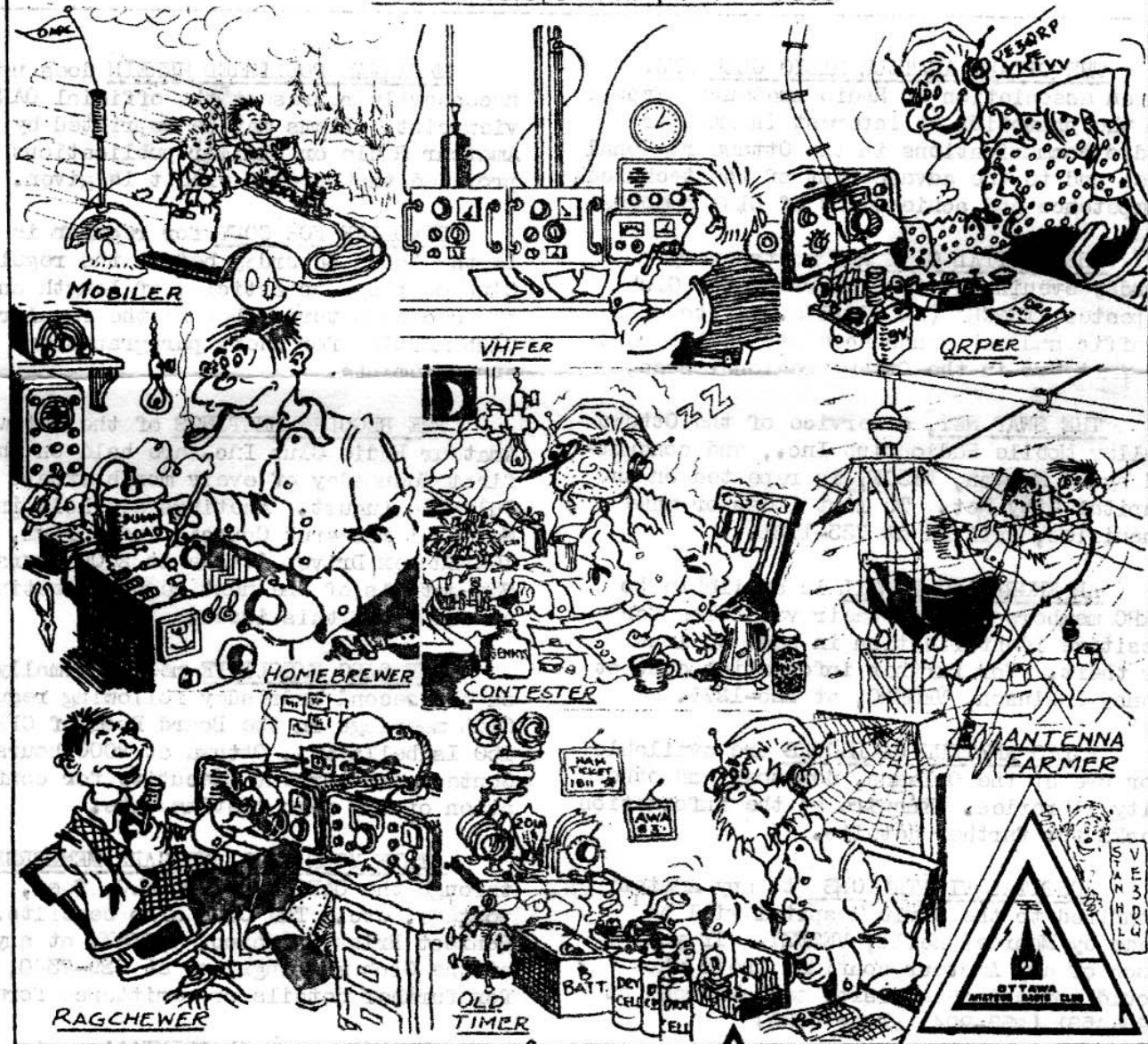




# THE GROUNDWAVE

THE OFFICIAL BULLETIN OF THE OTTAWA AMATEUR RADIO CLUB INC.  
 P. O. BOX 8873 OTTAWA, ONT. K1G3J2



**AMSAT**

Club Call VE3RC



Repeater VE2CRA



--- THE GROUNDWAVE --- 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 Ottawa regional area and to the advancement of the technical competence and achievement of Club members.

