

# marcOgram

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



Volume 49, Number 2

October 2003

## “M.A.R.C. ANNUAL GENERAL MEETING”

Wednesday 29 October 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

The October meeting will be the Annual General Meeting of the Montreal Amateur Radio Club. The details were published in last month's Marcogram and are also inside this month's Marcogram. This is an important meeting you are encouraged to attend. Please remember that in order to participate you must be a paid up member of the M.A.R.C. After the general meeting, time permitting, we hope to be able to show an interesting video.

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

Hello,

Well, its that time of year again - the Annual General Meeting is upon us. This is your chance to give your input to how the club will be run for the coming year. The annual meeting also means that it is election time and if you would like to join the board and help out you will find it can be quite enjoyable.

This year two of our directors have

expressed their intention to retire: David Melanson, VE2MPD; and Steven Faguy, VA2SMF. Their contributions to the board have been helpful and I would like to thank them both for the time and effort which they have given to the club.

I apologize to those of you who came to last month's meeting and had trouble finding the meeting. This year we are meeting in "The Lounge" which is behind the Parish Hall where we met last year. You can enter from the rear door on the south side of the church and, if possible, I will open the front door on the south side as well. There was some confusion

**Membership Renewal Reminder** - Thank 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.

Articles published in the MarcOgram may be reproduced providing credit is given to the original author and the Montreal Amateur Radio Club as the source.

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: Steven Faguy, VA2SMF va2smf@rac.ca  
 Secretary: Sheldon Werner, VA2SH  
 Treasurer: Vernon Ikeda, VE2MBS.....514-684-7944  
 ve2mbs@rac.ca  
 Directors: Don Dashney, VE3RM/VE2SH.....613-675-4715  
 dash@hawk.igs.net  
 Paul MacDougall, VA2YQ  
 Earl Paris, VE2ESP.....514-524-4633  
 Dave Melanson, VE2MPD

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

29 October 2003 - Annual General Meeting  
 26 November 2003 - TBA  
 28 January 2004 - TBA  
 25 February 2004 - TBA  
 31 March - TBA

## 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

last month as, unfortunately, the back door was locked after the choir practice ended! I will try to check the door periodically before the meeting starts.

If you have not already done so please pay your annual dues as soon as possible. Our membership year starts on September 1 and it helps a great deal when the renewals come in quickly.

After the AGM we will be showing a video which I am sure you will all find of considerable interest.

73 de Jim, VE2VE

- . . . -

### FROM THE EDITOR'S DESK

The National Antenna Tower Policy survey has been extended until the 24th of October so now is your last chance if you want to participate. Welcome back Fred Hart, who has another instalment of "Scanners Hear it First" in this month's Marcogram.

This month's meeting is our club's annual general meeting so I hope you will be able come out and participate. I look forward to seeing you at the meeting.

73 de Craig, VE2YGK

- . . . -

### 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.

#### October 2003

CQ Worldwide DX Contest SSB	0000Z Oct 25 - 2400Z Oct 26
10-10 Int. Fall Contest CW 0001Z	Oct 25 - 2400Z Oct 26

#### November 2003

IPA Contest CW	0600Z - 1000Z Nov 1 and 1400Z - 1800Z Nov 1
Ukrainian DX Contest	1200Z Nov 1 - 1200Z Nov 2
ARRL Sweepstakes Contest CW	2100Z Nov 1 - 0300Z Nov 3
North American Collegiate ARC Championship CW	2100Z Nov 1 - 0300Z Nov 3
IPA Contest SSB	0600Z - 1000Z Nov 2

