

The Hamilton Amateur

R. DANNY VACCA
 MONTHLY MEETING
 JAN 20 / 93
 NASH BUILDING
 CHEDOKE HOSPITAL COMPLEX

TOPIC
 SOLAR CELLS & SOLAR POWER
 BY DANNY VACCA

Also the NCF repeater problems will be discussed.

January

Have a very prosperous New Year!

HARC EXECUTIVE FOR 1992 / 93	VE3OQX	385-0879	Everett Englert
PRESIDENT:	VE3OQG	578-1789	Flora Mangn
PAST PRESIDENT:	VE3JAI	627-0333	Emsley Mitchell
VICE PRESIDENT:	VE3LTD	574-0818	Paul Webb
VICE PRESIDENT:	VE3DWJ	383-9808	Dave Brulon
SECRETARY:	VE3OCD	388-8383	Joe Urbanski
TREASURER:	VE3VEH	389-9259	Arie Verhoog
MEMBERSHIP:			
HARC COMMITTEE CHAIRPERSONS FOR 1992 / 93			
AWARDS & CONTESTS:	VE3DWJ	383-9808	Dave Brulon
HISTORIAN:	VE3BIG	383-7338	George Olenick
PROPERTY:	VE3DWJ	383-9808	Dave Brulon
BULLETIN EDITOR:	VE3SON	689-6839	Jim Walsh
EDUCATION:	VE3EKY	527-7175	Bernie Granby
EMERGENCY COORD:	VE3OQG	578-1789	Flora Mangn
FIELD DAY COORD:	VE3OQX	385-0879	Everett Englert
FLEA MARKET:	OPEN		
HEALTH & WELFARE:	SWL		
PROGRAMS:	VE3JAI	549-5119	Flora Reinke
PUBLIC LIASON:	VE3GCP	627-0333	Emsley Mitchell
HOSPITAL COORD:	VE3OQG	575-5197	Fred Robinson
SWAP NET CONTROL:	VE3JWJ	388-8383	Mary Urbanski
CANWARN COORD:	VE3LTD	578-4275	John Johnson
REPEATER:	VE3OCY	574-0818	Paul Webb
TECHNICAL:	VE3OCY	560-1960	Don Graziano
VE3DC LICENCEE:	VE3FHQ	385-2786	Glen Gibson
VE3NCF LICENCEE:	VE3OCY	560-1960	Don Graziano
VE3RCB LICENCEE:	VE3GCP	575-5197	Fred Robinson
VE3WXH LICENCEE:	VE3LTD	574-0818	Paul Webb
DESIGNATED EXAMINERS:	VE3GCP	575-5197	Fred Robinson
	VF3EKY	527-7175	Bernie Granby
	VF3IDB	389-7653	Lorraine Macpherson

ENTRY FORM FOR THE "ORDER OF THE GAVEL CW OPERATING AWARD"

Please submit this form not later than the February General Membership Meeting. The trophy will be awarded at the March General Membership Meeting. The judges may want to see your logs before making their final decision. Include QSO's from 1 January to 31 December inclusive. A valid QSO must be in the CW mode using your own call sign and must contain the standard report i.e. NAME, RST, CALLSIGN and QTH. Fill in the application blanks below to compute your score.

- A. number of QSO's under 10 watts (non DX) ___ X 5 = ___ points
- B. number of QSO's under 10 watts (DX) ___ X 5 X 5 = ___ points
- C. number of QSO's 10 to 200 watts (non DX) ___ X 2 = ___ points
- D. number of QSO's 10 to 200 watts (DX) ___ X 2 X 2 = ___ points
- E. number of QSO's over 200 watts (ALL) ___ = ___ points
- F. Add lines A+B+C+D+E = ___ points

Now use one of the following equalizers to obtain your score:

- G. Licensed 3 years or more, reduce F by 25%: F X .75 = ___ points
- H. Licensed 2 to 3 years, reduce F by 15%: F X .85 = ___ points
- I. Licensed 1 to 2 years, reduce F by 10%: F X .9 = ___ points
- J. Licensed less than 1 year: F X 365/(no. days lic'd) = ___ points

Date of Licence _____ (considered date of first QSO on your own call)

Name _____ Station Callsign _____

Address _____

SCORE: _____ points (one of G to J)

UPCOMING EVENTS

General Meetings: Speakers

Jan.	20, 93	Solar Cells and Solar Power	Danny Vacca
Feb.	17, 93	IPARN Discussion about IPARN link system	
March	17, 93	Hydro - Energy Saving Technique in the 90's	

ORDER OF THE GAVEL

This award is given to the past President of the HARC, during the Business meeting held on the 3rd Wednesday of January.