THE CAPITAL CITY NET meets every Monday evening at 2000 hours on the Club repeater, VE2CRA (146.34/146.94), to pass traffic and make announcements of interest to Amateurs in the Ottawa regional area.

THE SWAP NET, a service of the Ottawa Valley Mobile Radio Club Inc., and conducted by Ed Morgan, VE3GX, is repeated on the Capital City Net. To list items or make enquiries, call Ed at 753-1721.

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

RADIO AMATEUR CALLBOOKS are available for use at the Orleans, downtown and other city libraries. Enquire at the information desks for further details.

HOSPITAL VISITATIONS to any Amateur confined to the Civic Hospital will be made by Maureen Neill, VE3FZY. If you know of any Amateur confined their who would appreciate a visit, call Maureen at 725-4581 (233-9941 after 5:30)

DOMINION STORE CASH REGISTER TAPES are being collected by the OARC so save up your tapes (and your neighbour's and friends as well) and contact members of the Executive for further details.

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

DEADLINE FOR COPY for regular issues is the third Saturday before the regular Club meeting for articles of length and the second Saturday before the regular Club meeting for short paragraphs and announcements.

THE REGULAR MEETINGS of the Ottawa Amateur Radio Club Inc. are held on the first Wednesday of every month except July and August. Meetings are held in the National Research Council Auditorium, 100 Sussex Drive, Ottawa at 2000 hours. See details of the next regular meeting elsewhere in this issue.

THE OARC EXECUTIVE meets normally on the second Wednesday following regular Club meetings in the Board Room of CFRA, 150 Isabella St., Ottawa at 2000 hours. Contact the current Executive for confirmation of the next meeting date.

RENEW YOUR ARRL AND CARF MEMBERSHIPS through the OARC and save M.O. fees, postage, etc. The Club also benefits. Contact Brian Barsalou, VE3IBX, at any of the Club meetings, or at 829-7340, for further details or remittance forms.

SEE YOUR NAME IN PRINT!!! -- in national and international publications! Write an article to be published in THE GROUNDWAVE and then watch it travel! Many local articles have been reprinted in Club bulletins all across North America.

Minutes of the Ottawa Amateur  
Radio Club, Inc. 2 Jan 80

The meeting was brought to order by Larry, VE3CRX, President at 2010 hours. All members and visitors were welcomed. Visitors included Steve, a non-amateur and Jeff, VE3IWF.

Minutes of the December Meeting: Larry asked who had received the Groundwave and requested a motion that the minutes be adopted as published in the Groundwave - Merv, VE3CV made the motion and it was seconded by Ed, VE3HST.

Committee Reports:

VE2CRA: George, VE3BNO, said the major change was replacing the receiver. He said that when the generator runs, there is noise on the repeater, and as a project for 1980, he would like to see a different type of repeater. Larry thanked George for his work during the year.

Financial: John gave a run-down on the estimated and actual expenditures of the Club for 1979. He pointed out that the estimated cost of the Groundwave was not as high as had been budgeted, but in 1980 the cost would be close to the estimates and for this reason, the Club should consider raising the dues. Bruce McMahon, VE3AZM, gave the financial statement.

