

SEPTEMBER 1989

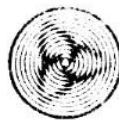
THE GROUNDWAVE



NEXT MEETING WILL BE HELD
WEDNESDAY, SEPTEMBER 6, 1989

Club Call VE3RC

Repeater VE2CRA



Official Bulletin of the Ottawa Amateur Radio Club, Inc.

| <u>The Ottawa Amateur Radio Club, Inc., Box 8873, Ottawa, Ont., K1G 3J2</u> | | | |
|---|------------------------|----------|----------|
| President | Dave Goodwin, VE2ZP | 684-1432 | |
| Vice-President | Peter Jago, VE3PWJ | 836-1013 | 836-6860 |
| Secretary | John Connor, VE3RMM | 727-5805 | |
| Treasurer | George Caskey, VE3NJJ | 224-6415 | |
| Past-President | Paul Cooper, VE3JLP | 821-2167 | |
| Directors | Don Blair, VE3MSQ | 745-6737 | 234-2366 |
| | Bill Dormer, VE3KEB | 829-0915 | 998-4569 |
| | Dave Parks, VE3GSA | 225-1206 | 993-6495 |
| Packet Group Chairman | Doug Yuill, VE3OCU | 230-1741 | |
| Repeater Chairman | Harrie Jones, VE3HYS | 739-9365 | 738-2372 |
| Net Manager | Bruce Lauer, VE3MJV | 829-9471 | |
| Emergency Coordinator | Ken Kendall, VE3IHX | 731-0892 | |
| EMI Committee Chairman | Ralph Cameron, VE3BBM | 825-1634 | 225-2850 |
| Membership Chairman | Mike Kelly, VE3FFK, | 722-5918 | 788-5782 |
| Nat. Cap. Award Manager | Brian Summers, VE3JKZ | 523-1535 | 996-7885 |
| Publicity | Mike Pilon, VE3BUP | 731-1567 | 996-3311 |
| Groundwave Editor | Mike James, VE3PDE | 592-2962 | 995-2730 |
| Graphic Designer | Maria Townson, VE3KIP | 828-9573 | |
| Contributing Editor | J. Gord MacKay, VE3JMT | 831-1004 | |
| Production Committee | Bill Hall, VE3JMC | 224-2107 | |
| | Chuck Baker, VE3PAP | 824-1941 | |
| | Ted May, VE3ADZ | 741-0862 | 993-9132 |

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) at the National Research Council Auditorium, 100 Sussex Drive, Ottawa, at 2000 hours. A bulletin board is available for posting notices of interest to other members about 1915 hours. Further details about each meeting is elsewhere in this publication.

PACKET RADIO MEETINGS are held at 19h30 on the last Thursday of every second month beginning in September, at the McNabb Community Centre, Percy and Gladstone. This is an OARC technical meeting open to all who have an interest in packet radio.

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.

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, 2-METER RIG AND AN ENGRAVING PENCIL are available for loan to club members. The 2-meter rig may be borrowed by members who are hospitalized. 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. A \$100 refundable deposit is required for the belts. Contact the President for the 2-meter rig or 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.

POI-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.

POI-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.
 For further information, please contact repeater chairman.

MINUTES OF THE OARC GENERAL MEETING
OF JUNE 7, 1989

"What I remember of the last General Meeting of the 1988 season."

(The minutes were lost in the mail - at least they didn't get to me in three weeks. The Ed.)

The meeting was convened by Paul, VE3JLP, at 20:05 (local), who welcomed visitors to the meeting.

After general announcements, Dave, VE2ZP, announced the results of the Executive Nomination Committee. The following were acclaimed: George, VE3NJJ, as Treasurer; Peter, VE3PWJ, as Vice-president; and John, VE3RMM as Secretary. Four members were proposed for the three directorships and a vote was taken. The three elected were: Don, MSQ; Bill, VE3KEB; and Dave, VE3GSA. Dave, VE2ZP, himself then reluctantly accepted acclamation as the new President.

Marcus, VE3MDL, gave a presentation on digital communications - which spans from CW to what we now know as "packet radio".

During the coffee break, members were invited to see the packet equipment demonstrated. This included: BBSs and the NTS, by Barry, VE3JF; the first TARR-1 TNC by Marcus; 56 kbps packet modems by Marcus and Doug, VE3OCU; a mobile Digipeater/Kanode by Gord, VE3PPE; and general station operation by a fellow with a 2-element quad.

