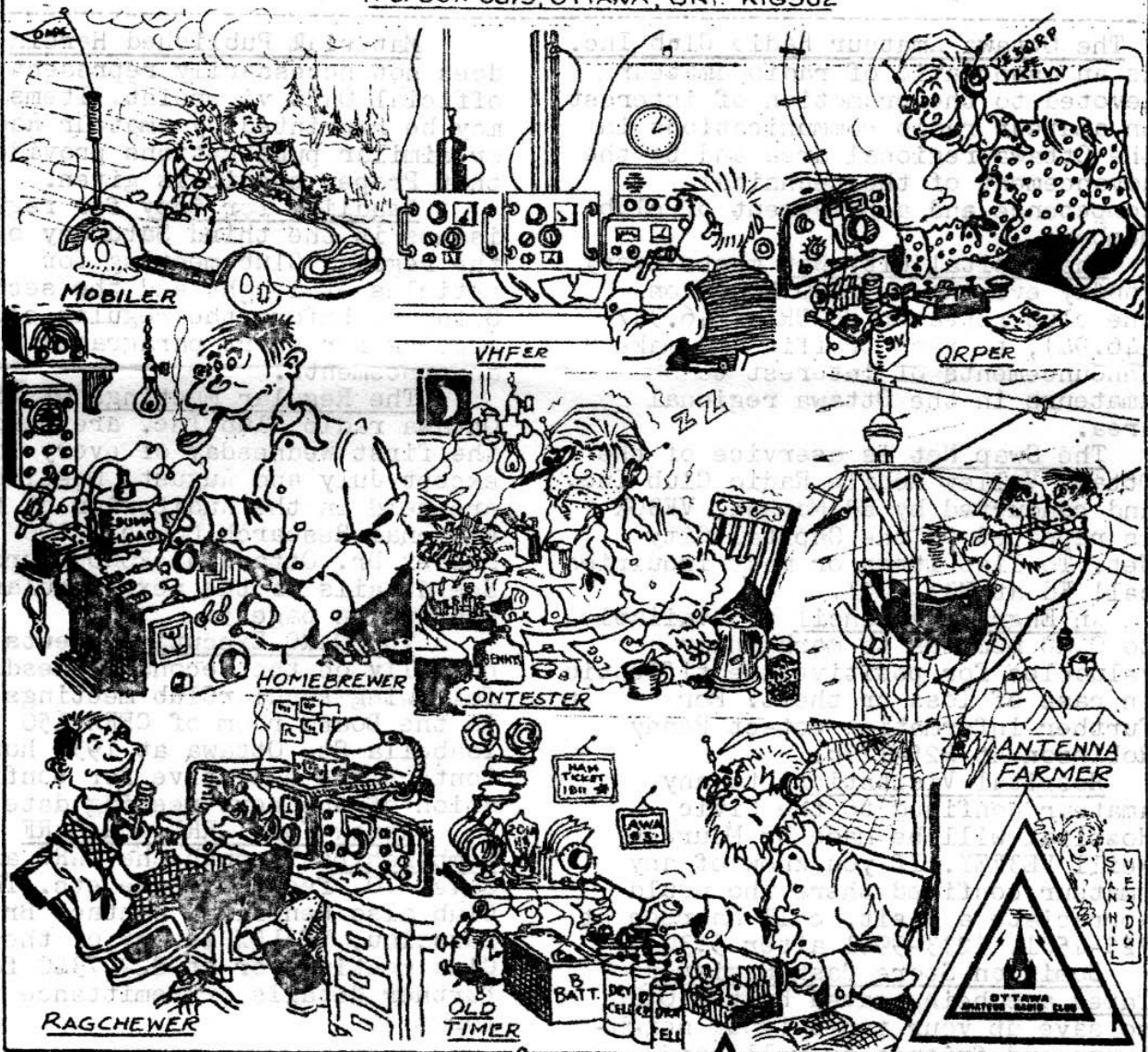




# THE GROUNDWAVE

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 associatio 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 is 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 inquiries call Ed at 733-1721.

