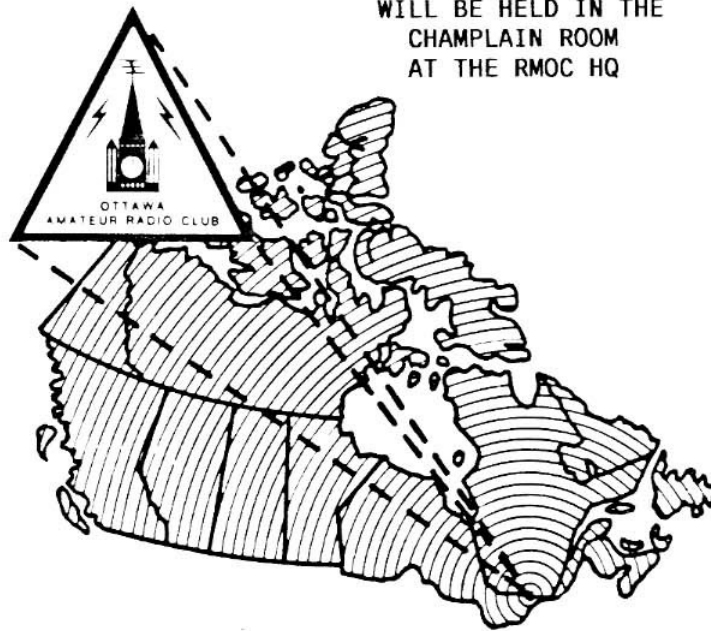


JANUARY-FEBRUARY 1995

THE GROUNDWAVE

****ATTENTION**ATTENTION****

THE FEBRUARY 8, 1995,
OARC GENERAL MEETING
WILL BE HELD IN THE
CHAMPLAIN ROOM
AT THE RMOC HQ



NEXT MEETING WILL BE HELD
WEDNESDAY, FEBRUARY 8, 1995

Club Call VE3RC Repeater VE2CRA



Official Bulletin of the Ottawa Amateur Radio Club, Inc.

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

President	Roger Swickis, VE3BZR	234-9836	228-6310
Vice-President	Richard Hagemeyer, VE3UNW	225-3275	953-0638
Secretary	Larry Woran, VE3WLN		953-7592
Treasurer	George Roach, VE3BNO	234-0885	738-2372
Past-President	Paul Coverdale, VE3ICV	820-6643	763-4277
Directors	Paul Griffiths, VE3PGL	592-6754	
	Ed Sieb, VA3ES		
	Bob Paterson, VE3IDG	825-7070	941-0533
Packet Group Chair	Bob Paterson, VE3IDG	825-7070	941-0533
Repeater Chair	Harrie Jones, VE3HYS	739-9365	738-2372
Net Manager	Wayne Greenough, VE3JSQ	836-5320	724-5464
EMI Committee Chair	Ralph Cameron, VE3BBM	825-1634	225-2850
Membership Chair	Tom Eyre, VE3QDX	737-5367	
Nat. Cap. Award Manager	Brian Summers, VE3JKZ	523-1535	738-6263
Publicity	Mike Pilon, VE3BUP	731-1567	
Groundwave Editor			
Graphic Designer	Maria Townson, VE3KIP	828-9573	
Production Committee	Paul Campbell, VE3CEP	733-0148	
	Ted May, VE3ADZ	741-0862	
Delegated Examiners	Richard Hagemeyer, VE3UNW	225-3275	953-0638
	Mike Kelly, VE3FFK		788-2600
Coffee Guy			

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 Champlain 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 Technology. 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) or Brian, VE3JKZ, at 523-1535 (East 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 Ed Morgan, VE3GX. This feature appears on the Capital City Net, noted in the foregoing paragraph. To list items and make inquiries, call Ed Morgan at 733-1721.

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	
VE3DX	Packet	145.11(SX)	

For further information, please contact repeater chairman.

