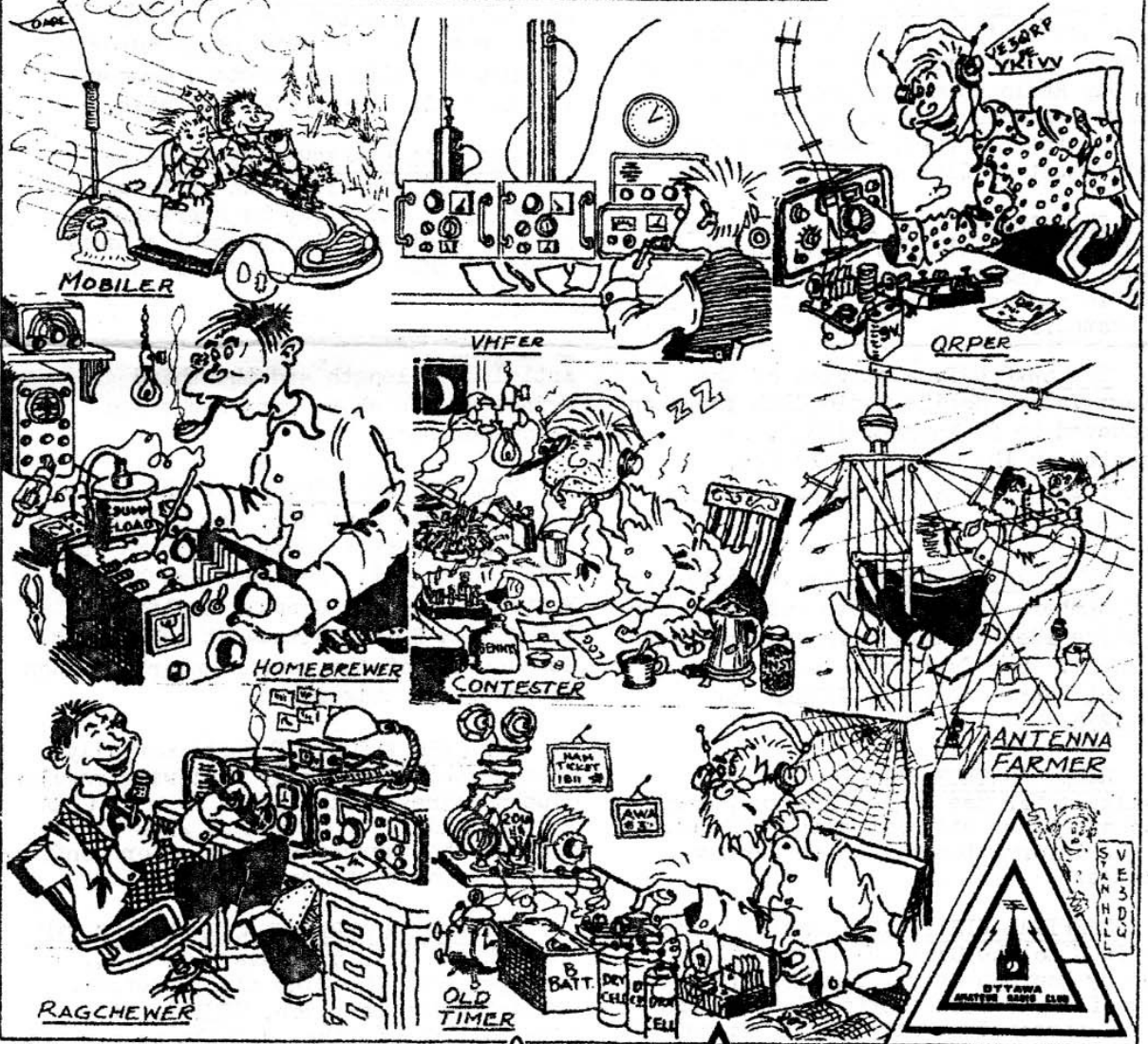




THE GROUNDWAVE

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 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, VE3ERO, at 225-1276.

RADIO AMATEUR CALL BOOKS 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 there who would appreciate a visit, call Maureen at 725-4748 (233-9941 after 5:30)

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.

