

# marcOgram

Official Publication of The Montreal Amateur Radio Club Inc.  
Box 53047 - RPO Dorval, Dorval Quebec H9S 5W4



Volume 49, Number 3

November 2003

## **“JOHN GROW, VE2EQL, ON EMERGENCY BACK UP POWER SYSTEMS”**

Wednesday 26 November 2003

Ragchew and Fleamarket: 19:30

Club meeting: 20:00

St. Ignatius of Loyola Parish Church

4455 West Broadway (corner of Terrebonne) in N.D.G. - Montreal

John Grow, VE2EQL will have a presentation on Emergency Back Up Power Systems. John plans to go over what we can expect for the future, as well as what are the components to build your own back up Power System. Also to be discussed are AC back up systems, (Generators, etc), DC back up systems, (Solar, Wind, etc) as well as battery systems and charging batteries. This should prove to be most a very informative meeting with a most interesting speaker.

### **A WORD FROM THE PRESIDENT**

Hello,

With last month's annual meeting now over we welcome two new directors to the board - Raymond Faguy, VE2SJA and David Mallette, VE2ARY. Welcome to you both and I look forward to working with you during the coming year.

By the time you read this the November Sweepstakes will be over the annual participation of VE2MAB will be done for another year. I want to

thank all of those who are mentioned elsewhere in this issue for their assistance. I know that the repairs to the HF antenna took longer than any of us planned but we did manage to overcome Murphy's best efforts.

This month's meeting should be interesting as winter often brings power failures and DC power sources are our backup. How many of us are ready for the coming winter?

Once again I would like to remind you that our meetings are held in the room behind the parish hall at the back of the church. I will again endeavour

**Membership Renewal Reminder** - Thanks to those of you who have already returned your membership renewal. If you have not already done so, now is the time to return your form and dues to show your support for the M.A.R.C. and amateur radio. Thank-you.

The MarcOgram is published nine times per year on the second to last Wednesday of September through June, excepting December by the Montreal Amateur Radio Club. Advertising and copy deadline is one week prior to publication.

Editor:  
 Craig Brander, VE2YGK craigyul@total.net 514-488-5109

Annual fees are:  
 General Members ... .. \$23.00  
 Associate Members ... .. \$23.00  
 White Cane Members... .. \$10.00  
 Family Members (per family) ... .. \$30.00

The membership year runs from September 1 to August 31. Memberships received on or after June 1 commence immediately and extend through the subsequent membership year - covering a period of up to fifteen months.

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The opinions expressed herein are, unless otherwise stated, solely those of the authors concerned, and not those of the Club, the Directors or members and do not represent the policy of the Club.

### Directors

President: James R. Hay, VE2VE.....514-697-7205  
 jrhay@HayA.qc.ca  
 Vice President: Sheldon Werner, VA2SH va2sh@rac.ca  
 Secretary: vacant  
 Treasurer: Vernon Ikeda, VE2MBS.....514-684-7944  
 ve2mbs@rac.ca  
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 dash@hawk.igs.net  
 Paul MacDougall, VA2YQ redmaple@ca.inter.net  
 Earl Paris, VE2ESP.....514-524-4633  
 David Mallette, VE2ARY ve2ary@hotmail.com  
 Raymond Faguy, VE2SJA ve2sja@rac.ca

Club Call Sign: VE2ARC

**Club Website: <http://www.marc.ca>**

### Repeaters

VE2BG 147.06 MHz (+)  
 Owned and operated by the Montreal Amateur Radio Club. Located on the Pointe Claire water tower.

VE2RED 147.27 MHz (+)  
 Owned and operated by the Montreal Amateur Radio Club. Located near Decarie and Cote St. Luc Road.

VE2RJS 449.975 MHz (-)  
 Owned by the Montreal Amateur Radio Club and operated by the Cote St Luc Amateur Radio Association. Located near Decarie and Cote St. Luc Road.