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 at 225-1276.

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

Dominion Store Cash Register Tapes are being saved by the OARC so save up your tapes (your neighbours 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 radio Club Inc. are held on the first Wednesday of every month except July and August. Meetings are held in the Auditorium of the National Research Council 100 Sussex Dr. Ottawa at 2000 hours. See details of the next regular meeting on page 5.

The OARC Executive meets normally on the second Wednesday following regular Club meetings in the Board room of CFRA 150 Isabella St. Ottawa at 1930 hours Contact the executive for confirmation of the next meeting date.

Renew Your ARRL and CARRF Memberships Through the OARC and save M.O. fees, postage etc. The Club also benefits. Contact Brian Barsalou, VE3LBX at any of the Club meetings or at 829-7340 for further details or remittance forms

Summary Minutes of the  
OTTAWA AMATEUR RADIO CLUB, Inc.

March 5, 1980

(Note- the full minutes were not received in time for this issue of the Groundwave, so this summary was prepared. - Ed.)

The meeting was brought to order by Paul, VE3ICV at 2000 hours. All members and visitors were welcomed. The minutes of the February meeting as published in the Groundwave.

The 1980 Budget was presented by the Treasurer, John VE3CXL. After a short discussion of the item on insurance, the budget was approved by a vote of the membership. It was explained that while there was no legal requirement to obtain insurance as the membership was now protected from individual liability, the executive felt that it had a moral obligation to be able to meet any commitment which might arise out of club activities which resulted in injury or property damage.

Paul VE3ICV reminded the members that the club owned a two meter rig which was available for loan to any member who might be hospitalized. He also announced that the club banquet and dance will be held on Friday, April 18th at the RA Centre and that tickets could be obtained from any member of the executive for \$15.00 each. Len Weeks orchestra will provide the music. The price includes a hot roast beef dinner and wine.

Brian VE3JKZ again called for a volunteer to take over the responsibility for preparing the coffee and cookies following the meetings since he can no longer look after this now that he is serving on the executive. Since there have been no volunteers, coffee will not be served at the April meeting.

Doug VE3CDC gave a brief summary of the recent changes to the DOC amateur radio regulations.

These include extension of the 40 meter phone band down to 7.050 MHz, deletion of the requirement to sign mobile or portable, the addition of endorsement for use of phone privileges on 160 meters for Amateur class licences after six months of operation, the addition of the 902-928 MHz band, and dropping of the requirement for Canadian amateurs to obtain FCC registration permits for operation in the United States. Most of these regulation changes went into effect on February 26th, 1980.

Brian VE3JKZ informed the members of the status of Club power supply project. Since the meeting, Joe VE2DZT agreed to chair a committee to come up with agreed upon parameters for the power supply.

Rick, VE3HVA reported that he is compiling a list of those interested in participating in a bulk purchase of either a Weller temperature controlled soldering station or an illuminated magnifier for bench work. The cost for each item will depend upon the quantity ordered, but will be about \$50-60 for each item. Anyone interested in either of these items should contact Rick at 737-0782.

Despite the poor skiing conditions, it was reported that the amateur support for communications for the Ski Marathon was excellent as usual. Because of lack of snow, on the second day, the skiers backtracked toward the starting point instead of continuing to the usual finish point.

The lucky winner of the monthly Club raffle has two new 1980 Callbooks.

The two speakers for the evening were George VE3BNO and Mike VE3TP who gave a most informative presentation of the Amsat satellites and how to become involved with this mode of operation. They pointed out that it is not necessary to have very fancy equipment to enjoy operation using the amateur satellites.

Following the main speakers' presentation, the President asked the membership if there was any other business. Thereupon, Bill VE3BDC asked to see the Club constitution. At the following executive meeting it was decided to provide one or two copies at the general meeting for interested members to read. If there is sufficient interest, additional copies will be made available for purchase at a cost of \$1.00 each.

The meeting was adjourned at 200 hrs.

