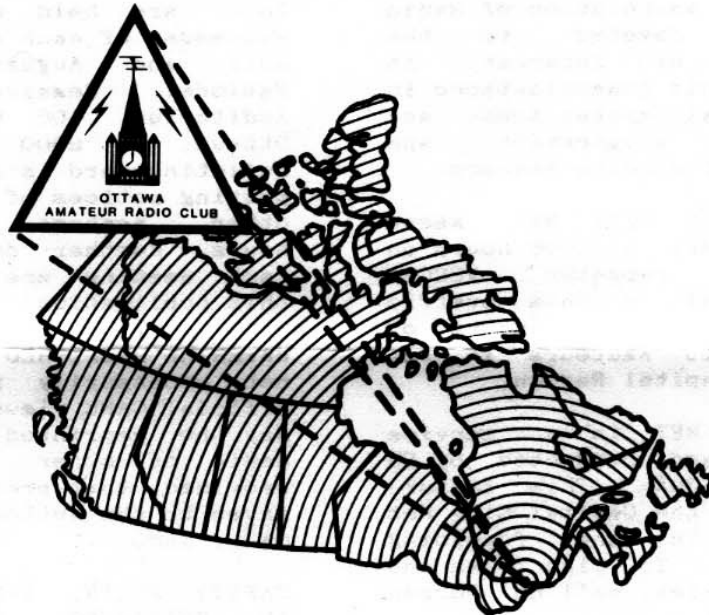


APR. 76

# THE GROUNDWAVE



Club Call VE3RC

Repeater VE2CRA



## Official Bulletin of the Ottawa Amateur Radio Club, Inc.

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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.

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.

THE SWAP NET is a service provided and conducted by Ed Morgan, VE3GX. This feature appears on the Capital City Net as noted in the foregoing paragraph. To list items and make inquiries, call Ed Morgan at 733-1721.

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.

DEADLINE FOR COPY is the executive meeting. Make yourself better known to fellow members and other amateurs, too, by giving us an article, technical or otherwise, relative to our hobby. They may get reprinted in far away places; and the family will be proud of you.

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 are elsewhere in this publication.

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.

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 member. 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.

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

MINUTES OF THE OARC GENERAL  
MEETING OF MARCH 5, 1986

Without initially having the use of the sound system the meeting was called to order at 2004 hrs. by the president, Dan Holmes, VE3EBI.

A correction to the previous minutes was given relating to DOC fees for radio amateurs, which should have read: "A fee of \$5.00 is assessed for each examination paper. The regulations paper has been dropped from the Advanced Amateur examination."

With the correction noted the minutes were adopted on a motion by Bill, VE3UD, seconded by George, VE3NJJ.

The president welcomed a visitor to the club, Laurence Gangur. Two members were congratulated on having received their first licences and new call signs, namely Georges, VE3PFZ, and Gord, VE3PPE.

In general news, Dan advised the group that the new directory is currently at the printers. Kathy, VE3OWY, is looking for members for the nominating committee for the next club year. The duties are quite modest and involve polling the members for candidates for next year's executive committee. Field Day preparations are going ahead under the leadership of Dave, VE3JTZ. The next general meeting is Homebrew Night when members will get a chance to show their technical prowess and possibly win a prize, including the coveted Technical Excellence Award. Rules

concerning the Joe Norton Trust Award for Amateur Radio were published in the February Groundwave. Any amateurs who have been licensed in the last year are encouraged to apply.

Paul, VE3JLP, spoke briefly on a QSL card deal that he has worked out with Canada's Capital City and Convention Bureau. They have supplied free postcards of Ottawa which Paul has had printed on the reverse side with QSL information. Paul has 900 cards for sale. Samples are only \$0.25 for ten, and the final cost (to cover printing) will be as low as \$0.01 or \$0.02 for each card. Members should contact Paul for further details at 821-2167.

Lloyd, VE3AYE, said a few words on the Double-Ducky Direction Finder (DDDF) project. For those members who are interested, he is proposing a bulk-buy of the hard-to-find parts; namely the vhf inductor and the PIN diodes. The cost for these will be approximately \$8.00. The remaining parts can be scrounged up for another \$10.00 or so.