The Hamilton Amateur Radio Club has been in existence since 1932, and was Provincially incorporated in 1956. The foundation upon which all acts and procedures of the Club are based is the "Constitution and By-Laws of Hamilton Amateur Radio Club." The most recent revision of the Constitution is dated 14 May 1990, and was passed by the membership on 16 May 1990.

The purpose of the Club as stated in the Constitution is "to promote public interest in Amateur Radio Communication and experimentation for the relaying of messages by radio, for the advancement of the radio art and of public welfare, and through its regular meetings and a News Letter, the maintenance of fraternalism, and a high standard of conduct among its members", as stated in the Letters Patent, our purpose is "to promote interest in amateur radio communication and experimentation, for the relaying of messages by radio and for the advancement of radio.

NOTE: January Business Meeting

Please remember that we are going to discuss the VE3NCF repeater operation. Have your questions written down, your criticisms, and suggestions are welcomed for an open discussion.

73 de, VE3DWWJ, Secretary

CRAWFORD TROPHY May 19, 1993. OK amateurs lets get those projects going to pass the long winter days and nights. Let's have a excellent turnout for home brew night. Remember the purpose is to improve amateur radio communications, and/or for testing of amateur radio equipment.

ADVANCED CLASSES

Advanced classes will be starting in the new year. Please look in The Hamilton Spectator. The Board of Education will be printing a list of general subjects available to the public. At time of printing deadlines, the particular date is unknown. The course will begin on Tuesday, January 19, 1993. The school is Westmount Secondary School, and will be six weeks in duration. Each session is three hours, and the cost is approx. \$50-60.00 Requirements for the course are must have Basic Endorsement. The Teacher is a member of our club.

If the caretakers strike is still on and night courses are not available, other arrangements maybe in the offering subject to accommodations, and costs.

ORDER OF THE GAVEL CW OPERATING AWARD

It's time again for the Order of the Gavel CW Operating Contest. If you are one of those who believes Morse Code sounds like music, dig out your logs for last year, fill out the entry form, and make sure the executive gets your entry before the February General Meeting.

A. Purpose

To promote the use of CW and to stimulate an interest among the newer Hams to operate in the HF bands.

B. Rules

1. The event is open to all members of the Hamilton Amateur Radio Club.
2. The award may only be won by a member once.
3. The contest will be an annual event.
4. Only the previous twelve months will be considered, from January 1st through December 31st. In the case of a Ham of less than twelve months, the score will be prorated by dividing 365 by the number of days licensed, times the score of points attained.
5. The following point system will be used to decide the winner:
200 watts or more input - 1 point per QSO
10 to 200 watts input - 2 points per QSO
less than 10 watts input - 5 points per QSO

21 December, 1992
Issued at CARF Headquarters
P.O. Box 356
Kingston, ON, K7L 4W2
William (Bill) H. Mason VE3NFU
Editor:
Packet Editor/Transmission: Steve Culway VE3GRS

ANTENNAS THREATENED BY POLICY PROBLEMS

CARF and CRRI are working behind the scenes attempting to stop some cities and municipalities from restricting the installation of antennas and antenna structures. DOC procedures circular CPC-2-0-03 (Provisional) governing antenna installations and environmental issues is not working. It is generally misunderstood and even rejected by some municipal officials. Some DOC people are slow to act and others appear unsure when federal power is challenged and overridden thereby allowing an air of threat and uncertainty to prevail. In some cases local DOC seem unfamiliar with the distribution of powers under the Radiocommunications Act causing further confusion and difficulties. Your national organizations are talking to DOC at the national and regional levels in an attempt to resolve this serious threat to amateur radio and other licensed radio services. CRRI and CARF, as members of the Radio Advisory Board in Canada, are seeking RABC support in this mutually threatening situation.

