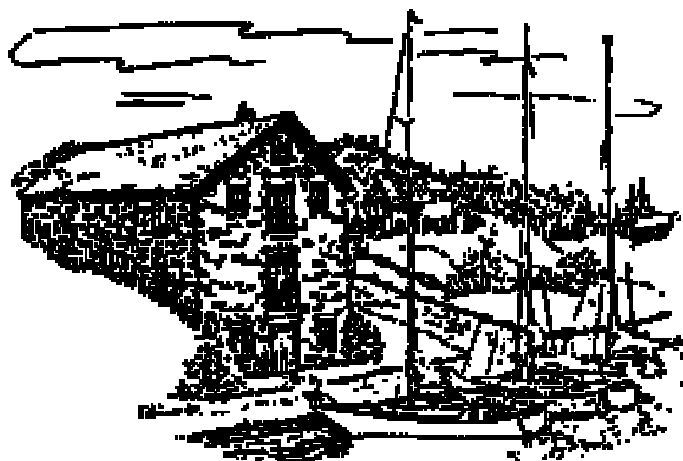


Hot Bananas

Oakville Amateur Radio Club VE3HB

February/March 2002



INSIDE THIS ISSUE

- 1** WinLink News
- 1** Production Slow Down
- 2** Calendar of Club Events
- 2** Just the Facts
- 3** Who's Who
- 3** PSK31 Bug
- 3** Stray Equipment
- 4** Call to Order
- 5** The Simple Balcony Antenna
- 8** Ontario QSO Party
- 10** RAC Application

WinLink 2000 News

VE1YZ

via www.rac.ca

I run a WinLink 2000 HF Pactor digital station scanning selected frequencies on 80m, 40m, 30m, 20m, 15m, and 10m. VE1YZ (near Halifax NS) is one of 31 stations worldwide, all interconnected via the Internet.

Winlink 2000 is the most advanced HF messaging system in the world, and that includes commercial systems. The primary use is HF <-> Internet e-mail. Secondary uses are weather information retrieval (text or images) and automatic position reporting via APRS.

Daily stations connecting runs anywhere from 80 to 100. Daily messages handled at VE1YZ are about 500. These messages are all personal messages or requested bulletins.

The majority of users are yachts. Other users are RVers and missionaries.

VE1YZ is also integrated with Emergency Preparedness Canada's (now OCIEP) digital HF Clover Network. On the EPC network I run VE1EPC.

For a complete description of Winlink 2000 see www.winlink.org Ω

Production Slow Down

The editor's desk has been a busy place over the past month. Work commitments prevented me from completing the February issue, so this is a combined February/March edition. The April edition will be issued on time. Thanks for your patience!Ω

CALENDAR OF CLUB EVENTS

CLUB MEETING

Oakville Red Cross Building

March 11, 2002, 7:30pm

Presentation: RadioWorld Presentation

CLUB MEETING

Oakville Red Cross Building

April 8, 2002, 7:30pm

Presentation: PSK-31 with Bob Abell

CLUB MEETING

Oakville Red Cross Building

May 13, 2002, 7:30pm

Presentation: Industry Canada Tour

CLUB MEETING

Oakville Red Cross Building

June 11, 2002, 7:30pm

Annual Meeting and Election

Just the Facts

About the OARC...

Meetings

Meetings are held on the Second Monday of each month from September to June at the Red Cross Building, 167 Navy Street, Oakville. Meetings begin at 7:30pm and all are welcome. An informal Saturday breakfast is held at 7:00 am at Angel's Diner, 369 Speers Road, Oakville. Also a Friday morning coffee session is held at Tim Horton's on Wycroft Road, Oakville at 10:30 am.

The OARC is a RAC affiliated club.

Repeater

VE3OAK 147.015 +.600 (131.8Hz CTCSS)

VE3OAK 444.325 +5.00

Digipeater

VE3OAK 145.750 (Packet)

VE3OAK 144.390 (APRS)

Net

Mondays at 7:30pm (except meeting nights/holidays)

Phone Patch Access

Code & Tel No (do not pause while dialing)

Web Site

<http://www.oakvilleamateurs.net>

Mailing Address

Oakville Amateur Radio Club

PO Box 69615

109 Thomas Street

Oakville ON L6J 7R4

Email Address

Info@oakvilleamateurs.net

Hot Bananas is published 10 times per year from September to June and is distributed to all members of the OARC. Articles may be reproduced without additional permission provided credit is given to Hot Bananas and the Oakville Amateur Radio Club.

