

Ottawa Amateur Radio Club

# Groundwave

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

September 2019

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Hamfest is just around the corner—this Saturday, September 7. See the information on page 9.

The Saturday after that is the Radio in the Park Day. See the information in the June minutes on page 3.

The speaker for September is Mike Christensen, VE3QMC, and the subject of his presentation is Emergency Communications.

See you at the meeting.

Ian Jeffrey, VE3IGJ  
Editor



Check out our Web Page: [www.oarc.net](http://www.oarc.net)

**Next Meeting 7:30 pm, Wednesday, September 11th  
in the Colonel By Room at Ottawa City Hall**

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Ottawa Amateur Radio Club

# Groundwave

*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 "ve3igj@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 Colonel By Room which is on the second floor of Ottawa City Hall, formerly Regional Municipality of Ottawa Carleton Headquarters, on Lisgar Street. Meetings commence at approximately 19:30 local. Further details about each meeting are noted elsewhere in this publication.

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

**The CAPITAL CITY FM Net** meets every Monday (except some holidays) at 20:00 local on the club repeater VE2CRA (146.940-, 100 Hz) to pass traffic and to make announcements of interest to amateurs in the National Capital Region.

**The Rubber Boot Net** runs week days at 07:30 local on VE3MPC (147.150+, 100 Hz CTCSS tone) hosted by Mike, VA3TJP. The Rubber Boot net has been running since the early 1980's and is popular for the early risers and the go to work crowd.

**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 that 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 Monday evening at 19:30 local on repeater VE3MPC (147.150+, 100 Hz) 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 local on 144.250, (roll calls after net on 50.150, 432.150, 222.150, and 1296.100.) Horizontal polarization is preferred.

**The Phoenix Net** meets Tuesday evenings at 20:00 local on VE3MPC (147.150+, 100 Hz CTCSS).

The regular **OVMRC net** meets Thursday evenings at 20:00 local on VE3TWO (147.300+, 100 Hz CTCSS tone) analogue FM.

*The Ottawa Amateur Radio Club bulletin "Groundwave" is published and distributed to club members. 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 those of the author.*

Voice (VHF) 146.940/146.340 100Hz CTCSS required  
 (UHF) 443.300/448.300 100Hz CTCSS required

VE3TVA Amateur Fast Scan Television Repeater  
 Currently off the air and looking for a new home.

IRLP Node 2040 146.940/146.340 (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 is 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 Monday night Capital City FM Net from 20:00 to about 21:45 .

**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.



## June Minutes

June 12, 2019

19:33 Meeting started by Diane VA3DB

Projector missing; thus no visual presentations.

**2019-2020 Executive and Volunteer Positions**  
 The following persons have volunteered for executive and volunteer positions in the club. None of the positions were contested, thus no formal election.

President: Dave VE3BOW  
 Vice President: Greg VE3YTZ  
 Treasurer: Margaret VA3VXN  
 Secretary: Arthur VA3BIT  
 Repeater Chair: Harrie VE3HYS  
 Past President/Website: Diane VA3DB  
 Groundwave: Ian VE3IGJ  
 Director/Membership: Roger VA3EGY  
 Director: Tyler VA3DGN  
 Director/Hamfest: Ed VE3WGO

All positions above were acclaimed.

**Budget (Margaret VA3VXN)**  
 In view of not having a projector, Margaret verbally summarized the budget for the past year, and presented the budget for the next year. To summarize: the club is on a sound financial footing.

**Field Day (Greg VE3YTZ)**  
 June 22-23  
 Consensus by the executive is to have Field Day at the Corkery Community Centre as in past years. Scouts HQ is unavailable. Greg has reserved Corkery for the weekend of June 21-23, with setup the afternoon of Friday, June 21. Greg is concerned about overall organizing, but the consensus is that between Dave VE3KL and Mike VE3FFK, the antennas and gear will appear and go up by themselves. Arthur noted that he will not be doing GOTA this year, but will act as Safety Officer. Douglas VE3YDK volunteered to run the GOTA station. Food will be organized by Margaret VA3VXN. Margaret is considering pizza, sandwiches or subs.