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 second Wednesday each month for articles of length and the third Wednesday 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 National Research Council Auditorium, 100 Sussex Drive, Ottawa at 2000 hours. See details of the next regular meetings 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 MEMBERSHIP through the OARC and save M.O. fees, postage, etc. The Club also benefits. Contact Brian Barsalou, VE3IBX, at 829-7340, for further details or remittance forms.

MINUTES OF THE OTTAWA AMATEUR
RADIO CLUB, INC. 1 October 1980

Paul VE3ICV, president, called the meeting to order at 2000 hours. He welcomed the visitors to the club meeting, including Fred VE3MT, John VE7CPY and VE1PZ. In considering the minutes of the September meeting, it was noted that there was an error on page 4; the sentence referring to the Boy Scouts and VE3SHQ should have been: "The Boy Scouts may also offer a course at their headquarters where their station VE3SHQ is located." With the above correction, Joe VE2DZT moved that the minutes be adopted and Gord VE3DY seconded the motion which was carried.

Paul reminded the members that he still has QSL cards for VE3JSC, VE3JQL, VE3JSF, VE3JRV, VE3JCN, VE3JMN, VE3JCO, VE3JKS, VE3JLM, VE3JLN, VE3JMO, VE3JCG.

Paul announced that a nominating committee is needed to propose a slate of nominees for the various positions on the executive. The election will be held at the January meeting. Gord VE3DY agreed to chair the committee.

Paul reminded the members of the availability of the club's two metre rig and linesman's belts. See past issues of the Groundwave for details.

Extra copies of the Club directory are available for \$1.00 each.

Nominations are now open for the club's award for "Amateur of the Year". If you would like to nominate someone for this award, send a letter to Paul outlining the reasons for your nomination.

Sydney VE3GVI provided further information on the auction to be held on October 25th at Canterbury High School. Penny VE3ERO is accepting reservations for tables. Volunteers are needed to provide refreshments. Contact Paul or Syd to help.

Paul VE3CEP has a friend interested in Short Wave Listening and who would like to know times and frequencies where one can hear broadcasts from Yugoslavia. Anyone with information should contact Paul.

Brian VE3JKZ introduced Home Brew Night with his power supply for a linear amplifier based upon the design of W6SAI's handbook. Under no-load conditions it produces 3200v. which drops to 2750v. at 400 ma. The Hammond transformer was surplus obtained from Century 21 for \$7.00. Eight 520 microfarad capacitors in series provide 65 microfarads. The circuit is a voltage doubler. A series time delay resistor in the primary limits surges.

Next, VE3LAO described his morse code receiver project which included filters and an interface to his TRS-80 microcomputer and the software to translate the morse code to ASCII.

Geof VE3KID showed his power supply for his Heath ten watt two metre amplifier. The design was obtained from the ARRL handbook. The supply provides 0-28v. at 3 amperes and parts cost about \$40.00.

VE3 DQM then showed his Accu-keyer. He overcame some initial rfi problems through bypassing the key leads and the a.c. power.

Brian VE3BKT described his power supply for a 100 watt two metre amplifier. It supplies up to 25 amperes at 13.5 v.d.c., is fully self protected and uses brute force filtering.

Chris VE3CBK showed his 24 hour LCD clock built around a \$30.00 clock module from Radio Shack.

Wayne VE3CZO described his two UHF amplifiers for broad-band TV at 450 MHz. He described in detail some problems in achieving adequate

MINUTES - Continued

adequate linearity for the am used for television.

Dave VE3KMV demonstrated an auto-alert tone decoder using a scanner and a microprocessor digital combination lock system developed by the Carleton University club to control access to its station. It is based upon a 6502 microprocessor, has 1024 bytes of memory to store separate combinations for each member and parts cost about \$80-\$90. He then showed a 220 MHz repeater built by Bret VE3JLG using modules from Midland.

Bill VE3AKZ described his keyer.

Finally, Joe VE2DZT described the power supplies built as a club project. The parts cost for each supply was only about \$12.00 as a result of Joe's excellent "scrounging" ability and the donation of the transformers by Fred Hammond.

