SOSSB
VA7BEC	2	2	204	SOSSB
VA7KO	7	5	170	SOCW
VE2FK	6	4	148	SOCW
VE7BGP	3	3	115	SOMIX
VE3RCN	2	2	108	SOCW

INDIANA QSO PARTY

Call	QSO	Mult	Score
VE9AA	27	17	918
VE4VT	14	13	208
VA3GKO	15	13	195
VY2LI	11	10	160
VE5KS	10	6	60
VE7JH	1	1	1

NEW ENGLAND QSO PARTY

Call	QSO	Mult	Score	Class
VE1RGB	189	53	20,034	SOLP
VE4VT	234	53	20,034	SOLP
VE9AA	183	51	18,666	MS
VE2AWR	156	51	14,433	SOLP
VE3KP	143	46	11,868	SOHP
VY2LI	102	39	6,474	SOHP
VA2FDT	53	31	3,286	SOQRP
VE7CV	46	33	2,475	SOHP
VE3HEU	41	25	2,050	SOLP
VA3FN	30	20	1,200	SOLP
VE9CX	29	23	667	SOLP
VE3MGY	17	16	544	SOQRP
VE5KS	13	13	234	SOLP
VE5BCS	7	6	42	SOLP
VE3VID	4	3	12	SOLP
VE3EXW	2	2	6	SOLP

CONTEST CALENDAR FOR MAY, JUNE AND EARLY JULY 2014

Contest Name	Start	End	Web Address
ARI DX Contest	1200z May 3	1159z May 4	http://www.ari.it/index.php?option=com_content&view=category&layout=blog&id=250&Itemid=270&lang=en
7QP QSO Party	1300z May 3	0700z May 4	http://www.codxc.com/new/page.asp?content=start
10-10 Int. Spring CW	0000z May 3	2359z May 4	http://www.ten-ten.org/
Microwave Sprint	0600 Local May 3	1300 Local May3	https://sites.google.com/site/springvhfupsprints/home
Indiana QSO Party	1600z May 3	0400z May 4	http://www.hdxcc.org/inqp/index.html
New England QSO Party (Pt 1)	2000z May 3	0500z May 4	http://www.fara.org/neqp/rules.html
New England QSO Party (Pt 2)	1300z May 4	2400z May 4	http://www.fara.org/neqp/rules.html
NAQCC Sprint	0130z May 22	0330z May 22	http://naqcc.info/
CQ-M Int. DX Contest	1200z May 10	1159z May 11	http://www.srr.ru/CONTEST/cq_m_14_eng.php
Volta WW RTTY Contest	1200z May 10	1200z May 11	http://www.contestvolta.com/
50MHz Sprint	2300z May 10	0300z May 11	https://sites.google.com/site/springvhfupsprints/home
FISTS Spring Sprint	1700z May 10	2100z May 10	http://www.fists.org/
King of Spain Contest CW	1200z May 17	1200z May 18	http://concursos.ure.es/en
CQ WW WPX CW	0000z May 24	2400z May 25	http://www.cqwpx.com/rules.htm
ARCI Hootowl Sprint	2000 Local May 25	2400 Local May 25	http://www.qrparci.org/
Alabama QSO Party	1600z Jun 7	0400z Jun 8	http://www.alabamaqsoparty.org/
Portugal Day Contest	0000z Jun 7	2400z Jun 8	http://www.rep.pt/portugal_day_contest/rules.html
GACW WW South America CW	1500z Jun 7	1500z Jun 8	http://www.wwsatest.org/
ARRL June VHF QSO Party	1800z Jun 14	0300z Jun 16	http://www.arrl.org/june-vhf
NAQCC Sprint	0030z Jun 11	0230z Jun 11	http://naqcc.info/
West Virginia QSO Party	1600z Jun 14	0200z Jun 15	http://www.qsl.net/wvsarc/wvqp/wvqp.html
All-Asia DX Contest CW	0000z Jun 14	2400z Jun 15	http://www.jarl.or.jp/English/0-2.htm
ARCI CW QRP Shootout	1800z Jun 14	2100z Jun 14	http://www.qrparci.org/
ARCI SSB QRP Shootout	1800z Jun 15	2100z Jun 15	http://www.qrparci.org/
SMIRK 6m Contest	0000z Jun 14	2400z Jun 15	http://www.smirk.org/contest.html
NAQCC Milliwatt Sprint	0030z Jun 19	0230z Jun 19	http://naqcc.info/
ARRL Field Day	1800z Jun 28	2100z Jun 29	http://www.arrl.org/field-day
King of Spain Contest SSB	1200z Jun 28	1200z Jun 29	http://concursos.ure.es/en
Canada Day Contest	0000z July 1	2359z July 1	http://www.rac.ca/service/infocont.htm
DL-DX RTTY Contest	1100z July 5	1059z July 6	http://drcg.de/index.php?lang=en
Venezuelan Independence Day	0000z July 5	2359z July 6	http://www.radioclubvenezolano.org/rules.htm
WRTC-2014	1200z July 12	1200z July 13	http://www.wrtc2014.org/
IARU HF World Championship	1200z July 12	1200z July 13	http://www.arrl.org/iaru-hf-championship
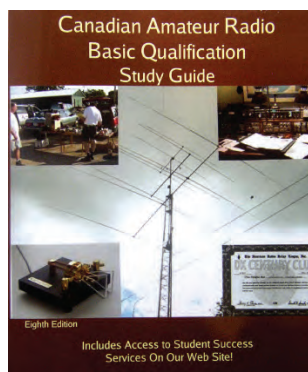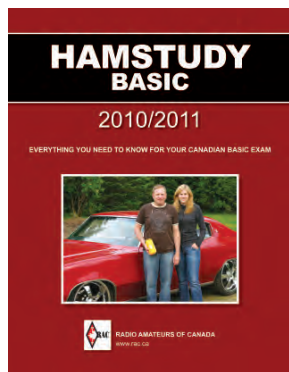
SECTION NEWS THE RAC FIELD ORGANIZATION FORUM

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 Terry Maher, VYIAK (Yukon)
OBM Bill Foster, VE7WWW
OOC: Dennis Wight, VE7IJJ
ACC: Karla Wakefield, VA7KJW
Website: www.va7mpg.ca

JANUARY-FEBRUARY SM REPORT:

In early January, British Columbia and the Yukon had stations participate in a simulated exercise known as CrossBorder 2014. This was one of the largest, if not *the* largest, Amateur Radio SET held on the West Coast of North America. As with all SETs there were surprises; some things worked, others didn't. See page 49 for a full report on this SET. Congratulations to not only those who participated, but those who organized this event. It was a tremendous amount of work by everyone involved.

In early February, the Emergency Radio Coordinators for Vancouver Island met in Parksville as part of their annual update. Members provided an update on their respective groups, Scott Goodman from Comox gave an interesting presentation on the dangers and effects of a geomagnetic storm. Merrick Grieder reviewed a Search and Rescue mission on northern Vancouver Island that had some interesting communications issues. Paul Peters gave a brief overview of the CrossBorder exercise. Thanks to the attendees, the Parksville Fire Department for the venue, Bob Longmore of the Mid Island Radio Association for his organization and also to Emergency Management for their attendance.

Industry Canada launched their new Question Bank for Amateur Radio Examinations on March 6. Please ensure your teaching staff is aware of this information.

