

OCTOBER 1990

THE GROUNDWAVE

* OARC FLEAMARKET *
* SUNDAY, OCTOBER 21, 1990 *



NEXT MEETING WILL BE HELD
WEDNESDAY, OCTOBER 3, 1990

Club Call VE3RC

Repeater VE2CRA



Official Bulletin of the Ottawa Amateur Radio Club, Inc.

<u>The Ottawa Amateur Radio Club, Inc., Box 8873, Ottawa, Ont., K1G 3J2</u>			
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Treasurer	George Caskey, VE3NHN	224-6415	
Past-President	Paul Cooper, VE3JLP	821-2167	
Directors	Clare Fowler, VE3NPC	232-1081	
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	Rob Morrison, VE3ZZR	722-3837	992-4334
	Doug Yuill, VE3OCU	234-2264	788-2733
	Harrie Jones, VE3HYS	739-9365	738-2372
Packet Group Chairman	Wayne Greenough, VE3JSQ		
Repeater Chairman	Ralph Cameron, VE3BBM	825-1634	225-2850
Net Manager	Mike Kelly, VE3FFK	722-5918	788-5782
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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.

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 is elsewhere in this publication.

PACKET RADIO MEETINGS are held at 19h30 on the last Thursday of every second month beginning in September, at the Museum of Science and Technology. This is an OARC technical meeting open to all who have an interest in packet radio.

THE OARC EXECUTIVE normally meets on the second Wednesday of each month at 1930 hours. Contact the President to confirm the date of the next meeting.

DEADLINE FOR COPY is the second Wednesday of each month. Make yourself better known to fellow members and other amateurs, too, by giving us an article, technical or otherwise, relative to our hobby.

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.

JUNIOR MEMBERSHIPS - To encourage young people to join the club and to participate in amateur radio, the club is opening a junior class of membership. Dues will be at a 50% discount but the junior member must pick up his/her copy of the Groundwave (preferably at the meeting).

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

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 members. For the belts, a refundable deposit consisting of a cheque equal to the replacement value of the belts is required. 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.

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.

PACKET RADIO VOICE NET meets following the Capital City Net on VE2CRA at 2040 hours. This is an informal net to answer questions about packet radio, pass along operating hints and provide information for future packet operators.

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

POI-HOLE NET is a SSB/HF net sponsored by the Ottawa Valley Mobile Radio Club, and conducted every Sunday at 1000 hours on 3.760 Mhz. All amateurs are welcome to check in. The Swap-Net is a regular feature.

POI-LID CW NET is an informal slow-speed CW net sponsored and conducted by Ed, VE3GX, and meeting every Sunday, except during July and August, at 1100 hours on 3.620 Mhz, to promote interest in CW and CW procedures.

REPEATERS
 VE2CRA Voice 146.94/34 443.300/448.300
 VE3OCR Packet 145.01(sx) Inter city links
 VE3OCR Packet 145.07(sx) Local Area net for QSO and Packet BBS.
 VE3OCR Packet 223.34/224.94
 56 kbps Packet 220.55/433.55

For further information, please contact repeater chairman.

MINUTES OF THE OARC GENERAL MEETING
OF SEPTEMBER 5, 1990

The September General Meeting of the Ottawa Amateur Radio Club was called to order at 2006 local by the President, VE2ZP.

The first order of business was the welcoming of visitors. Among several visitors in the audience were VE3ONE, VE3OJU, VE3GS, VE7PBE, and VE3SHZ.

Next on the agenda was the presentation of the Joe Norton Award. The chairman of the judging committee, VE3ZZR, presented a cheque in the amount of \$690 to Jeff Wilson, VE3RCI.

The main speaker for the evening was VE2VQ, who spoke on recent developments in amateur satellites.

VE3GSA reported that this year's Field Day was a success. In the area of CRRL business, he reported that the merger talks are progressing.

VE3EBI read the latest CARF bulletin.

VE3BUP spoke to the club on the topic of his difficulties with his neighbour and RFI.

VE3NUN requested volunteers to audit the club's books.

There being no further business, the meeting was adjourned at 2216.

OCTOBER MEETING
Speaker will be
Brian Crook, VE3CRG
on his recent visit with
Soviet hams

SILENT KEY

Brit Fader, VE1FQ, of Lower Sackville, N.S., a well-known amateur operator for decades, whose familiar voice appeared as net controller for the Maritime Net for many years and phone-patched messages for the Canadian forces for many years as well, died in August 1990.