OARC BANQUET

Keep the 13th of April free for the OARC Banquet at the RA Centre at 1900. Over half of the available tickets have been sold. At \$15.00 each, the tickets are a bargain including a roast beef dinner, wine and dancing to Len Weeks four piece band. Tickets are available from any member of the executive.

FIELD DAY 1980

Mark the weekend of June 28-29 on your calendar, and keep that date open for the annual Field Day!

Following a very long tradition, the OARC was again the winner in its class with a total of 5644 points last year as a result of 865 CW and 1095 phone contacts. We were competing in the four transmitter class.

Field day would could benefit from MORE OPERATORS, as last year, some hardy members had to put in very long stretches at the key or mike.

For those who are unfamiliar with the fun filled activities of Field day, plan to attend the June meeting when a few slides will be shown from last year's activities. If you are interested in helping to set up, take down the site or operate, contact John VE3DYJ at 829-1272.

OARC BUDGET for Fiscal year ending November 30th, 1980

<u>Estimated Revenues</u>	\$2,000.00
<u>Estimated Expenditures</u>	
Groundwave	\$1,247.37
EMI Clinics	60.00
Picnic	25.00
Field Day	100.00
Administration	551.00
Banquet	60.00
Repeater	100.00
Hospital (Maintenance)	25.00
Equipment	100.00
AMSAT	100.00
Ontario Trilliums	25.00
	<u>\$2,393.37</u>
Net Excess Expenditures over Revenue (Deficit)	(393.37)
<u>Cash Assets</u>	
Savings Account	\$4,082.31
Checking Account	156.54
Accounts Receivable	<u>153.12</u>
	\$4,396.97

NEXT MEETING

The next regular meeting of the Ottawa Amateur Radio Club, Inc. will be held on Wednesday April 2, 1980 in the Auditorium of the National Research Council, 100 Sussex Drive, Ottawa, at 2000 h.

There will be two main items on the agenda:

1. A live demonstration and talk by VE3OB and friends on the new "Digipeater" Packet Radio System operating on the 220 MHz. (We are told that this is not a digital repeater--to find out what a digipeater is, come to the meeting!);
2. A talk by Mitch Powell VE3OT, the recently elected Director of the Canadian Division of the American Radio Relay League.

Because of the full agenda, the meeting will be started promptly at 8:00 pm.

AMSAT

by George Roach,  
VE3BIO

The lively question period following the talk on AMSAT at last month's OARC meeting indicates that there is considerable interest in the upcoming launch of another amateur radio satellite. How time has flown! In 1961, the first of the Phase I battery powered, low earth orbit amateur satellites beeped "HI" as it raced around the world. In 1965, the first of the Phase II transponder satellites powered by solar cells opened up a new mode of amateur communication. In May, 1980 the first of the Phase III high elliptical orbiting amateur satellites will be launched to give amateurs a new DX band open to half of the world for up to nine hours in one stretch. As one amateur magazine

it will be possible to have a "round-table including W6, W3, DJ4, G3, 5Z4, KL7, U38 and YV5 all together".

Our newest satellite will be launched between May 20th and 28th from Kourou, French Guiana by a European Space Agency Ariane rocket. The launch will be between 1500 and 1800 Z and will place the amateur satellite (which will become Amsat-Oscar 9) into a "transfer" orbit around the equator. This orbit will be elliptical with the high point, or apogee, 34,000 km above the earth and the low point or perigee only 200 km up. If the satellite were to remain in this orbit, it would not last very long because of the drag of the earth's atmosphere near the perigee. To overcome this problem, a rocket motor has been mounted on the amateur satellite itself. Hopefully, a well timed 20 second "kick" from this motor will shift the satellite into a slightly different elliptical orbit having the same 34,000 km apogee, but a safe perigee of 1,500 km. The "ground track", or spot on the earth directly below the satellite, will progress from 57 degrees north latitude to 57 degrees south as the earth turns below the orbit. Initially, the apogee will occur at 25 degrees north latitude.

It will not be difficult to hear this satellite on two meters, just below the repeater band. The down-link frequencies are centred at 145.90 MHz. There is an engineering beacon at 145.99 MHz and a general beacon at 145.81. Modes heard will include CW, (lower)SSB, RTTY and SSTV in the communications band. In addition, there will be six special purpose channels?