The North Shore Emergency Management Office and the North Shore Amateur Radio Club have combined forces and will have a presentation on May 1 about the High River Alberta Floods by Vince D'eon, VE6LK. Seating is limited and arrangements are underway to have a live stream via the BCWARN network. If you are interesting in attending please contact the President of the North Shore Amateur Radio Club. I hope to have a report on this presentation in the next dispatch.

RAC SECTION MANAGER ELECTION NOTICE: ONTARIO NORTH AND ONTARIO SOUTH

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 10 or more full members of RAC residing in the Section concerned. It is advisable to have more than 10. 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:

Notice to all RAC members in the Ontario North and Ontario South Sections

_____ (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 **Ontario North and Ontario South Sections**, 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, 2014. 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, 2014. Return of ballots by 1600E September 22, 2014 and will be counted after September 23, 2014.

A Section Manager elected thus will serve a two-year term which begins on November 1, 2014. If no valid petition is received, the Section will be resolicited in *The Canadian Amateur*.

Field Day is just around the corner. Have you started to make plans for this event? After the 2013-2014 winter it will be good to get out in the fresh air and set up a station. Don't forget to involve your community. Most importantly don't forget to involve the kids; they are the lifeblood of Amateur Radio. Now is the time to start planning; use the media and come up with novel ways to present Amateur Radio to your community.

The folks in the Yukon had an interesting visitor and an interesting presentation of a remote radio station. For more information see the article on page 27.

I am getting very little input from the Section as to what is happening. If you want your event reported please let me know and I will include it on the website as well as in the next dispatch.

The training specification working group continues their mission of preparing a training document for ARES. It is hoped this information will be forwarded in draft form to the Section Managers in the near future.

Public Service Honour Roll
January:
VA7MPG 192; VE7DWG 90; VE7EEX 96; VE7GN 170; VE7WJ 98; and VE7WWW 120.
February:
VA7ET: 73 ; VA7MPG: 186; VE7DWG: 90; VE7EEX: 104; VE7GN; 240; VE7WWW: 108; VE7WJ: 100; and VE7XLH: 120.

Bulletins:
January 45
February 41

– 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 SM REPORT:

Reports for this period were non-existent so again I'm not saying that there was no activity; I'm just saying we don't know about it.

I hope everyone will take in the 44th Annual Central Alberta Amateur Radio Club Picnic which will be held on from June 13-15 at Shady Nook Hall, where we hope we can host a meeting with RAC President Geoff Bawden, VE4BAW. For further information please see: http://www.caarc.ca

ARES Red Deer EC Jeff, VA6JL, continues to make headway on the new UHF-linked, UHF repeater system which is being established in the event of a failure of the Southern Alberta Repeater Association system at any time in the future.

Most equipment has been purchased, acquired or donated for the planned installs. Many repeaters have been built and have already been tested and some are now on test at this time. It will all tie into VE6YXR on 444.550 in the Red Deer area as the main hub.

That's all for now.

– Garry Jacobs, VE6CIA

MANITOBA:

SM: Jan Schippers, VE4JS
STM: Jan Schippers, VE4JS
SEC: Vacant
DECs: Jeff Dovyak, VE4MBQ (Capital Region and CanWarn); Gord Snarr, VE4GLS (South-East Central Region / South-West Region); Wayne Warren, VE4WR (North Region and Special Projects); Vacant (North-Eastern Region); Vacant (North-West Region); EC Ron Wlliscroft, VE4QE (Selkirk and District); Bill Boskwick VE4BOZ for RM of Grey, RM of Dufferin & Town of Carman

JANUARY-FEBRUARY SM REPORT:

Wow it has been cold here in Manitoba. It is definitely a time to stay indoors and operate Amateur Radio.

We provided communications for the Klondike Derby on March 1-2 at Camp Amisk. This event is for Boy Scouts, Cubs and Guides to perform outdoor activities.

Winnipeg ARES
Jeff Dovyak, VE4MBQ

William Franzin, VE4VR, provided a very stimulating presentation and discussion session on the new digital network that he has established in Winnipeg with RAC Midwest Director Derek Hay, VE4HAY, at our January General Meeting.

Welcome to Peter Toth, VE4TTH, who joined Winnipeg ARES in January. In late January, Harm Hazeu, VE4HAZ and Mark Havens, VE4MBH (I still always want to say KB7REU) completed the Winnipeg Emergency Management (WEM) Course put on by the City of Winnipeg Emergency Preparedness Program.

At our February General Meeting, Bob Poole, VE4MAQ and Richard Kazuk, VE4KAZ, provided us with an excellent primer on the Klondike Derby and ARES operations during the event.

– Jan Schippers, VE4JS

Traffic Totals
January: 9
February: 2

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 SM REPORT:

I hope everyone made it through that extremely cold winter. I know it was a good time to test emergency systems as many areas of the north experienced hydro outages.

Now that spring is upon us I know many ARES groups will start to get busy with communications projects and events. Many are now gearing up for Field Day. I encourage all groups to try and operate at a Field Day event near your area. This is an excellent way to see how an emergency station works and it is lots of fun to boot. I hope to hear you on the air that weekend.

Don't forget to send me an email for extra points. Good luck to everyone and thanks again for all the work you do for Amateur Radio and public service.

ONN SEC Report
SEC ONN Dave Hayes, VE3JX

There are plans underway in various areas of the Section for upgrading or adding to the repeater facilities that will be useful for ARES. In Sault Ste Marie, the local Algoma Amateur Radio Club has approved the further research and obtaining of necessary locations and hardware to install a complete D-Star repeater system with ARES as its primary customer. It will, of course, be available to all D-Star users.

On Manitoulin Island, one of their main repeaters, VE3RMI, will be replaced with an ICOM IDAS repeater system, which allows for both analog and digital mixed usage. While the old repeater is putting out 25W, the new system will include an amp to boost output to 160-200W. They anticipate their current excellent coverage to actually double, though only time and testing will tell.

In the meantime, Thunder Bay has been working with Winlink to great success. A wrinkle in the works is the closure of the Salvation Army radio room which included the 24/7 RMS server that served two bands and many areas of North America. No doubt, they will find a new home for it.

By the time this report is read, spring should be here (sure doesn't look like it now) and with it comes antenna maintenance and installation time. (I'm told real men only work on antennas in the dead of winter, but I doubt that.) And so, all ARES groups will be checking their facilities to make sure everything survived. Have a great time!

DEC for Albany reports:
We are saddened to report the passing of one of our ARES members. Robert (Bob) Rollins, VA3RRN, died on December 29 at the local Hospice. Bob served our local ARES group as AEC as well as ADEC for Albany in the past. He will be sadly missed by his family and all his friends, and by his fellow ARES members. Rest in peace, my friend.

Fred Lesnick, DEC for Amethyst reports: As of February 1, VE3ONN that used to reside at Salvation Army Headquarters in Thunder Bay, Ontario is no more. The station inside has been removed and all radio gear taken down with the exception of the antennas that will wait until spring. The HQ is busting at the seams and the room is needed by staff there so the radio room is no more. This means the 24/7 RMS server that served two bands and many areas of North America has also been removed. The station was started back in 2009 and had a great run with SETS and other exercises.

Many thanks to everyone who volunteered helped set up and tear down, as well as those who over the years helped with equipment needs and donations. Thanks to the Salvation Army as well for the room and help over the years.