The judges, Brian VE3JKZ, Ray VE3CUA and Murray VE3JJSO, awarded the Technical Achievement Award to Wayne for the original design and quality of construction of his UHF amplifier. He was also commended for his contributions in the field of ATV. Dave was awarded a subscription to any amateur radio magazine for his ingenuity in the design of his morse receiver. Joe VE2DZT was also given a subscription to any radio magazine of his choice for the excellence of construction of his power supply. He was also commended for his excellent efforts to keep the costs for parts so low to all participants in the club project.

Geof VE3KID asked for communications assistance for the Capital City Chorus convention October 18th. Assistance is needed from 1300-1600 from amateurs with hand-held transceivers. Those assisting will be provided with free tickets for the evening show.

Murray VE3JJSO requested the members to submit articles or letters to the editor for the Groundwave.

Rick VE3HVA requested assistance for the Boy Scout Jamboree on the Air.

The members present were given the opportunity to view the excellent new ARRL film "The World of Amateur Radio".

The meeting was adjourned at 2230 on a motion by Rick VE3HVA, seconded by Murray VE3JJSO.

##-##

AN IN-CAR CHARGER FOR
HAND-HELD TRANSCEIVERS

- by Larry Bradley
VE3CRX

The new hand-held two meter transceivers, such as the TR2400, the FT207R and the IC2A use a nicad battery system that supplies less than 12 volts. In the case of the TR2400, for example, an eight cell battery provides 9.6 volts nominally. When fully charged and still on charge, the voltage can be 11 v. or higher. As discussed in an earlier article in the Groundwave, nicads must be charged at a constant current, 45 ma in the case of the "C" cells used in the TR2400. The problem, whose solution will be described here, is to provide a constant current of 45 ma to a battery with 8 volts or less when nearly discharged to 11 volts when fully charged from a car battery that can range from about 12 volts when in poor condition to over 14 volts when being heavily charged.

The circuit described here is quite simple, and will hold the charging current nearly constant over the full range of conditions described above. The unit also has a fast charge feature which provides 500 ma. This feature should only be

-continued on page 5

NEXT MEETING

The next regular meeting of the Ottawa Amateur Radio Club, Inc. will be held on Wednesday November 5th 1980 in the Auditorium of the National Research Council, 100 Sussex Drive, Ottawa, at 2000 hours.

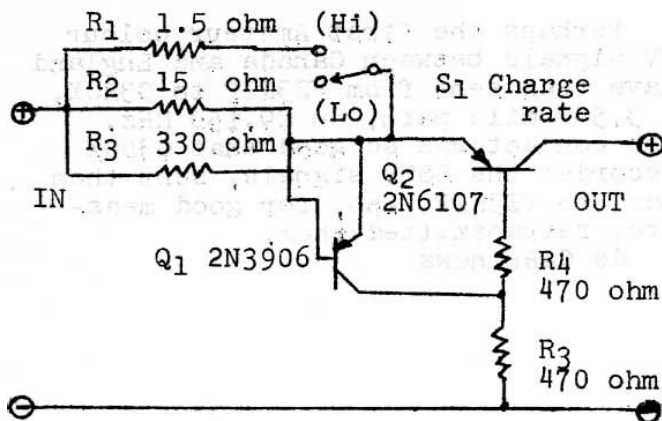
The featured speakers will be George Roach and Sandy Cameron who will discuss various aspects of r.f. interference, a common problem which faces most of us at one time or another!

Q₁ may be any small PNP transistor while Q₂ may be any small PNP power transistor capable of handling at least 1/2 ampere and of dissipating 5 watts if the fast charge option is included. R₂ is about 15 ohms and should be selected to obtain a 45 ma charging current. R₁ is about 1.5 ohms, selected to obtain 500 ma charging current when S₁ is in the Hi charge rate position. All resistors may be 1/4 watt, and Q₂ should be mounted on a small piece of metal to act as a heat sink for the fast charge mode.

In-Car Charger - continued

be used when the transceiver battery is discharged to the point where it will not transmit, and then for no more than one hour for 500 ma-hour (C cell) batteries.