The main speaker of the evening was Bill Wilson, VE3NR, who discussed the perils of "Lightning in the Ham Shack". He explained the mechanism of lightning and emphasized that protection is very important although not too difficult to achieve. He showed a chart which plotted the mean number of days with thunderstorms in North America. For Ottawa the figure is 25-30 storms per year. The objective of protection is to provide a safe low impedance path to ground

for the lightning strike and any associated static discharges. Bill described different schemes and devices to provide this protection, including details of buried rods, wires and plates and methods for effectively bonding towers and cables to ground. Inside the shack protection can be provided by various power protectors. The easiest and cheapest protection is to unplug everything in the shack when lightning threatens.

A demonstration of the DDDF project was given by Lloyd, VE3AYE, and Keith, VE3GFI. With his 2m handheld held aloft, Keith was able to locate Lloyd to within an accuracy of almost 45 degrees (or was it 225 degrees)! We were assured that things work very much better outside the confines of the building.\*

Finally Merve, VE3CV, made an appeal for participants in the HF Pot-Hole Net, which is held every Sunday at 10:00 a.m. on 3.760 MHz, and Keith, VE3GFI, reminded members of the upcoming Trans-Canada VHF Net. The meeting was adjourned at 2215 hrs.

Mark Farey, VE3OWL

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\*Those interested in building a Double Ducky may take advantage of bulk buying by contacting Keith Bedal (Nepean, 828-1870), Mark Farey (Kanata, 592-2522), Lloyd Reed (Ottawa, 722-5431), or Dave Goldsmith (Orleans, 824-0515). The parts cost is about \$8.00.

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PRODUCING THE 1986 DIRECTORY  
OR, "HOW AN OWL GAVE BIRTH TO  
AN ELEPHANT"

By now the 1986 edition of our Directory of Amateur Radio Club Members should be hitting the streets and I must confess to a real feeling of relief. I understand the gestation period for an elephant is about two years. Now I've an appreciation of how Mrs. Dumbo felt after finally giving birth!

I should have heeded the warning of my predecessor, Ed Kipp, VE3KLP, when he wrote in the Groundwave after producing the previous edition of the directory, that he would only consider doing it again if he "got a bit more help." I think Ed showed great powers of understatement!

Not that this was all a solo effort, and I must offer my sincere thanks to those who helped with the production. In particular, Gord Dey, recently elevated to VE3PPE, who laboured long and hard with the data entry and Joan Powell, VE3FVO, who went after the advertising. Kathy Rodd, VE3OWY, did a super job of contacting all of the clubs for their advanced orders before we went to the printer. Finally Peter Hafichuk, VE3LBW, who has the unenviable job of distribution and chasing our members to try to give them their free copies.

I should also emphasize that I got a lot of fun out of the job. I realized when I started that it would be a good investment to set up a system that will lend itself to easy updates and revisions for

future editions. The first step was to put all the membership information up on a database on an IBM PC using dBase II. A program was written in dBase which accepted the names and callsigns of members from each club and then ran a check of existing entries to look for that member. For next time, this program will pull out the data from this year to use (with amendments) for the next directory. This will really minimize the work next time as a good 50% of the data will probably be unchanged.

Other programs were written in dBase to sort the data by callsigns and names and to then produce the final listings, fully formatted and complete with page numbering.

As you will notice, the new directory contains repeater listings for Ontario and Quebec. This information from CRAG was also available in a dBase file, so it was a relatively easy job to print this out in the correct format.

The remainder of the text was prepared using a very popular word processor called Wordstar. Again, the idea was to have the text in a form that can be easily added to and amended for future editions.

With the approval of a certain hi-tech company, that wishes to remain anonymous (but is well known for its superb telephone systems), the various text files were assembled into one big file that was down-loaded to a VAX mainframe and then submitted to a Xerox 9700 laser printer to give camera-ready

copy; all untouched by human hands and ready to go to the printers.