## Dates to Remember

- |             |                            |
|-------------|----------------------------|
| <b>2019</b> |                            |
| Sep. 7      | OARC Hamfest               |
| Sep. 14     | Radio in the Park          |
| Sep. 30     | Membership Renewals Due    |
| Nov. 1      | Joe Norton Award Subm. Due |
| Nov 21-23   | Tall Pines Rally           |
| Dec. 28     | RAC Winter Contest         |
| <b>2020</b> |                            |
| Feb. 8-9    | Canada Ski Marathon        |
| Apr. 8      | Homebrew Night             |
| May 15-17   | Dayton Hamvention          |
| Jun. 10     | OARC AGM and Elections     |
| Jun. 27-28  | Field Day                  |
| Jul. 1      | RAC Canada Day Contest     |

**Radio in the Park (Arthur VA3BIT)**  
 September 14 in Walter Baker Park in Kanata  
 Arthur is organizing this year. Arthur was unable to reserve the picnic shelter, but did reserve the gazebo. As in past years, breakfast (for those that want to join us) is from 08:00-09:00 at Rockin' Johnny's Diner near Walter Baker Park at 486 Hazeldean Road, Kanata. Setup is from 09:00-10:00 at the park. We operate from 10:00-12:00 then teardown occurs from 12:00-13:00. We have the gazebo reserved from 09:00-13:00, but operators should feel free to continue to play radio for the rest of the day. Arthur pointed out that the event will be held rain or shine (or nearby tornado), regardless of how many people show up.

**Carp Hamfest (Ed VE3WGO)**  
 September 7 at the Erskine Johnston Arena inside the Carp Fairgrounds. Ed continues to need volunteers. Ed passed around a sign-up sheet. Doors open to commercial vendors at 07:30, private vendors at 08:00 and to the general public at 09:00.

Meeting ended at about 21:00, followed by brief coffee and social.

Minutes taken by VA3BIT.



## mk's Word

Is summer over already? Say it ain't so, Joe. Anyway, it was good while it lasted. I got some time on the bike, did a little radio outside, played in a few contests and pretty much ignored the chores.

Through August I have been playing with that 40-20 dipole I showed you last April. It behaves well on 20, but is a still chore to tune on 40. The idea was to get something I could use on those two bands without dragging a tuner along. The fan dipole required too many skyhooks to be any fun in the field, and the end fed, while a good player, was too long for me to reliably get into the trees. Maybe I could have shortened it, but I thought I'd try the dipole. The idea is that the coils effectively isolate the 20m section and act as inductive loading on 40. The trouble is that as a shortened 40m, it is narrow, and getting that 50 kHz to land right on target is proving elusive. I got a centre of 6825 kHz on one trimming, and 7090 after another. Next time I go out I will have bare copper on the ends, and just roll it up, rather than clipping it. Once I get it working on 40, I get to start over again, since I have come to realize that those big air-core coils, while having a really great Q, don't take well to being dragged through the trees after being stuffed into a pack. They are destined to be replaced with much smaller toroids at some point. At least the antenna as it is now always rewards my outings with a 20m QSO, so the trip isn't wasted. Of course these sessions would be less frustrating if I remembered to pack everything the first time through the door.

Fortunately my new favourite site isn't too far from home. Speaking of which, my new-ish favourite site is at the Central Experimental Farm. Between Carling and the Driveway, West of Prince of Wales, it is radio quiet, being a long way from everything, but close to my place. It has lots of nice trees for hanging antennas in, mowed grass under the trees so things don't get tangled in the weeds, and even a few picnic tables outside of lunch hour (and a half). Check it out.

Another new toy that has found a home here recently is another set of paddles. They are the little brother of the 3D printed paddles I showed you last year. I decided I'd like to keep a set with my portable rig, rather than stealing them off the operating position every time I wanted to go play outside. They needed a bit of filing of the rough spots. When I opened them up, I discovered that, unlike big brother, there was nothing keeping the paddles from separating and allowing the spring to launch into orbit. After finding it again, I found the spring wasn't to my taste, so I replaced it with one from the toy box after all. There is now a piece of approximately 36gauge fishing line preventing the mishap from recurring the next time I decide to change the tension. All that said, they're still the cutest little paddles I have ever owned. While ordering them, I noticed that the little magnets with countersink holes are available separately, so I ordered a bunch. Something tells me that my shack will soon be stuck together with the li'l guys.