The meeting was reconvened at 21:50 and immediately adjourned to the fall with wishes for a fun, safe summer.

PACKET GROUP

The next meeting of the OARC packet group will be on the last Thursday of September, that is, September 28th, starting at 7:30 p.m. Meeting will be at the McNabb Community Centre, 180 Percy Street. To get to the Centre, take the Queensway to Bronson Ave., go north on Bronson, through the lights at Gladstone, turn right at the second street past Gladstone which will be Gilmour, turn right at the first street which will be Percy. You will be going south and the Community Centre will be on your right beside the school.

Agenda items include: A plea for net controller so the Monday night packet net can continue, discussion of budgetary items, report from TAPR regarding our request for 9600 baud packet radios, fund raising and dates for future meetings. Contact Doug Yuill, VE3OCU, at 230-1741, for further information.

RIDES TO MEETINGS

In order to get people without cars to OARC meetings, we will list the names, addresses and phone numbers in the GROUNDWAVE. Nearby hams will hopefully offer lifts by contacting the requester or, if necessary, a member of the executive.

If you need a ride, or want to arrange a car pool, please leave you name, QTH and phone number with Doug Yuill, VE3OCU, at 230-1741.

* SEPTEMBER OARC MEETING *
* *
* John Brummell, VE3JDO *
* on *
* What it's like to be a QSL Manager *

PACKET RADIO

Packet Radio had become increasingly popular, including swapping messages between the States and Europe via 2 meters. As happens in most any group that is unregulated, problems occur, some serious. The following editorial by Chet Hart, WD4GDB, points up one of the more serious.

We have a problem that may soon come to a head on Packet Radio. Specifically the sale of products via bulletin boards by amateurs that probably don't think they're violating the FCC regulations.

The current interpretation of the rules allows amateurs to indicate a selling price when discussing the purchase of used amateur equipment. But this does not extend to the sale of a reproducible product like software. Amateurs who develop new software and want to sell it should think about putting ads into QST or 73 magazines, not over their local PBBS as a bulletin. It not only is a violation of FCC regulations, but some of us are annoyed at any commercial intrusion into Amateur Radio.

de Scuttlebutt, Bulletin of the Waterway Radio and Cruising Club

FOR SALE

VIC 20 with dataset, 16K memory expander and 8K RAM card memory expander. Package deal preferred at \$125.

de Doug Burrill, VE3CDC
733-7108

A REWARD OFFERED

A reward of 500 microtarads is offered for information leading to the arrest of Hopalong Capacity. This unrectified criminal escaped from a Weston Primary Cell where he had been Clamped in Ions awaiting the Gauss chamber. He is charged with the Induction of an 18-turn Coil named Milli Henry, who was found Choked and robbed of valuable Joules. He is armed with a Carbon Rod and is a Potential killer. Capacity is also charged with driving a DC Motor over a Wheatstone Bridge and refusing to let the Band Pass. If encountered he may offer Series Resistance. The Electromotive Force spent the night searching for him in a Magnetic Field, where he had Gone to Earth. They had no success and believe he returned Ohm via a Short Circuit. He was last seen riding a Kilocycle with his friend, Eddy Current, who was playing a Harmonic.

de WA4LXP
via Scuttlebutt, Bulletin of the Waterway Radio and Cruising Club



The Kidney Foundation of Canada

Give the greatest gift of all... the gift of life

Please sign an organ donor card... today.

ART STARK, VE3ZS
SILENT KEY

Amateurs across Canada will be sorry to learn that Ark Stark VE3ZS passed away in Ottawa on June 6 at the age of 81. He was well-known across the country, especially on the West Coast where he had spent a number of his early years with the then Department of Transport. Most Amateurs in Canada's capital knew the call VE3ZS belonged to Art Stark, who faithfully monitored the regional repeater, VE2CRA, for many years. He was always quick to respond to a call for assistance and played an active part in more than one local serious emergency.

Art retired in 1967 from the Department of Communications and then put his vast knowledge of its operations and regulations at the disposal of Canadian Amateurs. He became the Canadian Amateur Radio Federation's liaison officer with the DOC and wrote the first handbook on Amateur radio regulations, published by CARF and widely used by Amateur classes.

