

Ottawa Amateur Radio Club

Groundwave

P.O. Box 8873, Ottawa, Ontario, Canada, K1G 3J2

CLUB EXECUTIVE

President

Diane Bruce VA3DB
(H) 225-9920
va3db@rac.ca

Past President

George Roach, VE3BNO
(H) 234-0885
ve3bno@rac.ca

Vice-President

Dave Green, VE3TLY
(H) 728-8606
ve3tly@rac.ca

Secretary

Richard Hagemeyer, VE3UNW
(H) 225-5310
ve3unw@rac.ca

Treasurer

Janice Neelands VA3PAX
(H) 236-9291
va3pax@rac.ca

Directors

Brian Campbell, VE3ZRK
(H) 737-3933
ve3zrk@rogers.com

Ernie Brown, VA3OEB
(H) 225-7798
va3oeb@rac.ca

Wayne Getchell, VE3CZO
(H) 225-7989
Getch@magma.ca

Ian Jeffrey, VE3IGJ
(H) 837-7393
ve3igj@rac.ca

Harrie Jones, VE3HYS
(H) 739-9365
hjones@chumottawa.com

Check out our Web Page: www.oarc.net

November 2005

Don't forget the deadline for Joe Norton Award applications is November 2.

Membership renewals are now past due. If you have not yet done so please send in your renewal immediately.

I want to thank everyone who has sent me articles for inclusion in the newsletter. If your article has not appeared it's because I have an "embarrassment of riches" - more articles than space to print them. (I suppose I could use smaller type, but then, if you're my age or older, you couldn't read it.) Next month I will drop the membership renewal page to get more space. I am limited to 10 pages without an increase in postage.

November's speaker is Harrie Jones, VE3HYS, who will be outlining the new club repeater system for UHF, VHF, and IRLP. Included are two new remote receivers. See you at the meeting.

Ian Jeffrey, VE3IGJ



NOVEMBER MEETING 7:30 pm, November 9th in the Honeywell room at Ottawa City Hall

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Membership

Ernie Brown, VA3OEB
(H) 225-7798
va3oeb@rac.ca

Groundwave Editor

Ian Jeffrey VE3IGJ
(H) 837-7393
ve3igi@rac.ca

Delegated Examiner

Mike Kelly, VE3FFK
ve3ffk@rac.ca

Coffee Guy

Brian Campbell, VE3ZRK
(H) 737-3933
ve3zrk@rogers.com

Historian

George Roach, VE3BNO
(H) 234-0885
(Fax) 567-2372
ve3bno@rac.ca

Webmaster

Dianne Bruce, VA3DB
(H) 225-9920
va3db@rac.ca

IRLP Manager

Cary Honeywell, VE3EV
(H) 590-9873
ve3ev@rac.ca

Repeater

Harrie Jones
(H) 739-9365
Hjones@chumottawa.com



Ottawa Amateur Radio Club

Groundwave

November 2005

Articles may be submitted for use in this publication provided that they portray events or activities that promote Amateur Radio. Letters and comments are also welcome. Submissions may be made by mail addressed to the Editor care of the OARC, or by e-mail to "ve3igi@rac.ca". Deadline for submissions occurs three days after the regular monthly meeting of the OARC.

Please support your local radio organisations. They support you!

Club Information

The Ottawa Amateur Radio Club Inc. is an association of Radio Amateurs devoted to the promotion of interest in Amateur Radio communications in the National Capital Area and to the advancement and achievement of club members.

Regular Meetings of the OARC Inc. are held on the second Wednesday of each month (except July and August) in the Honeywell Room (2nd floor of the Old Teacher's College) of Ottawa City Hall (formerly Regional Municipality of Ottawa Carleton Headquarters) on Lisgar Street. Meetings commence at approximately 19:30 hours. Further details about each meeting is elsewhere in this publication.

Executive Meetings of the OARC Inc. are normally held on the first Wednesday of each month at 19:30 hours. Contact the President to confirm the date, time and place of the next meeting.

The CAPITAL CITY FM Net meets every Monday at 20:00 hours on the club repeater **VE2CRA** to pass traffic and to make announcements of interest to Amateurs in the National Capital Region.

The SWAP Net is a service provided and conducted by Ed Seib, VA3ES. This feature appears on the Capital City FM Net. To list items and make inquiries, call Ed at 613-738 8924 or e-mail him at va3es@rac.ca. Also available on the web: <http://www.igs.net/~swap>.