The end result you can now judge for yourself. I hope you like the larger format and boldface listings. We are constantly being told that the average age of radio amateurs is going up and up, so I figured that I should make it as legible as possible. I certainly need it!

By automating the process I hope I have laid a good foundation for future editions. Of course I won't do it again unless I get a bit of help...

Mark Farey, VE3OWL



### DIRECTORIES

Thanks to hard work by Mark Farey (VE3OWL) and others, the club directory is now available. They will be distributed to members at the next meeting. (First copy is free of charge, the second is \$2.00.) We are sorry but due to the low price, we can't mail copies.

OARC'S FIELD DAY

It's that time of year when we must start thinking about Field Day once again...

My name is David Anderson (VE3JTZ), and I am your Field Day chairman for this year, which will be held on the weekend of June 28/29, 1986.

The theme for this year's Field Day is:

**\*\*\*\* PARTICIPATION \*\*\*\***

This means that no matter what classes of licence you may have or how long you have been active in ham radio, there will be something for you to PARTICIPATE in.

I would like to recruit helpers in the following areas:

1) SOCIAL

- providing accommodation for those who would like to stay for the full 24 hr. period
- hospitality tent for workers and visitors (coffee and biscuits, etc.)
- providing breakfast on Sunday morning
- plus whatever else WE can think of to make the event enjoyable
- how about having a barbeque or some other social event?

\*\*\* NOTICE, no ham licence is required to help out here!! \*\*\*

2) CONTESTING

- Band Captains will be required
- responsibility for log sheets, etc.
- thinking of different ways to get bonus points (bicycle power, etc.)

- slow CW tent for the 'GREEN CONTESTER'
- operators during the contest 24 hr. period (of course!)
- ATTENTION NON-HAMS - logging and dupe checking help required also!
- plus whatever else WE can come up with.

\*\*\* Remember the SLOW CW tent is there strictly for those who may feel intimidated by the 40 wpm pace. \*\*\*

3) PUBLIC RELATIONS

- informing the public and the media as well as other hams as to what Field Day is all about
- giving guided tours of Field Day for visitors, family and friends
- providing demonstrations of ham radio activities (e.g., packet, OSCAR)
- plus whatever...

4) SET UP

- VOLUNTEERS NEEDED to help set up on Saturday morning and dismantle on Sunday afternoon
- since this is my first time as chairman, I would appreciate a call if you can loan trailers, tents, equipment (rigs), etc.

My goals as Field Day Chairman are:

- A) Make sure that EVERYONE who would like to PARTICIPATE has some active part to play in Field Day.
- B) Assist in explaining contest rules and contesting in general, for those of you who have never contested before.

C) Make sure that everyone has a FUN TIME.

I WANT YOU TO COME OUT AND FIND OUT HOW MUCH FUN FIELD DAY CAN BE!!!

If you would like further information or can help out in any way, please call myself or Mark Farey (VE3OWL).

73's

David Anderson, VE3J TZ  
(225-0886)  
Mark Farey, VE3OWL  
(592-2522)

THE TEN COMMANDMENTS OF ELECTRONICS

1. Beware of the lightning that lurketh in the undischarged capacitor, lest it cause thee to be bounced upon thy buttocks in a most unseemly manner.
2. Cause thou the switch that supplies large quantities of juice to be opened and thus tagged so that thy days may be long upon this earthly vale of tears.
3. Prove to thyself that all circuits that radiateth and upon which thou worketh are grounded, lest they lift thee to high frequency potential and cause thee to radiate also.
4. Take care thou useth the proper methods when thou taketh the measure of high voltage circuits so thou dost not incinerate both thee and thy meter; for verily, though thou hath no account number and can be easily replaced, the meter

hath one and as a consequence, brings much woe unto the Supply Department.

5. Tarry thou not amongst those who engage in intentional shocks, for surely they are non-believers and are not long for this world.

6. Take care thou tampereth not with interlocks and safety devices, for this will incur the wrath of thy seniors and bringeth the fury of the safety officer down about thy head and shoulders.

7. Work thou not on energized equipment for if thou doeth thy buddies will surely be buying beers for thy widow and consoling her in other ways not generally acceptable to thee.

