30 YEARS / ANS
Radio Amateurs of/du Canada

THE CANADIAN AMATEUR

JULY / AUGUST 2023 – JUILLET / AOÛT 2023

RAC

The Importance of Showing Up!



Jason Tremblay, VE3JXT and Phil McBride, VA3QR, met with Minister Prabmeet Sarkaria, President of the Treasury Board of Ontario at Queen's Park.



RAC President Phil McBride, VA3QR and CENTOR President Steve Peck, VA3SXP, present Jean Moffett, VE3WAD, with a well deserved Certificate of Appreciation.



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"The Importance of Showing Up..."

Canadian Amateur Radio Hall of Fame Award Nominations: Deadline September 30

Radio Amateurs of Canada recognizes deserving Amateurs by appointments to the Canadian Amateur Radio Hall of Fame.

The Constitution of the Hall specifies that the appointment as Member of the Hall is for "outstanding achievement and excellence of the highest degree, for serious and sustained service to Amateur Radio in Canada, or to Amateur Radio at large".

The Trustees of the Hall have interpreted the Constitution to mean that the person has performed significant service over many years to enhance the well-being of Amateur Radio.

No single achievement would necessarily qualify an Amateur for the Hall of Fame, but a lifetime of service would be favourable. Look at the list of Hall Members provided below and you will find Amateurs who have made distinguished contributions in many areas.

Please get together with your fellow Amateurs or club members and submit a nomination or two. Let us avoid the situation where no nominations are received as in past years. Let's not wait until a worthy Amateur becomes a Silent Key before being honoured.

Nominations must be prepared using the Canadian Amateur Radio Hall of Fame Nomination Form. Please send the PDF documents directly to the CARHOF Chair at carhof@rac.ca by September 30.

Please note: The nomination should be kept confidential and known only to the nominator(s). The person being nominated should not be made aware of the nomination nor be asked for his or her approval to be nominated.

For more information visit:

https://www.rac.ca/carhof/

RAC Amateur of the Year Award Nominations" Deadline September 30

The "Radio Amateur of the Year" Award was created by the Canadian Radio Relay League which merged with the Canadian Amateur Radio Federation to form Radio Amateurs of Canada in 1993.

Through the Amateur of the Year Award, Radio Amateurs of Canada recognizes the outstanding contributions made by Canadian Amateurs. It is the intent of the Board of Directors of Radio Amateurs of Canada to recognize the outstanding Canadian Radio Amateur of the Year, each year such candidates are nominated.

To qualify for the title "Amateur of the Year", an individual should have made an outstanding contribution to Amateur Radio in the past year, or have contributed consistently to the welfare of Amateur Radio over several years. RAC Directors, Officers and Section Managers are not eligible for the award while in office, and not in respect to their term(s) of office.

Nominations with supporting documentation are to be sent to the RAC Corporate Secretary by email to racgm@rac.ca by September 30.

Selection of the winning candidate will be by majority vote of the RAC Board of Directors based on the supporting documentation submitted with the nomination. The winning candidate will be notified. Due recognition will appear in The Canadian Amateur magazine and a suitable plaque will be presented at an appropriate time and place.

For more information visit:
www.rac.ca/rac-amateur-of-the-year/

Meet Our New Webmaster: Cal McLelland, VA3ZA



Radio Amateurs of Canada is pleased to introduce you to our new webmaster.

Cal McLelland, VA3ZLA, grew up between Ottawa, his hometown, and Sand Lake along the Rideau Waterway in Eastern Ontario where he would spend his summers at his family's cottage.

Cal went to Canterbury High School in Ottawa, where he played trumpet in the Music program. He then went to Carleton University where he nearly completed his Computer Science degree, before having a daughter and getting married. He moved on to the working world and currently works as a programmer with a great company.

In the summers, he enjoys visiting his cottage, going on bike rides and eating at patio restaurants with his wife and three-year old daughter, among other things. He recently joined the world of Amateur Radio after completing the Basic Course with Al Penney, VO1NO and is working on developing his CW skills and getting involved in the community.

Most of Cal's volunteering experience up to this point has been as a trumpet player in various charity bands, such as Souper Jazz, and the 20th Century Boys, raising money for the Shepherds of Good Hope as well as community music programs. Cal is "excited to bring his skills to the table and lend a hand at RAC".

RADIO SCOUTING IN CANADA: Scouts Canada Amateur Radio Station VE3SHQ is compiling a list of Amateur Radio enthusiasts who are also registered Active Scout Leaders in Canada. We have noticed an increase in Radio Scouting interests like Radio Orienteering, Fox Hunting, Jamboree on the Air, Youth on the Air and general STEM activities.

If you would like to be part of Radio Scouting in Canada and contribute to developing new program ideas for Scouts (Beaver Scouts 5-8; Cub Scouts 8-11; Scouts 11-14; Venturer Scouts 14-18; Rover Scouts 18-25), please send an email to VE3SHQ@gmail.com. Please include your call sign and Scout Group info. For more information about JOTI-JOTA visit:

https://www.scout.org/sites/default/files/2022-09/JOTAJOTI_Radio-Handbook_2022_EN.pdf

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Editor / Rédacteur en chef
Alan Griffin
Email: tcamag@yahoo.ca

Advisors / Conseillers
Dave Green, VE3TLY
Norm Rashleigh, VE3LC
Richard Ferch, VE3KI
Ken Grant, VE3FIT
Mike Kelly, VE3FFK

Translation / Traduction
Jacques Roland, VA3DLZ

Technical Diagrams / Schémas techniques
Stan Smith, VE3DDX

Advertising Department:
Rate sheet:
https://www.rac.ca/tca/
Contact: marcom@rac.ca

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The Canadian Amateur
720 Belfast Road,
Suite / Bureau 217
Ottawa, ON, Canada
K1G 0Z5
613-244-4367;
1-877-273-8304
tcamag@yahoo.ca
https://www.rac.ca/

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Evidence that the global pandemic is finally over can be found everywhere! Events are happening in-person again and it is very important to show up! Not just to enjoy all that we missed for three long years, but to once again do what Amateurs do best: provide support, volunteer, remain vigilant and to serve. Please share your stories of renewal with us by sending them to marcom@rac.ca and tcamag@yahoo.ca. – Ed.

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

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

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Radio Amateurs of Canada / Radio Amateurs du Canada

National Executive



PRESIDENT
Phil A McBride, VA3QR
134 Longfield Road
Acton, ON L7J 2K4
416-884-0480
president@rac.ca



VICE-PRESIDENT
Allan Boyd VE3AJB/VE3EM
27 Red Mill Road, Box 208
Little Current, ON P0P 1K0
705-368-2779
vp@rac.ca



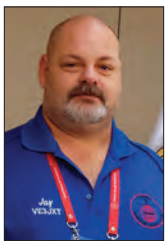
INTERNATIONAL AFFAIRS OFFICER
Serge Bertuzzo, VA3SB
5651 Goldenbrook Drive
Mississauga, ON L5M 3W2
905-567-6592
international@rac.ca



REGULATORY AFFAIRS OFFICER
Dave Goodwin, VE3KG
141 Acton Drive
Smiths Falls ON K7A 5B8
613-283-8334
regulatory@rac.ca



CHIEF INFORMATION AND TECHNOLOGY OFFICER
Jeff Dale, VA3ISP
Box 91
Hammond, ON K0A2A0
cito@rac.ca



COMMUNITY SERVICES OFFICER
Jason Tremblay, VE3JXT
3 Smyth Crescent
Beeton, ON L0G 1A0
705-890-9967
community@rac.ca



CORPORATE SECRETARY
Alvin (Al) M. Masse, VE3CWP
440 Maple Avenue
LaSalle, ON N9J 1P4
519-734-0026
secretary@rac.ca



TREASURER
Margaret Tidman, VA3VXN
583 Drummond Concession 5B
Perth, ON K7H 3C8
613-263-5486
treasurer@rac.ca



HONORARY LEGAL COUNSEL
Marcel D. Mongeon, VA3DDD
Suite 374
3-35 Stone Church Road
Ancaster, ON L9K 1S4
905-390-1818
legal@rac.ca

Regional Directors



ALBERTA/NWT/NU
Stephen Lee, VA6SGL
51 Ireland Crescent
Red Deer, AB T4R 3K8
403-307-1643
dir.alberta.northwest.nunavut@rac.ca



MIDWEST
Ed Richardson, VE4EAR/VE4VT
64 Avalon Road
Winnipeg, MB R2M 2L5
204-254-8425
dir.midwest@rac.ca



ATLANTIC
Al Penney, VO1NO
386 Victoria Road
Aylesford, NS B0P 1C0
(902) 847-0554
dir.atlantic@rac.ca

ONTARIO NORTH/EAST DIRECTOR

Vacant

ONTARIO NORTH/EAST



BRITISH COLUMBIA/YUKON
Keith Witney, VE7KW
2 – 1443 Edwards Street
PO Box 78042 RPO Northside
Port Coquitlam, BC, V3B 7H5
604-475-5254
dir.bc.yukon@rac.ca



ONTARIO SOUTH
Barry Brousseau, VE3SLD
67 Deerpath Drive
Guelph, ON N1K 1V1
519-829-9697
dir.ontario.south@rac.ca



QUEBEC
Guy Richard, VE2QG/VE2XTD
6572 du Chénas
Quebec City, QC G3E 1V8
418-847-3089
dir.quebec@rac.ca

Deputy Directors

ATLANTIC
Joe Earles, VO1BQ
BRITISH COLUMBIA/ YUKON
Allan J Munnik, VA7MP/VE7RMP
MIDWEST
Peter Toth, VE4TTH (Selkirk)

Assistant Directors

ALBERTA / NT / NU
Chris Cameron, VE8WD
Wally Gardiner, VE6BGL
Neal Sunderland, VA6NLS
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ATLANTIC
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Jerry Beneteau, VE3EXT (Essex & Kent)
John Lorenc, VA3WM (Niagara)
Stan Leschinsky, VE3TW (Greater Toronto Area)

RAC Section Managers | For Section Reports see page 43-47

Alberta (AB)
Ron Pettigrew, VE6RWP
29 Michigan Street
Devon, Alberta, T9G 1H7
ve6rwp@gmail.com
780-668-3218

British Columbia (BC)
Acting: Bill Gipps, VE7XS
9362 – 206A Street
Langley, BC
V1M 2W6
bill.gipps@gmail.com

Manitoba (MB)
Jan Schippers, VE4JS
202 Sadler Avenue
Winnipeg, MB
R2M 1P3
ve4js@myrac.ca

Nova Scotia (NS)
Dave Hull, VE1HUL
45 Archibald Street
Truro, NS
B2N 4R5
d.hull@ns.sympatico.ca

New Brunswick (NB)
Jean-Paul (JP) LeBlanc, VE9BK
13 Stelor Drive
Lutes Mountain, NB
E1G 5E5
medals2@gmail.com+

Newfoundland-Labrador (NL)
Boyd Snow, VO1DI
78 Main Road
Bristol's Hope, NL
A1Y 0A7
vo1cbs@eastlink.ca

Ontario East (ONE)
Michael Hickey, VE3IPC
2768 Chartrand Road
Lefaivre, ON K0B 1J0
ve3ipc@gmail.com

Ontario Golden Horseshoe (GH)
Rick Harrison, VA3NV
PO Box 85001
Burlington, ON L7R 4K3
ve3yrh@gmail.com

Ontario North (ONN)
Allan Boyd, VE3AJB
27 Red Mill Road, Box 208
Little Current, ON P0P 1K0
ve3ajb@vianet.ca

Ontario South (ONS)
Brett Gilbank, VE3ZBG
225 Periwinkle Road
London, ON, N6M1B7
ve3zbg@gmail.com

Prince Edward Island (PE)
Bill McMaster, VY2WM
11 Birch Hill Drive
Charlottetown, PE
C1A 6W4
bill@vy2wm.ca

Quebec (QC)
Sylvain Lamarre, VE2LAM
506 rue Père Joseph Jean
Rimouski, QC
G5N 1L18
ve2lam@raqi.ca

Saskatchewan (SK)
Vacant

Territories (TER)
(Northwest Territories/ Nunavut/Yukon)
Vacant

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

President's Message / Message du Président

Happy Canada Day and welcome to Summer 2023. There have been a lot of exciting things happening lately!



Phil A McBride, VA3QR
president@rac.ca

I had the pleasure of attending Hamvention 2023 along with RAC Vice-President Allan Boyd, VE3AJB, and RAC International Affairs Officer Serge Bertuzzo, VE3SB. Vince D'Eon, VE6LK, assisted me at the RAC booth and provided me with the occasional break to go shopping.

We shook hands with many RAC members and also spoke to several international Amateurs who wanted to know all about Amateur Radio in Canada and the regulatory structure that governs it, and also how they could operate while within our borders. There was a lot of activity over the three days and the 33,861 people who attended broke another record. For more information about Dayton please see pages 9 and 54.

While we were attending Hamvention, the Canada-Wide Science Fair and STEM Expo was taking place in Edmonton, Alberta. The event is described as "the country's largest annual youth science, technology, engineering and mathematics (STEM) event" (see page 28).

RAC was well represented at the once again in-person event by a team of volunteers from two Edmonton-based clubs – the Quarter City Amateur Radio Club and the Northern Alberta Radio Club – who introduced students, teachers, parents and a wide range of visitors to the Amateur Radio Service.

I would like to thank all of the volunteers who contributed to the success of the event.

As part of our mission to update our business processes and practices, in mid-May we completed the migration of the RAC email alias system to the @myrac.ca domain and all members who use the service are now using callsign@myrac.ca. I would like to thank everyone for their patience and apologize once again for any inconvenience caused by this important change.

We then moved RAC's corporate domain and the information services of the organization to Google Workspace – the company's corporate cloud services offering. During this migration, all of RAC's various and disparate accounts and services were consolidated into one centralized cloud-based business service.

All of RAC's staff and volunteers now have access to the collaborative tools they need to perform their duties and RAC is able to ensure effective record management and retention as well as data security.

Bonne Fête du Canada, et bienvenue à tous ceux et celles qui se joignent à moi pour profiter de l'été 2023. Beaucoup de choses intéressantes se sont produites dernièrement!

J'ai eu le plaisir d'assister à la Hamvention 2023 en compagnie du vice-président de RAC, Allan Boyd, VE3AJB, et de notre responsable des Affaires internationales, Serge Bertuzzo, VE3SB. Vince D'Eon, VE6LK, m'a aidé à assurer la permanence au kiosque de RAC, ce qui m'a permis de faire de temps à autre une pause pour aller magasiner.

Nous avons serré la main de nombreux membres de RAC et avons également eu l'occasion de bavarder avec plusieurs amateurs venus de l'étranger qui souhaitaient tout savoir sur la radio amateur au Canada, ainsi que sur la structure réglementaire qui la régit. Ils voulaient aussi savoir ce qu'ils devaient faire pour être autorisés à émettre pendant un séjour dans notre pays. Une multitude d'activités se sont déroulées pendant les trois jours de cette manifestation, et les 33 861 personnes qui y ont assisté ont établi un nouveau record. Pour en savoir plus sur ce qui s'est passé à Dayton, veuillez consulter les pages 9 et 54.

Pendant que nous assistions à la Hamvention, l'Expo-Sciences pancanadienne et l'Expo STIM avaient lieu à Edmonton (Alberta). Cette manifestation mérite bien d'être décrite comme « le principal événement organisé chaque année au pays pour stimuler chez les jeunes un intérêt pour les sciences, la technologie, l'ingénierie et les mathématiques (STIM) » (voir page 28).

RAC a été bien représenté à cet événement qui, une fois de plus, a été organisé en mode présentiel avec la participation d'une équipe de bénévoles composée de membres de deux clubs basés à Edmonton, le Quarter City Amateur Radio Club et le Northern Alberta Radio Club, ce qui a permis à des étudiants, des enseignants, des parents et une vaste gamme d'autres visiteurs d'en savoir plus sur le Service radio amateur.

Je souhaite remercier tous les bénévoles qui ont contribué au succès de cet événement.

Dans le cadre de la mission que nous nous sommes fixée lorsque nous avons décidé de moderniser nos processus et pratiques de fonctionnement, nous avons mis la dernière main, en mai, au transfert du système de courriels par alias de RAC au domaine myrac.ca, et tous les membres qui utilisent le service emploient désormais l'adresse indicatif @myrac.ca. Je tiens à vous remercier tous de votre patience et vous prie, une fois de plus, de m'excuser de tout désagrément qui a pu être causé par cet important changement.

Nous avons ensuite transféré le domaine institutionnel de RAC et les services d'information de notre organisation à Google Workspace, qui est la plateforme que Google met à la disposition des organismes pour accéder aux services offerts dans le nuage. Au cours de cette migration, tous les comptes et services de RAC, aussi variés et disparates qu'ils puissent être, ont été consolidés pour devenir un seul et unique service institutionnel centralisé hébergé dans le nuage.

Additionally, and most importantly, we are now able to reliably and effectively communicate with the government agencies and non-governmental organizations in the pursuit of our chartered mission to represent the interests of Canadian Radio Amateurs.

RAC will continue to update our internal processes with the goal of freeing up resources to provide additional programs and services to existing and future RAC members and to the Amateur Radio community. In order to achieve these goals we need qualified volunteers so If you have IT skills and are willing to help, please visit our Volunteer Opportunities webpage at https://www.rac.ca/volunteer/.

So that's a quick overview of what's happened. Now onto what's happening!

RAC continues to prepare for the World Radiocommunication Conference (WRC) 2023 which will be held in Dubai, United Arab Emirates from November 20 to December 15. In the lead-up to each Conference, detailed technical work is carried out in ITU-R Working Parties. These Preparatory Meetings are usually held at the International Telecommunication Union (ITU) headquarters in Geneva, Switzerland and are of two weeks' duration.

RAC Special Advisor Paul Coverdale, VE3ICV and RAC International Affairs Officer Serge Bertuzzo, VE3SB, have been attending the Preparatory Meetings leading up to the conference. Paul is part of the Canadian delegation to a specific Working Party (WP5A) which includes Amateur Radio in its scope.

Of particular interest is a threat to our 23cm band by various commercial interests. Stay tuned to the September-October 2023 TCA for a complete update as we continue our countdown to WRC-23.

If you have been reading the pages of this magazine in the last few years, you will most likely be aware that we have been heavily involved in the transition to the Auxiliary Communications Service (ACS). In addition, RAC Community Services Officer Jason Tremblay, VE3JXT and I have been part of several meetings with representatives of municipal, provincial/territorial and federal governments – including Public Safety Canada through our membership in the Emergency Management NGO Consortium of Canada (EMNCC). RAC is also diligently working with CIFAL/York University to develop training for the Auxiliary Communications Service.

The hard work seems to be paying off thanks in part to an event that happened almost a year ago. On July 8, 2022, Canadian telecom provider Rogers Communications experienced a major service outage affecting more than 12 million users – and it has changed everything. Prior to the outage there were growing concerns about the increasing dependency on network/infrastructure-heavy communications.

When the Rogers network went out, about 25% of Canada lost internet connectivity and the outage inhibited the ability to use 911 services from mobile phones on the Rogers network. In Toronto one quarter of all traffic signals relied on their cellular network for signal timing changes and the Rogers GSM network was also used to remotely monitor fire alarms and sprinklers in

Tous les membres du personnel et bénévoles de RAC ont maintenant accès aux outils collaboratifs dont ils ont besoin pour accomplir leurs fonctions, et RAC est en mesure d'assurer efficacement la gestion et la rétention de ses dossiers, ainsi que la sécurité des données. Par ailleurs, et ce qui est en fait le plus important, nous sommes maintenant en mesure de communiquer fiablement et efficacement avec les organismes gouvernementaux et les organisations non gouvernementales dans le cadre de la mission qui nous a été assignée, à savoir représenter les intérêts des radioamateurs canadiens.,

RAC continuera de mettre à niveau nos processus internes en vue de libérer des ressources et d'offrir ainsi des programmes et services supplémentaires à ses membres actuels et futurs, de même qu'à l'ensemble de la communauté des radio amateurs. Pour atteindre ces objectifs, nous avons besoin de bénévoles qualifiés; par conséquent, si vous possédez des compétences en informatique et êtes désireux de nous aider, veuillez visiter notre page Web consacrée aux Possibilités de volontariat, à l'adresse https://www.rac.ca/volunteer/.

Voilà donc un bref aperçu de ce qui s'est passé. Voyons maintenant ce qui nous attend!

RAC continue de se préparer à participer à la Conférence mondiale des radiocommunications (CMR) 2023, qui aura lieu du 20 novembre au 15 décembre à Dubaï, aux Émirats arabes unis. Au cours de la période précédant chaque conférence, des travaux techniques détaillés sont accomplis dans les Groupes de travail UIT-R. Ces réunions préparatoires se tiennent habituellement au siège de l'Union internationale des télécommunications (UIT) à Genève (Suisse) et durent deux semaines.

Paul Coverdale, VE3ICV, conseiller spécial de RAC et Serge Bertuzzo, VE3SB, chargé des Affaires internationales pour RAC, ont assisté aux réunions préparatoires tenues avant la conférence. Paul fait partie d'une délégation canadienne affectée à un groupe de travail spécial (WP5A) dont les attributions englobent notamment la radio amateur.

Un intérêt particulier est porté à la menace que divers opérateurs commerciaux font courir à notre bande de 23 cm. Vous trouverez dans le numéro de septembre-octobre 2023 de TCA une mise à jour détaillée sur cette question, alors que nous nous rapprochons de plus en plus de la date de l'ouverture de la CMR-23.

Si vous lisez les pages de cette revue depuis quelques années, vous aurez fort probablement remarqué que nous nous intéressons de très près à la transition vers le Service de communication auxiliaire. Par ailleurs, Jason Tremblay, VE3JXT, chargé des Services communautaires de RAC et moi-même avons pris part à plusieurs réunions avec des représentants des gouvernements municipaux, provinciaux/territoriaux et fédéral, y compris Sécurité publique Canada, étant donné que notre organisation est membre du Consortium canadien des

municipal buildings. The outage lasted as long as five days in some areas and had a significant impact on various information systems nationwide. The result of this severe breakdown has been a new and healthy respect for communications services not reliant on complicated networks to get messages across distances, both small and vast, and for the communicators who provide these services. Those in positions of authority related to emergency management and disaster response are now turning to the Amateur Radio Service. Stay tuned to the next issue of TCA for more information about these exciting developments.

On June 8, I had the pleasure of attending a meeting of the Central Toronto Amateur Radio Club (CENTOR) to honour Jean Moffett, VE3WAD, to celebrate her 100th birthday. Jean was recognized by the Ontario Science Centre for 25 years of volunteer service in 2018 and received the Sovereign's Medal for Volunteers issued by the Governor General of Canada. She is active on the club's Tuesday 70cm net and continues to spend time logging contacts at the OSC's VE3OSC station and fielding questions from OSC visitors and members. I can only hope and pray that I age as gracefully as she has. For more information see the article on page 51.

In August, members of RAC's Board of Directors and Executive – along with other key volunteers and staff – will participate in our first in-person Planning Meeting since the pandemic. The meeting will be held in Halifax, Nova Scotia in conjunction with the Halifax Amateur Radio Club Conference and Gala in celebration of their 90th anniversary.

In addition, the RAC Annual General Meeting will be held on Saturday, August 19 (see page 64). The Conference and the Annual General Meeting will be streamed live so that everyone can attend. I am very much looking forward to these events and I encourage all who are able to make the trip to join us in this beautiful part of our country. Have a great summer!

– 73! Phil A. McBride, VA3QR/VA3KPJ, RAC President and Chair

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ONG de sécurité civile (CCOSC). D'autre part, RAC collabore activement avec le CIFAL/l'Université York pour élaborer une formation destinée au Service de communications auxiliaires.

Les efforts inlassables que nous avons déployés semblent avoir été fructueux, en partie grâce à un événement qui s'est produit il y a presqu'un an. Le 8 juillet 2022, Rogers Communications, fournisseur canadien de services de télécommunications, a subi une panne majeure qui a affecté plus de 12 millions d'abonnés, et cela a changé complètement la donne. Avant la survenue de cette panne, des inquiétudes croissantes étaient exprimées au sujet de notre dépendance de plus en plus grande par rapport aux services de communications fonctionnant en réseau et reposant sur une infrastructure compliquée.

Quand le réseau Rogers a cessé de fonctionner, environ 25 % du Canada a perdu sa connectivité à l'Internet, et cette panne a empêché de contacter les services 911 à partir des téléphones mobiles appartenant aux abonnés à Rogers. À Toronto, un quart de tous les signaux de circulation dépendaient du réseau cellulaire de cette entreprise pour le chronométrage et la synchronisation des feux. Le réseau Rogers était aussi emprunté pour surveiller à distance les alarmes et extincteurs d'incendie automatiques installés dans les bâtiments municipaux.

La panne a duré pendant une période allant jusqu'à cinq jours dans certaines zones et a eu des effets considérables sur divers systèmes d'information à l'échelle nationale. Cette grave défaillance a et pour résultat d'inspirer un nouveau respect, manifesté le plus ouvertement du monde, pour les services de communication qui ne dépendent pas de réseaux compliqués pour acheminer les messages sur toutes sortes de distances, qu'elles soient petites ou grandes, et pour les communicateurs qui fournissent ces services. Ceux et celles qui occupent des postes haut placés dans des secteurs liés à la gestion des situations d'urgence et aux interventions en cas de catastrophe envisagent maintenant de faire appel au Service radio amateur en cas de besoin. Vous trouverez dans le prochain numéro de TCA de plus amples informations sur l'évolution de ce captivant dossier.

Le 8 juin, j'ai eu le plaisir d'assister à une réunion du Central Toronto Amateur Radio Club (CENTOR) tenue en l'honneur de Jean Moffett, VE3WAD, pour célébrer son 100e anniversaire. L'Ontario Science Centre avait déjà, en 2018, rendu hommage à Jean pour la remercier des services bénévoles qu'elle avait fournis pendant 25 ans, et elle avait reçu alors la Médaille du souverain pour les bénévoles, décernée par le gouverneur général du Canada. Elle participe activement aux contacts qui se nouent sur le réseau de 70 cm du club chaque mardi, et continue de consacrer une partie de son temps à établir des communications à partir de la station de l'OSC (VE3OSC) et à répondre aux questions que les visiteurs et membres du Centre lui posent. Je ne peux que souhaiter et prier qu'il me soit donné de vieillir en restant en aussi bonne forme qu'elle. Pour en savoir plus, consultez l'article figurant à la page 51.

En août, les membres du Conseil d'administration et de l'Exécutif de RAC, ainsi que d'autres bénévoles et employés occupant des postes clés, participeront à notre première réunion de planification tenue en personne depuis le début de la pandémie. Cette réunion aura lieu à Halifax (Nouvelle-Écosse) en même temps que la Conférence et le Gala du Halifax Amateur Radio Club organisés pour célébrer le 90e anniversaire de sa fondation. En outre, l'Assemblée générale annuelle de RAC aura lieu le samedi 19 août (voir page 64). La Conférence et l'Assemblée générale annuelle seront retransmises en direct et en défilement continu pour que tout le monde puisse y assister. Je suis très impatient d'assister à ces événements, et j'encourage tous ceux et celles qui seront en mesure de se déplacer à se joindre à nous dans cette magnifique partie de notre pays. Profitez bien de l'été!

Phil A. McBride, VA3QR/VA3KPJ
Président et chef de la direction de RAC

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– Traduction par Jacques Roland, VA3DLZ. Merci Jacques!

Silent Keys – In Memoriam

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

VA1WAB – Willis Bates, of Westville, Nova Scotia, on March 29, 2022
VA3BWF – Joseph Grasley, of Sault Ste Marie, Ontario, on April 7, 2023, at age 71
VA3DO – Daniel Sidorchuk, of St-Catharines, Ontario, on May 23, 2022, at age 96
VA3HHW – Harold Wirth, of Pembroke, Ontario, on July 13, 2022, at age 89
VA3HP – Gary Chase, of St. Thomas, Ontario, on May 23, 2022, at age 62
VA3NB – Nels Boehme, of Combermere, Ontario, on September 7, 2022, at age 93
VA3ORI – Ori Siegel, of Toronto, Ontario, on March 17, 2023
VE1AE – Marty Raine, of Halifax, Nova Scotia, on April 4, 2022, at age 81
VE1AJX – Al Goodwin, of Dartmouth, Nova Scotia, on February 28, 2022, at age 91
VE1BHN – Bette Nesbitt, of St. Stephen, New Brunswick, on September 10, 2022, at age 83
VE1CSF – Chris Foley, of Windsor, Nova Scotia, on August 14, 2022, at age 58
VE1CZR – Lawrence Skipper, of Sackville, New Brunswick, on September 11, 2022, at age 91
VE1DDX – Doug Denny, of Dartmouth, Nova Scotia, on April 13, 2022, at age 52
VE1DRB – Don Bell, of Cole Harbour, Nova Scotia, on March 20, 2022, at age 85
VE1EON – Maxime d'Eon, of Middle West Pubnico, Nova Scotia, on September 16, 2022, at age 94
VE1EST – Ernie Stamm, of Caledonia, Nova Scotia, on February 21, 2022
VE1HBA – Barry Aker, of Newport, Nova Scotia, on September 4, 2022, at age 75
VE1IU – Stephen Behune, of Sydney, Nova Scotia, on March 24, 2022
VE1JDT – Earl Laffin, of Pictoou, Nova Scotia, on April 12, 2022, at age 72
VE1JJH – James Howe, of Sheet Harbour, Nova Scotia, on March 31, 2023, at age 89
VE1MW – Fred Boddington, of Saint John, New Brunswick, on April 6, 2022, at age 90
VE1ON – Francois Delisle, of Saulnierville, Nova Scotia, on February 25, 2022, at age 87
VE1PT – Bernie Conrad, of Pine Grove, Nova Scotia, on July 25, 2022, at age 77
VE1VR – Anna Abraham, of River Ryan, Nova Scotia, on March 12, 2022, at age 89
VE1WHW – Wayne Whynot, of Milton, Nova Scotia, on June 8, 2022, at age 81
VE2CEO – Mary LaBombard, of Calgary, Alberta, on January 23, 2022, at age 82
VE3BSA – Harry Borsato, of St-Catharines, Ontario, in August, 2022, at age 96
VE3CBQ – Jean Gimbel, of Kitchener, Ontario, on March 7, 2022, at age 87
VE3CXK – Jack Greenway, of Amherstburg, Ontario, on October 9, 2022, at age 87
VE3DIT – Pat Lacey, of Kitchiner, Ontario, on August 22, 2022, at age 96
VE3DY – Gord Grant, of Ottawa, Ontario, on May 18, 2023, at age 104
VE3FIN – Ron Powers, of Ottawa, Ontario, on May 14, 2023, at age 86
VE3HOS – Ted Sauve, of Windsor, Ontario, on October 2, 2022, at age 91
VE3JFV – John Fair, of Curve Lake, Ontrario, on September 22, 2022, at age 71
VE3NVJ – Jim Smith, of Ottawa, Ontario, on July 24, 2022, at age 95
VE3PGY – Peggy Foley, of New Lowell, Ontario, on September 12, 2022, at age 63
VE3VLM – Lee Maunu, of Orangeville, Ontario, on August 29, 2022, at age 78
VE5HAE – Harry Enquist, of Prince Albert, Saskatchewan, on February 26, 2023, at age 83
VE5YN – John Schmidt, of Prince Albert, Saskatchewan, on March 12, 2023, at age 94
VE6KF – Frank Haley, of Edmonton, Alberta, on April 22, 2023, at age 98
VE6SRT – Jason Low, of Bragg Creek, Alberta, on April 15, 2023
VE7DLI – Diane Martin, of Merrit, British Columbia, on November 2, 2022, at age 81
VE7EKC – Reg Gale, of Logan Lake, British Columbia, on November 8, 2021, at age 81
VE7GLJ – Peter Jenkins, of Brentwood Bay, British Columbia, on March 26, 2023, at age 89
VE7ICH – Isabel Healy-Morrow, of Kamloops, British Columbia, on March 26, 2023, at age 67
VE7OBH – Bruce Hildebrand, of Vernon, British Columbia, in January 2022
VE7RJH – Ron Hollett, of Trail, British Columbia, on August 2, 2022, at age 71
VE9GU – Ron Smith, of Rosehill, New Brunswick, on April 6, 2023, at age 84
VE9IDA – Ida Ellis, of Oromocto, New Brunswick, on April 25, 2022, at age 81
VE9JAT – Skip Talbot, of Riverview, New Brunswick, on April 13, 2022, at age 89
VE9KNU – Bill Miller, of Nictau, New Brunswick, on October 3, 2022, at age 77
VE9ROB – Robert Springer, of Waterville, New Brunswick, on April 16, 2022, at age 83
VE9TGR – Tom Reid, of Saint John, New Brunswick, on June 8, 2022, at age 83
VE9VS – Vern Smith, of Fredericton, New Brunswick, on May 28, 2022, at age 80
VO1IA – George Hopkins, of Carbonear, Newfoundland and Labrador, on January 3, 2023, at age 84
VY2ROB – Rob MacDonald, of Stratford, Prince Edward Island, on March 29, 2022, at age 70

Correction: VE6DFC Randy Westby, of Red Deer, Alberta, on October 27, 2022, at age 61

Note: * In the above list an * indicates that a call sign has been reissued. The list of Silent Keys is prepared by volunteers. Please send obituary notices by email to rachq@rac.ca with a copy to: ic.spectrumamateur-spectreamateur.ic@ic.gc.ca. For more information visit: https://www.rac.ca/silent-keys/

RAC Scholastic Grants Available Now

– Deadline October 31–

Al Eros, VE4ZB – RAC Scholarship and Grants Coordinator

The RAC Foundation is now accepting Scholastic Grant applications from eligible Amateurs for the 2023-2024 school year. Scholastic Grants (Scholarships).

Radio Amateurs of Canada is able to provide grants and scholarships thanks to the RAC Foundation Program.

RAC operates the RAC Foundation in cooperation with the Community Foundation of Ottawa (CFO) which administers and invests the donated funds and disburses the earnings from those invested funds to grant applicants, based upon direction from RAC.

It is thanks to the continued generosity of Amateurs and Amateur Radio Clubs from all parts of Canada that we can support talented Canadian Amateurs who will contribute to the Amateur Radio Service for years to come.

Eligibility Requirements:

Eligible candidates must be:

- in full-time attendance at an educational institution such as a university or community college
- Canadian Radio Amateurs: must be a certified Amateur at time of the grant application

Scholastic grants will have a maximum value of $1,000. Decisions on grant eligibility and size will be at the sole discretion of the RAC Directors or their designees.

Applications:

All grant applications should be submitted to the RAC Foundation for processing and recommendation by October 31.

For more information please visit: https://www.rac.ca/grant-information/

Scholarship application:

https://wp.rac.ca/grant-information/scholastic-grant-application/

Youth On The Air Camp (YOTA) 2023



YOUTH ON THE AIR CAMP 2023

JULY 16-21, 2023

Ottawa, Ontario, Canada

Carleton University

Neil Rapp, WB9VPG – YOTA Camp Director



The next Youth on the Air Camp for the Americas has been scheduled for July 16-21 at Carleton University in Ottawa.

Youth On The Air Camp is for Amateur Radio operators between the ages of 15 to 25.

A team of RAC volunteers will serve as the local host for this event. The main organizers are Roger Egan, VA3EGY, and Harrie Jones, VE3HYS.

Youth on the Air Americas had a busy spring preparing for the YOTA 2023 Camp in Ottawa as well as beginning preparations for 2024 and 2025. Amateur Radio Digital Communications (ARDC) has awarded a grant to support the camp for all three years. We are very grateful to them for giving us the ability to start long-range planning and being able to expand capacity starting next year.

At our Dayton Hamvention booth (shown above), the youth social hours on Friday and Saturday were standing room only – we had people *standing in the aisles*. They were able to enjoy some drinks, snacks and each other's company. Some YOTA camp reunions took place, as well as some meetings between other youth they have contacted on the air but never met in person. We had a photo prop available, as well as promotional items for the camp. Three of our past campers were also speakers at the annual Carole Perry Youth Forum. We also had a chance to visit with Phillipp Springer, DK6SP and Markus Grober, DL8GM, who co-chair the International Amateur Radio Union's Region 1 Youth Working Group, which operated the Youngsters on the Air programs in Europe, Africa, the Middle East and parts of Asia. We support each others causes and it was great to spend some time with them in person instead of just over Telegram.

The plans continue to move forward for the YOTA Camp in Ottawa in July. At the time of writing in late May, we had a full compliment of 30 campers registered for the camp although the waitlist is nearly gone, including 7 from Canada, 18 from the USA, 1 from Argentina, and a guest each from Germany and Croatia in Region 1 YOTA. We are still waiting on Visas for a YL from El Salvador and another from Haiti. Our 31st camper, Wintta, VA3WGY, will only be with us for part of the week. She will be leading the balloon launch session and just received her Canadian Amateur Radio certification. Congratulations!

Thanks to all the volunteers and staff at RAC for working hard to prepare another great opportunity to keep our young people in Amateur Radio!

For more information visit: https://youthontheair.org/ottawa2023/

The RAC QSL Bureau System

https://www.rac.ca/qsl-bureau/

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. There are limits and restrictions for use of the Outgoing QSL Bureau.

For more information, surcharges, card sorting details and some handy tips, please visit http://wp.rac.ca/ or http://www.magma.ca/~ve3exy/bureau.html.

Member Societies of the International Radio Union (IARU) operate a worldwide system of QSL Bureaus. Radio Amateurs of Canada, as the Canadian member-society, operates a National Incoming QSL Bureau, and sponsors the Incoming Bureaus for the 12 Canadian call areas.

Cards received by the National Incoming Bureau from IARU Member Societies are sorted and forwarded to the Incoming Bureau in each call area. All domestic cards (VA-VE-VY) to Canadian Amateurs are to be sent directly to the RAC National Incoming Bureau and not to the Outgoing Bureau.