That task was a familiar one to Art as he had developed a series of procedural manuals for DOC radio operators and inspectors and standards for all classes of radio operators' certificates during his years with the Department of Transport and latterly with DOC when it took over the communications sector of DOT. As Chief Operations Supervisor for DOC, Art was responsible for the training programs for radio inspectors and participated in many international conferences with the International Civil Aviation Organization on aeronautical communication procedures.

Art spent 30 years with DOT and DOC head offices in Ottawa. His dozen years with DOT as a radio operator on West Coast ships, coast and radio range stations served him well in his work. World War II saw him serving as a wireless op in the famous Ferry Command

which he survived after many hazardous trans-Atlantic flights delivering aircraft to Britain.

He was born in the U.K. but his family settled in the Kootenay Valley of B.C. His first Amateur station was in that province in 1930, VE5AE, where he was active on the Red Cross Emergency Net. This interest in the usefulness of Amateurs in emergency and public service nets ensured Art's participation in such activities. One unique activity which Art headed up during the past few years was the provision of a half-dozen ops to provide radio communication for the emergency management training courses for municipal and provincial officials at the national Emergency Preparedness Canada College at Arnprior, Ontario.

His friends were not confined to this continent, as on his trips to Australia he obtained a VK call and kept up his contacts with Aussie Amateurs and their national Amateur organization whose problems were similar to many of our own.

Art's contribution to Amateur radio in this country was a significant one and he will indeed be missed by his legion of friends and those with whom he worked to build the Canadian Amateur Radio Federation.

de TCA

DON REAVELY, VE3ATJ
SILENT KEY

The Ottawa Amateur Radio Club lost a long time member in the passing of Don Reavely, VE3ATJ. Don was a long time employee of the radio engineering group at Air Materiel Command, Rockcliffe, and earlier a radio technician with the RCAF. He is survived by his wife Helen.

RFI PROBLEMS IN NUCLEAR POWER
PLANTS

by Charles V. Hayes

Mr. Hayes is a senior operational analysis engineer in the technical engineering section at Consolidated Edison Company's plant, Indian Point-2. An article appeared in April 1989 edition of NUCLEAR NEWS with the title and by-line shown above. Space precludes our reproduction of the whole article but much of it is familiar stuff to amateurs. However a squiggly picture and audio buzzes and whistles on the neighbor's TV is not quite the same problem as RFI in the neighbor's nuclear generating station. We quote.

"Over the past few years, several nuclear power plants across the nation have attempted to upgrade their communications capability by installing radio transmission systems. These radios provide rapid communications between control room operators and workers in the field, greatly enhancing plant safety. It seems, however, that for every action there is indeed an equal and opposite reaction. Installing radio transceivers can create something else besides rapid communications--the phenomenon of radio frequency interference (RFI)."

"RFI is the process by which radio energy causes, (1) measurable voltages and currents within systems that are not normally designed for the reception of radio energy, or (2) impairment of a desired radio signal by an undesired radio signal. The consequences of this unwanted energy can range from small signal perturbations to large signal spikes, depending on the nature of the RFI induced into the system. In nuclear power plant systems, these can lead to a variety of interesting -- and potentially disruptive -- effects.

"In 1987, a survey was sent to 61 U.S. and 8 foreign utilities by a southeastern utility. It asked whether portable radio

transceivers were allowed in the control rooms, about the frequency use of the radios, and if there were any limitations on their use. Eleven U.S. and two foreign utilities responded. They indicated that they do not allow portable radio use in their control rooms (or, for some, in other sensitive areas such as relay rooms). Also it was found that all use a frequency within a range of 25MHz (basically citizen band radio) to 800 MHz (ultra-high frequency).

"Since late 1985, there have been at least 11 cases of handheld radios causing reactor trips* or engineered safety features actuations at U.S. nuclear plants. Nonreportable phenomena caused by portable radios, such as effects on non-safety systems or secondary systems, have also occurred at about three to five times the rate of reportable phenomena. Clearly, this is a problem that must be addressed. Before it can be solved, however, we must understand the nature of the phenomenon."

The author then goes on to discuss the sources of RFI, factors affecting the strength of an interfering signal and susceptibility of an affected device. He touches on radiation and receptive resonance, harmonic components, and phase relationships of reflected wave components.

