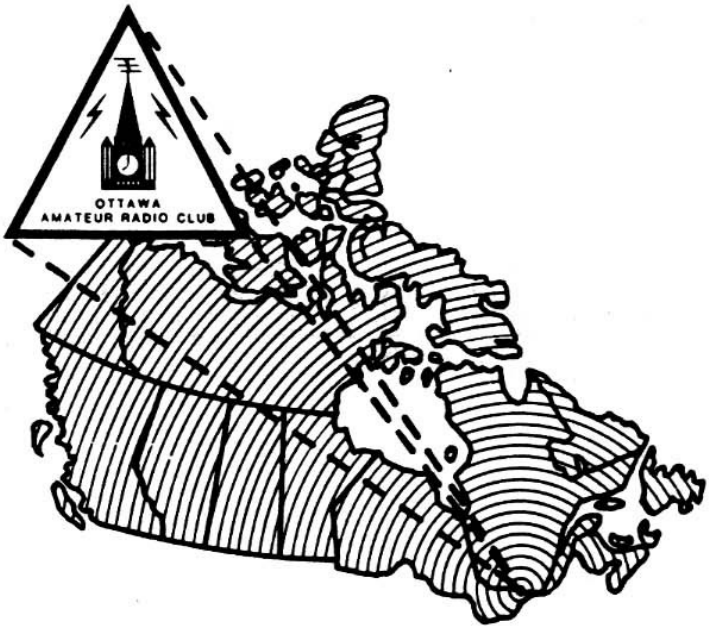
JANUARY–FEBRUARY 1997

THE GROUNDWAVE



NEXT MEETING WILL BE HELD
WEDNESDAY, FEBRUARY 5, 1997

Club Call VE3RC Repeater VE2CRA

AMSAT

RAC

Official Bulletin of the Ottawa Amateur Radio Club, Inc.

The Ottawa Amateur Radio Club,Inc., Box 8873, Ottawa, Ont., K1G 3J2

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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 first Wednesday of each month (except July and August) in the Keefer Room (2nd floor of the Old Teacher's College) of the RMOC HQ complex on Lisgar St., Ottawa, at 1915 hours. Further details about each meeting is elsewhere in this publication.

THE OARC EXECUTIVE normally meets on the second Wednesday of each month at 1930 hours. Contact the President to confirm the date of the next meeting.

PACKET RADIO MEETINGS will be held at 7:30 p.m. on the last Thursday of every 2nd month, starting September 1993, at the Museum of Science and Technlogy. This is an OARC technical meeting open to all who have an interest in packet radio.

DEADLINE FOR COPY is the second Wednesday of each month. Make yourself better known to fellow members and other amateurs, too, by giving us an article, technical or otherwise, relative to our hobby.

MATERIAL PUBLISHED herein does not necessarily represent the official OARC viewpoint. Items may be reprinted by Amateur Radio or other publications provided that proper credit is given to the author and to the OARC, Inc.

JUNIOR MEMBERSHIPS - To encourage young people to join the club and to participate in amateur radio, the club is opening a junior class of membership. Dues will be at a 50% discount but the junior member must pick up his/her copy of the Groundwave (preferably at the meeting).

RADIO AMATEUR CALL BOOKS are available at many local libraries. Ask at the information desk.

SAFETY BELTS AND AN ENGRAVING PENCIL are available for loan to club members. The engraving pencil (to mark valuables for identification in case of loss or theft) and the safety belts with pole straps are available to any members. For the belts, a refundable deposit consisting of a cheque equal to the replacement value of the belts is required. Contact the President for the engraving pencil; and Paul, VE3ICV, at 820-6643 (West End) for the belts.

THE CAPITAL CITY NET meets every Monday at 2000 hours on the Club Repeater VE2CRA (146.34/.94) to pass traffic and to make announcements of interest to amateurs in the National Capital Region.

PACKET RADIO VOICE NET meets following the Capital City Net on VE2CRA at 2040 hours. This is an informal net to answer questions about packet radio, pass along operating hints and provide information for future packet operators.