It is important to ensure that the charger be connected to a point in the car's electrical system where power is supplied at all times as if the power is interrupted, the transceiver battery will discharge through the collector-base junction of transistor Q₂ at about 10 ma. A silicon diode capable of handling the current (E.G. 1N4001) could be installed in the positive lead to prevent this, but the 0.7 v. drop across the diode will reduce the range of input voltages which the charger can handle.



HF AWARDS

FOR THE DESERVING AMATEUR

-by Brian Summers VE3JKZ

This series of articles has described several awards issued by North American amateur radio organizations. This month, we will look at some of the overseas awards, and what better place to start than the International Telecommunications Union, the I.T.U.

The I.T.U. sponsored "Diplome des 100" is issued to radio amateurs and Short Wave Listeners in recognition of their achievement in communicating with, or logging reception of amateur radio stations in the territory of 100 or more member administrations. There are no band, mode or other special endorsements.

Rest assured that this is not just another DXCC or CQDX type of 100 country award! To give you some idea of the relative difficulty, I had over 180 DXCC countries confirmed before I qualified for this one. To begin with, there are only 154 eligible countries on the official countries list as compared with 319 on the DXCC listing. Alas, places such as Alaska, Hawaii and the mainland U.S.A. count as one country only. England, Wales, Scotland, Northern Ireland and the Channel Islands are one as compared to seven for DXCC. There are only three USSR listings compared to 18 for DXCC

-continued on page 8.

377,615 individual Amateurs were licensed in the United States at the end of July, continuing the increase noted every month this year. The end of June station licences totaled 385,625 with the end of July station licences totaling 388,115.

de HR Report

CB DECLINING

CB is back where it was five years ago, before the gas shortage and TV publicity triggered the big CB boom. Current licence statistics show CB applications (69,000 in March) running at just the same rate they were five years ago, and only 17% of those whose CB licences are expiring are bothering to renew them.

DOC UPDATE

Reciprocal licensing agreements were concluded between Canada and Haiti during the summer. There is not yet a third-party traffic agreement with Haiti. Canadian Amateurs may handle third-party traffic from Amateur stations in Bolivia, Chile, Colombia, Costa Rica, Dominica, El Salvador, Guatemala, Guyana, Honduras, Israel, Jamaica, Mexico, Nicaragua, Peru, Trinidad and Tobago, United States (including all territories and possessions), Uruguay and Venezuela. Canadian Amateurs may not communicate with Amateur stations in Iraq, Kampuchea (with the exception of XU1AA), Libya, Somalia, Turkey, Viet Nam and the People's Democratic Republic of Yemen (70A-70Z).

"Dear Sir: We have received an enquiry from the Canadian Radio Relay League concerning the possibility of Canada and Australia entering into a special arrangement..." This letter, dated 1980 June 12, and signed by W.W. Scott on behalf of Dr. John deMercado, Director-General of Telecommunications regulatory Service, seeks a third-party traffic agreement between Canada and Australia. A simple letter of concurrence from the Australian authorities would put the agreement into effect. Keep your

FIRE RAVAGES BAND

The phone portion of the 20-metre band was hit by a freak fire last week that destroyed over 10kHz, according to FCC special frequency engineer, Marvin Larpsnogg.

Apparently, the fire originated on about 14.280 MHz following an unusually long series of QSOs by an undetermined number of California stations running high power and extreme modulation compression. Several Aø carriers were observed at the same time and may have contributed to starting the blaze.

"The fire just spread up and down the band," Larpsnogg said during an interview on "Transmit to the Nation" We had to turn off all the HF bands from 40 through 10 metres in an attempt to smother the flames," he said.

After nearly three hours, the FCC had the fire under control. Most HF bands were back to normal use the following day. However, 20 metres will be closed for an undetermined number of weeks.

Sandy Ampersand, League of Radio Relaying Americans, spokesperson said the fire was the worst such incident since the infamous 5-metre holocaust completely wiped out that band for all time in 1945.

de Worldradio

/Richardson Wireless Klub

TRANSATLANTIC COLOUR

Perhaps the first Amateur colour TV signals between Canada and England have been sent from VE3KIF to G3NOX, a 3,500-mile path, on 29.150 MHz. The contact was so good that G3NOX recorded the SSTV signals, sent them back to VE3KIF, who, for good measure, retransmitted them.

de CARF news

VOLCANO KILLS TWO HAMS

The Washington State RACES and ARES organizations set up emergency nets on March 27, the first day Mount St. Helen's showed signs of activity, and maintained 24-hour service through June.