The repeaters are open to all amateurs and VE2RED also offers a phone patch available to all amateurs during the day and evening.

### Meetings of the Board of Directors

Meetings of the Board of Directors are open to any member to attend. Board meetings are held the first Wednesday of the month (Sept. to June) at 7:30 PM at the Montreal Association for the Blind, 7000 Sherbrooke St West. Should you wish to attend one of the meetings you are welcome. Just speak to one of the directors before-hand to make certain that the meeting has neither been cancelled, nor the location changed.

## Club Activities Monthly Meetings

### Tentative Schedule

Club meetings are held at the St. Ignatius of Loyola Parish Church which is located at 4455 West Broadway (the corner of West Broadway and Terrebonne) in the N.D.G. District of Montreal. The meetings will be held in the Lounge which the rearmost door on the south side of the building unless we have reason to hold it in the Parish Hall which is the first door on the South side of the building. An informal fleamarket and ragchew session starts at 19:30 with the formal meeting starting at 20:00. The STM Buses 51, 162 and 105 stop nearby.

- 26 November 2003 - Emergency Back Up Power Systems
- 28 January 2004 - TBA
- 25 February 2004 - TBA
- 31 March 2004- TBA
- 28 April 2004 - TBA
- 26 May 2004 - Show and Tell

### Radio Classes

Each year the MARC holds a basic radio course. Plans are underway to start the next session in January 2004. We will have more details latter in the fall. For more information or if you know of any potential candidates please contact Jim Hay or Vern Ikeda.

### MARC Hamfest

Planning is now underway for next spring's hamfest. The date is tentatively set for Saturday, the 17th of April, 2004. If you want to contribute to the organization or for more information contact Jim Hay or Vern Ikeda.

## IN CASE OF EMERGENCY

Montreal 911 Centre ..... 514-280-2121  
 Laval 911 Centre .....450-662-4240  
 Longueuil 911 Centre .....450-646-8570  
 Sûreté du Québec ..... 310-4141  
 Kahnawake Peace Keepers 450-632-6505

These numbers are for emergencies ONLY

to make sure that both the front and back doors are open on the south side of the building.

I look forward to seeing you all at the meeting.

73 de Jim, VE2VE

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### FROM THE EDITOR'S DESK

This month's meeting topic, on "Emergency Back Up Power Systems" by John Grow, VE2EQL, should prove to be both very informative and interesting. We should all be able to pick up a few pointers on back up power supplies from John. As we all know from past experience this type of knowledge can be very useful from time to time. I hope to you all at the meeting.

As this is the last Marcogram before the holiday season let me take this opportunity to extend best wishes to you and all your close ones to have a pleasant and safe holiday season. I wish you all a healthy and prosperous new year.

73 de Craig, VE2YGK

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### CONTEST CALENDAR

More on contests including full rules can be found on the Internet. Check:

<http://www.hornucopia.com/contestcal/index.html>

This site has concise rules etc., for the current week's contests.

#### November 2003

LZ DX Contest 1200Z Nov 22 - 1200Z Nov 23  
CQ Worldwide DX Contest CW 0000Z Nov 29 - 2400Z Nov 30

#### December 2003

QRP ARCI Topband Sprint 0000Z - 1200Z Dec 4  
ARRL 160-Meter Contest 2200Z Dec 5 - 1600Z Dec 7  
PSK31 Death Match 0000Z Dec 6 - 2400Z Dec 7  
TARA RTTY Mele 0000Z - 2400Z Dec 6  
QRP ARCI Hol. Spirits Sprint 2000Z - 2400Z Dec 7  
ARRL 10-Meter Contest 0000Z Dec 13 - 2400Z Dec 14  
AGB Party Contest 2100Z - 2400Z Dec 19  
OK DX RTTY Contest 0000Z - 2400Z Dec 20  
International Naval Contest 1600Z Dec 20 - 1600Z Dec 21  
DARC Christmas Contest 0830Z - 1059Z Dec 26  
RAC Winter Contest 0000Z - 2400Z Dec 27  
Stew Perry Topband Challenge 1500Z Dec 27 - 1500Z Dec 28