The POT-HOLE Net is a SSB/HF net sponsored by the Ottawa Valley Mobile Radio Club and is conducted every Sunday at 10:00 hours on **3.760 MHz**. All amateurs are welcome to check in.

The POT-LID CW Net is an informal slow-speed CW net sponsored and conducted by Ed Morgan, VE3GX, and meets every Sunday, except during July and August, at 11:00 hours on **3.620 MHz**, to promote interest in CW and CW procedures.

The QCWA CHAPTER 70 Net meets every Thursday evening at 20:00 hours on repeater VE3TEL, **147.03** You do not have to be a QCWA member to participate.

The Ottawa Valley VHF/UHF SSB Net is sponsored by the West Carleton ARC. Look for it every Tuesday night (except the first Tuesday of the month) around 21:00 on **144.250**, (roll calls after net on 50.150, 432.150, 222.150, and 1296.100.) Horizontal polarization is preferred.

The Ottawa Amateur Radio Club bulletin "Groundwave" is published and distributed to club members by mail. Publication dates may vary but it is hoped that the bulletin arrives at its destination before the events listed in it have expired. The bulletin is not published for July and August when meetings do not occur. Every effort is made to provide accurate information in the bulletin, however we are all human and mistakes can be made. The OARC accepts no responsibility for any damages that may result from this. The opinions expressed in this bulletin are only those of the author.

Voice (VHF) 146.94/146.34 100Hz output tone
(UHF) 443.300/448.300

VE3TVA Amateur Fast Scan Television Repeater
Video/audio beacon & input 439.25 MHz (audio sub. 443.75)
Video/Audio output 914 MHz (FM)

IRLP Node 2040 146.94/146.34 (VE2CRA/VE3RC)
(Code 411 for info) (Code 204 for activity)
(Code 88 for time)

For further information please contact the Repeater Chair.

Note: The IRLP link not connected to ECHOLINK. Please do not try to connect using the alpha keys on your keypad. It just confuses the operator.

Note: The IRLP link is disabled during the Capital City Net each Monday. It is disabled from 2000 to 2145 Mondays except for May to August when the link is disabled from 2000 to 2020.

VE3TEN

Tuning in the beacon so that it makes sense requires you tune to **28.175** on cw and read the tone that is there . The spaces between the elements are the higher tone. If that doesn't work, tune to **28.175.28** on lower sideband for better results.



Dates to Remember

Minutes

The OARC monthly meeting was held at Oct 12th, 2005 at Ottawa City Hall, Ottawa, ON and was called to order at 19:37 by President Diane, VA3DB. About 30 were present.

1. Diane, VA3DB welcomed everybody and called for visitors:

Ed Blaser, VE3LZV is from the Barrie, ON area and now lives in Kanata. We hope Ed will join us every month.

Lockie Scott has no call, but is a Sagittarius. He still gets free coffee.

Since we are spinning our wheels waiting for the computer to show, Gord Holmes, mentioned he has a new call, VE3AVA.

2. There were no corrections offered to the published September minutes.

3. Joe Norton Award: A final call for Joe Norton submissions was made. All members are asked to encourage those eligible hams to make a submission. The deadline for submission in next month. Additional information is available from the club website

4. Strangely, there were no announcements from the floor this month. Especially ironic since we are still wasting time awaiting the laptop's arrival and you can always milk a few announcements for more minutes than they deserve.

5. Haves & Wants: A question from an aspiring ham:

Q: How do the exams work now with the recent changes from Industry Canada?

A: Mike Kelly, VE3FFK one of the club examiners answered that the exams are still the same, but the pass mark has been raised from 60% to 70%. You have access to all amateur frequency bands if you achieve an 80% or higher. The advanced exam is the also the same as before and additionally gives you access to all

2005

- September 3 OARC Hamfest and RAC Forum
- September 30 Membership Renewal Deadline
- November 2 Joe Norton Award Submissions Due
- December 17 RAC Winter Contest

2006

- February 11,12 Canada Ski Marathon
- April 12 Homebrew Night
- June 14 OARC AGM and Elections
- June 24,25 Field Day
- July 1 RAC Canada Day Contest

amateur frequencies. You may also still do the Morse test which is also unchanged.

6. Contact of the Month: Still trying to waste time, we called for a "contact of the month". Ian, VE3IGJ worked Phil, K1ICO in Massachusetts on AO-51 and QSL'd. Later Ian received a QSL card directly from Phil with a much coveted U.S. green stamp. Ian returned the dollar.