High Speed Club CW Contest	and 1400Z - 1800Z Nov 2 0900Z - 1100Z Nov 2
DARC 10-Meter Digital Contest	and 1500Z - 1700Z Nov 2 1100Z - 1700Z Nov 2
WAE DX Contest RTTY	0000Z Nov 8 - 2359Z Nov 9
Japan Int. DX Contest Phone	0700Z Nov 8 - 1300Z Nov 9
SARL Field Day Contest	1000Z Nov 8 - 1000Z Nov 9
OK/OM DX Contest CW	1200Z Nov 8 - 1200Z Nov 9
Anatolian ATA PSK31 Contest	1800Z - 2400Z Nov 8
All Austrian 160-Meter Contest	1600Z Nov 15 - 0700Z Nov 16
ARRL Sweepstakes Contest SSB	2100Z Nov 15 - 0300Z Nov 17
North American Collegiate ARC Championship SSB	2100Z Nov 15 - 0300Z Nov 17
RSGB 1.8 MHz Contest CW	2100Z Nov 15 - 0100Z Nov 16
LZ DX Contest	1200Z Nov 22 - 1200Z Nov 23
CQ Worldwide DX Contest CW	0000Z Nov 29 - 2400Z Nov 30

- . . . -

### 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>

#### 2003 Hamfests

##### OCT 25

##### Longueuil QC

On Saturday, October 25 the Hamfest de Rive-sud de Montréal, at Place Desaulniers, 1023, Blvd Taschereau, Longueuil, QC

Vendors 06h00 - General Admission 09h00 - 15h00 Talk-in: VE2RSM 145.390 (-)

E-mail: hamfest@ve2clm.ca

Web page:

<http://www.ve2clm.ca/hamfesta.htm>

##### NOV 01

##### Markham ON

On Saturday, November 1 the 27th Annual York Region Hamfest at the Markham Fairgrounds, McCowan Road at Elgin Mills Road East, Markham, Ontario.

Vendors General Admission at 09h00

Admission and Vendor Tables - see web page for more information.

Vendor Information: Tables are available by Mail only and payment must accompany your registration. No bookings will be taken by E-Mail, Phone, over the air or via Packet. Tables will be reserved only if pre-payment is received.

Talk-in: VE3YRA 145.350 (-)

Information/Reservations: The York Region Amateur Radio Club, P.O. Box 28590, Aurora, Ontario, L4G 6S6

Web Page:

<http://www.yrarc.on.ca/hamfest>

### 2004 Season

#### 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)

#### April 17 Whitby Hamfest Oshawa ON

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

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

73 de Vernon Erle Ikeda, VE2MBS

© 2003 - Vernon Erle Ikeda

- . . . -

### ARRL "LOGBOOK OF THE WORLD" IS OFF LIKE A ROCKET

NEWINGTON, CT, Oct 2, 2003--"Logbook of the World" (LoTW, <http://www.arrl.org/lotw/>) --the League's new QSL-cardless awards and contact credit system--has proven to be a big hit in the amateur community. LoTW opened September 15 to accept digital certificate applications. Since the first digital certificates were e-mailed to users September 22, LoTW has acquired nearly 2100 registered participants. Another 2500 or so applications are pending, and the QSO database of uploaded logs now is approaching 8 million contacts--nearly 1 million of them uploaded within a day after the first certificates went out.

"Certainly the number of Qs that we've gotten is well above what we expected at this point," said ARRL Membership Services Manager Wayne Mills, N7NG, who has been sharing duties with Assistant to the CEO David Patton, NN1N, as point man for LoTW. "The most

surprising thing is that we've gotten so many old logs. People over the years have been entering their old logs from the 1950s on into the computer, and we didn't anticipate that."

LoTW is open to all, and applying for a digital certificate is the first step toward taking advantage of the system. The digital certificate authenticates the user's identity.

### The More the Merrier

ARRL will maintain the already huge--and growing--repository of log data from casual operators, DXers, contesters and major DXpeditions. LoTW will be able to provide quick QSO credit for awards programs by identifying contact matches within submitted log data. Registered participants then will be able to apply LoTW-confirmed QSO credits toward ARRL awards, such as DXCC, WAS and VUCC.

