



Ottawa Amateur Radio Club

Groundwave

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Check out our Web Page: www.oarc.net

April 2006

RAC has agreed to present a technical forum at the Hamfest again this year. Details are not yet available. Last year's guest speaker waived his honourarium so the Hamfest made even more money than reported.

While SuitSat may have been a public relations hit, it was not a huge success from a listener's point of view. I spent 15 minutes on the driveway one cold Saturday morning waving my antenna at the sky listening to the early cosmos—but not SuitSat.

The April meeting is given over to Homebrew Night where everyone gets a chance to show and tell their handiwork.

So bring along something you have constructed in the past year.

See you at the meeting.

Ian Jeffrey, VE3IGJ



APRIL MEETING 7:30 pm, April 12th in the Honeywell 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 "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 VE3TWO **147.300+**. 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 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 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.



Minutes

The **OARC monthly meeting** was held at March 8th, 2006 at Ottawa City Hall, Ottawa, ON and was called to order at 19:33 by President Diane, VA3DB. About 30 were present including 3 guests.

Ian, VE3IGJ delivered the tone generator to Bryan, VE3ZRK

Diane, VA3DB called the meeting to order; there were two guests, but before we were done, a third walked in.

- Deborah Rockwood, VE3DHF
- Frederic John Thompson, VE3UEB
- Elias Zaydan, VE3EKZ

Diane then solicited corrections for the last minutes; there were none. She also asked if everyone had received the Groundwave.

Announcements:

Greg, VE3Ytz announced that once again our RAC director will host the RAC Forum. He noted that we have paid the city for the arena this year. Greg also was pleased to report that the RAC forum keynote speaker from last year declined the budgeted honourarium.

Richard, VE3UNW asked Harold, VA3UNK if he would consent to talking the lead on Field Day again this year. Harold accepted.

Dave, VE3TLY introduced Greg, VE3Ytz as tonight's feature speaker. Greg presented his experiences with SDR (Software Defined Radio). The crowd was at the edge of their seats throughout the presentation and had many questions which sparked a lively discussion. This was clearly a topic which interested us. Well done Greg! Bryan appeared on the last slide.

More Announcements:

The CNIB Amateur Radio program is soliciting for donations from clubs (we have donated

Dates to Remember

2006

- Feb. 11,12 Canada Ski Marathon
- Apr. 12 Homebrew Night
- Jun. 14 OARC AGM and Elections
- Jun. 24,25 Field Day
- Jul. 1 RAC Canada Day Contest
- Sep. 2 OARC Hamfest and RAC Forum
- Sep. 30 Membership Renewal Deadline
- Nov. 1 Joe Norton Award Subm. Due
- Dec. 30 RAC Winter Contest

in the past) and from individuals.

We received a letter of thanks from the QCWA for use of the club projector.

In Ernie's (VE3OEB) absence, Richard, VE3UNW reported on the membership status. We have 88 members as of March 1st, 65% of whom are RAC members. Rick, VE3IHI promised to renew his RAC membership ASAP (he went to see Debbie the next afternoon!) A few ex-members present were also pressured to renew their club membership.

Kris, VE3URL reported that Nortel has contacted him about the Tour Nortel coming up shortly. Contact him if interested (callsign@rac.ca)

Janice, VA3PAX, showed some pictures from her time at Checkpoint 8 at the Canadian Ski Marathon this year. She had way too much fun!

Diane, VA3DB solicited the crowd for Haves 'n' Wants before the coffee break.

The 50/50 draw was won by Greg, VA3GD. He won the SDR-1000 donated by VE3Ytz AND \$22. Wow, what luck!

Signed Richard Hagemeyer, VE3UNW club secretary.