7. The laptop arrived at 19:47 and Ben left immediately.

8. Diane, VA3DB called on the night's speaker, Ian, VE3IGJ, to introduce himself. He is currently the club Groundwave editor and was the club secretary for a couple of years. He was licensed in 2000. Since he seemed easy to talk into a job, he was immediately offered the jobs of Repeater Chair, Ski Marathon organizer, Hamfest manger and Bottle washer (chief). He declined them all. The talk was entitled "Underwater Electromagnetic Radiation".

- a. Ian works for a company which works to make naval ships and submarines electrically invisible.

- b. The system causes the unsuppressed signal of 1000 microvolts per metre to reduce to about 10 or less microvolts per metre near the ship with active and passive suppression.

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Maple Island Activation

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c. I can't divulge the rest in the minutes because we'd have to "take care" of all the readers and the secretary was working the PowerPoint on the laptop and couldn't take notes.

d. Ian was done at 20:31. You should've come to the meeting, we have real cool speakers!

9. Martin, VA3SIE spoke about the highly successful Maple Island "DXpedition" with Bob, VA3RCS and Harold, VE3UNK on September 25th, 2005. He had a very nicely done PowerPoint presentation with lots of pictures. Canadian Islands on the Air immediately granted Maple Island number ON277 as Martin and his crew met the requirements of island designation.

10. Since Martin was still at the front and having received word of his amazing accomplishments, Martin, VA3SIE was awarded a certificate for 1st place in the NA QRP CW contest. He also received his 1000 miles per watt certificate for a contact with EA6UN using about 800 milliwatts.

11. The night's business having been concluded, the meeting broke for coffee at 20:45.

12. The 50/50 draw included unclaimed prizes from the Hamfest. Al, VE3ZTU won an ARRL Antenna book, Harold, VE3UNK, and Steve, VA3MGY, won a \$10 gift certificate from Radio HF. Steve kindly allowed a redraw for his certificate which was won by Ernie, VE3OEB. Gord, VE3XGP, won the \$23.

13. After a bunch of coffee and talk people left.

Signed Richard Hagemeyer, VE3UNW

Secretary.

On the rainy morning of September 25th, Bob (VA3QV) and Martin (VA3SIE) cycled to Maple Island in Ottawa and activated it for the Canadian Islands Award Program. Full details are online here: <http://www.sunim.plus.com/maple/>

This program, administered by the Maple Leaf Radio Society, encourages island activity and island hunting in Canada and helps to stimulate operating activity around the world on the shortwave amateur radio bands. The program maintains a website here: <http://www.qsl.net/ve3tpz/cisa/>.

The program maintains a list of islands and each island in the program is assigned a number. Some of the islands in and around Ottawa already have numbers. If an island does not already have a number, a number can be earned by working 25 stations in 2 countries from the island. Maple Island fell into this category, and Bob and Martin set out to earn the island a number. This is their story.

We (Bob and myself) decided on a schedule of frequencies we would be operating on, and published it far and wide ahead of the day. When the day came around it turned out to be threatening rain, but undeterred we cycled down to the island and started setting up.

We carried out the operation using low power levels. Bob used a Yaesu FT-817 to feed a G5RV for HF SSB, which was strung between two large trees, and a J-pole for 6m & 2m. I used an Elecraft KX-1 kit radio for HF CW, and a Yaesu FT-51R dual band handheld radio for VHF FM.

Many local amateurs came down to the island to visit the operation and Bob and I would like to express our gratitude to those amateurs for their support (and food! – Yum, thanks!)

Bob made a couple of test contacts while setting up, and then he controlled the 80m Pot Hole Net from the island while I pulled in a couple of contacts on 40m. We then made contacts on 20m, 40m and 80m for the

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Mk's Words

It seemed like a good idea at the time. I decided to hook up a battery to a receiver I use every so often. I was using a "trailer" connector on the receiver, and the battery has power pole connectors on it. I wasn't too worried, since I had already put in an "idiot" diode, as well as a big filter capacitor to try to get rid of some ignition noise in the thing when it went mobile. What I thought I had was circuit A, but what I really had was B. (Page 8) Well, of course, the alligators found their way on to the wrong spots, with the expected sparks and a bit of escaping smoke. At that point, what's SUPPOSED to happen is that the diode gets forward biased and blows the fuse, leaving the hapless operator to exclaim "IDIOT!", swap the leads and replace the fuse. Fortunately, the lead from the capacitor to the rest of the circuit went open before too many milliseconds elapsed, or too much damage was done. Moral of the story, (No, I don't mean "Don't connect alligator clips before you wake up", or even "always use Powerpoles" (although that isn't a bad idea)). After you have worked on a circuit, take another look at it, just to be sure that you have what you think you have. By the way, the diode and the radio survived. The only casualty was the trailer style connector. It has since been replaced by a power pole connector, like the rest of my stuff. It is so much harder to get the polarity wrong with those things. End of Lesson.