People like Rene Poiras VE1CB, Bill Wilson VE3NR, Tim Ray VE3XV, Ralph Cameron VE3BBM, Jim Munsey VE6BKW, Tim Ellam VE6SH, Earle Smith VE6NM, Dave Fancy VE7EV and others across the country are helping amateurs who are dealing with restrictive bylaws and unsympathetic officials. Places such as Calgary, Edmonton, Kamloops, Vancouver, New Westminster and Madawaska, NB have instituted bylaws or procedures to control the erection of antenna structures. Antenna heights are limited: Edmonton to 32 feet, Madawaska to 13 feet, Vancouver "to 1.9 metres above the existing grade". New Westminster defines antennae structures as "accessory buildings" subject to local land use restrictions. Calgary wants "Development Review Permit" (\$142.00) and Madawaska demands an amateur must follow "variance" procedure (\$55.00). These are serious challenges to federal jurisdiction over radio communication matters.

The federal Radiocommunications Act clearly states under Section 5(f), the Minister "may approve each site on which radio apparatus, including antenna systems, may be located, and approve the erection of all masts, towers and other antenna supporting structures;..." The 1992 federal government commissioned Townsend Report, on the constitutionality of the various powers in this matter, backs up federal authority over free standing antenna structures. It is challenged by some municipal officials!

A Calgary city official stated in a letter to CRRI counsel Tim Ellam VE6SH that, "I'm prepared to concede, as you are, that support structures are the exclusive domain of the Federal Government. Clearly, this issue would be dependent on the facts of the case (eg. whether it was of prime importance or the impact of the structure on the neighbourhood versus its suitability to transmit or receive radio signals)." New Westminster ignored the pleas of amateur at council meetings and renamed antennas and support structures as buildings to get around federal control. There are other examples. Such opinions and actions seriously threaten federal control over amateur and licensed radio services in Canada. Jurisdiction and policy are openly undermined!

Some Regional and local DOC people seem out of step with the national policy coming of Ottawa. Vancouver DOC stole in a letter to city officials that, "Municipalities make by-laws concerning safety, aesthetics and similar issues pertaining to antenna towers." Saint John D. instructs an amateur that "...it is my recommendation that you make application... for a variance to the municipality of Clair's by-law pertaining to accessory structures." Unfortunately, statements unwillingly support "ultra-vires" actions which undermine federal jurisdiction control of radiocommunication matters. It is unclear at this time as to what DOC intends to do about all of this!

Packet part 4 continued.....
When you connect to a node, Your TNC automatically switches to converse mode, just like when you connect to any packet station. Anything you now type is sent to the node as a packet, and the node acknowledges each packet back to your TNC. For the remainder of your connection your TNC works only with this one node.

To use the node network to connect to other local stations, you simply enter a connect request as though you were connecting direct from your TNC, such as "C WB9LOZ". You do this, however, while you ARE STILL CONNECTED TO THE NODE. The node will then retransmit your connect request and you'll receive one of two responses: "Connected to (callsign)" or "Failure with (callsign)". Once you're connected you hold your QSO just as if you had connected direct or via a digipeater. When you're finished, go to command mode on your TNC (Control C) and enter "D" (CR) and you will be disconnected from the node and the station you were working.

(NOTE: If the node you're using is a G8RIPQ packet switch, it might have several frequency ports. You'll have to enter a port number between the C and the callsign in your connect request to indicate the frequency you want to use, such as "c 2 WB9LOZ". Enter "PORTS" for a port list.)

When you're connected to a node enter "NODES" <CR> and you'll receive a list of other nodes that you can reach on the network from the node you're using. You'll note that the node list will vary in length and in the calls listed as you move from frequency to frequency, since all frequencies are not linked together. The list gives both an alias ID and a callsign for each node. The alias ID often gives you a hint as to where the node is located, but not always. To find out for sure where a node is located you'll need to get a copy of the descriptive node listings that are available on most packet bulletin board systems. These complete lists give the alias, callsign, location, frequency and other information on each node in the network.