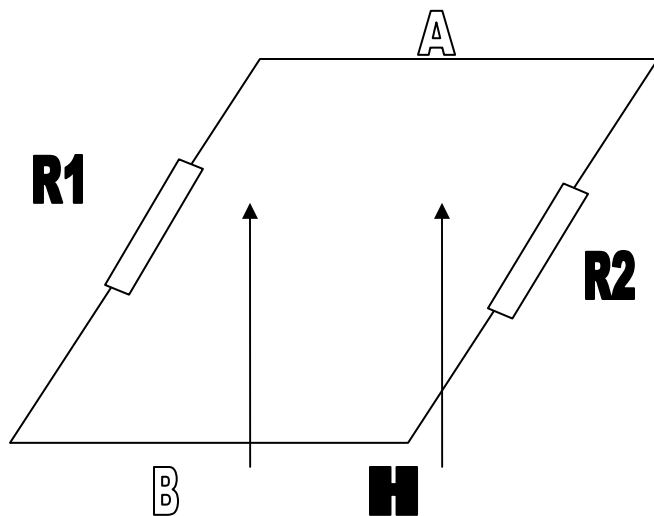
Hamfest Committee Sought

Brain Teaser

Consider two resistors R1 (1 kΩ) and R2 (3 kΩ), connected in parallel (Figure 1). According to Faraday's law, a time-varying magnetic field H, increasing linearly with time, induces a constant 1 mA in the loop. What is the voltage across nodes A-B? According to Ohm's law, the voltages across the two resistors should differ. But how is that possible if both resistors are connected to the same nodes A and B?

Answer next month. Honourable mention to those with the correct answer to VE3IGJ at callsign@rac.ca.

Figure 1



As I have announced at several of the monthly meetings, this will be my last year managing the OARC Hamfest. So we need to do some succession planning as no one would like to see the Hamfest, which I believe has gained an excellent reputation, wilt away. The Executive and I propose that a small committee be established in time for this year's Hamfest in order for the members to learn the ropes on the job. This year, I would lead the group, passing on my experience. It is then hoped that one of those committee members will step forward to manage next year's event, with the assistance of the committee, which I hope would also include myself.

If any are interested in getting involved in what really is a fun project, please let me know. I already have one individual who has expressed interest. I do hope that 2-3 others will step forward.

Greg Danylchenko
VE3Y TZ @ rac.ca
236-9291

Obituary

Bill Rothwell, SK

The RAC Board of Directors, Executive, and Headquarters Volunteer Group regret to advise of the passing of Bill Rothwell, VE3FGW, in Ottawa, on Monday, 30

January, 2006. An avid amateur for more than 55 years, Bill was a former Treasurer of Radio Amateurs of Canada and at the time of his death was active in RAC as a weekly volunteer providing support in the RAC office. He will be greatly missed. The funeral service for Bill was held in Ottawa on February 2nd. Our condolences to Bill's wife, Lorraine and their families.





Mk's Words

From the April 2002. aversion of this column:

"...Work in progress on the bidirectional noise cancelling headset will be described in a future April edition of this column.."

Well, now that the patents have been applied for in all the countries of the civilized world (and the other country too) it is possible to fill you all in on the story.

You have probably seen the unidirectional active noise cancelling headsets. These little marvels let you listen to your favorite music on the train without hearing the drone of the air conditioning, or those doppler shifted bells at the level crossings. You can drive down the highway while wearing these things and not hear the sirens behind you. Great stuff. Of course some of us just use them to let us hear the weak dx over the racket made by the blowers on the killerwatt amplifier. Anyway, that is old stuff. Those things have been in the stores since at least twenty oh three. The next new thing is the bidirectional active cancelling "oudio" noise headset (Bacon set for you acronym watchers). It takes the active noise cancelling to the next level. The old style headsets use a microphone on the outside of the headset. This microphone samples the ambient audio, reverses the phase and adds it to the signal you are trying to listen to. This combination of phase reversal and addition causes the unwanted ambient signal to cancel when it gets to your ears. This is great, as far as it goes, but it leaves a big gap in the noise cancelling field. We all know that no two people can agree on what to listen to. Your signal is someone else's noise, and vice versa. (I think you can see where this is going, can't you).

