



April 2001

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In this Issue

1	President's message
1	Amateurs respond to northwest US quake
2	Ontario QSO Party 2001
2	Important points
3	Mir & AO-40
4	March minutes
6	Around the Bay Race
6	Callsigns
6	Band plans

The Hamilton Amateur Radio Club
 PO Box 91215, Effort Square PO
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 Est. 1932 Inc. 1956

The Hamilton Amateur

The Hamilton Amateur Radio Club Newsletter - 69 Years of Amateur Radio 1932-2001

President's message

Linda VA3LJU - President

The members of the Hamilton Amateur Radio Club executive made the decision to mail this issue of The Hamilton Amateur to all licensed amateur radio operators in the Hamilton area. It is our hope that you will see something that will interest you.

We would like to have the opportunity to meet you at one of our club meetings or special events.

Although I'm sure that you've enjoyed many wonderful experiences since you've earned your license, the privilege of being able to use the Amateur radio frequencies also comes with some responsibility. As good Amateur radio operators we should not simply expect to reap the benefits of the hobby, but we should also be willing to contribute to the continued success and growth of the hobby.

For each of us this contribution will take different forms. For some, it will be to join the local Amateur radio club and meet with a group of likeminded individuals on a monthly basis. Many of our members are willing to lend a helping hand to fellow Hams who might need assistance with antenna work or setting up a radio shack. Other members of the club help with various public service events throughout the year including the "Round the Bay Race", The Salvation Army Red Shield Campaign, The CNIB walkathon and The Canadian Cancer Society's Linc Walk just to name a few. Joining the Amateur radio club also insures that the local club repeater will be able to continue to serve the Amateur radio

community in the future. The Hamilton Amateur Radio Club is recognized as the official Amateur radio contact group in case of an emergency situation here in Hamilton. We also hold classes for people who are interested in writing the exam to become Amateur radio operators. The members of our contest group have been extremely successful using the VE3DC call. These are just a few of the many activities that we think may interest you.

I hope you will take the time to attend one of our club meetings or events. I'm certain that you'll find it an interesting and enjoyable addition to your Amateur radio hobby.

Next meeting's Speaker

April 18

Amateur radio's roll in "The Journey of Hope"

Jim Thomas VA3JT will join us.

Amateurs respond to northwest US quake

The following note was submitted as e-mail to ve3dc@rac.ca

(For the second edition of our newsletter in a row the word "quake" has been on the front page. Thankfully, neither has occurred in our country, but this second - actually occurring after the last newsletter was essentially "in the mail" - did occur just to the south of our west coast and was felt in the lower mainland of B.C.

I actually listened to some of the nets referred to in the story that evening, on

Club meetings - 3rd Wednesday each month (except July and August) 8pm. Our new home is the St. John's Ambulance Association building, 550 Upper Wellington Street (on the Mountain). Park behind the St. John's building, NOT the Police station. Complimentary refreshments!

both 20m and 80m, and it really did show the unique value and ability of Amateur radio in this obviously tough situation. And please keep in mind, this is information as it came to me that evening - February 28th...ed.)

An earthquake estimated at magnitude 6.8 hit February 28 about 25 miles southeast of Seattle, Washington. No deaths and few serious injuries are reported. A state of emergency has been declared in King County, Washington--the greater Seattle area.

ARRL Western Washington Section Manager Harry Lewis W7JWJ, reports that some communities are without power. Telephone lines are jammed, and customers were being asked to not use their telephones.

District Emergency Coordinator Ed Bruette N7NVP, was reported enroute to the Kitsap County Emergency Operations Centre. "State RACES officer Jim Sutton WA7PHD, is NCS on the Washington State Emergency Net operating from the State EOC at Camp Murray," Lewis said.

ARES volunteers in King County were active on an emergency repeater net with King County EC Rich Hodges KB7TBF, and Lt Russ Reed N7NOV, of the US Coast Guard acting as NCS. Lewis said that several other county ARES nets were active as well. "I am deeply impressed by the immediate response that occurred with hams coming out of the woodwork, just like it might have been planned," Lewis said.

He noted that Red Cross, with Amateur Radio operators assisting, was already doing damage assessment, and that a temporary 2-meter net was set up for that purpose.