R.S.O. Convention  
Financial Report

Revenues

Registrations	14751.62
Exhibitors fees	363.55
Advertising	660.00
Donations	10.00
Flea Market	204.00
Raffle	337.00
Bank Interest	58.25
	<u>16384.42</u>

Disbursements

Skyline Hotel	767.75
Hotel Gratiuty	100.00
Orchestra	2200.00
Amateur Prizes	2081.06
Ladies Prizes	392.18
Bus Tours	355.50
Printing	1008.12
Signs	53.49
Postage	518.60
Security	144.45
Name Tags	63.44
Licence Fee	13.00
OVMRC Room	35.00
Bank Charges	2.16
Committee Expenses	167.99
RSO Contribution	500.00
	<u>15312.74</u>

Excess of Revenue over expenditure

1071.68

Ottawa Amateur Radio Club Incorporated  
Statement of Revenues and Expenditures  
For the year ended November 30, 1979

Revenue

Memberships	1618.33	
Interest	<u>188.82</u>	1807.15

Expenditures

Groundwave and Directory	520.95	
Operating	94.00	
Administration	<u>207.98</u>	822.93

Excess of Revenue over Expenditures before items  
Below: 984.22

Excess Revenue from monthly prize draws	137.23	
Excess Revenue from disposal of assets purchased from the Crown	84.00	
Excess of Revenue over expenditure on R.S.O. Convention	<u>1071.68</u>	1292.91

Excess of Revenue over expenditure for the year  
ended November 30, 1979 2277.13

Ottawa Amateur Radio Club Inc.  
Balance Sheet  
November 30, 1979.

ASSETS

Cash	4010.13
Accounts Receivable	<u>129.45</u>
	4139.58
Fixed Assets	4020.00
	<u>8159.58</u>
Other Assets	680.00
Incorporation Expense	<u>8839.58</u>

Liabilities and Surplus

Prepaid memberships 371.00

Supplus  
Balance at December 1, 1978 6191.45  
Excess of revenues over expend-  
itures for the year ended November  
30, 1979 2277.13

Balance at November 30, 1979 8468.58

8839.58

Auditors Report

The Executive  
Ottawa Amateur Radio  
Club Incorporated

I have examined the Balance Sheet and Statement of Revenues and Expenditures of the Ottawa Amateur Radio Club Incorporated (formerly known as the Ottawa Amateur Radio Club) for the year ended November 30, 1979. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstance except that I was unable to verify revenue beyond ascertaining that the receipts as recorded in the books of the Club were deposited in the Club's bank account.

In my opinion, except for the effect, if any, of adjustments that might have been required had it been possible to extend my verification of revenues, these financial statements present fairly the results of the Club's operations for the year ended November 30, 1979.

Ottawa, Ontario  
January 2, 1980.

Bruce McMahon  
Chartered Accountant

Groundwave: Carl, VE3BYX, offered to help the person who volunteered to take over the Groundwave. He said he thoroughly enjoyed working on the Groundwave during the past five years and meeting the various people. He wished the new Editor/committee the best of luck.

EMI: Bill, VE3EKA said it had been a very quiet year.

Membership: Ken, VE3PU said almost 200 people had registered.

Santa Claus: Bill, VE3KEB said approximately 55 children took part from the Children's Hospital, and it was a great success. Larry mentioned that there was a note about it on the 11:00 p.m. CJOH news.

E.C.: Larry said there hadn't been any emergencies. Amateurs still took part in the Ski marathon, Metres for Millions, and other local events. Larry mentioned that volunteers were required for the Ski marathon February 15, 16, and 17.

Old Business: Because of the Incorporation, the Executive requires a motion of ratification for the actions of the Executive during the past year. Ken, VE3LJ made the motion and it was seconded by Zyg, VE3GZS.

Larry mentioned that - back to the Groundwave - brice, VE3EDR, has helped and would continue to do so. He also mentioned that Jose is being transferred to Houston, and that a person is required to collate, staple and label the Groundwaves, and he would leave it up to the members to decide if they did in fact want a Groundwave.

---Continued on Page 10.---

NEXT MEETING: Wednesday, February 6, 1980---See Page 6 for details.