8. Verily, verily I say unto thee, never service high voltage equipment alone, for electric cooking is a slothful process. Thou might sizzle in thine own fat for hours before thy Maker sees fit to end thy misery and drag thee into His fold.

9. Trifle thou not with radio active tubes and substances, lest thou glow in the dark like a lightning bug, and thy wife be frustrated nightly and have no further use for thee except thy wages.

10. Commit to memory the works of the prophets, which are written in the instruction book, which giveth the straight dope and which consoleth thee, and thou cannot make mistakes, sometimes, maybe.

Courtesy of Electronics,  
de Skyhook

AMATEUR RADIO AND THE CANADIAN  
SKI MARATHON

The twentieth anniversary of the Canadian Ski Marathon held on February 8th and 9th covered a 160 km course across Quebec from Lachute to Gatineau, and was completed in two days with Montebello being the first stop. This year 1,500 skiers of all ages from 7 to 76 participated. A choice of trail variations to satisfy all appetites was selected - forested areas and lakes, meadows, wooded sections, rolling terrain, fast bush trails and swamps to undulating wilderness. Needless to say, the need of providing first aid attention to injured personnel anywhere along the route was a main concern for the committee. They required fast, reliable communication, not only for reporting injuries but for locating separated family members, publicity, bus transportation, food supplies for feeding stations, trail reports, danger zones and lost articles. This included just about anything that was necessary to monitor the pulse of this massive undertaking held in the unpredictable outdoor Canadian mid-winter environment.

Once again members of the amateur radio community voluntarily donated their services to fill this need. Headquarters for Friday and Saturday night was at the Chateau Montebello where net control and the race committee was based. Near the start at Lachute, Quebec, and in Hawkesbury on the Ontario side, another base station was set up. Its function was to

provide communication with dormitories set up in schools and motels located in Hawkesbury, Lachute, Papineauville and Montebello.

Each day the route was broken up into five sections ranging from 12 to 22 km. Two operators located their stations at each check point which also had a feeding station and toilets. Here skiers were provided with drinks in the form of warm water, orange juice, honey water, chocolatecoated raisins, oatmeal cookies and sometimes hot soup. In addition, safety patrol personnel were present to provide the needy with first aid for blisters, frost-bitten hands, face and feet, pulled muscles, sprains, broken ski poles and sometimes hypothermia. These mobile homes served as welcome rest spots where the weary could refresh themselves, sometimes with a minor clothes change or dry one's socks! The mobile safety vehicles also had a radio operator, qualified first aid staff, a toboggan and a backboard for the removal of severely injured persons from the trail. During the race, safety patrollers skied with the contestants.

A nominal time limit was set for the completion of each section. Skiers had to leave that check point before the time lapsed - no further departures being allowed. Fifteen minutes after closing, a pair of patrollers, one with 2M radio followed through providing help as needed and reporting status en route.

Radio equipped ski patrollers usually employ a three watt

portable with antennas ranging from quarter wave to five-eighths verticles. This writer used a home-brew quarter wave vertical stainless steel rod inserted in a SO 239 chassis connector to which were soldered four wires functioning as radials. This radiator was taped to a one inch diameter dowel that was carried in a back pack. The crude fixture was connected to the portable, hidden underneath the parka, with coax. This antenna survived several encounters with low hanging branches and minor spills, attesting to its simple rugged design. It was repaired once with a piece of tape from the first aid kit!

The mobile safety vehicles mainly used 5/8 mag-mount verticals. Some resourceful check point operators erected quarter-wave ground plane antennas where a pole was available. It was essential to put a good signal into the repeater, so the operators were requested to arrive early and position themselves accordingly before the first skier arrived. Repeaters used were VE2RM, VE2RBH and VE2CRA.

On the following weekend, February 16th, the Gatineau 55, an internationally sanctioned event in the worldloppet circuit was held in Gatineau Park with start and finish at Asticou Centre in Hull. This race was also conducted with rest stops, check points, safety patrols, feed stations and time limits. Skiers who were not past a one third way point at 11 a.m. were directed to the 35 km loop. Radio amateurs at check points and others skiing along with the

safety patrollers provided communication services.