So how did your summer go?  
73 (as the song goes.. "See you in September")  
mk

*(Continued from page 6)*

*highly of themselves and liked to dress like gentlemen. Taking him for a country bumpkin, they asked a very fast operator in another office to salt him. But as the speed of transmission increased, Edison kept on receiving happily at twenty-five, thirty, even thirty-five words per minute. Finally, having received all the messages without any difficulty, Edison tapped back to his opponent: "Why don't you use your other foot?"*

The book also makes clear that the telegraph had early versions of all the issues we have today with the internet: hackers and fraud artists, on-line romances and marriages, and information overload.

I highly recommend this book as a history of the telegraph and its social impact.

Ian Jeffrey, VE3IGJ



## Ham School 101

It's easy to give a course, right????? After all, you already have a licence therefore you know the topic. The only challenge should be to get some students and a place to hold the course. Thane, VA3TTM, said he had power point slides and the old OVMRC manual that we could use. This is going to be soooooo easy!

Let's get a location. Scout Headquarters on Baseline Road has lots of presentation space for our needs. They even had a great price if the course was only for members of Scouting. It's hard to beat free for a location rental price. They even agreed to do the advertising, I just had to write the script. We sent out one email a week for three weeks to all those registered in Eastern Ontario, Quebec and Northern Canada. I got 25 replies of interest. Three were from licenced hams that offered to help if needed. We ended up with twelve that showed up for the first class and a couple of others that couldn't start until week three. By the end of the course we had eight or nine attending the class regularly.

The course included a year's membership in the OARC so my students are all reading this right now. The course included pdf material and three hours on Sunday afternoons of my dad jokes and Thane's memory tips as we tried to impart as much knowledge about the hobby and what was needed to pass the test as we could into those twelve weeks. We didn't hold the class on long

weekends or during the March Break, I figured Thane and I would be Maytag repairmen on those days.

We started off easy and the first thing I realized was that the exam I took many years ago has very little to do with the current topics covered. Lots of note writing followed and conversations with others like Norm, VE3LC, as we worked our way through the course. We brought in lots of things for our students to see and touch. Tubes, resistors, diodes, capacitors, inductors, bits of feedline, often the parts came in two sizes, broadcast size, such as the 40 amp diode, and regular size. We even brought in some little pieces, SMT, that require magnification to actually see properly. Finally we got to exam day, Field Day Sunday, and Jeremy, VA3ZTF, came in and gave the exam to the seven brave souls that came out. Four of them passed, two of whom also passed the advanced exam.

Thane and I are working on a mini course so that the rest of the class can do a review weekend and then write the exam. This course was given by the OARC and the club executive decided that all of the course fees would go into making VE3SHQ a better station. We will use the fees to get a permanent antenna system in place at VE3SHQ.

Thane and I are also planning to do a course this fall so if you know of someone who is interested please send them our way.

Harrie Jones, VE3HYS

Class picture



**Morse Code: Then and Now**

**The Black Box**

Answer to June Puzzle - The Black Box

The following is the author's solution to the previously published essay entitled, "The Black Box" (EE, Jan '49, p 29).

The black box contains nothing but a mechanically driven switch, (perhaps by a spring motor). The circuit is closed half of the time, and open half of the time, but the interruptions are of a high enough frequency, to make the meters read the steady average value. The current therefore consists of 20-ampere pulses, followed by periods of zero current of equal length. The wattage in the black box is zero because at the time when the current flows, the voltage across it is zero, while at the time when the voltage is 100 volts, the current is zero. The average value of the current is 10 amperes, but the rms value is 14.14 amperes, resulting in a power of 1,000 watts in the 5-ohm resistor.