****ATTENTION**ATTENTION****

The February OARC general meeting will be held on the second Wednesday of the month, February 8, 1995, in the Champlain Room of the RMOC HQ complex.

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MINUTES OF OARC MEETING
HELD DEC 7, 1994

held at Algonquin College (Lees Campus)

Meeting was called to order at 19:40 by Roger, VE3BZR.

Roger mentioned that the Algonquin location should be a temporary location due to the elections last month.

Other meeting locations were suggested such as the Museum of Science and Technology, and the NRC building.

Roger welcomed a newly licensed amateur, Don, VA3DRK, and also a visitor...Clayton Jenkinson.

Roger then introduced the speaker for the

evening...Joe MacPherson, VE3CAT. Joe spoke about the Emergency Measures Radio Group (EMRG) and the new Emergency Operations Centre (EOC) located at Regional HQ on Lisgar Street. Currently there are approximately 125 EMRG members....100 amateurs and 25 XM49ers. Joe mentioned that a number of courses had been held over the year and that 60+ had taken the ROC course, 50+ the msg handling course, 30 packet radio, and 30 had taken the Net controller course. Joe talked about the "Town Hall" exercise that tested the ability of EMRG members to communicate from various locations around the region.

Joe also went into some detail about the new EOC (types of radio equipment and antennas) and that EMRG has 5 of the 16 operators positions (1 for HF, 1 for VHF, 1 for UHF, 1 for packet, and 1 for the XM49ers). The new digital trunked radio system for the region was also discussed. Also discussed was the upcoming change in the call for VHF EMRG repeater....with the installation of the UHF repeater scheduled for early next year, the call for the VHF EMRG repeater will change to VA3EMV and the new UHF EMRG repeater will be VA3EMU. The new software package, called Softrisk, was also discussed.

Roger thanked Joe.

Richard discussed membership....if you haven't paid then you are dropped from the club list.

Ed Strange talked about activating the Algonquin Amateur radio club and was seeking volunteers to help with the antenna.

Next Meeting should be in old meeting room at the region.

Richard closed the meeting at 20:50

Paul Griffiths, VE3PGL

MINUTES OF OARC MEETING
HELD JANUARY 4, 1995

The meeting was called to order at 19:41 by Vice President, Richard Hagemeyer, VE3UNW.

Richard invited guests and visitors to sign the guest book after the meeting.

Richard informed the members that, due to the pressures of Christmas, the Groundwave was not published. It was also noted that the Groundwave editor, Mike James, VE3PDE, has resigned the position after ten years. Richard thanked Mike on behalf of the club and asked that anyone who would like to volunteer for the position should contact him.

Harrie, VE3HYS, announced that volunteers were needed for the Canadian Ski Marathon to be held over the Valentine's Day weekend. The 100 mile marathon is held over two days and 30 to 35 volunteers will be needed. Amateur radio has supported the marathon since 1973. Anyone interested should contact Harrie, VE3HYS, or Richard, VE3UNW.

Richard, VE3UNW, advised the members that the intended meeting site for upcoming meetings is the RMOC however, please see the Groundwave for confirmation.

Richard complimented Vic Bajaj, VE3BSV, for the successful basic course he ran at Algonquin College. The average grade was said to be 93%. Richard also reminded everyone that he will be running an advanced course in the near future for anyone interested.

Mike Kelly, VE3FFK, announced the upcoming sale at Carleton University, Electrical Engineering Building, on January 8 and 9.

Richard introduced the evening guest speaker, Paul Cooper, VE3JLP. Paul brought with him a video of the expedition to Peter I Island, 3Y0PI,

detailing some of the two years of preparation, the hardship endured by the group and how they amassed some 60,000 QSO's. After the video Paul answered some of the members' questions.

Richard, VE3UNW, announced that Larry, VE3WEH, extended an invitation to members of the OARC to attend the February 19th meeting of the OVMRC to be held at the Museum of Science and Technology. A presentation by COREL is the feature of the evening. Draws will be made for various software packages including a copy of Corel Draw.