Note: Domestic cards sent to the Outgoing Bureau will experience a delay. Only cards for destinations outside Canada are to be sent to the Outgoing QSL Bureau.

The Incoming QSL Bureau service is a user-pay system, using one of four methods to get cards to you: (A) envelopes; (B) credits; (C) labels; or (D) combination credit with labels . *Note: Method B is preferred.

Web: http://wp.rac.ca/the-rac-national-incoming-qsl-bureau/

National Incoming QSL Bureau
Ed Spingola, VA3TPV, Manager
PO Box 83
Streetsville, ON L5M 1L5

RAC Outgoing QSL Bureau
PO Box 11156, Station H
Nepean, ON K2H 7T9
T: 613-670-3230
E: ve3exy@myrac.ca

VE1 – VE0 Bureau (B)
Brit Fader Memorial QSL Bureau
Sponsored by the Halifax ARC
Roger Stein, VA1RST
12 Canary Crescent
Halifax, NS B3M 1R1
burch.craft@gmail.com
www.halifax-arc.org/pages/qsl-bureau.html

VE2 Bureau (A, B)*
Jacques Dubé, VE2QK
Résidence du Jardin
897, rue St-Pierre, apt. 104
Trois-Rivières, QC G9A 4W5
jacques.dube@cgocable.ca

VA3/VE3 Bureau (B)
Michael Brickell, VE3TKI
PO Box 46
Streetsville, ON L5M 2B7
bureau-manager@ve3qcb.ca
https://ve3qcb.ca

VA4/VE4 Bureau (B)
Harm Hazeu, VE4HAZ
7 Ashley Cove
Winnipeg, MB R2G 2Z3
ve4haz@gmail.com

VA5/VE5 Bureau (B)
Todd Bendtsen, VE5MX
616 Moffet Drive
Weyburn, SK S4H 2M7
ve5mx@sasktel.net

VA6/VE6 Bureau (B)
Jerry Spring, VE6TL
206 Hampstead Place NW
Calgary, AB T3A 5J2
springjl@yahoo.com
http://www.buro.ve6hams.ca/

VA7/ VE7 Bureau (B)
Ken Clarke, VE7BC
PO Box 1109
100 Mile House, BC V0K 2E0
ve7bc27@gmail.com

VE8/VY0 Bureau (A, B)*
John Boudreau, VE8EV
PO Box 3099
Inuvik, NT X0E 0T0
ve8ev@myrac.ca

VE9 Bureau (B)
Rino Deschenes, VE9VIC
8 B rue Jeanne Mance
Kedgwick, NB E8B1G8
ve9vic@hotmail.com
Web: "VE9VIC" on QRZ.com

VO Bureau (B, C)*
Bill Kirby, VO1BB
60 McNiven Place
St. John's NL A1A 4X1
vo1bb@yahoo.ca

VY1 Bureau (A, B)
Allen Wootton, VY1KX
Box 21217
Whitehorse, YT Y1A 6R8
vy1kx@myrac.ca

VY2 Bureau (A, B)
Douglas Silliker, VY2DS
1072 Barbara Weit Road
Summerside PE
C1N 4J8

Operation of the RAC QSL Bureau System would not be possible without the commitment and hard work of the QSL Bureau volunteers.

Radio Amateurs of Canada, and all those who benefit, salute these dedicated Amateurs and extend sincere appreciation for the long hours they devote to this difficult task.

For a "Behind the Scenes Look at the QSL Bureau" check out the QSL Bureau webpage at:

https://www.rac.ca/qsl-bureau/

The Importance of Showing Up:

Donate to Defence of Amateur Radio Fund (DARF) Trust

The sole purpose of the Defence of Amateur Radio Fund (DARF) Trust is to support the travel expenses of a certified Amateur(s) as a member of the Canadian official delegation at the International Telecommunication Union's World Radiocommunication Conferences (WRC) and Preparatory Meetings.

World Radiocommunication Conferences – organized and held by the International Telecommunication Union (ITU) every four years – update the Radio Regulations, the international treaty that, among other things, sets out the frequencies on which radio services such as the Amateur Radio Service may operate.

The RAC delegate's role is to assist our regulator – Innovation, Science and Economic Development Canada (ISED) – with all WRC agenda issues that may influence allocations to the Amateur Radio Service.

Radio Amateurs have a seat at the table – in fact, there is a specific Working Party which includes the Amateur and Amateur Satellite Service in its title – but they need to be able to participate directly. Stay tuned to the next issue of TCA for an update on the Countdown to WRC-23.

While allowing RAC membership of the Canadian delegation, ISED does not provide any funds towards their participation. As most of these meetings are usually held in Geneva, one of the most expensive cities in the world, DARF's funding is essential.

Without DARF, there would be no Canadian Amateur presence at these international meetings or in the many pre-meetings that take place developing and working out what ultimately becomes Canada's position.

DARF Annual Report 2022:
https://www.rac.ca/darf/

Donate to DARF:
https://www.rac.ca/donation/

Six Metres and Down

Spring 50 MHz DX and the move into Summer E Skip Season

Dana Shtun, VE3DS | ve3dss@hotmail.com | www.qsl.net/ve3dss

Dana Shtun, VE3DS



The spring period was quite productive on 50 MHz this year with some really interesting Trans-Equatorial Propagation (TEP).

Will this lead into a banner Sporadic E season, with the increased solar activity and flare activity, or will the instability kill VHF propagation? Time will tell.

At this writing in late May, however the band is looking like its opening to Europe from areas in Eastern Ontario and out to Newfoundland. Out on the west coast the band has opened to the South Pacific and South America and the Caribbean as well.

Here at VE3DS, I picked up DXCC #153 on 50 MHz with ZP5RPO in GG14, worked on May 1, 2023. This was one of those contacts where I have not been able to work anyone in Paraguay (ZP) on 50 MHz since getting on the band in 1979! I kind of felt like Captain Ahab chasing some of these elusive DX contacts.

There is a problem with the geometry of the TEP zone where both Paraguay (ZP) and Bolivia (CP) stations have difficulty accessing the zone and propagating into our area via a Sporadic E extension. However, on that day I was working LU stations in Argentina including LU2GPB (GG03) and LU8GMM in GG02 – both right next to the border with Paraguay and 1 grid from its capital Asunción – so we were hoping for some ZP activity and fortunately things worked out for the ZP QSO. CP6UA was also on the band and worked stations in the Carolina's briefly, before the path broke up. I hope to complete working all South American countries with a QSO with CP6UA some day soon, hi.

– continued on next page



I2FAK's huge 2 metre EME Array.

Update on VHF Beacons

Stephen, VE3ZV, has the VE3TFU beacons back up and running on 1296 MHz and 2304 MHz from his home in EN92. On 1296 MHz, the power is 5 watts to a pair of 45-element loop Yagis at 70 feet on 1296.3257. Since the beacons use directional high gain antennas and are variously pointed at the Greater Toronto Area (GTA) and to the southwest signals vary. I will provide more detail on 2304 and up later.

Peter, VA3ELE, is also working on a beacon setup for the Mississauga Amateur Radio Club VE3MIS and has a low power beacon that hops from 902 to 1296 to 2304. They are temporarily on the air with call VA3BYA/B from his home in Mississauga, frequencies 902.290, 1296.290 and 2304.289 (plus minus with some drift). The antenna is a wideband 12dBi horizontal omnidirectional antenna and power is about one watt, so not loud even here in Etobicoke in FN03FQ, over a 20 kilometre path from Peter's 40-foot tower in FN03DM.

– continued from previous page

Other contacts on May 1 included CE2SV FF47, P41E in FK42, PJ2ND in FK52 and HI8MU in FK48.

May 7 brought some DX as well with CE2SV and CE3SX worked between 2227 and 2310 UTC.

May 16 brought some unusual Brazilian DX with P75EK in GG43 at 2106 UTC, PY5CC in GG54, PY4AQ in GG88 and PY2DX in GG66 at 2124 UTC, followed by LU1HLH in FF78 at 2237 UTC. These were new grids for VUCC here.

May 26 brought my first transatlantic DX at 2157 with CU6GT HM53, CU3AC HM68, CU2GI in HM77 and EA8TL in IL18.

May 29 brought contacts around 2300 UTC with 9H1TX in JM75 Malta and CT1IUA in IM67 for the first European continental contacts of the 2023 season.

May 30 brought a Mexican pipeline multihop E-skip opening with XE1MEX in EK08, 6D5C in DL80, XE2YWH in DL92, XE1CL in DL90, XE1O in DL80 and XE1KK in EK09 worked between 2300 and 0204 UTC on May 31. The southern Ontario gang were having a blast working not only Mexico but everything in between.

If you have a radio that covers 6 metres now is the time to get it going, with WSJT-X (FT8 or FT4), SSB or CW during E-skip season. With this type of propagation, you don't necessarily need high power, nor do yo u need big antennas so 100 watts and a dipole or 2-element beam or quad will get you going. If you are travelling, camping or trans-Canada driving, take a rig along and offer new grids for VUCC or for Summits and Parks on the Air etc. Enjoy and get on the Magic Band.

144 EME VA3IKE

Ike, VA3IKE in EN82 worked his first Earth-Moon-Earth (EME) contact on 144 MHz on May 26 with I2FAK in grid JN45. This was all on moonrise. Ike runs a 12-element Loop Fed Array (LFA) Yagi which gives him almost an hour of moon time, and 250 watts, using Q65 digital mode. Congrats to Ike for the new DXCC on 144 MHz! Incidentally, I2FAK runs a very large array on 144 MHz, check out the picture.

Ike is very active on terrestrial on 144 and 432 MHz, and most mornings he worked

Ron, WB2WGH, set up in Fn13 RL on 24 GHz.



W1VD and others out on the east coast and also out to the west into W9 and W0 land and down into South Carolina from EN82, Leamington, Ontario – almost the most southernly QTH in Canada!

Microwave Bands

Microwave Activity Day (MAD) and a 24 GHz DX Record

The microwave guys have been going out on Saturday mornings to work each other and try to catch some DX on 10 GHz and up.

On May 27, Hugh, VA3TO, set up from FN03an, then moved to EN93xo up in the hills northwest of Milton, midway between Milton and Acton, Ontario and up on the Niagara Escarpment. He worked three stations on 5.7 GHz, 12 stations on 10 GHz, 4 stations on 24 GHz and 1 on 47 GHz. There was lake tropospheric propagation as well where, as a result of changes in air density, layers form over the lake creating ducts that propagate signals like a waveguide, with little loss.

Hugh mentions working two of Andy K0SM's children (KE2AIZ and KE2AMI) on 10 GHz in FN12eu and then Ron, WB2WGH, in FN13rl on 24 GHz.

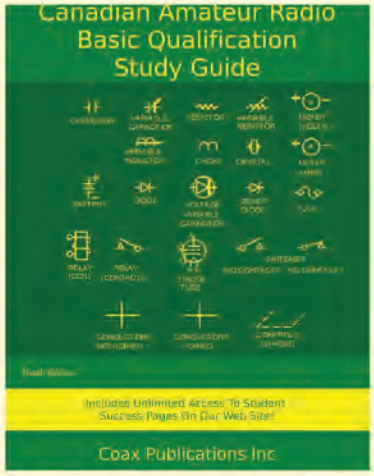
The path to Ron actually turned out to be a "terrestrial" distance record between the US and Canada at 278 kilometres.

Hugh, VA3TO, set up in FN03AN on 10 and 24 GHz.



Hugh runs a DB6NT MKU-24-GA (bare mixer) transverter, a Kuhne LNA, and a 2.5 watt mm-Tech Power Amplifier and a 22-inch dish.

Ron runs a DB6NT MK-24-G2 transverter with internal LNA and 2.9 watts of power with an 18-inch dish.





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New for 2023, this new 3rd printing updates some sections that were a bit ambiguous, corrects all known errors in previous printings, and replaces some parts of Section 1.5 related to resonant circuits. For the student who has prior operating experience and wants a challenge, the Advanced Qualification is the next step. This new printing is on a lighter grade of fully opaque paper and uses our durable high quality lie-flat binding.

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The above diagram kindly provided by VA3ELE shows Hugh's location vs Ron's and the path diagram. For the video visit: https://www.youtube.com/watch?v=CuseUtwvV8A

Intrigued by microwave DX? Check out the gang on the Ontario VHF Association groups.io (OVHFA). Yes I know it says "Ontario" but its really "Canada" and beyond eh...

Microwave Spring Sprint

The Spring Sprint was a Saturday morning mini distance contest and we got into it more for fun. Best DX was K1TEO in FN31JH on 1296 MHz, and we worked also on 902. We worked N2WK across the lake on 902, 1296 and 2304. We could have worked 3400.1 also but I had not yet converted the transverter. It is now, and I can go from 3456.1 to 3400.1 with the flip of a switch.

While working VE3ZV on 1296 SSB, a very loud W3IPA called in off the side for a new contact from EN91! He commented that VE3DS was his first 1296 QSO and how unusual it was to have a breaker on that band given the directivity of the antennas. We did work VE3ZV on 902, 1296, 2304 and 3456 MHz. Stephen has an outstanding signal from EN92 on all bands!

Later, we worked VA2IW in FN25 on 1296 MHz on aircraft scatter for a new initial as well on FT8 and we did it again the next day on CW! It took about 45 minutes as we had to get those big planes just in the right spot for the bounce. We also tried with Rene, VE2UG, in FN35 and he copied me via aircraft scatter, but nothing decoded at this end. I guess my 150 watts to his 10 watts under less than ideal conditions didn't help. We will try again now with the warm weather. We also ran a Q65 sked with Russ, VE3ELL, in FN04 on 1296 and managed to work quickly on that mode.

Contest Activity

By the time this gets to print the 2023 ARRL June VHF Contest will be history. More to report next column. There will be the CQ WW VHF Contest on July 15/16, the ARRL 222 and Up Distance Contest on August 5/6, 10 GHz and Up on August 19/20 and September 16/17 as well as the September VHF on September 9/11, so lots of activity right into the fall.

That's it for now, see you on the air. Feel free to send email reports and pictures of your activities to share with our members.

– 73, Dana, VE3DS



RADIO MAGIC

Robert C. Mazur, VA3ROM | va3rom@gmail.com | www.va3rom.com

Snap Circuits Part 2: "Mr. Morse" Gadget

Introduction

This isn't the full history and story of the "Electro-Magnetic Telegraph" – as Samuel F. B. Morse and Alfred Vail called it (with/without the hyphen) – or about the complex personal/business relationships between their two families because I'm still reading their letters and journals. But after 10 years of avoiding it, I'm finally writing about a mode we Radio Amateurs either love or hate with a passion. The inspiration came from Elenco Electronics' amazing Snap Circuits Arcade microcontroller kit, resulting in the "Mr. Morse" PICAXE gadget. But first, we need a bit of the back story…

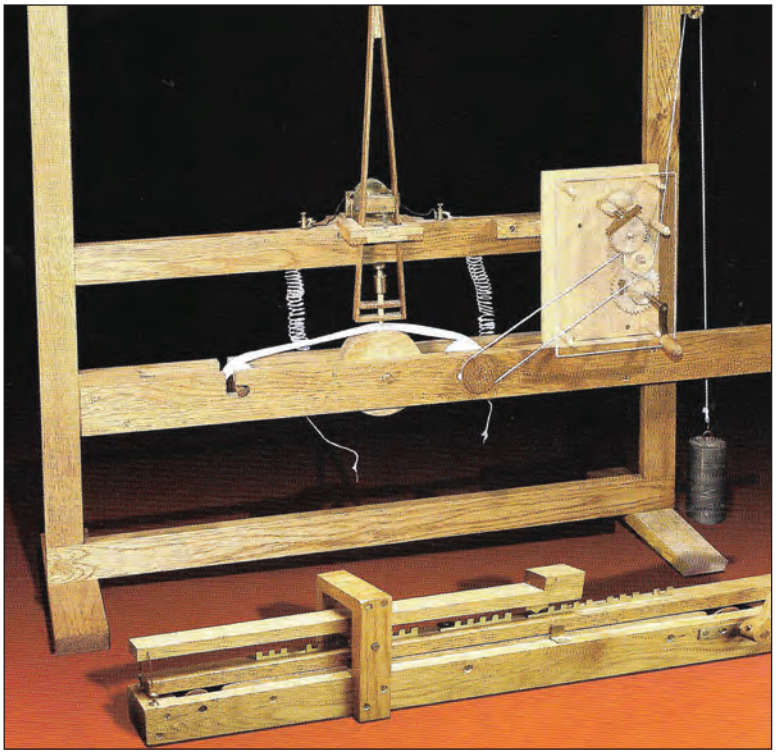


Figure 1A: Morse Printing Telegraph (1837). Working replica of the printing register (background) and "port rule" (foreground).

A hand crank moved the rule with the moveable type number slugs under a rocker arm that dipped a wire staple in/out of two separate mercury-filled conducting capsules to open/close the external electric circuit connected to a battery (not shown).

Credit: "Where Discovery Sparks Imagination", John D. Jenkins, 2009, page 37. Used with permission.

Genesis

The original Morse numbers code electric telegraph system used a moveable type transmission method, which required a words/phrases encode/decode dictionary paired with a printing ticker-tape register (receiver) at both ends of the wire for visual decoding of short messages (Figures 1A and 1B). It wasn't commercially viable but it was proof of concept that information could be transmitted via electrical pulses using a single wire connecting two distant places, and that a permanent record could be made of those pulses, as compared to "evanescent" (tending to vanish like vapour) signals that left no trace of their existence other than what someone said/wrote/interpreted was telegraphed.

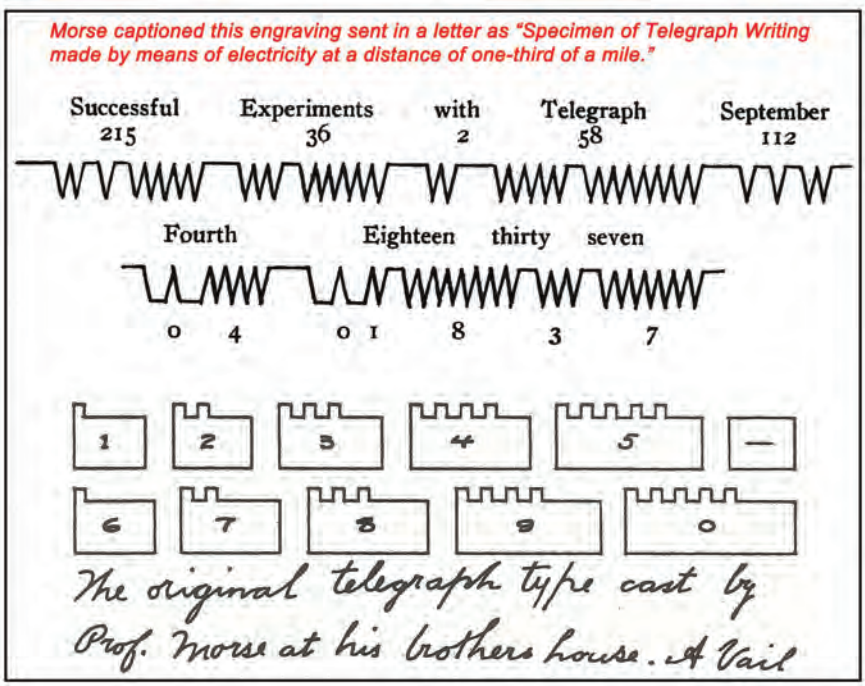


Figure 1B: Morse Printing Telegraph Example (1837). Moveable type number slugs and sample register printing using numbers code.

Hint: Count the bottom tips between spaces.

Credit: "Early History of the Electro-Magnetic Telegraph from the Letters and Journals of Alfred Vail", arranged by his son J. Cummings Vail, 1914, pages 29 and 30; reprinted from the University of Michigan library collection.

In late 1837, after a chance meeting with Morse, Alfred Vail (a young engineering genius) was made a business partner and contracted to improve the mechanical side of the telegraph system with financial assistance from his wealthy businessman father (Stephen Vail). The young Vail's invention of a simple "finger key" (later straight hand key) greatly simplified the method and increased the speed of sending messages, eliminating the need for the moveable type. He also redesigned the printing register making it more compact and more reliable with a proper windup clock-driven printing mechanism.

A new dot and dash code included letters of the alphabet (eliminating the dictionary) was designed based on the binary number system (0 and 1) created by 17th century mathematician Gottfried Wilhelm Leibniz ("Explication de l'Arithmétique Binaire"). The most frequently used English language letters were assigned the shortest dot time units. The letter E (first most used letter) was defined as the short mark (dot) of one dot time unit in length, and the letter T (second most used letter) was defined as a long mark (dash) of two dot time units in length (not three as today).

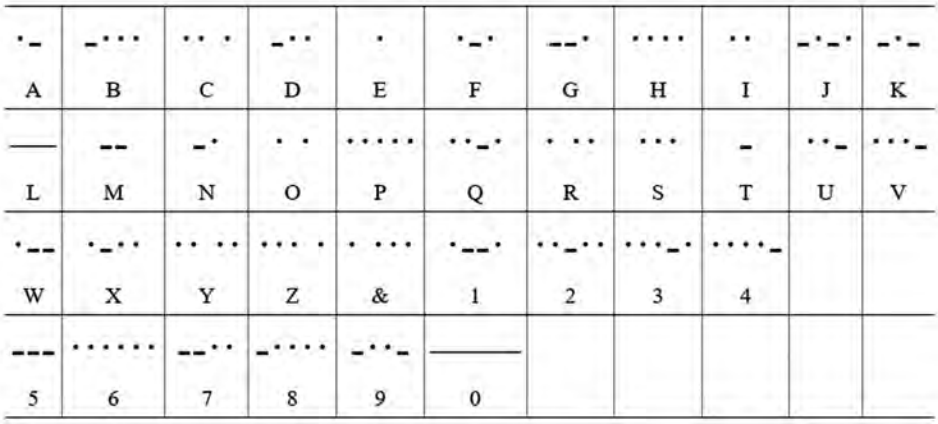
Here's how Alfred Vail explained it in his 1845 book "The American Electro Magnetic Telegraph". Figure 2 refers.

"By examining the telegraphic alphabet, the characters will be found to be made up of dots: short and long lines – and short and long spaces. A single touch of the key, answers to a single dot; which represents the letter, E. One touch of the key prolonged, that is, the contact at the key continued for about the time required to make two dots, produces a short line, and represents T.

A single touch for about the time required to make four dots, is a long line, and represents L.

A single touch for about the time required to make six dots, is a still longer line and represents the 0 of the numerals. If the use of the key be suspended for about the time required to make three dots, it is a short space, used between letters.

If suspended for the time required to make six dots, it is a long space, used between words, and a longer space is that used between sentences. These are the elements which enter into the construction of the



A	B	C	D	E	F	G	H	I	J	K
L	M	N	O	P	Q	R	S	T	U	V
W	X	Y	Z	&	1	2	3	4		
5	6	7	8	9	0					

Figure 2: American Morse Alphabet (1845)
Credit: "The American Electro Magnetic Telegraph", Alfred Vail; 1845, page 27.

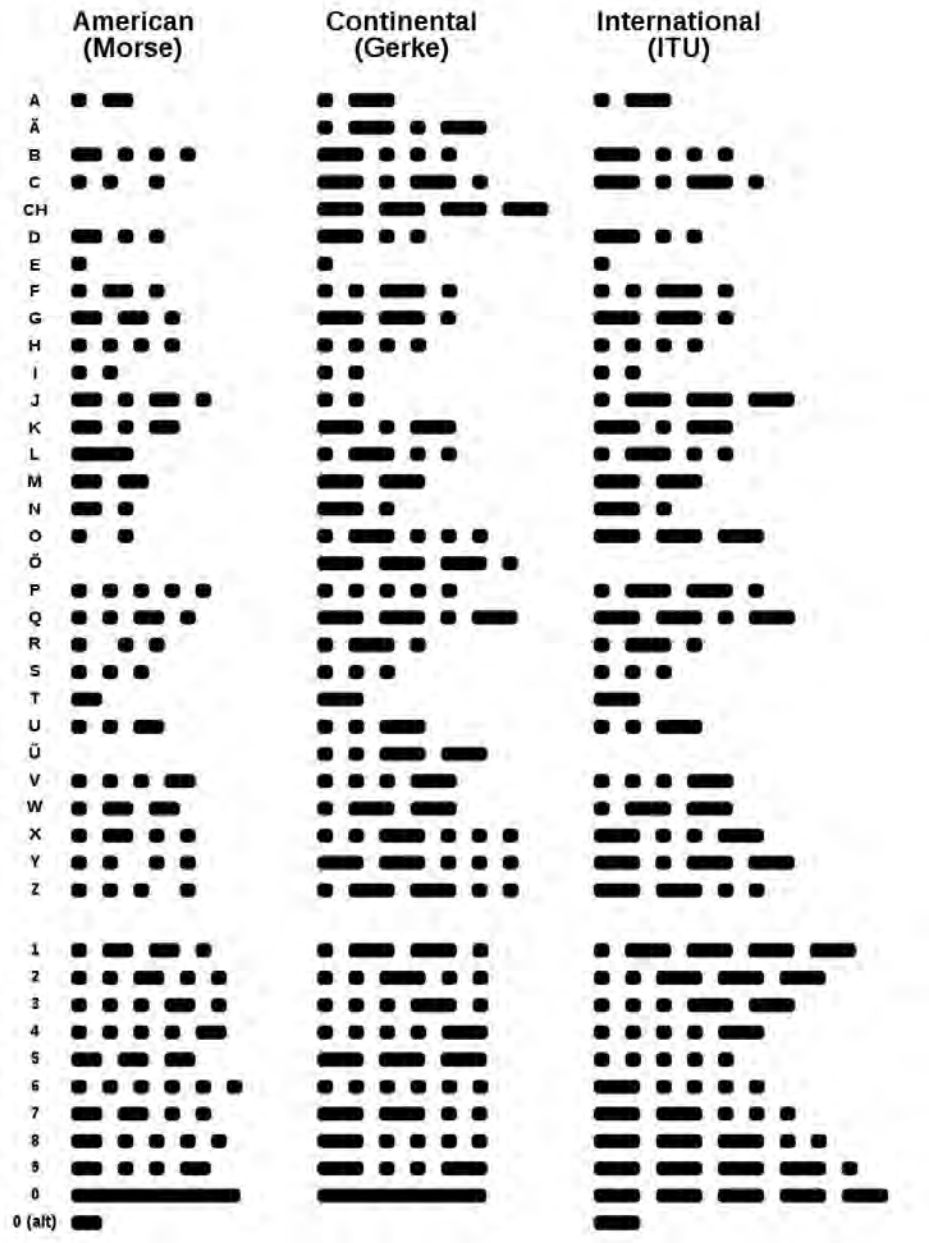


Figure 3: The Three "Morse" Codes. This comparison chart shows the Darwinian-like evolution of Morse code from the American, to the Continental, to the International version.
Credit: "Spinningspark"; Wikipedia: CC BY-SA 3.0.

telegraphic characters, as used in transmitting intelligence. The alphabet is represented by the following combination of these elements."

This became known as American Morse also railway/landline code to distinguish it from the other telegraph codes used in Britain and Europe.

Note 1: The "longer space" between sentences was written as a period in messages delivered to customers, but other punctuation wasn't defined until the American Telegraph Conference of 1854.

Note 2: Inept/inexperienced "fists" often sent sloppy "hog-Morse" or "ham-fisted" code caused mainly by eight letters with the same number of dots only differentiated by their inter-element spacings: I and O (two dots); C, R and S (three dots); H, Y and Z (four dots). Figure 2 refers. To be called a "hog" or a "ham" wasn't a telegrapher's term of endearment.

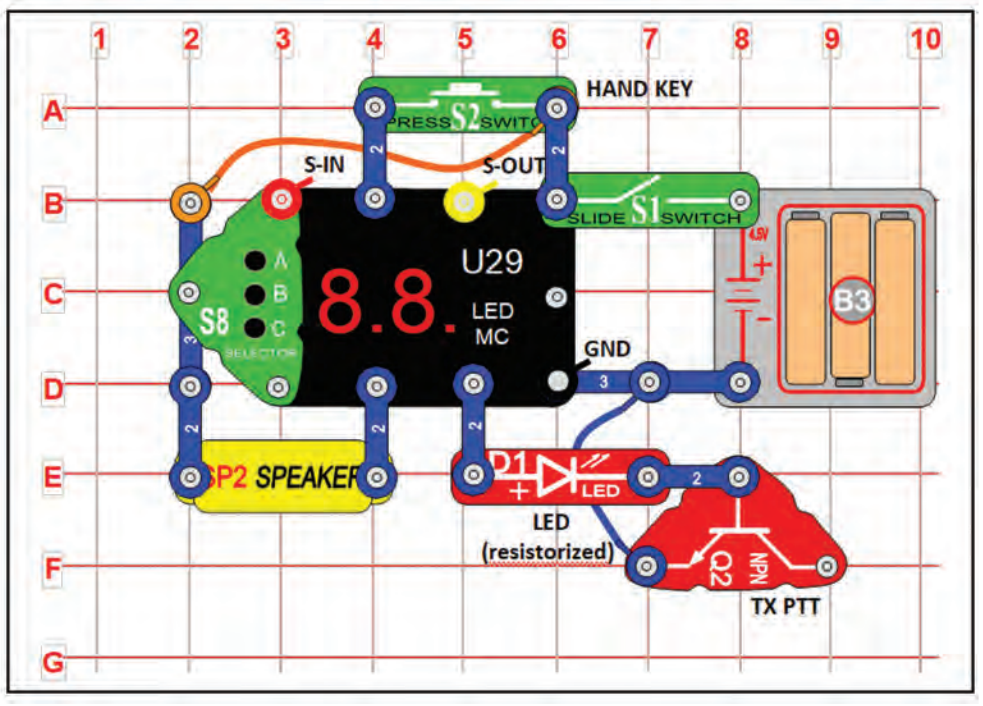


Figure 4: "Mr. Morse" Designer Diagram. Elenco's Designer Template makes it very easy to layout your ideas, swap parts in/out and/or change their positions/orientations before building the real-world snap circuit.

Morphosis

In 1847, Friedrich Clemens Gerke witnessed demonstrations of Morse's commercial telegraph system and code in Hamburg, Germany.

He quickly realized it was far superior to the optical telegraph system used within the German Confederation (central Europe). But he also realized while it (the Morse code) worked well when using English, most European languages had accented letters and digraphs, resulting in alphabets with more than 26 letters. And he set to work on the problem.

A year later, Gerke had not only translated Vail's "The American Electro Magnetic Telegraph" into German, he had also redesigned a large portion of the code.

The dot problematic letters were given their own unique codes, and the two different length dashes were discarded, leaving just the dot (still one dot time unit) and a slightly longer dash (now three dot time units).

Added were the German umlaut letters Ä, Ö and Ü and digraph CH. This became known as the "Hamburg alphabet" or Continental (German) code, adopted in 1851 by the German-Austrian Telegraph Association. Gerke's revisions of all the numbers and letters O, P, X, Y and Z had some really strange (to me) dot and dash combinations, plus the letters I (frequently used) and J (late Middle Ages variation of I and less frequently used) shared the same code (Figure 3).

In May 1865, the problematic numbers and letters were redefined, and the umlaut letters/digraph removed (too "Prussian" for the French Emperor Napoleon III and also host) at an international telegraphy conference held in Paris, France. The revised version was adopted by the also newly created International Telegraph (now Telecommunication) Union (ITU) and became known as the International Morse code (Figure 3 refers).

The ITU's original mandate was to establish international rules and regulations for telegraph networks among the first 20 signatory treaty nations (now 193).

It created a framework standardizing telegraphy equipment, established uniform operating procedures, and set tariff rates and accounting guidelines.

But the two "Morse" codes weren't mutually comprehensible and American telegraphers stubbornly stuck with "theirs" for domestic use (allowed by the ITU treaty) only switching to International Morse code, which was used on oceanic submarine communication cables that encircled and interconnected the world by the end of the 19th century, creating the first "internet". *Then along came Marconi...*

Today

Morse code (meaning the International version from now on) has been adapted to control devices and assist persons with various disabilities using puff-and-suck, head-tilt or eye-blink, foot or finger-tap, et al Morse control methods. Most smartphones can also switch between QWERTY and Morse code virtual keyboards.

Languages based on the Cyrillic, Arabic and Japanese alphabets use character matching of their alphabets to the same or nearly the same letters in the Latin alphabet, with modifications and/or additions for letters that don't exist in the Latin alphabet. Of course, Morse is very much alive and thriving in the Amateur Radio world and it's still the only digital mode we humans can encode/decode on-the-fly in our heads.

As an aside, most Amateurs still refer to Morse code as "CW", but CW means "continuous wave", which is a transmission method not a mode. In 1902, early radio pioneer Reginald Fessenden invented the continuous wave transmitter, and CW was used to differentiate between its on/off

carrier keying (OOCK) and damped wave's (spark-gap) on/off keying (OOK, no carrier) Morse code. This is no longer required plus there are now many radio modes transmitted using CW and also modulated CW (MCW), which is used for iCW (CW over Internet).

Meet the "Mr. Morse" PICAXE Gadget

Elenco's Snap Circuits ARCADE electronic learning kit was introduced in Part 1 in the May-June 2023 TCA and I described how to build and code a simple PICAXE Morse code practise oscillator (CPO). Months later, it has evolved beyond my expectations (Figures 4, 5A and 5B).

The Snap Circuits kit builds may be large, colourful and cute, but also Elenco packs in a lot of learning and fun for "Ages 8 to 108", as the cover art proudly states. And once I had reverse engineered the undocumented Arcade PICAXE source code, it was easy to expand its versatility and functionality, using just parts in the kit, as it turned out.

Revolution Education's free PICAXE Editor 6.0 was used to develop the "Mr. Morse" program because as an old-school FORTRAN programmer, I prefer free-form text coding. The program is fully annotated so I won't go into the nitty-gritty details except for a couple of important topics. You can download "Mr. Morse" from my "Radio Magic" webpage (www.va3rom.com) to use and/or read through the code for developing your own PICAXE projects with/without building prototypes using various Snap Circuits kits. Sure, you can skip the builds, but you won't have as much fun!

Here are the "Mr. Morse" features and functions:

A) Code practise oscillator (CPO). Use the pushbutton or a hand key (preferred).

B) Battery voltage level monitor (useful with the 3-cell AA battery pack).

C) Set number of five-character code groups to send.

D) Set character sending speed.

E) Set user programmable beacon transmission repeat interval.

The following also print characters to PICAXE Editor terminal if connected via the programming cable to your computer.

F) Transmit user programmable beacon (optionally keys external transmitter).

G) Send random five-character alphanumeric groups plus common punctuation.

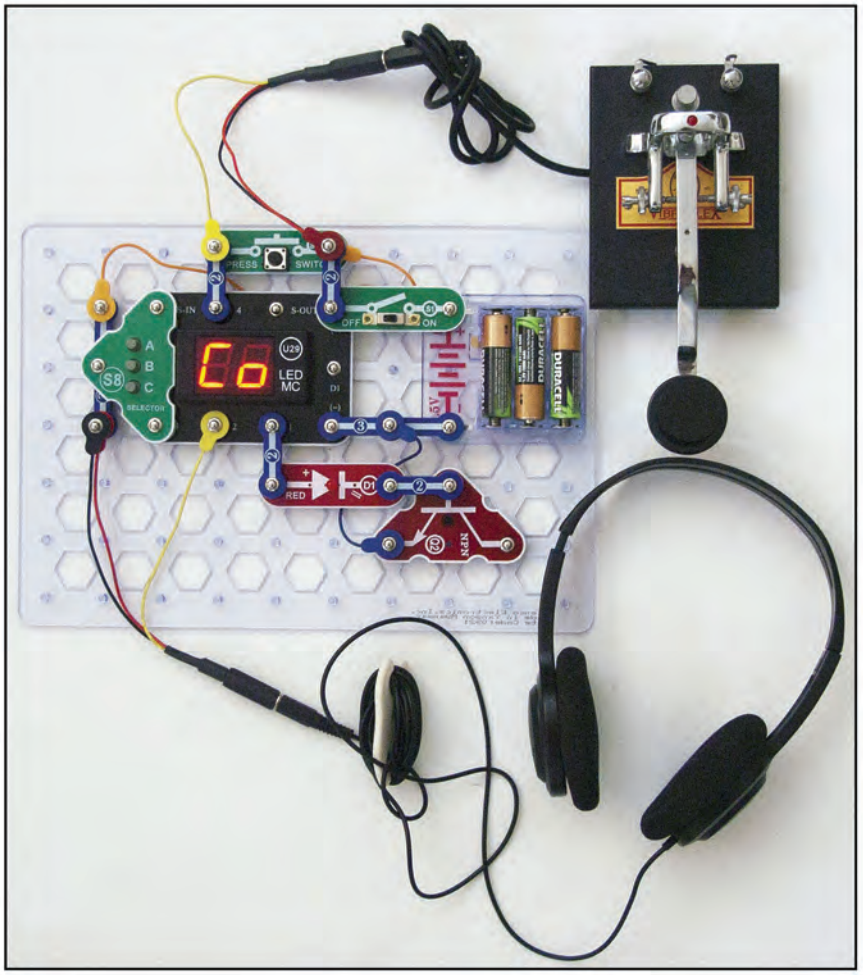


Figure 5A: "Mr. Morse" CPO Mode Wiring. Audio is fairly loud so you may want to use a headset with a built-in volume control. The PICAXE produces a raspy square wave tone somewhat close to what a rotary spark-gap transmitter probably sounded like 120 years ago. Because Revolution Education's TRS wiring pattern is used, the tip and ground snap-connectors must be reversed.