Salvation Army Team Emergency Radio Network reports it is standing by on its net frequency of 14.265 MHz.

OQP 2001

Bob Chandler VE3SRE (via the ODXA)

(In case you aren't aware, VE3DC has won the M/M competition (and more!) in the OQP in each of the first 4 years!

Important points

Executive Meetings

The HARC Executive committee meets each month, except July and August, at Mohawk College in room E031A. All members are invited to attend and participate. The meetings are scheduled monthly to fit the schedules of the Executive members.

VE3NCF [146.760- & 444.075+ MHz]

The HARC operates VE3NCF repeater, located atop the Niagara escarpment. It's open for use by all Amateurs. Special features are a privilege of membership. VE3NCF is part of the VE3RPT link system.

Check-In and Swap nets

The HARC "check-in net" is held every Tuesday evening, except July and August, at 7:30pm. The HARC "swap net" follows at 8:00pm.

Examinations

Amateur radio licence examinations are conducted the second Wednesday each month, except July and August. Contact the voluntary examiners to make an appointment. Each test costs \$3.00.

HARC Fleamarket

The HARC Fleamarket is held annually at Marritt Hall, Ancaster. Contact the Fleamarket chairperson for information. **Hamfest 2001 has been announced for Saturday, October 13th, 2001.** And thanks to everyone that attended and helped with Hamfest 2000!

Membership Information

Club membership, including all privileges, is \$25.00 per person, per year, September 1 to August 31. Additional memberships, for immediate family members living in the same home, are \$1.00 per person. One newsletter is sent to each address.

The Hamilton Amateur

The Hamilton Amateur is published ten times each year. It is not published in July or August. The deadline for article submission is the *last Saturday* of the month for the next month's issue. The preferred format is ASCII code (.txt files). Articles will be checked for spelling and grammar, but the author is responsible for the factual content. E-mail submissions to David VE3STT at ve3stt@rac.ca

Any inquiries about 2001 can be directed to Rick VE3BK...ed.)

The 5th Annual Ontario QSO Party happens April 21, 2001 @1800utc - April 22, 2001 @1800utc. GET ON THE AIR AND JOIN THE FUN!!

Frequencies: (Phone/CW) All HF Bands 160-10m with the exception of the WARC bands. All VHF/UHF bands. Suggested frequencies for Mobiles/QRP: 1.870, 3.735, 3.860, 7.070, 7.260, 14.130, 14.265, 21.260, 28.360 on SSB & 1.830, 3.530, 3.720, 7.030, 7.130, 14.030, 21.030, 21.130, 28.030 on CW. 52.540, 146.550, 446.100 on FM

Upcoming Meeting Speakers

May 16

VB2R - DXpedition

Bob Chandler VE3SRE will speak about his role in the DXpedition to activate "zone 2" in 2000. And give us an idea of what being the DX feels like?

AND - Homebrew Night

If Chris VE3PKY didn't inspire you at a recent meeting, hopefully you've built something else to show off at Homebrew Night!

June 20

HARC Annual Election Night

It's never too early to start your "campaign" for a place at the Executive table!

Suggested Manner of Operation:

Work HF SSB on the hour, HF CW on the half hour, work VHF/UHF (either FM simplex, SSB or CW) at 15 minutes past the hour.

Use of FM: Operators cannot use repeaters for either contest contacts or for soliciting contacts. Please keep the FM Simplex calling frequency of 146.520Mhz clear.

Categories: Multi-op, Single Op LP (up to 150w HF, up to 50w VHF/UHF), Single Op HP (over 150w HF or over 50w VHF/UHF), Single Op Single Band, Mobile, HF QRP (5w and under), VHF/UHF FM QRP, CW-only, Phone-Only, or Mixed Mode, Mobile/Rover, SWL.

Exchange: ON stations send signal report and multiplier area. Other stations send signal report and Canadian province/territory, US state, or DXCC country name.

Scoring: ON stations work everyone. Non-ON stations work Ontario stations only. Mobile/Rover stations may be worked again when they change multiplier areas. SWL's log only Ontario stations.

Score 1QSO pt. for each station worked on SSB per HF band.