A brief discussion ensued concerning trouble being experienced with channels 18 and 20.

The meeting was closed at 20:45 and was followed by coffee and a rag chew.

UPCOMING MEETINGS

March: George Roach, VE3BNO
April: Home Brew Night
May: Speaker to be announced

EDITOR'S POSITION

The Executive would like to express their thanks to Mike James, VE3PDE, for the excellent work he has done as Editor of the Groundwave for more than 10 years. He long-time dedication has been very much appreciated. Due to work commitments, Mike is no longer able to continue in this capacity.

Anyone interested in volunteering for this position should contact Richard Hagemeyer, VE3UNW, at 225-3275 (home) or 953-0638 (work).

MAKERS OF ELECTRONIC HISTORY

HEINRICH RUDOLPH HERTZ



Heinrich Hertz, well-known physicist, was born in 1857 in Germany. He is noted as the discoverer of electromagnetic waves, which form the basis of all radio transmission and reception. He found that a simple spark discharge sends out electric waves which, in turn, can be received with a coil of wire. He further demonstrated many of the important phenomena associated today with the propagation of electromagnetic waves through space. Hence, the term Hertzian Waves, which is now used frequently. He also completed numerous valuable experiments in connection with the electric phenomena in vacuum tubes. Hertz died in 1894, at the early age of 37. Had he been granted a few more years, he might have accomplished much in completing the work that he so meritoriously started, and from which the entire human race is his beneficiary.

Picture - Courtesy RADIOCRAFT de Peel Signal, Bulletin of the Peel Amateur Radio Club

ADVANCED AMATEUR CLASS

The Advanced Amateur Class, sponsored by the OARC, will start January 31, 1995, and will be given by Mike Kelly, VE3FFK, Rick, VE3IHI, and Richard Hagemeyer, VE3UNW. Classes are free and will be held every Tuesday until mid-May.

HOW TO KILL AN ORGANIZATION

No one purposely sabotages a group which he or she has joined, but a glance at this list might reveal ways to work against an organization without being aware of it.

1. Don't come to meetings. If you do come, be late.
2. If the weather doesn't suit you, don't even think of coming.
3. If you attend, find fault with the work of others.
4. Never accept an office - it's easier to criticize.
5. Be angry if you're not appointed to a committee.
6. If you're asked your opinion, say nothing.
7. Do no more than necessary. If a few persons work tirelessly, complain that the group is run by a clique.
8. Don't bother to help get new members.
9. Don't tell leaders how the group can help you or achieve certain goals - but if it doesn't, quit coming.
10. Agree with everything at the meetings, then disagree later.
11. Get all the benefits your organization provides, but don't make any personal contribution.
12. Talk about cooperation but don't practice it.

The success of any organization is tied directly to its members. Amateur Radio is fortunate that so many of its members show such dedication and participation.

From The Ground Wave, bulletin of the Saint Paul Radio Club Inc. (who have credit to the Static Sheet published by the Des Moines Radio Amateur Association)

mk's WORDS

I was going through a pile of old magazines the other day when I came across a fairly old copy of the Groundwave. It was the Jul/Aug 77 issue. Although that's like the day before yesterday for you old timers who were around when spark was king, it was old enough that it made interesting reading.

Stuff that hasn't changed: Found... One coleman camp stove, left at the field day site. Rick is putting together a bulk order of wire.. contact him if you want to get in on the deal. QSL according to a story in the newspaper stands for quick short letter. Somebody said "CQ, VE3XXX" took longer to say than "This is VE3XXX monitoring". This person was alleged to be the same one looking for a LINEAR amplifier for his 2 metre rig. Special prefixes were in fashion.