I'm not sure where or if we will find a new home but for now the 55 Plus Centre at SAO looks like it will and could serve as an HF hub in the event that a station is required.

DEC for Killarney District, Stiig Larson, VE3LBX, includes in his report these comments from two areas:

Alan Viitala, VA3AJV, EC for Sudbury offers his thanks to the City of Greater Sudbury IT Department for graciously donating five Dell laptops to our ARES unit! These will be used for digital modes with our field kits and training will begin soon. Thanks to AEC Wayne, VE3THN, for picking them up and loading them with software so they are ready to go!

Jim McLean, VE3LJM, EC for Manitoulin Island & North Shore reports that preparations and agenda were prepared in February for the ARES group commitments, parades and CanWarn training. Recruiting has started for additional ARES members in the Manitoulin area.

A new repeater, being set up and adjusted for installation, should give a boost to our coverage area. It is to replace the almost 20 year old veteran VE3RMI unit that has served us well but is starting to show her age. It needs constant attention so we decided to bite the bullet and purchase a new one.

The new repeater is an Icom IC-FR500 VHF (147,270+ MHz) with extra channels to run IDAS Digital on the same frequency and another channel to run FM analog and digital at the same time, interfaced with an S-Com 7330 controller with voice announcements coupled to a TE Systems Amp, Mod #1412RA w/160 -200W output with min 25W input.

– Allan Boyd, VE3AJB

DECs reporting:
VA3s: PC
VE3s: LBX and FAL

ECs reporting:
VA3s: AJV and SPT.
VE3s: LJM, SUT, RQR, JX and MXJ.

ONTARIO SOUTH:

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

JANUARY-FEBRUARY SM REPORT:

Six members of the London ARC completed the EMO IMS-100 and -200 courses. Congratulations to Michael Watts, VE3ACW; Ansil Rock, VE3HDR; Ken Brightling, VE3ETP; Brett Gilbank, VE3ZBG; London EC Doug Elliott, VA3DAE; Charles Moher, VA3XXZ; and club President David Lambert, VE3KGK.

Congratulations to Worth Chisholm, VE3BTC, who has assumed the role of President of the Elgin Amateur Radio Society. The Society has completed the build of a mobile communications trailer and at time of writing were installing a 30-foot crank-up tower and antennas. See page 51 for more information on the finished project.

Digital communication is becoming more important in EmComm operations every day. The Winlink Hybrid Radio Email Network is increasingly the choice of government and non-government agencies (see www.winlink.org). It is an integrated system with HF, packet radio, MESH and several other options from creating a local area network to sending email over hundreds of miles. System and point-to-point capabilities are included. The RMS Express user application is simple to set up; the instructions can be found on the Winlink home page. Any KISS capable TNC is suitable and the WINMOR sound-card virtual modem is available for a small donation. Check it out.

ACTIVITY REPORTS

Unusually heavy winter weather this year has had its effect, forcing Bruce County DEC Brad Rodríguez, VE3RHJ, to cancel a visit to the Georgian Bay ARC at Owen Sound where he was to speak on the ARES program. This event will be rescheduled. In the meantime Brad is scheduled to give a similar briefing to the Guelph club in March. Thank you Brad for this support.

EC Worth Chisholm, VE3BTC, reports on several meetings with local CEMCs and the Officer Commanding the 31st Combat Engineer Regiment based at

St Thomas. Stay tuned for future reports on joint exercises, special event stations in conjunction with 1CER's upcoming anniversary, and briefings to the St Thomas and Elgin County ARES Group on IMS operations by the St Thomas CEMC. Congratulations to a very public service minded club and ARES group.

DECs Reporting: VE3RHJ
ECs Reporting:
VE3s: VE3BTC, VE3LKD, VE3LGN, VE3RTE and VE3EQV.

OBS Reporting:
VE3GIO, VE3VBR and VE3XTA.

Traffic Totals:
January: VE3RHJ 12, VE3TPZ 3
February: VE3RHJ 11, VE3TPZ 3

Public Service Honour Roll:
January: VE3RHJ 72, VE3TPZ 43
February: VE3RHJ 67, VE3TPZ 31

ONTARIO EAST:

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

JANUARY-FEBRUARY SM REPORT:

On the ARES front:

The RAC ARES Training Specifications Working Group is soon to wrap up its part one of this two-year innovative endeavour, which is planned to culminate at the April Winnipeg AGM where it will be finalized and approved. This has been an ongoing national effort by a small team of SMs and SECs to which I have been a regular contributor.

Once this step has been completed, the ARES Training Specifications document will be sent to all ARES group leadership across Canada to review it so that they can all provide their questions and comments, and so that any tweaking that may be needed can be done before moving onto the next phase. The next phase will be to further develop the document details and go deeper into each aspect of the ARES Training Specs. We are bringing ARES/EmComm into the 21st Century with these new training specs.

Eastern Ontario ARES District Group reports:

Ottawa EMRG/ARES Group:
Submitted by AEC Mike, VE3FFK for Coordinator Richard, VE3UNW

The Ottawa EMRG/ARES Group had only one activity this January, which was the usual repeater test that went well with a good turnout and all repeaters checked out. Thanks to Tracy, VA3TXN, Tim, VA3PYC, Roger, VE3NPO, Arthur,

VA3BIT and Sandy, VE3AAC. Good coverage near the boundaries (Tracy at Metcalfe and Tim at Carp). The Barrhaven UHF repeater on 444.950 is working quite well.

The Ottawa EMRG/ARES Group's high point of activity in February was our participation in safety and logistics communications for the Canadian Ski Marathon (CMS). This activity involved 40 Amateurs, about a third of them members of EMRG / Ottawa ARES. This event requires Amateurs at fixed points, as mobile operators and on skis, travelling the course through the back country of Quebec. Although cellular coverage is available on some of the course, there are still a lot of places where ham radio is the most practical way to communicate. By the way, even when cell coverage is available, when 911 gets a call from an injured skier, they call us since it would be the radio equipped safety team who would work out the logistics of getting the casualty from the trail to a place where an ambulance can reach.

The volunteers for this year's CSM were: Daniel, VA2KEY, Clarence, VA2SLB, Ron, VA3ACZ, Arthur, VA3BIT, Dean, VA3CDD, Tyler, VA3DGN, Jonathon, VA3GDG, Georges, VA3LZY, Peter, VA3PJS, Austin, VA3SWY, Theresa, VA3TGS, Donna, VA3TTE, Tracy, VA3TXN, Harold, VA3UNK, Christine, VA3VK, Margaret, VA3VXN, François, VE2AAY, Malcolm, VE2DDZ, Souly, VE2FFS, Stéphane, VE2STQ, Duncan, VE3BDC, Clayton, VE3CBJ, Wayne, VE3CZO, Bill, VE3DW, Mike, VE3FFK, Gordon, VE3FRB, Gil, VE3GJM, Harrie, VE3HYS, Gaëtan, VE3IET, Luc, VE3JGL, John, VE3JKG, Lynda, VE3JRL, David, VE3KMV, Jean-Marc, VE3ORL, Neil, VE3PUE, Mike, VE3UMC, Richard, VE3UNW, Gordon, VE3XGP, Glenn, VE3XRA and Alan, VE3ZTU.