NEXT MEETING

The next regular meeting of the Ottawa Amateur Radio Club will be held on Wednesday, February 6th, 1980 in the Auditorium of the National Research Council, 100 Sussex Drive, Ottawa, at 2200 h.

The principal speaker will be Dick Atkinson, VE3JBO who will tell us about VUCOM CRT terminals.

MEET YOUR NEW EXECUTIVE

Immediately following the election seems to be a natural time to introduce the members of the executive to the members through the Groundwave. A few short biographies will be given in this issue, with the rest to follow in the March edition.

Brian Summers, VE3JKZ - Vice Pres.

Brian is 37, married and has two children. He is employed by the Department of National Defence. He passed his first radio amateur examination in 1959 while a SVL in England. Eighteen years passed before his first QSO in June 1977. He operates HF only: SSB, CW and RTTY. Brian likes to work DX and has over 150 countries confirmed.

Over the past year, Brian built a linear amplifier. He says that he has received so much enjoyment from amateur radio and the OARC that he wanted to put something back in; so he ran the snack bar at the club auction/flea market a couple of years ago, provided coffee at the meetings last year, and ran for (and was elected) Vice-President this year. He intends to work with the executive and club members to help maintain the club's success.

Jim Swail, VE3KF - Director

Jim was first licenced as VE2TU in Montreal in 1946, the same year that he graduated from McGill and got his first job with NRC here in Ottawa. After one year as VE3BNR, Jim moved to Hull where he held the call VE2YU until 1948 when he

came back to Ottawa and obtained his current call, VE3KF.

Jim is a member of DXCC, Rag Chewer's Club and OCVA. He operates all HF bands and two meters. In the late 40's he was President of OARC and in 1976/77, the President of the Champlain Regional Repeater Association.

Professionally, Jim has worked on the frequency and time signal control systems for CHU. More recently, he has been involved in the development of aids for the handicapped. Jim is married and has four grown-up children.

Dave Hilborn, VE3JBX - Director

Dave graduated from Queens University, Medicine, in 1960. He became a licenced amateur in 1967 (one of Gerry King's successes). He is most interested in trouble shooting, although he claims to be not very experienced, and only moderately successful!

John Gilbert, VE3CXL - Treasurer

John has been an amateur since 1955 and has been active as VE3BOH, VE8OW and VE3CXL. He has many interests in the hobby, but DXing and Contests remaining as lasting interests. His most recent interest is writing about amateur radio in the North.

John is a member of CARF, ARRL and CANAD-X. He holds DXCC, both phone and CW, has applied for 5 Band WAS and is now awaiting a few cards to enable him to apply for 5 Band DXCC. His favourite band is 80 meters CW--the bottom 15 KHz CW.

He is married with two children and is also interested in genealogy, stamp collecting and Canadian History.

ARIANE

The first launch of the European Space Agency's new satellite launch vehicle took place on December 24th, 1979 and was a complete success. The next amateur satellite will be launched by Ariane later this year.



AMATEUR RADIO COURSE

Boy Scouts Regional Headquarters is starting an Amateur Radio course on Wednesday nights at 7:30 p.m. at the Totem Building on Baseline Road. Final registration is January 31 and those starting the course will hopefully be ready to pass the Amateur exams in May. Anyone interested please call Sean Huntley (course director) at 722-9467 or John Fiener at 729-8641.

TWO METRES IN MEXICO

How would you like to transmit from 250 to 500 miles through one repeater using only one watt?

The secret, of course, is to live in mountainous country like central Mexico. Contrary to popular belief, Mexico is not all arid desert. As a matter of fact, Mexico City is at an altitude of over 8000 feet, while the highlands are at 6000 feet.

The UHF/VHF club in Mexico has made a survey of the mountains and has selected a site that will allow club members in Mexico City to talk directly to club members in Acapulco which is about 270 road miles away. Further to this, surveys are being taken to the west of Mexico City and the club feels that Mexico hams will be able to talk to hams in Guadalajara directly at a distance of 570 road miles. Of course, many hams between these stations will also be able to use the repeaters and more sophisticated like the use of microprocessors will be coming in the future.

