

JAN 83

GROUNDWAVE



Club Call VE3RC Repeater VE2CRA



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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 Ottawa regional area and to the advancement of the technical competence and achievement of Club Members.

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 Ottawa regional area.

THE SWAP NET, a service of the Ottawa Valley Mobile Radio Club Inc., is repeated on the Capital City Net and is conducted by Ed Morgan VE3GX. To list items and make enquiries, call Ed at 733-1721.

An ENGRAVING PENCIL is available to Club Members to mark their valuables for positive identification in case of loss or theft. For further information, contact Penny Robinson VE3ERO at 225-1276.

The OARC EXECUTIVE normally meets on the second Wednesday of each month in the Board Room of CFRA, 150 Isabella St., Ottawa at 1930 hours. Contact the President to confirm the date of the next meeting.

RENEW YOUR CARF AND CRRL MEMBERSHIP directly with these organizations, as the Club no longer provides this service to members.

DEADLINE FOR COPY is the first Wednesday of each month.

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 at about 1915 hours. For further details about the next meeting, see Page 5.

SEE YOUR NAME IN PRINT! -- in National and International publications. Write an article for the GROUNDWAVE and watch it travel! Many local articles have been reprinted in Club bulletins across North America.

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

SAFETY BELTS and TWO METRE RIG are available for loan to Club Members. The 2 metre rig may be borrowed by members who are hospitalized and the safety belts and pole straps by any member (\$100 refundable deposit is required for the latter). For the belts, contact Paul VE3ICV 820-6643 (west end) or Brian VE3JKZ (east end) at 523-1535. Contact the President for the two metre rig.

RADIO AMATEUR CALL BOOKS are available for the use of area amateurs at many of the libraries throughout the region, including downtown and other city libraries, Orleans and Nepean. Enquire at the information desk of your local library for details.

MINUTES OF THE OTTAWA AMATEUR
RADIO CLUB, Inc.

December 1st, 1982

The meeting was called to order at 2005, and visitors VE1CJF (who is moving to Ottawa) and VE3NVE were welcomed to the meeting. The minutes of the November meeting were adopted as published in The Groundwave on a motion by Merv VE3CV seconded by Joe VE2DZT, subject to a correction to Bob DeGrace' call.

Ralph VE3BBM reported on the availability of several sizes of torroids and ferrite beads. He asked that those who had placed orders for these to contact him. The fall rfi clinic was cancelled, but one may be held on December 12th, depending upon interest. Ralph has free copies of the DOC handout. He reminded members of the rfi kit.

Ken VE3IHX reported that letters are going out to controllers advising them of the net schedule. He also asked for an indication of the number of Club Members with Apple computers set up for CW or RTTY--only one person present indicated that he had one. Bob VE3FTB, the Treasurer gave a brief report. The members gave a vote of thanks on a motion by Merv VE3CV seconded by Fred VE3IO. It was reported that 68 membership renewals have been received.

Merv VE3CV reported on discussions on tying Ottawa in to the network of linked repeaters via Bancroft. He will be organizing a meeting of interested people; the date and place will be given on the Capital City Net as soon as it is known.

It was reported on behalf of CARF that a committee on cable TV interference has been established. A CY prefix may be used in conjunction with a world communications day, May 17; A Marconi stamp is to be issued.

Gerry VE3GK reported paging interference on 20 metres.

There was no one present to report on behalf of the CRRL.

Art VE3ZS reported on his recent trip to Australia. He used two metres extensively, and he reported that some repeaters installed at high elevations have very long range. A different split is standard in Australia, making use of a synthesized rig desirable. Art met old friends 4CK and \$AND.

It was announced that the Groundwave deadline for December was the first, and that an organizer was needed for the Childrens Hospital Santa Claus visit.

Merv announced operation of the Snow Bird Net, 21.265 MHz at 0930.

Ed VE3KLP outlined the schedule for publication of the New Directory and pointed out the change in the OPP telephone number.

Thanks to the supplier of the cookies and to the coffee organizers. The January meeting will feature the annual elections and a free draw for members only. Outdated exams are available from DOC on Albert Street.

The guest speaker for the evening was George Roach, who gave a most informative talk on repeaters, including how they are linked in a network.

Merv VE3CV added information on the Link Users Group, which is interested in extending the link to Ottawa from Bancroft via VE3STP. Auto-patch is not permitted on the link.