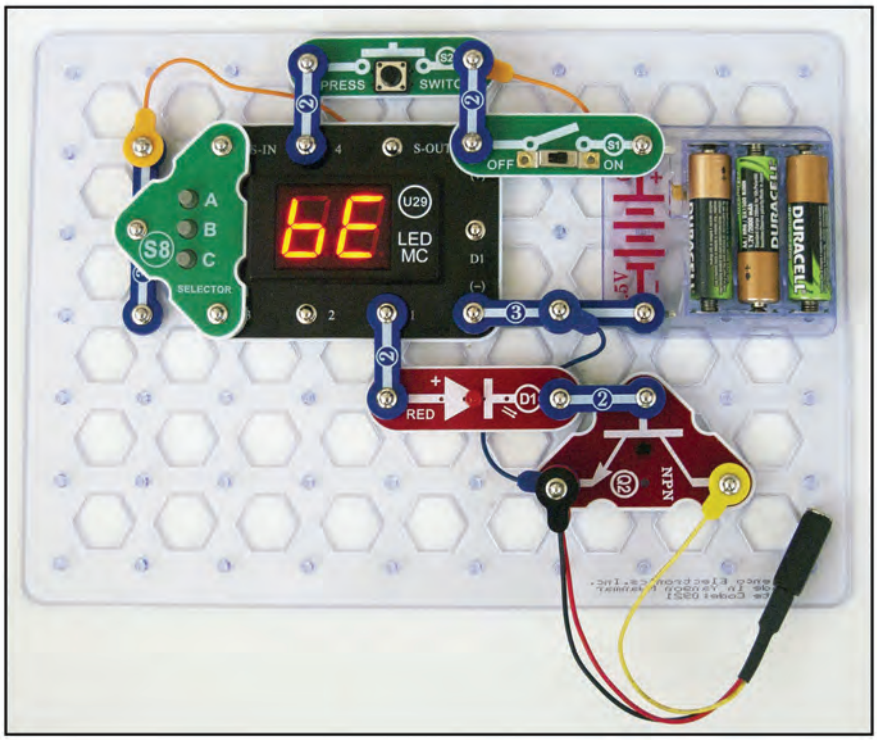


Figure 5B: "Mr. Morse" Beacon/Keying Mode Wiring
Transistor Q2 is ready for beacon mode and connecting an external transmitter.

H) Send random five-character numbers only groups.

I) Send random five-character alphabet only groups.

Note: The values for items C, D and E are stored in electrically erasable programmable read-only memory (EEPROM) and reloaded into random access memory (RAM) on power up.

The 7-segment LED displays two-letter abbreviations of menu items and parrots them in Morse code to speaker (SP2) as well, sending a Morse "R" for "Roger" to confirm and/or accept inputs via pushbutton (S8) button B.

Buttons A and B scroll up/down through menu items and also increment/decrement numbers.

One caveat: the 7-segment LED display's serial data control, red LED (D1) and NPN transistor (Q2) all share the same PICAXE pin/port so an external transmitter shouldn't be connected until after activating beacon mode. A 10-second delay is included, which should be enough time to connect the keying line to the transmitter. Some transceivers have a menu "BK" key on/off function (Yaesu FT-857D) or some other method so this may be more convenient and the 10-second delay can be removed.

Speaking of cables, if you're not a PICAXE user, you'll need to purchase the programming cable, a half dozen coloured (red, black and yellow) snap-connector wires (RobotShop.ca), and a couple of 3.5 mm stereo or tip, ring, sleeve (TRS) jacks (any electronic parts supplier) to make two snap-jack TRS adapters.

For some reason, Revolution Education reversed the tip and ground connections of their programming cable creating a teeny-tiny problem (Figure 6). So you can either solder the TRS jack adapters as per normal then remember to switch the tip and ground around on the PICAXE LED MC connections to use with the programming cable, or you can follow Revolution Education's TRS wiring pattern (my preference) and then do vice versa to use it as a regular audio/hand key jack adapter. Figures 5A and 5B refer.

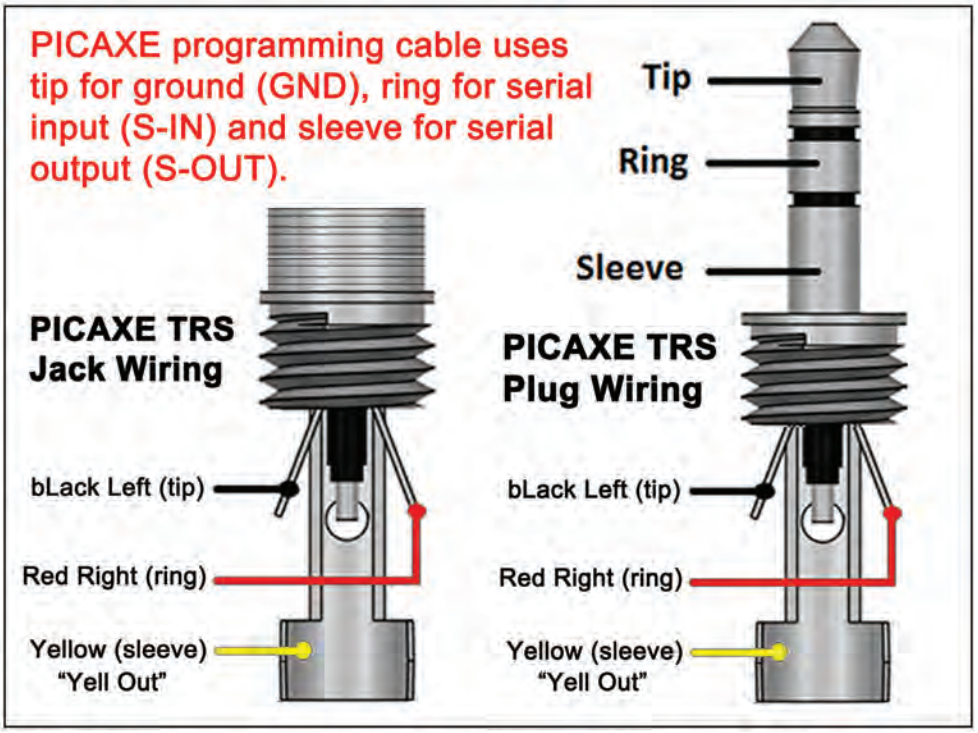


Figure 6: PICAXE TRS Wiring Pattern. Credit: Components101.com

The Encoding/Decoding Process

You can encode up to 256 Morse characters (0 to 255) or most anything else for that matter using 8-bit binary encoding. There are several methods but here's the best.

Example: Ä (umlaut A) is · — · — (dot dash dot dash) in German Morse code. What are its encoded binary/integer values?

Solution: Let all dashes equal binary 1; let all dots equal binary 0 and let a stop bit equal binary 1 (marks the end of a character's elements). Map all dots and dashes including the stop bit to an 8-bit binary number using left to right bit encoding (my preference). Finally, add all the non-zero bit values to get the equivalent encoded integer value (these are stored in lookup tables).

Method 1: (I'm a leftie plus we send character elements left to right)

1	**2**	**4**	**8**	**16**	**32**	**64**	**128**	
0	1	0	1	1				= 2 + 8 + 16 = 26
.	—	·	—	stop bit				

Method 2: (If you prefer the "proper" right to left encoding)

128	**64**	**32**	**16**	**8**	**4**	**2**	**1**	
			1	1	0	1	0	= 16 + 8 + 2 = 26
			stop bit	—	·	—	·	*(Note the reversal!)*

Therefore umlaut A is encoded 8-bit binary 00011010 and the equivalent encoded integer is 26. What we've done is "plant" a binary search tree (BST) that can "grow" by adding more encoded Morse code characters (nodes) interconnected by "branches" that "sprout" left (for a dot) or right (for a dash). Figure 7 on the next page refers.

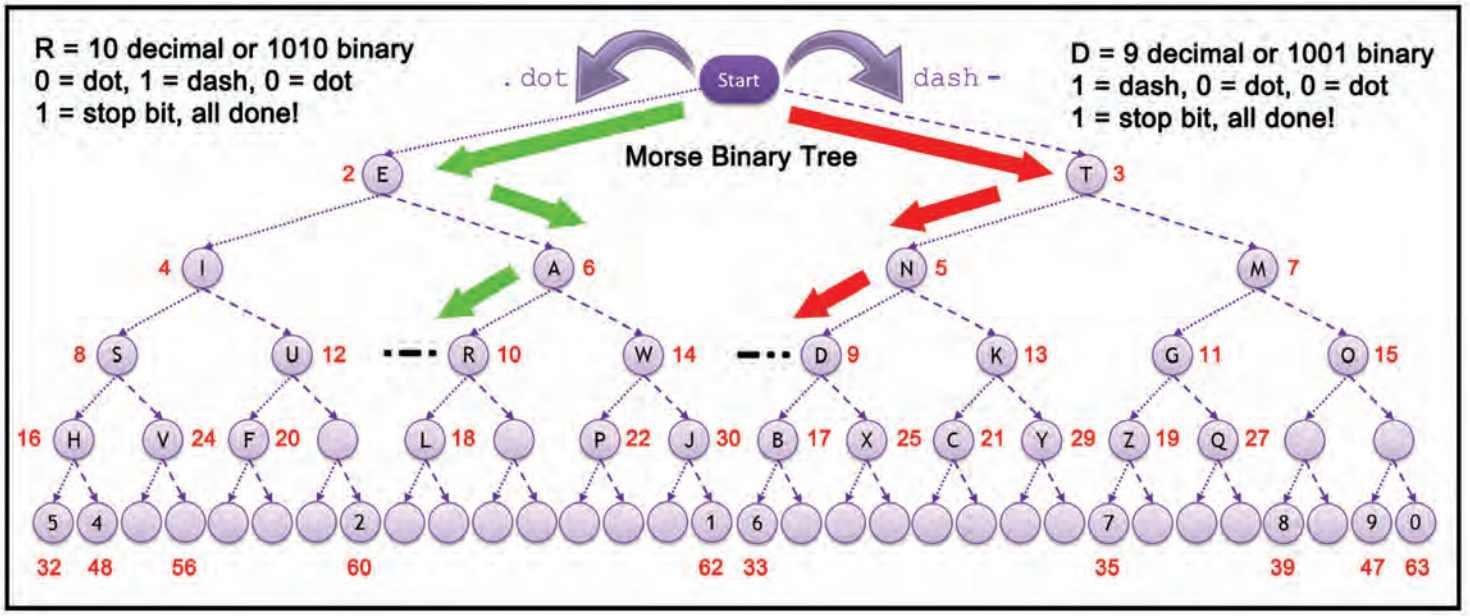


Figure 7: Morse Binary Tree. I removed all accented letters, digraphs and punctuation for easier visualization. Credit: "Aris00" at English Wikipedia; transferred by "Ddxc" to Commons.

To explain how "Mr. Morse" searches the BST using a copy of any encoded binary value, I'll use plain language pseudo-code.

Start BST Query

Is encoded binary value an odd or even number? (modulo function)

If odd, take the branch to the right and send a dash

If even, take the branch to the left and send a dot

Divide encoded binary value by 2 (cuts the branches to search in half)

Is encoded binary value now equal to 1? (stop bit)

If Yes, exit BST Query (all done with this Morse character)

If No, pause for inter-element space (one dot time unit)

Repeat BST Query

This BST has a small number of branches and nodes, but even a tree with a billion branches (i.e., for a chess playing computer) would only take 29 divisions by 2 (which is simply right bit shifting) to get to the bottom node taking perhaps a nanosecond – if that, giving the illusion of "intelligence".

And without the BST, all AIs such as ChatGPT are virtually dumb as tree stumps (double pun intended).

My Final

Feel free to make modifications or even translate the PICAXE code for other microcontrollers/computers. Because I finished most of this article on May 4th or "Star Wars" day, along with "May the fourth be with you!"

I'll also add "May the Morse be with you!" – 73

References and Resources

Binary Search Tree –
https://tinyurl.com/49f2mxnj

Elenco Designer –
https://tinyurl.com/bddsh8m5

internet CW (iCW) –
https://tinyurl.com/mrzwr3pn

International Telecommunications Union (ITU) –
https://tinyurl.com/53kh9rz8

Landline Morse –
https://tinyurl.com/ycx6x58h

Morse code Assistive Technology –

https://tinyurl.com/6ewzfkbk and
https://tinyurl.com/52vr7dcs

Morse code for non-Latin alphabets –
https://tinyurl.com/5f3smww6

PICAXE (Revolution Education) –
https://rev-ed.co.uk

RobotShop – https://ca.robotshop.com

Snap Circuits –
https://tinyurl.com/2p84je9r

"The American Electro Magnetic Telegraph" –
https://tinyurl.com/2p8a3tb4

The 1865 International Telegraph Conference –
https://tinyurl.com/yc5tkjpn

Canadian Straight Key Month | Mois canadien de la clé croite

Special Call Sign – L'indicatif spécial – VC3K – September/Septembre

The Straight Key Century Club's yearly on-air event promotes the club's many Canadian members. This year **VC3K** is the special call sign that has been granted in Canada for this event, which we refer to as the "Canadian Straight Key Month."

VC3K runs from September 1 through September 30.

It's a perfect time to introduce or reacquaint Amateurs to the fun of hand-keyed Morse code sent with straight keys, bugs, and side-swipers. Members and non-members alike are welcome to hunt the Canadian-based VC3K stations. Non-members are encouraged but not required to use straight keys for their VC3K contacts.

Le Straight Key Century Club organise chaque année un événement sur les ondes pour promouvoir ses nombreux membres canadiens. Cette année, VC3K est l'indicatif spécial Canadien accordé pour cet événement, que nous appelons le « Mois canadien de la Clé Droite ».

VC3K se déroulera du 1er au 30 septembre.

C'est le moment idéal pour initier ou réintroduire les radioamateurs à l'amusement de la transmission en code Morse avec des clés droites, c'est-à-dire des manipulateurs ("straight keys"), des vibreurs ("bugs") ou des manipulateurs latéraux ("sideswipers").



This year we hope to field VC3K operators in all Canadian provinces and territories. You can track your progress working the event stations by referring to the Stats section on the VC3K Straight Key Month page at the SKCC website.

Check for regular updates in your standings for Number of Areas, Bands and VC3K operators to



W : www.skccgroup.com

Les membres et les non-membres sont invités à rechercher les stations VC3K basées au Canada. Les non-membres sont encouragés, mais pas obligés, à utiliser des clés droites lors de leurs contacts avec VC3K.

Cette année, nous espérons qu'il y aura des opérateurs VC3K dans toutes les provinces et territoires canadiens.

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document your success. Earn a QSL card by making at least one contact with any VC3K event station. Work all provinces for a basic sweep; add territories for extra points; check the Op Schedule and Operator Map links to find where and when the VC3K stations are operating.

For SKCC members VC3K is a great opportunity to make lots of progress toward various club awards. Contacts with VC3K stations are valid for SKCC awards purposes. Also, by signing up as a VC3K Operator you can readily log dozens or hundreds of award-eligible QSOs with other SKCC members.

Would you like to sign on as one of our VC3K Operators?

You can try it for just an hour or two. Or reserve a series of time slots throughout the month.

Code speed and station sophistication are not important. The on-air exchanges tend to be fairly relaxed.

Please contact the Province Coordinator in your area for more info ((www.skccgroup.com). Our VC3K operators are key to a successful event!

– 73, The VC3K Straight Key Month Committee

Vous pouvez suivre vos progrès de contacts avec les stations de l'événement en consultant la section Statistiques sur la page intitulée "VC3K Straight Key Month" sur le site Web du SKCC (www.skccgroup.com). Vous pourrez vérifier régulièrement les mises à jour de votre classement en ce qui concerne le nombre de régions, les bandes et les opérateurs VC3K afin de documenter votre réussite.

Vous mériterez une carte QSL en établissant au moins un contact avec une station VC3K de l'événement. Faites des contacts dans toutes les provinces pour une couverture de base ; ajoutez les territoires pour des points supplémentaires ; consultez les liens de l'horaire d'opération et de la carte des opérateurs pour savoir où et quand les stations VC3K sont en activité.

Pour les membres du SKCC, VC3K est une excellente opportunité de progresser vers divers prix du club. Les contacts avec les stations VC3K sont valables aux fins des récompenses du SKCC. De plus, en vous inscrivant en tant qu'opérateur VC3K, vous pouvez facilement enregistrer des dizaines voire des centaines de QSO éligibles aux prix avec d'autres membres du SKCC.

Souhaitez-vous vous inscrire en tant qu'un de nos opérateurs VC3K?

Vous pouvez tenter l'expérience pendant une heure ou deux. Ou réserver une série de créneaux horaires tout au long du mois. La vitesse du code et la sophistication de la station ne sont pas importantes. Les échanges sur les ondes ont tendance à être assez détendus.

Veuillez contacter le coordinateur de la province de votre région pour plus d'informations (www.skccgroup.com). Nos opérateurs VC3K sont essentiels pour la réussite de l'événement!

– 73, Le comité du Mois canadien de la Clé Droite.

COLUMNIST

RAC Regulatory Roundup

Update on the Canadian Amateur Radio Advisory Board (CARAB)

The Canadian Amateur Radio Advisory Board (CARAB) is a formal, annual meeting between our regulator, Innovation, Science and Economic Development Canada (ISED) and the Radio Amateurs of Canada (RAC). In this meeting, RAC and ISED each provide an update to the other on their activities. Almost always, RAC makes requests for changes in ISED policy, practices and regulations and the two organizations work out our priorities.

The 2023 CARAB will have taken place by the time you read this column. The tentative agenda included:

- A proposal from RAC for changes and updates to ISED's policy on Amateur Radio call signs.
- A presentation by RAC on the work of RAC's Examination Standards Committee (RAC-ESC) to recommend changes to the Basic and Advanced exams.

Radio Amateurs of Canada conducted an online survey on the Canadian Call Sign Policy in August and September 2022 which was open to all Canadian Radio Amateurs. Based on the survey results two resolutions were passed by the RAC Board in March and May 2023 to request some updates to ISED's Amateur Radio Call Sign Policy including:

- Shift the allocation of call signs from the current "125-year rule" to a system of easy online renewals of the registration of call signs at least every five years
- Add satellites, astronauts and space stations to the categories of stations eligible for VEØ call signs
- Change the qualification required to obtain a new two-letter-suffixed call sign (e.g., VA1AA) from the current five years to 10 years and to require an Advanced certificate
- Protect the current VA, VE, VO and VY call areas
- Expand the use of all Canadian prefixes
- Make fuller use in Newfoundland and Labrador of the historically significant VO prefixes
- Reinforce the special character of the VO and VY call areas
- Reinforce the exclusivity of the CY9 and CYØ prefixes for use on St Paul Island and Sable Island
- Allow for mobility of selected call sign groups for those Amateurs who move
- Permanently eliminate the shortage of two-letter-suffixed call signs
- Respond to a significant demand for one-letter-suffixed call signs
- Make easier translation of special prefixes to regular call signs
- Allow better choices for Special Event Station call signs
- Provide additional incentives for Amateurs to upgrade their skills, knowledge and qualifications
- Bring Canadian practices in line with the International Telecommunication Union's regulations and practices in many countries
- Provide a policy that may not require revision for many decades

RAC's proposal is very detailed and comprehensive. No matter what RAC proposes, it will down to ISED to determine what to implement and at what speed.

RAC's Examination Standards Committee has been working hard to improve the quality of the Question Banks for the Basic and Advanced examinations.

At the CARAB meeting, RAC intends to present details to ISED of the standards we have developed to improve the questions and the answers.



Dave Goodwin, VE3KG
RAC Regulatory Affairs Officer
regulatory@rac.ca
https://www.rac.ca/regulatory-advocacy/

Most of the over 1,000 questions in the Basic Question Bank and the over 500 questions in the Advanced Question Bank can remain unchanged. A minority need to be updated, clarified or replaced with more appropriate questions. For every question, there are four possible answers: one correct and four incorrect. The approximately 1,500 correct answers and the 4,500 incorrect answers need to be examined to ensure that they are true tests of the knowledge relevant to being a Radio Amateur. It is a mammoth task and the objective at CARAB is to give ISED confidence in the committee and its work. We hope that our recommendations will be accepted and implemented rapidly.

One issue is a holdover from last year's CARAB meeting. RAC and an officer in ISED's enforcement group have been working to develop "best practices" for those rare occasions when Radio Amateurs need to engage ISED on an enforcement question. CARAB is the suitable place to report an update on this work.

Another issue to follow up from 2022 relates to Amateur Satellites. Canada is in a regulatory void: we have no regulations to facilitate or govern Amateur Radio satellites. We have several CubeSat projects at Canadian universities and some of these would like to use Amateur frequencies and provide a communications platform for Amateurs.

– continued on page 27

"The Changing Face of Amateur Radio"

How the face of Amateur Radio has changed over its history. Our founders used vacuum tubes, straight keys and basic wire antennas. Regulations were needed to "control" or "govern" Amateur radio and were written for the technology available at the time.

By the time my Dad got his "ticket" and became VE3CRW, time had advanced to the early 1960s. He had to learn Morse code, draw schematics and prove to an Inspector for the Department of Communications (maybe it was the Department of Transport back then) that he was proficient at Amateur Radio.

When he got his first licence, he used vacuum tube gear. He had to record the contacts he made (keep a log) and show the log to the Inspector when the time came to upgrade his licence to get his 10 metre endorsement. He was pretty happy to be able to use AM voice on the 10 metre band.

As time went by, two of his sons would study for their first Amateur Radio licence. I got mine first and my younger brother Rob got his a couple of years later. I remember going to the DOC office in London, Ontario to write my exam, draw schematics and pass the 10 wpm Morse code test. I disliked learning Morse code, but as time went by it became my primary way of communicating on HF. For years, I have been a QRP operator who uses Morse code exclusively.

My younger brother has developed skills using computer technology that make me sit back in wonder. Who could have dreamed that in such a short space of time, Amateur Radio would advance so far? There have been some adaptations to the regulations for Amateur Radio but I can see even more coming to help address the changes being made with the technology available today.

Many contesters use programs which generate CW for them to send exchanges to other stations. In a very real way, they are giving control of their stations to the control of the folks who wrote the contesting software. Has anyone ever thought of that? Are the authors of contesting software holders of Advanced Amateur licences either in Canada or in a country that has a reciprocal operating agreement with Canada?



John Noakes, VE7NI and his father Len Noakes, VE3CRW.

Age and physical disabilities eventually caught up to Dad. He said many times that he never wanted to end up in a nursing home. But, the last couple of years were spent in assisted living. What broke his heart was having to give up his beloved hobby.

Mom died several years before Dad. Amateur Radio was the most important thing in his life besides his kids and grandkids. Often, when he couldn't sleep, he listened on his HF radio for hours on end. I know that he missed Mom terribly.

When he went into the nursing home, he had a dipole for 75 metres to continue to check into the SSB nets such as ONTARS, CJ Net etc. When he had to have the wire antenna taken down, it was a huge loss. For a while, he used a "make-believe" simulator on his computer and it gave him a partial outlet to talk to other Amateurs via the computer in his room.

The technology now exists to allow aging Amateurs living in nursing homes to hold onto the hobby that often gave them purpose to life. I know how much that would have meant to my Dad. He missed Amateur Radio so greatly.

The above photo is of the last time my Dad and I saw each other. He spent time in his room but I know that he missed his friends on the 75 metre SSB nets.

I guess that it is a fair question to ask each one of you about the importance of Amateur Radio in your life. It's likely the time will come when you will lose your HF station at home and maybe find yourself living in a care home where you can't have an antenna. How are you going to cope?

Maybe the technology will advance to the point where aging Amateurs living in a care home can still regularly enjoy the hobby through he use of a remote HF station. The trust is put into the person operating the station that it is done within the specifications covering Amateur Radio. Just like when I did phone patches years ago, I was the control operator and was responsible for the operation of my station.

To my Dad, I give my heartfelt thanks for being my Elmer and promoting my love for the hobby. My brother feels the same way; he has passed his love for the hobby to his wife and son.

John Noakes, VE7NI
Kamloops, British Columbia

"QUA – A Topical Digest"

Experimentation and Homebrew Construction



Allen Wootton, VY1KX
Box 21217 | Whitehorse, Yukon
vy1kx@myrac.ca

I often think of how very fortunate Amateurs are to have the spectrum allocations that we do.

Our ability to communicate via radio over short and long distances gives us a unique way in which to meet others and establish friendships.

Experiments and construction projects, both simple and complex, are great opportunities to learn from experience and to better understand principles. The following descriptions of my recent experiments illustrate how simple projects can provide so much learning and pleasure in achievement.

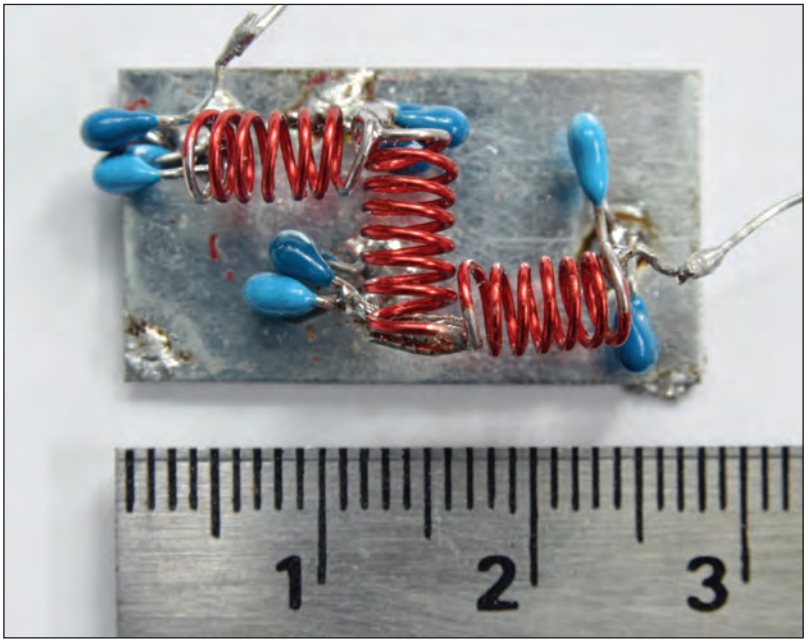


Figure 1: A 2 metre band low pass filter. The inductors are made from #24 enamelled wire wound on a 1/8-inch drill bit. Capacitors are ceramic NP0. The scale in the figure is in centimetres.

A 2 metre Low Pass Filter

My first experiment involved low pass filters, which are essential parts of transceivers. They provide a lower frequency pass band that has little or no attenuation of signals and considerable attenuation of any signals above a "cut-off frequency" that is determined by the components used in the filter and its construction.

A low pass filter suitable for the 2 metre band is shown in Figure 1. It has a cut-off frequency at about 150 MHz. As you can see, it is small and the inductors are coreless, in contrast to inductors wound on toroid cores as would be used for a lower frequency filter.

In the past, the design of a filter like this was a fairly complex process. Tables of data required for their design were included in older issues of the *ARRL Handbook*, although that is no longer the case because now there are a number of easy to use computer programs that make the design process very straightforward. For the filter shown in Figure 1, I used the free program "Elsie", from Tonne Software at: http://tonnesoftware.com/elsie.html

For this filter I chose a Chebyshev 7th order capacitor input filter with 0.1 dB passband ripple and a bandwidth of 160 MHz. With that information the program carried out the necessary calculations and provided a diagram of the filter.

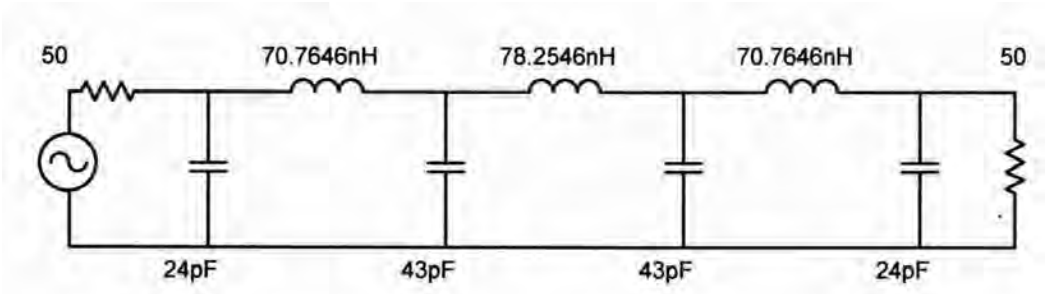


Figure 2: Circuit diagram.

Whereas inductors can be adjusted easily to a desired value, by compressing or expanding their coil spacings, that is not the case for capacitors so I chose to have the filter modified slightly to give capacitor values to the nearest 5% values. The program made this change and presented me with the circuit diagram shown in Figure 2.

By comparing the circuit diagram of Figure 2 and the actual circuit as constructed in Figure 1, you can see that the specified capacitor values were attained by connecting smaller valued capacitors in parallel. I used an "Air Cored Inductor Calculator" program written by M0UKD to determine the dimensions of the inductors. This program is available at https://m0ukd.com/calculators/air-cored-inductor-calculator/. I used the shaft of a 1/8-inch (3.2 mm) drill bit as the form on which to wind #24 gauge enamelled wire for the inductors.

Experimenting just with "Elsie" can provide a good understanding of filters because it is so easy to change various parameters and see the resulting effects on the graphs that the program draws. For example, the predicted graphs for my low pass filter are shown in Figure 3 on the next page. A different filter – perhaps a Butterworth filter instead of Chebyshev or a filter with five instead of seven elements – would have performance graphs that are quite different.

While it is very instructive to just use the computer program to make changes and see the effect, it is even better to actually construct a filter and see how the predicted results compare with the actual measurements.

For this purpose, the amazingly capable NanoVNAs that have become available recently are wonderful tools. I used mine to measure the same S11, S21 parameters and Smith Chart as were produced from the "Elsie" program. The results shown in Figure 4 are one example of many taken from trials that I made over a period of several hours. For each trial I adjusted the inductors, expanding or contracting the turns spacing and then made a measurement. It was very interesting to see how small changes had significant effects on the results. The results shown in Figure 4 were not the closest match to those predicted by "Elsie" that I achieved, but after many trials I couldn't get back to the best results and decided that these were at least adequate.

I made this low pass filter to use with a DRA818V 2 metre transceiver module. As I mentioned in the May/June 2023 QUA column, these modules are very small and can be programmed to frequencies between 144 and 148 MHz. They do produce significant harmonics, however, and the purpose of my low pass filter was to attenuate these

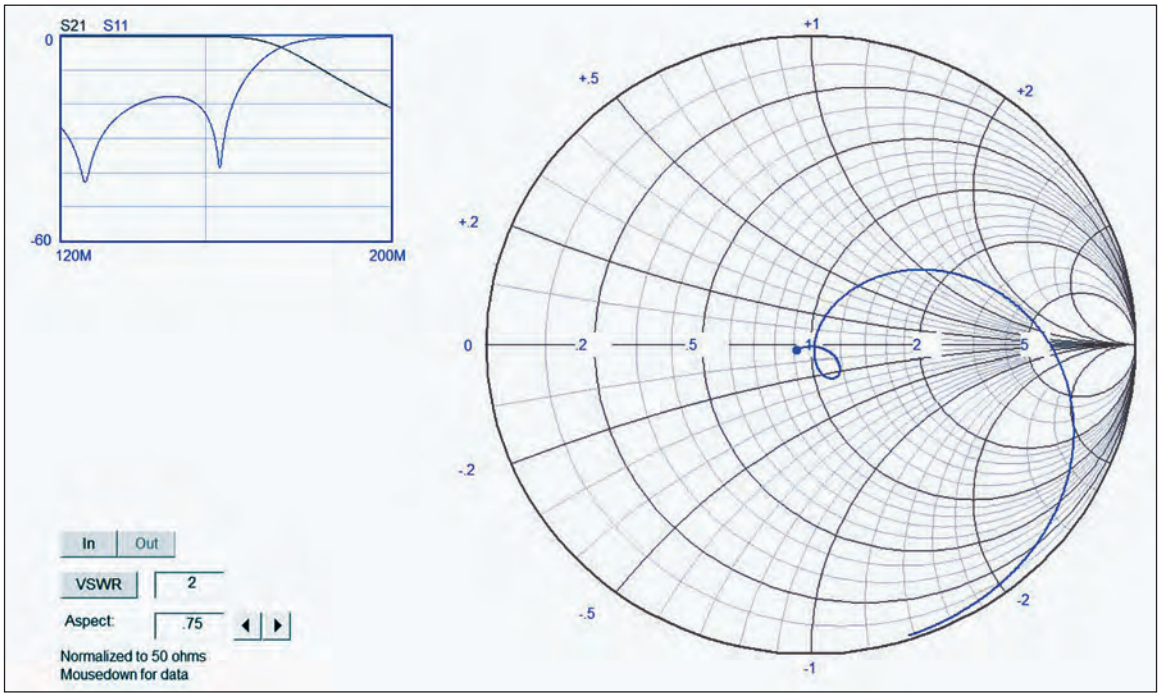


Figure 3. The line with two dips in graph (a) shows S11, the return loss. The line that begins horizontally on the left and then slopes downward is S21, the signal transmission from input to output. The Smith Chart shown in graph (b) indicates that the low pass filter provides a good match to 50 ohms up to about the cut-off frequency but a poor match as the frequency is increased.

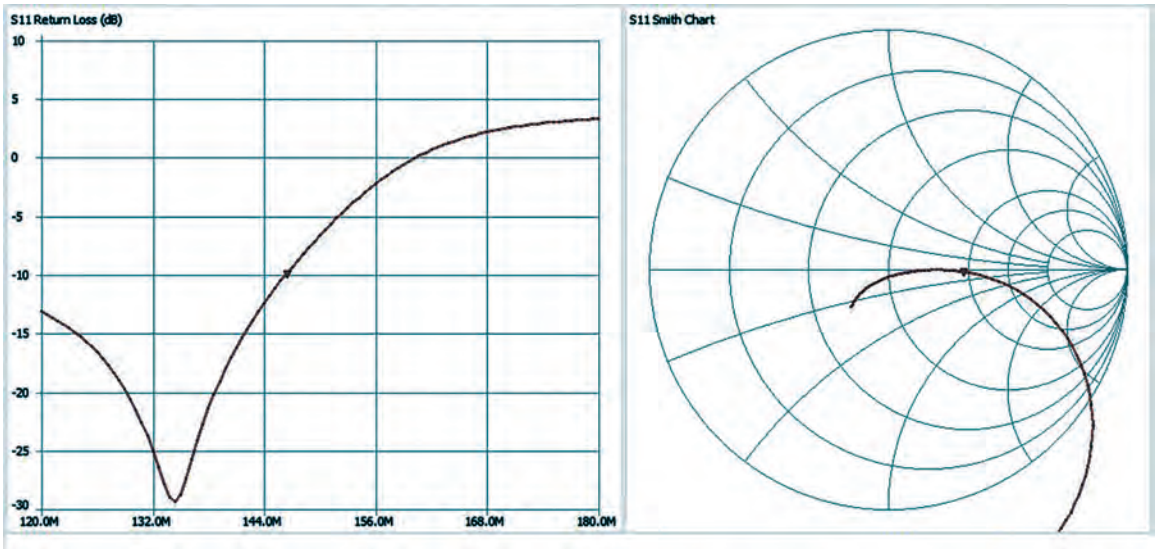


Figure 4. Measured NanoVNA results for the 2 metre low pass filter.

harmonics to levels at which they would not be a problem. I also tested the harmonic attenuation using my recently purchased SPRplay RSPdx receiver (https://www.sdrplay.com) and found that the harmonics were more than 30 dB below the fundamental.

RF Current Meter

For several years, I considered measuring the current on each side of the balanced line antenna feeders I use for my doublet antenna, but just hadn't got around to it even though I had seen a number of easy to construct devices that would be suitable for this purpose. Some on-air discussion regarding balanced line antenna feeders with my friends Bruce, VE7EDT, Geoff, VY1BG, Keith, VE7ECK and Mark, VA7MNV, finally prompted me to try measuring these currents. A balanced line feeder is made with two wires spaced apart from one another with some kind of insulating material. Often commercially available 450 ohm "ladder line" is used, but it can also be homemade. For example, my feeder shown in Figure 5 on the next page was made with #15 enamelled wire and electric fence insulators.

The concept of a balanced line feeder is that the current in each of the two wires is equal in magnitude but opposite in direction. If this condition is met, in the space between the wires the magnetic fields add to one another; whereas in the space external to the feeder the magnetic field should be very small because the magnetic field lines there are in opposite directions and cancel one another. Similarly, the electric field should be strong between the wires but weak externally.

In theory, then, a feeder of this type connected to a balanced antenna, like a dipole or a doublet, should have the necessary equal and opposite currents and only a very small or nonexistent external magnetic and electric field. In practice, of course, the situation could be very different due to factors that unbalance one side of an antenna and its feeder compared to the other. In the case of my own doublet – which is more or less horizontal except for sag between the supports at the ends and in the centre – the ground rises towards one end and there are some trees near the other. These differences could certainly affect the antenna's balance.

To measure the current on each of the conductors of my "balanced line" feeder, I made the apparatus shown in Figure 6. As you can see the few components are connected to one another and directly to the terminals of a small ammeter. This ammeter was salvaged from old equipment and is calibrated in S-units but it has a sensitivity of 0.5 mA for a full scale reading. The circuit diagram is shown in Figure 7 and it is adapted from several sources I found on the Internet. I used a T50-6 toroid core because I had one available, but I am sure other toroids would work just as well (or better?). Similarly, I expect a 1N914 or 1N4148 could be substituted for the 1N5711 Schottky diode.

A number of constructors of instruments of this type use large clamps on ferrite beads for the RF transformer. An RF transformer using this type of core provides many advantages over the toroid core I used because it can be clamped over any conductor that will fit through the centre hole of the ferrite bead like, for example, the shield of a coax cable.