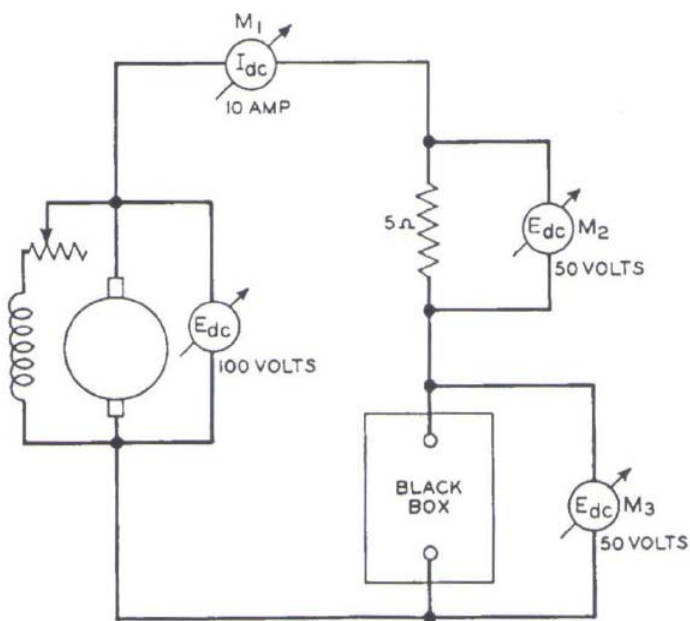


Figure 1

Recently, I heard Mike Kelly talking on the radio about a book *The Art and Skill of Radio-Telegraphy* by William G. Pearpoint, NOHFF. I looked it up on line and discovered Mike had written a glowing review of the book.

*Much more readable on paper than the older on line versions. I highly recommend it for those wanting to, or beginning to learn Morse code. As with older versions, much practical advice about the physical set up of keys, paddles and bugs. Also many tips for those of us who want to improve our speed from day-to-day operating speeds to the 50+ words per minute level. I expect to have to buy more copies as loaners tend not to come back.*

I bought a copy and agree that it is a good reference for correctly learning the code and improving your speed.

I think I was browsing in a book store when I came across *The Victorian Internet* by Tom Standage. This was an eye opener for me about the impact of the telegraph in Victorian times. It was truly the Internet of the late 1800's and early 1900's. It had as much, if not more, impact than radio and the Internet of today, as it was the first method of long distance communication faster than a horse.

I found the following excerpt particularly interesting.

*Young Thomas Edison was legendary for being able to take down messages as fast as anyone could transmit them. Edison was taught Morse code as a teenager by a railway stationmaster, whose three-year-old son he had lucked from the path of an oncoming train. He rapidly became an expert operator, and there are numerous tales of his prowess. At one stage the disheveled Edison took a job in Boston, where the operators thought rather*

(Continued on page 4)

## Is Ham Radio a Hobby, a Utility...or Both?

### A Battle Over Spectrum Heats Up

Some think automated radio emails are mucking up the spectrum reserved for amateur radio, while others say these new offerings provide a useful service.

Like many amateur radio fans his age, Ron Kolarik, 71, still recalls the “pure magic” of his first ham experience nearly 60 years ago. Lately, though, encrypted messages have begun to infiltrate the amateur bands in ways that he says are antithetical to the spirit of this beloved hobby.

So Kolarik filed a petition, RM-11831, to the U.S. Federal Communications Commission (FCC) proposing a rule change to “Reduce Interference and Add Transparency to Digital Data Communications.” And as the proposal makes its way through the FCC’s process, it has stirred up heated debate that goes straight to the heart of what ham radio is, and ought to be.

The core questions: Should amateur radio—and its precious spectrum—be protected purely as a hobby, or is it a utility that delivers data traffic? Or is it both? And who gets to decide?

Since Kolarik filed his petition in late 2018, this debate has engulfed the ham world. Fierce defenders of both sides have filed passionate letters and comments to the FCC arguing their cases.

On one side is Kolarik in Nebraska. In his view, it’s all rather simple: “Transparency is a core part of ham radio,” he says. “And yet, you can find tons of traffic from automatic[ally controlled digital] stations that are extremely difficult to identify, if you can identify them at all, and they cause interference.”

The automatically controlled digital stations (ACDS) Kolarik refers to can serve to power services like Winlink, a “global radio email” system.