- A - Scientific Research
- B - Computer linking etc.
- C - Formal Traffic Nets
- D - CW/RTTY bulletins and code practice
- E - Oscar Education program material
- F - General bulletin channel for amateur radio societies around the world, and on-board telemetry.

A FREE OUT-GOING QSL SERVICE is one of the services provided with a membership in the Canadian Amateur Radio Federation. Many inquiries are received asking how the CARF National QSL Bureau works, how to prepare cards, etc. The following is a very condensed outline of the operation.

**VOLUNTEER STAFF**---- Consists of a QSL Manager, Assistant Manager, Acting Treasurers, 3 assistants, Manager for Box 66 clearing and 3 assistants.

**OUTGOING CARDS**---- Gather up your DX cards and sort them alphabetically by prefix, sort your VE and VO cards by district number and mail them in bulk to:  
"CARF National QSL Bureau Services, Box 66, Islington, Ont., M9A  
Be sure to put your return address and CARF number on the **4X1** outside of all packages and envelopes. To keep postage down, mail as "Printed Matter" but be sure to write **PRINTED MATTER** on the outside of all packages and envelopes along with your return address and CARF number.

**SELF ADDRESSED STAMPED ENVELOPES (SASE)**---- If you wish, you may enclose SASEs with your outgoing cards and they will be passed to the volunteer who looks after your incoming cards.

**BOX 66 CLEARING**---- Ken Rolison, VE3CRL, is in charge of this and the box is cleared 5 times weekly. They are then delivered to Jean Evans, VE3DGG, once a week.

**PROCESSING CARDS**---- Cards are sorted immediately and all letters checked. Mailing of cards is done as volume dictates, usually three times a month. EVERY card is cleared at the end of each month even if there are only one or two cards for a rare prefix - NO card is left in the files at the end of the month.

**UNCLAIMED CARDS**---- Every means is used to get an incoming card delivered before it is returned to the originating country as 'Unclaimed'. It is better to return a card than to have the sender wonder why he has not received a return QSL. Each unclaimed card carries a notation of why it could not be delivered and they are enclosed in outgoing bundles so no extra postage is involved. Other countries do this for us so, in the interests of good public relations, we reciprocate.

**CORRESPONDENCE**---- All letters are answered and then filed for future reference. All letters of inquiries, ideas, suggestions and complaints are welcomed from members, non-members, SWLs or other interested persons.

**RE-CYCLING**---- Wrappers, envelopes, string, etc. are all re-used. Costs must be kept down wherever and whenever possible.

**RECORDS**---- File cards are kept on all countries and entries made of date and number of cards mailed. A master record sheet is kept of totals per month and per year. All records are available at any time for those wishing to see them.

Good Luck, and we hope to hear from you soon. Good Health for the coming year.

Sincere 73,

Jean Evans, VE3DGG, Manager  
CARF National QSL Services

AMSAT -continued

Because of the spin rate of the satellite, right hand circularly polarized antennae should be used. Either a helical antenna or crossed yagis phased for right hand polarization will do the job, but arrange for them

to point skyward. Because of the distance to the satellite, at apogee, at least 8 db of antenna gain will be required. Information on the 435 MHz uplink and the Amsat Launch Information Nets, ALINS, will appear in the next issue of the Groundwave. Cont. P 11