In the summation of his article, Mr. Hayes offers a number of ways to minimize RFI:

- a. reduce transmission power to the lowest acceptable level
- b. as a general case, VHF/UHF is preferable to an HF assignment for in-plant communications
- c. good quality equipment does a better job of filtering
- d. if radio use from certain areas of the plant cause RFI, post those areas as "Restricted for radio use," and
- e. test for communication trouble before trouble tests the plant.

(For the full text, see Nuclear News, April 1989, pp. 69-71.)

*reactor trip = engineered safety feature
actuation = things are not right so a
controlled shutdown is commencing.

FROM THE EXCHANGE BAG

Getting the GROUNDWAVE ready for a new season is a real summer pooper. Press time is normally a week and a day after the monthly meeting. The extra day allows the Secretary to assemble the minutes of the Executive meeting held each month one week after the club meeting. Club members expect to have their copy of GROUNDWAVE at hand with the minutes of the previous meeting. With the first meeting of the new season scheduled for September 6th, most of the content of the September issue must be ready by the end of July. This content comes from the Executive, from the Secretary, from committee heads representing DX, packet, and other special interests, and from extracts taken from the club papers of other ham clubs.

It has been the often pleasurable, sometimes onerous, duty of the "Contributing Editor" to scan the exchange papers for pertinent items. Many of the more interesting items have an extremely short shelf life. So much so that the event we would have publicized is history long before it could appear in announcement form in GROUNDWAVE.

Other material arrives with the exchange papers: an invitation to an art exhibition; an announcement of a showing of approximately 2400 of 9000 panels of quilting, three feet by six feet each, bearing the names of AIDS victims and sponsored by the AIDS Committee of Ottawa; a news release from the NCC inviting visitors to the MacKenzie King Estate, open until 9 October.

Closer to home and our raison d'etre, is a solicitation for support for a broadcast station license. This we will send to the interference committee for a look and possible intervention. Finally, from the Canadian National Institute for the Blind (CNIB), a package of information on two extremely interesting devices: the Xerox/Kurzweil Personal Reader and the other, the Braillex-IB 80 piezo, a personal computer display for the blind.

This month the mailbag contained the publications of seventeen clubs, a figure down somewhat from times past and perhaps attributable to the higher postage inflicted upon us the past few years.

Anything we find in the exchange magazines that strikes us as clever, funny, odd, wise, perceptive, pertinent to the ham way is grist for our mill. (I used to have an upright Underwood typewriter that printed only upper case. That was a mill! It would've made my Atari 1040ST look like a hair dryer.) There is an informal arrangement between ham clubs that anything in a club magazine may be used by another club if credit is given to the source.

After GROUNDWAVE is through with the exchange magazines, they are brought to the meeting and left on the front table for whomever wants them. If you are fortunate enough to QSO someone whose club paper you have seen, give their club a pat on the back for their efforts.

FIELD DAY

The OARC and OVMRC collaborated in the 1989 Field Day. There were two stations - one using a tri-bander beam antenna, the other using a 40-meter quad.

OTTAWA AMATEUR RADIO CLUB INC.
BOX 8873, OTTAWA, K1G 3J2
MEMBERSHIP, RENEWAL AND APPLICATION
1989 / 90

New
 Renewal
Single \$12.00
Family \$14.00

Surname: _____ First Name: _____ Callsign(s): _____

FULL _____ Postal
Address _____ Code

Telephone: Res.: _____ Certificate: Amateur Digital
Bus.: _____ Advanced

Operating Activities

Bands: 160m 80m 40m 30m 20m 15m 10m
 6m 2m 1.25m 70cm other:

Modes: CW SSB FM FSTV SSTV RTTY Packet
 other:

Interests: HF VHF satellites
 contesting antennas
 homebrewing other:

I own a handheld or fully portable 2 metre FM transceiver
 I am a registered member of the EMO Amateur Radio Group

I am a member of: AMSAT CARF CRRL RAQI RSO

Yes, I would like to be part of the team.

Please contact me about:

- serving on the club executive
- assisting in the production of the Groundwave
- operating during or organizing Field Day
- speaking at a club meeting
- operating as a net controller for the Capital City FM Net
- assisting with the fall fleamarket/auction
- entering my homebrew project in the Homebrew Contest
- providing communications for the Canadian Ski Marathon
- packet communications

Activities that I would like the club to do this year:

**THE BACK OF
PAGE 9 WAS
BLANK
-mk VE3FFK**