I recently received my copy of the 2006 "ARRL Handbook for Radio Communications". Do you remember the good old days when it was the Radio Amateur's Handbook? Anyway, along with the book came a reprint of the first handbook, printed in 1926. It is interesting to see what has changed, and more interesting to see what has stayed the same. First, the type was a lot smaller then. Since hams were teens, pre-teens and the young hi tech workers of their day, they had pretty good eyesight. The economy was in good shape and parts were in plentiful supply. Much of the handbook is devoted to the "Relay" part of the ARRL, but in the theory section they explain how to generate both damped and continuous waves. They also point out that amateurs may not use damped waves any more, since they cause

so much interference. Even with the exclusive use of continuous waves, hams had to deal with interference complaints as broadcast radio spread across the continent. Getting dc for the plate circuits of the vacuum tubes of the day was an interesting process. They had electrolytic rectifiers (aluminum and lead plates in a sodium bicarbonate electrolyte), synchronous rectifiers (motors driving switches, turning in sync with the power line frequency) and finally the expensive vacuum tube rectifiers (also known as Rectrons or Kenotrons). These were listed for sale in the ads at the back of the book for a buck eighty five (extra special price). Take inflation into account, then consider that a 1N4006 will do the job for less than a dime of today's money. Then subtract the cost of the filament transformer, and stop complaining about the cost of getting on the air these days. It is fun to look back and see where we came from. I might even learn a thing or two if I'm not careful.

Those of you who don't get on the air much may not have heard, but the Pioneer Amateur Radio Club is no more. The repeaters are off the air, and what was left of the club is now a social group that plans to get together maybe once a year. They are planning to get the two metre repeater up in the Hazeldean site with a single receiver at that spot. The UHF repeater will probably go back on the air eventually from the fire dispatch site on Randall Avenue, under the EMRG / Ottawa ARES banner. Anyway, they aren't the first club to go under, and they won't be the last. Every time it happens, I think "that could be us some day". Clubs come into existence for a reason, and disappear for a reason. It may be demographics, apathy or internal politics. The OARC has been going a long time (understatement of the week), so look around and ask yourself what you can do to make sure it doesn't go the way of the Pioneers.

You can finally see the trees between the leaves so get out there and put those antennas up, or it'll be a long winter.

73.. mk VE3FFK



Joe Norton Award

Clarification of Amateur TV Repeater Operation

Here is a further explanation of the VE3TVA amateur TV repeater operation.

The repeater's 439.25 port is actually both an input and output. When not in use it retransmits the NASA channel for 58 seconds each minute. For two seconds the transmitter is turned off and the receiver looks for an AM TV signal on 439.25. If it sees one it holds off the 439.25 transmitter and keys up the 914 transmitter. The AM modulated input signal on 439.25 is translated to an FM TV signal on 914.

There is also an FM receiver on 1245MHz. FM TV signals received on 1245 are demodulated, cleaned up a bit then re-transmitted on both 914 (FM) and 439.25 (AM).

I hope that clarifies things. A couple of additional notes: The repeater controller is currently down for refurbishment, so both the 439.25 and 914 outputs are running in beacon mode only, both receiver inputs are disabled.

Wayne Getchell (VE3CZO)

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<http://www.orienteing.ca/>

[4] ARDF in the USA

<http://members.aol.com/homingin/farsnews.html>

[5] ARDF in Canada

<http://www.rac.ca/opsinfo/ardf.htm>

[6] More photos from the championships

http://www.wm5r.org/photos/2005_iaru_r2_ardf/

A licensed Amateur Radio Operator since 1993, and an active orienteer since 2000, Ken Harker is a member of the Central Texas DX & Contest Club (CTDXCC) and the Houston Orienteering Club (HOC.) You can contact the author by surface mail at 7009 Fireoak Dr, Austin, TX 78759, on the Web (<http://www.kenharker.com/>), or via e-mail at kenharker@kenharker.com.