IMPLICATIONS OF THE NEW BANDS

Several departures from established Ham procedures are going to be necessary if we are to fully use our new bands. First, of course, the bands are no longer harmonically related so we will have to modify any VFO types that just generate a 160 or 80 metre signal and multiply it to get into the proper band. Receivers are going to need changes in the local oscillator generation because the bands no longer start on an integer number of megahertz. Either you can calibrate your dial in MHz above band edge or you must develop a new dial system. Of course, if you have one of the new digital readout dials with the LED's, you are home free but many of you are not in that class. The best position to be in is the case where you have really one receiver and a whole slew of crystal-controlled front-end converters. In this case, it becomes a matter of getting some new crystals and building up a set of converters for the new bands. I am one of the fortunate ones, as this is the technique used in the HW 16. I think several of the other Heath rigs use a similar system and any rig that allows selection of other bands for SWLing, etc., such as the Drake TR series can be changed the same way. Antennas are a slightly different kettle of fish. The ubiquitous tri-bander cannot easily be replaced with a six-bander because the traps would be horrendous to contemplate and interleaving a group of elements tuned that closely to each other as is done in the full-size tribanders and in multi-band quads will inevitably lead to a tune-up nightmare. It seems much more profitable to me that antennas of the future will be log-periodic or a related approach. This should make more sense than the few presently available log-periodic types ~~that~~ because the bands will be more closely spaced proportionately. Over the typical usable bandwidth of 2:1, the best that can be done to date was 20/15/10 with two of the bands at the extremes of the tuning range. The same range now will include

the bands at 14, 18, 21, 24 and 28 MHz, and it may be feasible to get to 3:1 to include the 10 MHz band.

de Peel ARC News

HOME-BREW POWER SUPPLY

The Ottawa Valley Mobile Radio Club is beginning a club project to build 13.8 volt DC power supplies. If interested, contact Russ Pastuch, VE3FSN, telephone 521-7994.

CENTRAL ONTARIO FLEAMARKET

The Guelph ARC is sponsoring the Central Ontario Amateur Radio Flea-market and Computer Fest, Saturday, 17 June 1980, at the Centennial Arena in Guelph. Surplus dealers, computer hardware and software, packet radio. Contact Rocco Furfaro, VE3HGZ, (519) 824-1157.

CQ DX HOUNDS

If all goes well, Paul Cassel VE3AVY and Doug Campbell VE3CHQ will be off to Africa this summer. If licensing arrangements can be made, we plan to operate, if time permits, from the northern part of Zambia in Central Africa.

Two-Way Communications Ltd. where Daoug and Paul are employed, have been awarded a contract to establish two communications systems in the country. One of the systems will use SSB on 4 and 8 MHz while the other system will comprise two 40 MHz FM repeaters and 35 mobile radios in construction equipment. Two-Way was the successful bidder out of five for this Canadian International Development Agency funded project.

As of this writing, no new amateur activity was being authorized due to the state of war existing in Rhodesia to the south which also involves part of southern Zambia. Since peace has been negotiated, there is hope that Amateur activity will resume.

de VE3AVY Kitchener-Waterloo ARC

LAKE SIMCOE HAM FEST

The Lake Simcoe Repeater Association, with the assistance of the Barrie, Orillia and Newmarket clubs, is sponsoring the Lake Simcoe Ham Fest, June 13, 14 and 15, 1980, at Molson's Park, Barrie, Ontario. A full range of activities is planned and camping facilities, but no trailer hookups, will be available. Talk-in will be on VE3LSR 146.25/85, simplex 146.2552 MHz and 3790 kHz. Pre-registration-admission fee is \$4.00, under age 18 free. For information and reservations, write Ron Clarke, VE3JPS, PO Box 2283, Orillia, Ontario.

QRP OR QRO?

I, for one, can't help but "tsk-tsk" some of the statements heard on today's ham bands. (Not that yesterday's statements were any different.) For instance, I heard ole Bucketmouth telling Tradewind the other day, "I traded my ole Potbelly 150 rig for one-a-them new Fireball 150 rigs. That other 50 watts makes a goshawful difference. All I get now is reports of 20 over 9 or better."

BALONEY! Even Junior the Novice knows that 50 more watts in this case don't matter a hoot! Granted, if you are working VHF or opening or closing a HF band, the power can make a notable difference. Or, if you contact someone who has a receiver with an S-9 threshold level, an extra dogbiscuit or so can be heard. But who uses crystal sets?