The usual monthly repeater tests were also conducted on February 5, with Dave, VE3KMV, doing the usual coordination of Ron, VA3ACZ, Mike, VE3FFK, Bob, VA3QV, Stuart, VE3SMF, Mike VE3UMC, Sandy, VE3AAC and Paul, VE3CPH. This was a larger than usual group of checkins and well dispersed geographically. All was well, with some anomalies noted once again on the Western repeater. We are still looking at the problem.

LNL-ARES Group:
Submitted by AEC Norm, VE3VY for Coordinator Barrie, VE3BSB

The Lanark/North Leeds (LNL)-ARES Group's January report is basically nil owing mainly to weather. The only work going on aside from regular activities is the

construction of a 440 repeater for Westport, to be linked to the LNLARES Network, which will be installed when weather permits, and used to cover the dead spots in the Westport Village area. Our Saturday morning breakfasts get-together continue.

Prescott-Russell-ARES Group
Submitted by EC Lance, VA3LP

The Prescott-Russell (PR)-ARES Group members were very busy in January and February with the preparations for the Rockland Classic Bicycle Race on April 6. This race provides the group with an opportunity each year to get out in the public eye and practise providing communications service.

Work is still progressing on a MESH network as well as preparations for the installation of a packet digipeater at the VE3PRV repeater site.

Members of the group spent time at the bedside of a very dear friend to not only the Amateurs of the Prescott-Russell ARES group but to many Amateurs throughout Eastern Ontario, Western Quebec and around the world. Sadly, Don Dashney, VE3RM, became a Silent Key on February 12. Don was a patriarch to most of the members

of our group, always willing to share his vast knowledge of radios and Amateur Radio. Don was an avid contester and his expertise helped us through many of our Field Days. His sage advice kept us on the straight and narrow and allowed our group to make our decisions on sound principles. Don's smiling face and kindness to all will be sorely missed. Good bye Don and safe journey to your new ham shack. 73

Renfrew County East ARES-Group
Submitted by EC Debra A. Bee, VE3IEH

The Renfrew County East (RCE)-ARES Group reports that, in a referral from Cory Nicholas of the Arnprior Fire Department, Debra was contacted in January by the Homes Coordinator for L'Arche Arnprior, a faith-based network of communities for people with or without developmental disabilities. (Their charter, mission and vision is outlined in the website http://www.larche.org.) In Ontario, it is funded by the Ministry of Community and Social Services. L'Arche just had a compliance review and under regulation 299/10 they are to formulate an Emergency Preparedness Plan for each of their homes in the event of a

disaster. A meeting is being planned in order to determine how the ARES members of RCE can serve this worthy organization as a part of their plan.

Discussions are underway for another opportunity for RCE-ARES to take place in Arnprior in June. A municipal trade show for the Association of Ontario Road Supervisors will be held at the Nick Smith Centre on June 4 and 5. It is estimated that there will be 250 exhibitors of materials, services and equipment needed to maintain municipal roads and infrastructure projects. The show is also a showcase for GPS/GIS technology, staff training, underground utility locators, wastewater treatment and traffic control. The organizers expect approximately 3,000 visitors. She anticipates that, depending on the needs of the organizers, it may be necessary to call out additional ARES members under the mutual aid program.

The Renfrew County East (RCE)-ARES Group Coordinator Debra, VE3IEH and Renfrew County West Group Coordinator Bob, VE3YX and his AEC George, VE3GPD, met on February 19 at the Nick Smith Centre with the Association of Ontario Road Supervisors (AORS) trade show Chairperson (Steve Boland), Logistics Manager (Don England), Director of Recreation Services (Glenn Arthur) for the Town of Arnprior and Fred Blackstein, VE3FPB. Members of the Lanark North Leeds ARES group were not able to attend, however they are expected to be full participants in the ARES callout on June 4 and 5.

The group was escorted through the Nick Smith Centre and the grounds and provided with a full description of where key stakeholders would be located. The AORS team provided several options concerning where the ARES team would like to set up and the likely choice will be outside in the 40x100 tent along with the registration table. Hydro will be available in the tent. The ARES team was invited to have an information table available in addition to the portable operation station. Bob, VE3YX, proposed that HF equipment be included as a way to "advertise" Amateur Radio. Debra, VE3IEH, stated that she may have a highly portable vertical antenna by then that could be used to cover all of the HF bands and indicated that she would lend it for the purpose of the ARES presence at the show.

The AORS team fully understand that the ARES people are there for one purpose only and that is for communications. (There will be no parking or security tasks assigned to us.) It is anticipated that RCE will supply teams of four ARES members to cover two shifts (7:30 am to 12 pm on June 4 and 5) with RCW supplying a team of four to cover one shift (12 pm to 4 pm on June 4 or 5) and Lanark-Leeds to supply a team of four to cover one shift (12 pm to 4 pm on June 4 or 5). In all shifts, two members will be responsible to work the base station and two members will circulate through the exhibit areas in watching for anyone needing assistance or as "extra" eyes.

The teams will meet again in May to tie up any loose ends and to present their action plans. Information on the Association of Ontario Road Supervisors can be found: http://www.aors.on.ca

In other news, Group Coordinator Debra, VE3IEH, will be meeting with a co-owner of the Neat Coffee Shop in Burnstown to discuss how ARES members might be of assistance with their "Get There From Here" initiative which is a series of runs or bike rides of varying lengths from nearby towns using scenic routes. These activities are scheduled to be held from April 26 to October 8.

Renfrew County West ARES-Group
Submitted by Group Coordinator Bob, VE3YX

The Renfrew County West (RCW)-ARES Group held four Wednesday evening nets in January on the VE3STP repeater located in RCW-ARES region. As well as attendance reported in the RCW Group report, the group provided safety communications for Deep River's Silver Spoon Ski Race for the 41st time on February 8. AGC Dom, VE3DGZ and Ken, VE2HFX, operated the base stations on 2m and 70 cm. Richard, VA3BIX, was at the ski chalet to provide communications for the ski patrol if required. Dan, VE9DAN, Bob, VE3YYG and GC Bob, VE3YX, were stationed strategically along the route.

Fortunately, there were no incidents although we did have to keep track of one skier that took a "long cut". The stations in the field relayed the bib numbers of the skiers as they passed and the base stations checked them on the start sheets. All the handhelds in the field were on 2m and a car with crossband was positioned to provide 70 cm to the base for two of the more distant sites. One of our group members, Tony, VA3HWH, participated in the race having missed only one race in the 42 years it has been held.

Stormont, Dundas & Glengarry-ARES Group
Submitted by Group Coordinator Earl, VE3IMP

The Stormont, Dundas & Glengarry (SD&G)-ARES group participated in a multi-municipal / Red Cross deployed exercise on February 1. The SD&G ARES group exercise with the Cornwall Red Cross, the Township of South Stormont, the Township of South Glengarry and the City of Cornwall went well. The group's EmComm exercise involved seven related sites and five ARES operators. During the four-hour, on-the-air exercise the simulated emergency of an ice storm allowed us to confirm the serviceability of the ARES installations at seven locations close to Cornwall, simulate an emergency and pass related traffic using official RAC radiogram forms. It allowed us to enhance radio communications with the CEMCs of the above organizations.

After the exercise and debrief were concluded, the lunch period allowed for discussions to better prepare for emergencies where SD&G ARES may be called on to respond. The exercise went well and reinforced that we have many strengths. It also allowed us to make over 29 recommendations for improvements to our system.