About fifty hams provided communication for both events which, without their assistance, could not have been conducted in such an efficient manner. The CSM committee wishes to recognize these amateurs who contributed to the success of these winter activities.

VE2FFS	VE2KM	VE3AOE	VE3ANO
VE3ASM	VE3BYX	(& XYL)	VE3CRX
VE3EOT	VE3GFI	VE3GSA	VE3GVI
VE3HCA	VE3HVA	VE3HYS	VE3IDC
VE3IHX	VE3INT	VE3JDB	VE3JLG
VE3JRX	VE3JSD	VE3JTZ	VE3KEB
VE3KIH	VE3KIZ	VE3KJQ	VE3KMV
VE3LBH	VE3LBW	VE3LNH	VE3LOT
VE3MJC	VE3MPG	VE3MPX	VE3NHN
VE3NPB	VE3OAF	VE3OFM	VE3OJN
VE3OMA	VE3OSL	VE3OWL	VE3OWW
VE3OWY	VE3PAE	VE3PAP	VE3ZS

W4LIE and WD4ECBY.

The latter two from Reston, Virginia, were in the Ottawa area and managed to get in on the action for the Gatineau 55.

A word of acknowledgement to those who volunteered their services as standees; their names didn't appear on the daily roster but Harrie, VE3HYS, and Rick, VE3HVA, had them lined up if needed.

by Peter, VE3LBW

#### FLEA MARKET, April 19

The OVMRC is having its spring Flea Market on April 19th at Canterbury High School.

RESOLUTION

This resolution is under consideration by the OVMRC. It looks like a start towards getting some sanity in the law concerning EMI.

RESOLUTION RELATING TO INTERFERENCE WITH THE USE OF RADIO ARISING FROM THE SUSCEPTIBILITY OF CONSUMER ELECTRONIC EQUIPMENT.

The Ottawa Valley Mobile Radio Club

mindful of,

- 1) the continually increasing number of problems of interference arising from the susceptibility of consumer electronic equipment to licensed radio transmissions,
- 2) the increasing number of licensed radio stations and the rapidly increasing amount of consumer electronic equipment being used in Canada,
- 3) the fact that most retailers and practically all users are, as yet, unaware of the fact that much of the consumer electronic equipment that they purchase may experience interference at some time and are unaware of how to deal with it,

recalling that,

- 4) in 1977 the Department of Communications told manufacturers by means of Electromagnetic Compatibility Advisory Bulletin No. 1 (which was very widely circulated throughout

industry) about radio field strengths in which consumer electronic equipment could be expected to operate,

- 5) engineering committee of the Radio Advisory Board of Canada and the Canadian Standards Association have been studying this matter for at least seven years now,
- 6) the means for reducing the susceptibility of consumer electronics equipment to radio fields have been well known since the early days of radio and that these means are not expensive when taken at the time of manufacture,

recognizing that,

- 7) Canadians have an absolute right to benefit from the responsible use of radio and, having complied with the requirements of the Radio Act and Regulations and having received a license, should not be held hostage by the manufacturers and users of consumer electronic equipment that reacts improperly and undesirably to licensed radio transmission,

is gravely concerned because,

- 8) a court in Ontario has already ordered that a licensed amateur radio station may now not be operated because some consumer's electronic equipment malfunctioned,
- 9) failure to take positive action on the matter of consumer electronic equip-

ment susceptibility will now result in a widely used precedent being set and in further court decisions similar to this one which will prevent the use of all kinds of radio in Canada and thus limit the benefits of radio to Canadians in general,

therefore unanimously resolves,

10) that the Minister of Communications be asked to take steps immediately in conjunction with the Minister for Consumer and Corporate Affairs to have the law amended to place responsibility for resolving problems due to the susceptibility of consumer electronic equipment to licensed radio transmissions, squarely on the manufacturers and users of affected equipment,

11) to ask all amateurs, especially those who have suffered as a result of the susceptibility of consumer electronic equipment, amateur radio clubs, and the two national associations of radio amateurs to write their Members of Parliament, the Minister of Communications and the Minister of Consumer and Corporate Affairs, supporting this resolution and asking that steps be taken immediately to correct this problem of consumer electronic equipment susceptibility to authorized radio transmissions.