A Chairman for field day is needed. This year, we were first in Canada, 7 or 8 in our class. See p. 4 of the GROUNDWAVE and Nov. QST for a picture. The meeting adjourned at 2220 on a motion by VE3ICV seconded by VE3HJI



--photo by Bob VE3MPG

CQ FD DE VE3RC/3

-by Brian Summers VE3JKZ

Field Day 1982 has passed and the November issue of QST is now out with a full tabulation of the results. The OARC, operating VE3RC in the 4A category (four transmitters, portable) maintained its position of the past several years by coming in tops in Canada. In the following table, the results of the past six years are tabulated. In the first column, the year and number of entries are recorded. Next are the calls of the top station that year, then the top Canadian, followed by the runner-up Canadian. The next column gives that station's position in the 4A category. Finally, the points obtained by each station are given. As you can, we did exceptionally well in 1982, scoring over 8000 points; far better than in any of the past six years. This is just as well, as VE2KH beat our previous scores!!

Year/# of entrants	Call	rank	Points
1977/ 160	N3AW	1	11,120
	VE3RC	18	5,209
	VE3NSR	26	4,390
1978/ 159	N3AW	1	11,554
	VE3RC	14	5,964
	VE3NSR	15	5,746
1979/ 173	K6YT	1	12,582
	VE3RC	18	6,194
	VE7CVA	46	4,372
1980/ 184	K6YT	1	14,472
	VE3RC	16	6,162
	VE7CVA	33	4,984
1981/ 151	K6YT	1	14,596
	VE3RC	20	6,225
	VE7CVA	44	4,446
1982/ 175	K6YT	1	13,784
	VE3RC	11	8,034
	VE2KH	18	6,522

NEXT MEETING

The next regular meeting of the Ottawa Amateur Radio Club, Inc. will be held on Wednesday January 5th, 1983 in the Auditorium of the National Research Council, 100 Sussex Drive Ottawa, at 2000 hours.

The meeting will feature the annual general election. In addition, there will be a "free" draw for valuable prizes. The draw will be open to members only.

Before each meeting, the notice board is set up at about 1915 hours to give members an opportunity to seek information, to buy or sell articles or to contact others with similar specialty interests. Use the Club Bulletin Board as a focal point to meet other members with whom you have had a QSO and to have an "eyeball"--to meet him or her in person!

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CQ FD DE VE3RC/3 -- Cont'd.

We obtained bonus points for operating on emergency power, publicity (did you see the fine article in the "Citizen"? And the coverage on CHOH-TV?), message to SCM, W1AW Field Day Message, and for working W1AW. We missed out on bonus points for working through the OSCAR satellite and for a station operated by a natural power source.

One can never remember all the names of participants, or even the people who should be thanked for their efforts in making this a successful weekend. Some who come to mind are: Mother Nature for giving us glorious sunshine and for keeping the bugs away; the NCC who let us use their property and who even cut the grass this year; George Roach and CFRA for the use of a generator; EMO for a backup generator; the ARRL, with out which there would be no Field Day; Joe Courtemanche and the "CITIZEN" for pens, pencils, erasers and the food for breakfast; the couple who cooked breakfast; Russ Lowe and the Ottawa Police for the use of the

van; Wally Clarke who once again supplied a magnificent tool kit and provided the things you left at home (such as spare tubes to replace Dave Goodwin's finals when they blew!); Gerry Martin who willingly stores our stuff from one year to the next; those who loaned their trailers, tents and campers; John Mitchell for camping out with his two little girls, thereby providing company for my own two little girls; Ray Charbonneau for setting the OARC 100 metre sprint record with smoke pouring from his rig; and everyone else who was in the slightest way involved.

Field Day 1983 is only six months away and it is never too early to start planning..... CUAGN 73 ES GL DE VE3RC.....

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FIELD DAY PARTICIPANTS

VE3JDB, Bob; VE3LOE, Ralph; VE3LOW, Russ; VE3JKZ, Brian; VE3CBE, Wally; VE2ZP, Dave; VE3KKU, Craig; V VE3ANO, Al; VE2DZT, Joe; VE3JRX, Ray; VE3HJI, Jack; VE3MJC, Mike; VE3GJY, Jim; VE3GPP, George; VE3BNO, George-- generators & gas; VE3CXL, John; VE3FWT, Chuck; VE3EBR; VE3BYX, Carl; VE3MJY, Phil--40/15 m rig; VE3MYV; VE3NGN--George Caskey and XYL--cooks; Joe, VE2DZT--food; ---Bob, VE3MPG

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A US WOODPECKER?

--Paul Cooper, VE3JLP

I noticed recently brief mention in one of our local club magazines that the US would be on the air shortly with own version of the woodpecker called "Over-the-Horizon Backscatter Radar" or OTH-B. The item gloomily indicated that the power would be about 1.2 Mwatts and implied that were all about to be clobbered by our own side from much closer range this time. I had almost forgotten the original note when I spotted a three page article in "Aviation Week & Space Technology" for August 1982 entitled "Backscatter Radar Unit Enters Production Phase". After reading a few lines, I realized that

--Continued on Page 8--

ANYBODY FOR CHESS?