Brit had just been awarded the Award of Honour for 1990 by the Canadian Amateur Hall of Fame.

He will indeed be missed by Canadian amateurs as well as others around the world.

de Doug Burrill, VE3CDC

NEW DIRECTORY

Production of the directory is always a big chore and we need HELP. Please contact Dave Parks, VE3GSA, at 225-1206, to offer your services.

DOCUMENTALIST NEEDED

If you can read this message, have we got a volunteer opportunity for you this Fall!

The National Museum of Science and Technology Corporation is looking for a communications documentalist. This volunteer activity consists of conducting limited research projects in the areas of telephony, telegraphy, or radio broadcasting, contributing towards the new communications exhibit planned for December 1992. Experience in these fields is an asset for this position as you will be broadening the record of knowledge on the collection.

Don't hesitate, call Suzanne in Volunteer Services at 993-5757, today.

LETTERS, LETTERS, LETTERS

Charles W. McMullen, K3CM
Co-Chairman, PA QSO Party

FROM: The Nittany Amateur Radio Club
P.O. Box 614
State College, PA USA 16804

**Copies of the forms will be available at the October meeting of the OARC. The contest will be held October 13-14, 1990.

TO: All members of the Ottawa ARC

Date: July 19, 1990

Dear Fellow Radio Amateurs,

FROM: Quarter Century Wireless Association
2180 Benjamin Ave.
Ottawa, Ontario, K2A 1P4

The members of the Nittany Amateur Radio Club of Centre County, PA, cordially invite you to participate in the 1990 Pennsylvania QSO Party. This QSO party is one of the largest state QSO parties in the USA and also one of the friendliest.

Date: July 6, 1990

To: President, OARC

In order to recognize the participation of Canadian amateurs in the PA QSO Party, we have taken two steps. First, we will be awarding a plaque to the highest scoring entrant from Canada. The plaque is solid walnut and will be custom engraved for the winner. It will be a handsome addition to someone's shack wall. Second, we will be using CRRL sections as multipliers for PA stations. We are hoping this will have the effect of encouraging PA stations to look for and work more Canadians.

The QCWA is offering to coordinate the preparation of a set of guidelines for handling the disposition of radio equipment of "silent keys". We would appreciate any input your club can provide and hope that you will discuss this matter at your next meeting.

We have enclosed a copy of the rules and summary sheet and a log form for the party.** Please make as many copies of these as you need. If you need additional information or forms, please write to the above address or send a packet message to K3CM @ W3YA.PA.USA.NA.

Some ideas from our last meeting are as follows:

1. Amateurs keep an up-to-date list of their equipment including disposal instructions in their safety deposit box.
2. Amateurs establish a complete file of equipment manuals.
3. More than one amateur should be involved in arranging disposal of the equipment.

The PA QSO Party has been growing steadily for the past seven or eight years and last year drew over 600 entries. We would like to continue this growth and hope that you will join us and be a part of it.

Please send us any suggestions your members might have.

Ralph Thomas, VE3GG
Secretary, QCWA

MORE LETTERS, LETTERS, LETTERS

FROM: National Capital Triathlon
13 Phillip Dr.
Nepean, Ont. K2E 6R6

Date: September 2, 1990

To: Mr. Harry Jones, OARC

The 8th annual National Capital Triathlon was very successful with 287 entries and a great day for the race. We also forwarded a donation to The Canadian Guide Dogs for the Blind.

On behalf of our committee, I wish to thank Rick and the other operators for providing communication for the various segments of the event. This is a necessity for the race and your club's assistance was appreciated.

Thank you Harry for coordinating the operators.

Mike Scott,
Race Director

FROM: Ottawa Valley Mobile Radio Club
Inc.
P.O. Box 5530, Station F
Ottawa, Ont. K2X 3M1

Date: May 1, 1990

I refer to page 5 of the May issue of The Groundwave and the notice entitled "DID YOU KNOW THAT" as quoted from the Barrie Amateur Radio Club.