Districts reporting:
Eastern Ontario

ECs (GCs) reporting:
VE3VY, VE3FFK, VE3YX, VA3LP, VE3IMP, VE3IEH.

DECs reporting: VA3LP.

OBS reporting: VE3YX, VE3KII, VE3VY, VE3ZJS and VE3IQZ.

– 73, Michael Hickey, VE3IPC

ONTARIO GTA SECTION REPORT

SM: George Duffield, VE3WKJ
ASM: Vic Henderson, VE3FOX
ASM: James King, VE3ETZ
SEC: Rick Harrison, VA3NV
STM: Vacant
SBM: Brad Rodriguez, VE3RHJ

JANUARY-FEBRUARY SM REPORT:

There is a lot going on in the Amateur Radio world in Canada and this is no more evident than in the GTA Section. It is unusual to have so much energy and camaraderie displayed as it has been in the Section over the past several months.

Members of the various clubs across the Section are attending meetings of clubs other than their own, to share knowledge and expertise so that every operator involved in ARES activities will have the opportunity for training to the same level of competence. There remains work to be done, specifically in Durham Region and to a lesser degree in York Regiion, but the goal is to expand the knowledge to every corner of the Section.

As the Section Manager, I want to thank my Section Emergency Coordinator Rick Harrison, VA3NV, for his exemplary work in building the leadership team. In the past two months, Rick has made key appointments to our group that is already producing key results. Rick nominated Malcolm Kendall, VE3BGD, as the DEC for Toronto and worked with Malcolm to add Tim Andrew, VA3TMA, to the team as EC for Etobicoke.

A key activity that will have taken place by the time this edition of TCA is printed, is a meeting which took place at Radioworld in late May. RAC President Geoff Bawden, VE4BAW and Rod Hardman, VE3RHF, will be speaking to members of our community, both RAC members and non-members, about the development of our national society. No doubt there will be more to say about this in the future. There will be a second meeting, featuring ARES activities and planning for the future that will also take place at Radioworld on the weekend before Field Day. I encourage as many as possible to attend this meeting.

Amateur Radio is about passion and experimentation. Get involved in whatever aspect reflects your passion.

SEC Rick Harrison, VA3NV, report:

Tim Andrew, VA3TMA, has been appointed as the Emergency Coordinator for Etobicoke.

A meeting of Emergency Coordinators from the GTA was held on Thursday, January 30 at the Red Cross Ontario Zone Office in Mississauga and 16 people attended. Amongst those attending were the District Director and the Section Manager for the GTA Section. The ARES coordinator for the Provincial Emergency Operations Centre was also present. The meeting was chaired by the Section Emergency Coordinator. This group plans to continue meeting on a quarterly basis. At this meeting Fldigi was adopted as the digital mode that will be used by all GTA ARES groups. Packet radio will remain as a backup mode.

A note of thanks to Toronto DEC Malcolm Kendall, VE3BGD. Malcolm has been quite active in demonstrating Fldigi to various ARES groups in the GTA Section.

On a related note, it seems as if most ARES groups in the GTA Section are moving ahead with the plan to adopt Fldigi as the main digital mode for emergency operations in the Section.

The donation of a trailer to the Oakville ARES group should enable them to provide even greater service to their local government agencies and NGOs.

DEC (GTA West) Glenn Marrett, VE3CEZ, report:

January has continued to assault us with wind and snow throughout the GTA. An effort to put together a Winter Field Day site in Halton was abandoned due to unsafe driving conditions, and those who were going to participate were advised to stay home and operate from a warm and safe location.

On the evening of January 29, the Halton Region Emergency Communication Team met at the Regional Centre on Bronte, where I participated as an observer at the meeting.

Although still very cold at this writing, it appears that ARES activity in support of groups requesting communication assistance is starting to pick up. It is also encouraging to observe the inter-sectional assistance being provided by our ARES groups in the GTA. During the recent Chilly Half-Marathon held in Burlington, radio operators from Oakville, Milton, Burlington, Brampton, Mississauga and Toronto all volunteered their time to ensure a successful, impressive demonstration of the power of cooperation! Well done to those who stepped forward and gave their time! More to come on this next month!

Fldigi is becoming a mode that ARES groups around the GTA should really start to study and experiment with if they haven't already started doing so. It is a very accessible program to download off the internet and many thanks go to Malcolm, VE3BGD, for providing assistance to groups that have requested his experience in setting up this digital program to use. One of the key factors for the use of Fldigi is the many forms contained within the software for use by the many agencies we may serve at any particular point. Also, there are many operational modes that can be used within the program during emergencies or hobby use. Agreed upon standards enable users to make contacts quickly and effectively without the use of any other gear other than a computer/laptop and a radio with a microphone!

A generous donation of a travel trailer to the Oakville ARES group by George, VE3OGP, will enable the group to set up for emergency use and have mobile shelter for inclement weather. It is important not only to be able to configure the trailer for use, but also find a willing partner that will allow the group to store (hopefully at no cost) and provide access the trailer easily when needed. Thank you George for your kind donation!

DEC Toronto Malcolm Kendall, VE3BGD, report:

At the last meeting of the Toronto Amateur Radio Club the members agreed to affiliate an ARES group within the club. We already have two ARES members out of this club (Tim, VA3TMA and Ralph, VE3RWO) with the possibility of at least two more members to come. Members of the club assisted with a test of Fldigi NBEMS system on HF that was completed successfully.

Regarding the Toronto Red Cross Group we have set up a regular monthly meeting of the Toronto ARES group along with volunteers from the Red Cross. This group is growing and we have another two people that would like to become licensed operators within the Red Cross and ARES. We are starting to train the group using the Incident Management System. We hope to have a Red Cross digital net up and running by the end of this month.

City of Toronto Malcolm Kendall, VA3BGD report:

See Toronto DEC report above.

Brampton / Caledon ARES EC Richard Upfield, VA3RMU:

After a busy year in 2013, there were no official ARES events for the month of January. Our ARES meetings continue on the third Monday of each month and we have been working with the Fldigi software for our ARES communications. We continue working and making good progress with the Fldigi communication software at our monthly meetings as well as on our weekly ARES net. We have decided to make this an official communication software for our ARES communications.

Burlington ARES EC Kevin Andrews, VA3KRA, report:

On Thursday, January 2, Kevin VA3KRA, attended the Burlington ARC General Meeting. A report was given on ARES "Standby" activation by Halton Region for the December 22 Ice Storm.

On Monday, January 20, VA3KRA attended the monthly meeting of the Halton Red Cross Disaster Management meeting. This meeting focused on a debriefing of the RC's involvement in the December 22nd Ice Storm.

On Monday, January 27, VA3KRA attended the VR Pro Committee meeting. On Wednesday, January 29, VA3KRA attended the Halton Region Emergency Communications Team meeting (HRECT) and he attended the Burlington ARC Board of Directors meeting on Thursday, January 30 and provided an ARES report. Burlington ARES has participated in four of the HRECT nets in January.

On Thursday, February 6, VA3KRA attended the Burlington Amateur Radio Club general meeting and provided an ARES report.