As Eduardo, XE1SOL, was leaving Luis' home, I jokingly said that maybe we could be talking on two metres one day. With a serious look on his face, Ed said he was quite sure that such a QSO was in the not too distant future.

Mexican hams are aggressive and face many more problems in purchasing rigs, getting repair parts and at one time faced extremely difficult exams before a licence was issued. Licences are now easier to obtain but equipment is still very, very expensive. There are many repeaters in the larger centres of Mexico on

frequencies that we are familiar with and could use our rigs when we visit Mexico City or Acapulco.

I could not take my two-metre rig into Mexico because we do not have a reciprocal agreement with them. What a shame and how do we get things moving to alter the situation? Auto-patch is not legal in Mexico but noises are being made to have the rule relaxed a bit. I could have used my rig and a phone patch because I got lost many times.

Finally, I regret to say that two-metre rigs are stolen in Mexico and unauthorized people get on the air and the language used often leaves a bit to be desired. The latest UHF/VHF bulletin has a drawing of a good antenna to locate illegal operators. It does sound familiar but I assure you we really don't have an unauthorized use of our repeater as serious as other countries.

de VE3IBV/London ARC Bulletin

CANADIAN OPERATION IN U.S.

A working arrangement has been concluded between the Federal Communications Commission and the Department of Communications to the effect that registration permits will not be required after January 21, 1980, for visiting amateurs who intend to temporarily operate their stations while visiting in the other country.

de DOC memo to CARF/CRRL

MISSISSAUGA EVACUATION (CONT)

South Pickering ARC members JPP, WZ, HAA, DAX, KZE, LEP, LEQ, IDQ, CLL, KXT, LIJ and BIC under the guidance of EC VE3FGN manned communications at Red Cross HQ. Kitchener-Waterloo ARC members AVY, IZR, IXC, CGE, IYY and HRU manned stations at evacuation centres as well. Peel ARC efforts were guided by EC VE3IXB and the club repeater, MHZ, was used. Other repeaters used included XRX, RSO and SKY.

BATTERIES by Carl Everson, VESBYX

The proliferation of transistorized equipment, smoke detectors, toys, etc. have generated an unprecedented use of batteries in today's households. A survey of our requirements would be an eye-opener to most of us.

A typical household indicated upwards of 40 common cells needed to keep everything on the go but the most startling figures show that these batteries could cost anywhere from \$15 to \$150 depending upon the type used. This gives an indication of possible savings if the correct type is chosen for each particular application.

The 'right' choice, however, is not always simple, Eveready, for example, makes over 300 different types. Also, batteries perform differently depending on the type of service and frequency of use and the price can vary significantly from place to place as batteries are frequently used as loss-leaders by some stores. I have recently noted prices from \$1.59 to \$2.69 for a common make of 9-volt Alkaline battery. It pays to shop around!

There are three common primary types, carbon-zinc, zinc-chloride and alkaline, and one common secondary (rechargeable) type, nickel-cadmium. Some manufacturers produce only one type or another while others produce a variety for different needs.

Carbon-zinc batteries are most efficient when used at drains of under 100 milliamperes and with rest periods between periods of use. This is due to the phenomenon of polarization which allows a layer of hydrogen bubbles to form and effectively stop current flow when used at higher drains and continuous use. When the device is turned off, many of these bubbles will escape and after a few hours rest the battery will be useable again.

Carbon-zinc batteries are inefficient for heavy drains such as are encountered in toys, camera flash units, some walkie-talkies etc. and their low temperature performance is also poor. Why, then, buy carbon-zinc cells? For average use in a flashlight, it's the best buy as well as in radios used occasionally.

"Super Duty", "Supercell" and "Transistor" designators indicate a more refined mixture of chemicals and offer some improvements although the basic characteristics remain the same.