Submit story ideas, feedback, comments, articles or artwork to va3afa@rac.ca or mail to Hot Bananas, PO Box 69615 109 Thomas St, Oakville ON L6J 7R4. Fax is available, address to John Clarke at (416) 982-8471. Electronic format is preferred, however we can accommodate any media, including handwritten stories, audio recordings or in-person interviews! Ω

WHO'S WHO

EXECUTIVE

President	Hubert Heath, VE3HLD
Vice President	Jack Livingstone, VE3ITM
Director-Membership	Russ Schwandt, VE3JUZ
Special Projects	Doug Smith, VE3RG
Director-Secretary	John Clarke, VA3AFA
Finance	Carvell Pelkey, VE3CPQ
Director-Activity	Mike Brown, VA3GRL

COORDINATORS

Emergency Coordinator	Rick Harrison, VE3YRH
Assistant Emergency Coordinator	Jack Livingstone, VE3ITM
Assistant Emergency Coordinator	Phil Thompson, VE3RD
Help Committee	Harry Kosterman, VE3HKC
VHF Net Activities	Denny Zidek, VE3OKD
Repeater Programming	Graham Chatfield, VA3GPC
Repeater Maintenance	Gary Hetherington, VE3TGH Harry Kosterman, VE3HKC
Packet BBS	Michael Willems, VA3MVW
Special Event Catering	Carvell Pelkey, VE3CPQ
Training-Basic & Advanced	Jack Livingstone, VE3ITM
Examiner	Jack Livingstone, VE3ITM
Internet Web Site	Michael Willems, VA3MVW
Public Relations	Doug Smith, VE3RG
Equipment/Shack	Mike Brown, VA3GRL
QSL Manager	Ron O'Reilly, VE3FII
DX Interest Group	Ron O'Reilly, VE3FII

CLUB BULLETIN

Editor	John Clarke, VA3AFA
Production	Richard Davis Jr
Distribution	Duncan Smith, VE3HFG

PSK31 bug?

Reprinted from "Splatter"

Bermuda Amateur Radio Club Newsletter

Joe Swingle, W9DGW (VP9U) kindly wrote and told me way back when that he had been bitten by the PSK31 bug and would like to know if any VP9's have also been bitten? He wrote.. Most of the activity is centered on 14,070 kHz USB. I have heard ZL's and VK's and ZS's and JA's plus stations from all over Europe, North and South America, but have yet to hear a VP9. If any of the RSB members need assistance via e-mail, I'll be glad to do my best to help you get on. I have made all the mistakes in the book and have probably contributed to a second edition. Tell the "gang" to come on and "experiment" with the rest of us.

Maybe I'll take you up on that offer Joe when I get my antenna fixed, sounds interesting, anyone else going to have a try? Ω

Stray Equipment

The club has been making great strides through the efforts of many, including Mike Brown, to bring the club station at the Red Cross building up to a state of operational readiness.

We have noticed that several pieces of equipment that should be at the station have been removed.

Any club members who have club equipment are asked to return it to the station, or to the equipment manager. This will ensure we have the necessary equipment on-hand to meet the need of all members and to support the club's emergency preparedness efforts.Ω

Call To Order

Minutes of the Oakville Amateur Radio Club Regular Meeting of January 14, 2002



Opening Remarks

- The meeting was opened by Shot Heath at 7:30pm. Shot welcomed 29 members and 2 guests in attendance. Special welcome was extended to one of the clubs founding members, Bert Crowell. Bert commented that the OARC was formed from members of the Hamilton ARC who were interested in learning CW; the initial meetings were conducted near by the Red Cross building, in the basement of what is now Sharkey's Restaurant.

Discussion

- The February meeting replaced with a tour of the new Oakville Hydro meter lab. The facility is located on Wyecroft Rd. at Fourth line.
- The shack will be opened on Jan 15. Anyone who would like training on the equipment or would like to operate should meet Mike Brown at 7:30pm.
- The Mississauga ARA donated a swap shop table at HAMEX 2002 to OARC to be held on March 23/02. Draw tickets are also available from Shot Heath and Jack Livingstone.
- Carvell Pekley provided a Treasurers report indicating a current account of \$1331.97.
- Rick Harrison provided an EC report indicating 20 OARC members were signed up as ARES members. A temporary emergency call out list is now available to members. Any corrections should be forwarded to Rick as soon as possible. The time commitment requested for ARES participants is approximately two hours per month. ARES members do not necessarily require their own equipment to participate, only a willingness to help and to be available for training. Also, a meeting was recently held with the manager of the Oakville Red Cross branch, where she indicated her priority in an emergency is to establish and maintain communications between the various shelters in Oakville. Rick and Greg Foster will meet to explore coordination exists between the Red Cross emergency committee and the OARC.