Overseen and operated by licensed volunteers around the globe, Winlink is funded and guided by the Amateur Radio Safety Foundation, Inc. (ARSFI). The service uses amateur and government radio frequencies around the globe to send email messages by radio. Users initiate the transmission through an Internet connection, or go Internet-free and use smart-network radio relays.

On Winlink’s website, the service says it provides its licensed users the ability to send email with attachments, plus messages about their positions, and weather and information bulletins. Representatives of the service say it also allows users to participate in emergency and disaster relief communications.

But Kolarik’s petition argues two points: First, because such messages “are not readily and freely able to be decoded,” the FCC should require all digital codes to use protocols that “can be monitored in entirety by third parties with freely available, open-source software.” Secondly, he wants the rule change to reduce the interference that he says services like Winlink can create between amateur-to-amateur stations—by relegating the often-unattended automatic stations to operate solely on narrower sub-bands.

Loring Kutchins, the president of ARSFI, says he believes Kolarik’s petition is “well intentioned in its basis. But the fundamental conflict is between people who believe amateur radio is about hobby, not about utility. But nowhere do the FCC rules use the word ‘hobby.’”

The divide between hobbyists and utilitarians seems to come down to age, in Kutchins’ opinion.

“Younger people who have come along tend to see amateur radio as a service, as it’s defined by FCC rules, which outline the purpose of amateur radio—especially as it relates to emergency operations,” he says.

In short, Kutchins says, his view boils down to abiding by the FCC rules as currently written: “Why is email inappropriate for amateur ra-

*(Continued on page 8)*



(Continued from page 7)

dio? Why should utilitarian purposes not be part of amateur radio?"

While Kolarik's petition touches on some of those questions, an ex parte letter by professor Theodore Rappaport, who leads the NYU Wireless research center at NYU's Tandon School of Engineering, makes particularly strong statements against services like Winlink.

Rappaport's letter calls Kolarik's proposed rule change vital to "safeguard the national security of the United States," and key to attracting young people to ham radio. He also accuses services like Winlink of being used to flout various FCC rules. For example, he wrote these services are used "often by boat owners to avoid other readily available commercial means for sending private email (a violation of numerous FCC rules which explicitly prohibit bypassing other commercial means and prohibit pecuniary interest)."

Kutchins, however, doesn't think Rappaport's passion is genuine. He fired back in his own letter to the FCC: "Theodore Rappaport and the opponents he informs offer an emotional, layman's conjecture in their assertions that hard-to-monitor, advanced digital protocols used in the amateur radio service will encourage crime, terrorism, and are a threat to national security," Kutchins wrote. "They clearly do not know or appreciate what monitoring and inspection routinely occurs, and are thus not qualified to judge."

In an interview, Kutchins says Winlink has system operators who monitor traffic for illegal activity, and though every group has bad actors, he argues that "people on Rappaport's side have gone through and picked out anything that could be a violation, rather than use the amateur radio principle that we're supposed to be self-regulating. We call each other out when somebody does something wrong: Inform the violator and educate how you think they have violated the rules."

Further, Kutchins says, any licensee can read any message sent through a U.S. station on amateur radio frequencies in plain text via a message viewer that is open and available online, and he adds

that Winlink has a reporting program established at the FCC's request.

But Rappaport says his chief "concern is that the proliferation of illegal, effectively encrypted data will turn the hobby of ham radio into a mean-spirited, non-technical dummed-down mosh pit of signals that eventually becomes a high-frequency Internet access point in the sky."

His fear is "that many applications and transmissions will be closed and controlled by a tiny group of individuals who do not share the vision or incentive for providing transparency of all activities—or technology—in amateur radio. How will that attract youth and help the STEM effort in America?"

The battle continues in letters and comments to the FCC about the proposal. It could be months before the agency completes all of its comment periods and other processes and ultimately decides whether to codify the proposal or strike it down.

In the meantime, back in Lincoln, Nebraska, Kolarik says he's simply focused on the future of his cherished hobby. He's heartened by young ham fans who commented on the proposal, like 15-year-old Bryant Rascoll, an Extra Class amateur radio licensee in Alabama who wrote in support of RM-11831 about protecting "our precious spectrum."