"Heavy Duty" and "Supertop" are designators for certain makes of zinc-chloride cells. There are other names used as well

but, unfortunately, they are not usually identified specifically as 'zinc-chloride' and the price is only slightly higher so that is no indication of type either.

Zinc-chloride cells perform better in medium and high drain situations due to less polarization problems and their low temperature performance is better than carbon-zinc types as well.

Alkaline cells are the best all-round performers of the commonly available primary cells, giving the longest life under heavy drains and continuous use. Its low-temperature performance is good and its shelf-life is slightly better than carbon-zinc or zinc-chloride types.

Alkaline types also carry the highest price tag - about twice that of the previous two and on a strict hours-per-dollar basis does not look that good but the voltage stays higher longer and does not begin to fall off until near the end of its life. On a continuous duty cycle, especially with heavy drain, the alkaline cannot be beat.

Nickel-cadmium cells have the equivalent of a 'reverse gear'. With a primary cell, it is a process of strict chemical-to-electrical conversion but with ni-cads this can also be reversed to electrical-to-chemical action to charge the cell when required.

The life of any particular charge of a ni-cad is less than that of a primary cell, an alkaline cell might last as much as 10 times as long as a ni-cad of the same physical size. Ni-cad low temperature performance is also good and voltage stays up until just near the end of its discharge period.

Initial cost of a ni-cad is also high, as much as 4 to 6 times that of an alkaline and you must also figure in the cost of a charger but if you use a lot of battery power the cost per hour is very low and might be your best buy.

In summary, if carbon-zincs are available cheap, they are worth buying for a flashlight used on occasion. Zinc-chlorides are better but still leave something to be desired performance-wise. Alkalines are a good choice where reliability is considered over cost, especially for high-drain continuous-use applications. Nickel-cadmiums should be a first choice for heavy battery use. The savings just cannot be beat.

If a device uses more than two sets of alkalines per year, ni-cads begin to look attractive but to realize the full advantage of ni-cads, the device would need to be using at least 20 sets of alkalines per year and that's heavy use!

(VESBYX)

Assets: The assets of the Club (equipment, etc) will be published in the Groundwave.

It was mentioned that Bob Sangster, VE3FB had passed away and condolences will be sent to the family.

Doug, VE3OZ and Chuck, VE3JDM have been in the hospital.

Amateur of the Year Award: Larry gave a brief run down on how and when the Amateur of the Year Award was given and the names of previous winners. The 1979 Amateur of the Year Award was presented to Doug, VE3CDC, for, among other things, his contribution to Canadian amateurs as editor of T.C.A. Doug said he appreciated the award and was extremely surprised that he won it. He gave a short history of TCA and of the people who worked on it. Doug, by the way, is retiring as the active TCA editor.

Larry said 1979 had been an interesting year. We hosted the R.S.O. Convention, but not as many people helped as they had done in the past. He said too much had been done by too few, because the committee couldn't get volunteers. The picnic was cancelled because no one worked for it. The banquet was cancelled because only 22 people showed an interest in attending. So far there isn't an Editor for the Groundwave or a collator. He said there was certainly a lack of volunteers for just about everything, although some people did volunteer. Larry said he realized amateur radio was a hobby but if everyone just sat back, there wouldn't be anyone to do things - no Convention, no repeater; the Executive and Committees require co-operation and without it the Club will dwindle. Larry said the same people do things year after year - George, VE3BNO requires help with the repeater. Paul, VE3ICV and his Executive will require help in 1980. How the Club functions in 1980 is up to the membership, not the new Executive. If there are things you want done, tell the Executive - they're more than willing to listen. Larry thanked the people who came to the meetings and thanked the Executive and Directors from 1979. He hopes Paul and his Executive will get the Club support and make 1980 a better year.

Nominating Committee: Ray, VE3CUA, explained the voting procedures and ballots were handed out.