Motions

- It was MOVED by Shot Heath that the minutes of the December regular club meeting as published in the January edition of Hot Bananas be approved. Motion was SECONDED by Greg Foster. The MOTION was PASSED.
- It was MOVED by Carvell Pelkey that the Treasurers report as presented be accepted. Motion was SECONDED by Jim Croll. The MOTION was PASSED.

Closing

- IT was MOVED by Shot Heath that the meeting be adjourned. MOTION was SECONDED by Jim Fitzpatrick. The MOTION was PASSED.Ω

The simple “Balcony antenna” for digital mode

Ernest Latal

VE3ZUF

For city dwellers the digital mode, specialy PSK, brings full opportunity to get DX QSO on top HF bands. Easy interface to everyone computer, free software, today's high quality radio transceivers and QSL E-mail services are lofty beginning of 21 century in amateurs radio. For apartment ham first (or last) link – antenna still creates major technical problem. Following describes “balcony antenna” should be the simplest way to go on air for unfortunate amateurs without 2 acres antenna farm. Many articles about antennas for limited space are available on Internet, in magazines and in special books, too. I will try to describe the primitive antenna without coils, fully tunable, for 50 Ohm coax direct and with possibility to set up SWR as low as 1.1: 1. I vote up, on the end my experimentation, for top capacitance hat antenna performance as mentioned by G4FGQ in software program. Please read the arguments in beginning of his Notes:

Program name: TOPHAT1.exe Author: R.J.Edwards G4FGQ (C) 25th March, 2001

PERFORMANCE OF SHORT, VERTICAL, TOP-CAPACITANCE-LOADED ANTENNAS

Capacitance loading of a short vertical antenna can improve radiating efficiency better, than inductance loading. Best possible improvement for a 2/3-height loading coil relative to base loading is typically 3 dB. But top-capacitance loading can increase gain by 6 dB or more. In this program loading is provided

by a number of horizontal radial wires or rods surrounded by a wire circle.

Capacitance loading improves efficiency in two ways -

(1) A more uniform distribution of antenna current versus height results in an increase in radiation resistance for no loss in the top-hat. Whereas the high loss resistance of a raised coil may outweigh the benefit of increased Rrad.

(2) A coil is essential either in the antenna or in a tuner. But a smaller inductance is needed when a capacitance hat is fitted. If overall coil dimensions and Q is unchanged then coil loss resistance is significantly reduced.

A more uniform antenna current due to a top hat will limit the advantage of locating the coil in the antenna. It can then be conveniently combined with the L-match network or tuner located between the antenna feedpoint and transmitter.

When you are experimenting with these antennas on the balcony of 19th floor, you definitely are short of perfect ground. Fortunately today trend in antenna's ground is to eliminate “real”ground and highly conductive soil with many buried radials. (Last article in CQ Jan 2002 from VK6APH and many other before). The proper size of aluminum mesh on the balcony floor exhibits “quality” ground.

The top hat antenna for 28.12 MHz

In beginning:

Result of calculation by **Short, vertical, top capacitance loaded antennas** by R.J.Edwards G4FGQ (software)

Mast height meters	1.84	Diameter of radials, mm	2.0
Mast diameter, mm ...	12.0	Ground loss, ohms	1.0
Number of radials ...	13	Q of L-match inductance	500
Radial length, meters	0.23	Frequency, MHz	28.170
Antenna height	0.1724 λ	Capacitance of top hat	10.5 pF
Feedpoint series input : reactance	-0.3 Ω		
Feedpoint series input resistance	23.7 Ω		
Radiation resistance	22.718 Ω (referred to feedpoint)		
Power radiated	95.6 %		
L-match: inductance	0.1 μ H		
capacitance	119 pF		