To connect to a station in another area using the node network you first must determine which node is closest to the station you want to work. For demonstration purposes, let's say we want to connect to N6ZYX. He's told you he uses the W6AMT-3 node, so you check the node list and see that SFO3:W6AMT-3 is listed. WHILE STILL CONNECTED TO YOUR LOCAL NODE you first connect to the distant node by sending a normal connect request, in this case "C W6AMT-3". Your TNC will send this as a packet to your local node and your local node will acknowledge it. The network will then go to work for you and find the best path between your local node and the one you're trying to reach. You might have to be a little patient here, as it sometimes takes a few minutes for the connection to be completed. You'll then see one of two responses: "Connected to W6AMT-3" OR "Failure with W6AMT-3". If it can't connect for some reason, try again later. It could be that W6AMT-3 IS temporarily off the air or the path has decayed and is no longer available. We're going to be positive here and say we received the first option.

Once you're connected to W6AMT-3, enter "C N6XYZ". Again, your TNC will send this as a packet to your local node and the local node will acknowledge it and send it down the path to W6AMT-3. W6AMT-3 will then attempt to connect to N6XYZ. Here again you'll get one of the two responses: "Connected to N5XYZ" OR "failure with N6XYZ". If you get connected, you hold your QSO just as you normally would, but there's one BIG difference—your TNC is receiving acknowledgments from your local node, and N6XYZ is receiving acknowledgments from W6AMT-3. The acknowledgments do not have to travel the entire distance between the two end stations. Each node in the path handles the acknowledgement with the next node in line

THE PACKET COMMANDS

Packet Radio continued: PART 3

RETRY: Your TNC will retransmit a packet if it doesn't receive an acknowledgement from the station you're working. **RETRY** indicates the number of times the TNC will try to get the packet through before giving up and disconnecting. This can be set from 1 to 15, but I've found 8 to 10 to work well. Less than that causes an unnecessary disconnect if the channel happens to be busy, but more than that clutters up the channel.

The following TNC commands affect the monitoring mode and what you see on screen:

MONITOR: This must be ON for to monitor anything. When ON, you see packets from other stations on the frequency you're tuned to. What packets you see is determined by other commands from the list below. If **MONITOR** is OFF, you see only packets sent to you while you're connected to another station.

MALL: If MALL is ON, you receive packets from stations that are connected to other stations, as well as packets sent in unproto (unconnected) mode. This should be ON for "reading the mail". If MALL is OFF, you receive only packets sent in unproto mode by other stations.

MCOM: If ON, you see connect <C>, disconnect <D>, acknowledge <UA> and busy <DM> frames in addition to information packets. If OFF, only information packets are seen.

MCON: If ON, you see packets from other stations while you're connected to someone else. This can get very confusing, but is useful when your path is bad and you want to see if your packets are being digipeated okay. If OFF, the monitoring of other stations is stopped when you're connected to another station.

MRPT: If ON, you see a display of all the stations used as digipeaters along with the station originating the packet and the destination station. If OFF, you see only the originating and destination stations. For example, if you have **MRPT** ON, you might see a transmission such as: **K9AT>wb6qvu,w6pw-5**; I'll be leaving for the meeting about 7:30. If **MRPT** was OFF, the same transmission would look like: **K9AT>wb6qvu**; I'll be leaving for the meeting at about 7:30. In the first case, you can see that the **W6PW-5** digipeater was being used. The asterisk indicates which station you were hearing the packet from. In the second case you have no idea if digipeaters are being used or what station you were receiving.

HEADERLN: If you have this turned ON, the header of each packet is printed on a separate line from the text. If OFF, both the header and packet text are printed on the same line.

MSTAMP: Monitored packets have the date and the time the packet was received if **MSTAMP** is ON. If it's OFF, the date/time stamp is not shown.

I run my station with all of these commands, except **MCON**, turned ON so that I really see what's happening on the frequency I'm monitoring. Try various combinations of these commands and then decide on the combination you like best for your station.

15 December, 1992
Issued at CARF Headquarters
P.O. Box 356
Kingston, ON, K7L 4W2
Editor: William (Bill) H. Mason VE3HHU
Packet Editor/Transmission: Steve Conway VE3GRS

ITEM 01. ANTEENIA BYLAW WATCH: CARF and CRRI need your help! The telecommunications Act gives DOC control over antenna installations. Some municipalities are enacting bylaws which attempt to override the DOC's jurisdiction. We want copies of bylaws which prohibit, restrict or unduly impede the installation of amateur radio antennas and antenna structures. We will compile and convey this bylaw information to the Minister of Communications requesting that he act to resolve this serious threat to radiocommunications in Canada.

