

APRIL 1995

THE GROUNDWAVE



**NEXT MEETING WILL BE HELD
WEDNESDAY, APRIL 12, 1995**

Club Call VE3RC

Repeater VE2CRA



Official Bulletin of the Ottawa Amateur Radio Club, Inc.

The Ottawa Amateur Radio Club, Inc., Box 8873, Ottawa, Ont., K1G 3J2

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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) in the Champlain Room (2nd floor of the Old Teacher's College) of the RMOC HQ complex on Lisgar St., Ottawa, at 1915 hours. Further details about each meeting is elsewhere in this publication.

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.

PACKET RADIO MEETINGS will be held at 7:30 p.m. on the last Thursday of every 2nd month, starting September 1993, at the Museum of Science and Technology. This is an OARC technical meeting open to all who have an interest in packet radio.

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 AND AN ENGRAVING PENCIL are available for loan to club members. 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 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.

POT-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.

POT-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.
56 kbps	Packet	220.55/433.55
VE3XDX	Packet	145.11(SX)

For further information, please contact repeater chairman.

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**MINUTES OF OARC GENERAL MEETING
 HELD MARCH 8, 1995**

The meeting was opened at approximately 7:30 p.m. by the president, Roger, VE3BZR. Roger welcomed all the members and visitors to the temporary meeting place. It was explained that another interest group with higher priority had the Champlain Room for the evening. The April meeting, home brew night, is scheduled for the Champlain Room.

All visitors to the meeting were invited to introduce themselves or sign the club guest book.

Roger asked the members if anyone had any problems. One member stated his TR2500's display did not always light. He explained that he placed a new battery in the unit, then realized he had wired the polarity wrong, then corrected it but that the problem still existed. Ed, VA3ES, suggested that the battery having been wired incorrectly was discharged and that a new battery was needed.

A comment was received from one member praising the excellent job on the Groundwave. Richard, VE3UNW, explained that the credit correctly belongs to Maria. A round of applause was received for all the work she does on the Groundwave.

One member announced that anyone who has surplus magazines of any sort may wish to

donate them to the National Library, International Magazine Agency, 85 Bentley Ave., Ottawa. This group collects and distributes magazines to third world countries. Roger, VE3BZR, asked that anyone with QSTs from the 1920s and 30s that they would like to get rid of to contact him. It was also noted that there is a collection of QST, TCA and other amateur magazines available at the Museum of Science and Technology.

Roger introduced the evenings speaker, George Roach VE3BNO, whose topic for the evening was the second part of his previous talk on the new CFRA transmitter site. George gave a brief overview of why the station needed the new site. In 1984, CFRA learned by accident that the proposed 416 highway would be coming through their present site. Ten years later, after numerous hearings, they are advised at the end of 1993 that the transmitter site had to be moved by March 1994. George's slides first depicted the bare building which was erected to house the transmitters and equipment and brought us through the various stages of installing the two solid state transmitters, generator, wiring etc. The two transmitters, 50 kw and 10 kw feed the new 420 foot towers via 3 1/8 inch heliax. The "second" floor of the transmitter site houses VE3TEN, the ten meter beacon. George also noted that during the winter CFRA receives requests for QSL cards, usually from Norway, Sweden and Finland. Roger thanked George for the excellent presentation.

Richard VE3UNW announced that there were spare copies of the Groundwave for anyone who may not have received their issue.

The meeting was closed at approximately 8:55 p.m. and was followed by coffee.

UPCOMING MEETINGS

- April: Home Brew Night
- May: Internet demo - to be confirmed

mk's WORDS

Mar. 10/95.. It's sure been busy around the ol' engineer factory these days... It seems like months since I did one of these columns. One of the things going on around here is that my office is moving. I wouldn't be too keen on the disruption that causes to the routine, except for one thing... The new QTH isn't in the center of the building, between two electrically noisy labs. It is on an outside wall, near the corner of the building. This means I'm only inches away from the great outdoors, electrically speaking. Being near the corner means fewer computers and other noise generators in my neighbourhood. I still don't have a window, but at least now I have a scheme.. With any luck, and a long drill bit, I should be able to put out some kind of signal from work, at least over the lunch hour, "real soon now". The irony of it all is all the other hams in the building have offices with windows that open to the outside, and as far as I know, none of them has even brought so much as a receiver in to work. It wouldn't surprise me to have company for lunch on a regular basis once I get going on this latest project.