Original QRP Contest CW

1500Z Dec 27 - 1500Z Dec 28

### January 2004

AGB NYSB Contest 0000Z - 0100Z Jan 1  
SARTG New Year RTTY Contest 0800Z - 1100Z Jan 1  
AGCW Happy New Year Contest 0900Z - 1200Z Jan 1  
ARRL RTTY Roundup 1800Z Jan 3 - 2400Z Jan 4  
Kid's Day Contest 1800Z - 2400Z Jan 3  
East Asia 160/80 DX Contest 0900Z Jan 10 - 2200Z Jan 11  
UK DX Contest SSB 1200Z Jan 10 - 1200Z Jan 11  
Midwinter Contest CW 1400Z - 2000Z Jan 10  
North American QSO Party CW 1800Z Jan 10 - 0600Z Jan 11  
Midwinter Contest Phone 0800Z - 1400Z Jan 11  
DARC 10-Meter Contest 0900Z - 1059Z Jan 11  
070 Club PSKFest 0000Z - 2400Z Jan 17  
LZ Open Contest CW 1200Z - 2000Z Jan 17  
MI QRP January CW Contest 1200Z Jan 17 - 2359Z Jan 18  
North American QSO Party SSB 1800Z Jan 17 - 0600Z Jan 18  
ARRL January VHF Sweepstakes 1900Z Jan 17 - 0400Z Jan 19  
CQ 160-Meter Contest CW 0000Z Jan 24 - 2359Z Jan 25

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### COMING EVENTS

For up to date Canadian Fleamarket listings, please check the Radio Amateurs of Canada site at:

<http://rac.eton.ca/>

or for up to date American listings, go to the American Radio Relay League Hamfest website at:

<http://www.arrl.org/hamfest.html>

#### 2004 Season

#### February 7 ON

#### St. Catharine's

On Saturday, February 7 the Niagara Peninsula Amateur Radio Club Big Event 26 - St. Catharine's, Ontario at the Canadian Auto Workers Hall, 125 Bunting Road, St. Catharine's, ON. Vendors 07h00 - Public 09h00 to 13h00 Admission \$6.00, Tables \$20.00 (includes 1 admission)

Talk-in: VE3NRS 147.240 (+)

For tables please call Dave Wilson at 905-262-5588/ve3bbn@rac.ca and for all other information call Ron Counsell at 905-688-8137/ve3ndi@rac.ca

[Web Page: http://www.qsl.net/ve3vm](http://www.qsl.net/ve3vm)

**RAC BOARD RECOMMENDS THAT  
EXAMINATIONS BE REVISED AND  
MANDATORY MORSE TESTING DROPPED.**

**April 17** **LaSalle (Montreal) QC**

On Saturday, April 17, the **Montreal Hamfest and Fleamarket** in LaSalle (Montreal), Québec at the Royal Canadian Legion Branch 212 (LaSalle), 7771 Bouvier, corner of Shevchenko. STM Bus 109 at the door.

Vendors 07h30 Public 08h30 to 12h00. Admission - 4.00\$

Talk-in VE2RED 147.270 (+)

Information: James R. Hay, VE2VE -  
(514)-697-7205

E-mail: ve2arc@rac.ca

[Web page: http://www.marc.ca/fest/fest.html](http://www.marc.ca/fest/fest.html)

\*\*\*\* Note: Please note that the dates for the Milton Hamfest on February 28, 2004 and the HAMEX 2004 on Saturday, March 20, 2004 are still tentative. \*\*\*\*

**February 28** Northern Vermont Winter Hamfest - ARRL Vermont State Convention Milton Hamfest - **Milton, VT**

[Web page: http://www.ranv.org/milton.html](http://www.ranv.org/milton.html)

**February 28** Burlington Spring Fleamarket **Burlington ON**

[Web page: http://www.barc.ca](http://www.barc.ca)