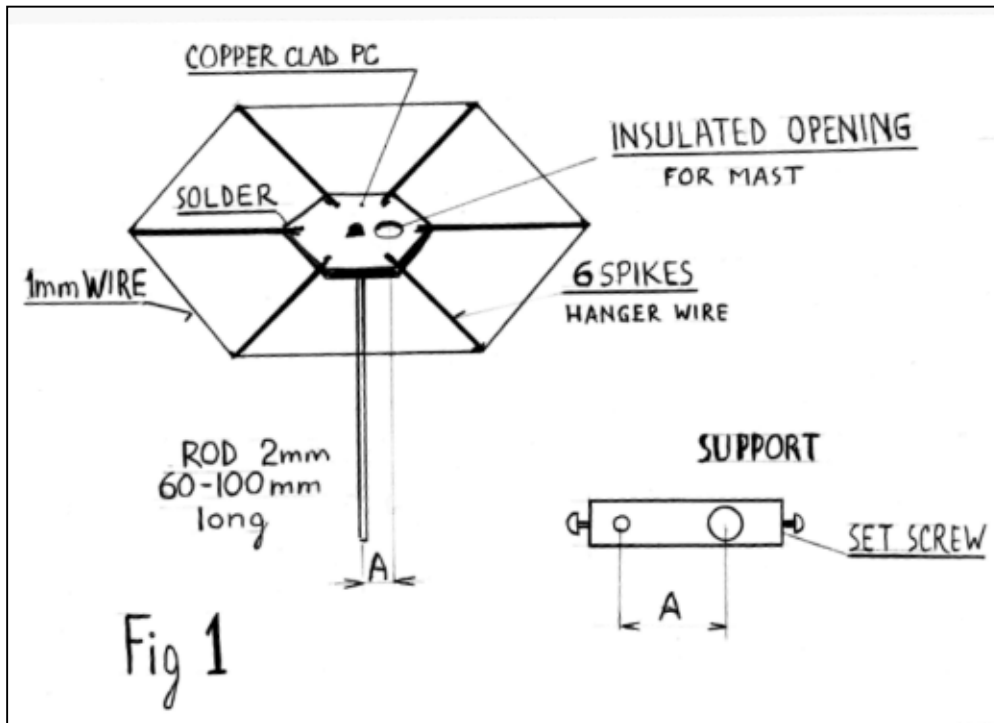
L-match coil is in series with antenna, capacitor is across 50-ohm coax line.

Real antenna on my balcony:

- Mast height 1.83 m (6ft) with 60 mm tunes up wire
- Mast dia 12 mm aluminum (1/4 inch)
- Standing on Teflon insulator in center of aluminum mesh 6 x 2 1/2 ft.
- Connector for 50-Ohm coax on the end of mast, grounded on aluminum mesh.
- Cap. hat: 6 spikes 2mm dia and 18 cm long. Ends are joined by 1mm wire (soldered)
- Cap. Hat's Support Rod: 2mm dia and 60 mm long
- No coil or capacitor.

Fig. 1 shows details of cap.hat and Fig. 2 explains arrangement of antenna parts.

On Fig.1 opening on hat's center must be insulated from antenna mast. Adjustable support for capacitance hat is simple piece of brass rod or bar with the holes for mast and hat's rod. The screws lock the support on mast and hat's rod when antenna is tuned and set for best SWR.



Tuning: The trick is to eliminate coils, capacitor, and antenna tuner and still have good SWR is in double adjustable position of cap.hat and at mast end. The arrangement permits 1) move cap.hat up and down on main antenna mast and 2) move cap.hat's rod in Hat's Support. The truth is, size of hat (hat's capacitance) is important for tuning. The hat's position on mast tunes antenna. Also this way it is not necessary to make a hat's capacitance (size) precisely by same calculation. The combination with position hat's rod in the

hat's support permits to be set SWR close to 1:1. Antenna Analyzer or similar instrument is must for this job.

Note: 10m antenna and its 20m sister is in use over 6 months with transceiver running 30W in my place. QSL from Europe, Patagonia, Russia and West Canada make me happy. I found antennas working in rain and snow. The parts must be protected by varnish and petroleum jelly against Toronto's aggressive air. (Pollution is really heavy. Copper pipe for 2m J antenna is perfectly green in 1 month)

NOTES: The grounding mesh should be connected directly to coax connector or by short and straight heavy wire. For lower frequencies aluminum mesh has to be longer not wider. The balcony rail **must not be grounded**. (Transceiver is grounded to cold water pipe.) The cap.hat should be fixed by fishing line to be steady in heavy wind.

The six spikes are soldered to the center piece made from PC (best two side clad). The same manner the hat's rod is soldered in a center of PC. The "hanger" wire is OK. After finishing the hat, a piece should be painted by spare (boat) varnish. Proper tightening the setscrews guarantee good electrical contact.

The support is made by 1/2 x 3/8-inch brass or aluminum bar with setscrews on both sides.