The OTTAWA AMATEUR RADIO CLUB INC. annually awards the Joe Norton Trust Award for the advancement of amateur radio. The amount of this award is \$500 and a wall plaque.

Applications must include a written submission of no less than 600 words and no more than 900 words to the executive of the Ottawa Amateur Radio Club Inc., setting out his or her interests, achievements and plans to contribute to the advancement of amateur radio.

Entries must be received by November 2, 2005. For complete details on eligibility and entry, see the description on the OARC web page <http://www.oarc.net/norton.html>.

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rest of the morning.

In the afternoon Bob controlled the Trans-Provincial Net while I pulled in some more contacts on 20m CW. We also made a smattering of contacts on VHF. Just as I was about to pack up for the day I made a quick contact with EA6UN in Mallorca, Spain.

Thanks to all the amateurs who contacted us and made the event so much fun for us both! Our final tally was 68 contacts with amateur in 3 countries, and we earned Maple Island a number – ON277. We had a great time and I'm sure it was as much fun for those who talked to us on the air as it was for us!

73 from VA3QV/QRP/P and VA3SIE/QRP/P.



Amateur Radio Direction Finding

The week of August 1-6, 2005, competitors from around the United States and the rest of the world traveled to Albuquerque, New Mexico for the third IARU Region II Amateur Radio Direction Finding (ARDF) Championships.[1] Organized by the International Amateur Radio Union (IARU)[2], Amateur Radio Direction Finding (ARDF) is a map and compass sport where the locations of transmitters are not marked on the map. Competitors must use detailed topographic maps and handheld radio receivers to find the radio transmitters. The Region II Championships this year were organized and hosted by the Albuquerque Amateur Radio Club.

Amateur Radio Direction Finding (ARDF) is often referred to in Amateur Radio society as "on-foot foxhunting." While that is accurate, there's more to it than that. ARDF is a sport with formalized, international rules that borrow a lot from orienteering.[3] In fact, ARDF is often called "radio orienteering" in orienteering society. Like orienteering, ARDF includes navigation across diverse, wooded terrain, always with the use of a detailed topographic map, sometimes with the aid of a compass, and including navigation off-trail. The transmitters in the woods are marked with standard orange-and-white orienteering controls (which look a little like box kites) and have some sort of punching system where the runner can record their visit to the control. The event is a timed race, where competitors leave a start area in five-minute intervals, must find a certain set of the transmitters out in the woods, and then run to the finish area marked on their map.

Twenty-nine radio orienteers, 23 men and 6 women, participated in the championships in New Mexico. California, Colorado, Indiana, Kentucky, Massachusetts, Montana, North Carolina, New Mexico, Ohio, and Texas were all represented. Four of the competitors traveled to the meet from outside Region II, traveling from Australia, the Czech Republic, and Kazakhstan to North America to experience ARDF on new terrain. Even though not eligible for Region II competitive rankings, they were warmly welcomed to enter the

event and share the experience. Many of the competitors have been entering the IARU Region II or USA ARDF Championships for several years, and the quality of competition improves every year. 12 of the 14 members of the 2004 Team USA[4] came to New Mexico for this competition, making it the place to be to see the very best North American athletes in the sport.

The results from these championships and the 2006 USA ARDF Championships (to be held in the Raleigh, NC area sometime in spring or early summer) will help determine who will represent the USA at the 2006 World ARDF Championships, which will be held at a Black Sea beach resort near Bourgas, Bulgaria the week of 12-27 September 2006. Each country is allowed to bring up to three competitors in each of the nine entry classes to the World Championships. It would be fantastic if Canadians once again tried their hand at this sport. Canada has never sent a team to the ARDF World Championships, and no Canadians have attended an IARU Region II ARDF Championship since the first one held in 1999 in Portland, Oregon. Any Canadians looking to learn more about ARDF are encouraged to get in touch with Joe Young VE7BFK[5], the ARDF Coordinator for the Radio Amateurs of Canada. All Canadians are of course welcome and encouraged to participate in ARDF meets south of the border, including the USA ARDF Championships.

ARDF is still a growing sport in North America. The level of competition improves every year, and there's still plenty of opportunity for newcomers to get involved. The third IARU Region II ARDF championships[6] was an exceptional event, put on by a very dedicated group of individuals. The next IARU Region II ARDF Championship will be in 2007, at a location yet to be determined.