**March 20** HAMEX 2004 **Brampton, ON**

[Web page: http://www.peelarc.org](http://www.peelarc.org)

**April 17** Whitby Hamfest **Oshawa ON**

[Web Page: http://w.a.r.c.tripod.com](http://w.a.r.c.tripod.com)

**May 8** Smiths Falls Amateur Radio Fleamarket - **Smiths Falls ON**

[Web page: http://www.falls.igs.net/~rlarc](http://www.falls.igs.net/~rlarc)

**May 08** Skyward Annual Spring Hamfest And Fleamarket **Etobicoke(Toronto), Ontario**

[Web page http://webhome.idirect.com/~jproc/sarc](http://webhome.idirect.com/~jproc/sarc)

**June 12** Central Ontario Fleamarket -Hamfest **Fergus ON**

[Web page: http://www.hamfest.on.ca](http://www.hamfest.on.ca)

**Sept 04** OARC 6th Annual Hamfest **Carp ON**

[Web Page: http://oarc.net/fleamarket](http://oarc.net/fleamarket)

73 de Vernon Erle Ikeda, VE2MBS

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Following the change, in July 2003, of the international regulations governing the requirement for Morse testing as a prerequisite for access to the amateur bands below 30 MHz, the Board of Directors of Radio Amateurs of Canada established a small ad-hoc committee to review the results of consultations with Canadian amateurs, and to make recommendations as to appropriate action. The Ad Hoc committee, composed of Chair Jim Dean VE3IQ, and members Brice Wightman VE3EDR and Bob Kavanagh VE3OSZ submitted their report to the RAC Board in September.

The RAC Board approved the report and it was presented to Industry Canada at the fall meeting of the Canadian Amateur Radio Advisory Board, held in Ottawa on October 23 2003. Industry Canada has subsequently asked RAC to submit a formal proposal.

In particular, the report recommends that:

- Morse proficiency cease to be a mandatory requirement to qualify as a radio amateur, although an optional Morse test should be retained for Canadian amateurs who may need it to qualify for operating privileges abroad.

- To maintain an adequate standard needed for HF privileges, the report also recommends an increase in the examination pass marks.

- The result of these changes would be a progressive, three-tier, scheme of qualifications: Basic, Intermediate (replacing the present Basic + Morse) and Advanced.

- Finally, the report recommends certain enhancements to the privileges granted to holders of the Intermediate Qualification.

These recommendations are such that the authors believe they could be implemented by Industry Canada relatively quickly and would not prejudice a possible restructuring of the system of qualifications which might be contemplated for the future.

The report also examines, in a preliminary way, other aspects of the system of qualifications and examinations. In particular, it suggests that consideration be given to replacing the present Basic Qualification by a new entry level qualification. This would resemble the entry or foundation levels existing or planned in other countries to encourage the entry of new people, particularly young people, into Amateur Radio while maintaining a high standard of proficiency.

It also suggests that the Intermediate syllabus, in future, would include increased emphasis on operating procedures and on modern technologies.

Because these concepts will require further time and effort to refine, the authors suggest that the report be considered to be an interim report and that the ten specific recommendations contained therein be acted upon forthwith. They also suggest that the ad hoc committee be authorized to continue its efforts concerning these matters of qualifications and examinations with a view to submitting a further report in due course.

The complete report (17 pages) can be downloaded from this web site in MS Word format, or in pdf format by clicking on the addresses below.