On Monday, February 3, 10, 17 and 24, EC Kevin, VA3KRA, attended the VR Pro committee meetings in preparation for the Chilly Half-Marathon Run / Walk & Frosty 5K run on March 2. Organizers were expecting close to 4,000 runners/walkers between the three events. About 20 radio operators will be needed to support communications for the organizing committee, medical, and logistics which includes water stations, start/finish, route coordination and a variety of other duties. Proceeds go to the Joseph Brant Hospital foundation. This is the next largest road race in the area to the Around the Bay road race in Hamilton later in March.

On Sunday February 9, Burlington & Oakville ARES along with the TB Radio Communications group provided communications for the Valentine's Day Sweetheart Couples & Singles 5K Run which had just over 350 participants. Thank you to John, VA3BL, Gary, VE3TTO, Shawn, VA3MFD and Kevin, VA3KRA, for their participation.

On Thursday, February 27, VA3KRA attended the Burlington Amateur Radio Club board of directors meeting and provided an ARES report.

Burlington ARES has participated in four of the Halton Region Emergency Communications Team (HRECT) nets for the month of February with EC Kevin, VA3KRA, as the NCS for February 25.

Georgetown/HARC ARES EC Lyle Winfield, VA3VI, report:

The VE3PKG packet node has been replaced and is now active once again. The node was available from the first week of January. VHF (VE3OD) and UHF (VE3HR) repeaters operational, both with 100% uptime in January and February. (Report filed by AEC Bob Scanferla, VA3RJS)

Mississauga ARES EC Thomas Bernard, VA3TMB, report:

At the monthly meeting held on Thursday January 16, Ed, VE3TPV, presented the theory of Fldigi followed by a live demonstration of the MT63 digital mode. At the meeting on Thursday, February 20, Toronto DEC Malcolm Kendall, VE3BGD, came out to demo Fldigi. It was a useful discussion and demo.

Despite the treacherous driving conditions on that day, eight attendees were present. We plan to explore this more at future ARES meetings to go over setup and use again.

Oakville/Milton ARES EC George Davis, VE3OGP, report:

The January meeting found us reviewing our members adventures of the ice storm that struck the GTA in December.

The first edition of the new "ARES Update" newsletter was published in early January. Further editions will be made available to our members via download off the private yahoo group.

Mother Nature stepped up its wintery assault for the winter Field Day. Due to a winter storm with high winds it was decided that the poor driving conditions made getting to the WFD site unsafe. As a result we cancelled the remote operation and recommended to our members to operate from the safety of their homes. Reports from those participating indicated that a good time was had.

A training session was held at our February meeting. The setup and use of Fldigi for ARES groups was presented and as we will be approaching the spring, a refresher of CanWarn operations rounded out the session.

A training session was held during our February meeting. Glenn, VE3CEZ, presented a talk on how to setup and use the program Fldigi, with emphasis on its application for use in ARES operations. The demo included a hands-on demonstration. Afterwards Glenn gave a PowerPoint presentation on SSTV.

The ARES group has now received a donation of a small travel trailer. A committee has been struck to formulate plans to convert it to a mobile radio station platform.

OBS reporting: VE3JUZ, VE3SHM

– George Duffield, VE3WKJ

MARITIMES:

SM: Craig Seaboyer, VE1DSS

JANUARY-FEBRUARY SM REPORT:

After taking the past year off from most of my duties as Section Manager for the Maritimes for personal reasons, I'm back and I hope to be active again.

Over the past year the Amateur Radio scene has changed dramatically for our small community in rural Nova Scotia and this is one reason that I put aside the responsibilities of Section Manager.

I feel that in order to represent the Amateurs in the Greater Maritimes, I had to first help to rebuild our local club. So, after 10 years of hibernation, the Antigonish Amateur Radio Club has been reborn. With the dedication of our new President, Doug Holmes, VE1AHF, the club

has approximately 12 members, a new website at (http://www.ve1rti.ca), had its first annual fishing derby, participated in several contests, helped a fellow Amateur with a disability gain new freedom by acquiring specialized radio equipment, held a public demonstration, and held monthly meetings and weekly nets.

It's a great feeling to help rebuild this club that had at one time a fairly large membership. Our goals are to grow this small group to include classes and support for new Amateurs, participate in local events and organizations, and promote ham radio in a positive light.

My goals for the next year as Section Manager for the Maritimes include active participation in the Executive of the Antigonish Amateur Radio Club, communicate with as many local radio clubs as possible and try to encourage a few stories out of the local Amateurs to submit to the TCA, have a presence at the local Amateur Radio hamfests / fleamarkets and build relationships with local community leaders to promote ham radio and RAC.

– Craig Seaboyer, VE1DSS

NEWFOUNDLAND AND LABRADOR:

SM: Vacant

JANUARY-FEBRUARY SM REPORT:

Despite the snowy dreary weather these past two months, Amateur Radio life carried on. Paul Burggraaf, VO1PBB, Ira, VO1IRA, and Paul, VO1UF, all assisted in an emergency exercise involving Fire and Emergency Services Newfoundland and Labrador (FES-NL) and the RCMP. Here's a report compiled by Paul and Ira:

"On February 10, VO1PRB, VO1UF and VO1IRA along with the RCMP's Garry Collins, Information technologist, and Keith Frampton, Sergeant, and FES-NL's Regional Emergency Management Officer, Bill Collins, participated in an emergency exercise. The FES-NL command trailer was taken from the storage facility and the mast extended to mount the homebrew multi-dipole for 80, 40, 20, 10 and 15 metres.

After 30 minutes of preparation, the antenna was positioned and ready for testing the Pactor Mail System. VO1PRB fired up the unit and we were able to make contact with post office station VE1YZ in Halifax and as well, we were able to send an email to the cellphone of FES-NL's Bill Collins who also dropped by the site. The RCMP members in attendance were pleased with the ability of our equipment to do what was

indicated it could do should complete communications fail and the ARES group is required to take action to facilitate the need for communications.

The RCMP were very pleased with the operation and demonstration and FES-NL left with a positive sense that Amateur operators or ARES personnel have to be given the ability to put the required equipment in place to make this happen should the need arise. Further meetings and planning will be held to ensure everything required will be enabled within the FES-NL building and the command trailer. All persons onsite that day left with a positive note that Amateurs can provide the required communications when called upon to do so".

There is a move underway to have an Amateur gathering/hamfest in the Gander area this coming summer, probably in early September. Gander was decided on because it is the midpoint of the island from anywhere, and the area has a fair number of Amateurs.

This idea sprang out of a chat between Ira and Cal, VO1CAL. Since then an ad-hoc committee has been formed to make some plans. It would probably be a weekend event, starting sometime on a Saturday and ending Sunday after a bite of breakfast. This is not intended to be a Club event but just the meeting of a bunch of Amateurs for food, fellowship, camaraderie, fun and telling of "lies" i.e., the stretching of the truth. Some ideas have been kicked around with respect to a fleamarket, barbecue and dance, operation of a portable station, exploration of area tourist attractions, and so on.

Anyone wishing to help out or make suggestions as to planning of an itinerary should get in contact with the two head honchos or any Amateur around the Gander area. Remember, the more participants, the more fun and less work to be shared around. This could be the chance to put a face to an Amateur you've talked to or heard on the nets! I would suggest by early August the committee would like to have a confirmed number of participants for bookings and a small participation fee to cover incidental costs. When you plan your summer, keep this event in mind. More news to come after any formal meeting.