The advanced class is coming along nicely, we are through power supplies, and will be done receivers and well into transmitters by the time this makes it into print. They are quite a bunch of keeners, and want lab time to get some of the hands on experience they need to start building things. We are looking at building some kits together as a class as well. These folks are going to know which end of the iron gets hot by the time they graduate. It's hard keeping ahead of them.

Outdoors, the season has been marked by the ski marathon, and several transmitter hunts. We won some, and consequently had to go and hide the proverbial bunny. Fortunately the weather was superb, and a night hunt was run. We modelled the hunt on a search

for a lost skier, with the transmitter (me) hiding under a bridge in Manotick. This gave the Ottawa hunters a minimal signal to look for, and congratulations are in order for those resourceful few who found their way to the transmitter and subsequent BBQ (yes, even in the first week of March, even after the sunset is long gone, we bunny hunters get our bbq burgs).

I haven't done much antenna work this winter, so I won't have any 40 Metre yagis to bring to homebrew night, but I will have at least a few toys out there. Be sure to bring yours along too. After all, if they don't work out, you can still use the excuse that it was just meant as an April Fools joke. Will Brian have a transceiver for his shirt pocket? Will Claire have a ready to launch 10 Ghz satellite? Will the trophy be re-named in his honour, since he wins it so often? Stay tuned.. see you there.

73.. mk VE3FFK

SOME NEW COMPUTER VIRUSES

Politically Correct Virus: Never calls itself a "virus" but instead refers to itself as an "electronic microorganism".

Elvis Virus: Your computer gets fat, slow and lazy, then self destructs only to resurface at shopping malls and service stations across rural America.

Kevorkian Virus: Helps your computer to shut down as an act of mercy.

Imelda Marcos Virus: Sings you a song (slightly off key) on boot up, then subtracts money from your Quicken account and spends it all on expensive shoes it purchases through Prodigy.

Health Care Virus: Tests your system for a day, finds nothing wrong and sends you a bill for \$14,500

The Economist Virus: Nothing works but all of your diagnostics software says everything is fine.

Lorraine Bobbitt Virus: Cuts off while you are processing data and throws it out the window.

de The Ground Wave, Bulletin of the St. Paul Radio Club Inc. (who credit the Mankato Area RC News)

MOBILE ANTENNA INSTALLATION GUIDELINES

Top Ten Places to Install a Mobile Antenna (from Excellent to Fair)

1. Centre of vehicle roof
2. Centre of trunk or on hatch back*
3. Mirror Mount (trucks/vans/RVs)
4. Right rear fender (passenger side)*
5. Left rear fender (driver side)*
6. Rear bumper mount *for long antennas)*
7. Rear window glass mount (non-tinted glass only)
8. Right front fender (passenger side)*
9. Side window/gutter mount
10. Left front fender (driver side)*

*Antenna tip should clear the roofline of the vehicle for best performance

- Always use 95% shield, high quality coaxial cable in vehicle installations to reduce radio interference to and from other electronic systems in the vehicle.
- Never run antenna cables parallel or together with other vehicle cables or wires. If necessary, antenna cables should be positioned so that they cross other vehicle cables at 90-degree angles to reduce the possibility of interference.
- Radio communication accessory equipment not suitable for mounting in the passenger compartment should be mounted in the trunk of the vehicle. Never mount this equipment in the engine compartment, as it may

lead to failure of the vehicle's electronic system.