[http://www.rac.ca/downloads/Morse\\_report.PDF](http://www.rac.ca/downloads/Morse_report.PDF)

or

[http://www.rac.ca/downloads/Morse\\_report.doc](http://www.rac.ca/downloads/Morse_report.doc)

Also available, are the results of the RAC web site survey on the Morse question at:

[http://www.rac.ca/downloads/Survey\\_results.PDF](http://www.rac.ca/downloads/Survey_results.PDF)

or

[http://www.rac.ca/downloads/Survey\\_results.doc](http://www.rac.ca/downloads/Survey_results.doc)

From the RAC web page:

[http://www.rac.ca/news/canada.htm#RACBoard\\_recommends](http://www.rac.ca/news/canada.htm#RACBoard_recommends)

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**RAC BULLETIN 03-028E - BRIEF  
REPORT BY RADIO AMATEURS OF  
CANADA AT THE CONCLUSION OF THE  
TWENTY-FIRST IC-RAC CANADIAN  
AMATEUR RADIO ADVISORY BOARD  
MEETING HELD IN OTTAWA, ON, OCTOBER  
23, 2003.**

This is a brief report of the Canadian Amateur Radio Advisory Board meeting held in Ottawa, Ontario on October, 23, 2003.

Among several on-going regulatory subjects on the agenda, were the following:

\* RAC presented its Board-approved recommendation

that Morse code be dropped as a qualification requirement.

\* Possible options for consideration related to four-character call sign suffixes were discussed.

\* RAC provided IC with a copy of its submission to the Committee on the National Antenna Tower Policy Review.

\* RAC's efforts to bring more young people into Amateur Radio through the RAC Youth Education Program were introduced and discussed.

Industry Canada invited RAC to submit detailed proposals on dropping Morse code and the use of four-character call signs.

Industry Canada expressed appreciation to RAC for its prompt and comprehensive response to the department's request for input on significant changes to regulations arising out of the WRC-2003 decisions.

RAC was represented by President Bill Gillis, VE1WG, Vice-president Regulatory Affairs Jim Dean, VE3IQ, and Directors David Nimmo, VE1NN, and Bj Madsen, VE5FX. Also participating through presentation of their work as members of the RAC Ad Hoc Committee on qualifications were: Bob Kavanagh, VE3OSZ and Brice Wightman, VA2BW/VE3EDR.

Industry Canada was represented by Senior Director, Spectrum Management, Mike Connolly, Director Eastern Ontario District Office and Amateur Radio Service Centre, Line Perron, Directorate of Spectrum Operations staff members, Rob Cepella and Gary Steckly, and Harold Carmichael, Program Manager, Quebec City District Office.

Comments to: rachq@rac.ca

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**MAB RADIO STATION  
ANTENNA WORK DONE AT VE2MAB**

The work to repair the tri-band beam at the Montreal Association for the Blind station (VE2MAB) has been completed and it now functions as it should.

Earl Paris, VE2ESP, the trustee of the VE2MAB station, and the Montreal Association for the Blind would like to thank Jim Hay, VE2VE for organizing and coordinating the work along with the following amateurs for helping in fixing the tri-bander and re-aligning the mast:

- \* Don Devey, VA2DWD
- \* Paul MacDougall, VA2YQ
- \* Greg Dixon, VE2GDX
- \* Vernon Ikeda, VE2MBS

- \* Stan Patacic, VE2QXP
- \* Stephen Donovan, VE2OCT
- \* Shawn Englehart, VA3STE
- \* Don Dashney, VE3RM

**SCANNERS HEAR IT FIRST**  
**BY FREDERICK HART, VE2LSQ**

Earl would also like to thank Paul, VA2YQ for the donation of a new coax line as well.

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**ROMAN MASSANOV**

As a long time volunteer at the Montreal Shriners Hospital, I try and introduce Amateur Radio to the older children. Most times, there is no interest, but when I showed my Hand Held (HT) radio to Roman, and showed what it does, and I explained a little about Amateur Radio, he took notice.

As time progressed, and I was able to spend more time with Roman, I found him to be a very bright, and eager to learn, young boy. I was able to bring him to a Boy Scout's presentation for Amateur Radio, and introduced him to other members of the club, so they could also see if his interest was real. And it was. So I spoke with Jim Hay, to see what the club can do to help him.