Score 2QSO pts. for each station worked on CW per HF band.

(You may work a station twice per band on HF, once on SSB and once on CW).

On the VHF/UHF bands you may only work a station ONCE per band regardless of mode. Score 5QSO pts. for each station worked per band.

Score 10QSO pts. for each contact made with VE3ODX and VA3RAC. (You may work them both phone and CW on HF but only once on each of the VHF/UHF bands).

Multiplier Points: ON stations claim 1 multiplier point for each Ontario multiplier worked on each band. You also claim one multiplier point for each Canadian province/territory, US state and DXCC country worked on each band.

Stations outside Ontario and SWL's claim Ontario multipliers only on each band.

Total Score: Total QSO Pts. X Total Multiplier Pts. = Your Score

Mobile/Rover Bonus: Mobile/Rover stations add 300 bonus pts. for each Ontario multiplier activated. To earn the mobile/rover bonus the stations must make at least three contacts with at least

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Chris Cuthbert VE3PKY

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three different stations from the multiplier area.

A "mobile" station is a station that is "on wheels" moving from multiplier to multiplier. A "rover" station is a station that moves between fixed stations in different multipliers.

AWARDS:

Certificates to the top scoring stations in each category and to the top scoring stations in each Ontario county, district, regional municipality and City of Toronto. Regional Certificates will be awarded to the top scoring stations in each region of Ontario ie: Northern Ontario (postal code area P), Southwestern Ontario (N), Central Ontario (L), and Eastern Ontario (K).

Certificates will also be issued to the top scoring stations from Canada (outside Ontario), USA and DX. Certificates will also be awarded to top scoring stations from each Canadian province/territory, US state and DXCC Country.

Certificates and plaques may also be awarded in other categories based on the level of activity.



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Logs: Entries should be postmarked no later than May 31, 2001.

(Visit ODXA website www.odxa.on.ca to find out even more about the contest, awards and to obtain a list of the ON multipliers. You can even obtain a free software program written by one of the ODXA members to help you keep score as you contest!

Above all, remember to make contact with VE3DC - oh, and me of course VE3STT - during the contest. Whether you are on HF or simply have a 2m handheld you will find activity on the bands. Last year was the busiest year on 2m yet! And living where we live, we're in a "target rich" environment on all the bands...ed.)

Mir & AO-40

The following note was submitted as e-mail to ve3dc@rac.ca

Mir - SK

Over the 15 years it was aloft, *Mir* housed Amateur Radio gear and hosted several Amateur Radio operators as part of its many crews, often using the R0MIR call sign.

Mar 23, 2001 that all ended when mission controllers in Moscow fired engines on a Progress cargo ship attached to *Mir* to "de-orbit" the spacecraft and send it hurtling through Earth's atmosphere. While most of the aging spacecraft is believed to have burned up upon re-entry, many had a chance to view the remnants hurtling through the atmosphere over the south Pacific. Upwards of 30 tons of debris were expected to survive the trip and end up in the Pacific between Chile and Australia.

Countless earthbound hams, including students who were part of the Space Amateur Radio Experiment (SAREX), had a chance to speak directly with *Mir*'s crew, including US astronauts on several missions, or have accessed *Mir*'s packet messaging system. (*Even your editor had a few packets float across his computer screen bearing the R0MIR call...ed.*)

In all, more than 100 astronauts and cosmonauts called *Mir* "home" over the years, including the current ISS Expedition 2 crew commander Yury Usachev UA9AD.

While the Amateur radio gear was initially installed aboard *Mir* as a boost to crew morale, it became a vital communication link after an infamous and nearly disastrous fire broke out aboard the spacecraft and when the station's hull was pierced in a cargo rocket collision sometime shortly thereafter.

AO-40 - The story continues

AMSAT-NA President Robin Haighton VE3FRH, has issued a likely explanation of why AO-40 suddenly went silent in mid-December 2000. Haighton's March 16 statement outlines a three-part failure scenario theorizing that AO-40's problems began with a fault in a helium valve.