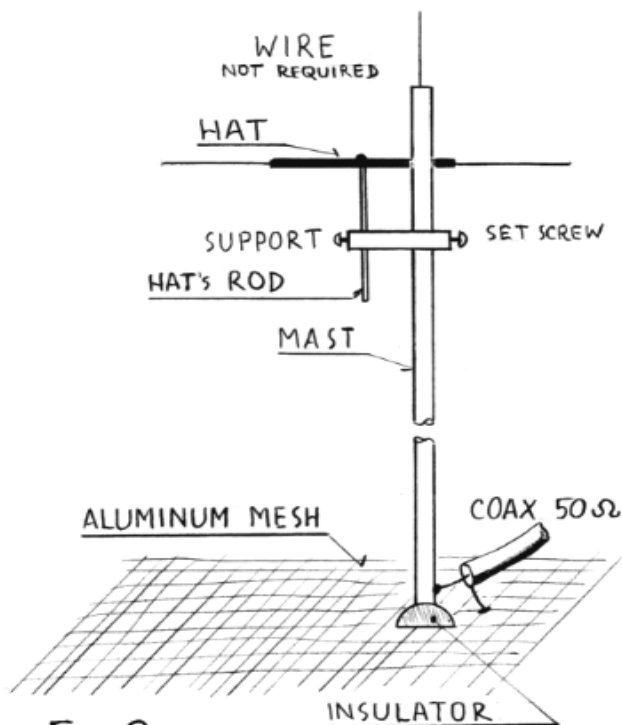


Fig 2

The capacitance hat is movable along the mast and by the hat's rod to tune and set SWR.

The antenna mast is going through the hat and **no electric connection** at this point.

Tune-up wire on top of the mast is not mandatory.

The mast-insulator should be properly shaped for keeping rainwater out during rain.

The aluminum mesh should be squeezed between two alum. strips. Shield of the coax cable should be squeezed between aluminum strips, to guarantee perfect "ground".

The 1/2 x 6 x 1/4 inch strips joined by four screws are adequate.

The antennas for 10 m and 20m band on a balcony in 19th floor of apartment building in Etobicoke.



ANNOUNCING THE 6th ANNUAL ONTARIO QSO PARTY

1800 UTC on Saturday, April 20th to 1800 UTC on Sunday, April 21st 2002. The Ontario QSO Party is open to all amateur radio operators regardless of license class and shortwave listeners world-wide.

Frequencies: (Phone/CW) All HF Bands 160-10 meters 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 HF SSB, 1.830, 3.530, 3.720, 7.030, 7.130, 14.030, 21.030, 21.130, 28.030 on HF CW. 52.540, 146.550, 446.100 on VHF/UHF FM. 50.130, 144.205, 432.105 on VHF/UHF SSB (or other appropriate VHF/UHF frequencies)

Suggested Manner of Operation: Work HF SSB on the hour, work HF CW on the half hour, work VHF/UHF (either SSB/CW or FM Simplex) at 15 minutes past the hour.

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

Categories: Multi-operator, Single Operator Low Power (under 150 watts HF and under 50 watts VHF/UHF), Single Operator High Power (over 150 watts HF and over 50 watts VHF/UHF), Single Operator Single Band, Single Operator HF QRP (under 5 watts), VHF/UHF FM QRP (under 5 watts), CW-only, SSB-only or Mixed Mode, SWL, Mobile/Rover.

A mobile station is a station operating on wheels moving between multipliers, while a rover station is a station moving between multipliers using "fixed" antennas.

Exchange: Ontario stations send signal report and county, district, regional municipality or city in the case of the Cities of Toronto, Sudbury, Ottawa, Hamilton and Kawartha Lakes The "Towns" of Haldimand and Norfolk are considered a single multiplier. Non-Ontario stations send signal report and Canadian province/territory, U.S. state, or DXCC country name.

Scoring:

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

Score 1 QSO point for each station worked on SSB per HF band. Score 2 QSO points for each station worked on CW per HF band. (You may work a station TWICE per HF band, once on SSB and once on CW).

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

Score 10 QSO points for each contact made with ODXA club station VE3ODX and RAC Ontario club station VA3RAC. (You may work VE3ODX and VA3RAC twice per HF band i.e. SSB & CW and once on each of the VHF/UHF bands).

Ontario stations claim 1 multiplier point for each Ontario county, district, regional municipality (city in the case of City of Toronto), worked on each band. Ontario stations also claim 1 multiplier point for each Canadian province/territory, U.S. state and DXCC country worked on each band.

Non-Ontario stations and SWL's claim Ontario multipliers only.