Gerald Martin, W6TQF, was handling communications for a group of scientific observers when he reported on May 18: "You can't believe this; the mountain has exploded! The car and camper in front of me to the south are already covered and it's going to get me next." These were the last known words from W6TQF.

Reid Blackburn, KA7AMP, who was handling communications for a seismographic observation unit, was also killed the same day.

de Worldradio

OVMRC CLUB PROJECT

Russ Pastuch, VE3FSN, Technical Advisor for the ROVMRC, reports in The Rambler that a two-metre amplifier, 2.5 watts in/15 watts out, has been selected as the club project. A complete kit, right down to nuts and bolts, will be supplied at a cost of \$50.

CNE STATION

Members of the South Pickering ARC helped man the Amateur Radio booth at the CNE this summer. One of the members, VE3JPP, had an interesting experience when he called CQ to Holland. A Dutch lady and her husband were listening behind Peter because he was speaking Dutch. The Amateur who answered was the lady's brother! It had been many months since she had last heard from him. The QSO continued for over half an hour. Needless to say, she was excited and a large crowd gathered once the word got around.

de SPARC GAP

SPARKS FIGHT FOR CW

The 650,000-member Communications Workers of America is currently fighting the FCC to keep CW equipment on large ships. CWA has charged FCC with overstepping its authority concerning Radiotelegraph regulations in the Federal Communications Act. The FCC is proposing that large ships on domestic voyages no longer be required to use CW.

In written comments to the FCC, the union also charged that the proposed deregulation is potentially hazardous, citing a recent collision of two ships near Balveston, Texas. In this case, radiotelephone channels were blocked by interference and rescue efforts were coordinated ONLY through CW communications with an ITT shore station.

CW QRT? Unthinkable!
de St. Paul Ground Wave
/Worldradio/Feedback

AMATEUR RADIO MAGAZINE DANGEROUS

So says the Iowa Department of Social Services. In a letter dated July 16, to one of our readers (who unfortunately happens to be an unwilling guest of the Iowa State Penitentiary at Fort Madison), B. Broxann Keigley, Division of Adult Corrections stated, "73 Magazine for Radio Amateurs has been disapproved by the publications review committee because of being a threat to security and order at the institution." When appealed, this decision was upheld by the prison's director. "This publication gives individuals access to information that could be very detrimental to the security of the institution," he said. The reader (whose only contact with his hobby is by reading about it) feels quite strongly that his first amendment rights are being violated. He has the Iowa Civil Liberties Union working on the case.

de St. Paul Ground Wave
/W5YI Report

**PAGE 9 MISSING FROM
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-MK VE3FFK**

**PAGE 10 MISSING FROM
ORIGINAL DOCUMENT
-MK VE3FFK**

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MEMBERSHIP APPLICATION 1981
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ADDITIONAL NAMES (IF FAMILY MEMBERSHIP)

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ACTIVITIES (PLEASE CHECK APPROPRIATE ITEMS)

BANDS

- SSB _____
- AM _____
- VHF/FM _____
- CW _____
- RTTY _____
- SSTV _____
- VHF _____

PLEASE CHECK APPROPRIATE ITEMS:

I AM A:	MEMBER	APPOINTEE	OFFICIAL
ARRL	_____	_____	_____
RSO	_____	_____	_____
CARF	_____	_____	_____
RAQI	_____	_____	_____

I HAVE A GAS/DIESEL GENERATOR _____ I HAVE A 2-METRE HAND CARRIED _____
yes/no yes/no

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

WHAT WOULD YOU LIKE TO SEE THE OARC DO/NOT DO NEXT YEAR?

(Applicant to complete at same time as above)

OARC MEMBERSHIP - 1981

RECEIVED FROM..... AMOUNT OF \$.....

.....
SIGNATURE
MEMBERSHIP CHAIRMAN

.....
DATE

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P.O. Box 8873 OTTAWA, Ontario, Canada
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