The author is partially right -- Tariff Item (not Customs Exemption) 8537.39.1000 does refer to amateur radio equipment, and it is duty free. It states, specifically:

"Domestic *radio receivers** designed for use on the amateur bands of the radio

frequency as defined by regulations made pursuant to the Radio Act..." (**italics mine*)

It might be more helpful, however, for amateurs to know that *transceivers* are covered under Tariff Item 8525.20.10 which reads as follows:

"8525.20 Transmission apparatus incorporating reception apparatus

8525.20.10 Designed for use on amateur bands of the radio frequency as defined by regulations made pursuant to the Radio Act; facsimile apparatus"

This Tariff Item goes on to describe transceivers covered, such as hand-helds, other transceivers under 30 MHz, those exceeding 30 MHz but not exceeding 400 MHz, and those exceeding 400 MHz. All are classed as duty free. Other Tariff Items, too numerous to list, cover other gear, such as antennas, meters, electronic components and computer hardware and software with varying rates of duty. These can be ascertained by phoning the Customs Regional Office for Ottawa at 991-0605.

A. Chas. King, VE3PDK
Editor, The Rambler

OARC MEMBERSHIP

Membership now stands at 66!!! Please join up, especially if you wish to continue receiving this fine publication. (See the September issue of the GROUNDWAVE for the Membership Form.)

MORE MEMBERSHIP CHAIRY STUFF

September is the busiest month here at the engineer factory, so I'll make this short. First, thanks to those 63 people who already have their 90-91 memberships. That's about a third of last year's final total, so I think we are in good shape. Special thanks to those who sent in your renewal by mail. It turns out to be much easier to deal with that flood of paper when I'm sitting at home, than at the monthly meeting. I don't mind, but in all that chaos, its easier for something to get lost. If your address label doesn't say OK90-91 on it, this will be your last issue... 'nuff said about that. I won't nag (much). Special welcome to newcomers who are reading your first Groundwave. I hope its the first of many for you. Please let us know what you like and dislike about the contents, and by all means, don't be shy about writing a piece for the Groundwave yourself.

A member asked if we could print an update to the directory, which would list those members who have joined us since the last issue was printed over a year ago. The idea has some merit, but involves some work. The next directory will not start until late 1991, for publication in '92 some time. Some clubs publish a list of new (i.e., not renewing) members in each issue. How would you like to handle the problem of keeping your list current?

On the topic of directories, they are published every few years, not annually. When they are published, everyone who is a member at the time is entitled to one copy, free, provided they pick it up themselves. In addition, people who become new members (not renewals), after the books are printed, are also entitled to a free copy. This remains in effect until we run out of directories. We still have some copies, and I have a list of who has already picked up a copy. So if you haven't collected one, and if you are one of those entitled to it, see me at the next

meeting. If the dog ate your old copy, or you just want another to put in the bicycle, the club will be happy to sell you another one for three bucks.

Remember back in March, how you promised yourself you would be out there fixing up ye ol' antenna farm, once the frost left the guy anchors? Well, the leaves are turning, so don't put it off any longer. (I'm guilty of this myself, but that storm a few weeks ago took down my HF antenna, so I REALLY have to get to it now...if only I can get a free weekend without a soaker in it). LAST WORD..BACKUPS (always have).

...73, Mike Kelly, VE3FFK
SEPT. 11/90

JOE NORTON AWARD

At the September club meeting, Jeff Wilson, VE3RCI, was presented with a cheque for \$690.00 as this year's recipient of the Joe Norton Trust Award for Amateur Radio. A written submission, "setting out his or her interests, achievements and plans to contribute to the advancement of amateur radio" was judged with other entries received. Ever since his licence was issued, Jeff has been involved in a plethora of activities including; OVMRC/OARC 1990 Field Day Coordinator, the 1990 Ski Marathon, OVMRC publicity chairman, editor of the monthly "DX de You" column in the OVMRC Rambler, and organiser of the 1990 OVMRC spring flea market. With cheque in hand, Jeff mentioned a few of his projects in need of his recent windfall....perhaps a new tower at his new QTH.

Well done Jeff!

OARC FLEA MARKET

ALL KINDS OF HAM RADIO, COMPUTER, TEST EQUIPMENT AND OTHER ELECTRONIC STUFF.

Sunday, October 21, 1990

8 a.m to 1 p.m.

RA Centre, 2451 Riverside Drive

General Admission:\$ 3.00
 Tables: \$10.00
 Vendors: \$20.00
 Half Tables: \$ 5.00

FOR TABLE RESERVATIONS PLEASE CONTACT ROB, VE3ZZR, AT 722-3837.

A THOUGHT

Someone who knows nothing except that he knows nothing, knows not nothing and thus knows more than someone who knows nothing and does not know he knows nothing.

So, someone who knows nothing except that he knows nothing, does not know that someone who knows absolutely nothing does not know that he knows nothing and thus does not know that he knows more than someone who knows nothing and does not know he knows nothing.