- Glass mount antennas can only be used on non or slightly tinted glass. Heavily tinted glass will impede antenna performance.
- Many antenna failures are due to moisture entering and deteriorating the contact point where the antenna mates with the antenna cable. Use a good quality coax sealant to weatherize-waterproof the connection point where antenna meets antenna cable. Avoid using silicon glues, epoxies, or rubber sealants for this application because they contain acids that vaporize during the curing process; these acids can oxidize or destroy the electrical connection point required for optimum antenna performance.
- When two or more mobile antennas are installed on a vehicle, for best performance they should be placed not less than one-quarter wavelength apart, based on the antenna with the lowest operating frequency. This distance is calculated by using the formula: $2952/\text{Frequency in MHz} = \text{Length in Inches}$.

de VE2RM Radio Club

CLUB DONATIONS

The Club has donated \$375 to the Canadian National Institute for the Blind Amateur Radio Program and \$50 to the VE3CNE demonstration at the exhibition in Toronto.

OVMRC FLEAMARKET

The OVMRC fleamarket will be held on May 13, 1995. Details will follow in next month's Groundwave.

PHASE 3D TEAM MEETS
TO REVIEW ONGOING PROGRESS

Members of the Phase 3D Team met in Marburg, Germany from October 12th to 23rd, 1994 which included a "top to bottom" review of progress on all the satellite's systems and subsystems. During the discussions team members also bench-tested a number of flight-hardware electronic items and set the final operating frequencies for the spacecraft's transmitters and receivers.

"It was a marathon session" said Dick Jansson, AMSAT-NA's Vice President for Engineering. Dick went on to note that, as a result of the session, team members were now very confident that all key elements of the project were on schedule and the spacecraft's integration in Florida can continue without interruption.

Several critical schedule milestones were reached during the meetings. Among them were completion of all the formal documentation accompanying AMSAT's "Application to Use Ariane" along with the necessary safety submission. Together, these documents constitute the formal written request to the European Space Agency (ESA) regarding how AMSAT proposes to safely mount Phase 3D on the Ariane 5. A representative of ESA visited with the team in Marburg during the session to discuss details of Phase 3D's interface.

Also present at the session was Freddy de Guchteneire, ON6UG, Phase 3D's frequency coordinator. Under Freddy's guidance, the team finalized all of Phase 3D's frequency passbands. This important step cast the frequencies in "quartz" for the spacecraft's RF units.

All present at the meeting agreed that the Phase 3D schedule was "tight". However, in closing, Dr. Karl Meinzer, AMSAT-DL President and Phase 3D Project Team Leader, expressed confidence that the time allotted for all remaining critical activities in the project schedule appeared both realistic and achievable.

de The AMSAT Journal

TELEPHONE AND ELECTRICAL SAFETY

downloaded from Internet
courtesy of VE3ZDC

It is common practice in England to signal a telephone subscriber by signalling with 90 volts across one side of the two wire circuit and ground (earth in England). When the subscriber answers the phone, it switches to the two wire circuit for the conversation. This method allows two parties on the same line to be signalled without disturbing each other.

This particular subscriber, an elderly lady with several pets, called to say that her telephone failed to ring when her friends called and that on the few occasions when it did manage to ring, her dog always barked first. Torn between curiosity to see this psychic dog and a realization that standard service techniques might not suffice in this case, Pat proceeded to the scene. Climbing a nearby telephone pole and hooking in his test set, he dialed the subscriber's house. The phone didn't ring. He tried again. The dog barked loudly, followed by a ringing telephone. Climbing down from the pole, Pat found:

- a. dog was tied to the telephone system's ground post via an iron chain and collar
- b. dog was receiving 90 volts of signalling current
- c. after several jolts, the dog was urinating on ground and barking
- d. wet ground now conducted and phone rang

Which goes to prove that some grounding problems can be passed on.

de LARC Bulletin

CLUB REPEATER

The Club Radio Amateur de Gatineau will be providing a community service for the Red Cross on April 22-23, 1995, on VE2CRA.