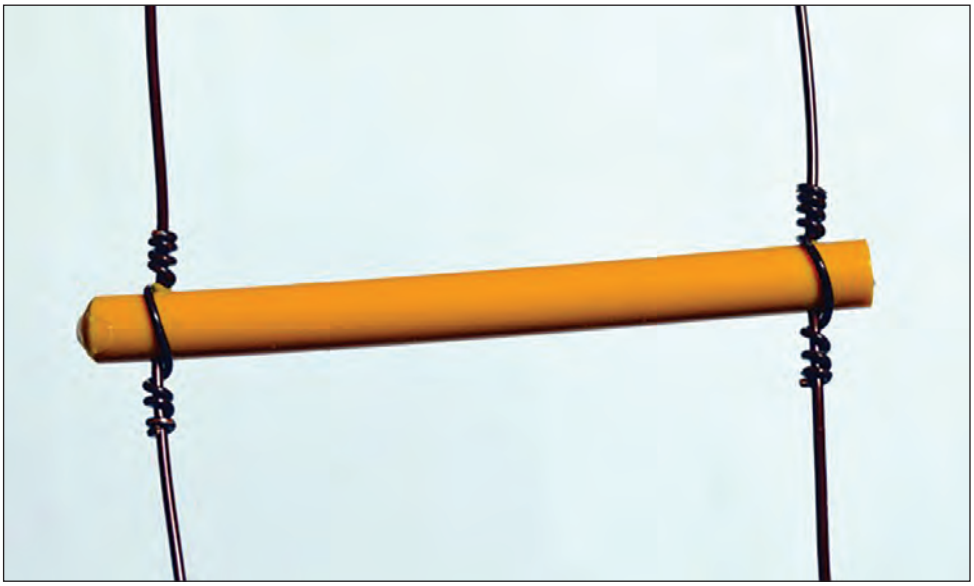


Figure 5. An example of homemade balanced line feeder.

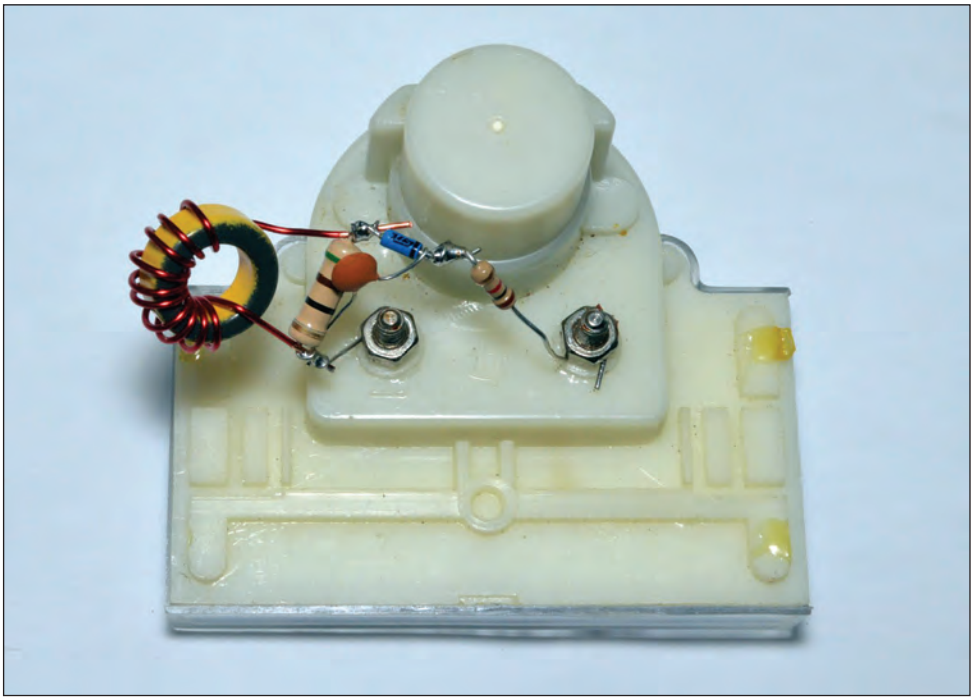


Figure 6: An RF current measuring instrument.

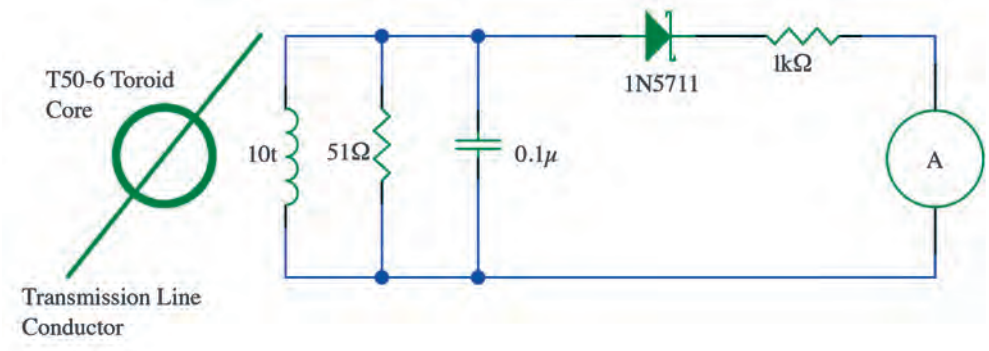


Figure 7: Current measuring instrument schematic. The transmission line conductor passing through the toroid is the primary of a transformer. The secondary is the 10 turns of #24 wire wound on the toroid.



A good source of information regarding the construction and use of an instrument using one of these cores can be found at http://www.ifwtech.co.uk/g3sek/clamp-on/clamp-on.htm. In my particular case the T50-6 toroid core I used was satisfactory because I was only interested in measuring the current in the feeder wires and I could easily disconnect and reconnect the wires so as to insert them through the toroid core. You can see how I did this in Figure 8.

I made my measurements with my transceiver power output set to 80 watts and I found a difference of about 20% between the currents in the two conductors. I think there are a number of problems with my measurement – the instrument is not well calibrated; there is no measurement of current phase; the position of the feeder wire within the toroid made a difference to the reading; the measurement on one wire by itself may add to any unbalance already in the system – but nevertheless I felt that the measurements gave me some worthwhile information about my feeder system. I didn't expect it to be completely balanced and I think that the results bear out this supposition. I should also note that I don't experience RF problems when I operate my radio.

One side benefit from my measurements was that I found that the balun became warm even though my transmission times were fairly short. Some experiments with alternative baluns may be in order!

Summary

From my discussion of these two projects, I hope you can see that there may be more questions than answers that come from experiments. In spite of spending a lot of time with the low pass filter, I'm still not totally satisfied with the comparison between the theoretical and actual results and from my comments regarding the RF current meter I think you will see that there is much room for further experimentation.

As Amateurs we may often have to make do with equipment that is less than state of the art, and although this can limit our ability to make definitive measurements perhaps this can be both a disadvantage and an advantage. I often think, for example, of how much the pioneers of radio science accomplished using simple equipment and ingenuity. If you have any questions or comments please contact me at vy1kx@myrac.ca.

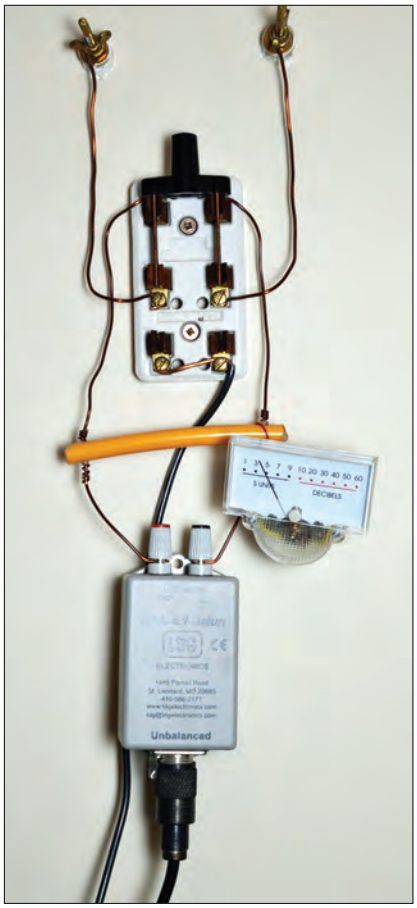


Figure 8:

My balanced line comes into the house through two long ceramic tubes after which it is connected to a DPDT (double pole double throw) knife switch.

To make a measurement, it is easy to disconnect one side of the feeder at the 4:1 balun, insert the wire through the toroid and then reconnect the wire to the balun and make the measurement.

The knife switch allows me to ground the antenna when it is not in use.

"Regulatory Roundup" continued from page 22

In the absence of any Canadian regulations for the Amateur Satellite Service, successful projects will have to be licensed in some other radio service, or, more embarrassingly, by some other country. In 2022, RAC provided ISED with detailed recommendations. RAC will be looking for an update from ISED.

ISED will have its own matters to raise for discussion. At time of writing, ISED has not been definitive about what they wish to discuss so I won't reveal them here. A full report on the 2023 CARAB meeting will appear in a future edition of this column. I hope to provide a report on CARAB during the RAC Conference which will take place in Halifax on August 19 prior to the Annual General Meeting. The conference will be livestreamed so even if you can't make it to Halifax, you can attend virtually and get caught up on the latest news.



RAC Exhibit Focused on Youth in Amateur Radio at Canada-Wide Science Fair STEM Expo in Edmonton

Paul Tyschuk, VE6UFO

Each year, the top school science projects in the country come together for the Canada-Wide Science Fair, where they compete for top honours in various categories. The fair is hosted by Youth Science Canada (YSC) and it is the country's largest youth science, technology, engineering and mathematics (STEM) event.

The event is held in a different city each year and Edmonton finally got to host after a three-year delay due to Covid-19. In addition to the science projects, the STEM Expo part of the event included over 50 exhibitors from science, education, community, government and technology sectors including Radio Amateurs of Canada who participates each year using the slogan "Amateur Radio: Out of This World Opportunities!" RAC reached out to local clubs to run the booth, and the Quarter Century Amateur Radio Club (QCARC) and the Northern Alberta Radio Club (NARC) jointly assumed the responsibility of hosting the RAC exhibit.

This was a unique opportunity for us to host this booth at a youth-oriented event when a young lady who is one of Canada's youngest Amateurs happens to call Edmonton home. Eleven year-old Star Covington, VA6SCC, who is a member of both clubs, worked as our "Youth Ambassador" for all three days of this event alongside her dad, Kirby, VE6MFX.



Star's smooth execution of Morse code on our "loudly" amplified oscillator attracted visitors in droves. Youths and adults alike were amazed to learn that she was a skilled Amateur Radio operator at such a young age.

QCARC Vice-President Neil Brown, VE6TCK, who is also our club's repeater team leader, kept everything working. He came up with some great ideas such as a remote control HF station demonstration and a high tech service monitor that displayed a modulation scope on a big screen.

Kids used handheld (HT) radios under our guidance to "see" what they sounded like when transmitting a VHF signal. There was also a fully self-contained "Go Box" set up to showcase the portability of Amateur Radio when needed in emergencies and to demonstrate how texts or emails can be sent via RF using Winlink.

THE OTTAWA AMATEUR RADIO CLUB PRESENTS THE 2023 OTTAWA (CARP) HAMFEST

SATURDAY, SEPTEMBER 9, 2023

(The week after the Labour Day Weekend)
Commercial Vendor setup: 7:30 am; Private Vendors: 8 am
Fleamarket Open: 9 am until 12 noon

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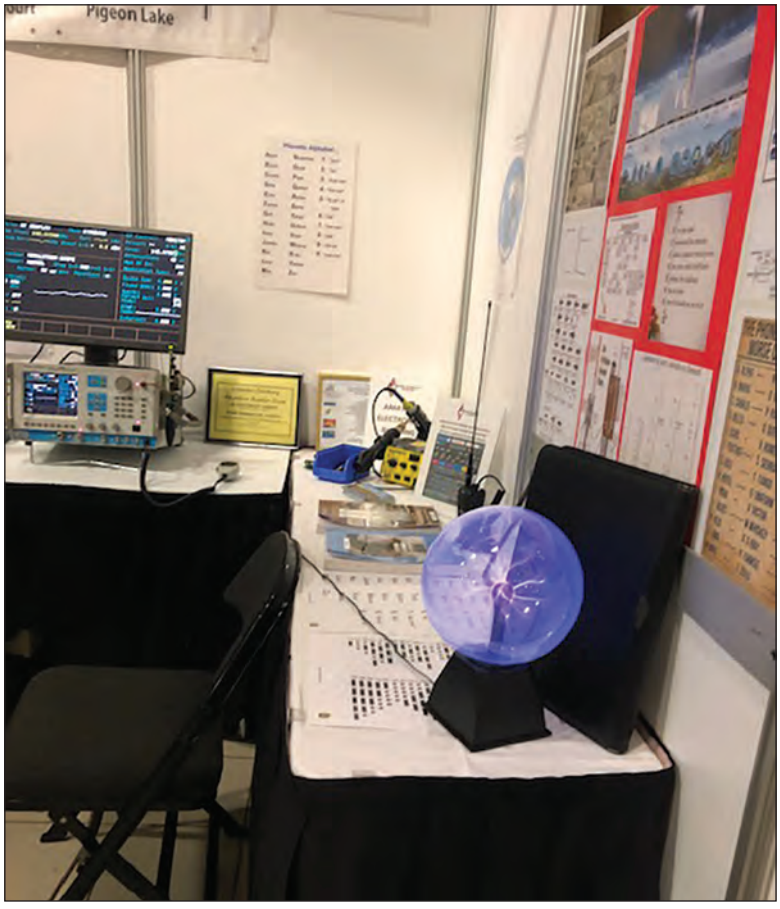
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RAC
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Email: hamfest@oarc.net
Website: https://oarc.net/hamfest/
Talk-in on VE2CRA, 146.94–, 100 Hz



To jazz the booth up a bit and make it more eye catching, we added flashing LED's and a plasma ball that the kids thought were really cool. We utilized some really great radio related science posters made by Kirby, VE6MFX and many visual aids and posters supplied by the Northern Alberta Radio Club.

We did hand out some QSL cards but significantly reduced our paper consumption by using an online brochure that was accessible by QR code.

Out of the 10,000 plus visitors to the event, we may have some new Amateurs in the future whose interest was sparked by this exhibit. If you are able to attend one of these fairs I highly recommend it.

We had a great time participating in the event and I wish to thank everyone who made it possible from planning to finish.

In particular I wish to thank Star Covington, VA6SCC, Kirby Covington, VE6MFX, Neil Brown, VE6TCK (QCARC Vice-President), Terry Whitson, VE6EM (QCARC President), Lloyd Ropchan, VA6CLR (NARC President), Radio Amateurs of Canada and all of the Amateur stations that took the time to attempt contacts with us.

And now for the rest of the story….

Trials, triumphs and takeaways from hosting the Canada-Wide Science Fair...

For several weeks before the event, a lot of planning and communications went on, mostly by email with all the interested parties: Quarter Century Amateur Radio Club, Northern Alberta Radio Club, Radio Amateurs of Canada and the Youth Science Canada, the event host.

One of our ideas was to have a VHF Winlink set up, so in April we actually brought my "Go Box" to the venue for testing in order to figure out on the event map where our booth should be located. Luckily, one of our guys used to work at the venue and he is familiar with the facility and to this day he still has a hidden antenna in the shipping bay HIHI! Our tests were successful and we chose our particular spot. I think we were the first exhibitors in the Expo to do so. Shortly after that we did a mockup of our table layout in a garage to make sure that it all made sense. There was a fair amount of effort involved in doing all of this in preparation for the event. But no matter how well you plan something, there will always be issues.

The day before setup we found out that none of the RAC signage would be onsite, so we improvised and made a bunch of RAC signs at the last minute. They turned out well. On setup day, two of us showed up to the venue with an SUV packed to the brim with equipment and visual aids.

At the booth, it was evident that the tables we rented weren't going to fit. The "10x10" booth was actually only 9.5 feet wide. Again improvise. Our connection to the venue operator got us a different sized table. We got everything set up and started testing equipment. At that point I reached a milestone. After over 30 years as an Amateur, I got my first RF burn.

Handy tip: *Don't grab a 2 metre antenna during TX, like I did while the Winlink radio was being tested. I don't recommend it. Even at 50 watts, it will blister your skin. We finished up for the day, went for a nice lunch, got to where I parked my truck in the morning, went to get in and I had no keys. They got left on a table at the event. By now, rush hour was starting and we had to go all the way back downtown. Not good, but nothing we could do about it.*

That night, we weren't sure if we had enough skeds arranged for the HF demo so I sent out an email blast at the last minute. Ready for the event to start…..

At 9 am on the first day of the Expo the doors burst open and 4,000 kids entered the hall all at once and there was such high ambient noise that our code oscillator could not be heard and it was difficult to run HF. Even carrying on conversations with people was not easy. As the crowd tapered off it got better, but we knew we had to change some things before the next day, including ways to draw the crowds into the booth. Apparently, posters aren't very captivating to kids.

Day 2 we did a major transformation to the booth with the addition of flashing LED's, a plasma ball and loudspeakers for the Morse code and HF demos. "CQ" could be heard from at least 30 feet away and that really attracted visitors. Also the handheld radios and modulation display were popular. We also added a candy jar but it wasn't really necessary once all the other improvements were implemented.

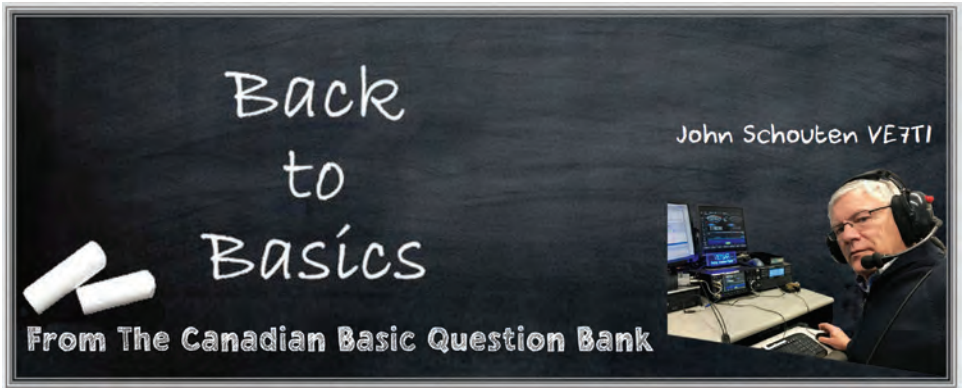
WiFi was marginal there so to make the HF remote work properly, we used one of our phones as a hotspot. During one of the QSOs the remote went dead when inadvertently the phone owner went away for lunch with the phone in his pocket!! By the end of the day we had everything under control and the next day went smoothly also. The HF setup looked good but a 2meter rig with a few locals dedicated to QSO with the kids all day would have worked better. After all, a new ham usually is on 2m first anyways.

Fun fact: Kids love Morse code. In the end, it was awesome to do this and I think all of our volunteers enjoyed it as much as I did.









The following article by John Shouten, VE7TI, is courtesy of the SARC Communicator. Thanks John!

A Decibel?

Have you wondered how radio wave strength is measured? This topic is often covered in Amateur Radio Basic Courses because there are several questions based on decibels in the exam required for Amateur Radio certification.

Decibels are another of those Basic course topics that can produce the dreaded "deer-in-the-headlights" stare. Typically, there can be up to two questions in the Basic exam but more often only one.

Here is one of the questions that we see frequently:

B-5-8-9: You add a 9 dB gain amplifier to your 2-watt handheld. What is the power output of the combination?

A) 20 watts

B) 18 watts

C) 16 watts

D) 11 watts



First, the bel unit was named after Alexander Graham Bell. This unit was so large that it is more typical to use the deci-bel, which is one bel divided by 10. Before bels, there was the Transmission Unit (TU).

Without resorting to high school algebra, a logarithm is a relationship between numbers. The decibel scale is logarithmic. One decibel corresponds to a 26% increase in power level. Doubling the power corresponds to a +3 dB increase. Similarly, reducing the power by half drops the level by –3 dB. Because it is logarithmic, a ten times increase in power is 10 dB.

The S Unit is normally defined as a 6 dB change in signal level, which is a factor of four in power (see Wikipedia at: https://en.wikipedia.org/wiki/S_meter).

Looking at sound levels first

Sound is a fundamental part of our daily lives, from the music we listen to, to the sounds of nature and the city around us. But how do we measure the loudness of sound? This is where decibels come in.

Decibels are a unit of measurement used to quantify the intensity or loudness of a sound. The scale ranges from 0 dB, which represents the quietest sound that humans can hear, to 194 dB, which is the sound of a rocket taking off.

As mentioned, the decibel scale is logarithmic, which means that an increase of 10 dB represents a tenfold increase in the sound intensity. For example, if the sound of a conversation measures 60 dB and a passing truck measures 70 dB, the 10 dB difference means the passing truck is ten times louder than the conversation.

What about radio?

Again, it is important to note that the decibel is a relative measure, not an absolute one. In other words, it is not an indication of the actual strength of the signal, but rather a comparison between two different levels.

For example, as shown in Figure 1, if you are listening to a radio station with a signal strength of 20 dB, and you increase the signal strength to 30 dB, you are not doubling the actual strength of the signal, but rather increasing it by a factor of 10.

Another important use of the decibel in radio is to measure the quality of the signal.

Decibel—Power Ratio

Figure 1

dB	Power ratio
100	10000000000
90	1000000000
80	100000000
70	10000000
60	1000000
50	100000
40	10000
30	1000
20	100
10	10
6	3.981 ≈ 4
3	1.995 ≈ 2
1	1.259
0	1
−1	0.794
−3	0.501 ≈ ½
−6	0.251 ≈ ¼
−10	0.1
−20	0.01
−30	0.001
−40	0 .0001
−50	0 .00001
−60	0 .000001
−70	0 .0000001
−80	0 .00000001
−90	0 .000000001
−100	0 .0000000001

Figure 2 Cable loss in dB per 100 feet

Cable Group	30 MHZ	50 MHZ	100 MHZ	150 MHZ	450 MHZ	1000 MHZ	2400 MHZ
LMR-100A®	3.9	5.1	7.2	8.9	15.8	24.1	38
LMR-200®	1.8	2.3	3.2	4	7	10.4	16.5
LMR-240 Ultra®	1.3	1.7	2.9	3.6	5.3	9.5	12.7
LMR-240®	1.3	1.7	2.4	3	5.2	7.9	12.7
LMR-400 Ultra®	0.8	1.1	1.5	1.5	3.2	5	7.9
LMR-400®	0.7	0.9	1.3	1.5	2.7	4.1	6.6
RG-174	5.5	6.6	8.8	10.3	18.1	27.4	43
RG-213	1	1.5	2.1	2.8	4.4	7.1	12
RG-214	1.2	1.6	1.9	2.4	5.1	8	13.7
RG-316	4.3	5.6	7.9	4.4	17.2	26.1	45
RG-58A/U	2.5	4.1	5.3	6.1	10.6	24	38.9
RG-8/U FOAM	1	1.2	1.8	2.4	4.4	7.1	12
RG-8X	2	2.1	3	4.7	8.6	12.9	21.6
RG218/U	0.4	0.6	0.8	1	2	3.8	6.4

Radio signals can be affected by a variety of factors, including distance, interference, and noise. By measuring the strength of the signal relative to the noise level, we can determine the signal-to-noise ratio (SNR), which is a measure of the clarity of the signal. The higher the SNR, the better the signal quality, and the more easily it can be received and understood. The more energy a radio signal has, the stronger it is and the louder it sounds. The farther a radio signal travels, the weaker it becomes and the quieter it sounds.

A decibel measures the ratio between two levels of power, such as the power of a radio signal at its source and at its destination. A decibel is equal to 10 times the logarithm of this ratio. For example, if a radio signal has 1000 times more power at its source than at its destination, then the difference in decibels is 10 times the logarithm of 1000, which is about 30 decibels. A higher number of decibels means a bigger difference in power levels and a stronger or louder signal.

The strength of a radio signal depends on how much energy it has and how far it travels. In the world of radio, we use the decibel (dB) to quantify the relative strength of radio waves.

The reference level for radio signals is typically set at one milliwatt of power. This is the amount of power that is required to produce a standard signal at a particular frequency. Any signal that is stronger than this reference level is said to be a positive number of decibels, while a signal weaker than this reference level is said to be a negative number of decibels.

Decibels crop up often in Amateur Radio. For example, with transmission line 100 feet of RG-8X coaxial cable has only 1.1 dB of loss at 10 MHz. Increase the frequency to 146 MHz and the loss jumps to 4.5 dB, using the Times Microwave cable calculator (https://timesmicrowave.com/Calculator/Embed). That means 50 watts of power at the transmitter turns into 17.7 watts at the other end of the cable. Using LMR-400 coax reduces the attenuation to 1.5 dB. Are you losing more than three times your power?

What should you retain for the exam? Know that +3 dB is a doubling and that –3 dB a halving. Know that a 10 dB increase is 10 times and beyond that count thezeros. So 20 dB is 1 plus 2 zeros or 100 times. Therefore 30 dB is 1 plus 3 zeros or 1000, and so on.

So for the answer to our initial question:

B-5-8-9 You add a 9 dB gain amplifier to your 2 watt handheld. What is the power output of the combination?

We have a 2-Watt handheld. Adding 3db is a doubling to 4-Watts. Another 3 dB doubles it again to 8-Watts, another 3 dB doubles again to 16-Watts. We've added 3 dB three times so we have reached the 9dB asked for in the question (+9 dB = power multiplied by 2x2x2).

John Schouten, VE7TI John Schouten, VE7TI, resides in Surrey, BritishColumbia.

He has served in a number ofAmateur Radio posts including as the Southwest Regional Amateur Radio Representative for the Provincial Emergency Program, where he was awarded the "Communications Volunteer of the Year" Award in 2003.

He was a founding member of the Vancouver Emergency Community Telecommunications Organization (VECTOR) and is currently a Director with Surrey Amateur Radio Communications (SARC) and the Surrey Emergency Program Amateur Radio (SEPAR).

He edits and publishes the SARC newsletter " The Communicator", which is available online at ve7sar.blogspot.ca.

We thank the SARC for granting permission for us to use this article.

Study Links for more information

Whether you are new to the hobby or brushing up on skills, you should find these study links helpful:

1) RIC-7 is the entire up-to-date Industry Canada (IC) Basic Question Bank. http://tinyurl.com/CanadaBasicQB

2) Industry Canada (ISED) on-line practice page: https://apc-cap.ic.gc.ca/pls/apc_anon/apeg_practice.practice_form

3) The Amateur Radio Exam Generator is at: https://www.ic.gc.ca/eic/site/025.nsf/eng/h_00040.html

4) The ExHaminer Study software for Windows is at: https://wp.rac.ca/exhaminer-v2-5/

5) VE3YT has an excellent question-based guide available at ve3yt.com

HAMpuzzle V1.2

New students are often confused by the block diagrams for receivers and transmitters.

François Daigneault, VE2AAY, wrote the the HAMpuzzle© program to give students the ability to practise assembling block diagrams for the Canadian Amateur Radio Basic Certification Exam.

Radio Amateurs of Canada is pleased to provide the program in both English and French as freeware on the RAC website at the link provided below. It runs under Microsoft Windows, but also works flawlessly on Ubuntu 10.04 + Wine 1.2.2).

Be sure to download at least one set of diagrams from the webpage and deposit the banks in the same folder as the program.

https://www.rac.ca/hampuzzle-v1-2/

RAC Offers Both Basic Qualification Study Guides

Hamstudy Basic Study Guide 2021/2022

This Study Guide has been designed to get you started in the world of Amateur Radio with 20 to 35 hours of study.

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- The complete December 2020 Question Bank is included in this edition.
- This manual is based on self-study courses which have been offered for more than 20 years at http://www.hamstudy.com.
- This is the perfect reference for new Radio Amateur enthusiasts.

The Canadian Amateur Radio Basic Qualification Study Guide

This Study Guide includes all information required to pass the current Innovation, Science and Economic Development's examination.

- The new 5th printing includes updated information about the 630m and 60m bands.
- Matched to current ISED examination requirements and contains all material and information required to pass the Basic Qualification exam
- Still includes unlimited time access to the acclaimed online Student Success Pages support
- The *Ask The Professor* help is added for some questions

More information on how to get started in Amateur Radio and where to find courses can be found on the Radio Amateurs of Canada website at: https://www.rac.ca/how-to-start/

Study Guides: https://www.rac.ca/study-guides-2/

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Amateur Radio Satellites



Keith Baker, VA3KSF/KB1SF
kb1sf@yahoo.com

Wow! I've been getting a *lot* of email questions from readers in response to my satellite columns here in TCA. Many of the questions range from "What radios should I use?" to "Do I need to have a large antenna to work the satellites." However, the *vast* majority of the questions I receive from readers revolve around "Which coax should I use?" to "Whether (or not) I need a preamp" for my home station?"

Preamps and Coax

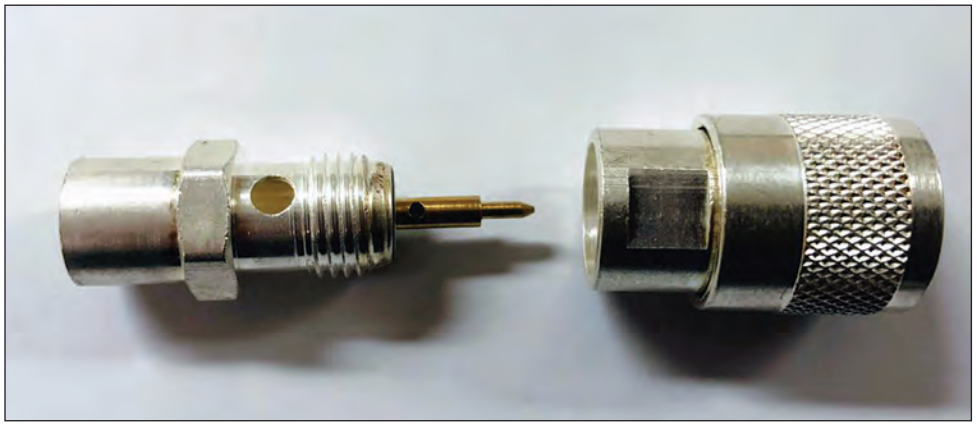
So in this installment of my satellite column, I'll discuss some of the various types of feedlines and connectors that are particularly suited for satellite operation, as well as whether (or not) you need to consider adding a preamplifier (or two) to your antenna system.

Feedlines for Satellite Work

Most veteran satellite operators know that otherwise excellent antennas can be rendered quite useless if they are linked to your station equipment with poor quality feedline. The feedline is what connects your antenna to your radio. While the proverbial "wet noodle" feedline might work well for local VHF/UHF repeater or scanner activity, because satellite work is *weak signal work* many types of feedlines used in the former activity are *not at all* suited for the latter.

A pair of "long boom" M2 crossed Yagi antennas and about 8 metres of Times LMR-400 feedline are set up in my backyard. This arrangement precludes the need for mast-mounted preamps, as the internal preamplifier in my TS-2000 radio has proven to be sufficient. (Courtesy: VA3KSF)

The principal concern with feedlines is *loss* and every feedline has it to some degree. That is, if you insert 50 watts into a feedline at your station, you'll have *less* than 50 watts once your signal gets to your antenna. The rest of the power is lost somewhere in the feedline – usually in the form of heat. Unfortunately, these characteristics are also at work when you receive signals as well. And because the signal from one of our satellites is *already* weak when it strikes your antenna, it follows that you can ill afford to waste any of that horrifically weak downlink RF heating up your feedline! What's more, those losses usually increase as the line length and operating frequencies being transmitted or received increase.



This two-piece Type-N connector assembles like a PL-259 but still exhibits all the low loss RF features of the original N connector design without the original version's notoriously "less than ideal" mechanical characteristics. (Courtesy: VA3KSF)

Most of us working the birds these days are using some form of coaxial cable (or simply "coax") for feedline. There are about as many varieties of coax as there are companies manufacturing them. However, most of us use some form of so-called "low loss" coaxial cable such as Belden 9913 or Times LMR 400 as opposed to lengths of RG-58, RG-8X, RG-213 or RG-8 used in most other Amateur Radio work.

Veteran satellite operators use low loss coax cable in their Earth stations because, as the name implies, this coax exhibits much lower losses (particularly at VHF and UHF frequencies) than those used for other (primarily HF) Amateur activities. In the past, I've used a variety of Belden 9913 coax for my various satellite stations. It exhibits a relatively low loss (on the order of about 2.6 dB at 400 MHz) per 100 feet, which is roughly half that of a similar length of RG-8 coax (about 4.1 dB).

The magic number to always keep in mind when comparing feedlines is 3 dB. That's because for every 3 dB of loss, roughly *half* of your signal is being wasted in the feedline. In the example above at frequencies close to our satellite uplink or downlink frequencies (400 MHz), using a 100-foot length of RG-8 means that well over *half* of your uplink power (or downlink signal) will be lost in the coax. Ouch!

Unfortunately, for all of its wonderful low loss attributes, Belden 9913 also has a dark side. Because the dielectric in this coax is largely made up of air, it tends to attract moisture. And even though you can try your best to completely seal connection points from the elements, over time the normal heating and cooling of the atmosphere *will* result in moist air getting inside and then condensing inside the cable.

The fancy name for this effect is called "diurnal pumping". For this reason, veteran satellite operators sometimes (derisively) refer to 9913 and its variants as "garden hose".

Fortunately, a relatively new brand of cable on the market, called Times LMR 400, offers about the same loss characteristics as Belden 9913 at about the same price, but without the "garden hose" issue. An excellent source of information about various types of transmission lines (including their loss characteristics) can be found online courtesy of Richard Pemble, W4RP, at: https://www.w4rp.com/ref/coax.html

Preamps

As I've noted, the downlink signal from most of our satellites is already weak when it strikes your antenna. So another "nice to have" (but sometimes not absolutely necessary) addition to your base station setup is a receive preamplifier to boost the satellite's downlink signal. These preamplifiers (or "preamps" as we call them) come in many shapes and forms. Some are integrated into the radio itself (or into external, so-called "brick" amplifiers") while others are designed to be mast-mounted nearer to your antenna.

Over the years, I've found the mast-mounted variety are best because they boost the satellite's weak downlink signal where it is strongest, that is *before* any of that weak satellite downlink signal is lost in the feedline to your station. However, unless the receiving preamp is specifically equipped with internal switching relays, it is very important to remember that transmitting a signal back through one of them will often prove fatal to the device. I've "smoked" more than one of these in my time this way!



Mast-mounted preamps, such as this one from SSB electronics, boost weak satellite downlink signals at the antenna feedpoint where those signals are strongest.
(Courtesy: SSB Electronics)

Do I Need One?

The short answer is: "It depends". As I've said on numerous occasions in the past, because satellite work is weak signal work, building your satellite station to consistently receive "S9+" downlink signals from the birds is absolute overkill.

What *is* important is that you simply be able to hear your own downlink signals (and those of the other stations that wish to make contact with you) coming through the satellite. Period.



MFJ-Mirage offers mast-mounted preamps for VHF and UHF frequencies. Each model features internal TX/RX switching and is powered by 12 volts added to the coax from either a radio or their in-line switchbox. (Courtesy: MFJ Enterprises)

How strong those downlink signals will be at your radio will depend on the length and type of feedline that you are using and the gain in your antenna system. If your low-loss coax run is less than 10 metres or so and your antenna gains are in the 5-10 db gain ballpark, you *may* be able to get by just using the preamp built into your radio on the downlink.

For example, I'm currently using a pair of "long boom" crossed Yagi antennas from M2 and about 8 metres of LMR-400 coax feeding my Kenwood TS-2000. While the received signals on the 435 MHz downlink are a bit weak, I still have absolutely *no* trouble hearing (and being heard) on the satellites using just the internal preamp built into my TS-2000.

Bottom line: I suggest you *first* build your satellite Earth Station using the best antennas and feedlines you can afford. In addition, try to keep those low loss coax runs between your antennas and radio as short as possible and see if that arrangement is sufficient. If you find you are still having trouble hearing your own signals (or those of others) on the downlink, you then might consider adding a preamp (or preamps) into your setup to see if that addition improves things.

A Word About Connectors

Besides the importance of using a high quality, low loss feedline to and from your satellite antenna (and keeping that feedline length as short as practicable), it is also important to use the very best connectors you can afford. Just as with choosing your feedline, if you try to skimp on the connectors for the feedline connecting your antenna to your radio, you could lose a significant portion of your signal through those connectors as well.

Remember, every dB of attenuation that weak satellite signals encounter while traveling from your antenna to your radio is a bit of the downlink you won't hear. A 3-6 dB loss from using cheap, HF-only rated coax and poor quality connectors can turn a marginal VHF or UHF downlink signal into one that simply isn't there.

Connectors add to line losses by creating impedance "bumps" that act like little resistors in the line. At HF (and to some extent at 6m and 2m) you can usually get by with using the common SO-239/PL-259 connector combination. However, at higher frequencies (such as at 70 cm and above where many of our Amateur Radio satellites operate), most satellite-capable equipment now comes equipped with a Type-N connector for those frequencies. The type-N connector, when properly installed, will help minimize these small mismatches in the feedline which, in turn, will allow a greater portion of that (already weak) satellite downlink signal to make its way to your operating position from your satellite antenna.

As I've also noted, it is critically important to make sure that these connectors are well seated and well sealed when installed at your antenna. Otherwise, your coax will very quickly become waterlogged and then you'll *really* have line losses to contend with! One popular method is to wrap electrical tape tightly around the connectors. You can also use one of the many available hand-moldable compounds sold just for this purpose.

Wrap Up

In future editions, I'll continue to share some helpful hints to assist you with your exploration of this absolutely fascinating aspect of the Amateur Radio Service.

I'll also bring you up to date on the status of our satellite fleet. See you then.

In the meantime, and as always, you can get the very latest information about the current status and future plans via the AMSAT website at: www.amsat.org.