THE SWAP NET is a service provided and conducted by Dan Reardon, VE3GUU. This feature appears on the Capital City Net, noted in the foregoing paragraph. To list items and make inquiries, call Dan Reardon at 836-2633.

POT-HOLE NET is a SSB/HF net sponsored by the Ottawa Valley Mobile Radio Club, and conducted every Sunday at 1000 hours on 3.760 Mhz. All amateurs are welcome to check in. The Swap-Net is a regular feature.

POT-LID CW NET is an informal slow-speed CW net sponsored and conducted by Ed, VE3GX, and meeting every Sunday, except during July and August, at 1100 hours on 3.620 Mhz, to promote interest in CW and CW procedures.

REPEATERS

VE2CRA	Voice	146.94/34 443.300/448.300
VE3OCR	Packet	145.01(sx) Inter city links
VE3OCR	Packet	145.07(sx) Local Area net for QSO and Packet BBS.
56 kbps	Packet	220.55/433.55
VE3XDX	Packet	145.11(SX)

For further information, please contact repeater chairman.

OARC WWW Home Page:
http://www.worldlink.ca/oarc.

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UPCOMING MEETINGS:

- February - ENIGMA - speaker Richard Brisson
- March - OCRI/TRIO
- April - Homebrew Night
- May - Volunteer Recognition
- June - Elections

mk's WORDS

It was nice to hear volunteers come forward to help with the 97 fleamarket. It's such a nice change from "those guys should..."

Those of you who hang out only on 2 metres may have noticed a few changes, with the VE3TWO and VE3TEL machines down for a while. Interesting how the 70 CM side of both are still on the air. ...Lots of room for the conspiracy theorists to play in here. It does seem to be increasing the traffic levels on the other repeaters, including VE2CRA. People are (re)discovering the "other" repeaters in and around town, such as the "new" VA3BAY. I haven't noticed any rise in simplex activity on the band, though. Too bad.

Of course, if you aren't on two metres, you've probably been too busy watching the ionosphere wake up again, and with the Canada Winter Contest, Straight Key Night and so on. Good for you, patience is rewarded again.

Even with the nice December weather (this December had the highest average temperature) I still haven't quite gotten around to closing the loop (antenna that is). Maybe now that we are into the usually bright days of January, I can find time. (It was also the darkest December on record.) Otherwise, I might have to do something drastic, like stuff a hamstick out the window, just to get on the air. It's nice to hear from places where the temperature is +33C. It would be nicer to be able to work 'em too.

I hope Santa was good to you all. He brought me another little toy, and I hope to have it ready to bring to home brew night. The trouble is, I have to get going on fixing all the other little toys that have broken down since Santa was around last time. Funny how there is always more time/money available to build new stuff than to fix the old stuff.

73.. mk

DOUGHNUT ANTENNA FIRM PURSUES SPOT IN WIRELESS

(original source unknown)
via the GRARC newsletter, Dubuque, IA

A Canadian company believes it is backing a revolutionary antenna that will advance the wireless industry.

"There is no antenna to outperform it currently" said John Robertson, President of IAS Communications Inc., of Richmond, B.C.

The Contrawound Toroidal Helical Antenna (CTHA) was developed at the University of West Virginia. IAS formed in 1994 to

provide the project with additional research and development funds and to pay patent fees.

The device is shaped like a doughnut (toroidal) with contrawound wires that create an electromagnetic field. It lies flat on the ground and transmits with the same efficiency as an antenna mounted on a tower, IAS said.

"It travels around trees and over mountains. It's a 360 degree signal that covers a huge area. You don't have to worry about aiming it" Robertson said. Laboratory models have operated at between 2 MHz and 950 Mhz.

Evidence suggests the antenna's signal may ride the earth's magnetic field near or just below the surface, the company said. The energy wave created by the antenna is circularly polarized so the transmission is less susceptible to absorption or reflection by buildings in a city, and echo is eliminated, IAS said.