QST "How's DX?" Editor Bernie McClenny, W3UR, reports he's already uploaded three logs worth of data--a combined QSO total of 23,063--and came up with 79 "hits" or matches. While McClenny says he still enjoys collecting QSL cards and would want one from any new entity that might come on the DXCC list today, "I think for the future for any band countries, I will try to confirm these via the new LoTW and save my postage for something else."

"As the old saying goes, try it, you'll like it!" McClenny commented in a recent edition of his newsletter, The Daily DX, <http://www.dailydx.com/>.

Work continues on the last major LoTW component--the Web pages to apply LoTW confirmations toward ARRL-sponsored awards. Mills expects that LoTW also will one day provide contact credits for non-ARRL programs. "Major award sponsors have expressed interest in using LoTW records, and details are pending," he said.

The key to the ultimate success of LoTW is for users to upload as much log data as possible. The more contacts in the database, the better the chances of a QSO match.

LoTW eventually will be able to search users' DXCC records and find new credits automatically. The program also will provide full viewing of users' DXCC records, automatically alert users to new awards achieved and offer comprehensive support for many other awards.

### Growing Pains

While for the most part LoTW's inauguration has gone smoothly, Mills said problems have come up. One recurring difficulty has arisen when users who believe they've made an error in their initial application alter or wipe out their digital certificates and submit another application.

"That's basically fatal," Mills said.

"When you create a request for a digital certificate and send it to us, we start processing it," Mills explained. "The process of making the request generates what's known as a 'private key,' and when ARRL sends the digital certificate back to the applicant, it has to find that 'private key.'"

The bottom line, Mills said, is that LoTW permits just one digital certificate request per call sign. "If you then create a new request, you void the first one, and the certificate we send back won't match." Mills advises that once users apply for a certificate, they should not attempt to alter it or create another request. Any errors, he points out, can be corrected later.

For US users, the first certificate has to be for a current call sign that's in the FCC database. After you get the certificate, you can request additional certificates for old call signs that are no longer assigned to you without going through the password process.

### LoTW Fees

While obtaining a digital certificate is free to all, LoTW will charge on a per-credit basis to apply credits toward awards. "Logbook of the World is an alternative to collecting QSL cards by mail," Mills said. According to the fee schedule at <https://www.arrl.org/lotw/fees> posted this week, the more contact credits you purchase, the lower the per-credit cost. The fees, in increments of 50, 100, 250 and 500, range from 22.5 cents per credit for 50 credits to 15 cents per credit for 500 credits. Users may purchase credits in advance, Mills noted, but LoTW fees do not also cover award fees, which remain separate.

"It turns out that this is a much cheaper way to collect credits for DXCC," Mills asserted, noting that the cost of cards, envelopes and postage can run as high as \$3 or \$4 for direct QSLing, including return postage, and 75 cents or more via the bureau for each card you get back.

Will LoTW change the face of traditional QSLing? "We don't really know yet how QSLing will change," Mills said. "The concept of electronic QSLing was coming, and the only way we saw to implement it satisfactorily was to do it ourselves." ARRL Web and Software Development Department Manager Jon Bloom, KE3Z, has been handling software development and updating for LoTW.

McClenny says he doesn't think LoTW will keep amateurs from exchanging QSL cards. "I have worked every country on the DXCC and obtained a QSL for each one," he says.

Meanwhile, as the LoTW database continues to balloon with new log data showing up by the hour, Mills,

Patton and Bloom have been hustling to handle support questions and updating the Web support information as new questions or issues arise. There have been two updates to the TQSL software to address bugs and to make it more difficult for users to inadvertently delete certificates or keys that cannot be replicated.

"Overall, we are very happy with the progress and user acceptance," Mills said.

This week, EchoLink, <http://www.echolink.org/> announced that it would accept ARRL's LoTW's digital certificates to authenticate new users. The Amateur Radio Internet linking system says prospective EchoLink users may submit LoTW certificates as an alternative to a copy of their amateur license. "System security is critical, and all new EchoLink users must be validated before being allowed access," said EchoLink developer Jonathan Taylor, K1RFD.