I'd said it before but I need to mention it again; we should be very grateful to all our VO net controllers on both the Cod Jigger and Evening Nets. These people make the commitment to be around at a specific time or else they make arrangements for someone else to cover for them.

That's difficult to do in this world of hustle and bustle when personal time seems to get less and less. These volunteers are keeping the Amateur traditions alive and deserve our thanks and appreciation. Too many times Amateurs are ready to criticize for the slightest of things, not considering the commitment made by the controller or the hurt feelings it could cause. So at your next net checkin, please thank the controller for making the commitment. Also, if something bothers you with respect to the manner in which a controller operates his net, discuss it privately with the controller or refer it to the chief controllers, Bill, VO1WB, for the CJ Net and Lester, VO1UL, for the Evening Net. This is a hobby remember.

With sadness I have to advise you of the passing of one of our NL Amateur icons, John Tessier, VO1FX. John was always a gentleman. I met him first in 1993 when he gave me my 5 WPM Code test. He was a saint to pass me then, but I guess he saw my commitment to the hobby. He was always active in Amateur and broadcast radio with a particular love for station, VO1AA, at Cabot Tower. Most of the display items there originated from his collection as well as station VO1BZM at Admiralty House in Mount Pearl. His tireless commitment to the NL Amateur scene was always appreciated; a standard for all of us to aspire to.

I was talking with Ira, there he is again, about starting a CW Net for us newbies who are somewhat apprehensive about jumping in to that mode of the hobby. I remember the first time I checked in on SSB back in 1993 and afterwards I was a wreck from the stress of that first plunge. What we would like is to get a voice controller(s), who would ask for CW checkins and allow us, flaws and all, to make, in the beginning, the shortest CW checkin possible. From there, as we gain confidence, allow us to pass a bit more traffic and eventually move to an all CW Net. This net would also allow experienced CW operators to check in, but not in a manner as to impress others with speed and fist so as to discourage those new to the mode. What is needed here is encouragement and practise and hopefully draw others to the CW side of the hobby. Comments?

My thanks go to Paul Burggraaf, Paul Fisher and Ira Stacey for their contributions to this report. Remember, Amateur Radio is a hobby; have fun with it.

Here are the latest Net reports thanks to Ira:

Cod Jigger
January 468
February 426

Evening
January 949
February 979

Charlie Marsh, VO1VZ
NL Section Bulletin Editor

COMING EVENTS

THE HAMFEST AND FLEAMARKET CALENDAR

The following events are listed by date. Some dates and details are tentative. For more Hamfests and Fleamarkets please go to http://rac.eton.ca/events/upcoming.php

NEW ENGLAND AMATEUR RADIO FESTIVAL (NEAR-Fest XV)
Sponsored by the New England Amateur Radio Festival, Inc.
Date: Friday, May 2 to Saturday, May 3.
Time: Gates open at 9 am on Friday for sellers and buyers. We do not provide for early admission and preferential treatment for "dealer setup" or "Early Bird" buyers. Everyone has the same chance to find the bargains!
Place: Deerfield, NH, USA. The Deerfield Fairground is located on Route 43 approx 15 miles NE of Manchester NH. GPS coordinates: N42d 5m 57.4" W71d 14m 33.5s (Lat 43.099286 Lon -71.242663).
Cost: $10 per person and $10 per vehicle into the fleamarket. Camping fees are $30 a night. Tent sites are $15. All overnight fees are payable to the Deerfield Fair Association.
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.
Info: W1RC@near-fest.com
Webpage: http://www.near-fest.com/

MAPLE RIDGE SWAP MEET
Sponsored by the Maple Ridge ARC
Date: Sunday, May 4.
Time: Vendors 7:30 am; Public 9 am. Open For pancake breakfast at 8 am.
Place: Pitt Meadows, British Columbia; 12460 Harris Road, one Block South of the Lougheed Highway in the old REC Building.
Description: Come one come all! Ham Radio & Computer Swapmeet The largest in the Fraser Valley Great prices lots of stuff. Pancake breakfast between 8 and 9 am. Concession will remain open during the event.
Cost: Tables $20 includes 1 entry and a chance to win a radio. Entry $5 includes chance to win a radio.
Talkin: 146.800 -600 + Tone 156.7.
Info: Call Nick at 604-465-9476
Contact: ve7te@mrarc.net.
Webpage: http://www.mrarc.net

30TH SMITHS FALLS FLEAMARKET
Sponsored by the Rideau Lakes ARC
Date: Saturday, May 10.
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 30th Annual Fleamarket of Amateur Radio Equipment includes a large number of Commercial and Private Vendors, a Canteen, a Consignment Table and an Equipment Test Table.
Cost: Admission $5 (includes a door prize ticket); Youth under 16 admitted Free of Charge; Vendors: Tables (Approx. 2 1/2 X 5 ft) $10 (admission not included).
Talkin: VE3RLR on 147.21 MHz+.
Info: For more information or reservations, contact 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 25.
Time: 9 am.
Place: North Vancouver, British Columbia; North Shore Emergency Management Office, 147 E. 14th Street.
Info: Click the link for "Notice of 2014 Annual General Meeting: May 25, 2014" on our website or contact Secretary Ed Frazer, VE7EF, ve7ef@rac.ca
Webpage: http://www.bcarcc.org/

40TH ANNUALCENTRAL ONTARIO HAMFEST
Sponsored by the GARC and KWARC
Date: Sunday, June 1.
Time: Inside Vendors at 7 am; Tailgaters 8 am; Public 9 to noon. Excellent full-featured snack bar ready to serve you.
Place: North Dumfries, Ontario; 1199 Rife Road just west of Cambridge at the Waterloo Regional Police Association Recreation Park. See our website for a map: http://www.hamfest.on.ca/map.html
Cost: $7; Youths 12 & under are free. Vendors: Inside 8-foot tables $20 includes one admission; Tailgater $15 includes one admission.
Talkin: VE3KSR repeater on 146.970 (CTCSS 131.8). Simplex range switch to 146.520 and listen as above. Simplex will be used to bring people off the 401
Info: Email info@hamfest.on.ca
Webpage: http://www.hamfest.on.ca/

VE3MIS SPECIAL EVENT STATION
Sponsored by the Mississauga ARC
Date: June 7 and June 8.
Time: 1400z – 2000z
Description: The Mississauga Amateur Radio Club will be operating a special event station VE3MIS at the Streetsville Bread and Honey Festival, in Streetsville,

Maple Leaf Communications
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http://www.mapleleafcom.com
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- Portable J-Pole Antennas (6m/2m70cm)
- Zeus Lightning Surge Suppressors
- RF Connectors & Adapters
- Coaxial Cables (50, 75, 93, 125, & 36 Ohm)
- Ladder Line (300, 400, 440, & 450 Ohm)
- Antenna Wire (bare, tinned, & insulated)
- Baluns 1:1, 4:1, 6:1 (stainless hardware)
- RF Coaxial Chokes (160m thru 6m)
- Fiberglass Rods & Tubes
- Dacron Rope (3/32" to 5/16" dia.)
- Aluminum tubing (telescopic)
- Custom Antennas
- Duplexers for 70cm and 23cm
Box 1471, Everett, ON L0M 1J0
Tel: (705) 435-2819
Fax: (705) 435-2996
email: info@mapleleafcom.com