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Silver / Argent

François Daigneault, VE2AAY
Eric Kehler, VA7NX
Ron Vadeboncoeur, VE3REV

Bronze / Bronze

Dave Ackerman, VE3UGT
Yvonne Adam, VE3RYA
Michael Adams, VE2KVU
Rob Adams, VE6YXE
Russell Adams, VE7MTU
John Alexandersen, VE5JJA
Stuart Allan, VE3STY
Paul Allen, VA3PB
Chris Allingham, VE3FU
Christopher Allsop, VE3SKH
Pablo Alvarez, VE3FNT
Wayne Anderson, VE3UWA
Michael Anson-Cartwright, VA3QAC
Luis Araiza Chavez, VA7WCR
David Argo, VE3NLZ
Matthew Asham, VE7UDP
Ken Asprey, VE1PDL
Gijo Augustin, VE2GIJ
Michael Avotins, VA6MWA
Joël Bédard, VE2JBD
Gary Badcock, VO1GWC
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Stewart Blackburn, VE7SZB
Clinton Blackmore, VE6CWB
Henry Blais, VE3HJL
James Blemkie, VA3JXB
Colin Bodor, VA6CCB
Roy Boehli, VE6CBG
Denis Bois, VE3OOZ
Sidney Boloten, VE7BIA
Don Booker, VA2EEK
Bruno Bouliane, VE2VK
Rodrick Bourque, VE9HV
Jeremy Bourque, VE9RJB
Matthew Bovolotto
Allan Boyd, VE3AJB
Robert Boyer, VE3XBB
Steven Bradshaw, VE7CBH
Patrick Brewer, VE3KJQ
Michael Brickell, VE3TKI
L.A Robert Brosseau, VA2DBJ
Matthew Eric Brown, VE3EB
Edward Brown, VO2ED
Ian Brownlee, VA4IAM
James Bruce, VE4ATL
Denis Brunette, VA3DCB
Paul Bryan, VA7XP
Karen Bryden, VA3IGO
Eric Bryer, VE3HF
Don Buchan, VE3DBM
Harry Buckley, VE3YSH
Pam Buckway, VY1PJB
Richard Budny, VA3RSA
Guy Bujold, VE2CXA
Ron Bull, VE7DIO
William Burgess, VE3CRU
Paul Burggraaf, VE3PRB
Rob Burns, VA3KGY
Gary Butler, VE7OQ
Dale Butt, VE3IOU
Paul Caccamo, VA3PC
David Caddell, VA7VVV
Frederick Cain, VE3JMJ
Michael Caissie, VE9MCA
Bruce Calhoun, VE3BER
Antonio Callà, VE7AXI
Sandy Cameron, VE3AAC
Ralph Cameron, VE3BBM
Jordan Campbell, VE7HBI
Mark Capewell, VA7MNV
Mary Card, VE3FEB
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Lee Cassar, VA3XLC
Malcolm Challis, VA7MKB
Borden Chapman, VA1CBC
Rob Chartier, VA7QAD
Gilles Chevalier, VA2CG
John Chin, VA3BOF
Janice Lynn Clanfield, VA3POX
Robert Clift, VE7OCQ
Ernest Clintberg, VE6ECK
Scott Clitheroe, VE3QBZ
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Guy Costanzo, VA7GAC
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Robert Cottreau, VE1RCC
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Robert Cove, VO1REC
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Rick Danby, VE3BK
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John deLagran, VE3VL
Andrew DeMarsh, VE3HCA
Luc Desnoyers, VE2AEI
Richard Dion, VE3LAD
Grant Dixon, VE3CGV
Lawrence Dobranski, VA3IQ
Michael Doyle, VE3EJF
Nicholas Doyle, VE7NCD
Keith Drader, VE6KKD
Mike Drake, VA3BKQ
George Duffield, VE3WKJ
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Peter Dwan, VE6DWN
Robert Dyer, VE3KTY
Michel Dyotte, VA2MDY
Richard Edge, VE7RXE
Robert Eichhorn, VA7RPE
Doug Elliott, VA3DAE
Clinton Elliott, VA6CBE
Jeffrey Ellis, KD9BLO
Mark Ellison, VA2MKE
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Marcel Eschenmoser, VE3UKW
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Gordon Fairchild, VE3GDN
Richard Ferch, VE3KI
Margaret Ferguson, VA7VF
Andriy Fesun
Halden Field, VE7UTS
Terry Finn, VE6TF
Sally Finora, VA7SMF
Bob Foley, VE3RVZ
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James Fortune, VA3JSF
L Clare Fowler, VE3NPC
Doug Frame, VE3JDF
Ed Frazer, VE7EF
Norm Freidin, VE3CZI
Stefan Fridriksson, VA3FDX
Rob Fry, VA3FR
G Keith Fuller, VE7GKF
Frank Fullum, VE2KOI
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Frank Garofalo, VA3FGF
Jean Gauthier, VA2NJG
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Brett Gibson, VA3EES
Phil GIbson, VA3KDC
Ron Gibson, VE3CGR
John Gilje, VE6KJG
Keith Gill, VE3KRU
William Gillies, VO1WJG
Dave Gillingham, VE3DZG
Eric Gingras, VA3DZY
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Thomas W. Godden, VE3TWG
Jason Gomes, VE7OLB
Carlos Ernesto Gomes Medeiros, VA3VIE
Dave Goodwin, VE3KG
Stephen Goodwin, VE6SMG
Donald Gover, VA6DLG
David Green, VE3TLY
Dustin Greig, VE6SVN
Guy Grosjean, VA3ZHF
Michael Grover, VE7MGQ
Colin Guillas, VA3CSG
Reg Gulliford, VE3AWN
J. Paul Guy, VE8JG
Tom Haavisto, VE3CX
Will Haggerty, VA1HEL

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Colin Haig, VE3MSC
Alan Haines, VE3ALH
Lana Hale, VA6LDH
Don Hamilton, VA7GL
David Hamilton, VE6DWH
Gordon Hamilton, VE7ON
Garry V. Hammond, VE3XN
Jovan Hamovic, VA7JOV
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Brad Harris, VE3MXJ
Gerald Harris, VE6GBH
Bruce Havery, VA7SND
James Haworth, VE3DXG
Harm Hazeu, VE4HAZ
Jean-Paul Henault, VE2JHP
Hugh Henderson, VY1HH
Mathew Hengst, VE9GF
Paul Henry, VE3CPH
Jody Herperger, VE5SAR
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Christopher Hillier, VO1IDX
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Peter Hodgson, VE3UR
Frank-Michael Hofmann, VE6FMH
Csaba Hollo, VA7NDT
Brad Honke, VE4XM
Peter Hope-Tindall, VA3YR
Michal Hoppe, VE7TMZ
Roger Hopson, VA3HPR
Gabor Horvath, VE7DXG
Alan Hotte, VA3IAH
Robert (Bob) Howard, VE3YX
Derek Howes, VE3BRV
Adrian Huber, VA7AGH
Jim Humphrey, VE3TKV
Mark Humphreys, VA5LNX
John Hunter, VA3OOD
Jan Hykamp, VA3EPP
John Illes, VE7JSI
James Irvine, VE3UZX
Lorne Jackson, VE3CXT
Gordon John Jacques, VA3GJJ
Peter Jago, VA3PJ
Zain Jaison, VA7VZN
Stephen Jamieson, VA3ZXN
Robert Jankov, VA3KRJ
S. Wray Jaques, VA3EO
B.M. Jatzeck, VA6BMJ
Jason Johnson, VE3PEJ
Dave Johnson, VE7VR
Harris Jones, VA3HMJ
Jeremy Jones, VA3ZTF
Vern Jones
James Joyce, VE3LTN
Jean-Michel Julien, VE2ZEB
Charles Kaeff, WA4HCC
David Kammann, VA3DKM
Gordon Kelland, VO1KGZ
Jason Kendall, VE3YCA
Stephen A. Keppel, VA3LDK
Ryan Kerr, VA6FTW
Richard Kettle, VE3QRK
Mohammad Kia, VE7JMI
Patrick Kierans, VE3KPA
R Neil King, VA7DX
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David Kingsland, VE3MDX
Glen Kinner, VE5GHK
Erland Kirste, VE7EFK
David Klatt, VE5GN
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Larry Konowalchuk, VA4LMK
Gordon Kosmenko, VE6SV
Mersudin Kozo, VE2KME
Luc LaCasse, VE2LLX
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Robert Laramée, VE2KZW
Don Latter, VE7DIL
Derrick Lau, VA3LGT
Al Law, VE3FZ
Samuel Leach, VO1CBL
Gregory Leck, VA2LCK
Francis Leclerc, VE2FLP
John Lediett, VE3FVC
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Barrie Lennox, VE3AOI
Stan Leschinsky, VE3TW
Ritchie Leslie, VA7RLX
Joel Levis, VE3CJJ
Trevor Lien, VE5TDL
Carolyn Liggins, VE1CRL
David P. Lopetinsky, VE6ELL
John Lorenc, VA3WM
Peter Lower, VE3KWM
Gordon Lowick, VE7YMJ
James Ludwar, VE6JWL
Eric Lusk, VE7EMI
Erin Lutz, VE5EML
Ancil Lynch, VA3FIP
Paul Lynott, VA3PNL
Jory Maccan, VE6JBM
Richard MacDonald, VA1UAV
Charles MacDonald, VA3CPY
Glenn MacDonell, VE3XRA
Ian MacFarquhar, VE9IM
Mike MacGregor, VE3QMM
Darcey MacInnes, VA7DKY
John MacKay, VE7EEX
Robert MacKenzie, VA3RKM
Neil Macklem, VE3SST
Pierre Mainville, VA3PM
Alan Mallett, VA7AWM
John Marn, VA3JSM
Bruce Marshall, VA6BRM
Dan Martin, VE6GDM
Darie Marza, VA3HFC
Gregory Mason, VE4AMN
Gabriel Mazzeo, VA3CWT
Phil McBride, VA3QR
Don McCallan, VA3GFD
Duncan McCansh, VE3OM
Dwayne McCormick, VE3CQQ
Hugh McCully, VE3AYR
Aaron McDonald, VA6LIT
Brian McDonnell, VA3CBG
Leonard McDougall, VA5MCD
Doug McDougall, VE3DGY
Steve McEdwards, VA3TPS
William McEvoy, VE3NEF
John McGrath, VE3JPW
Ken McIntosh, VA7KBM
Andrew Allan McKay, VA4XRY
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L. David McLennon, VO1LM
Grant Mcsorley, VY2GAM
Martin Menard, VA3EIC
Robert Millar, VE3LNV
Ken Miller, VE3KQR
Roger Miller, VE3ROG
Eric Mills, VE1AST
Michael Milosevic, VE3EQM
Vladimir Milutinovic, VE3JM
Andrew Mitchell, VA3CW
J.T. Mitchell, VE6OH
Paresh Mody, VE3PQX
Marcel Mongeon, VA3DDD
Greg Moore, VE7GMQ
Bob Morton, VE3WY
John Moylan, VA3YOM
Michael Mucciaccio, VA3MMU
Wilf Mulder, VE7OHM
Gordon Murray, VE3JSJ
Bruce Murray, VE6BRZ
Darrell Murray, VE6DRZ
Mykhailo Mykhno, VE7WOA
Robert Nash, VE3KZ
Jim Nelson, VE6ACR
Chris Nielsen, VA6JCN
David Niemi, VA3NIE
Allan Niittymaa, VA3KAI
Ken Niles, VA3YYK
Brian Nilsson, VE3SLB
Andrew Norwood, VE3YTP
Mark Nowicki, VE3MNA
Arron Oberman, VA7ZZA
Keith Olson, VE4VO
Alex Opotchanov, VE6ALO
Bernhard Osthoff, VE6JWG
Jeff Page, VA3OBJ
Phil Parker, VE3GFX
Gordon Passmore, VA7GAP
Brad Paterson, VA6AKF
Bruce Patten, VE7PTN
Cleve Patterson, VE7NKD
Bruce Patterson, VE7XBP
Tony Pattinson, VE2KM
Colin Pavey, VA3FP
Irmgard (Geddie) Pawlowski, VE3VM
Bruce Payan, VE7CGN
Tim Pekkonen, VE3UO
Steve Pengelly, VE3STV
Karen Peori, VE1VEZ
Raymond Perrin, VE3FN
Lars James Taillon Petersen, VE9LJ
Brent Robert Petersen, VE9EX
Jim Pierce, VA1YZX
Richard Pierik, VE1RPX
Dale Pilsworth, VA6OK
Eric Pinkerton, VE3EPN
Bruce Poirier, VA3WBO
Gary Pollock, VE1GMP
Gregory Popelas, VA3CBN
Peter Potjewyd, VE3WYD
Terry Potts, VE3TEP
John Potts, VE6JWP
Scott Prior, VA7LMP
Theodore Arthur Rachwal, VE9AQM
Victor Rowell Radovan, VE4RWL
Kolya Ramirez-Hughes, VE5KE
Paulo Ranzani, VE8PR
Norm Rashleigh, VE3LC

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Tony Ratcliffe, VE6AER
Bryan Rawlings, VE3QN
William Redmond, VA3WBR
Steve REGAN, VA3MGY
David Reid, VE6BIR
Gilles Renucci, VE2TZT
Guy Richard, VE2XTD
Earl Richardet, VE7QJ
Randall Risto, VE6RND
Simon Rizzardo, VE7RIZ
Ted Robb, VE4RBL
Jeff Robb, VE3MDC
Donald Robinson,
William Robinson, VE3ARE
J. Mark Robinson, VE3JMR
David Rogers, KB9YYM
David Rosenfeld, VE3BAK
Allan Ross, VE7WJ
Shaun Rossi, VE3FNI
Louise-Michelle Rouillard
Eric Rouse, VA3FYB
Don Rowed, VE3KII
Dave Rowlinson, VE3ZDR
Cary Rubenfeld, VE4EA
Denis Rule, VE3BF
Rick Ruschmeier
Ken Rusnak, VE3EFZ
Robert (Bob) Ryll, VA7RYL
Ted Rypma, VE3TRQ
Bunty Saini, VA3KBM
Mason Salmon, VE7PMD
Edward Samborski, VE3TAS
Dan Sanchez, VE7EOZ
David Sangwin, VA3NSC
Anthony Santen, VE3EPE
Kim Schaffer, VA3ZXC
Mark Schellenberg, VE7JWU
Bill Scholey, VE7QC
Trevor Schriver, VE3VVB
Mark Scola, VA3HES
John Scott, VE1JS
David Scott, VE3ZZU
Don Scott, VE7DLD
Ian Seddon, VE3HUT
Zachary Seguin, VA3ZTS
Gord Settle, VY1GS
Gordon Sharkey, VE7RYE
Ian Shaw, VE3IJS
Harold Shepherd, VE3HSB
Pietra Shirley
Paul Shiryaev, VA3PAW
Joseph Shynn, VA3GOC
Kevin Sidlar, VA3SID
Andre Silveira Santos de Souza, VA2HAS
Antonio Simonetta, VE3WZM
Glenn Simpson, VE3GTS
Kirk Sinclair, VA3KXS
Jack Sinclair, VA3WPJ

Ron Sinclair, VE3JRN
Erik Skovgaard, VE7MDL
Jon Slaco, VA7NOJ
Curt Smecher, VE7CAS
Douglas Smith, VE3OUI
Patrick Speer, VE7PJS
Ron Spencer, VA3RSX
Mark Spencer, VE7AFZ
Tom Spina, VE7TKS
Edward Spingola, VA3TPV
RJ Spitz, VA7UY
Mike Stafford, VE6MEX
Michael Stagg, VA6CNC
Edward Stavin, VE3VYT
Peter Stec, VE3TOT
David Steels, VE3UZ
Rob Steenweg, VE1CHW
Roger Stein, K7SJ
Al Stephens, VE3NXP
Bruce Stevenson, VA3BSR
Jeff Stewart, VA3WXM
David Stewart, VA4DJS
Patrick Stoddard, VA7EWK
Edmund Strange, VE2MPP
William Stunden, VA3ZA
Brian Summers, VE7JKZ
Walter Szyc, VE3SYZ
Hiroshi Takahashi, VA7LET
Raymond Tanguay, VE2RZQ
Rainerio Tayco, VE3RYT
Malcolm Taylor, VE6YL
Art Tendies, VE4AK
Leonardo Terceiro, VE6KLE
Richard Tervo, VE9AS
Jim Thiessen, VA3KV
David Charles Thompson, VE3SXY
Stephen Tian, VE6TLM
Doug Tompkins, VE3IDT
Jason Toms, VE3TBE
Jean-François Tremblay, VA2FW
Jason Tremblay, VE3JXT
Gerry Trueman, VE7GGT
Yori Tsuji, VE4ACX
Ian Turnbull, VE7TGI
Paul Twa, VE7KWA
Scott Ullrich, VE7RSU
William Underwood, VE1WLU
Richard Upfield, VA3RMU
John Van Egdom, VE6XJV
Michael Van Kuyk, VE7KPZ
John van Loenen, VA3FVL
Bernard Van Tighem, VE7BVT
Rob Van Wyck, VE3FLB
Robert Vanderminnen, VA3RMV
Pierre Vella-Zarb, VE3VZP
Derek Vermette, VA4AFK
Cory Vickruck, VE7KFX
Maurice-André Vigneault, VE3VIG

New Members | Nouveaux membres

Daniel Alvarez, VE3FCT
Pierre Amestoy, F4ITS
Ryan Barber , VA7BFR
Kristian Barnes, VE3KNB
Moira Bell, VA3NZQ
Jeffrey Best, VE1 JEF
Lary Bloomk, VE7LXB
Cory Blum, VE2ZXY
Marlowe Brennan, VE7QFT
James Burley, VE3VDQ
Piotr Cebula, VE1PAC
Fernand Charlebois, VA3LMA
Bob Conlon, VE6UKR
Charles Copeland, VA6CHK
Pierre Cossette
Andrew Crawford, VE1VAC
Trevor Decker, VE5DKR
Chris Deecker, VE3CXD
Joshua Deecker, VE3VQR
Roger Delaney, VE3SOZ
Roxanne Delmage, VE3ROX
Jean-Sébastien Dominique
William Dorfmann, VE7WDO
Pierre Dubois, VA3HWK
Craig Ewan
Dwayne Fitzgerald, VE9D0
Rob Fry, VA3FR
Matthew Gervais, VE3MXG
Allan Giffen, VA3NEF
Paul Graham, VE7CXZ
Kenneth Gray, KI7IOB
Dimtcho Gueorguiev, VE7XDT
Peter Harris, VA3PMH
Jeff Hopson
Martin Houle, VA2AMH
Bob Housser, VE3SFW
Brian Jarman, VE7WO
Rick Jeffery, VA7XEX
Chris Kidney, V01CRK

Dean Kinden, VO1OKK
Ryan Andrew King, VA3GKL
Anthony Knezevic
Joseph Krysl, VE7KRY
Steven La Hay
Mark Lane, VE6MCL
Tibor Lesko, VE3YTL
Lyle MacGregor
Wayne Malone, VA6WTM
Rob Manering, VE7RQB
Todd Martin, VA3VIG
Dalen McClintock, VA3EIG
William McEvoy
Richard McIntyre, VA3KTR
Virginia McLane, VE7FXH
Cal McLelland, VA3ZLA
Rick Middleton, VA7ROP
John Mott
Earl Osborne, VE1SN
Russell Pastuch, VE3FSN
Michael Poczynek, VE3ITS
Trevor Schriver, VE3VVB
John Senez, VA3JBS
Nathaniel Senff, VA7SNF
Stephanie Smith, VE6NIX
Dean Smith, VA3ARX
Edward Stavin, VE3VYT
Raymond Tanguay, VE2RZQ
Heath R Tanner, VA7HMT
Anthony Thiessen, VE4XLT
Edwin Thompson, VE7EKZ
Kenneth Van Derveer
Robert Waarbroek, VA7RWE
Stephen Weiss
Patrick Wilcox, VE6PLW
Michael Williams, VA1KMA
Jennifer Williams, VE7RTJ
Ronald Woodbeck
Bev Yuen, AH6NF

Welcome! Bienvenue! | Thank You! Merci!

Stephen Vinokuroff, VE7WCZ
Earnest Vinson
Rob Walker, VE3RWY
Scott Waller, VE3OCB
James Webb, VE3WA
Joel Weder, VE6EI
Greg Weir, VE1GWE
Gerald Welch, VE6WCE
David Wendt, VE3EAC
Sean Wenzel, VA3WNZ
David Westerman, VE7DVQ
Gerard White, VO1OR
Donald Whitty, VE9XX
Brice Wightman, VE3EDR
James Wilkins, VE7UVL
Kenneth Williams, VE9KW
Wayne Willis, VE5WFW

Thomas Willms, VE7TXL
Glenn Wilson, VA3XOG
Alan Wilson, VE1AWW
Maureen Wilson, VE3MWL
Rodney (Rod) Wilson, VE3RXN
Bruce Winter, VE7HBW
Scott Winton, VA3RSW
John Wiseman, VE7BVS
Richard Wodzianek, VA7RLW
K. Scott Wood, VE1QD
Allen Wootton, VY1KX
Robert Wortman, VE9RLW
Clayton Wozney, VA3WOZ
Leo Yoshinaka, VA3EBI
Fei Zhou, VA3EMQ
Zhixu (Steven) Zhu, VA3GLQ

Message from RAC Community Services Officer

Jason Tremblay, VE3JXT | Community Services Officer | community@rac.ca



Things are Happening!

As reported in my last CSO Message, the rollout of the Auxiliary Communications Service (ACS) program is well underway.

We have received numerous inquiries from governments and non-governmental organizations (NGOs) who would like to be part of its implementation in Canada.

The objective is to make the Auxiliary Communications Service a program which is managed by Radio Amateurs of Canada, but funded and advised by stakeholders.

RAC President Phil A. McBride, VA3QR, and I been part of several meetings with representatives of municipal, provincial/territorial and federal governments – including Public Safety Canada through RAC's membership in the Emergency Management NGO Consortium of Canada (EMNCC). RAC is also diligently working with CIFAL/York University to develop training for the Auxiliary Communications Service.

On Thursday, June 20, Phil and I had the pleasure of meeting with Minister Prabmeet Sarkaria, President of the Treasury Board of Ontario at Queens' Park. Radio Amateurs of Canada is collaborating with the Province through Volunteer Corps Ontario and Emergency Management Ontario (EMO) to provide communications equipment and a cadre of trained and vetted volunteers to serve as Auxiliary Communicators at the Provincial Emergency Operations Centre, as well as to deploy across Ontario when called upon.

Stay tuned for more updates on this exciting project!



Jason Tremblay, VE3JXT and Phil McBride, VA3QR, met with Minister Prabmeet Sarkaria, President of the Treasury Board of Ontario at Queen's Park.

We Need Your Help!

The Canadian Field Organization has been reorganized into 14 Sections to reflect our expanding needs:

- Alberta (AB)
- British Columbia (BC)
- Manitoba (MB)
- New Brunswick (NB)
- Newfoundland and Labrador (NL)
- Nova Scotia (NS)
- Ontario North (ONN)
- Ontario South (ONS)
- Ontario Golden Horseshoe (GH)
- Ontario East (ONE)
- Prince Edward Island (PE)
- Quebec (QC)
- Saskatchewan (SK)
- Territories (TER)

Note: Ontario continues to have four Sections in order to match the geographic regions used by Emergency Management Ontario (EMO).

Radio Amateurs of Canada is expanding the leadership of the Sections to include several new positions in the following areas.

National Advisory Committee

- Deputy Community Services Officer
- National AuxComm Coordinator
- National Community and Youth Coordinator
- National Radio Traffic and Bulletin Coordinator
- National Training Coordinator
- National CanWarn Coordinator
- Section Manager for the Territories

Sectional Council

- Deputy Section Manager
- Sectional ACS Coordinator
- Sectional Community and Youth Coordinator
- Sectional Radio and Traffic Coordinator
- Sectional Training Officer
- Sectional CanWarn Coordinator
- ACS Group Coordinator
- ACS Rapid Response Team Leader
- ACS Provincial Response Team Coordinator

Each member of the National Advisory Committee and the Sectional Council serves to provide representation to the Amateur community in Canada.

Leadership with a purpose: to ensure you, as a member of this community, are trained, supported and mentored when and if you require it.

It also provides you with a voice, from the club to the national society, and from the national society to you.

National Advisory Committee

The National Advisory Committee will be made up of volunteers from across Canada who are dedicated to:

- Developing programs and collaboration within each Section
- Strengthening the Amateur community by promoting and serving local community group and government-based programs
- Providing mentoring and education programs to inspire and retain Amateurs throughout Canada

These positions will be full-time volunteer positions which will assist RAC with the day-to-day operations of the Field Organization, by working directly with the Section Councils from across Canada.

Some of these positions may work with Federal agencies and Non-Government Organizations (NGOs) through programs like the Emergency Management Consortium of Canada (EMNCC).

They may also help to develop cross-border operations with Region 2 of the International Amateur Radio Union (IARU-R2), and also focus on streamlining services and enhancing collaboration between Sections and implementation of national programs.

Sectional Council

The Sectional Council will work locally and support local programs as they are developed. By empowering Sectional leadership, we benefit from the diversity of the community and its knowledge and experience. This in turn creates a collaborative environment which will benefit the entire Amateur community – including individual Amateurs and not just Affiliated Clubs or Amateur Radio groups. The result will be new and improved programs and services which will inspire individuals to get involved in Amateur Radio and to stay active.

ACS Support Team

Working with Emergency Management and Non-Governmental Organizations can sometimes be difficult, especially from the national level. Emergencies are managed from local or county agencies long before Provincial and Federal assistance are called upon.

Sectional leadership can build stronger relationships with stakeholders. This may offer interoperability and even diversity within community-based organizations. By embedding communication operators within organizations, we assist with interoperability and strengthen the resolve of our organization. That along with a nationally recognized training program, auxiliary communication will benefit all organization involved with emergency management.

Support for Emergency Response

The ACS Community Response Group will fall under the direction of the local Community Emergency Management Coordinator (CEMC).

Community Response Group operation will be dedicated to the Community Emergency Plan as provided by the Authority Having Jurisdiction (AHJ) within a county or municipality. The team will provide local support in disasters, if and when required, and will report to the County or Community Emergency Management Coordinator (CEMC) of the authority having jurisdiction for operational assignments.

The ACS Group Coordinator will work with the ACS District Coordinator for assistance and training. Community based, non-deployable AuxComm trained operators may be used to assist in community-based communications, delivering of emergency bulletins and other tasks with the permission of the Authority Having Jurisdiction.

The ACS Rapid Response Team will assist the rapid deployment programs from NGOs and Emergency Management agencies to remote locations without communications. The Rapid Response Team may also assist Community Response Groups as additional resources in extended emergencies.

The Rapid Response Team is in essences an Incident Command System (ICS) Strike Team consisting of: a Communications Leader (provided by the Authority Having Jurisdiction); a Systems Operator in charge of the maintaining of the communications setup; and three communicators for operational services who assist with setup.

Members report to the Sectional ACS District Coordinators for assistance, deployment information and training purposes. This team is designed to deploy with provincial or NGO support teams in support of provincial emergency management organizations.

The Section Disaster Support Group is provincially supported by volunteer radio operators who can assist with rapid response deployments. These teams will consist of volunteers from one Section or from multiple Sections who are able to assist with a deployment for more than 72 hours. The Section Disaster Support Group's operations will include supporting the Rapid Response Teams deployment and the Provincial Emergency Operations Centre. This team reports to the Provincial response groups – such as Emergency Management Field Officers and NGO support teams – and may assist in remote regions.

In support of the Sectional Rapid Response Teams, when a community support group is not available teams can deploy to fill gaps for short periods or additional support when required by the community. They will be trained to aid at Provincial Emergency Operations Centres, Field Operations such as Command Posts and report to Authorities Having Jurisdiction during their deployment.

The ACS Section Coordinator is responsible to ensure training and deployment capabilities.

National ACS Working Group
The ACS Working group will be comprised of stakeholders including Non-Government Organizations (NGO) and Authorities Having Jurisdiction over emergency management operations. The ACS Working Group will have full oversight in the training recommendations and in the development of the ACS Positions Training Task Book (PTTB), which will provide operational recommendations for deployment in an Emergent or Disaster situation.

Those team members signed off using the PTTB are in essence an integrated unpaid member of the sponsoring agency or NGOs (stakeholders). During a deployment all members will fall under the jurisdiction of their lead agency or NGO, however while training and for practices, we will deploy a leadership hierarchy to better coordinate the ACS operation.

The primary objectives of the ACS Working Group are to:

- Enhance Collaboration
- Cultivate Climate for Cooperation
- Leverage Best Practices

The ACS Working Group will have oversight for the:

- Training and Qualifications of volunteer operators
- Communication Planning and development practicum for training
- Collaboration on ACS developments between stakeholders and ACS membered groups within Canada

This will provide the foundation for all training and give the stakeholders sign off authority for the training program.

The ACS Working Group will help Provincial Emergency Management Organizations (EMO) set up the Provincial Interoperability Coordinators. These individuals will work directly with the Section ACS Coordinator to determine the recommended operational requirements for the Sectional Support Group and the Rapid Response teams.

National Qualification Review Board

The RAC Auxiliary Communications Service will need to be reviewed yearly to ensure the training standards are aligned with those of our clients to ensure that Amateurs stay safe and up to date. The National Qualifications Review Board is part of the Auxiliary Communications Service. It will work with the National ASC Working Group and the RAC National Advisory Committee on training review, simulated testing, best practices and changes in professional programs. This will benefit those individuals that volunteer with RAC in the Field Organization and Auxiliary Communications Service in Canada. This group is currently not yet in place but we hope to recruit volunteers who have a background in human resources, program development and training and education.

Auxiliary Communications Training Program

I continue to work with York University's "CIFAL York" program to develop the final stages of the Auxiliary Communications Training Program (https://www.yorku.ca/cifal/). CIFAL York is an internationally sponsored program through UNITAR (https://www.unitar.org/) United Nations Institute for Training and Research (1963-2023). There are 30 plus facilities located around the world with the focus of building local programs to benefit communities, provide information and training sessions and conduct research.

CIFAL York has connections with Emergency Management and other professional organizations across Canada and with their assistance we are developing accredited programs that meet the requirements of Emergency Management.

In the United States, Auxiliary Communications groups and the Department of Homeland Security have been running successful training programs for over a decade. We have carefully reviewed these programs from a Canadian perspective and with a particular interest in the differences between the Incident Command System (ICS) – where AUXCOMM originated – and the Incident Management System in Ontario (IMS).

Moving forward our goal is to develop a new training program in Auxiliary Communications and also to prepare a Deployment and Operations Training Guide for field use.

New Section Managers

We have made several changes to the Field Organization including how we appoint Section Managers. In my last CSO Message I was pleased to introduce you to Bill McMaster, VY2WM/VY2EM and Ron Pettigrew, VE6RWP. Bill and Ron were the first two Amateurs to go through the new Section Managers approval process. I would like to congratulate Bill once again in his new role as Section Manager for Prince Edward Island. You can find his first Section Manager's report on page 47.

Ron will be taking over for Alberta Section Manager Garry Jacobs, VE6CIA, as of July 1. I would like to thank Garry for his years of dedicated service to the Field Organization in Alberta.

I am also pleased to announce that Jean-Paul (JP) Leblanc, VE9BK, is now the first ever Section Manager for New Brunswick. Welcome aboard JP! You can find a complete bio in his first Section Report on page 47.

CANWARN Program and Training

On May 26 and June 14, Radio Amateurs of Canada once again partnered with the Ontario Storm Prediction Centre (OSPC) to provide an online CANWARN Training session.

CANWARN – or the CANadian Weather Amateur Radio Network – is a network of volunteer Amateur Radio operators who observe and report both winter and summer severe weather conditions. These volunteers come from all walks of life: Amateur Radio operators; first responders; government employees; and members of the general public with an interest in providing a service to others.

CANWARN volunteers are trained to look for clues in the sky as to which spring and summer storms may produce damaging weather. Reports are passed on via Amateur Radio to a network controller who triages the reports and sends the significant ones on to the forecasters of the Ontario Storm Prediction Center in Toronto.

The CANWARN Training session was presented by Geoff Coulson, Warning Preparedness Meteorologist, via a Zoom webinar which provided a welcoming environment for the presentation and the Q&A segment. Topics covered in the training session included the basics of thunderstorm formation, the types of damage severe thunderstorms can produce and what to look for in the sky. Winter severe weather was touched on as well.

The training also provided ways that storm reports can be provided to the OSPC and a number of safety tips to keep storm spotters safe. The event could not be recorded due to copyright regulations. The feedback was extremely positive and many participants hope to see more programs like this in the future.

In addition to these training sessions, if everything went according to plan after this magazine went to press, Geoff Coulson and I were also able to present "CANWARN 2022 and Beyond: a behind the scenes look at the CANWARN program" on June 28.

For more information please visit the RAC CANWARN webpage at: https://www.rac.ca/emergency-services/canwarn/

Community and Emergency Service Reports (ACS/ARES)

BRITISH COLUMBIA / YUKON:

Acting SM: Bill Gipps, VE7XS
A/SM: David Musselwhite, VY1XY
A/SM: Neil King, VA7DX
STM: Al Ross, VE7WJ
SEC: Acting Al Munnik, VA7MP
SEC: Terry Maher, VYIAK (Yukon)
OOC: Dennis Wight, VE7IJJ
ACC: Karla Wakefield, VA7KJW
CEC: Gursimran Gill, VA7GUR
SBM: Fred Orsetti, VE7IO
Website: www.va7mpg.ca

March-April SM Report:

If you have an item of interest to include in this section, please send it to the Acting Section Manager Bill Gipps, VE7XS, at bill.gipps@gmail.com and to the TCA Editor at tcamag@yahoo.ca.

NARA Nanaimo Amateur Radio Association
Randy Harvey, VE7FAA

The Nanaimo Amateur Radio Association (NARA) celebrates its 75th year with the special call sign VX7NA from June 24 until July 24. After the loss of their clubhouse to fire on March 17, 2022 they now have a new space at 205 Collishaw Air Cadet Squadron on Nanaimo Lakes Road.

On April 15, Ken Welte, VA7WEL, presented a GPS/Navigation/Safety/SAR workshop which was attended by 30 people.

Vancouver Sun Run –
Paul Bryan, VA7XP

The Vancouver Sun Run, Canada's largest 10K running event, was held on April 16 with over 25,000 participants. Communications support was provided by 45 volunteer Amateur Radio operators, representing seven clubs.

They were the eyes and ears of the event, providing timely information to event controllers, communicating medical emergencies, and helping reunite lost children with their families.

Two directed nets (primary net and medical net) were held on two VE7RNV VHF repeaters, with net controllers operating from the North Shore Emergency Management facility and the BC Place event control centre.

The Vancouver Sun Run Race Committee greatly appreciates the effort and demonstrated professionalism of the local Amateur Radio community.

Public Service Honour Roll

March:
VE7XLH: 88; VA7MPG: 152;
VE7GN: 110; and VE7WJ: 94
April:
VE7XLH : 86; VA7MPG: 141;
VE7GN: 155 ; VE7WJ: 85

ALBERTA:

SM: Garry Jacobs, VE6CIA
SEC: Brian Davies, VE6CKC
STM: Don Moman, VE6JY
OO: Don Moman, VE6JY
wp.rac.ca/ares-alberta-yellowknife-nwt/

March-April SM Report:

North West Territories and area –
Paulo Ranzani VE8PR

Following a long winter and strong winds here in the Northwest Territories, spring maintenance is now underway. The roof covering has suffered some damage and needs to be repaired, a dipole antenna was down and the cable broken, the vertical antenna is curved, and I have to fix it before the next winter. The loop antenna also needs some tweaking, but thankfully the VHF/UHF and satellite antenna survived. We attended a Winlink seminar

Red Deer and Area –

The Central Alberta Amateur Radio Club has obtained an old boat trailer to convert to a tower trailer. Weekend work parties at Gregg VA6GMC's place have seen good turnouts with some donated supplies being utilized. It has been reinforced, a new tongue and hitch have been installed and new brackets have been made. The tower has also been mounted and painted and an aluminum box was installed to carry anchors, guy cables etc. It should be ready for Field Day.

– SM Garry, 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).
ECs: Ron Williscroft, VE4QE (Selkirk and District); Bill Boskwick, VE4BOZ (RM of Grey, RM of Dufferin & Town of Carman); Jason Coombe, VE4JYC, (Brokenhead ARES); Grant Delaney, VA4GD (LGD of Pinawa and surrounding municipalities); Andrew Webb, VE4PER for Portage la Prairie area.
wp.rac.ca/ares-manitoba/

March-April SM Report:

Winnipeg ARES – Jeff Dovyak, VE4MBQ

At the March meeting of the Winnipeg Amateur Radio It was great to see long-time Amateur Radio volunteer and previous Winnipeg ARES Treasurer Susan Collings, VE4SYM, recognized by Winnipeg Amateur Radio Club Pat the March meeting by being presented with the Outstanding Service Concerning Amateur Radio (OSCAR) Award by WARC President Drew VE4DRW.

Our March General Meeting featured Gerry Desjardins who gave us a presentation on "Panic on the Air".

Thanks to Richard Kazuk for coordinating the Winnipeg ARES operation for Scouts Canada Klondike Derby at Camp Amisk on March 4 and 5. Volunteer operators were: VE4s KAZ, GWB, CLK, TRO, KIZ, JFK, GWN, CKP, PXL, FTS, JAH, STG, VA4SMC and special guest operator VE3CKP.

Our hybrid general meeting in APR included a presentation on Call-Outs and Equipment by Jeff, VE4MBQ.

We had an excellent CANWARN Spotter Training session in Fraserwood on Saturday, April 15 at Fraserwood Hall. Amanda and her staff were most hospitable. Fifteen (15) Amateurs attended and we picked up eight new Spotters from several new communities. The coffee break and majority of handout materials (wallet cards, summer & winter what to report, URLs) and door prize tickets were financed by Winnipeg ARES Inc. The primary speaker was Environment and Climate Change Canada (ECCC) Warning Preparedness Meteorologist Natalie Hasell, VE4NAT, and the secondary speaker was Jeff Dovyak, VE4MBQ CANWARN DEC & A/SEC Manitoba ARES. Attendees were: VA4CQD, LMK; and VE4s JDH, ABA, MBQ, HK, WAL, GMT, NQ, XC, SW, YE, KK, STG and PXL.

Door prizes were won by: Barrett Filbert, VE4ABA, Hamish Donaldson, VE4JDH, Marc Collette, VA4CQD, Phil Mendelsohn, VE4STG, and Jeff Dovyak, VE4MBQ.