Mills' article, "Introducing Logbook of the World," <http://www.arrl.org/qst/2003/10/0310046.pdf> appears in the October issue of QST.

Logging software developers can obtain documentation and a Windows DLL library--as well as complete source code for the TQSL software--at the SourceForge Web site,

<http://sourceforge.net/projects/trustedqsl/>.

News and announcements will be posted to the Logbook of the World Web site, <http://www.arrl.org/lotw/>.

From the ARRL, <http://www.arrl.org>

- . . . -

## RAC BULLETIN 03-023E

### E-TOWN HALL ON NATIONAL ANTENNA TOWER POLICY REVIEW

**EDITOR'S NOTE: I AM REPEATING THIS  
NOTICE AS THIS SURVEY IS EXTENDED  
UNTIL 24 OCTOBER SO IF YOU ARE  
INTERESTED YOU STILL HAVE TIME.**

The Townsend Committee conducting the National Antenna Tower Policy Review under contract to Industry Canada has established an E-Town Hall Website where interested parties may record their views, comment on other views and make formal submissions. The website will be available 3 September to 10 October.

Amateurs wishing to join the E-Town Hall and comment on tower issues should go to

<http://www.antennareview.ca>

This address provides access to both English and French language pages. Amateurs desiring to contribute or comment are urged to ensure that their remarks are clear, concise, factual and courteous.

RAC is preparing a response to the Townsend Committee that will be submitted directly to the Committee; it is also responding as part of the submission being prepared by the Radio Advisory Board of Canada.

Comments to: [rachq@rac.ca](mailto:rachq@rac.ca)

- . . . -

### **MAB RADIO STATION REQUIRES ASSISTANCE**

Volunteers are needed at the MAB radio station, as some work needs to be done to tune up the antenna before the ARRL Sweepstakes contest in November. If you can help out please contact Jim Hay at 514-697-7205 or [jrhay@haya.qc.ca](mailto:jrhay@haya.qc.ca)

Earl Paris is looking for some participants to help operate and log during the ARRL Sweepstakes Contest (SSB) from Saturday 15 Nov 16h00 (4pm) to Sunday 16 Nov 22h00 (10pm), with a break Sunday morning between 03h00 and 09h00. This is an excellent opportunity for new hams to have some fun and also gain some HF and contesting experience. Contact Earl at the MAB, at 514-489-8201, local 1015. Please leave a message if Earl is not available when you call.

- . . . -

### **VERMONT ARES SIMULATED EMERGENCY TEST ON OCT 25**

There will be a Simulated Emergency Test (S.E.T) for the Vermont ARES on Saturday, October 25, involving all 7 Vermont districts. The simulated event will be a weather emergency simulating the effects of a tropical storm and includes simulated messages from the NWS/Skywarn. Each district will have at least one VHF net and contact other districts over HF.

From the BARC Newsletter (Burlington Vermont)

- . . . -

### **AMATEUR RADIO EXAM NEWS**

Welcome aboard to Justin Cuplinskas, VE2MNC and Yoko Yamashita, VE2YOK who passed their basic exam a few weeks ago at the October directors meeting. Yoko is graduate of the Winter 2002 class.

If you know anyone who is interested in taking either the Basic, Advanced or Morse code tests, please send me an e-mail via the club e-mail address at:

[ve2arc@rac.ca](mailto:ve2arc@rac.ca)

and I will pass on the information to you.

73 de Vernon Erle Ikeda, VE2MBS

- . . . -

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

Well here we are into the fall season (my favourite) and the temperatures are cooling off quite rapidly...Did we really have a summer? From my vantage point I saw some of it. Things are progressing as per plan and I am getting used to the changes that were incurred after surgery. Now to keep on track and keep getting smaller I should be OK. Again thanx to those who have visited and sent cards and emails the support is appreciated. As for the listening end of things I have been able to tune into some of the frequencies in the area. The SSIM are still doing their thing on the digital system and only a handful of people are listening fully as the new scanner with the APCO-25 board is still quite pricey.