Ontario. 14.240, 7.230 MHz. To obtain a certificate please send a QSL request with a return envelope and $2 to Michael Brickell, VE3TKI, at 2801 Bucklepost Crescent, Mississauga, Ontario, Canada, L5N 1X6.
Webpage: http://www.marc.on.ca

LONDON VINTAGE RADIO CLUB FLEAMARKET
Sponsored by London Vintage Radio Club
Date: Saturday, June 7.
Time: Public and vendors 7 am.
Place: Guelph, Ontario; Event takes place in the east side of the parking lot of Hammond Manufacturing, 394 Edinburgh Road (at corner of Speedvale and Edinburgh) in North Guelph.
Description: Bring your own table. You will find antique and vintage radios, Amateur Radio equipment, tubes, radio collectables, parts, magazines and all sorts of radio goodies for sale, trade etc. The Hammond Museum of Radio on Southgate Road will be open for visitors in the afternoon.
Cost: $10 for vendors; no charge to public.
Info: Contact larry.asp@sympatico.ca
Webpage: http://lvrc.homestead.com/fleamarket.html

51ST INTERNATIONAL HAM FEST

Date: July 11 and 12.
Place: The US Lodge in the International Peace Garden. South of Brandon on the Canadian USA border.
Description: Fleamarket, Rabbit Hunts, Mobile Judging, Homebrew Contest, Prizes, Food Concession, Saturday night Dance, Free Saturday Lunch for those registered. Campers, identify yourself at the gate for special camping rates.
Cost: Registration fee is $15 per person.
Info: Contact: Richard Holder, VE4QK, ve4ihf@mts.net or 204-268-1702. Please see the article on page 23 of the March-April 2014 TCA for additional information.
Webpage: www.mts.net/~holderr/ihf.htm

40TH ONTARIO HAMFEST

Sponsored by the Burlington ARC
Date: Saturday, July 12.
Time: Inside & Commercial Vendors 7 am and Tailgate Vendors 8 am at the Robert Street Gate; Public 9 am at the Thomas Street Gate only.
Place: Milton, Ontario; at the Milton Agricultural Fairgrounds.
Cost: Public $ 7; Tables: $14 each Tailgate Permit $ 7 per space.
Talkin: 146.520 Simplex.
Info: Coordinators Bob Parker, VE3OIP, barc.ontariohamfest@gmail.com
Vendor Coordinator: Norm Freidin, VE3CZI ontariohamfestvendors@gmail.com
Mail Vendor reservations to:
Ontario Hamfest Vendor Registration
2129 Larabee Court
Burlington, ON L7P 3S3
Phone: 905-335-8962
Webpage: http://www.barc.ca/Ontario%20Hamfest.htm

OTTAWA (CARP) 17TH ANNUAL HAMFEST

Sponsored by the Ottawa ARC
Date: Saturday, September 6.
Time: Building Vendor setup: 7:30 am; Tailgaters: 8 am; Indoor Fleamarket open 9 am to noon.
Place: Ottawa (Carp), Ontario; Carp Agricultural Fairgrounds (in the W. Erskine Johnston Arena at the north end of the fairgrounds), 3832 Carp Road,
Description: The region's largest fleamarket and hamfest. All of the big Amateur Radio retailers are going to be there! Major doorprize draws! Breakfast, coffee, and lunch concession. Volunteer organizations and displays. We also have on-site Amateur Radio licence exams.
Cost: $6 General Admission; $12/table (plus admission) if booked before September 1 (but $15 after that to cover extra table costs), $5/tailgate (plus admission). Please book tables early to ensure a reservation.
Talkin: VE2CRA, 146.94-, 100 Hz
Info: Ed Sich, VE3WGO, 613-853-2281 (please leave a message).
Email contact: fleamarket at oarc.net
Webpage: http://www.oarc.net/fleamarket

NL & LABRADOR HAMFEST

Date: Saturday, September 6 to Sunday, September 7.
Time: Saturday, 10 am until the evening. Sunday: Amateurs will gather at a location in Gander to be advised later for breakfast prior to leaving for our trip home.
Place: Gander, Newfoundland; at the Masonic Lodge.
Description: Tables will be provided for Amateurs who wish to display swap shop items to sell. Derrick Drover, VO1YE, will DJ at the event with some live music as well those who wish to have a dance. During the day prizes will be drawn for with a selection of items donated by companies who have provided items for this event, and donations from other sources.
Cost: Registration $10; Barbeque $15 per person includes Prime Rib Steak, Salads, Coffee, Tea and or soft drink with dessert.
Talkin: VO1GLR 147.180+ or VO1ADE 146.880- also HF will be active on 80m 3.740 and 40m 7.085.
Info: Please see our webpage for complete information. Contact Ira Stacey, VO1RA, vo1ira@yahoo.ca Everyone attending will be required to have the registration fee and meal paid for by August 23. Please send payment to: Ira Stacey, 9 Spruce Grove Avenue, Goulds, NL A1S0A5
Webpage: http://rac.eton.ca/events/detail.php?event_ID=1664

LONDON ARC 37TH ANNUAL HAMFEST

Sponsored by the London ARC
Date: Sunday, September 21.
Time: Vendors: 8 am; Public 9 am to noon.
Place: London, Ontario; Hellenic Community Centre, 133 Southdale Road West N6J 2J2.
Cost: Admission $8 (age 10 and up); Tables: $20; Extra tables $15.
Description: Free Parking; Air Conditioned; Commercial Dealers; Wheelchair Accessible with Handicap Washrooms. Bring & Buy: Let LARC sell your item(s) at our club table. Special Draws: two Radioworld Gift Certificates
Info: LARChamfest@gmail.com; Phone: 519-455-9465 (Ruth)
Make Cheque or Money Order Payable to "London Amateur Radio Club Inc" (not to Ruth Dahl) and mail to: Ruth Dahl VE3RBO Apt #805 700 Wonderland Rd N London ON N6H 4V3
Talkin: VA3LON. 147.060 PL 114.8
Webpage: http://www.larc.ca/index.php/hamfest-information

CK3Q – 150TH ANNIVERSARY OF QUEBEC CONFERENCE

Sponsored by Robert Emerson, VE3RHE
Date: Saturday, October 11 to Monday, November 10.
Place: Mississauga, Ontario.
Description: Special Event Station CK3Q celebrating the 150th Anniversary of the Quebec Conference. Expected frequencies are 28.490, 21.290, 14.290. Hopefully I will be operating on 12m, 17m, and 40m as well. Visit our website for updates. QSL Cards will be available via VE3RHE after the event (Bureau or direct).
Info: Please contact Robert at ve3rhe@gmail.com for additional details.
Webpage: http://canada-150th.ca

MONTREAL SOUTH SHORE HAMFEST

Sponsored by Club Radio Amateur Rive-Sud de Montréal
Date: Saturday, October 18.
Time: Vendors 6 am; Public 9 am.
Place: Longueuil (10 minutes from downtown Montreal); Place Desaulniers, 1023 Taschereau Boulevard.
Description: The biggest Hamfest in Quebec. Restaurant. Free parking. Accessible to handicapped persons
Info: Martin Fournier, VE2DNF, phone: 450-466-2810, email hamfest@ve2clm.ca
Cost: Tables $10 (individual entry(s) not included); Public $7.
Talkin: 145,390 (-) CTCSS 103,5 MHz, VE2RSM.
Webpage: http://www.ve2clm.ca/articles.php?lng=fr&pg=120

TCA