What about when the bands open, like 10 and 15 now? Consider this: In 1926, the Jewel Electrical Instrument Company sponsored a contest for low power work, the winner to be that Ham who achieved the greatest miles-per-watt. (First QRP contest?) The wattage was to be measured as the total input to all tubes in the transmitter, including filaments. Loren Windom, 8GZ, was the winner, and his outstanding achievement was the QSO with Australian 5BG using an incredible input power of 0.567 watts! This was a distance of 10,100 miles which calculates to a record-breaking 17,820 miles per

watt. The tube was a 199 with four volts on the filament and 70 volts on the plate.

To my knowledge, this record stands today, 41 years later. Point? What has your Fireball 150 done for you lately? QRP or QRO?

de Chuck Conner KØNG  
/St. Paul Groundwave  
/Ham Hum/Lincoln Log

SMOKE SIGNALS

The new VE3SKY repeater, operational 26 December last, includes a novel feature. A smoke detector, when activated, replaces the periodic three-minute identifier with a steady tone until the smoke is eliminated.

ARRL AWARD OF MERIT

Marshall Killen, VE3KK (ex VE3CDK) was awarded ARRL's Certificate of Merit for outstanding contribution to Amateur Radio.

Marshall has been active since 1919, before the Northern Irish government issued licences and he became EG2AUB. As a cable operator, he moved to Italy in 1925 and, with Western Union, to the Azores in 1928, receiving the first Azores licence EP3MK. The war brought him to Canada (as VE3IH and VE3DSC) and to Tunisia where his knowledge of CW helped save a life. After the war, Marshall retired and returned to Cape Breton with WU and then back to the Azores.

Marshall retired in 1977 and now pounds brass in Kitchener-Waterloo every day from 4 pm to 11 pm, handling 200-300 messages a month. He was the first Canadian to earn the ARRL certificate for 40 WPM.

de Kitchener-Waterloo ARC

LAST MONTH'S CIRCUIT

last month's article on the tone alert circuit referred to "diode D1" but the diodes were not labeled in the diagram. To defeat the timer reset, remove the diode across the 270k resistor.

MISSISSAUGA POSTSCRIPT

The Canadian Red Cross placed ads in Mississauga area newspapers thanking all those who assisted them in the emergency including Radio Amateurs.

## ANATOMY OF A CONVENTION

by John Gilbert VE3CXL

September, 1978: A phone call from Bud Punchard, VE3JUD asking "How would you like to spend a couple of hours helping out on the RSO Convention program?" - Pleased to oblige says I.

November, 1978: Spent a pleasant evening at Bud's house in company with Bill Westbrook, VE3EKA telling stories and quaffing Bud's "Cutty Sark". A couple of minutes were dedicated to discussing convention programs.

December, 1978: Another pleasant evening at Bud's, with more discussion, taller stories and more quaffing.

February, 1979: Attended a meeting of OARC Executive (as Treasurer) to witness the decision of that august body that the OARC Treasurer would also be responsible for the finances of the RSO Convention. "Not much to do", said the President, "just a couple of cheques to write and a visit or two to the bank".

March - June, 1979: Just as the President predicted, wrote out a couple of cheques and made a visit or two to the bank. Also made occasional visits to Bud's house. Noticed a subtle change in this routine - increasingly more work, fewer tales and less quaffing.

June - September, 1979: Change of venue from Bud's house, with his comfortable chairs and smooth scotch to downtown conference rooms. Slight compensation for the loss of comfort in the form of do-nuts provided by Croft Taylor, VE3OR. A large number of meetings of the Convention Committee. The program and other activities started to take shape. On the financial front the summer proved to be very pleasant. Money started to flow into and out of the bank account, just as planned, necessitating leisurely visits to the bank. These were usually made at lunch time providing the occasion for a stroll down Sparks street with its interesting sights and sounds.

September, 1979: Sudden increase in activity (quaffing long forgotten now). Jim Hatch, membership chairman, appeared

almost daily at our front door clutching bundles of cheques from amateurs across the province and beyond. Frequency of visits to the bank increased. September also marked the departure of Bud Punchard for Geneva and the World Administrative Radio Conference. I agreed to cover any last minute program details since nothing much could happen now, could it?