Traffic Totals
March: 3
April: 0

ONTARIO – GOLDEN HORSESHOE:

SM: Rick Harrison, VA3NV
ASM: George Davis, VE3OGP
SEC: Rick Harrison, VA3NV
ASEC: Robert Galambos, VA3BXG
va3bxg@gmail.com

March-April SM Report:

York Region ARES
EC Mike Crabtree, VA3MCT

The York Region Amateur Radio Club (YRARC) tested both phone and Winlink communications with the Provincial Emergency Operations Centre (PEOC) on February 3, supported by both York Region Emergency Management Office (VA3YEM) and Markham Emergency Management Office

(VA3MEO). We are now working with York Region EMO on a range of remediation tasks to improve the operational systems.

VA3BAL-10 has returned to the air giving us 1200 bps packet to cover the central York Region so we now have coverage in mid, northern and southern York Region which is great news, but more RMS are still needed. I am hearing of two new potential RMS covering parts of the GTA that will certainly help.

VE3LSR-10 has also been modified to use VARA FM on 70cm and has great coverage in the North of York Region.

A lot of work has been ongoing to improve our knowledge of APRS and potentially use this as one of a group of callout systems. More APRS Digipeaters would also be useful within York Region.

Due to some areas within the GTA having a focus only on traditional Packet systems, York Region has investigated use of packet and Outpost using VA3BAL-2, which is a packet only system operated by COARC. This system is also associated with VA3BAL-10 for use with Winlink Packet connections. A few members have had successful communications and transferred messages using this method and more training is underway. This extra training is supplemental to the Winlink training as Winlink will remain our primary messaging system.

Our local YRARC Winlink Wednesday is going strong with 15 sessions of training for Winlink completed. Most YRARC operators are comfortable with the application and general troubleshooting, which is usually PC-related issues, more than radio issues. Upcoming training will look at APRS messaging potentially for use in Call-outs.

VA3BAL-10 has returned to the air giving us 1200 bps packet to cover the central York Region, so we now have coverage south, mid and northern York Region which is great news, but more RMS are still needed. I am hearing of 1 new potential RMS covering parts of the GTA that will certainly help. I also heard about a system being implemented in London, so the Winlink message is getting out there and slowly being accepted as the norm.

VARA FM 4.2.9 was also released which provides packet detection, so it will not transmit if packets are being detected. This helps a great deal for groups using a single antenna/radio in a hybrid packet/VARA mode. If anyone needs a documented approach to building a hybrid RMS, please do reach out to me.

Our health and wellness net still runs daily at 8:30 pm Eastern and has had 316 individual call signs checked in and 1107 nets run up until the end of April 2023.

73, EC Mike Crabtree, VA3MCT

ONTARIO NORTH:

SM: Allan (Al) Boyd, VE3AJB
ve3ajb@vianet.ca
STM: Patrick (Pat) Dopson, VE3HZQ
dopsonp@vianet.ca
SEC: Stiig Larsen VE3LBX
slarsen@vianet.ca
OBM: Paul Caccamo, VA3PC
va3pc@ciinet.org
Web: http://ontario.racares.ca

March-April SM Report:

Things have been very busy on the Field Services front. As you will see from the CSO Message on page 40, the ACS program is coming along nicely. New agreements with EMO are being worked out with future information to be shared soon.

Albany District

Echo Bay – Laird Township

Sault Ste Marie

Dave, VE3ZDR, attended the Sault Ste Marie Emergency Management Advisory Group meeting on March 30 to represent ARES, participate in the Emergency Planning reviews and provide a PowerPoint presentation on ARES application in Emergency and Non-Emergency Events.

Elliot Lake – EC Bob Young, VE3ETE

Our Tuesday evening net participation was lighter, averaging 43 in March. Our NCS Earl, VE3AB, continues with the CW and SSB nets on 144.200 MHz, followed by the FM net on Tuesday nights, to give our numerous FM stations first chance at checking in.

The C4FM digital net is still well attended. The local CEMC continues to be copied with our Winlink weather reports.

I attended three Manitoulin ARC Zoom meetings and checked into the Procomm net eight times. There were 4 XRF-103 reflector check-ins (D-STAR Digital Mode).
I also checked into ONTARS on Sunday mornings four times. I sent in a log for the CQ WPX Contest (Phone) for 93 QSOs.

Thunder Bay – EC Brad Harris, VE3MXJ

Monthly EOC nets have returned. Weekly HF ARES net Wednesday nights on 80m continue. On Saturday, March 4, we were at the Sleeping Giant Loppet, cross-country ski race. We had eight operators participate – our first public service event since the pandemic.

Atikokan – EC Warren Paulson, VE3FYN

With monthly EOC nets resuming, some general maintenance was completed at our EOC station, VA3EOA, located at Town Hall. There was no activity in February, other than participating in weekly nets.

Sioux Narrows – Nestor Falls
EC Woody Linton, VE3JJA

We had good training with Amethyst District-wide VARA P2P message handling between EOCs with Thunder Bay EOC as NCS. We also participated in the monthly Amethyst District EC Zoom meeting. Both VA3EMN and VA3EOC stations have been updated with the most current Winlink and VARA software.

Sudbury – EC Marc Savignac, VE3SNA

As the new EC, I have began work on reviving our local ARES group and reconnecting with the EOC. These will be my first undertakings since the pandemic stopped all ARES activities and group meetings.

Killarney District

Manitoulin Island and North Shore –
Acting EC Allan Boyd, VE3AJB

A Basic Amateur Radio course was held in April in Central Manitoulin as we have many front-line responders wishing to obtain their Amateur certification. I am pleased to announce that Manitoulin has 12 new Amateurs. Everything else is good for Manitoulin.

– 73, SM Allan Boyd, VE3AJB

DECs Reporting:
VA3s: PC
VE3s: FYN

ECs reporting:
VA3s: ECO
VE3s: FYN, ETE, JJA, MXJ, RYD, SNA, TGI, YDN and ZDR.

ONTARIO EAST:

SM: Michael Hickey, VE3IPC
Email: ve3ipc@gmail.com
SEC: Michael Hickey, VE3IPC
STM: Vacant
OBM: Paul Caccamo, VA3PC,
va3pc@ciinet.org
Web: http://wp.rac.ca/ares/

March-April SM Report:

Prescott-Russell ARES reports on how the group conducted an EmComm radio communications test on March 28 to look for a VHF radio path from Embrun in Russell Township and the radio station at the United Counties of Prescott & Russell's (UCPR) primary EOC in Hawkesbury.

PR-ARES GC Lance, VA3LP, details having attended the Emergency Management Committee meeting for Nation Township on April 28.

Acting Peterborough GC Harmen, VE3EMA and Martin, VA3OMW, met with the City and County Emergency Management staff to discuss our proposal to implement 5.8 GHz repeater links and client access.

Congratulations go to Harmen, VE3EMA, for accepting the position of Peterborough Group Coordinator as of May 1. Harmen is supported by an active and enthusiastic membership. Harmen is replacing John DeLagran, VE3VL, who has done an excellent job in building the ARES group for the past several years, and he will remain part of the leadership team.

The SD&G ARES AuxComm Group provided communications support for the Raisin River Canoe Race on April 15. This was the group's largest communications event of the year.

RCW-ARES experienced a power failure in Petawawa which took out the computer, monitor and UPS for their IRLP node.

ARES EmComm Group Leadership Reports:

Submitted by Prescott-Russell (PR-ARES) GC Lance Peterson, VA3LP

PR-ARES Group Coordinator Lance Peterson, VA3LP, reports that PR-ARES Group members attended both Russell Township in Embrun and the primary EOC for United Counties of Prescott and Russell (UCPR) in Hawkesbury, to conduct radio communications tests between these two locations.

This station uses the powerful Diamond X-700A dual band antenna (VHF & UHF) some 40-feet up which was replaced in 2020. This radio station exists to provide a service that is in support of municipalities' Emergency Management (EM), so that UCPR's EM can be in contact with them, when all normal channels of communications go dark. Under such a condition, this auxiliary communication capability using Radio Amateur frequencies by certified radio operators, would allow two-way radio contacts with municipalities that may be in need of support from the UCPR.

At first they utilized the two repeaters owned by the PR-ARC, VE3PRV in Hammond and VA3PRA in Alfred, establishing communications between the township and county governments. The operators then switched to simplex but were unable to make direct contact. However, they were able to use a station in Vankleek Hill to use as a relay station. Next other repeaters throughout the adjacent area were tested and the following provided good connections between the test stations: VE2CRA (Camp Fortune), VE3OJE (Moose Creek), VE2RM (Rigaud).

Once a permanent tower and antenna are installed in Embrun, group members will conduct more tests.

Participants included:

- Hawkesbury: Mike, VE3IPC
- Vankleek Hill: Al, VE3BOA
- Embrun: Lance, VA3LP, Gilles, VE3NPI, Harry, VA3ZAK, Leo, VA3EBI, Mickael, VA3PAI and Chad VE3OUO

The **PR-ARES Group Coordinator Lance, VA3LP,** attended the Emergency Management Committee meeting for Nation Township on April 28. This was the first time that the group had been invited. GC Lance gave a brief description of the capabilities of the PR-ARES Group and the group plans for the future.

In attendance were members of the Emergency Management Control Group (EMCG) for Nation Township, Ontario Provincial Police officers, the CEMC for Nation, Bylaw officers, Assistant Fire Chief for Nation Fire Department as well as other community persons interested in helping Russell Township identify areas that need to be addressed by the committee. There was a big discussion on the problems that occurred during the ice storm at Christmas 2022.

After the meeting, Lance spoke with the CEMC regarding some commercial equipment that Nation has, including frequencies, and how these can be utilized.

Congratulations to the new Radio Amateur amongst us – Pierre, VA3HWK, of Hawkesbury area – who passed with honours. Welcome to the radio community and to the Prescott-Russell Amateur Radio Club!

Submitted by Peterborough ARES – GC John deLegran, VE3VL

The **Peterborough ARES Group Coordinator John deLegran, VE3VL,** reports that Barry, VE3BLM, Rick, VE3IQZ and Bob, VE3RVZ, checked the ARES radio equipment at the City EOC in March. This site had not been checked for three years and it showed that coverage was not the best in certain directions.

Acting GC Harmen, VE3EMA and Martin, VA3OMW, met with the City and County Emergency Management staff to discuss our proposal to implement 5.8 GHz repeater links and client access. There was also a discussion about the ARES equipment at the City EOC. Future discussions will be planned later in the summer. They also had a follow-up meeting with Peterborough Utilities about access to one of the Water Tanks (tower) to mount 5.8 GHz equipment. We are now waiting on engineering to see if they can accommodate the equipment.

Peterborough ARES Group Coordinator John, VE3VL report that he is stepping down as of end of April. AGC Harmen, VE3EMA, has been acting in the role over the winter and has brought forward many new initiatives, strengthened relationship with County and City CEMCs and recruited new members.

Harmen, VE3EMA and Martin, VA3OMW, checked the ARES radio equipment at the County Alternate EOC in April including the Vara FM link to a VE3KPG Gateway and the new VE3BUY-10 nodes on low power. The radio check went well.

Two new members have joined Peterborough ARES Group! Welcome aboard Nick, VA3NPW and Jon Brown, VE3XOE.

There were an average of 13 check-ins to the weekly net in March and April.

Submitted by Renfrew County West ARES – GC Bob Howard, VE3YX

Renfrew County West (RCW-ARES) Group Coordinator reports on the status of their IRLP node in Pembroke # 2520 has been know out of commission. Just before Christmas there was a power failure in Petawawa that, for some reason, took out the computer, monitor and UPS for our IRLP node. The radio and HTX-202 and the IRLP board survived. The node had been running for 12 years with the only maintenance being battery replacement in the UPS. The computer was at least 20 years old and was running Centos 4.9.

To continue using the group's V 2 IRLP board they needed a PC with a parallel port and apparently, a USB to parallel interface would not work. Also, IRLP systems are now using Debian. GC Bob, VE3YX, had an HP 6005 that was just taken out of service as a shack PC and it happened to have a parallel port, so it is being set up now. Debian 11 and the IRLP software are installed but there are problems getting the UDP ports open on the home router where the rebuild and testing are taking place.

Bob hopes to resolve the remaining issues and get the node back on the air soon.

Submitted by the Stormont, Dundas & Glengarry ARES – GC Earle DePass, VE3IMP

The **Stormont, Dundas & Glengarry (SD&G)-ARES AuxComm Group Coordinator Earle DePass, VE3IMP,** reports that the group is in association with the Saint-Lawrence Amateur Radio Club (SVARC). The club continues to hold its monthly hybrid meetings which have interesting guest speakers. Coffee Klatches where members can socialize with each other are held on the second and fourth Saturdays of each month, starting at 8:30 am at Spinners Restaurant in Cornwall.

The club's eight repeater systems continue to function very well. The SVARC weekly net is conducted on each Monday at 7 pm. The net first starts on VE3SVC (147.180 MHz+). Checks are then made by switching the net to the VE3PGC (UHF) repeater where an EchoLink check is performed.

A check is also performed on VE3VSW, VA3FHA then DMR, TG 9. This process confirms the serviceability of nearby Seaway Valley Amateur Radio Club (SVARC) repeater systems at least once a week, should they be required by the RAC Auxiliary Communications Service (ACS).

On average there are 20 total check-ins. The weekly reporting system has been enhanced to show the names and call signs as those who check in. This as opposed to just recording the number of weekly check-ins.

The SVARC held a Fox Hunt on Sunday, March 5 in Cornwall.

On Sunday, April 15 the group participated in the Raisin River Canoe Race – its largest communications event of the year. They staffed various positions along the Raisin River, just North of St. Andrews West and provided updates to the race organizers, various fire departments along the route as well as the supplier of First Aid Services. The organizers as usual were very satisfied with the role we played.

There were 300 canoe enthusiasts from Eastern Ontario. Many thanks to; John Grow, VE2EQL, Roger Bélanger, VA3GBV, Steve Harvey, VE3EZB, Earnest Vinson, VA3EWV, Doug Pearson, VE3HTR, Dan Cullen, VE3JMF, Hal Green, VE3HWG, Hunter Racine, VA3HWF, Jason Racine, VE3PRY, Joe Scott, VE3ADB and Jim Richardson, (VE3AFV, from the SVARC for their participation.

Our AECs are: Hal Green, VE3HWG (South Glengarry), Stan Fortune, VA3JSF (South Stormont), Ed Halliwell, VE3EAH (South Stormont), Doug Pearson, VE3HTR (Cornwall) and Rick Palmer, VA3EV (Cornwall).

City Of Cornwall: Discussions with Leighton Woods (Deputy Fire Chief, Fire Services for the City of Cornwall) continue. We hope to meet with the City of Cornwall in the next few months.

South Glengarry ARES Projects:

The VA3FHA repeater installed on August 29, 2022 at the Beaver Brook landfill site, continues to function well.

Eastern Ontario and Severn

GCs (ECs) or Assistants reporting: VA3LP, VE3VL, VE3IMP and VE3YX

OBS reporting: VE3IQZ

RAC FIELD ORGANIZATION REPORTS
National Traffic System (NTS) Net Reports

Net (Manager)	Sessions	QNI	QTC
March 2023:			
APSN (VE6JY)	31	2449	16
Alberta ARES (VE6JER)	8	340	12
Aurora (VE7GBO)	31	3525	0
BCEN (VE7XLH)	30	177	11
BCYTN (VE7WJ)	31	474	39
CECA (VE7GBK)	4	105	7
MEPN (VE4JS)	31	791	0
MMWXN (VA4GD)	31	566	2
MRS (VE4HK)	9	328	0
MSMN (VE4AJ)	21	528	0
Saturday (VE4AJ)	4	83	0
April 2023:			
APSN (VE6JY)	30	2526	12
Alberta ARES (VE6JER)	9	460	18
Aurora (VE7GBO)	30	3393	0
BCEN (VE7XLH)	29	167	11
BCYTN (VE7WJ)	30	476	30
CECA (VE7AKE)	4	114	8
MEPN (VE4JS)	30	752	0
MMWXN (VA4GD)	30	537	0
MRS (VE4HK)	9	320	0
MSMN (VE4AJ)	20	508	0
Saturday (VE4AJ)	5	96	0

QUEBEC / QUÉBEC:

SM: Sylvain Lamarre, VE2LAM
lamarrsy@yahoo.com

March-April SM Report:

Spring flash floods caused considerable damages in some regions of the province in late April.

The RAQI Emergency Measures section was in an "awareness" status (3-awareness / 2-radio watch / 1-deployment-action), and in contact with the CANWARN Quebec team, who was following the situation closely. But normal communications were not severed so no action was required either locally or regionally by Amateur Emergency teams or Quebec's Securité Civile coordinators.

I have announced to RAQI's Board that I will be stepping down from my role of Emergency Measures Manager, which I have held since November 2020. I completed all the improvements that I identified when I began my mandate and I think that now is a good time to pass the baton to a colleague. My efforts with my local club take a fair bit of time and I don't want to neglect my role with RAQI. As for RAC, I will continue my role of Quebec Section Manager. I'll see later this year if I step down from this role too, but it is not in my radar in the short term. Thanks for reading!

Sylvain Lamarre, VE2LAM,
RAQI Emergency Measures

Rapport SM d'janvier et février :

Dans les derniers mois, l'équipe des Mesures d'urgence de RAQI a été en état de « pré-alerte » (3-pré-alerte / 2-veille radio / 1-déploiement/action), et en contact avec l'équipe de CanWarn à quelques occasions.

Les communications normales n'ayant pas été touchées, aucune action n'a été requise, ni localement ni régionalement, par les équipes d'urgence amateur ou les coordonnateurs de la sécurité civile du Québec.

J'ai annoncé au conseil d'administration de RAQI que je quitterais mon rôle de gestionnaire des mesures d'urgence, que j'occupais depuis novembre 2020. J'ai complété toutes les améliorations que j'avais identifiées au début de mon mandat et je pense que c'est le bon moment maintenant passer le relais à un collègue. Mes efforts avec mon club local prennent pas mal de temps et je ne veux pas négliger mon rôle avec RAQI.

Quant à RAC, je poursuivrai mon rôle de gestionnaire de la section Québec. Je verrai plus tard cette année si je me retire également de ce rôle, mais ce n'est pas dans mon radar à court terme.Merci d'avoir lu!

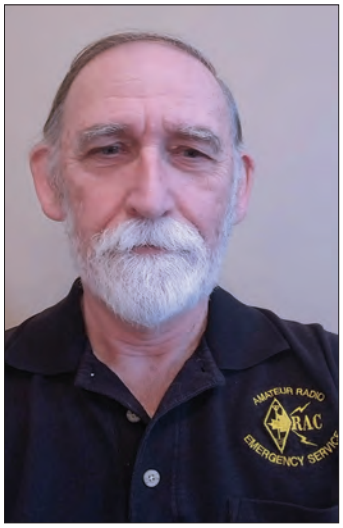
Sylvain Lamarre, VE2LAM,
Mesures d'urgence RAQI

– 73, Sylvain, VE2LAM

NEW BRUNSWICK

SM Jean-Paul Leblanc, VE9BK
medals2@gmail.com

March-April SM Report:



I am pleased to be the first Section Manager for the New Brunswick Section.

I was born in Moncton, New Brunswick and in 1970 enrolled as a Private in the Canadian Forces.

Following basic training, I completed Communicator Research trades training in Ottawa. I was then posted to various locations in Canada, Bermuda and Germany. I retired after 42 years of service in the rank of Major. I'm qualified as both an Air Force Communications and Army Signal Officer. At retirement, I was the Deputy Commander of 72 Communication Group in Halifax, responsible for all Communication Reserve units in Atlantic Canada.

I was attached-posted to CFS Alert (VE8RCS), Northwest Territories for four six-month operational tours. This is where I got involved in Amateur Radio doing phone patches on my days off, and operating the CFARS (VDH9) station. I'm presently the Atlantic Representative for CFARS and licensed as CIW807.

I was first licensed in 1982 as VP9LA. From the very beginning, I got involved in ARES while moving around the country. I'm presently the Coordinator for our local ARES group in the Moncton area where we provide radio operators in nine Emergency Operation Centres. I'm also double hated as the New Brunswick Emergency Measures Organization (EMO) Emergency Management Communication Group (EMCG) Communication Officer in Regions 6 and 7.

My main focus has been on training our volunteers, with a focus on Message Handling and Voice Procedures (MH&VP). To reinforce the training, a weekly MH&VP net is held. We also hold periodic local exercises, as well as take part in various municipal, provincial and federal exercises.

When I retired from the military, I was employed as an Emergency Management Coordinator with Justice Technology System, the Information Technology Cluster for the Ministry of the Attorney General and the Ministry of Community Safety and Correctional Services for the Province of Ontario.

I've always been a supporter of RAC and its predecessor the Canadian Amateur Radio Federation. The role played by RAC in "looking after our interests" is an extremely important one which needs our support. For many years, I wrote the Club Corner column in the TCA. My current interest is in Emergency Communications and contesting.

I look forward to sharing with you the reports of all that is happening in New Brunswick. Please send them to me medals2@gmail.com.

PRINCE EDWARD ISLAND

SM Bill McMaster, VY2WM
bill@vy2wm.ca

March-April SM Report:

The Prince Edward Island Amateur Radio community has been very active. The weekly nets both on 2m and 80m have continued to draw good attendance. There is a 2m Simplex net which meets once a month and several Amateurs have made improvements to their stations as a result of knowing what their 2m coverage had been.

A number of PEI Amateurs continue to participate each week in the Winlink Wednesday exercise. In most cases they are making use of the VHF RMS Gateway, which is capable of accepting both Winlink Packet and VARA-FM messages. Following a meeting with the Provincial EMO, this gateway was relocated and is now hosted in a radio room adjacent to the EMO EOC in downtown Charlottetown. The antenna is located on the roof of the six storey office building. Initial surveys show less than desired coverage at this new location. Further work is planned to continue to improve the range and access to this resource.

During the same meeting with EMO, an initial plan was discussed, detailing what the first phase of integrating the Amateur Radio service with EMO Incident response. A VHF/UHF station will be installed with the help of PEI Amateurs, adjacent to the EMO EOC. In addition, a portable 'Go-Box' station with VHF/UHF capabilities will be assembled. This box will be able to be deployed on site at an incident and will be able to provide communication back to the EOC if and when needed. Discussion is continuing on what training would be appropriate for those Amateurs that would participate in these activations.

The Charlottetown Amateur Radio Club completed their second Basic Radio course in the last six months. There were 16 individuals

www.
HAMSTUDY
.COM
Self study courses for Canadian
BASIC and ADVANCED
Amateur Radio exams

taking the course which was held at the Canadian Red Cross Headquarters in Charlottetown. The club wishes to acknowledge and thank the Canadian Red Cross for providing this excellent venue for this course. The first round of exams were held recently and seven new Amateurs earned their certificates, including five Basic with Honours.

With over 20 new Amateurs on the Island in the last eight months, the radio community has pulled together to provide guidance and help assembling new stations and building and erecting new antennas. It's exciting to hear all the new call signs and voices on the air.

As a follow up to the increased interest in CW within the PEI Radio community, approximately a dozen local Amateurs took delivery of Morse code practice keyers from an order placed earlier in February. These are in kit form and the next step is to organize a kit-building workshop. Talks continue on organizing a CW net to give participants a chance to practice their skills on the air with other local Amateurs.

Bill McMaster, VY2WM
President, Charlottetown Amateur Radio Club
www.charlottetownarc.com

TCA

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ACS
ACS-SAC CANADA

– The Club Corner / Bits and Pieces –



Phillip Boucher, VE3BOC
phillipjboucher@gmail.com
www.phillipjboucher.com

Welcome to another "Club Corner" column!

Did you know that this column has been a fairly regular feature in *The Canadian Amateur* magazine since the beginning of time – well at least since before the formation of Radio Amateurs of Canada 30 years ago.

In fact, the "Club Corner" columnist for TCA back in 1993 when RAC was formed was Jean-Paul LeBlanc, VE9BK, who is the new Section Manager for New Brunswick. Welcome back JP! You can find his first Section Report on page 47.

There is a great deal going on in the club scene with the end of the pandemic and the arrival of spring and summer.

The following pages include foxhunts, fleamarkets, symposiums and even the birth of a brand new club. Please share your club news and events with us by sending them to me.

Being 62 with mobility issues due to a work injury to my left knee – I have to walk with a cane – can be a pain in the proverbial behind. And moving to a senior's residence in a small rural Ontario town called Smithville in the Niagara area of West Lincoln is both a blessing and another pain in the butt. On the good side it is a slower lifestyle and very quiet, with cheaper rent but with amenities such as a grocery store, a fast food joint, a Timmy's, pizza places, library, and so on. My wife and I have so much less stress now.

On the downside: I now need help from readers on an issue that I find myself in but never considered as a topic to cover in the column. I am now living smack between two urban centres (Hamilton and Niagara Falls) with repeaters but I can't hit any of them with my handheld or in the car with a long dual-band antenna on the roof while travelling in the local area.

I don't know if it's the distance, the terrain or something else, but it sure is RF dead here, which is quite a downside for a person with Type 1 Autism (Asperger's) whose only real interaction with people is over the air. Not only am I unable to hit any repeaters, but I now can't hear any of the Provincial Government Trunking frequencies out of Fonthill (Pelham, Ontario) so scanning Ministry of Health communications is out of my radio hobby work as well.

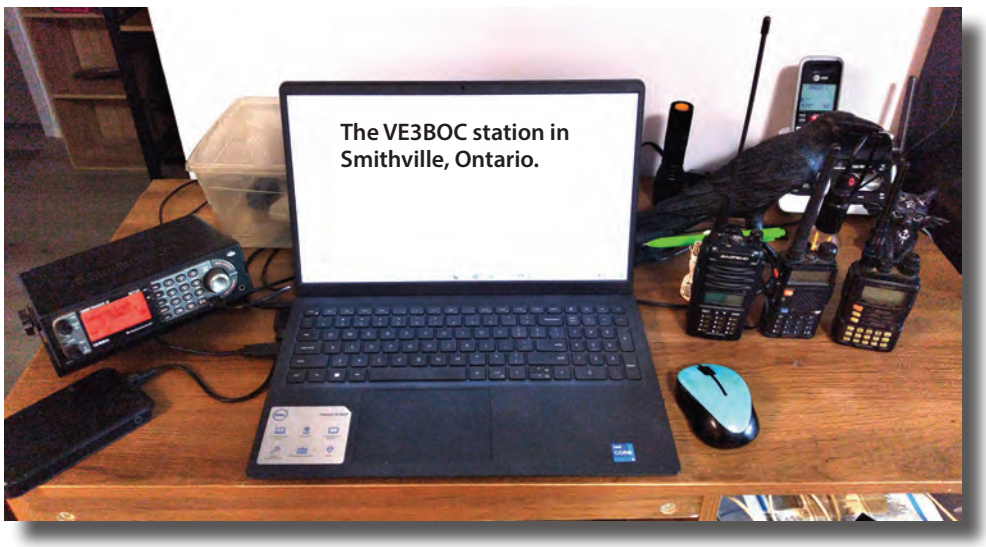
I suppose I could use Echolink to keep up in the hobby, accessing repeaters over the internet. And of course I know some of

How many of you are in the same boat? Do you just use the radio when you travel into these urban centres where you can finally hit a repeater? Do you get in touch with other Amateurs in town on a simplex frequency and carry on communications there?

you might be thinking, "Just go on HF". I would if I could, but I could never afford an HF rig. "So get a 50 watt dual-band mobile 2m/70cm radio for the car" – again, I could never afford it. Still can't afford either one. Same with a digital rig. Just my cheap HTs, and an old beat up Yaesu VX-6R I got over two decades ago on sale.

I am not complaining by any means, just stating facts. And I am sure I am not the only one in this position. I'd love to hear from others that have similar issues. Or other issues that sort of prevent you from getting on the air. How do you beat the frustration? How do you cope? Right now I just use the VX-6R in the car with my dual-band antenna on the roof when I am nearer the Hamilton or Fonthill areas.

Aside from all that, I am still writing the column, fantasy novels, and other non-fiction tech books. With a slower lifestyle, and now with no access to repeaters from my home, or car within the area, I guess I have more time to write and get all this stuff stored up in my brain down on paper (well, actually into my laptop).



The VE3BOC station in Smithville, Ontario.

IslandHF Radio Association

Glenn Lindsey, VA7HC

A coffee shop conversation:

VA7HC: Had a real interesting contact on 20-metres today.

VE7PT: Who was it?

VA7HC: A US ham driving an 18-wheeler through Arkansas. Had a Kenwood 480 and a linear pushing 400 watts.

VE7PT: How interesting. And you pushing 75 watts through a vertical from your car. (smile) The joy of HF.

VA7HC: Roger (smile)

When operating HF, Radio Amateurs sometimes forget that they're bouncing RF off the ionosphere and they have no idea where it's going to land. Contacting an Amateur driving an 18-wheeler through Arkansas 3,000 kilometres away and heading for Columbus, Ohio was an HF show-stopper for me. He probably travelled 20 miles before our QSO ended, conditions were that good.

Who could I tell about this interesting contact? I wondered. There are a few Amateur friends locally who work the HF bands, but the local club is repeater oriented with most Amateurs focused on EmComm preparation and public service.

I called my friend Andy Woodsworth, VE7PT, an HF aficionado. "Let's share a coffee," I said. He happily agreed. We met at a local marina coffee shop and shot the breeze for a while with the conversation eventually getting to my 18-wheeler story.

I commented that maybe we could set up a Zoom meeting with the ham in the USA and share the story with others.

For the better part of three years, I had searched around Victoria and the south end of Vancouver Island for a place where an HF home station could be set up for the local club. But it was in vain. Just too many issues. Having a physical building – or even a retrofitted sea can – just wasn't going to work.

"But the local club isn't really that interested in HF," I commented further."Why don't we start our own club," Andy replied. That reply was the genesis of the IslandHF Radio Association (IslandHF).

Andy and I decided we'd get some other Amateurs together we knew enjoyed HF. Brian Summers, VE7JKZ, was among them and he helped us vision what our virtual club would focus on. Somewhat ironically all three of us had previously been either the President, the Treasurer or the Education Coordinator of the other local club.

We wanted no part in a Board of Directors and by-laws in this new club. Most other clubs require significant investment in infrastructure, are largely funded by donations, and have to be an incorporated society with officers, by-laws and so on. We wanted an informal club that would: promote HF activities including contesting; help new Amateurs with HF operations; and just have fun when meeting together for some ragchewing.

Brian worked through Radio Amateurs of Canada and Innovation Science and Economic Development Canada (ISED) to acquire our club call sign VA7IHF while Andy and I quickly created a website. You can find it at www.islandhf.ca. It is often updated with HF news and information.

Informal coffee shop meetings have already been held. A Zoom Meet & Greet with RAC British Columbia and Yukon Director Keith Witney, VE7KW, will take place in July, and in-person meetings with technical presentations are being planned for the fall. IslandHF has got off to a great start with membership totalling over 25.

Oh, did I mention that there are no membership fees. You just need to be interested in and/or operating in the high frequency bands. Check out the website and sign up if you are interested in what's happening with HF in Victoria, British Columbia.

TCA

Bits and Pieces

Toilet Paper is also great for Amateur Radio Repairs.

Richard Langer recently received a second-hand DAB radio from a friend, but right away he noticed that when listening to it at a lower volume, he kept hearing a scratching sound that disappeared only when the radio volume was turned up louder.

Richard commenced to find a way to fix the problem without having to replace the speaker. He finally got to the bottom (tee hee) of the solution in the form of toilet paper. He discovered that the speaker's paper cone had apparently warped, causing the voice coil to rub annoyingly against the magnet assembly. The friction had worn down the insulation on the turns of the coil so much that it had forced it out of alignment.

Not one to take any crap, Richard took some crumpled toilet paper and after inserting it at exactly the right spot between the cone and the metal housing, the toilet paper provided enough pressure to restore the alignment without over-straining it. And voila, no more scratching at low volume. He had wiped the problem away so the radio didn't need to be flushed into the (garbage) pile.

Richard shared this simple solution in a recent video on his YouTube channel with the following description.

https://www.youtube.com/watch?v=54Pc2hCxU3g



Skywide Amateur Radio Club Holds Fox Hunt

Jerry Proc, VE3FAB – jerry.proc@sympatico.ca

The Skywide Amateur Radio Club of Etobicoke (Toronto) held its inaugural fox hunt on Sunday, April 23 at Marie Curtis and Lakeshore Parks in Etobicoke.

Fox hunting is a great way for Amateur Radio clubs to engage their members. It encourages team building, cooperation, physical exercise and everyone can participate – even those with physical disabilities.

Fox hunts can be as simple or complex and competitive or passive as you choose, and they not weather dependent. You can fox hunt in any season in virtually any conditions depending on how brave (or foolish) you are.

While fox hunts are fun, they do have real world implications. Amateurs learn valuable skills while fox hunting and these skills can be used to find sources of radio frequency interference (RFI). Participants will better understand how signals propagate, reflect or attenuate in different environments and conditions.

For our fox hunt we deployed three radio foxes in the two parks with varying power levels and degrees of difficulty. The foxes were spaced 20 kHz apart on 147.4125, 147.43125 and 147.450 MHz.

In use were the Byonics Micro-Fox 15mW and Byonics Micro-Fox 700mW foxes.

If one of the foxes was found by all the participants, it was then moved to a new location and reintroduced into the hunt.

An Event Captain was available on the 147.400 MHz simplex frequency to provide clues if necessary.

The participants used both commercial and homebrew VHF antennas to track down the foxes. Each fox hunter was awarded a virtual club trophy.

Gary Zakaib, VA3GDZ, reports that: "Those of us wandering around all over the place were kept warm enough, but were greeted with many strange looks by the hikers, bikers and dog walkers who saw us in the park. A couple stopped to ask what the heck we were doing and what were those things we were lugging around. I told them we were practising in finding the next downed Chinese weather balloon. Hi Hi."



Roger Hopson, VE3HPR, starting his search for the Fox. Photo courtesy of Tom Stefanac, VA3VWX.



Tom Stefanac, VA3VWX and Carlos Rivera, VA3CRL at the base camp. Photo by Gary Zakaib, VA3GDZ.

A couple of the spots for the hidden foxes were a bit challenging. For example, one participant had a really strong signal but found out the hard way that he was on the wrong side of a fence.

The winners of the fox hunt were as follows:

1st – Mark Scola, VA3HES

2nd – Gary Zakaib, VA3GDZ

3rd – Andrew Jones, VE3GTU

4th – Andrew Norwood, VE3YTP

5th – Roger Hopson, VA3HPR

6th – Jason Poste, VA3PLJ

Participation – Joao Soares, VE3AXW

Participation – Scouts

Also in attendance were Robert Campbell, VE3VAJ, Matt Gillard, VA3SNM and Uwe Pankatz, VE3TGL

The club extends its thanks to Tom Stefanac, VA3VW , Ian Penney, VE3INP and Ron Spencer, VA3RSX, for braving the cold by Lake Ontario and all of their efforts to organize and run the Fox hunt event. Would also like to thank Ken Baine, VA3KEX, for the food delivery and Andrew Norwood, VE3YTP, for providing one of the foxes.

Additional details and photos about the foxhunt can be found at: https://www.skywide.ca/fox-hunting/

Jerry Proc, VE3FAB
jerry.proc@sympatico.ca
Web: www.jproc.ca

Central Toronto Amateur Radio Club Honours Jean Moffett, VE3WAD

Steve Peck, VA3SXP – CENTOR President

The Central Toronto Amateur Radio Club (CENTOR) recognized one of its original and life members, Jean Moffett, VE3WAD, for her contributions to the club, promoting and remaining active in Amateur Radio for over 40 years.

Jean holds her Advanced, Basic and Morse Code certifications and was one of the earliest volunteers involved with setting up the Ontario Science Centre's Amateur Radio station (VE3OSC) over 30 years ago. She is approaching her 100th birthday in August and the club wanted to recognize her for her long-standing service to the club and to the Amateur Radio Service.

Jean is active on the club's Tuesday 70cm net that runs at 7:30 pm EST on the VA3ATL repeater and continues to spend time logging contacts at the Ontario Science Centre VE3OSC station and fielding questions from OSC visitors and members. She was recognized by the Ontario Science Centre for 25 years of volunteer service in 2018 and received the Sovereign's Medal for Volunteers issued by the Governor General of Canada. The Sovereign's Medal recognizes the exceptional volunteer achievements of Canadians from across the country.

Jean has seen how technology has expanded Amateur Radio. Early in her Amateur Radio days she enjoyed making contacts using the Amateur Radio satellites and always wanted to have a QSO with an astronaut. Jean received the opportunity to do this in January 2020 through an organized QSO with the International Space Station through the ARISS program.

Like most clubs during the pandemic CENTOR went virtual and Jean was active in the club's Zoom calls. Jean was thrilled when the club was able to hold its meetings back at the Ontario Science Centre post-pandemic as this is where CENTOR was originally started. Jean continues to attend Field Day activities making calls and logging contacts and is known for bringing the "cookies and sweets" for the break time and at Field Day events.

The club was pleased to organize this event to honour Jean as this was an event originally started by Ori Seigel, VA3XW, a long-standing member of CENTOR, and also the club's meeting Chair, who sadly became a Silent Key in March 2023. The club mobilized to make sure this event was completed on Ori's behalf. Jean was very appreciative and surprised at the event and is pictured above with RAC President Phil McBride, VA3QR and CENTOR President Steve Peck, VA3SXP, at the club monthly meeting on June 6.

The Central Toronto Amateur Radio Club is a group dedicated to the promotion and enjoyment of Amateur Radio in the Toronto and GTA region of Ontario Canada. The club is open to anyone interested in Amateur Radio and those holding Amateur Radio certification. Our meetings are hybrid (both in-person and via Zoom) and include talks on various topics related to Amateur Radio as well as a chance to meet and socialize with other Amateurs. The club also offers courses for people wishing to obtain their Canadian Amateur Radio Basic Certification as well as other activities. If you have any questions, send us an email and we'll get in touch with you as soon as possible.