Chess & Amateur Radio International (CARI) is dedicated to bringing together the combined hobbies of chess and amateur radio. The first goal of CARI will be to set up standardized procedures by which members will be able to turn to the ham bands for a chess game without the frustrations of the past. Regularized calling frequencies and calling times are offered. In short, no more whistling in the dark for a chess game.

What about chess players who are not amateurs? Third party arrangements, either in real time or via traffic nets are in the planning. Non-amateur chess players and non-chess playing amateurs will be invited to become active in the other hobby. Membership includes a newsletter, a membership list and other goodies.

Membership for US and Canada is \$10 per year of \$18 for two years. Students are asked for \$5. If your interests include chess, drop a line to Chess & Amateur Radio International, P.O. Box 682, Cologne, NJ 08213

de CARI NEWSLETTER NO. 2
Oct-Dec 1982

THE AMATEUR RADIO AWARDS DIRECTORY OF
THE WORLD

This new gestetner publication prepared for hams and swl's contains the rules, checklists, maps, and application forms for more than 150 of the most popular, prestigious, attractive, and sought after certificates, diplomas, pins and plaques available to the amateur radio fraternity. All continents and more than 50 countries are represented. The directory has an 8½ x 11 format for the easy removal and addition of 3-ring pages in its Duotang binder. The postage paid cost of \$7.00 is small compared to the convenience of having it all together, ready to use, to keep track of your operating progress as you work stations, and lastly being able to apply for the many FB awards for your shack wall or album.

Please send cash, cheque, or money order to author VE3GCO Garry V. Hammond,
5 McLaren Ave., Listowel, Ontario N4W 3K1

de SARC NEWS
Scarborough ARC

"Experience is what you get when you are expecting something else."

PERSONAL AUTO PLATES

At the present time, amateurs can obtain automobile license plates in Ontario that carry their amateur call for an extra one-time fee of \$25. There is some concern that the lifetime plate scheme being introduced in 1983 will bring a considerable higher surcharge for personal selection. Amateur groups have asked for this privilege but have been slow to respond to the opportunity. Why not go for it when you renew at the first part of 1983?

AMATEUR SAFETY

The Pioneer Amateur Radio Club of Ottawa, an affiliate of Telephone Pioneers of America, reported an "off-the-jot" accident involving one of their members. Without emphasis on the victims, let us recount the story in the interests of general awareness.

As told, the gentleman doing the telling was climbing a friend's telescoping tower when the moveable section collapsed on his fingers and a foot. The owner came to the rescue and released him by saving a cross member away from the trapped foot. Luckily for the visitor, he was not seriously hurt. Unluckily, however, the owner fell and broke his foot. We understand that everyone concerned has an increased respect for the vagaries of telescoping towers.

MOOSE JAW ARC'S SIXTIETH

Moose Jaw Amateur Radio Club, the oldest continuously-functioning amateur radio club in Canada, is celebrating its sixtieth anniversary. If you work two Moose Jaw stations on high frequency bands after September 1, 1982, you qualify for the Moose Jaw Award. For information, contact Murray Button, VE5ACM, at 1105 - 14th Avenue S.W., Moose Jaw, Saskatchewan S6H 7S4.

de CRRL NEWS (Bull. 37)

CANADIAN APPOINTMENTS TO ARRL

Some recent Canadian appointments to ARRL Advisory Committees have been,
Contests - Bob Nash VE3KZ
DX - Harold Parsons, VE3QA
Public Relations - John Gowron, VE4ADS
Emergency Communications - Jack Strangleman
VE3GV

VHF Repeaters - Ron MacKay, VE1AIC
VHF-UHF, Les Weir, VE3AIB, and Digital
Communications - Doug Lockhart, VE7APU/3
de CRRL NEWS (Bull 35)

EDITORIAL COMMENT

(The following editorial comment comes from Worldradio, September 1982 and was appended to an article about proposed US "codeless licensing of Technician Class with access limited to frequencies above 50 MHz. FCC staff will also explore the possibility of a codeless digital license, similar to Canada's Digital Radio Operator Certificate, which requires a knowledge of digital theory)

Let us not make a mockery of Amateur Radio. No one should be issued a license that says "Radio Operator" if they are unable to copy an SOS on a car horn at 5 wpm.

Contrary to what some say, CW is not a primitive mode. It is, in fact, the ultimate mode in weak-signal, marginal conditions, minimal equipment situations.