John, VE3EHO, won the FT202R two metre rig, which was the door prize.

Larry said the boxes of things at the front of the auditorium belonged to Ted, VE3CAD, and that the proceeds from the raffle would go to the Estate. A total of 71.50 was collected, and John, VE3EHO, was the winner. Larry thanked everyone for their generosity.

<u>Nominated</u>	<u>Elected</u>
<u>Vice-President</u>	<u>President</u>
Brian Summers - VE3JKZ	Paul Coverdale - VE3ICV
Art Binch - VE3JGW	<u>Vice-President</u>
<u>Directors (Elect Three)</u>	Brian Summers - VE3JKZ
Sean Huntley - VE3HXP	<u>Treasurer</u>
Jean Benoit - VE3JBQ	John Gilbert - VE3CXL

Jim Swail - VE3KF  
 Dave Hilborn - VE3JBX  
 Fred Green - VE3IO

Secretary  
 Dave Parks - VE3GSA

Directors  
 Jim Swail - VE3KF  
 Dave Hilborn - VE3JBX  
 Fred Green - VE3IO

Ray thanked the people who didn't win for letting their names stand, and said there had been one invalid ballot.

Larry turned the meeting over to Paul, VE3ICV. Paul thanked everyone and said he wanted to welcome the new Executive. He thanked the out-going Executive, especially Larry. He said he thought amateur radio was a hobby and should be enjoyable, and would like to see the Club do practical things - projects. He gave a brief background of himself and said he hopes to see everyone at the February meeting. He also said he would like to see an "exchange of information" at the meetings as had been done in the past. Fred, VE3IO said he requires earphones for a new amateur.

A motion was made by John, VE3EHO and seconded by Syd, VE3GVI to end the meeting at 2200 hours.

MESSAGE FROM THE PRESIDENT

1980 brings a new decade and quite a few new faces to the OARC Inc. executive. Although most of us, including myself, have not previously held executive positions in the club, I can promise you that we will all work hard to make the 1980 program a success. Nevertheless, we can't do all the work ourselves. We need volunteers for specific projects, we need ideas, and we all need encouragement. I would particularly urge any new members to get involved. It's a great way to meet other members, and it sure beats sitting alone at the back of the auditorium during club meetings.

My personal hope this year is that we can put together a good technical program for the club meetings. I am sure that activity in most of the different facets of Amateur Radio around the Ottawa area. Let's try to get the people involved in these activities to the meetings to enable us all to find out about them.

On a personal note, I was first licenced in England as G3TJZ. In

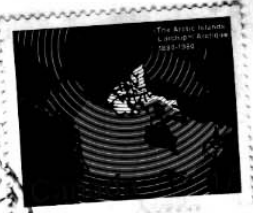
those days I was an impecunious schoolboy, so ham activities were fairly limited, although I still have fond memories of my first home-brew 150 watt 80 meter transmitter and AR77 receiver. In 1972 I graduated to an FT-200, but my apartment in London limited my antenna possibilities. I really became active when I moved to Canada in 1974 and obtained my present call, VE3ICV. For the past three years I have been involved in the OARC Field Day, twice as Chairman. Recently, I helped draft sample questions for the Amateur and Advanced Exams. Professionally, I am a member of the scientific staff of Bell Northern Research where I am involved with subjective experiments to assess the performance of new types of telephones and systems. I also teach Electrical Fundamentals at Algonquin College one evening a week in the Fall and Spring. All of this, plus a wife, two children and a dog keeps me pretty busy.

73,

Paul, VE3ICV

THE OTTAWA AMATEUR RADIO CLUB INC.  
 BOX 3873, OTTAWA, ONTARIO, CANADA  
 K1G 3J2

FIRST CLASS MAIL  
 FIRST CLASS MAIL



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:	VE3JKZ	Ontario, K1H 7H7	993-2931
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:	VE3KF	Ontario, K1K 0G8	
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