The board of directors will see what can be done for study guides, material and membership for Roman. At the October meeting, I brought Roman to introduce him to other members of the MARC, and to get a better idea of what we do at meetings. Just this past weekend, I was able to get Roman to participate in the ARRL November Sweepstakes Phone contest. He was nervous at first, but was able to make a few contacts.

Roman, arrived with his Mother from Russia (Kazakhstan) in 1998. He is a landed Canadian immigrant, and loves Montreal. He plans on remaining in Montreal. Roman is 13 years old and attends Mary Mount High School and the MAB (Montreal Association for the Blind). Roman is legally blind and has orthopedic problems that are being corrected at the Montreal Shriners Hospital. His mother is on social assistance and is taking English classes until she can find work. She was a librarian for a major library in Kazakkstan. So there is no funds for extra's. So if any members have any amateur radio items that they could spare, please contact Jim Hay.

73 de John Grow, VE2EQL

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So here we are in the month of November and some of that white stuff has made a brief appearance around the neighbourhood...It is also a month that some of us get older (although I am improving here in the hospital. My knees still feel like they are 25 years older than the rest of me)...As for earfuls in the region there has been a lot of traffic on the various frequencies in and around the Metro/Montreal and environs. The SSIM have been busy in the past few weeks and are in the news quite a lot. Just hearing the dispatch as they go to the trunk/digital assigned frequency when they give the apparatus the call. Only the 10-07 (Intervention needed/working incident) and the subsequent codes and extra alarms pertaining to the working incident are heard on 412.7625 ( A-14 ) The first responders are on C-13 and you hear the call given there for any medical call.

On the south shore, the Mega city of Longueuil has been busy running into all the other arrondissements around the original Longueuil on 412-7125... I have included a small list of UHF frequencies that make up the boroughs in Longueuil they are as follows:

- 410.0875.....410.1375
- 410-1875.....410.2875
- 412.2125.....412.2375
- 412.2875.....412.7125
- 413.3625(fireground simplex)

The city of Chateauguay, Qc is in the process of setting up in their new station on Anjou Blvd. It will have seven bays in the front and one on the side (on 1st Ave side). Rumour has it that they will operate Chateauguay/Mercier/Lery from the same station I will confirm that in a later column They will operate on the Chateauguay frequency on 412.8375.

As for the police frequencies in the Montreal area the rumour mill still has them going up to the 800mHz trunk section of the Public security band (as they are to be up there by late 2004 as per requested by the public security ministry. Those of you that like to get earfuls on Police scenes, get them now because they will be un-heard when they go up there or so I have been told we will have to wait



RON CAMPBELL, VA2RJC

For those who were at the last meeting and signed the get well card for Ron, he sends thanks for the card and advises that he is recovering from his illness:

I really appreciated the gesture of the club members, it is something I will not forget. I'm on the mend slowly, not moving around too much as I seem to get exhausted fast. I go to the hospital for follow-up tests on December 8th. I'm not sure if I will be able to make the November meeting, I'll let you know.

When I'm fully recovered, I want to take my CW test before I forget it all and they go and cancel the requirement!!

73 de Ron VA2RJC

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and see (I mean hear...)

There is a lot of traffic on the seaway frequency on 156.700 as winter months control the flow of ships going up/down the seaway.

As this is the last month of the Marcogram for the year 2003 I would like to thank the readership for their support and input for my column and a big thanks to Craig Brander, VE2YGK, for his many efforts putting up with us and putting the Marcogram together.

I wish to take this time to wish you and your's the very best and safe being during the holiday season...I will be spending it here at the hospital which sucks but it's for the better of my convalescence so I can climb down all those chimneys next year....

HO HO HO !!!