A recent letter in QST was from a person who said he would like to become an amateur but since he had already decided he would never use the code, and that was a requirement, he had decided that he would not pursue it. Good riddance.

An analogy: there are people who go into the Army to become cooks and bakers, not riflemen. However, there have been many occasions when they have been glad that they had been given rifle training.

Astronauts and Special Forces have to know the code — because they wish to communicate. Pilots of the most sophisticated military aircraft carry small pistols, because they wish to survive.

Somehow, in the midst of an era when there is more access to information and learning than ever before, there have been bred the "whiners." They want the bar examinations done away with for lawyers, and on and on.

When we see the blind, the paralyzed — and yes, even the deaf learning the code, to say that it is a barrier keeping many out is simply not true.

It is indeed more of a shield than a barrier. If it served no more purpose than to keep out the element that never wants to work for anything, that alone would be sufficient reason for its retention. But code is indeed basic communication. Today's navigators have access to equipment that reads their position within 200 feet anywhere on earth, via the satellite. However, they still want to know how to use the sextant.

Let us keep some standard.

RADIO, TEXAS-STYLE?

(Sam Caputo, W2RSL) I was talking the other day to a W5 in Texas who gave me a rundown on his equipment. He had a kilowatt rig for every band and three 100-foot oil derricks for towers, with a multi-band 6-element cubicle quad on each tower.

I told him that we in New York also do things in a big way, telling him that I was using a long-wire antenna — 1400 feet — for all bands from 160 to 10, and that I had worked over 100 countries in less than two months.

The W5 came back and said, "Oh, that's nothing; my neighbor — just 10 miles from here — was using an abandoned telephone line five miles long for an antenna and he worked DX like crazy."

I noticed that he was talking in the past tense, so I asked him if his friend was still using the telephone line.

He said, "No, lightning struck the antenna and killed him."

I guess that's Amateur Radio, Texas Style.

de WORLD RADIO

The foregoing piece prompted some nostalgic stirrings. At Goose Bay in the late forties, one of my fellow hams was billeted very close to the end of a disused three-mile long Beveridge antenna. This gentleman was unable to pass up the opportunity to try out this monster on the ham bands. Unfortunately, his first attempt at loading took out the front ends of several BCL receivers belonging to other opportunists further down the antenna. Time has dimmed the details but the experiment ended somewhat quicker than the subsequent discussion of responsibility.

My own family was housed in part of a building designed to house an anti-aircraft gun crew. Crew and gun had departed but abandoned telephone wire strung over the ground was still available. The most promising length — we never did find the end — when connected to an HRO receiver with broadcast coils provided a reliable feed to our local station, VOUG, from Moncton CBC. This "antenna" was right on the ground. The ground consisted of seventy-five or so feet of alluvial sand. This put the antenna well up in the air. It is probable that this "high" ground may have had some part in the abandonment of the Beveridges. (ED.)

N6WR

US WOODPECKER -- Cont'd.AM STEREO

I had stumbled upon the definitive story about this system. Author Kenneth Stein has done an excellent job of describing the radar and I am indebted to him for these notes, which I hope will be of interest to those club members who don't see Aviation Week regularly, if at all.

The first production unit was installed 55 miles northwest of Bangor, Maine at a place ominously called Moscow/Caratunk. The unit employs twelve HF transmitters each rated at 100kw average power driving a multi-band 2,265 feet long! The radar returns are received at another site 110 miles southeast, close to the Maine coastline. The system can transmit on any one of six bands that cover 5-28 Mhz--so those of you who work only 160, 80 or 10 metres need read no farther!

The operating frequency can be selected in 1 Hz steps and is described as having an FM/CW waveform, computer generated with bandwidths of 2.5, 5, 10, 50 and 100 kHz and repetition frequencies of 20, 30, 45 and 60 Hz. A Hewlett-Packard 141T Spectrum Analyzer is used as an aid in selecting frequencies that no one is using. The system is programmed to avoid completely certain guarded frequencies that are sub-harmonics of Aeronautical VOR (VHF Omni Range) frequencies in the area.

That huge antenna--it will eventually be even bigger--will start by beaming northeast from Main covering a sector 16.5-76.5 degrees relative to true north. This means that only our friends in VO1 land are likely to be troubled by the system at first. Later, however, its coverage will be extended so that it can be steered to the northwest, so our turn will come. The big question is how well the operators, using their spectrum analyser and computer, will be able to avoid our bands?

To close on a lighter note, how would you like to pay the hydro bills for this radar? During system tests, they were running at about \$20,000/mo.