Visit : https://va3cta.net/about/



RAC President Phil McBride, VA3QR and CENTOR President Steve Peck, VA3SXP, present Jean Moffett, VE3WAD, with a well deserved Certificate of Appreciation. Congrats Jean!



Jean Moffett, VE3WAD, at the Ontario Science Centre station.

For more information on Jean's accomplishments check out:

- https://globalnews.ca/video/9468921/ontario-science-centre-volunteer-set-to-celebrate-100th-birthday/
- https://www.rac.ca/amateurs-in-the-news-96-year-old-amateur-radio-operator-at-ontario-science-centre-speaks-with-astronaut/

Symposium for Maritime Amateur Radio Technology

Jim Langille, VE1JBL
SMART Coordinator

The sixth annual Symposium for Maritime Amateur Radio Technology (SMART) began on Friday evening May 5 with the first ever Meet & Greet at the Amherst Railway Station. It turned out to be a success with over 30 Amateurs taking part over two hours.



Rod Bourque, VE9HV, Garrett Orr, VA1OR, Mike Caissie, VE9MTV and Kevin Burke, VE1KEV.

On Saturday, a sunny morning greeted everyone for SMART23 at the Dr. Carson & Marion Murray Community Centre in Springhill, Nova Scotia. The doors opened at 7 am for volunteers with Kevin Burke, VE1KEV, Frank Marks, VE1FSM and Mike Masters, VE1ZB, looking after the set up of tables while Mike Embree, VE1MY, was on the talk-in frequency of 147.285 VE1WRC directing Amateurs to the event.

As the fleamarket tables were being set up volunteers were busy preparing for the rush of Amateurs expected at 8 am when the doors opened. Once opened, Terry and Susan Duncan – VE1AS and VA1SIS – were tasked at looking after the entrance fees while Mike Caissie, VE9MTV, Don Anderson, VE9CUB and Gordon Cotton, VE9GC gave out tickets for lunch and helped give out name tags to all registered Amateurs.

People began filing in and soon were buying raffle tickets from Steve and Colleen Orr – VE1OR and VE1CEO – and 50/50 tickets from Al Christie, VE1ZS and his wife Mary. Thanks to Dana Rushton, VE1VOX, for getting the licence for the draws. While this was going on, Ron Bickle, VE1BIC, Tom Hughes, VE1TWH and Robert Mannette, VE1CA, were busy preparing the classrooms with audio and video testing.

Mike Johnson, VE1MWJ, was once again the Master of Ceremonies and he gave the opening remarks. The first classes began at 9 am. Over the next three and a half hours, six classes were held before lunch began at 12:30 pm.

Members of the Springhill Teen Centre prepared hamburgers and cheeseburgers on the barbecue while potato salad was dished out to all. After lunch, Amateurs milled around the fleamarket and vendor tables, others collected their QSL cards from the VE1/VE0 QSL Bureau while others checked out the automobiles registered for best Amateur Radio install. Other displays included the Halifax ARC promoting the club's 90th anniversary) see page 64), the Maritime Contest Club, the Old Timer's Club and the Atlantic Provinces Support Team for Amateur Radio (APSTAR).

The afternoon classes began at 2 pm and after four more classes over the next two and half hours it was time to give out the door prizes and raffle prizes.

There was over $1000 of door prizes this year including an ICOM handheld radio from Grant Saffarek, VE9CXT of ICOM Canada which was won by Jon Gordon, VE1JSG. Other door prizes were from Yaesu USA, Scott Davis, N3FJP, Radioworld, WestCumb ARC, Moncton & Area ARC, Fredericton ARC, Halifax ARC, Kings County ARC and Greenwood ARC.

Other prizes were from Maritime Lady Amateurs, Limitless Designs by Robin Stone, and Streetsridge Custom Designs by Ann Cutmore who designed our logo for SMART and made our mugs and shirts for sale. As always raffle prizes were from the WestCumb ARC including three radios won by Mike Caissie, VE9MTV, Rod Bourque, VE9HV and Garrett Orr, VA1OR. The 50/50 was won by Craig Seaboyer, VE1DSS, from Antigonish, Nova Scotia.

The first "best auto install" generated a lot of discussion and interest. Frank Marks, VE1FSM, was very thorough with his inspection and analysis of each vehicle and their radio installation.

Winner of best radio installation went to Mike Masters, VE1ZB, while Brad Ross, VE1ZX, took second place.

The SMART organizing committee would like to thank the following presenters who hosted the classes: Chris Pye, VA1PYE, Fred Archibald, VE1FA, Al Penney, VO1NO, Gordon Cotton, VE9GC, Brent Taylor, VY2HF, William McMaster, VY2WM, Robert Schoefield, VE1RSM, Craig Seaboyer, VE1DSS, Len Morgan, VE9MY, Bill Karle, VE1YY, Jason Ingraham, VE1PYE and special guest Walter Rawle, AC1AE.

We also want to thank organizer George Dewar, VY2GF, who worked very hard to find these presenters for the event.

We would also like to thank the Municipality of Cumberland for their continuing support and the staff at the Dr. Carson & Marion Murray Community Centre who set up the centre and looked after all our needs throughout the day.

Finally a big thank you to all the Amateurs who attended the event and their continuing support of SMART. Without all of you this event would not take place.

For all the information and pictures of SMART 23 go to the WestCumb ARC website at www.westcumb.ca and click on SMART23.

I hope to see you next year at SMART24.

Lakehead Amateur Radio Club in Ontario Recognizes Bruce Clements, VE3BV, for "Outstanding Technical Support"

James St Cyr, VE3OPD
Vice-President /
Interim President
Lakehead Amateur
Radio Club

It gives me great pleasure to drop you a line about the most humble and helpful Amateur Radio operator that I have met in my 37 years of being licensed. I met Bruce by coincidence after setting up my own simplex AllStarLink node. By chance, I called into one of the Parry Sound Amateur Radio Club's nodes and Bruce Clements, VE3BV, responded advising that he was working on the 6 metre Repeater to AllStarLink equipment.

Bruce and I immediately hit it off with a history of his EMS Radio Tech Supervisor experience and me being a retired member of the Ontario Provincial Police.

Bruce became an Amateur in the mid-1970s and was employed in the Telecomm field for over 40 years. He worked for Motorola as RF Systems Specialist for 10 years and specialized in land to air and land to land Public Safety sectors. He retired from the City of Toronto Emergency Medical Services after 32 years as Telecomm Superintendent.

From there Bruce and I started emailing and I asked him in 2022 if he could help with the interfacing of a Motorola MTR2000 / controller / Raspberry Pi for AllStarLink (ASL). We worked on this endeavour via telephone but ran into some problems with the MTR2000 RSS tuning following the PA mod for 2 metres. What astounded me was that Bruce was so patient and unrelenting through the whole process. I recall that we had been on the phone for 3.5 hours at one point, with me wearing a headset to carry out procedures and convey the results to Bruce. Now that is what I call telephone tech support!

I have been an Advanced Amateur for most of my licensed career but I have been out of the hobby for some time. The neurons at this end are not as sharp as they used to be but this did not deter Bruce.

The next time we worked together was for a club project of the Lakehead Amateur Radio Club (LARC) which would entail the same framework but with an MTR3000 instead of an MTR2000.

To that end, Bruce once again pulled out all the stops to help with our stated goals.

Astounding would be an understatement to the kind of support and dedication that has been provided to our club. Bruce is the epitome of what a Radio Amateur should be. His knowledge, support and kind, caring demeanour go way beyond the call of duty.

I would be remiss if I did not share the aforementioned with the Amateur community and request that you publish this accolade in *The Canadian Amateur* magazine. An abundance of thanks to you Bruce for all your patience and vigilant guidance. Words barely express the gratitude felt by members of the Lakehead Amateur Radio Club. You have helped to put us on the ASL map and your tireless efforts have been congratulated throughout Canada via the ASL network.

VE3TBR took to the air on Saturday, April 8 shortly after 1 pm and consisted of the following new equipment: MTR3000 VHF repeater, Arcom RC210 Controller and Raspberry Pi4 running the AllStarlLnk. The antenna and feedline were swept with a Rig Expert TDR and the the true test was the Telewave 44AP wattmeter that showed 58 watts forward out of the duplexer with only 800 milliwatts reflected.

First contact was Tim Whittaker, VE4CT, in Winnipeg along with Dan Keizer, VE4DRK. Next up was Bruce Clements, VE3BV, in McKellar, Ontario (Parry Sound) on the new repeater and AllStarLink Node 59075. Signal reports were excellent from everyone on the network and many congratulations were received from Amateurs on the Canada Hub and East Coast Reflector in QSOs that followed.



LARC President James St Cyr, VE3OPD (right) makes presentation to Bruce Clements, VE3BV.

On April 24, a dinner was held at Montana's restaurant for Bruce and his wife Jeanette to thank him for his assistance in setting up the AllStarLink node and the VE3TBR repeater. He was presented with a few gifts and a Letter of Recognition from the Lakehead Amateur Radio Club by Club Vice-President / Interim President James St Cyr, VE3OPD.

Many thanks to Bruce for his unselfish assistance. Also a big thank you to Eric Todd, VE3XET, for his major financial contribution and to all the Radio Amateurs who contributed to the project in one form or another: VE3WJX, VE3OPF, VE3OTV, VE3NHX, VE3OPD, VE3SID, VE3SJB, VE3WRL, VE3WGE, VE3RH, VA3ZU and VE4CT. Sincere thanks also go to Christian Broadcaster CJTL for allowing us to share equipment space and resources at the transmitter site. Our link to the outside world via the AllStar network would not be possible without their support and continued cooperation.

The Lakehead Amateur Radio Club (LARC) is a group of Amateur Radio operators in the Thunder Bay area that meet for self-education, community service and fellowship.

Find out more at http://www.larclub.ca/about-larc/

The Sports Page: The Canadian Contest Scene

"Things that can only happen at a place like Dayton"

Tom Haavisto, VE3CX | ve3cx@myrac.ca

One of the interesting aspects of contesting is getting to meet people from across the globe. In a contest, we typically just exchange a small piece of information, and move on to the next QSO. Over a number of contests – and over the *years* – you run into the same people *over and over again*, and start to recognize certain calls as you have worked them many times before. One of the more interesting aspects of going to Dayton is the chance to meet some of these same folks and engage in a longer conversation or eyeball QSO. Yes, sometimes you run into the same people every year, and you also get to meet a few new Amateurs. Things that can only happen at a place like Dayton.

This year, I was chatting with Pierre Fogal, VE3KTB/VY0ERC, and two guys from Iceland came up and introduced themselves. They were interested in Pierre's experiences from operating in the far north. Darned if I remember their calls… One of them checked his Logbook of the World (LoTW) account on his phone and I had worked him many times over the years. Later on that day, when speaking with Gerry Hull, W1VE, he was mentioning that he was going to Italy for the World Radiosport Team Championship (WRTC) competition in July as a referee. As part of his travels, there is a 10-hour layover in Iceland so I mentioned there were two Amateurs from Iceland at the hotel we were staying. Gerry was quite happy to hear this and introductions were made the following morning over breakfast. While this may sound quite fantastic, these types of things happen at Hamvention on a regular basis, pretty much every year.

Hamvention also gives us the opportunity to see what is happening, both within the contesting community and the broader world of Amateur Radio. Here are a few things I was able to learn this year:

1) It seems that operating remote has cleared any number of technical challenges over the past few years and has become more commonplace.

The biggest obstacle has been "jitter" – issues with the audio path between the remote site and the operator. On the internet, there can be delays between various packets arriving at the other end as congestion can cause them to take a different route. This is handled by using a buffer – a "holding tank" or reservoir to ensure a steady stream of audio.

When streaming movies over the internet, a large buffer can be used to ensure smooth audio/video. Think of a pail being filled with a garden hose, with an outlet at the bottom for water to pour out of. The goal is to keep water in the pail, with a steady stream of water coming out. If the pail runs empty, the flow of water pauses. We can keep a steady stream of water coming out by using a larger pail. If there are brief pauses with water coming into the pail from the garden hose, we don't notice it as there continues to be a steady stream of water coming out. The problem with using a bigger pail is it also delays the new water coming in, before it is able to exit from the pail. Ideally, we can use a pail that adds just enough of a buffer to keep data coming out, without causing excessive delay.

When the buffer runs empty there is no more audio. When you hear this over the air, the audio becomes choppy and breaks up. It almost sounds like a loose microphone connection. Between new protocols for transmitting audio over the internet and better hardware/software, this is becoming less of an issue even over lower bandwidth connections. Fibre internet, DSL, Starlink (satellite) and even cellular are being used successfully for remote operations.

2) This is also good news for Amateurs who live in areas where installing a tower and antennas is difficult.

One of the issues of city living these days is noise from all manner of appliances and various electronic devices. If you can set up your station in a remote area, many of these noise sources are not there, allowing you to hear more stations on the band. As the old saying goes "If you can't hear them, you can't work them".

As Don Moman, VE6JY, pointed out not knowing what you are missing can also be an issue. Knowing you have a local noise source will help get you started on the path to *hopefully* lessening or eliminating these noise sources. By using a remote receiver –



at a quiet location – and comparing what you can hear at your station can be an eye-opening experience.

3) As we also learned during the pandemic, travel is not always feasible.

If you are headed to another location to be an operator, time and expense are usually a primary concern. Being able to operate remote solves many of those issues. No need to book *expensive* flights and travel for several days in order to be a *guest* operator at another site. With remote you can stay home and still operate from *somewhere else* – no travel required. Not that this is always the best option, but it is becoming more commonplace. On the air it is hard to know where the operator is located – on site or remote.

4) It seems that FT-8 is becoming more popular.

One of the issues with FT-8 was whether it was a complete QSO? This first showed up in the World Wide Digi DX Contest which takes place in the last weekend of August and a higher than expected NIL (Not In Log) QSOs across multiple logs. This is where one operator logs the QSO and the other operator does not. This is considered a busted QSO. When investigating the issue, sponsors found that some Amateurs would log the QSO and other operators

WAE DX CW August 2022

Call	QSO	Mult	QTC	Category	Score
VY2ZM	1,855	441	1,891	SO HP	1,651,986
VE3AT	1,618	381	1,626	SO HP	1,235,964
VE9AA	980	335	920	SO HP	636,500
VE3DZ	740	277	746	SO HP	411,622
VE3NZ	748	223	776	SO HP	339,852
VE3CT	709	224	724	SO HP	320,992
VE2FK	621	171	625	SO HP	213,066
VA2EBI	457	187	451	SO HP	169,796
VE3JM	319	168	322	SO HP	107,688
VE3TM	307	140	312	SO LP	86,660
VE1ANU	235	155	80	SO HP	48,825
VE3BR	147	115	150	SO HP	34,155
VE3NFN	193	138	0	SO LP	26,634
VA3FN	92	100	95	SO LP	18,700
VE6RST	136	66	137	SO HP	18,018
VA3TNM	141	121	0	SO LP	17,061
VE3EY	75	100	75	SO HP	15,000
VA3SB	65	92	70	SO LP	12,420
VY0ERC (VE3KTB)	98	52	101	SO LP	10,348
VE2HLS	79	52	71	SO LP	7,800
VA3IK	64	54	64	SO HP	6,912
VA3PAF	47	68	35	SO LP	5,576
VA1CC	58	68	0	SO LP	3,944
VE3EUS	59	62	0	SO LP	3,658
VE5GC	61	50	0	SO LP	3,050
VE3LMS	38	48	20	SO LP	2,784
VE2QV	34	42	28	SO LP	2,604
VE7SAR (VA7VJ, VE7NX)	43	42	0	MO	1,806
VE2PI	35	36	0	SO LP	1,260
VE2/PY2KGB	20	20	0	SO LP	400
VE3OU	11	20	0	SO LP	220

Checklog: VE3KOT

would not. Some were expecting an "RR73" or "RRR" to confirm that the QSO was complete in order to log it. Other operators looked at this as "implied final confirmation" and logged the QSO and thought sending "RR73" or "RRR" was "not required", in order to save one transmission cycle off each QSO and allow more time to achieve QSOs. This is in large part an operator issue and you need to be aware of what your QSO partner is doing. You need to exercise your judgment regarding this issue as there does not yet seem to be a solution. In any event, FT-8 it is becoming more popular both in contesting and in DX circles.

5) The other trend I noticed is that we are attracting younger individual to this great hobby of ours.

Notably, the guest speaker, Bryant Rascoll, KG5HVO, aged 19. He is a proficient CW operator and at age 14 he was the youngest competitor at WRTC 2018 in Germany. He has also been on a number of DXpeditions and operated as part of a few multi-ops. It was good to also see a number of younger Amateurs both at the Dayton Contest Dinner and at the Xenia hamfest site. For many years, there was a concern about the "greying of Amateur Radio". It was good to see that getting a younger generation involved in this great hobby of our is working.

For many years, Hamvention was held at the Hara arena and it was moved after the Hara area closed in 2016. Many of us still have fond (and not so fond) memories of the place. The buildings were damaged by a tornado a few years ago. On my way out of town, I decided to drive by the site. All the steel from the building is down, and has been removed. The site in now just an empty field. Thanks for letting me share some of my experiences from Dayton Hamvention 2023. It was a blast and I am already looking forward to next year. Hope to see you on the bands

– 73, Tom Haavisto, VE3CX

IARU HF WORLD CHAMPIONSHIP – July 2022

Call	QSOs	Mult	Category	Score
VY2EJ	3077	233	SOMIX HP	2,874,987
VX3AT (VE3AT)	2668	235	SOMIX HP	2,293,600
VE3CT (VE3CT VE3EY VE3NNT)	1721	250	MOST HP	1,609,750
VE6SH/7 (VE6SH VE7JH VE7UF VE7XF VE7ZO)	1382	193	AC	941,261
VE3NZ	1484	168	SOUCW HP	865,872
VE2NTT	1391	138	SOUPH HP	554,898
VA2EBI	734	222	SOUMIX HP	502,830
VA7ST	959	124	SOCW HP	386,384
VE3YT	663	149	SOUCW LP	323,330
VE2FK	734	118	SOUCW HP	297,124
VE3TM	690	126	SOCW LP	283,878
VE3MV	504	158	SOUCW LP	242,214
VE7KW	503	141	SOUCW HP	235,752
VE4EA	594	109	SOCW HP	219,853
VE3PJ	473	129	SOUMIX LP	196,725
VE6RST	536	113	SOUCW HP	188,032
VE3MGY	621	77	SOCW LP	138,677
VE3KOT	357	108	SOCW LP	122,796
VE3FH	412	98	SOCW LP	120,442
VA3IDD	309	115	SOUPH LP	104,190
VE3VN	359	80	SOCW HP	101,600
VE5KS	274	111	SOCW LP	93,240
VE2HIT	273	107	SOPH LP	82,711
VE3GJP	284	100	SOPH LP	76,000
VA3ZNQ	206	104	SOPH HP	63,648
VE2HQ	242	64	SOCW HP	63,296
VE2IAA	268	82	SOPH LP	62,238
VE3KP	227	86	SOCW HP	57,190
VA3KRT	198	95	SOPH LP	56,335
VA3IJK	294	65	SOMIX LP	52,390
VE3VY	226	73	SOUCW LP	49,348
VE3HZ	170	96	SOUPH LP	43,488
VA3PAF	195	67	SOUMIX LP	36,582
VE3BFU	150	86	SOPH HP	35,862
VE5SF	238	50	SOMIX LP	33,450
VE3YV	135	84	R2	31,080
VE3EUS	148	59	SOCW LP	26,255
VA3RKM	137	68	SOCW LP	23,460
VE3IGJ	169	45	SOCW LP	21,420
VA3TMV	146	53	SOUCW LP	19,822
VE3IDT	112	53	SOPH LP	18,921
VA3SB	198	33	SOCW HP	18,744
VE3RVZ	96	61	SOPH LP	17,141
VA3GHB	97	61	SOPH LP	16,592
VE2TSM	98	49	SOPH HP	15,925
VE3JZT	101	51	SOUMIX LP	12,903
VE3RSA	115	40	SOCW QRP	12,560
VE3YAA (VE3DQ)	97	37	SOUCW HP	11,840
VE3WG	95	39	SOMIX LP	11,076
VE3EIB	110	27	SOUMIX LP	9,774
VY2OX	72	38	SOCW HP	9,082
VE3VIG	83	41	SOCW LP	8,528
VE4DL	76	34	SOUMIX LP	7,140
VA3LR	61	39	SOUPH HP	7,137
VA7MM (VA7MM VE7CNF)	67	30	MOST HP	6,990
VA6BGE	87	27	SOUCW LP	6,696
VE2OWL	53	28	SOCW LP	5,376
VA3TPS	54	33	SOPH LP	4,521
VE5CPU	54	31	SOMIX HP	4,402
VE6CLG	39	27	SOPH LP	3,564
VE3AC	46	30	SOPH LP	3,420
VE3SYZ	40	27	SOPH LP	2,943
VA2KD	40	31	SOMIX LP	2,015
VE4IM	37	21	SOCW LP	1,869
VE7YAH	32	21	SOPH LP	1,638
VO2AC	27	17	SOUCW HP	1,173
VA3IIF	29	16	SOCW QRP	1,152
VE6SYD	19	16	SOPH LP	912
VE7ZX	25	10	SOUMIX LP	750
VE4SF	27	11	SOMIX QRP	660
VE7BLW	16	7	SOMIX HP	434
VO1CH	13	8	SOUMIX HP	264
VA2LGQ	12	6	SOCW LP	132
VE3RXH	6	3	SOPH QRP	66
VE2GT	3	3	SOPH LP	9

AC= Administrative Council | U= Unlimited | Exec= Executive Committee | R2 = Region 2 Exec Committee

NORTH AMERICAN QSO PARTY, CW – August 2022

Call	QSOs	Mult	Category	Score
VE3DZ	1240	239	SO LP	296,360
VE3EJ	1115	227	SO LP	253,105
VE3MGY	911	207	SP LP(A)	188,577
VE4EA	762	168	SO LP	128,016
VE3RZ	608	209	SP LP(A)	127,072
VE6RST	567	198	SP LP(A)	112,266
VE3EY	660	146	SO LP	96,360
VE3VN	547	148	SO QRP	80,956
VE5GC	474	125	SO LP	59,250
VE3MV	357	153	SP LP(A)	54,621
VE3KP	386	129	SO LP	49,794
VE3NZ	588	82	SP LP(A)	48,216
VE3TM	412	112	SO LP	46,144
VE3GFN	343	124	SP LP(A)	42,532
VE3UZ	323	113	SO LP	36,499
VE3TW	307	117	SP LP(A)	35,919
VA3WB	315	106	SP LP(A)	33,390
VE3NRT	328	97	SO LP	31,816
VE3KI	309	102	SO QRP	31,518
VA6RCN (VE3RCN)	277	106	SO LP	29,362
VE9AA	291	100	SO LP	29,100
VE3TMK	242	116	SO LP	28,072
VA3EC	281	96	SO LP	26,976
VE5UO	300	88	SP LP(A)	26,400
VE3SMA	264	99	SO LP	26,136
VE3VY	255	100	SP LP(A)	25,500
VA1RST	243	80	SO LP	19,440
VA3IJK	234	74	SO LP	17,316
VE3FH	190	73	SO LP	13,870
VA3KRJ	195	68	SO LP	13,260
VA3RKM	158	78	SO LP	12,324
VE9HF	255	47	SO LP	11,985
VE3KOT	191	58	SO LP	11,078
VE3SIF	147	72	SO QRP	10,584
VE3BXG	150	62	SO LP	9,300
VA2UR	133	67	SP LP(A)	8,911
VE7IO	117	75	SP LP(A)	8,775
VE3NFN	142	58	SO LP	8,236
VE3AQ	119	61	SO LP	7,259
VA3PAF	124	51	SP LP(A)	6,324
VE7CV	94	64	SP LP(A)	6,016
VA4JP	113	51	SO LP	5,763
VYØERC (VE3KTB)	112	48	SP LP(A)	5,376
VA2VT	90	56	SP LP(A)	5,040
VE3JZT	87	57	SP LP(A)	4,959
VA6BGE	85	47	SP LP(A)	3,995
VE3KJQ	83	37	SO QRP	3,071
VE3SSR	62	41	SP LP(A)	2,542
K6PO/VE7	63	38	SP LP(A)	2,394
VA1MM	57	38	SO LP	2,166
VA7GI	57	34	SO LP	1,938
VE3PQ	52	33	SO LP	1,716
VA7ZM	52	27	SO LP	1,404
VA3FN	50	28	SO LP	1,400
VE3EUS	51	22	SO LP	1,122
VA2OT	53	21	SP LP(A)	1,113
VE4DL	31	24	SP LP(A)	744
VE3KG	28	23	SO LP	644
VE7BGP	23	19	SO LP	437
VE3FP	25	15	SP LP(A)	375
VA3IIF	24	15	SO QRP	360
VA6TI	18	12	SO LP	216
VE3DRS	15	11	SO LP	165
VE3VIG	8	7	SO LP	56

NORTH AMERICAN QSO PARTY, RTTY – July 2022

Call	QSOs	Mult	Category	Score
VE3PJ	446	134	SO LP	59,764
VE5KS	268	100	SO LP	26,800
VE3FH	228	94	SO LP	21,432
VE3CT	243	80	SO LP	19,440
VE3NFN	164	77	SO LP	12,628
VE2HEW	124	63	SO LP	7,812
VE3KJQ	84	37	SO QRP	3,108
VE2EZD	49	26	SO LP	1,274
VE7IO	37	26	SO LP	962
VA3FN	32	21	SO LP	672
VE3EUS	30	18	SO LP	540
VE3SST	22	20	SO LP	440
VA3IK	25	13	SO LP	325
VA3WEB	18	12	SO LP	216

NORTH AMERICAN QSO PARTY, SSB – August 2022

Call	QSOs	Mult	Category	Score
VE3PJ	512	132	SO LP(A)	67,584
VA2CZ	331	98	SO LP(A)	32,438
VA3GKO	292	78	SO LP	22,776
VE3TW	219	96	SO LP	21,024
VA3IDD	218	84	SO LP(A)	18,312
VE3HZ	177	65	SO LP(A)	11,505
VE3IDT	125	69	SO LP	8,625
VA3LR	131	61	SO LP(A)	7,991
VE3RVZ	102	52	SO LP	5,304
VA3OOL	104	51	SO LP	5,304
VA3IJK	107	49	SO LP	5,243
VA3WW	106	46	SO LP(A)	4,876
VA3PC	98	49	SO LP	4,802
VE3TM	96	46	SO LP	4,416
VA3PAF	91	41	SO LP(A)	3,731
VE7CV	85	43	SO LP(A)	3,655
VA3GMO	92	39	SO LP	3,588
VE5UO	93	37	SO LP(A)	3,441
VY2DS	92	37	SO LP	3,404
VE9RLW	61	38	SO LP	2,318
VE3BFU	59	33	SO LP	1,947
VA7ROH	54	27	SO LP	1,458
VA6TVA	51	27	SO LP	1,377
K2NV/VE3	45	30	SO LP	1,350
VA3CME	54	22	SO LP	1,188
VA2QR	41	28	SO LP	1,148
VA3KRT	44	26	SO LP	1,144
VE3VGJ	46	23	SO LP	1,058
VE1FSM	37	23	SO LP	851
VA2KD	31	23	SO LP	713
VA3EEB	34	20	SO LP	680
VA1PYE	25	18	SO LP	450
VE3OU	21	17	SO LP(A)	357
VE6SYD	20	12	SO LP	240
VE7BGP	18	11	SO LP	198
VE9WRS	7	7	SO LP	49
VE7PAE	0	0	SO QRP	0

Check Log: VA7XU

ARRL 10 GHZ AND UP CONTEST – August 2022

Call	QSO	Mult	Category	Score
VA3ELE	288	0	10GUP	75,461
VA3TO	186	0	10G	59,157
VE3KH	152	0	10G	44,432
VE3SST	176	0	10G	35,154
VE4MA	51	0	10GUP	12,352
VE3ADQ	37	0	10GUP	11,238
VE3KRP	35	0	10GUP	11,139
VE3FN	23	0	10G	9,716
VE3SMA	45	0	10G	9,696
VE3EG	39	0	10G	9,030
VE2UG	31	0	10GUP	6,756
VA3MW	30	0	10G	6,428
VA3CW	20	0	10G	5,373
VE3WJ	14	0	10G	3,916
VE3MSC	19	0	10G	3,248
VE3JGL	8	0	10G	2,921
VA3ECO	5	0	10G	1,817
VE3UET	9	0	10G	1,384
VE4SA	14	0	10GUP	946
VE7AFZ	6	0	10G	544
VA7SC	7	0	10G	504
VE7HR	5	0	10G	352

SARTG WW RTTY CONTEST – August 2022

Call	QSO	Mult	Category	Score
VE2BVV	217	84	SOAB LP	231,840
VE2FK	116	56	SOAB HP	80,080
VE5KS	77	49	SOAB LP	45,815
VA3OGG	74	42	SOAB HP	34,230
VA1XH	36	32	SOAB HP	15,680
VA3IK	38	26	SOAB HP	12,610
VE3WVA	35	23	SOAB HP	8,625
VA7ST	32	22	SOAB LP	7,260
VE9AGG	23	23	SOAB LP	5,635
VE2CSP	20	13	SOAB LP	2,925
VE3EUS	13	14	SOAB LP	2,170
VE9AGG	9	9	SO40 LP	900

CQWW VHF CONTEST – July 2022

Call	QSOs	Mult	Category	Score
VA2VT	98	61	SO QRP	6,405
VA3TIC	90	52	SOAB	6,292
VA2BN	97	63	SOAB	6,111
VE3NRT	90	52	SOAB	6,084
VA3IKE	76	46	SOAB	5,842
VE3RX	76	51	SOAB	4,080
XM3A (VE3ZF)	82	35	H	3,710
VE7DAY	87	39	SOAB	3,354
VA3WB	57	43	SOAB	3,010
VE3KI	55	44	SOAB	2,288
VE3SST	50	33	SOAB	2,277
VA3UAP	47	32	SOAB	2,112
VE3ELL	38	28	SOAB	1,568
VE7AFZ	57	22	SOAB	1,430
VE3PJ	54	25	SOAB	1,300
VA3RQX	29	20	SOAB	840
VA3OGG/R	34	22	ROVER	836
VE7AB	45	18	SO6M	774
VA7USD	38	14	SO QRP	756
VA7OTC/R	32	15	ROVER	735
VE3LFS	23	18	SOAB	648
VA7ST	31	19	SO6M	589
VE3AJB	27	18	SOAB	522
VA3WEB	25	20	SO6M	480
VA6AN	24	13	SOAB	442
VE3WVA/R	26	11	ROVER	440
VE2OTA	17	13	SOAB	325
VE2NR	17	14	SOAB	266
VE2BAP	15	15	SOAB	240
VA7DXC	15	12	SOAB	192
VE6BMX	12	8	SOAB	136
VE7AJK	14	8	SO QRP	104
VE2GT/R	12	9	ROVER	99
VO1HP	12	8	SO6M	96
VE3KP	10	9	SO6M	90
VE5MX	11	11	SOAB	88
VE3LDE/R	7	6	ROVER	60
VE3JO	7	7	SO QRP	49
VA3PAF	7	7	SOAB	49
VE3AB	7	6	SOAB	48
VE3TM	7	6	SO6M	42
VE2HAY	5	5	SOAB	40
VE3CYX	6	4	SOAB	32
VE3KG	6	6	SO6M	30
VE3ETE	7	5	SOAB	30
VE3LDY	6	3	SOAB	27
VE3JFN	6	3	SOAB	27
VA3TSS	4	3	SOAB	21
VE3IQZ	4	4	SOAB	20
VE3AC	3	2	SOAB	10
VE3EG	3	3	SO QRP	9
VA6MA	2	2	SO2M	8
VE3HZQ/M	2	1	SOAB	4

WAE DX CW – August 2022

Call	QSO	Mult	QTC	Category	Score
VY2ZM	1,855	441	1,891	SO HP	1,651,986
VE3AT	1,618	381	1,626	SO HP	1,235,964
VE9AA	980	335	920	SO HP	636,500
VE3DZ	740	277	746	SO HP	411,622
VE3NZ	748	223	776	SO HP	339,852
VE3CT	709	224	724	SO HP	320,992
VE2FK	621	171	625	SO HP	213,066
VA2EBI	457	187	451	SO HP	169,796
VE3JM	319	168	322	SO HP	107,688
VE3TM	307	140	312	SO LP	86,660
VE1ANU	235	155	80	SO HP	48,825
VE3BR	147	115	150	SO HP	34,155
VE3NFN	193	138	0	SO LP	26,634
VA3FN	92	100	95	SO LP	18,700
VE6RST	136	66	137	SO HP	18,018
VA3TNM	141	121	0	SO LP	17,061
VE3EY	75	100	75	SO HP	15,000
VA3SB	65	92	70	SO LP	12,420
VY0ERC (VE3KTB)	98	52	101	SO LP	10,348
VE2HLS	79	52	71	SO LP	7,800
VA3IK	64	54	64	SO HP	6,912
VA3PAF	47	68	35	SO LP	5,576
VA1CC	58	68	0	SO LP	3,944
VE3EUS	59	62	0	SO LP	3,658
VE5GC	61	50	0	SO LP	3,050
VE3LMS	38	48	20	SO LP	2,784
VE2QV	34	42	28	SO LP	2,604
VE7SAR (VA7VJ, VE7NX)	43	42	0	MO	1,806
VE2PI	35	36	0	SO LP	1,260
VE2/PY2KGB	20	20	0	SO LP	400
VE3OU	11	20	0	SO LP	220

Checklog: VE3KOT

RSGB IOTA – July 2022

Call	QSO	Mult	Category	Score
VY2TT (K6LA)	2,248	226	SOMIX HP 24H	3,719,960
VX2I (VE2FK VE2CSM VE2PI VE2EBK VE2GHO)	765	153	M2	923,355
VE3CT	279	142	SOCW HP9(A) 12H	503,390
VY2OX	251	101	SOCW HP 24H	283,810
VO1CH	354	50	SOMIX HP(A) 12H	166,250
VO1NO	218	74	SOSSB LP(A) 24H	156,880
VE3TM	225	74	SOCW LP 12H	135,716
VE3ZZ	125	64	SOMIX HP(A) 24H	85,568
VY0ERC (VE3KTB)	253	39	SOMIX HP(A) 12H	77,025
VE4EA	96	53	SOCW HP(A) 12H	52,523
VE3KOT	109	42	SOCW LP 12H	35,952
VO1GRC (VO1AX VO1BYD)	170	28	MOST HP	33,320
VE1AI	60	40	SOMIX HP(A) 24H	28,240
VA2KZ	59	38	SOMIX LP 24H	24,206
VA3TNM	51	33	SOCW HP(A) 12H	18,183
VE2HEW	72	31	SOMIX LP(A) 12H	17,608
VE9KK	67	27	SOCW LP(A) 12H	13,959
VE3KP	52	26	SOCW HP 12H	12,922
VA3IDD	29	22	SOSSB LP(A) 24H	8,206
VE3BFU	36	19	SOSSB HP 24H	7,220
VE3GJP	23	14	SOSSB LP 24H	3,528
VE9EX	22	14	SOMIX HP(A) 24H	3,458
VE3AC	22	13	SOSSB LP 12H	3,276
VA2KD	15	12	SOSSB LP 12H	2,148
VE3DZ	17	10	SOCW HP 12H	1,720
VA3FN	14	10	SOCW LP 12H	1,580
VE3KG	9	7	SOCW HP(A) 12H	728
VA3RKM	7	5	SOMIX LP 12H	435
VE4IM	5	5	SOMIX HP 12H	325
VE3EUS	12	4	SOCW LP 12H	244
VY2PLH	5	4	SOSSB LP 24H	180
VE3VIG	8	4	SOCW LP 24H	172
VE3EPS	4	2	SOSSB LP 12H	48
VE7BGP	9	0	SOMIX LP 24H	45

Checklog: VE2IAA, VE6BMX

HAWAII QSO PARTY – August 2022

Call	QSOs	Mult	Category	Score
VE7BV	28	16	SOMIX LP	1,216
VE7CV	18	11	SOMIX LP	528
VE7ZR	9	5	SOMIX LP	130
VE6BMX	6	4	SOMIX HP	60
VE4EA	5	3	SODG HP	45
VA3RKM	4	3	SOCW LP	36
VE7ARN	4	3	SOCW LP	36
VA7RN	3	3	SOCW LP	27
VE3RUA	3	3	SOCW LP	27
VA3IJK	2	2	SOCW LP	12
VA3PAF	2	2	SOCW LP	12
VE3KOT	2	2	SOCW LP	12
VE3MV	2	2	SOCW LP	12
VA3TNM	2	2	SOCW HP	12
VE3DQN	1	1	SO QRP	3
VA3FN	1	1	SOCW LP	3
VA3PC	1	1	SODG LP	3
VE3AYR	1	1	SOCW LP	3
VE2GT	1	1	SOCW HP	3
VE3JZT	1	1	SOCW HP	3
VA3GKO	1	1	SOPH LP	2

OHIO QSO PARTY – August 2022

Call	QSOs	Mult	Category	Score
VE3NFN	65	42	SOLP	4,662
VE3MV	57	38	SOLP	4,180
VA3GKO	70	42	SOLP	2,940
VA3IDD	59	34	SOLP	2,006
VA3RKM	40	25	SOLP	2,000
VE3KOT	26	18	SOLP	936
VE6BMX	25	23	SOHP	897
VA3PAF	25	20	SOLP	820
VE3JZT	27	22	SOLP	770
VA3IJK	22	18	SOLP	756
VE3AC	28	22	SOLP	616
VE3DQN	16	14	SO QRP	448
VA3FN	15	10	SOLP	300
VE9RLW	20	12	SOLP	240
VE3PQ	8	6	SOLP	96
VA3PC	6	6	SOLP	36
VA6TVA	6	6	SOLP	36
VE2GT	3	3	SOHP	9
VA2QR	2	2	SOHP	4

Contest Calendar: July, August and Early September 2023

RAC Canada Day Contest	0000Z, Jul 1	2359Z, Jul 1	https://www.rac.ca/
DL-DX RTTY Contest	1100Z, Jul 1	1059Z, Jul 2	http://www.drcg.de/dldxrtty/dl-dx-rtty-english.html
Marconi Memorial HF Contest	1400Z, Jul 1	1400Z, Jul 2	http://www.arifano.it/contest_marconi.html
IARU HF World Championship	1200Z, Jul 8	1200Z, Jul 9	http://www.arrl.org/iaru-hf-world-championship
CQ Worldwide VHF Contest	1800Z, Jul 15	2100Z, Jul 16	http://www.cqww-vhf.com/
North American QSO Party, RTTY	1800Z, Jul 15	0600Z, Jul 16	http://www.ncjweb.com/NAQP-Rules.pdf
RSGB IOTA Contest	1200Z, Jul 29	1200Z, Jul 30	https://www.rsgbcc.org/hf/rules/2022/riota.shtml
European HF Championship	1200Z, Aug 5	2359Z, Aug 5	https://euhf.s5cc.eu/euhfc_rules/
North American QSO Party, CW	1800Z, Aug 5	0600Z, Aug 6	http://www.ncjweb.com/NAQP-Rules.pdf
WAE DX Contest, CW	0000Z, Aug 12	2359Z, Aug 13	https://www.darc.de/der-club/referate/conteste/wae-dx-contest/en/
Maryland-DC QSO Party	1400Z, Aug 12	0400Z, Aug 13	http://w3vpr.org/mdcqsop/
SARTG WW RTTY Contest	0000Z, Aug 19	1600Z, Aug 20	http://www.sartg.com/contest/wwrules.htm
ARRL 10 GHz and Up Contest	0600 local, Aug 19	2400 local, Aug 20	http://www.arrl.org/10-ghz-up
North American QSO Party, SSB	1800Z, Aug 19	0600Z, Aug 20	http://www.ncjweb.com/NAQP-Rules.pdf
Ohio QSO Party	1600Z, Aug 26	0400Z, Aug 27	http://www.ohqp.org/index.php/rules/
Hawaii QSO Party	0400Z, Aug 26	0400Z, Aug 28	http://www.hawaiiqsoparty.org/
World Wide Digi DX Contest	1200Z, Aug 26	1200Z, Aug 27	https://ww-digi.com/
YO DX HF Contest	1200Z, Aug 26	1200Z, Aug 27	http://www.yodx.ro/en/
Kansas QSO Party	1400Z, Aug 26	2000Z, Aug 27	https://ksqsoparty.org/rules/KSQPRules2022.pdf?1
CWOps CW Open	0000Z, Sep 2	2359Z, Sep 2	https://cwops.org/cwops-tests/cw-open/
All Asian DX Contest, Phone	0000Z, Sep 2	2400Z, Sep 3	https://www.jarl.org/English/4_Library/A-4-3_Contests/2022AA_rule.htm
Colorado QSO Party	1300Z, Sep 2	0400Z, Sep 3	http://ppraa.org/coqp
Tennessee QSO Party	1800Z, Sep 3	1800Z, Sep 3	http://tnqp.org/rules/
WAE DX Contest, SSB	0000Z, Sep 9	2359Z, Sep 10	http://www.darc.de/der-club/referate/referat-conteste/worked-all-europe-dx-contest/en/
Texas QSO Party	1400Z, Sep 16	2000Z, Sep 17	http://www.txqp.net/

Note: In the above chart an * indicates Local Time. The "Contest Calendar" 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.