Total Score = Total QSO points x total multiplier points.

Mobile/Rover Bonus: Mobile/Rover stations add 300 bonus points for each Ontario multiplier activated. To earn the mobile/rover bonus a station must make at least three contacts with three different stations from the multiplier area.

AWARDS:

Certificates to the top scoring stations in each category and to the top scoring stations in each Ontario county, district, regional municipality and the City of Toronto. Regional certificates will be issued to the top scoring stations in each region of Ontario i.e. Northern Ontario (postal code area P), Southwestern Ontario (postal code area N), Central

Ontario (postal code area L) and Eastern Ontario (postal code area K). Certificates will also be awarded to the top scoring stations in each Canadian province/territory, U.S.A. state and DXCC country.

ODXA "Clean Sweep Award"

This plaque will be awarded to the very first station who manages to make contact with each of the 48 Ontario multipliers plus VE3ODX and VA3RAC.

QRP Award

Thanks to Jeff Heatherington, VA3JFF and his better half there will again be a special QRP Award in the 2001 Ontario QSO Party going to:

- a) The top scoring QRP entrant from Ontario
- b) The top scoring QRP entrant from outside Ontario

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

Durham Radio Award

Thanks to Keith Carcasole of Durham Radio a special plaque will be awarded to the top scoring single

Radio World Award

Thanks to the folks at Radio World a special plaque will be awarded to the top scoring multi-operator station.

ODXA Newbie Award

Will be awarded to the highest scoring entrant who has not previously been an entrant in the Ontario QSO Party.

Border City (Windsor) Amateur Radio Club Award

Will be awarded to the top scoring station from southwestern Ontario (postal code area "N")

Frank S. Salter (VE3FRS) Memorial Award

Thanks to Ron Walsh VE3GO this award will go to the top scoring entrant from eastern Ontario (postal code area "K")

ODXA "Outside Ontario" Award

This award will go to the top scoring station from outside the province of Ontario

OTHER AWARDS TO BE ANNOUNCED!!

Buttons: Stations making over 50 contacts will qualify for an "Ontario QSO Party" call sign button. Operators at multi-operator stations making over 50 contacts also qualify. Please send \$2.00 Canadian or equivalent to cover costs.

T-Shirts: Stations making over 100 contacts will qualify for an "Ontario QSO Party t-shirt. Operators at multi-operator stations making over 100 contacts also qualify. Please send \$15.00 Canadian or equivalent to cover costs. Please specify size of t-shirts when ordering (S, M, L, XL, XXL).

Logs: Entries should be postmarked no later than May 31, 2002. Send your logs to:

Ontario QSO Party, Ontario DX Association, P.O. Box 161, Station "A", Willowdale, ON M2N 5S8

E-mail logs are strongly encouraged. Please send them to ve3sre@rac.ca. Please include your snail-mail address with any electronic entries. Please ensure that your entry includes the class you are entering in, and the multiplier area(s) you operated from.

Entry forms are available from the ODXA website at [OQPForm](#).

Entries are not invalid if the official form is not used but we would prefer that you do so.

Results: will be posted on the ODXA website as they come in. Final results will be published in the ODXA magazine "Listening In".

RAC Membership / The Canadian Amateur Subscription Application



Name _____ Call sign _____

Address _____

City / town _____ Province _____ Postal Code _____

• 1-year single at \$39.95 (GST incl.) *\$41.43 in NB, NS, NF (HST incl.) \$

• Additional family member at \$20 (one magazine / family membership)\$

(Name / call sign of family members – must reside at same address) _____

• Blind membership (no magazine) at \$20 \$

(CNIB Registration # required)

• Foreign 1-year single at \$53 (US funds only) \$

• I am making a donation to the RAC Foundation in the amount of \$

• I would like to order video # \$

Total enclosed \$

VISA / MasterCard No.

Card Expiry Date

Signature

**Have your credit card ready and call toll free
1-877-273-8304 or mail or fax form to:**

Radio Amateurs of Canada Inc. 720 Belfast Road, Suite 217, Ottawa, ON
K1G 0Z5 Fax: 613-244-4369 Tel. 613-244-4367 E-mail: <rachq@rac.ca>
Website: www.rac.ca

Cheque / money order should be made payable to Radio Amateurs of Canada Inc. in
Canadian funds. Payment must accompany the application form. You may join with
VISA/MC. Multi-year purchases are accepted to a maximum of three years.

Don't forget, a RAC membership / TCA subscription also makes a great gift idea!