--Ralph Cameron, VE3BBM

July 23rd, 1982 marked another milestone in the history of radio. Radio stations KTSA, San Antonio, Texas and KDKA, well known pioneer radio station in Pittsburgh, Pennsylvania began the first authorized transmissions of AM Stereo. KDKA supports the KAHN System, one of five given the OK by the FCC.

The five systems were described in a presentation to the Society of Broadcast Engineers Show, Seattle Chapter, October 28th, 1980.

1. BELAR AM/FM Modulation: The left and right audio signals are combined in a matrix form (L+R) and (L-R) products. The (L-R) is pre-emphasized with a 100 microsecond time constant and frequency modulates the RF input to the transmitter. The (L+R) component amplitude modulates the RF carrier in the normal fashion.

2. Harris-CPM System: In this "Compatible Phase Multiplex" System two carrier signals separated in phase by thirty degrees. The left channel modulates a carrier lagging that of the transmitter by 15 degrees while the right modulates a carrier leading by 15 degrees. The result is (L+R) sidebands identical to those of conventional monaural transmitters and (L-R) quadrature sidebands.

3. KAHN/HAZELTINE-ISB System: The "Independent Sideband System" uses a phase shifter to combine the (L+R) and (L-R) signals 90 degrees out of phase with each other. The result is phase modulated, multiplied in frequency and fed to the transmitter.

4. Magnavox-AM/PM System: The (L+R) signal AM modulates the carrier while the L-R component phase modulates it.

5. Motorola C-Quam System: Two signals are transmitted on one carrier by separately modulating two carriers of the same frequency but in phase quadrature with each other. The components are (L+R) in phase and (L-R) as the quadrature.

ALL THE BEST WISHES FOR THE HOLIDAY SEASON--AND HAPPY NEW YEAR TO ALL

MEMBERSHIP APPLICATION

OTTAWA AMATEUR RADIO CLUB, Inc., P.O. Box 8873, OTTAWA, Ontario K1G 3J2.
SURNAME Common Name Call

Additional Names/
Calls (Family Membership)
Address (Street/City/Province) Postal Code

Telephone Telephone CLASS Associate()
(home) : (Work) : Amateur() Advanced Amateur()

ACTIVITIES (List bands worked)

CW AM
SSB RTTY
SSTV ()
VHF/FM PACKET RADIO

I am a: MEMBER APPOINTEE OFFICIAL ; I have a gas/diesel generator
of: ARRL () () () ; Yes() No()
CARF () () () : I have a two metre hand carried
RSO () () () : portable rig; Yes() No()
RAQI () () () :

MY MAIN INTEREST IN AMATEUR RADIO IS: () HF () VHF () Other

Membership Fees: Individual -- \$8.00 Family \$10.00
(Except student & over 65--contact a member of executive)

I would like to see the OARC, Inc. do/not do the following next year:

I would be willing to help organize the following as a Club Activity:

(Applicant to complete at same time as above)

OTTAWA AMATEUR RADIO CLUB, Inc. Membership 198

RECEIVED FROM.....The Amount\$.....

Signature of Membership Chairman

Date



THE OTTAWA AMATEUR RADIO CLUB, Inc.

P.O. Box 8873

OTTAWA, Ontario, Canada

FIRST CLASS MAIL

K1G 3J2

FIRST CLASS MAIL G. MARTIN, OARC ARCHIVES
1771 HUTTON AVE
OTTAWA ONT
K1G 1M1

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THE OTTAWA AMATEUR RADIO CLUB Inc. Box 8873, Ottawa, Ont. Canada K1G 3J2

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- : VE3GVI Ontario, K2H 7Y1 225-1171:
- : V/President Bob Baillargeon 179 McGillivray St., OTTAWA 235-0187:
- : VE3MPG Ontario, K1S 1K7 744-0963:
- : Secretary Ray Charbonneau 3007 Rankin Street, OTTAWA, 731-4981:
- : VE3JRX Ontario, K1V 8L2 993-2482:
- : Treasurer Bob DeGrace 805 Eastbourne Ave., OTTAWA, 746-1711:
- : VE3FTB Ontario, K1K 0H8 235-7221:
- : Directors Lloyd Reed 696 Sherbourne Road, OTTAWA, 722-5431:
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- : P/President Biran Summers 2231 Hillary Ave., OTTAWA, 523-1535:
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- : Chairman VE3BNO Ontario, K1S 1X6 233-6241:
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- : Archivist VE3CNJ Ontario, K1G 1M1 :
- : Net Mgr. & Ken Kendall 777B Springland Drive, OTTAWA, 731-0892:
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- : EMI Cmttee Ralph Cameron 30 St. Remy Drive, OTTAWA, 825-1634:
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