The CW guys can't take much of that duck quacking the SSB kids listen to. The phone ops can't tolerate that beep beep stuff of the CW types. Neither has much use for the deedle deedle tweet of the digital hams. The bidirectional active - oh heck just call 'em bacon

phones - the bacon fones invert and add both the ambient audio, via their microphone, and the audio piped down the wires from the rig. In theory, this dual "addition and add" routine should make for complete silence. In practice it is necessary to add a microphone inside the headset, to sample, invert and replay the small noises that result from the heartbeat (if any) and respiration of the wearer. Once this is done, the resultant audio is completely free of .. well, free of audio. Silence, stillness, peace and quiet. Beautiful and complete. Perfect - almost...

There are still a few bugs to work out. It seems people were not designed to operate in this environment. Funny how people can operate under water, or in free fall in a space ship, but it seems we can't take real quiet. Observers watching test subjects have noticed them going from a relaxed restfulness to a kind of zen trance, to something like a coma. Remember turntables? Think of a turntable coasting to a stop, and you get the picture.

The last part of the bacon phones, and the hardest to get the patent on, is a quantum fluctuation amplifier. This circuit amplifies the random variations in the quantum space time field until they become audible as random ticks and pops every few seconds. Think of the records on that turntable you pictured earlier, with the music added and subtracted again, leaving just the ticks and pops. That little noise is required to keep the bacon phone wearer from dropping off the deep end. It sounds a little like.. well, like bacon in a frying pan. I'll bring in a pair of bacon phones to show you at homebrew night, if I can get the last few bugs out of the quantum field amplifier - It isn't as easy as it sounds.

73.. mk VE3FFK



Now that's a Tower!



-viktor-

Photo by Vincent Laforet / The New York Times

Equipment Burn-in

By Ken Larson KJ6RZ

One characteristic of modern semiconductor electronic equipment is something called infant mortality. The failure rate of new electronic equipment is generally very low. However, if the equipment is going to fail, it is likely to do so within the first few hundred hours of operation. Failure within this time period is called an infant mortality failure and is usually caused by a flaw in a semiconductor or other electronic component. Simply having the equipment power turned on is often enough to cause this type of failure to occur. If the equipment does not fail in the first few hundred hours of operation, then it will probably provide many years of trouble free operation.

The consumer electronic industry generally warrants new electronic equipment for 90 days. A new computer, audio equipment, a television, DVD player, or similar equipment that fails in the first 90 days can generally be returned to the store where it was purchased and replaced with a new unit with few if any questions asked. However, if the device fails after the 90 day warranty, then getting it replaced becomes much more difficult.

Understanding infant mortality and 90 day warranties suggests a procedure that probably should be used for all new electronic equipment. When you purchase a new electronic device, turn it on and run it continuously for two weeks. Two weeks will provide 336 hours of operation (14 days x 24 hours/day = 336 hours). Once a day cycle the power. Turn the device off, wait a minute or two, and then turn it back on. If after two weeks, your new equipment is still working, then you are probably through the infant mortality period and can expect years of reliable service. If things go badly instead and your new device fails, then by running the equipment continuously you have forced the failure to occur in two weeks, well within the 90 day warranty period. The problem with not following this procedure is that you can become busy doing other things. 90 days goes by and you have used your new equipment for only a few hours. Your warranty has expired and you are still in the infant mortality period, not a good situation.

Burn-in procedures are used by most high-tech companies. For example, when I worked for GTE Government Systems, we had to supply the Government with records showing that we had burned in each system prior to delivering it.

(Continued on page 7)



Roughing it at Checkpoint 8 in St. Sixte during the CSM.

Janice (VA3PAX) and Ian (VE3IGJ) were well equipped with antennas, food, and lattes.

Photos courtesy Janice Neelands.



(Continued from page 6)

I use this procedure on all electronic equipment that I buy, and it works! Last year I bought a 1 ¼ meter transceiver for ARES/RACES work. In addition to turning on the power, I made a point of transmitting at least once a day. Usually just transmitting my call. On the third day of burn-in a problem developed. Occasionally when I hit the push to talk key, the transceiver turned off (completely powered down). Not every time, it was a very sporadic failure, the worse kind. I returned the radio to Ham Radio Outlet and they gave me a new one without any hassle. The new radio made it through the two week burn-in and has been working great ever since.

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 Feb. 1) 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: _____

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TS-480HX/TS-480SAT

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