HARC 2000-2001 Chairs

Awards - Lorraine MacPherson
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Contesting - Rick Danby
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Education - Mardy Eedson
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Health/Welfare - Mary Urbanski
VE3OGQ 388-8383

Hospitality - Monthly Volunteers

Newsletter/Web - David Jones
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Repeater/Tech - * open chair *

Swap Net Control - Frank Love
VA3FWL 679-4524

Property Mgr - Rick Danby
VE3BK 544-3253
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"Initial thoughts were that the spacecraft was completely dead and that chances of recovery were remote, with the possibility that AO-40 was in multiple pieces," Haighton said.

The satellite's 2m beacon quit while ground controllers were testing the onboard 400-newton motor system after anomalies with an orbit-shifting burn that lasted several minutes too long. It was almost two weeks before ground controllers were able to reset the onboard computers and restart a beacon on 2.4GHz.

Ground controllers have been somewhat successful in regaining control of the next-generation amateur satellite since telemetry transmissions resumed Christmas Day, but Haighton concedes some onboard systems may not be recoverable.

Haighton said that while the Phase 3D team may never know exactly what happened, the likely scenario includes what Haighton told ARRL was "a minor explosion" aboard AO-40, as out-of-place fuel mixed and then ignited as a result of a blocked exhaust port on a helium valve.

Ground controllers have used AO-40's magnetorquing system to reduce the satellite's spin rate to around 5 RPM and are optimistic that they'll be able to re-orient the satellite for communication with Earth.

The satellite's omnidirectional antennas appear to be lost, but ground controllers hope the high-gain directional antennas still work and that reorienting the spacecraft will bring about a resumption of signals from other transmitters.

"Following the reorientation it will be possible to test the remaining systems on board the spacecraft and to determine which systems and bands will be available for future operations and under what conditions," Haighton said.

February minutes

Iona VE3UGM - Secretary

Held at St. John Ambulance, 500 Upper Wellington Street, Hamilton, ON.
Wednesday, March 21, 2001 at 8pm.

The Meeting came to order at 8:03pm.

Speaker

In the absence of Linda VA3LJU President (in Florida), Mardy VE3QEE

introduced the evening's speaker, Peter Shilton VE3AX, winner of the Crawford Trophy, past member of HARC, and one of only 10 persons who have received the Worked All States award on 220MHz, a feat that can only be done from Earth by using moon bounce techniques.

Peter gave a very interesting and comprehensive talk on how to go about using the Moon to reflect signals. He showed pictures of a number of large antenna arrays used by "big" moon bounce operators throughout the world. He explained the use of transverters, antenna arrays, heliastats, rotation and elevation devices and computer software to follow the Moon. He also played recorded signals sent to and reflected from the Moon using CW and voice, and he explained the difficulties encountered with Faraday rotation and noise generated by the Sun and the galaxy.

Peter's presentation was illustrated using Power Point on a computer driving a Proxima digital projector.

Following questions and discussion, Glenn VE3FHQ, thanked Peter to appreciative applause from the members present.

The meeting broke at 9:12pm. for coffee and some exceptionally delicious brownies and cake squares kindly supplied by Bud Barber, Gord's VE3AAH wife.

Business

The Meeting reconvened at 9:30pm. for Business with Doug VE3ZDG, Treasurer, presiding.

Treasurer's Report

Doug VE3ZDG, Treasurer, distributed copies of the Club's latest financial standing statement as at March 21, 2001. Doug offered to answer any questions about the Annual Financial Statements for the fiscal year ended August 31, 2000 as printed in the February 2001 issue of the Club's Newsletter since he had not been able to do so at the last General Meeting.

Doug said that any members' questions that did not immediately come to mind could be e-mailed to him and he would answer them. Doug made a MOTION,

which was seconded by Bob VE3ACE and passed without objection that the Treasurer's Report be approved.

Warplane Heritage Museum Report

Frank VE3FWL, said that following meetings with the Warplane Heritage Museum Association members, he had come up with a plan for setting up the Warplane Ham Station, which was now being implemented. A big beam antenna is in the process of being purchased for \$700, together with a 40ft tower, rotator, etc., and the material to build the division is being ordered.