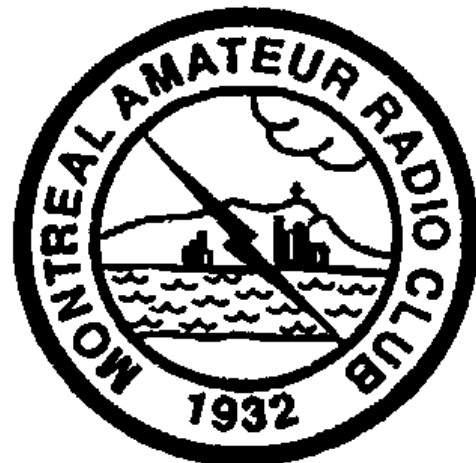
73's de Fred VE2 LS and a Q

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**CLASSIFIED**

DEADLINE for classified ads is the second Wednesday before the monthly meeting.

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# RADIO HF

Sheldon Harvey, Prop.

P.O. BOX 67063-LEMOYNE  
ST. LAMBERT, QUEBEC J4R 2T8

TELEPHONE or/ou FAX: 450-671-3773  
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[radiohf@sympatico.ca](mailto:radiohf@sympatico.ca)

<http://www3.sympatico.ca/radiohf>

## SHORTWAVE & AM/FM RADIOS

### RADIOS ONDES COURTES & AM/FM

A.O.R., BAYGEN, DRAKE, GENERAL ELECTRIC, GRUNDIG, ICOM, KENWOOD,  
LOWE, SANGEAN, SONY, SUN-MATE, YAESU

### SCANNERS / BALAYEURS D'ONDES

A.O.R., ALINCO, ICOM, RELM, UNIDEN/BEARCAT, WELZ, WINRADIO,  
YUPITERU

### AMATEUR RADIO / RADIO-AMATEUR

A.D.I., ALINCO, CHEROKEE, ICOM, KENWOOD, MAHA-REXON, YAESU

### CITIZENS BAND (CB) / BANDE PUBLIQUE (CB)

ASTATIC, CHEROKEE, COBRA, K40, MACO, MAXON, MIDLAND,  
PARADYNAMICS, RANGER, ROAD NOISE, SHAKESPEARE, SOLARCON/ANTRON,  
UNIDEN, VALOR, WILSON, WORKMAN

### FAMILY RADIO SERVICE (FRS)

### DISPOSITIFS RADIO DOMESTIQUES (DRD)

CHEROKEE, COBRA, ICOM, KENWOOD, MAXON, MIDLAND, MOTOROLA, UNIDEN

### ANTENNAS / ANTENNES

ALPHA DELTA, ANTENNA SUPERMARKET, COMET, CREATE, CUSHCRAFT,  
DIAMOND, HUSTLER, L.F. ENGINEERING, LARSEN, MFJ, OUTBACKER,  
SCANMASTER, TELEX HYGAIN, VALOR/PRO-AM, VAN GORDEN, WORKMAN

### SPECIALTY PRODUCTS / PRODUITS SPECIALISES

ADVANCED BATTERY SYSTEMS (PERIPHEX), AMERITRON, ASTRON, BENCHER,  
DAIWA, D.C.I., HEIL, KANTRONICS, KIWA ELECTRONICS, MAHA, MFJ,  
MIRAGE, NYE VIKING, OPTOELECTRONICS, PALOMAR ENGINEERS, PALSTAR,  
PREMIER, RF CONCEPTS, R.F. SYSTEMS, RAMSEY KITS, S.G.C.,  
TIMEWAVE, UNADILLA, UNIVERSAL, VECTRONICS, VIBROPLEX

### PUBLICATIONS / PUBLICATIONS

A.R.R.L., ARROWHEAD, ARTSCI, BAYLIN PUBLICATIONS, BILLBOARD  
(WRTH), CQ, CRB, ANDRE GUEVIN, HARUTEQ, HIGHTEXT, IBS (PASSPORT),  
KLINGENFUSS, LOOMPANICS, NATIONAL RADIO CLUB, RSGB, RADIO AMATEUR  
CALLBOOK, RADIO AMATEURS OF CANADA, RADIO AMATEURS DU QUEBEC,  
SCHIFFER BOOKS, SONORAN, TAB, TIARE, UNIVERSAL RADIO