Send bylaw copies to: ANTEENIA BYLAW WATCH, c/o Earle Smith, VE6TJM, P.O. Box 412, Grande Prairie, AB, T8V 3A5.

Make no mistake... we are faced with a very serious threat to amateur radio in Canada. Many cities and municipalities are choosing to ignore federal jurisdiction. Your national organizations cannot act without evidence - we are relying on you to get it for us!
J. Farrell Hopwood, VE7RD
President, CARF

Dana Shun, VE3DSS
President, CRRI

ITEM 02. TALK TO THE ASTRONAUTS! Three space shuttle missions are scheduled for Spring 1993 with amateur radio operators aboard! The October 15th issue of OSCAR Satellite Report points out that the next SAREX shuttle flight is STS-55 planned for February 1993. (SAREX is the NASA/ARRL sponsored Shuttle Amateur Radio Experiment.) U.S. astronauts Steve Nagel, N5RAW, and Jerry Ross, N5SCW, will operate 2 metre FM voice and packet.

STS-56 in mid-March has Ken Cameron, N5AWP, Ken Cockrell, K8SUAH, Mike Foale, K8SUAC and Ellen Ochoa, K8STZ aboard. They will operate slow and fast scan TV in addition to voice and packet. STS-57 (late April) is also scheduled to be a SAREX mission. WSVI REPORT, November 1992

ITEM 03. RECORD MEMBERSHIP FOR SOFIRA: (Society of Newfoundland Radio Amateurs) 1992 marks a new milestone in the growth and development of SOFIRA. For the first time they have recorded 300 paid-up members in their membership year. ("We may not do everything right, but nearly half of all the Hams in Newfoundland are us!")
from VO Hews, Newfoundland

Everybody wants to eat at the government's table, but nobody wants to do the dishes.

VEHICLE GENERATED RFI

- 4 VE3WP, GEOFF, (416)648-4980
JOHNSON 25-30-3 1KW ANTENNA TUNE \$125.00
- 4 VE3BLE, BLAKE, (416)529-4415 EVENINGS
DIAMOND K-30 TRUNKLID HATCHBACK MOUNT, NEW \$30.00
-TRC-449 CB MODIFIED, NO MIC, GREAT SHAPE \$150.00
- 1 VE3NCK, BILL
YAESU 101E SPEAKER AND CABINET \$50.00
-MEJ 941-C ANTENNA TUNER \$75.00
-PYE-NET HOME BREW ANTENNA TUNER \$50.00
ALL THE ABOVE IN EXCELLENT CONDITION

ITEMS WANTED LIST

- 1 VE3JVJ, MARK (416)574-4370
2 METER AMP. 2IN 50 OUT WANTED.
- 1 VE3WTE, WHITEY (416)547-0515
POWER MIKE 5200 YEASU MOBILE
- 1 VE3CYL, TOM (416)643-7665
ICOM 751 SERVICE MANUAL WANTED
- 1 VE3ZF, ED (416)659-3025
RUBBER DUCKY ANTENNA WITH BNC CONNECTOR WANTED
- 1 VE3JIS, JACK (416)648-6443
KWD. 7950 MOBILE WANTED
CB 40 CHANL SSB WANTED
- 1 VE3PYK, CHRIS (416)547-3169
VACUUM TUBES WANTED 6DQ6A 2 OR 3
6V5 OR 6G5 WANTED
- 2 VE3SE, JOE, (416)680-1211
KNIFE SWITCH 1 OR 2 WANTED
- 2 VE3MMH, BOB, (416)385-4246
T50-2 T50-6 TORIODES WANTED
- 2 VE3ZMB, AL, (416)387-4360
2 MTR HH NO FRILLS WANTED
- 3 VE3ITY, BORUS, (416)388-6200
INTEL 8049 PRG. KB001 FOR KEYBOARD WANTED
- 3 VE3BRL, JIM, (416)279-9574
AM TRANSMITTER, DX110, VALIANT 32B. WANTED
- 2 VE3NCK, BILL (416)578-4275
KENWOOD 7950 OR 7930 RADIO WANTED