The antenna will be set up at the observation deck in the back of the Museum and will rise above the roofline by no more than some 28 or 32 feet as permitted by the airport. Lights will not be required on the tower. It is also a requirement that a licensed Amateur radio operator be on hand at all times that the station is open. Frank suggested working out a list of volunteer members who would each be scheduled to monitor the station and demonstrate its operation to the public for some 2 to 3 hours per week. It is expected that admission and parking would be free to any members working at the station.

The HSR goes within a 2km walking distance of the museum at present and it is expected that HSR service will be going all the way to the airport soon. The equipment at the station consists of an ICOM 765 and an FT101, which is being looked at. The station call sign is being worked on.

Membership and Education Report

Mardy VE3QEE, said that the previous Basic course had finished on Feb 14, 2001 and that of those that passed the course (Pat Faux, David Locke, Julian DiBattista and Harm Yager) most now had call signs and were members of HARC to welcoming applause from the other members at the Meeting. The current Basic course, roughly half finished, has five students, including Bob's VE3ACE, wife. Gerald VE3GMJ confirmed that the Advanced course was finished and the exam would be held in April.

Upcoming Public Service Events

David VE3DWJ, who is in charge of HARC volunteer arrangements for upcoming public events, said that the Around the Bay Road Race was this Sunday, March 25, 2001. David said that at this point he had information that St. John Ambulance would be helping out towards the end of the Race. HARC volunteers are to meet at Churchill Secondary School at 9am where Neil VE3VNG will be handing out vests and special packages.

David proceeded to demonstrate the new regulation version of the vests to be worn by Club volunteers, which are tear-proof.

David said that volunteers were also required for the following events.

Sunday, April 22 -Paris to Ancaster Bicycle Race. Gary VE3TTO, is HARC co-ordinator for this event. It starts around 10am until approximately 2pm. Club volunteers with cars especially needed to monitor this event.

Sunday, May 6 - CNIB Walkathon from CNIB Building along the railway trail to the Dundas Railway Station.

Monday, May 7 - Salvation Army Red Shield Campaign. Volunteers, especially those with cars needed, around 6pm to maybe 11:30pm.

Saturday, June 23 and Sunday, June 24, 2001 - ARRL Field Day. David said he expects everyone to show up this year if only for one hour to help with all the work.

(Volunteers - call David VE3DWJ at 383-9808).

VE3DC Contesting Report

Rick VE3BK, Contest Chair of the group (*who are doing a fantastic job as VE3DC as will be noted by any members reading The Canadian Amateur magazine March/April, 2001 issue...Sec'y*), asked for volunteers for the April 21-22, 2001, 24 hour Ontario QSO Party Contest.

Rick said that this contest is an all band/all mode contest and that HARC won this Contest last year. Those interested should call him (544-3253) or e-mail rdanby@hwc.org. Rick also brought some photos taken during contests for the members to view.

It was MOVED by Neil VE3VNG, seconded by Iona VE3UGM and passed without objection, that the meeting be adjourned 10:10pm.

Around the Bay race

David VE3DWJ

The running of the 107th annual road race took place on March 25, 2001. The Hamilton Amateur Radio Club again supplied volunteer Amateurs to help make the race a success.

The weather was very cool, with a wind chill factor near -17c. Despite that, the following Amateurs gave their time to help out:

VA3GMJ Gerald, VE3VMO Vic, VA3JEN Jennifer, VA3DMK David, VA3AWK John, VE3DNN David, VA3WWB Walter, VA3FWL Frank, VE3KYC Bill, VE3TTO Gary, VE3AAH Gord and his wife Bud, VA3FDN Rob, VE3QEE Mardy, VE3VNG Neil, VE3OQG Fiore and VE3DWJ David.

Thanks again to all who helped out this year. Remember that we are always in need of volunteer support. Check the March meeting minutes for up-coming events or call me at 383-9808 to find out more.

Callsigns

Mardy VE3QEE - Membership

Four new graduates (as seen in the March minutes) from the Fall/Winter Basic course have now received their call signs. They are:

VA3PJF Patrick Faux, Ancaster
VE3DLK David Locke, Hamilton
VA3JDD Julian DiBattista, Hamilton
VE3HRM Harm Jager, Dundas

Make sure you welcome them to the air when you hear the new call!