October, 1979: Twelve hectic days left. Bank manager gives me a cheery greeting each day as I add more money to their coffers. The few minor withdrawals for buses, name tags etc. gave him no inkling that the thousands building up in our account would disappear as fast as they came in. Last minute letters, radio schedules and telephone calls to speakers and technical experts on the program. In addition, frantic last minute checking on films and audio visual equipment to suit the varied (and changing) preferences of a host of speakers. At last the time has run out and no more can be done....

Friday, October 12, 1979: The Convention has begun. Monitoring VE2CRA, one hears dozens of amateurs from afar descending on our fair city eager to benefit (?) from our labours over the year. Arrived at the hotel at 5 p.m. to join the flurry of activity. Members of the Convention committee look stangely out of place dressed in their Sunday finery and flushed with excitement (or perhaps as a result of some furtive quaffing).

Saturday, October 13, 1979: Time for the program to begin. Will the speakers really arrive? Is the equipment in the right place? Suddenly there are 800 people milling around trying to locate their particular item of interest. Questions galore. (Where's Punchard's Cutty Sark when it is needed?) The morning passes with minor hitches noticed by only a few. Then the afternoon has come and gone and suddenly it's all over.

Sunday, October 14, 1979: At last a chance to enjoy the Convention, visit a couple of sessions and stop at the flea market. Happened to run into Tommy Lott, a keynote speaker who gave his opinion that the

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**BULK PURCHASE:** If you are interested in participating in the Club bulk purchase of either the Weller temperature controlled soldering

station or the illuminated magnifier for bench assembly work, contact Rick at 737-0782. The cost of these items will depend upon the number ordered

Convention was better than any he had attended in recent years in the U.S.. His comment was music to the ears of the Convention Committee - with comments like that maybe, just maybe we will do it again....

Postscript: Back to the bank on Monday to see the balance clear \$12,000, but not for long. In the ensuing days the bills for the band, the hotel and a host of other expenses would leave us with a profit of just over \$1. Later in October there was a postmortum at the home of Gord Grant, VE3DY. Tales of the Convention were exchanged into the evening as Gordon's supply of gin and tonic went into a deep decline. The Convention flame was extinguished to burn again this year in the City of Toronto.

HF Awards for Deserving Amateur  
Brian Summers, VE3JKZ

Awards and Certificates which can be obtained as a result of your on the air activities make fascinating "sheepskins" to hang on the shack wall. Many of them are quite easy to obtain, costs are minimal, and visitors will find them more intriguing than listening to CW or SSB squawking through a loudspeaker. Some of them are simply fun things to go for and can be obtained quite easily. Others will tax your competitive spirit to the limit and hone your operating skills to a fine edge. All of them will improve your knowledge of antennas and propagation.

Over the next several months I will describe various HF operating awards which are available through a series of articles. There are probably thousands of them on a world wide basis, so I can only hope to describe several examples of both the more common and less common ones of which I am aware.

Before we start let me say two things. Sunspot Cycle 21 seems to have peaked already. Although there is still lots of good propagation in store for the deserving DX'er, the time for this cycle is running down. The second thing is that beams and high power amplifiers are not the most essential thing for success. You'll not bust a pile up on 14.210 MHz

#### OARC BANQUET

The OARC Banquet will be held on

using 100 watts and a dipole, but the world is at your fingertips with patience, operating skills and a good pair of ears.

The two most popular HF awards for DX purposes are the Worked All Continents (WAC) to be described here and the DX Century Club (DXCC), which will be covered next month. The WAC must be the easiest of all the HF Awards. The requirement is to work one amateur station in each of the six Continents of the World, i.e. North America, South America, Europe, Africa, Oceania and Asia. The Award is sponsored by the International Amateur Radio Union (IARU). Two way confirmed contacts (original QSL cards) must be sent to ARRL Headquarters for checking, one for each of the six continents. Confirmations with all cw or mixed cw and phone will receive the basic award. Special endorsements are available for 1.8, 3.5 or 50 MHz, SSTV, SSB and phone. A unique version of the award is available for working all continents on each of five or six bands, after January 1, 1974. It is advisable to send your QSL cards by registered mail - and be sure to include sufficient funds or IRCs to cover the return postage. Full details may be obtained from ARRL Headquarters, Newington, Conn. U.S.A. 06111.