In tests, the antenna successfully operated at a distance of 37 miles, compared to the 10-mile distance for common monopole antennas, IAS said.

The CTHA is 60 times shorter than a monopole antenna, but its toroidal magnetic field is equal to the linear electric field of other antennas, IAS said.

"A 3-foot antenna can take the place of a monopole tower. It's ideal for boats and you can put them on the car at the size of a quarter. It's cheaper and has three to five times the battery life," said Robertson.

The CTHA antenna is more economical because some mounting costs can be avoided, IAS said. In most applications, it weighs 80% less than a monopole tower and can be flush mounted for low profile packaging. Because it radiates in all directions, the CTHA is ideal for satellite telephony and global positioning system applications, the company said.

West Virginia University is the patent holder, IAS has sublicensed rights to the technology and is seeking license agreements with manufacturers and end users to produce the product.

"We'll build a prototype according to their specifications, and then let the company do field tests jointly. Let them use their best antenna and we're confident we'll have a better and more efficient antenna," Robertson said.

IAS has its headquarters in Richmond, B.C. The company had an initial public offering in April at which time it warned potential investor, "While not a highly competitive business in terms of numbers of competitors, the business of developing antennas of a new design and attempting to either license or produce them is nonetheless difficult because most existing antenna producers are large, well financed companies, which are very concerned about maintaining their market position."

Robertson said the company does not aspire to be a manufacturer, but hopes first to license its technology.

Dr. James Smith is chairman of the IAS Board of Directors and is a tenured professor at West Virginia University. He directed the research and development of the antenna. Smith also owns and controls Integral Concepts Inc., which has an exclusive worldwide license for the antenna technology, including military applications and resulting procurement interests.

Additional scientific and practical R&D is required to complete the commercialization of the CTHA, IAS said. Prototypes are being tested by the U.S. Department of Defense, and IAS believes the results will verify non-military applications.

The Contrawound Toroidal Helical Antenna consists of two helical windings, pairs wrapped with opposite pitch to each other, referred to as contrawinding. Winding interactions slow the propagation of the electrical current within the antenna, causing it to behave as a larger, lower-frequency antenna, the company said.

Feed ports are located at points where the contrawound conductors cross. At one or more feed ports, the conductors are broken and voltage is applied so that the current produced in each winding will flow in opposite directions around the toroid.

via St. Paul ARC "The Ground Wave"

WHAT DOES D.A.R.E. REALLY MEAN?

by Jay Smith, KK0O

If you find yourself some day wondering how you got addicted to Amateur Radio, the next thing you'll discover is there is no easy way to get unhooked!

That's right! You're on your own pal. You got yourself in way over your head, didn't you? You hauled home way too much junk from the hamfests. You thought you could handle it. It wouldn't get the best of you, you said!

Well help is here. Put your hand on your radio and say, "Thank you Marconi" to the D.A.R.E. (Deliberate Amateur Radio Exorcism) program.

Modeled after the police department Drug Awareness Resistance Education program, many of the characteristics are similar. Hams need help. Just ask any XYL of a DX chasing, tower owning, contest operating, hamfest going amateur radio addict.

Sure, you deny it at first, but is it necessary to work every contest? Are dinner dishes from the last two nights still on the operating desk? Is the DX net control operator on a first name basis with you when you check in? Come on pal, you've got a problem,...admit it.

It is very difficult to quit cold turkey. This D.A.R.E. program features a graduated process over several months, that leaves you clean! You have to start somewhere. Your journey begins with the first step.

You may change the order to create a personalized D.A.R.E. program.

Steps:

Sell your linear amp. Use the Yellow Sheets. Subscribe to them if you are not a member. Try to work 'em and operate the same as before. Quit going to local radio club meetings.

After some time goes by, sell the yagi and rotor off the tower. Erect a 10 meter dipole in it's place. Use the tower! Try harder to work 'em just like step one above. Try working on 160 meters with your dipole on summer nights.