Radio Shack has come out with competition for the Uniden

BC250D and it is the Pro-96 which has the board already built in to the unit so no costly accessories. The price from what I hear is also less than the Bearcat unit. I have included a photo of the Pro-96 in this column and as you can see it comes with two different battery combinations. When your battery-pak is discharged there is a battery cluster/holder for regular AA cells which I think is a good idea. From the reports on the unit it sounds like quite the compact electronic box of features. WWW.strongsignals.net has some good reviews on the Pro-96 along with pictures so you can check into it and see for yourself.

There is alot of action on the Longueil frequency for Fire and EMS 412.7125 as they have given all the other municipalities new station numbers in the new southshore mega city. I have been also listening to 412.8125 Upper Richelieu valley system with the codes they use pretty much sounding the same as SSIM so once you have SSIM figured out you are ready to tackle the southshore.

That is about it for this month I hope you will get an earful in your listening habits and I will see you here next month with the latest in scanning stuff .

73's de Fred VE2 LSQ

- . . . -

### NOTICE OF MEETING

Notice is hereby given that the Annual General Meeting of the Montreal Amateur Radio Club, Inc. will be held on Wednesday, October 29th, 2003 at eight o'clock in the evening at the St. Ignatius of Loyola Parish Church, 4455 West Broadway (corner of Terrebonne) in N.D.G., Montreal

The meeting is called to

- Receive and if thought fit, approve the reports of the officers,
- Receive, and if thought fit, approve the report of the auditor,
- Elect a President and elect other executive positions for the ensuing year,
- Elect the remaining Board of Directors for the ensuing year,
- Transact such other business as may properly come before the meeting.

Given at Montreal this 11th day of September, 2003.

(sgd) Sheldon Werner  
Sheldon Werner, VA2SH  
Secretary.

### CLASSIFIED

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

. . . . .

### ANDREW (ANDY) RUGG, VA3TEE/VE2EM - SK

I am sorry to pass on the news of the passing of Andrew (Andy) Rugg VA3TEE/VE2EM. While not a member of the Montreal Amateur Radio Club, I am sure many of you on my private mailing list knew him.

I first met Andy about ten years ago at a Bar-BQ organized by Sheldon Harvey, VE2SHW. At that time I was still pretty much a beginner who still didn't know a whole lot of about the hobby but Andy was willing to answer the questions I had. Over the years we would chat whenever we met at CIDX meetings or other radio related functions.

Andy was an active Amateur Radio Operator whose favourite operating mode on the HF bands was CW. In recent years, he discovered 6-metres when he acquired an Icom IC-706 and made many contacts on 6 metres. As well, was involved with the Seaway Valley ARC and regular contributor to the Amateur Radio column in the CIDX club bulletin. Andy's other radio passion was DX'ing the SW and MW broadcast bands. I remember a few years ago when I was helping Andy scout out some sites for his planned entry in the ARRL CW Sweepstakes, we stopped at the site of late uncle's summer cottage in St. Jovite and he asked if I could try and see if I could get the cottage for that weekend. I remember getting permission and giving him the keys to the place. A few weeks later, after the contest was over, I went to see Andy to pick up the keys and he had a lot of nice things to say about the good ham band dx that he was able to get in addition to the SW and MW dx loggings that he had made from there.

73 de Vernon E. Ikeda, VE2MBS

. . . . .



# RADIO HF

Sheldon Harvey, Prop.

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

TELEPHONE or/ou FAX: 450-671-3773  
TOLL FREE / SANS FRAIS  
1-800-463-3773

HEURES D'OUVERTURE/BUSINESS HOURS  
LUNDI AU SAMEDI - 10h00 a 17h00  
MONDAY TO SATURDAY - 10 AM to 5 PM

[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