### ELECTRONIC TRIVIA

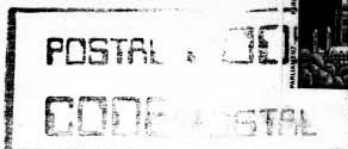
The term "condenser" was born in 1745 when a scientist was experimenting with a Leyden jar. He reasoned that the electric charges were "condensed" in the jar. A Leyden jar was the original capacitor consisting of metal foil sheets on the inside and outside of a glass jar. The foil served as the plate and the glass as the dielectric. A hundred years later, Michael Faraday further studied the characteristics of capacitors.

Alessandro Volta judged a battery by the flash he saw when he touched its wires to his eyelids! Andre Maire Ampere showed that when current flowed through a suspended rectangular wire loop, the loop became magnetized and acted like a compass needle and pointed north.

George Simon Ohm discovered curious mathematical relationships between various electrical components in 1827. Ohm's source of electricity was a set of Leyden jars connected by brass rods. In 1831, Joseph Henry discovered that electricity is induced in a conductor as a result of a magnetic field. It led to the discovery of the transformer. None of these early electrical scientists ever realized the magnitude of their discoveries - but they can never be forgotten.

Tnx-W5YI REPORT  
de RaRa RAG

de The Rambler



<u>The Ottawa Amateur Radio Club. Inc. Box 8873, Ottawa, Ont. K1G 3J2</u>			
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<b>Vice-President</b>	Kathy Rodd VE3OWY	3-295 Lincoln Ave. Ottawa, Ont. K1Z 6Y5	722-0255
<b>Secretary</b>	Samson Pierre VE3JSP	Box 909, R.R. #1 Cumberland, Ont. KOA 1S0	833-2801 745-9411
<b>Treasurer</b>	Bruce Lauer VE3MJV	10 Winlock Crescent Nepean, Ont., K2G 3X4	829-9471 990-8887
<b>Past-President</b>	Joan Powell VE3FVO	Box 390, R.R. #2 Nepean, Ont., K2C 3H1	825-4104
<b>Directors</b>	Ken Asmus VE3MVV	2-215 Percy Street Ottawa, Ont.	820-2509 996-5630
	Keith Bedal VE3GFI	125 Ridgefield Crescent Nepean, Ont., K2H 6T4	828-1870 998-2234
	Mark Farey VE3OWL	26 Naismith Crescent Kanata, Ont., K2L 2K8	592-2522 592-2122
<b>Packet Group</b>	Dick Atkinson VE3JBO	20 Mancil Drive Nepean, Ont., K2J 2J5	825-5619 560-3260
<b>Chairmen</b>	Harrie Jones VE3HYS	2-147 Arlington Avenue Ottawa, Ont., K1R 5S6	237-6427 233-6241
<b>Chairman</b>	David Goldsmith VE3FM	6250 Fortune Drive Orleans, Ont., K1C 2B1	824-0515 675-4671
<b>Net Manager</b>	Ken Kendall VE3IHX	777B Springland Drive Ottawa, Ont., K1V 6L9	731-0892
<b>Emergency Coordinator</b>	Ralph Cameron VE3BBM	30 St. Remy Drive Nepean, Ont., K2J 1A3	825-1634 225-2850
<b>EMI Committee</b>	Peter Hafichuk VE3LBW	118 Ivy Crescent Ottawa, Ont., K1M 1X6	745-0608 993-1740
<b>Chairman</b>	David Anderson VE3JTZ	299A Craig Henry Drive Nepean, Ont., K2G 4E9	225-0886 592-2122
<b>Technical Coordinator</b>	Brian Summers VE3JKZ	2231 Hillary Avenue Ottawa, Ont., K1H 7H7	523-1535 996-7885
<b>National Cap. Award Manager</b>			