Band plans

David VE3STT - Editor

In an effort to encourage use of our bands, and possibly give you some new ones to explore, here are some

additional RAC suggested band plans for you to study.

Last issue it was the lower HF bands. This issue, the so-called "magic band" 6m (caught between HF/VHF), 2m and 70cm or 440MHz:

<u>6m Band - Amateur Exclusive</u>
50.0-50.6 -SSB and AM
50.0-50.050 -CW/Bacons/Moon bounce
50.050-50.1 -CW/Bacons
50.100 -CW Calling frequency
50.1-50.6 -SSB and AM (Bandwidth less than or equal to 2.3kHz)
50.105-50.115 -DX Window (Listen for DX here)
50.110 -DX Call frequency (Non-North American stations)
50.125 -National SSB Call frequency
50.4 -AM Call frequency
50.6-51.0 -Experimental modes
50.7 -RTTY/AMTOR Call frequency
50.8-50.98 -Radio control of models. (Ten channels on a 20kHz Raster)
51-51.1 -Pacific (ZL) DX Window (SSB/CW Only)
51.1-52 -FM Voice simplex and Packet
51.7 -National simplex Packet call frequency
52-52.05 -Pacific (VK) DX Window (SSB/CW Only)
52.525 -National FM call frequency
52-53 -FM Voice repeater inputs
53-54 -FM Voice repeater outputs
<u>2m Band - Amateur Exclusive</u>
144-144.1 -Moon bounce and CW
144.100 -CW Calling frequency
144.1-144.200 -CW/SSB Weak signal
144.200 -SSB Calling frequency (Call and then move off frequency)
144.2-144.275 -AM Narrow band modes exclusive (ACSSB, SSB, CW, other modes - bandwidth less than 3kHz. ie: FAX, SSTV, RTTY)
144.275-144.300 -Propagation beacon network exclusive
144.3-144.500 -Digital
144.340 -National ATV coordination frequency
144.390 -National APRS frequency
144.5-144.600 -Repeater INPUTS primary, linear translator INPUTS secondary
144.6-144.900 -Repeater INPUTS
144.9-145.100 -Digital
145.1-145.200 -Repeater OUTPUTS primary, Linear translator OUTPUTS

secondary
145.2-145.500 -Repeater OUTPUTS
145.5-145.590 -SAREX/Space station links
145.590-145.790 -Digital
145.8-146.000 -Exclusive Amateur satellite service
146.010-146.370 -Repeater INPUTS
146.4-146.580 -FM Simplex
146.520 -National FM Call frequency (Call and then move off frequency)
146.610-147.390 -Repeater OUTPUTS
147.420-147.570 -FM Simplex
147.435-147.585 -Digital
147.6-147.990 -Repeater INPUTS

70cm Band - Radiolocation
Primary/Amateur Secondary
430.025-431.500 -Digital
431.5-433.000 -CW, SSB, Moon bounce (Global Exclusive Allocation), AM narrow band modes.
432.000 -Centre frequency for EME (Globally coordinated frequency allocations exist above and below 432MHz)
432.100 -National CW Call frequency
432.200 -National SSB Call frequency
432.3-432.400 -Propagation beacon network exclusive
432.4-433.000 -Experimental narrow bandwidth modes
433.0-434.800 -Digital modes
434.8-434.900 -Analog repeater links
434.9-435.000 -Guard Band
435.0-438.000 -Satellite (Global Exclusive Allocation)
438.0-444.000 -Amateur Television (NTSC, Vestigial Sideband, Digitally Enhanced Video)
439.250 -Video Carrier frequency
442.0-445.000 -Repeater OUTPUTS
444.000 -Spread Spectrum
445.0-445.775 -Analog and digital links
445.8-445.975 -Digital
446.0-446.175 -FM Simplex
446.000 -National FM Call frequency (Call and then move off frequency)
446.2-446.375 -FM Remote Base (Uncoordinated)
446.4-446.775 -Analog and digital links
446.8-446.975 -Digital
447.0-450.000 -Repeater INPUTS

Certain "notes" go along with some of the suggested operating band plans above (especially on 2m). Please check the RAC website, www.rac.ca for more.

Get on the air!