Stuff that has changed: The cover was a series of cartoons showing various hams doing their thing. (drawn by Stan, VE3DQ) It also showed our affiliation to AMSAT, ARRL, CARF, and the RSO. There was a crossword puzzle. There was a fairly long article about the intruder watch program, which collected data on other services making use of amateur hf spectrum allocations illegally. Bruce Spanton (VE3BRS, inspector, DOC) wrote an article about Esperanto and the Esperanto net. From the repeater council meeting: A six metre linked system VE3DVQ/JGP was reported to be having problems VE2CRA was anticipating repairs to its antenna system with 70cm going up in height and gain soon. VE3STP was soon to be all solid state. VE3TEL, VE3TWO, and a repeater proposed by the RCMP club were not on the air, but frequencies had been obtained. And finally... The postage was 12 cents!

All this sure made it hard to get the magazines sorted away, but it was fun anyway. Does anyone care to do this sort

of thing with Groundwaves from the more distant past? I'd love to hear what was going on in the club in the fifty's and before.

73.. mk VE3 FFK

WATT IS ELECTRICITY?

Electricity is a colorless, odorless gas which burns with a bright flame. Light grows from a bulb. An amp is a little animal that crawls along a wire. In the summer, an amp lives in a coulomb. Polarization is the changing of an OHM into a coulomb. An Ammeter is an animal that eats amps. A battery fires amps around a circuit. An amp rides around a circuit on megacycle. Megacycles are parked on a grid. The right-hand rule requires amps ride their megacycles on the right side of the wire. All amps meet at an accumulator. An oerstead is an ohmstead for orses. A joule is a right between two amps. You receive a shock when an amp isn't wearing any shoes. When an amp falls off its megacycle, it hertz.

de The Ground Wave, Bulletin of the Saint Paul Radio Club Inc. (who credit the PHD News published by the PHD ARA Inc. serving the Kansas City metro area)

SKI MARATHON

The Ski Marathon will take place on February 11-12, 1995. Thanks to all who have volunteered to participate. If you would like information about the Marathon, call Harrie, VE3HYS, at 739-9365.

A WORD ABOUT HAIL

by Randy Mawson
Environment Canada

Hail isn't frequent in Southern Ontario, and when we get it, it's usually rather small, pea-sized. Plants like tomatoes and tobacco however, are extremely susceptible to hail and can be ruined in 20-30 seconds as the missiles of ice do their damage. The tomato fruit, once bruised by the stones are worthless. Tobacco leaves riddled by hail cannot be harvested and sold.

Hail is, in almost every case, associated with mature thunderstorms which by definition usually have updrafts and downdrafts strong enough to support the weight of large hailstones. The stones start off as rain drops which are carried by updrafts to altitudes as high as 14 km., then freeze as temperatures drop to -45 to -50. Downdrafts then carry the stone to the lower levels where rain covers the small but already frozen stone. Here the process starts all over again and in fact it may occur ten or twenty more times before finally being expelled by the mature storm. If you could see a hailstone in half, you'd find growth rings not unlike those you would find on the trunk of a tree.

When the rock of ice becomes too heavy for the updrafts to support its weight, it will fall out usually just ahead of the heaviest rain. It may also be expelled at the top of the cloud near the anvil and fall well ahead of the approaching storm. Many cases have been reported when hail has fallen well before an approaching thunderhead with the sun still shining.

To this day, I can still remember my father pushing my sister and I under the seats of our wooden boat when we were caught in the path of an approaching hail storm. At age six, I was fascinated by the sound of the stones bouncing off the deck of the boat and was puzzled by the quantities of ice floating in the lake

immediately afterwards. After all, it was mid summer...how could it snow? I don't remember my father complaining, but it must have been rather painful to have endured the deluge of hailstones for what seemed several minutes.

Hail, while not exclusive to any particular place in Canada, is quite common. In Southern Ontario, the average fall is about 1-2 days per year with the highest frequencies coming during the months from May to July. Nearly three quarters of all hailfalls occur between noon and the dinner hour. The average hailfall usually lasts from 6 to 10 minutes.