Next year, sell your tower. Replace it with either a 20 foot chain link fence top rail to support the dipole or buy a 1/4 wave vertical and ground mount it. Do not install radials! Subscribe to a QRP news letter. Look it up in your yellow sheets!

Since your tower is gone which also held your 2 meter yagi, install a unity gain 2 meter antenna on the roof of the house. Feed with with RG-58. Reduce output power to 1.5 watts.

Monitor local swap nets on 2 meters, but only check in for the count way at the end of the net. Purchase a short wave listening guide. Read it while you are monitoring the local swap nets.

Check into far away repeaters that hold nets on week nights only. Start skipping hamfests. Just go to the big one in your area. Park a long way away, so you won't

be so eager to haul something home. Better yet, ride with another D.A.R.E. friend. You can skip the hamfest together!

Purchase a 24 GHz transceiver. When the contest bug hits, get on 24 GHz and call CQ until exhausted. (Same end effect but not so much logging to do). Leave your 2 meter mag mount antenna inside the trunk on purpose. Continue to operate as usual.

Program in a bunch of simplex frequencies in your 2 Meter Rig. Start listening just to those channels. Purchase a TV guide. Study it while your monitoring the simplex channels. Did you know that cable TV installation is only $9.95?

Set your 2 meter rig to scan for clear channels only. When it detects activity, it immediately should QSY to a clear channel.

Over time, let your subscriptions expire one by one. Have a friend advertise your 2 meter rig on the local swapnets.

These steps will help you rid yourself of your addiction over time.

Good luck. D.A.R.E. yourself or a friend! Friends D.A.R.E. friends.

via St. Pal Radio Club "The Ground Wave"

THE FOLLOWING INFORMATION IS TAKEN FROM CHURCH BULLETINS

Be sure to read between the lines.

Don't let worry kill you -- let the church help...

Thursday night -- Potluck supper. Prayer and medication to follow...

For those of you who have children and don't know it, we have a nursery downstairs...

The rosebud on the altar this morning is to announce the birth of David Alan Belzer, the sin of Rev. and Mrs. Julius Belzer...

This afternoon there will be a meeting in the South and North ends of the church. Children will be baptized at both ends...

Tuesday at 4:00 p.m., there will be an ice cream social. All ladies giving milk will please come early...

Wednesday, the ladies Liturgy Society will meet. Mrs. Jones will sing "Put me in my little bed", accompanied by the pastor...

Thursday at 5:00 p.m. there will be a meeting of the Little Mothers Club. All wishing go become little mothers, please see the minister in his study...

This being Easter Sunday, we will ask Mrs. Lewis to come forward and lay an egg on the altar...

The service will close with "Little Drops of Water." One of the ladies will start quietly and the rest of the congregation will follow...

Next Sunday, a special collection will be taken to defray the cost of the new carpet...

All those wishing to do something on the new carpet will come forward and do so...

The ladies of the church have cast off clothing of every kind and they may be seen in the church basement Friday...

At the evening service tonight, the sermon topic will be "What is Hell?" Come early and listen to our choir practice...

YOU MAY BE AN ENGINEER IF...

You may be an engineer...
If, at Christmas, it goes without saying that you will be the one to find the burnt out bulb on the string.
If you have ever taken the back off your TV just to see what's inside.
If you have ever saved the power cord from a broken appliance.
If the salespeople at Circuit City can't answer any of your questions.

CALLSIGN VO500JC JAN. 1 TO DEC. 31, 1997

A message from Paul J. Piercey VO1HE,

The Society of Newfoundland Radio Amateurs, will be operating the callsign VO500JC from the club station VO1AA, in Cabot Tower in St. John's, periodically from Jan 1, 1997 until Dec 31, 1997 in celebration of the 500th anniversary of Cabot's voyage to the new World. If you need any further info, email me at the address below or via packet. 73.

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RAC BOOKSTORE CLOSING

For a number of reasons, including the increased cost of paper, a saturation of the market for training guides and manuals, and increased exchange rates for US Books, the RAC bookstore operation is no longer financially viable. Following an in-depth study this summer, the RAC Board has reluctantly decided to close down the headquarters retail sales operation.