Links:

- [1] Third IARU Region II ARDF Championships
<http://mywebpages.comcast.net/ardf-usa/>
- [2] ARDF in IARU Region II
<http://www.ardf-r2.org/>
- [3] Orienteering in Canada

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Question Bank Corner

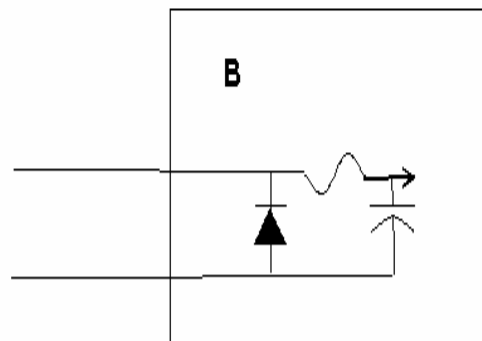
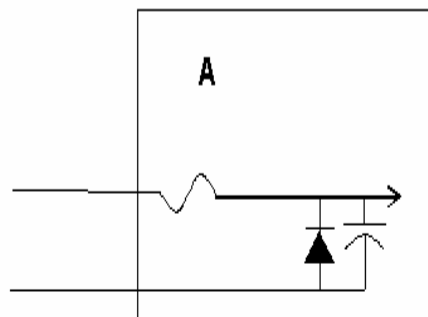
Test your knowledge against the newbies! You wouldn't want them to beat you in December! These are questions from the basic and advanced exam.

- Radio communications transmitted by stations other than a broadcasting station may be divulged or used:
 - if it is transmitted by an amateur station
 - if transmitted in English or French
 - during peacetime civil emergencies
 - if transmitted by any station using the international Morse code
- The maximum bandwidth of an amateur station's transmission allowed in the band 50 to 54 MHz is:
 - 30 kHz
 - 20 kHz
 - 15 kHz
 - 6 kHz
- Which type of antenna would be a good choice as part of a portable HF amateur station that could be set up in case of an emergency?
 - A Parabolic dish
 - A three-element quad
 - A three-element yagi
 - A dipole
- FM receivers perform in an unusual manner when two or more stations are present. The loudest signal, even though it is only two or three times as loud as the other signals, will be the only transmission demodulated. What is this called?:
 - capture effect
 - attach effect
 - interference effect
 - surrender effect
- After two time constants, the capacitor in an RC circuit is charged to what percentage of the supply volt-

age?

- 95%
 - 86.5%
 - 63.2%
 - 36.8%
- What is a crystal lattice filter?
 - A filter with wide bandwidth and shallow skirts made using quartz crystals
 - A filter with narrow bandwidth and steep skirts made using quartz crystals
 - An audio filter made with four quartz crystals that resonate at 1 kHz intervals
 - A power supply filter made with interlaced quartz crystals

Richard Hagemeyer, VE3UNW



Answers: 1-a; 2-a; 3-d; 4-a; 5-b; 6-b.

MEMBERSHIP APPLICATION / RENEWAL

Ottawa Amateur Radio Club, Inc.

Box 8873 Ottawa, Ontario K1G 3J2

- Renewal New New Ham (FREE if licensed in current membership year)
 Single (\$25 (\$20 after 1 Feb)) Family (\$30) Junior (\$15)
 Emailed PDF Copy Mailed Copy *Add \$5.00 for mailed copy of Groundwave.*

(Please note: membership year is September 1 to August 31.)

Family Name: _____ First Name/Initials: _____

Address: _____

City: _____ Prov: _____ Postal Code: _____

Home Phone: _____ Work Phone: _____ Ext _____

E-mail address: _____@_____ (For Groundwave mailing)

Callsign(s): |_____| |_____| |_____| Fax: _____

Qualifications: Basic Advanced Grandfathered
Year Licenced: _____

Other Family Members

Name: _____ Callsign(s): |_____| |_____| |_____|

Qualifications: Basic Advanced Grandfathered
Year Licenced: _____

Name: _____ Callsign(s): |_____| |_____| |_____|

Qualifications: Basic Advanced Grandfathered
Year Licenced: _____

Name: _____ Callsign(s): |_____| |_____| |_____|

Qualifications: Basic Advanced Grandfathered
Year Licenced: _____

Interests: _____

Comments/Suggestions: _____

KENWOOD

TS-480HX/TS-480SAT

HF/50MHz All-Mode Transceiver

KENWOOD
NETWORK COMMAND SYSTEM
with Voice over Internet Protocol capability



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