"I don't want to see amateur radio turn into essentially a smartphone for sending email—today's kid has that and more there in his pocket," Kolarik says. "But if they can turn on a machine and talk to someone thousands of miles away, without the worry of interference, they will feel that magic that I did too, years ago."

By Julianne Pepitone,

*IEEE Spectrum, Tech Alert, July 11, 2019*

## THE OTTAWA AMATEUR RADIO CLUB PRESENTS THE 2019 OTTAWA (CARP) HAMFEST



**SATURDAY, SEPTEMBER 7, 2019**

(The week after the Labour Day Weekend)

Commercial Vendor setup: 7:30 am; Private Vendors: 8 am  
Fleamarket Open: 9 am until 12 noon

**CARP AGRICULTURAL FAIRGROUNDS**  
W Erskine Johnston Arena  
3882 Carp Road, Ottawa (Carp), Ontario

- Next door to the renowned Carp Farmers' Market
- Just minutes from the Diefenbunker
- Enjoy Scenic Ottawa – Canada's Capital City

From Ottawa take Highway 417 West to Carp Road exit #144,  
10 kilometres North to the fairgrounds.  
We are in the W. Erskine Johnson Arena – follow the signs.

**Ham licence exams on site – get yours or upgrade!**

**THE REGION'S LARGEST FLEAMARKET  
AND HAMFEST! MAJOR HAM RADIO  
RETAILERS! LOTS OF DOORPRIZE DRAWS!**

Public: \$6 general admission  
Vendors: \$14/table (plus admission)

**For further information or reservations contact:**

Ed, VE3WGO

Email: fleamarket@oarc.net

http://www.facebook.com/oarc.hamfest

Website: http://www.oarc.net/fleamarket

Talk-in on VE2CRA, 146.94–, 100 Hz



<https://wp.rac.ca/>



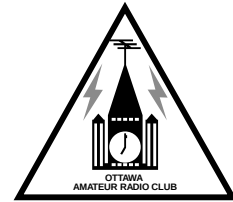
There are 10 kinds of people in the world: those who understand binary and those who don't.

The earth's geomagnetic magnetic field strength was first measured in the 1830's. Since that time it has declined almost ten percent. That decline rate is about twenty times faster than the natural decline rate would have been if the power source creating the earth's magnetic field had completely stopped, so there obviously must be some other cause. It is known that the polarity of earth's magnetic field has flipped from north to south and back again hundreds of times in the past. A popular current theory is that it may be in the process of flipping again. However, the flips are thought to be caused by a complexity of chaotic process in earth's outer core, so instead of reversing, the field strength could quickly rise again with its current polarity and the next reversal could be far in the future. ©2005 Martek International

# OARC Membership Application/Renewal

Ottawa Amateur Radio Club Inc., Box 8873, Ottawa, ON, K1G 3J2, Canada

- Single \$25 (\$20 after February 1)
- Family \$30
- Junior \$15 (under 18 years of age)
- New Ham \$0 (licensed in current membership year)
  
- Emailed Newsletter \$0       Mailed Newsletter \$10



Name	<input type="text"/>	Phone	<input type="text"/>
Callsign(s)	<input type="text"/>	Year Licensed	<input type="text"/>
<input type="checkbox"/> Basic	<input type="checkbox"/> Honours	<input type="checkbox"/> Advanced	<input type="checkbox"/> Morse <input type="checkbox"/> RAC Member
Email Address	<input type="text"/>		

Name	<input type="text"/>	Phone	<input type="text"/>
Callsign(s)	<input type="text"/>	Year Licensed	<input type="text"/>
<input type="checkbox"/> Basic	<input type="checkbox"/> Honours	<input type="checkbox"/> Advanced	<input type="checkbox"/> Morse <input type="checkbox"/> RAC Member
Email Address	<input type="text"/>		

Postal Address

Membership year is September 1 through August 31. Paying members who are in good standing by the December General Meeting will be eligible for a free one-time name badge. Members who wish to purchase additional replacement badges may do so through the club for \$10 each. Ordered badges will be available in January. All prices are listed in Canadian Dollars (CAD).

First Name on badge       Callsign on badge

First Name on badge       Callsign on badge

Notes