Likely everyone can remember a time when hail has fallen and everybody has their favourite story. While my own recollections of large hail come from childhood, I still remember the hail that fell in Southern Essex County on May 30th, 1985. That was the precursor to the Barrie tornado which happened the very next day. Nearly every farmer in the southern half of the county reported some damage to greenhouses with many losing every single pane of glass. I recall touring through Collisantes greenhouses near Kingsville and finding hail 18 inches deep inside the greenhouses the following day. Fruit crops were badly damaged, buildings destroyed and crops were flattened...damage estimates were \$30-\$40 million. The table on the following page (Courtesy of Environment Canada) shows some of the more notable hailstorms in Canada.

Reports of hailstorms go back in history for many years, centuries in fact. I came across one example of a hailstorm from the 17th century.

On March 25th, 1635, a hailstorm broke in King's County in Ireland and this is the story as set down and preserved in the British Museum. "...every stone of it was the size of four inches in circumference. A hen was killed in

Ballykilmurry, and her two legs were broken by one piece of it. Two scaldcrows were killed by it in Baile Chodag. Every stone went two inches into the earth, and what fell in the water went to the bottom like a natural stone. And some of them at the time of the shower struck a woman on the head, even from under her hood, and wounded her, and her head was sore for a week from it. And a peasant whose feet were struck by the stones became covered with blisters".

Perhaps the largest hailstone on records which has been accepted as a real fact is one that fell at Potter, Nebraska, July 6, 1928. It was as large as a grapefruit. It was weighed, measured and photographed immediately after falling. It measured 17 inches around and it weighed 1.5 pounds. When cut open, it was found to have the typical layers of ice proving it was a single stone and not two or three stuck together. The weather observer at Potter, who witnessed that hailstorm, wrote that "the monster chunks of ice could be heard hissing through the air, and when they hit in soft or ploughed ground completely buried themselves, and sank half-way in on prairie ground."

There have been many experts, Canadian, American and Russian who have delved into the science of hail suppression with some limited success. It's my belief that Mother Nature can whip up a storm with more fury than our technology is capable of dealing with right now. In the meantime, keep an eye out for those big thunderheads in the distance and until next time...keep a weather watch.

FAMOUS CANADIAN HAILSTORMS

Edmonton, July 10, 1901 - Almost every tin roof was ruined and thousands of lights were broken. Hailstones measured 8 cm. and weighed 140 g.

Okanagan Valley, July 29, 1946 - Near Penticton a hailstorm inflicted \$2 million damage to the apple and pear crop in 15 minutes.

Central Alberta, July 14, 1953 - Golf-ball size hail covered 1800 square kilometres. Thousands of birds were crushed.

Lambeth, Ontario, August 19, 1968 - A severe hailstorm left ice up to 17.5 cm. deep on the streets and caused extensive damage to crops and property.

Edmonton, August 4, 1969 - Some of the largest hailstones ever observed in the area inflicted \$17 million damage to the city and environs.

Western Prairies, July 23, 1971 - 2 days of severe weather did \$20 million damage. The hail swath extended over 500 km.

Cedoux, Sask., August 27, 1973 - Damage estimates put at \$10 million. One hailstone weighed 290 g. and measured 114 mm. across, the largest documented hailstone in Canada.

Montreal, June 5, 1979 - A violent thunderstorm with hail and heavy rains caused considerable damage, especially to the Botanical Gardens.

Calgary, July 28, 1981 - A 15 minute hailstorm caused in excess of \$100 million damage - a record for insurance claims in Canada due to hail fall.

Windsor-Leamington, Ontario, May 30, 1985 - Golf-ball size hail smashed greenhouses and flattened crops. Damage estimates were \$30-\$40 million.

Montreal, May 29, 1986 - Hailstones up to 8 cm. in diameter pounded the south shore. Damage estimates exceeded \$65 million. One year later, another multimillion dollar hail disaster occurred in Montreal.