Therefore, as of January 1, 1997, RAC will no longer sell books on a retail basis to individuals or clubs. RAC will continue to publish the popular study guides, question banks, repeater maps/directories, and log books, but they will be available through your local Ham Radio dealer and other retail outlets, rather than through the RAC Administrative office in Ottawa.

HELP RADIO CANADA INTERNATIONAL!

This item was received from Lauren McCallum, a Reporter/Editor at RCI.

Hello,

This is the first time I've visited your (web)site and I have to say it's very well organized. I'm writing as an employee at Radio Canada International. As you may have heard, the CBC has refused to fund it for yet another year in a row...and again, right before Christmas. Heritage Minister, Sheila Copps hasn't come out and said if she'd be able to find the money to save us again. Last year thousands of letters poured in from around the world...I'm hoping you can encourage your correspondents to send their comments via E-Mail to Ms. Copps at min_copps@pch.gc.ca I really appreciate your help.

Thanks,
Lauren McCallum
Reporter/Editor RCI.

RAC editor's note:

According to recent news reports, Heritage Minister, Sheila Copps had asked the CBC to delay this announcement while she looked for alternate funding. However, labor laws require that notification be given quite far in advance when layoffs of more than 50

people are being contemplated. The CBC announced the layoffs on the last day they could legally do so, based on a March 31 closure.

That having been said, EVERYONE interested in seeing RCI survive should still send email, a letter or a fax to Heritage Minister Sheila Copps (min_copps@pch.gc.ca) and to Prime Minister Chretien indicating your support of RCI.

GUATAMALA DESTROYS (SIC) 70 CM HAM BAND

The following item provides some additional info about the Guatemalan 70 cm band allocations. It is directly from the December 6th edition of Newsline.

Hams have lost out to commercial users of the 70 cm band in Guatemala and the cost could be interference to ham radio satellite operations world wide. This is because Guatemala now intends to put commercial operations across the band. Commercial signals that will probably include the 70 centimeter satellite subband.

Manfred Kolbe, TG9IKE, reports via the Amsat News Service that on Monday, November 18, 1996, the Diario de Centro America published the new law regulating all telecommunications in Guatemala. Part of the law removes ham radio access from all frequencies above 146 MHZ except for tiny slivers in the giga hertz region.

The new law was created by a commission from the state owned telecommunications company GUATEL, which consulted the Radio Club of Guatemala about the project. The commission was quite astonished to learn that ham operators operate some 20 satellites for global communications. Even more so when Guatemalan hams supplied a list of amateur satellites with operating frequencies and modes. The existence of the Amateur Satellite Service was also brought to the attention of the CEO of GUATEL. Also told was the chairman of the committee of congress in charge of the new Guatemalan telecommunications law. He was even presented IARU and ITU documentation.

But even with all of this documentation, the decision was made to run the hams off and turn the spectrum over to money making operations. As a result, the 70 cm band in Guatemala which is comprised of the frequencies between 430 to 440 MHZ has now been declared available for commercial use only.

And it's not only Guatemala hams that will face problems because of the change. There is likely to be heavy interference to Amateur Satellite Service operations in Region 2 when the transponders on various ham sats pick up commercial signals and rebroadcast them on other bands. Even for low orbiting satellites this will affect an area from southern Canada, all of the USA, Mexico, Central and South America down to Chile and Argentina. Taking into account the future operations of the Phase 3D ham satellite, the situation may even get a lot worse.

NEW! REPEATER LISTS!

Ken Pulfer sez:

In response to many, many requests, I have set up a new page on the RAC site with links to web pages with repeater listings across Canada and in some other countries. For the moment it covers mostly FM voice repeaters.

If you know of more repeater lists which I should include, please send the URL's to Ken Pulfer at jkpulfer@rac.ca.

This has the potential of becoming a very large and very difficult to maintain set of links, but I will do my best.

73, Ken