On the other hand, someone who knows nothing and does not know that he knows nothing, does also now know that someone who knows nothing except that he knows that he knows nothing, knows more.

Moral: To know something is no merit when you don't share it.

(From TIP)
 de MARCOGRAM,
 Montreal Amateur Radio Club

BOY SCOUT AMATEUR RADIO STATIONVE3SHQ LOOKING FOR SCOUT MEMBERS

The Scout Amateur Radio Station, VE3SHQ, located at 1345 Baseline Road in Ottawa is establishing a list of eligible members. Membership is available to registered adult leaders (scouters) holding an amateur radio licence. We are planning a bi-weekly net, regular visits by cubs and scouts at the station, active participation in the Jamboree-On-The-Air, and more. We need your assistance to work with our youth. Please contact Robert Michaud, VE3PAD, at 825-4126.

VE3SHQ NEEDS EQUIPMENT

In its effort to make amateur radio interesting for youth in the scouting movement, the Scout Amateur Radio Station would like to obtain pre-owned equipment to fulfil its objectives. We are looking for a 2 M rig with a touch-tone pad for phone patch and packet communications, a Commodore-64 with a disk drive and CRT for Morse code transmission and decoding, and a packet TNC. Donations will be acknowledged with an Income Tax Receipt. Please contact Robert Michaud, VE3PAD, at 825-4126.

JAMBOREE-ON-THE-AIR - OCT. 20-21, 1990

The JAMBOREE-ON-THE-AIR will be in its 33rd year. It is an event whereby members of the scouting movement, past and present, boys and girls, youth and adults, meet on the ham bands for 48 hours. They exchange information and memories, they make friends, they challenge one another ... just like at a Jamboree. To participate, listen to 3.740, 7.090, 14.290, 21.360 and 28.990 MHz on phone, and 3.590, 7.030, 14.070, 21.140 and 28.190 MHz on CW. Do you know members of Scouts Canada, Girl Guides or the Association des Scouts du Canada? Invite them into your shack and help them meet new friends on the air. For further details, contact the regional co-ordinator, Marcel Tremblay, VE3MNO, at 830-7481.

FIELD DAY

Results of the joint effort by the OTTAWA AMATEUR RADIO CLUB (OARC) and the OTTAWA VALLEY MOBILE RADIO CLUB (OVMRC), Field Day, June 23-24, 1990.

CW			PHONE		
	QSOs	Power Output		QSOs	Power Output
160			160		
80	181	100	80	202	100
40	272	100	40	38	100
20	92	100	20	285	100
15			15	47	100
10			10		
6			6		
2			2		
Other*	3		Other*	81	

548	CW QSOs	653	Phone QSOs
	Novice CW QSOs		Novice PHONE QSOs
548	Total CW QSOs	653	Total PHONE QSOs

*Satellite

Total CW QSOs 548 x 2 = 1,096

Total phone QSOs 653 x 1 = 653

Total QSO points 1,749

Total QSO points 1,749 x Power Multiplier (5 W or less, x5; 150 W or less, x2; over 150 W, x1) 2 equals Claimed Score (less bonus points) 3,498

- | | | | |
|---------------|--------------------------|-----------------|--------------|
| Bonus Points: | 100% Emergency Power | Media Publicity | Satellite |
| | W1AW Field Day Message | Natural Power | Packet Radio |
| | Location in Public Place | Message to SM | |

C.T.C.S

by Brad Seward, VE3NRJ

This the first of a series of articles prepared by Brad for the LARC BULLETIN, the newsletter of the London, Ontario, Amateur Radio Club. The why's and wherefore's become apparent as we follow Brad's discussion.

What is CTCS? Why do I need to use it? Where is it used? Is CTCS a good or bad proposition? This series of articles will attempt to answer these questions and many others that may arise as we become familiar with CTCS systems.

First of all, CTCS means "Continuous Tone Code Squelch." Commercially, it has been called channel guard, PL, or private line. These terms all refer to the same system. CTCS has been used commercially for many years in FM repeater and FM simplex communications. It allows co-channel usage of the limited spectrum available to the land/mobile services. Let's do a comparison of a standard FM system that is carrier operated vs. an FM system that is CTCS operated.