KANSAS QSO PARTY – August 2022

Call	CW	PH	DIG	Mult	Score
VE5KS	183	126	0	99	79,399
VE3YT	156	40	0	91	49,968
VE7CV	98	58	0	68	27,980
VE6BMX	59	24	0	48	10,800
VE3MV	62	10	0	44	9,064
VA3PAF	40	26	0	33	5,776
VE2GT	26	21	0	28	3,460
VA3RKM	50	0	0	22	3,400
VE9AA	37	7	0	24	3,000
VA3IDD	0	49	0	29	2,942
VE3AYR	41	0	0	22	2,706
VA3GKO	0	41	0	25	2,150
VA3FN	27	0	0	16	1,296
VA2QR	6	21	0	17	1,120
VA6TVA	0	25	0	19	1,050
VE3JZT	8	16	0	17	952
VA3IJK	22	2	0	12	840
VE9RLW	0	23	0	15	690
VE3PQ	17	0	0	13	663
VE3PYJ	0	18	0	15	540
VE7IO	9	0	0	7	189
VE3DQN	6	0	0	5	90
VE3AC	0	5	0	5	50

YO DX HF CONTEST – August 2022

Call	Category	Score
VE9OA	SOMIX HP	86,953
VA3TNM	SOAB CW	41,544
VE3NZ	SOAB CW	40,733
VE3TM	SOAB CW	38,157
VE9HF	SOAB CW	12,274
VE3CT	SO20 MIX	9,600
VE9ML	SO40 MIX	6,496
VA1RST	SOAB CW	1,275

Checklog: VA3PAF

COLORADO QSO PARTY – September 2022

Call	Category	Score
VA3GKO	SOPH LP	1,190
VA3PC	SOPH LP	740
VA3IDD	MOPH LP	330
VE3MV	SOCW LP	216
VA3IJK	SOMIX LP	152
VA3FN	SOCW LP	100
VA6RCN	SOMIX LP	72
VA3PAF	SOPH LP	50
VE3AYR	SOCW LP	48
VA3RKM	SOCW LP	24
VE3DQN	SOCW QRP	24
VE3HZ	SOPH LP	24
VE3KOT	SOMIX LP	18
VE9RLW	SOPH LP	18
VE2GT	SOPH HP	6

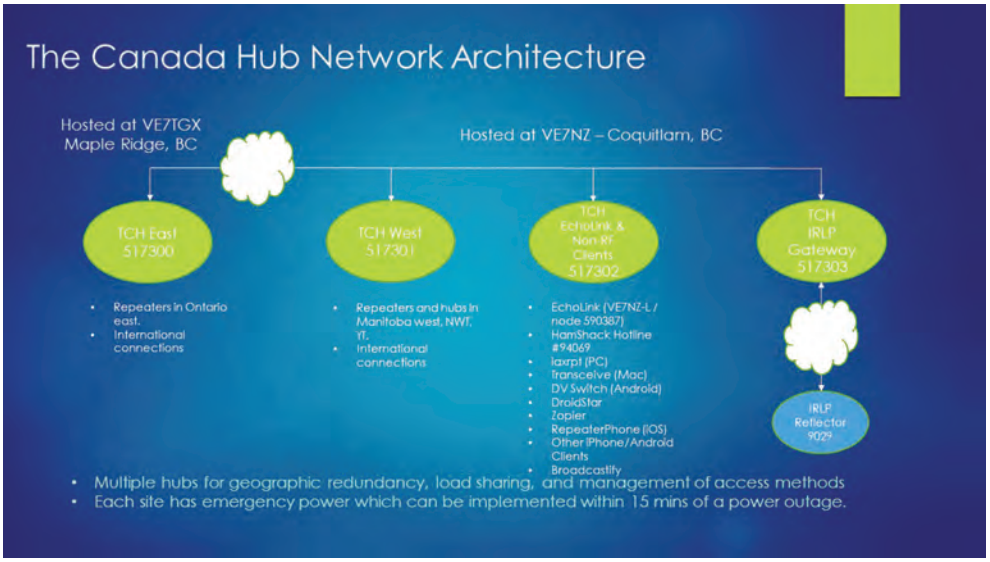
MARYLAND-DC QSO PARTY – August 2022

Call	Score
VA3IDD	622
VE3HZ	402
VE9RLW	370
VA2KD	324
VA3PAF	322
VE3AC	290
VE3MV	260
VE3AYR	230
VA3IJK	206
VA2QR	180
VA3PC	164



The Canada Hub: Three Years Old and Going Strong!

Adrian Stimpson, VE7NZ



This year marks the third anniversary of The Canada Hub – an idea formed during the pandemic that has become a Canadian Amateur Radio success story. For those unfamiliar with the project, The Canada Hub is a nationwide network of interconnected repeaters, simplex nodes, and VoIP clients with the goal of bringing together Canadian Amateurs and increasing activity on our bands.

Looking back, the early days were challenging. The underlying AllStar software had trouble supporting more than 70 nodes and there was a fairly steep learning curve in figuring out how to implement a large network and manage technical issues from distant repeaters. But these are the sorts of things that make Amateur Radio both challenging and rewarding, at least for me.

But not all challenges were technical. Encouraging people to join and stay connected to the network was difficult in the beginning because there was not a lot of activity. People would connect, hear nothing, and leave. However, eventually as people put their call signs out and started QSOs we had a group of friendly regulars, welcoming one and all, upon which activity continues to build.

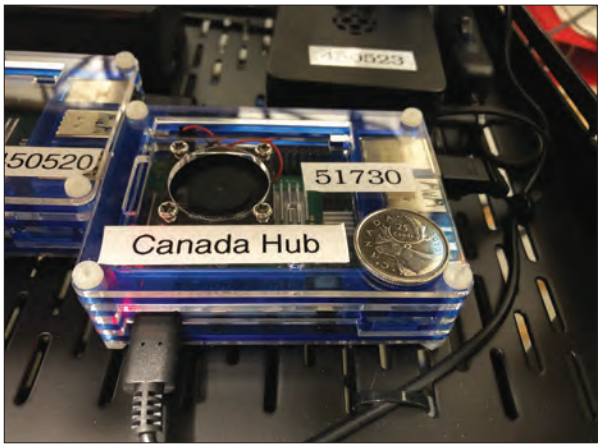
Geographically, we now have many full-time connections from across the country, including some of the lesser populated areas such as Yellowknife, Whitehorse and the Maritimes. It is also not uncommon to hear the occasional QSO in French.

As the network has become popular, there have been an increasing number of requests from international networks and scheduled nets wanting to connect to us. We have attempted to strike a balance in this regard. We welcome international visitors as they add additional colour to the network.

It was great recently to hear a new Amateur in Ottawa make his first "DX" contact with an Amateur in the United Kingdom. He had that same excitement we all remember from our first overseas QSO. But we also want to make sure that the network maintains its Canadian focus and leaves enough space for people to have QSOs as opposed to having nets all day long.

We seem to have got it right. There are seven nets a week that are quite unique. They include: a roundtable hosted by the Prescott-Russell ARC on Tuesdays and Thursdays; the Monday night "Sounds Good Net" that focuses on "all things audio" hosted by Chris, VE3RWJ; the Tuesday night Absolute Tech Net; and the Saturday night Science Net hosted by Ken, VE3KEX. Then of course there's our own Trans-Canada Net on Sundays at 10 am Pacific, where we not only take check-ins but ask a fun and informative "question of the week."

We typically have 200 repeaters and simplex nodes connected during the larger nets, yet everything runs smoothly thanks to the hard work of the individual repeater owners and our own network managers behind-the-scenes including Scott, VA7SL, Steve, VE7SLZ, Kevin, VE3BZ and our adopted "Texadian" Lewis, KC5RJL, from Houston, Texas.



I continue to give presentations on Allstar, explaining how it can be used for remote repeater control, for networking, and how it is implemented in The Canada Hub. If your club is interested in this, please contact me at ve7nz@myrac.ca. Even if your local club does not connect their repeater, there are now many ways for individuals to join the network using low-power simplex nodes or PC/Mac/smartphone clients.

I encourage you to check us out at www.thecanadahub.ca where you can listen live, see a dashboard of connected nodes, and find links on how you can set up your own connection to the network.

Adrian Stimpson, VE7NZ, was first licensed in 1980 at the age of 15 and has been on the air almost daily ever since. He got his first job with an engineering company that wanted to hire someone with Advanced Amateur Radio credentials!

Thanks to Amateur Radio, he has since spent over 30 years in the satellite and telecommunications industries, most recently pursuing the development of high-accuracy GPS for autonomous vehicles and smartphones. He can be reached at ve7nz@myrac.ca

Coming Events:

Ontario Hamfest (Milton)
Sponsor: Burlington Amateur Radio Club
Date: Saturday, July 8
Place: Milton, ON; Milton Fairgrounds. Vendors and tailgaters use Robert Street. Public entrance via Thomas Street.
Time: Vendors and tailgaters 7am; Public 9 am.
Cost: Vendors $5 per person + $10 per single-width vehicle space.
Public: $5 per person;.
Children 12 or under, free with adult.
Talk-in: 146.520 MHz
Info: Email buckmelbuckmel@gmail.com
W: https://www.barc.ca/ontario-hamfest

Richmond ARC Swap Meet & Emergency Communication Equipment Display
Sponsor: Richmond Amateur Radio Club
Date: Saturday, July 15
Place: Richmond/Steveston, BC; South Arm United Church Gym Hall
Time: 9:30 am to 12:30 pm
Cost: $7/person
Table: $25 each (6-ft).
Info: Urey, VE7URE, info@richmondarc.ca
www.richmondarc.ca/swapmeet2023.html

WIARC Flea Market
Sponsor: West Island Amateur Radio Club
Date: Saturday, July 15
Place: Montreal, Quebec; Lakeside Heights Baptist Church, 275 Braebrook Ave, Pointe-Claire, QC, H9R 1W1
Time: Vendors 7 am; Public 8 am.
Cost: Vendor Tables $5. Admission $5.
Info: Contact Jonathan at vp@wiarc.ca to reserve a table.
W: https://wiarc.ca/

Pacific NorthWest DX Convention
Sponsor: Orca DX and Contest Club
Date: Friday, August 11
Place: New Westminster, BC; Quay Hotel, 900 Quayside Drive.
Time: Friday 2 pm; Saturday 7:30 am; Sunday 8:30 am.
Cost: Saturday programs $30; Saturday dinner $55; Sunday brunch $30.
Info: Contact ve7vr@myrac.ca
W: https://pacificnwdxconvention.com/

For updated information on Amateur Radio events please visit: https://secure.eton.ca/rac/events/index.html

Manitoba Ham Fest
Sponsor: Brandon Amateur Radio Club
Date: Saturday, August 12
Place: Austin, Manitoba on the site of the Manitoba Agricultural Museum.
Time: Public 11 am to 3 pm.
Cost: Public $5.
Talk-in: ve4mtr 146.91 or 146.52
Info: Contact Stan Penner, VE4SJP, at ve4sjp@gmail.com. For tables contact Brian Beadle, VE4BCB, at bcbeadle@mymts.net
W: https://www.brandonarc.ca/

Hanover Ham Haul
Sponsor: Local Amateurs
Date: Saturday, August 12
Place: Hanover, ON; Hanover Drive-In Theatre. Enter at ticket booth.
Time: Vendors 8:30; Public 9:30 until 1 pm.
Cost: Admission $5 per person and $5 per vendor space. Children under 12 free. Please bring your own table. All proceeds after expenses go to the support of local charities.
Talk-in: 146.520 simplex, no tone
Info: davemargetts@bmts.com.
W: https://www.ontars.com/

London Amateur Radio Club Annual Hamfest
Sponsor: London Amateur Radio Club
Date: Sunday, August 20
Place: Dorchester, ON; 4939 Hamilton Road.
Time: 9 am to 12 noon
Cost: Public $8; Tables and Tailgating $7 plus $8 admission
Talk-in: VE3OME 145.450 PL 114.8
Info: Email LARChamfest@gmail.com
W: http://www.larc.ca

Barrie ARCHamfest | Junk-In-The-Trunk
Sponsor: Barrie ARC
Date: Saturday, August 26
Place: Barrie, Ontario; Barrie Legion #147 410 St. Vincent Street.
Time: Vendors 7:30 am; Public 8:30 am. Rain or shine event
Cost: Vendors $10 per space. Public: admission is free. Donations to the Legion would be gratefully accepted. Profits will be split and donated to the Barrie Legion.
Talk-In: 147.000+ Tone 156.7 VE3RAG.
Info: Brian, VE3XNS ve3xns@gmail.com or Mike, VE3MKX, ve3mkxqrp@gmail.com
W: https://barriearc.com/

Ottawa (Carp) 2023 Hamfest
Sponsor: Ottawa Amateur Radio Club, Inc.
Date: Saturday, September 9
Place: Ottawa (Carp), ON; Carp Agricultural Fairgrounds in the W. Erskine Johnston Arena, 3882 Carp Road
Time: Commercial Vendors 7:30 am; Private vendors: 8 am; Public: 9 am to noon.
Cost: Vendor tables: $17 per 8-foot table. Please book tables early to reserve your preferred table location. Admission: $6. Children 12 and under are free.
Talk-in: VE2CRA, 146.94-, 100 Hz
Info: Ed, VE3WGO, hamfest@oarc.net. Please see our ad on page 29.
W: https://oarc.net/hamfest2023

Simcoe County Fall Hamfest
Simcoe County Amateur Radio Enthusiasts
Date: Saturday, September 16
Place: Barrie, ON; Grenfel Community Centre, 1989 County Road 40 Sunnidale Road.
Time: Vendors 8 am; Public 9 am to noon.
Cost: Vendors $5; Admission is free but donations are welcome.
Talk-in: 146.55 MHz simplex no tone
Info: Brant Smith, ve3ume@scare-radio.com 289-802-1480
W: http://scare-radio.com/Scare-Radio.com/Home.html

Kingston Amateur Radio Club Hamfest
Sponsor: Kingston Amateur Radio Club
Date: Saturday, October 14.
Place: Kingston, ON; Royal Canadian Legion (Branch 560), 734 Montreal Street.
Time: Vendors 7:30 am; Public 8:30 am.
Cost: Vendors $10/table; Public $5/person.
Talk-in: VE3KBR 146.94(-) Tone 151.4
Info: Tim, VA3TIC, va3tic@gmail.com or Greg, VE3PJ, greg.foster@sympatico.ca
W: https://www.ve3kbr.com/main.html

Montreal South Shore Hamfest
Sponsor: Club Radio Amateur Rive-Sud de Montreal
Date: Saturday, October 21
Place: Longueuil, QC; Bingo Longeuil, 1591, blvd Roland-Therrien Longueuil (10 minutes from downtown Montreal).
Time: Vendors 6 am; Public 8:30 to 11:30.
Cost: Public $10; Tables $10 plus admission
Talk-in: VE2RSM 145,39 MHz, CTCSS 103,5 Hz
Info: Francois Drien, VE2FDA, 450-672-9994, hamfest@ve2clm.ca
W: http://www.ve2clm.ca

Parks On The Air (POTA) in Canada

Parks on the Air® (POTA) is a popular Amateur Radio activity that involves operating portable radios from designated parks and nature reserves around the world. Currently, Parks on the Air lists over 400 national/provincial/territorial parks, nature reserves and historical sites. Each will present a unique experience and operating styles and seasons will also affect the nature of your experience.









The Parks On The Air Program

The Parks on the Air program is a fun and rewarding learning experience that combines your love of Amateur Radio with adventures in the great outdoors!

The following information is courtesy of the main POTA website:

- "Getting started with POTA can happen via one of two paths: as an **'activator'** who heads out into the parks or as a **'hunter'** who is trying to contact someone in a park.
- The easiest way to participate in POTA is as a hunter, who can be located anywhere, and contact the activators in the park.
- Activators are the individuals that pack up their portable gear and head out to a park, and set up a station.
- The first place to start as a hunter is the https://pota.app. The home page you land on will be the spotting page, which lets you know who is on the air, what parks they are in, and what frequencies and modes they are currently operating on. Spin the dial, and answer their call if you can hear them. If you make a contact, you've officially started in POTA! That's all there is to it!
- Activators are the individuals that pack up their portable gear and head out to a park, and set up a station. After you've done some hunting, you might want to take a shot at activating."

Benefits of Participating in Parks on the Air:

Participating in Parks on the Air (POTA) can provide you with several learning opportunities including:

Outdoor Skills: You will learn how to set up your radio equipment in a portable manner and how to operate it outdoors. This can include learning about battery power, portable antennas and radio communication techniques.

Radio Communication Skills: POTA provides an opportunity to hone your radio communication skills including proper etiquette, frequency usage and operating procedures.

Enhance emergency communication capabilities: POTA can enhance an Amateur Radio operators' ability to communicate during emergency situations. By practising temporary communication station setups and operating in challenging environments, Amateur Radio operators will be prepared in the event of an emergency.

Nature and Conservation: POTA can provide an opportunity to learn about local flora and fauna, environmental conservation, and the importance of protecting natural resources.

Collaboration and Community: POTA provides an opportunity to connect with other Amateur Radio operators around the world and to work together to improve your skills, share knowledge and support each other.

Navigation Skills: POTA provides opportunities to enhance navigation skills by reading maps, using GPS devices and understanding park regulations.

For more information please visit: https://www.rac.ca/parks-on-the-air-canada/

The RAC Challenge Update: April and May

Ante Laurijssen, VA2BBW

Some of you may have noticed that Dave Goodwin's name isn't at the top of this column in this issue. Indeed, along with my new duties as RAC Awards Manager, I have happily taken over responsibilities for the Canadian Portable Operations Challenge as well. I would like to thank Dave for starting this fun program and dedicating his time in the last two years to make it what it is! I hope to carry on the good work that he has done.

Now, let's get down to business! These last two months have been quite active and I was very surprised to see applications pop up in my inbox almost every day. For the month of April we had 15 different operators submitting applications for activations from a variety of grid squares, parks, lighthouses and summits.



Chris, VE3CBK and XYL Deb at Dickinson Landing Lighthouse ARLHS CAN-1061

Chris Bisaillion, VE3CBK, just ran with it, activating a very respectable 23 lighthouses, accompanied by his wife Deb who took the opportunity to snap some nice pictures. I also had the pleasure of meeting Chris at the recent Smiths Falls hamfest and congratulating him in person.

The month of May was even busier, with 19 operators sending in reports of their outdoor activities. Chris kept up his lighthouse effort, but Nicolas Gagnon, VA2VT, ended up taking the crown, operating from 25 parks and 9 grid squares for an impressive points tally.

John McGrath, VE3FDZ, currently in first place for 2023, also crept back up into the top five this month, finishing third. Christopher Lang, VE7LRV, was this month's only Islands On The Air (IOTA) activator, operating from island NA-036.

I am also happy to report that three more Coureur des Bois awards were earned in April. Congratulations to Michael Van Kuyk, VE7KPZ, Warren Bekker, VA3WEB, and Mike Snarr, VE3WNX. All three were awarded the Bronze level certificate for having submitted at least 25 activation reports. I am sure we will see their names in this column again!

Another familiar name also crossed my inbox along with a little story. Our own Dave Goodwin, VE3KG, operated from grid square FN24 and shared his experience with us:

"This was a community service operation. I was part of a group of Amateurs (New Hams Ottawa) providing safety communications for about 220 Ottawa-area members of Scouts Canada.

The Scouts were doing the 'Rideau Challenge Journey,' a collection of two-day hikes in the Rideau Trail system. I set up on Saturday in Burritt's Rapids, a rural community in the extreme south of Ottawa, then tore down, then re-deployed to the same location on Sunday.

All operations were on 146.55 MHz simplex FM, with stations spread across more than a dozen locations."



Dave, VE3KG – Rideau Challenge Journey

Coureur des Bois: April

Michael Van Kuyk, VE7KPZ
Warren Bekker, VA3WEB
Mike Snarr, VE3WNX

"The Top Five"

RAC Challenge Top 5: April 2023

Place	Name/Call	Points
1st	Chris Bisaillion VE3CBK	25,704
2nd	Mike Bingley, VE6FXL	16,320
3rd	Nicolas Gagnon VA2VT	12,060
4th	Pierre Jolin VE2GT	10,944
5th	Jeff Zimmerman VE3JZT	3,498

RAC Challenge Top 5: May 2023

Place	Name/Call	Points
1st	Nicolas Gagnon VA2VT	165,060
2nd	Jeff Zimmerman VE3JZT	61,398
3rd	John McGrath VE3FDZ	50,028
4th	Chris Bisaillion VE3CBK	13,080
5th	Gerry Bell VE3PYJ	6,260

We also got another nice report from my buddy Tom Cort, VA2NW, who operated from Rockcliffe Park in Ottawa with a local group of Parks on the Air (POTA) enthusiasts, which I was part of. He wrote:

"I hopped the provincial border from Quebec to Ontario today for a little Parks on the Air fun. I ended up at Rockcliffe Park in Ottawa (VE-1597).

There were quite a few operators at the park today and it was quite a sight to see.

I had a blast and enjoyed seeing everyone. There was some RFI, so I let some others warm the clouds while I packed up and did some visiting.

I hung out with Ante, VA2BBW (shown in the right column) and his CW was so mesmerizing that a turkey came by to check it out (photo attached).



Ante, VA2BBW, and the turkey :)

I made 16 QSOs, 5 of which were park-to-park contacts. The higher bands were pretty dead. The breakdown is as follows: 12 on 20m, 1 on 30m and 3 on 40m. I was running 5W from my Xiegu X6100 into a homebrew end-fed random wire: 35.5-foot radiator in an inverted L configuration with a 17-foot counterpoise connected to a BNC binding post adapter plugged directly into the transceiver. My average RST Sent was 4.82/5.82/9 and average RST Received was 4.41/4.71/9. 12 contacts were CW and 4 were SSB. Despite the conditions, my QSO rate was 14.53 per hour."

If only other operators had found my CW as mesmerizing as the turkey, I may have had the same success as Tom. But the bands were in rough shape. Thankfully, our group ended the day with some pub fare and brews! He also told us about another outing of his:

"I made a quick stop at the Gatineau Park Welcome Area (P3) while my daughter attended a Girl Guides meeting. Using a Xiegu X6100 at 5W, a 'hamstick'-type antenna on a magnet mount, and CW Morse paddles, I did a quick activation.

The contacts were coming slowly at first and I wasn't sure if I'd make my 10 contacts for a valid POTA activation in time to get back to pick up my daughter, but things quickly ramped up. I ended the evening about half an hour after I started. I had 17 QRP CW contacts on 40m with over a dozen states worked and two provinces.

I love living in the National Capital Region as most of the National Capital Commission's parks are free and close enough that I can stop in for a quick activation like this when I need to kill an hour. The furthest contact was with Georgia."

Not bad! We also got a really nice story from the western part of the country from Michael Van Kuyk, VE7KPZ, who did a little bit of elmering. I think it is important for us to help new Amateurs out and Michael did a great job. Here is how his activation went:

"This was a 1:1 session with new Amateur Howard, VA7PWF. The idea was to jumpstart Howard into portable operation, and really answer any questions he had about operating.

In the four hours we spent together in the park, we cut wire for and tuned an End-fed Half-wave (EFHW) with a NanoVNA, setup the aforementioned antenna on a portable mast, set up the station, got on the air and activated the park for POTA.

We did a bit of experimentation with radio settings and dove into recommended logging software and log management.

Howard was a natural on the air and commanded the mic with ease. It's a little different running vs search and pounce.

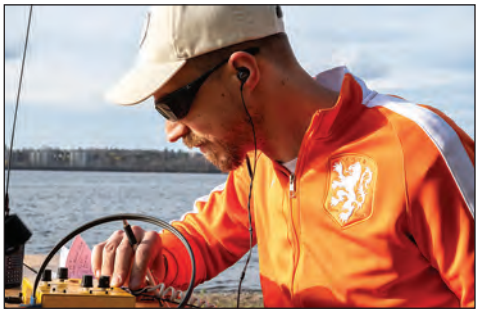
I am expecting Howard will now have the tools to get outdoors on the air on his own with little doubt in his abilities and/or equipment going forward.

The weather was also quite nice."

I'm sure we'll be hearing more from Michael and Howard in the future.

TCA

Meet Our New RAC Awards Manager: Ante Laurijssen, VA2BBW



Although I got my Amateur Radio certification in 2008, my interest in radio started when I was a kid, listening to intriguing shortwave signals and broadcasts on a little Realistic DX-360.

I remember buying a few issues of *CQ Magazine* and dreaming of the gear in the ads, imagining myself talking with folks all over the world. Well, I took a few turns along the way, but at the age of 24 the spark came back and I got my ticket and have been enjoying being an Amateur ever since.

Despite my simple little station I am very active on HF and love chasing DX on all bands and modes, especially CW. I also enjoy operating QRP, either from home or in a park with friends. I am also active on the local scene with both the Club de Radio Amateur Outaouais (CRAO) and the Ottawa Valley Mobile Radio Club (OVMRC) and participate in our 2m nets whenever I can.

In addition to being the new RAC Awards Manager, I have also volunteered to look after the RAC Challenge. Thankfully I have a very supportive wife and two awesome kids who are very understanding of my passion for this wonderful hobby!

I have been working closely with the the RAC Contests and Awards Committee and we hope to have some exciting news to share with you in the coming months.

Stay tuned tothe RAC website for more information.

- https://www.rac.ca/operating/rac-operating-awards/
- https://www.rac.ca/rac-challenge/

You can also reach me by email at: awards@rac.ca

TCA

RAC AGM / AGA | CONFERENCE / CONFÉRENCE 2023

RAC Annual General Meeting

The Radio Amateurs of Canada is pleased to hold its Annual General Meeting (AGM) in Halifax, Nova Scotia. The AGM will be hosted by the Halifax Amateur Radio Club (HARC) in conjunction with its 90th Anniversary Gala Dinner and Conference, which is being held at the same location.

All RAC members are encouraged to attend the Annual General Meeting which will be held as a hybrid event (both in-person and online).

Date: Saturday, August 19.

Time: 3 pm (Eastern Time)

Agenda items will include:

1) Report of the President

2) Review of the 2022 finances

3) Appointment of auditors for 2023

A Question and Answer period will follow the AGM proceedings. 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 members of the RAC Board of Directors and Executive and is open to all RAC members. Stay tuned to the RAC website for more information.

Assemblée générale annuelle de RAC

Les Radioamateurs du Canada sont heureux de tenir leur assemblée générale annuelle (AGA) à Halifax, en Nouvelle-Écosse. L'AGA sera organisée par le Halifax Amateur Radio Club (HARC) en conjonction avec son dîner de gala et sa conférence du 90e anniversaire, qui se tiendront au même endroit.

Tous les membres de l'ACFC sont encouragés à assister à l'assemblée générale annuelle qui se tiendra sous forme d'événement hybride (en personne et en ligne).

Date : samedi 19 août

Heure : 15h00 (heure normale de l'Est)

Les points à l'ordre du jour incluent :

1) le rapport du président

2) la présentation des états financiers de 2022

3) nomination de l'auditeur pour 2023

Une période de questions et de réponses suivra les procédures de l'AGA. Voici votre chance d'écouter ce que vos représentants ont accompli durant la dernière année, poser vos questions et faire vos suggestions à propos de la gestion et de l'orientation future de RAC.

Les membres du conseil d'administration et de l'exécutif de la RAC participeront à la réunion et seront ouverts à tous les membres.

Restez à l'écoute pour plus d'informations.

– https://www.rac.ca/agm –

Halifax Amateur Radio Club's 90th Anniversary Gala Dinner and Conference: August 18 to 20

The Halifax Amateur Radio Club (HARC) in Nova Scotia is celebrating its 90th anniversary with a special **Gala Dinner and Conference**. The Conference will feature a range of presentations and discussions on various topics related to Amateur Radio including emergency communications, contesting, digital modes and more.

The highlight for the Gala Dinner on Saturday August 19 will be a talk from RAC President Phil McBride on "The Future of Amateur Radio in Canada and Abroad".

RAC has chosen to celebrate its 30th anniversary with us here in Halifax. On Saturday they will hold a "Fireside Chat" with the Presidents of the International Amateur Radio Union, the American Radio Relay League and of Radio Amateurs of Canada.

The following is a tentative list of presentations. Each presentation will be 30 to 60 minutes in length.

- **Bill Karle, VE1YY and Jason Ingraham, VE1PYE:** "Try the 630m Band"
- **Dave George, VE1AJP:** "Answering the Call", a historical review of the some of key Public Service and Emergency events in the Halifax area over the past 40 years
- **Fred Archibald VE1FA:** "Air-Sea Rescue in WW2 and the 'Gibson Girl' Radio"
- **Nathaniel Senff, VA7SNF:** Rebuilding Domestic HF Capabilities through the Canadian Forces Affiliate Radio System (CFARS)
- **Matt Boyle, VE1BSG:** "A look at Public Safety communicaions past, present and future, in Nova Scotia and across the Atlantic Region"
- **Gerry Hull, VE1RM/W1VE:** "Remote Operating A-Z: From your own Shack or DXpeditioning"
- **Al Penney, VO1NO:** "Defeating Hitler's Chase-Me-Charlies"
- **Dave Goodwin, VE3KG:** "The Remarkable International System of Amateur Radio Governance"
- **George Nicholson, N4GRN/VE1GRN:** "The Wild Side of Exotic DXpeditioning"
- **Amanda Christie, VE9OHM:** "Making Art with Electromagnetic Spectrum"

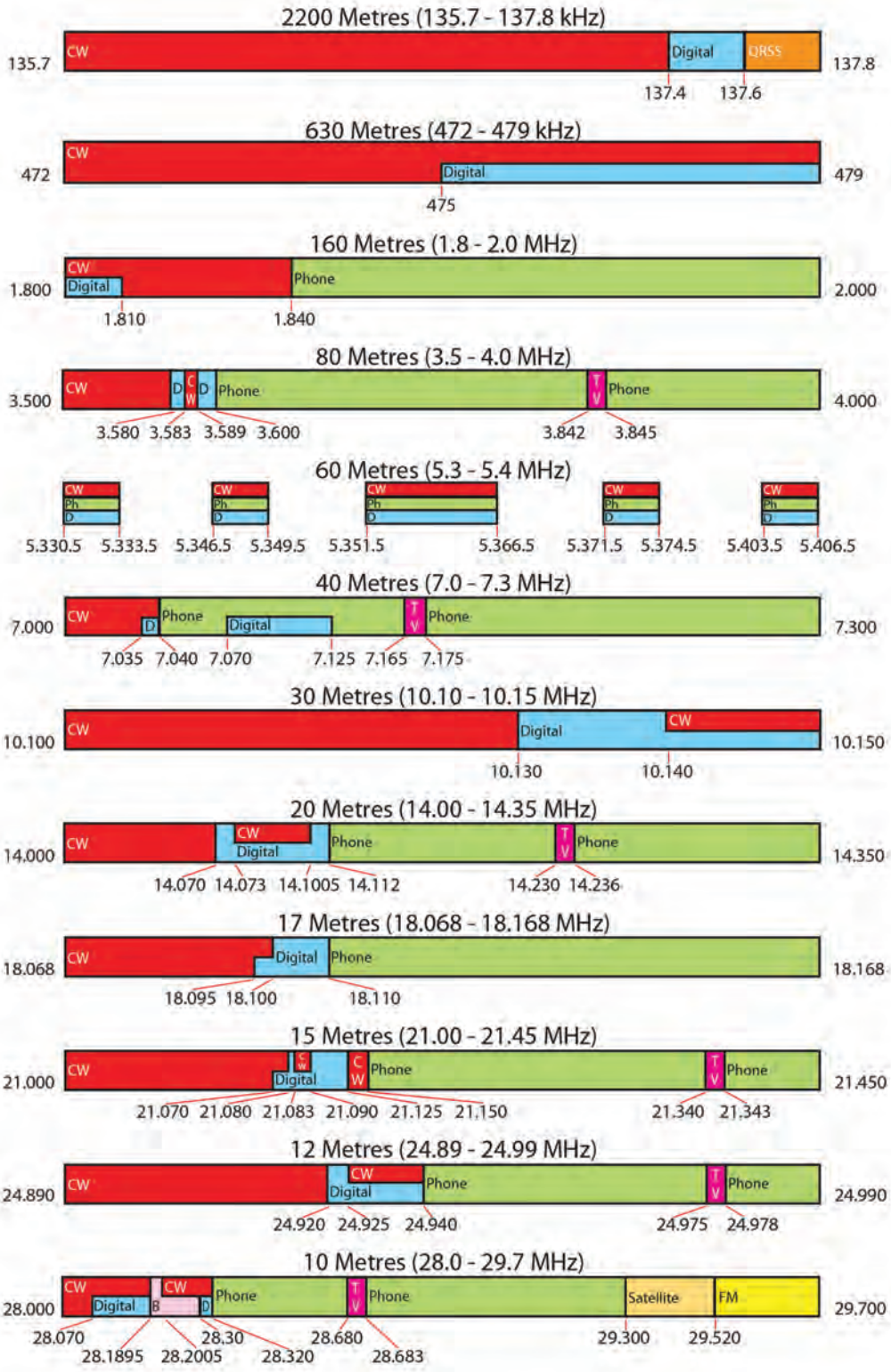
For information please visit https://www.rac.ca/agm and http://www.halifax-arc.org/

Canadian 0 - 30MHz Band Plan

Effective Date: June 1, 2023

1. Not all permissible modes/activities are represented.
2. LSB is used on 160, 80 and 40m. USB is used on all other bands that permit SSB, including 60m.
3. Consult various online resources for detailed information on what digital modes are used.
4. Maximum bandwidth permitted on 2200m is 100 Hz. Maximum power is 1 Watt EIRP.
5. Canadian Amateurs are allowed a maximum of five watts EIRP on the 630m band, using emissions with a maximum bandwidth of 1 kHz.
6. Canadian Amateurs are allowed a maximum of 100 watts ERP, using emissions with a maximum bandwidth of 2.8 kHz on the 60m band. Refer to the RAC website for full details before operating on the 60m band: https://www.rac.ca/60metres/.
7. Remember not to allow your signal to spill over into adjoining band segments when operating close to the edges. During major weekend contests, activity in certain modes can spill over into other segments. Operators should avoid NCDXF beacons on 14.100, 18.110, 21.150, 24.930 and 28.200 MHz.
8. This graphic is a living document and will be reviewed and updated periodically to reflect changes in the band plans and operating habits.

www.rac.ca



Key

CW	CW	FM	FM	TV	SSTV
OR	CW QRSS	B	Beacons	D	Digital
Ph	Phone	S	Satellite		

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