My WAC is endorsed "SSB Phone", but if you want my opinion just apply for the basic award. Otherwise the printing of the endorsement tends to obscure the small print which states what you received the award for - makes it difficult for visitors to read and appreciate what you accomplished

With conditions as they are on ten metres you can do this Award in a day or two without any difficulty - probably in an hour or so if you're lucky. From early morning to mid afternoon you can work Europe and Africa. All day work North and South America. Late afternoon work Australia for Oceania and Japan for Asia. There, you've just worked all Continents. Easy wasn't it?

Just be patient for several months while the cards come through the bureaus and then send off for the Certificate. The Certificate looks very nice, and the cost is absolutely free. As with most Awards a decent frame will far exceed the cost of the Certificate.

April 18th at the RA Centre. Tickets are \$15.00 each and available from any member of the executive. The price includes a hot roast beef dinner, wine and dancing to Len Weeks' orchestra. Over half of the available tickets have already been sold. Get yours soon!

AMSAT -- continued

What will you hear by monitoring ALINS? Why the countdown and launch on the HF bands! The Amsat net at 2000 local time every Tuesday evening will give you the latest dope on "what happens when you have to reduce the memory of the onboard computer from 32K to 16K at the last minute?" or "can the antenna tuning be adjusted at the last minute because the antenna had to be shortened by an inch because it was rubbing against another part of the rocket payload?"

NEXT MONTH IN THE GROUNDWAVE

In the next issue of the Groundwave, look for an article on the DXCC award, more on AMSAT and some thoughts on the cost of sending QSLs. Why don't YOU submit an article? The deadline for the May edition is April 11th, 1980.

FROM THE EDITOR

After Larry VE3CRX made his impassioned "swan song" speech at the January meeting of the OARC requesting a volunteer to take on the the job of Groundwave editor upon the retirement of Carl VE3BYX, I (foolishly?) offered to give it a try. Thanks to a long set of minutes already typed on Gestetner masters by Marilyn VE3JDS, last year's secretary, a great deal of assistance and good advice from Carl, continuing help from Ian VE3AMK who coordinates the publishing and the excellent support of the assistant editors and publishers, the February issue came out on time and without any serious problems. As a result of continuing excellent support from the editorial and publishing staff (see page 2), as well as the authors of the many articles which have been submitted, you are now reading the third issue of our Club magazine since I took on the job of editor.

I would like to take this opportunity, on behalf of all the Club members, to thank Carl for the excellent service he has provided to the OARC over the years as editor of our Groundwave. I hope that I will be able to at least maintain the standards set by Carl.

I do not plan to make any drastic changes to the style or content of the Groundwave in the near future, except at the request of you, the Club members or your representatives, the club executive. As we gain experience, my assistants or I may propose some changes to the executive. If you have any suggestions for improvement, please let me or any member of your executive know about them.

Now for the standard plea made by all club bulletin editors: HELP! This is YOUR magazine. The executive and editorial staff can provide some material to help fill the pages, and much of this should be of interest to the membership. However, the GROUNDWAVE can only be successful if it continues to receive articles written by the members. So why don't you give vent to your literary talents?

There are so many different aspects to our hobby that none of us can be expert on them all. What is your primary interest? Wouldn't other club members like to know more about it? Have you built something interesting? Have you performed some interesting experiments? Or is there some aspect of our hobby that is either especially attractive to you, or one that "bugs" you? If so, why not write a letter to the editor? Don't worry about grammar, spelling or style (please do make it legible though!)-- after all part of an editor's job is to try to make the english at least passable! We are trying to make your bulletin interesting and informative so let us know how we are doing.

THE OTTAWA AMATEUR RADIO CLUB INC.  
 BOX 8873, OTTAWA, ONTARIO, CANADA  
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