In a standard system the FM transmitter, when keyed, will produce a carrier signal that is frequency modulated. The standard FM receiver will intercept this carrier signal and with the use of a discriminator and audio amplification circuitry produce an audio signal for listening. The squelch control of the standard FM receiver has the task of deciding when to allow the audio and speaker stages to operate allowing noise and hiss to be heard. So the function of the squelch is to open the receiver only if a carrier is detected.

In a CTCS system the transmitter, when keyed, will produce a carrier that is also encoded with a low deviation subaudible tone. At the FM receiver, the presence of the tone on the carrier is decoded to produce a control signal to allow the audio and speaker stages to operate.

This receiver is said to be operating is a "tone squelch mode" instead of a "carrier operated mode." Only carriers with the subaudible tone will open this receiver. Interference, intermod, or other standard FM carrier signals will not be heard because no subaudible tone has been detected. The CTCS receiver only hears the CTCS transmitter.

The industry standard uses a selectable range of 32 different CTCS tones. See the accompanying chart of the agreed tones by frequency and code reference. When you listen to a CTCS FM carrier on a standard FM receiver, you will hear a very low hum or low pitch whine at the speaker. Using a pair of headphones will assist in this listening test. The presence of the tone in the system will not interfere with the normal audio range of the set. It is only used to signal the receiver to open the audio path and let sound be heard.

Getting back to our commercial system, it is evident that many users can operate on the same carrier frequency and by transmitting different CTCS tones, communicate only to the intended receivers in the system. This is called a tone shared channel and permits a higher usage of the spectrum. Now how does this relate to the amateur bands, particularly the ever growing crowded 2 metre band 144-148 MHz?

Part 2 of this series is at hand to discuss practical applications. Watch this space.

Brad Seward, VE3NRJ, is Secretary of LARC INCORPORATED.

C.T.C.S. TONES

#	Freq.	Code
1.	67.0	XZ
2.	71.9	XA
3.	74.7	WA
4.	77.0	XB
5.	79.7	SP
6.	82.5	YZ
7.	85.4	YA
8.	88.5	YB
9.	91.5	ZZ
10.	94.8	ZA
11.	97.4	ZB
12.	100.0	1Z
13.	103.5	1A
14.	107.2	1B
15.	110.9	2Z
16.	114.8	2A
17.	118.8	2B
18.	123.0	3Z
19.	127.3	3A
20.	131.8	3B
21.	136.5	4Z
22.	141.3	4A
23.	146.2	4B
24.	151.4	5Z
25.	156.7	5A
26.	162.2	5B
27.	167.9	6Z
28.	173.8	6A
29.	179.9	6B
30.	186.2	7Z
31.	192.8	7A
32.	203.5	M1

IN CASE YOU MISSED IT

More and More RF. Many telephone and communications companies across Canada have applied to the DOC for authorization of public cordless telephone systems. This will allow callers to use their handsets in public locations, industrial sites, even in the bathroom. Typically a handset can be used within about 100 metres of a telepoint (base station) in shopping malls, subway stations, airports, and other high traffic locations. These will require many more low power U.H.F.

transmitters in the urban environment, plus the office wireless, alarm, sensing and surveillance systems, including meteorological, and the rapid inrush of new Amateur Radio operators in October '90 which will strain the electromagnetic tolerance of sensitive equipment.

Comments on these items should be addressed to Ralph Cameron, VE3BBM, Chairman EMC Committee. Item 4, CARF News Bulletin 90-12.

Unlicensed "Amateur" Radio Operator Fined. Operating Amateur Radio equipment without proper licences cost an Ottawa businessman \$200 in fines. The operator pleaded guilty recently to two charges laid under the Radio Act (the law in force at the time of the charge). A Provincial Court Judge levied a \$100 fine for each of the two counts. Item 2, CARF News Bulletin 10-90.

WAVO (Worked All VO) sponsored by S.O.N.R.A. is available to any Amateur not resident in Newfoundland and Labrador operating from one call area who can show proof of two-way contact with 40 different stations operating fixed, portable or mobile in the Province. One of these stations must be using a VO2 (Labrador) prefix.

QSL cards are NOT needed as proof of contact. The log book entries must be certified by an Executive member of a recognized club, or two other Amateur radio operators. The submitted list of log book entries must include the call of the station worked, date, time, band, mode, signal report received from the VO station, and the signal report given to the VO station

No endorsement for "SSB", "CW", etc., are available.

Applications should be sent to Maurice VO1FG, Awards Chairman, P.O. Box 501, CARBONEAR, Newfoundland, A0A 1T0. Item 8, CARF News Bulletin 10-90.