Here is yet another concern for amateurs to investigate when purchasing a vehicle that is check for internally generated RFI on the bands you intend to use. The case in point identifies a problem experienced by Lee, KG7OW, with the purchase of a 1991 Cutlass Cierra and the installation of a mobile rig. When the set was tuned to 146.820, the RFI was so bad it could not be squelched out. Tuning to other frequencies did not detect any RFI. The dealer could not suggest a solution but countered that the 2 meter equipment was non standard item. No satisfactory response was forthcoming either when the ham suggested what would happen if the car was purchased by a police department and the interference was on their channel. Tests were conducted to establish the source of interference using a handheld radio. The RFI was traced to the ignition module and was most intense when the set was oriented vertically (most man-made noise travels vertically). It could be completely nulled out when the set was turned horizontally. By the way, this problem only exists after the vehicle has warmed up. Is this an isolated case? Apparently not. Lee mentioned a friend of his noted the same problem when a non-ham visitor with a similar car visited him and the 2 meter rig was used to detect the interference. Another ham observed a similar problem with a 1990-Chev S 10 truck. What is the cause of this RFI? Could it be a defective oscillator circuit within the module or is it an inherent circuit design fault? The proliferation of electronic gadgetry on new vehicles has created a whole new problem for the amateur (and other vehicular radio users). Perhaps the day is coming when a purchaser will have to shell out a few extra thousand dollars for a vehicle immune from spurious emanating electromagnetic emissions. And likewise not be affected by RF energy from installed transmitters. In the meantime, buyer beware, take that hand-held with you when shopping for a new chariot!

Edited version from Mike and Kay ARC and World Radio, October 1992 and from The Groundwave December issue, Ottawa Amateur Radio Club. To members of the Hamilton Amateur Club, are any members experiencing similar problems. Is it any brand handheld, or mobile. Is it a manufacturing electronic module problem. Have you a solution. Speak to the executive of the club, or write a short note to the Editor.

Note from VE3SMF

I just read the December issue of the Hamilton Amateur with regards to the new FT-89 and the SWR on one of the bands. The problem is not with the FT-890 and the built antenna tuner. The tuner in the FT-890 is designed to work with antennas designed for the particular band of operation. It just reduces the SWR, it will not act as a full antenna tuner. The Red Cross station does not have antenna for all bands, and the radio should only be operated in the bands for which there are antennas. In addition, the built tuner may not cover an entire band, such as 80 metres. The solution is to have antennas that are resonant. As with all good HF practice, if you have a high SWR, check the feed lines and the antennas first.

If you really want to operate the radio on an antenna that is not resonant, use manual antenna tuner that is at the Red Cross Station. You may have to turn a few dials and switches to make it work (no computer control) HI HI. No repairs should required, just read the manual.

73 DE Stuart VE3SMF

ETIQUETTE IS WHAT IT IS

While I was standing around, trying to look inconspicuous, a newly-licensed Ham approached me and asked, "Where can I get a book that tells me about appropriate repeater etiquette?" Damn good question, thought I; I certainly never found one. So here-with behold Herber's totally Personal Guide to Repeater Operation.

First the five rules:

- 1 Use common sense. (This is the most difficult rule). If someone is talking, don't interrupt. Courteous repeater users will pause every once in a while and ask if anyone needs to use the machine. That's when you can pipe up.
- 2 The corollary to #1 is leave a break for other hams every once in a while when you are using a repeater.
- 3 The word "BREAK" should only be used in emergencies to request repeater access. If it's not an emergency, and if the guys on the machine aren't leaving any gaps, you can jump in by giving just your call.
- 4 If you hear someone having trouble with the patch or using questionable operating practices, DO NOT CUT THEM OFF. It may be someone in distress who is panicking. Calmly offer to help them out. Button pushers will ignore but someone having trouble will welcome your offer.
- 5 ALWAYS identify yourself. If you 'kerchunk' the repeater to see if your handie talkie battery is working without identifying, there is no way to tell you from a jammer. All it takes is "VE3—testing."

Now as an added no-charge service, the top five stupidest repeater practices:

- 5 Saying "we" when you are alone, such as, "Yeah, we just have to brush our teeth and then we'll be off".
- 4 Saying that you "have destinated" when you mean arrived.
- 3 Using Q-codes rather than talking like a normal human being. Does it really take longer to say "Well I'm home", rather than "Well, we have destinated at our home queue tea aitch".
- 2 Saying "Yeah, roger" every time you start to speak.
- 1 And the number one stupidest repeater practice: Repeating everything you say on a perfectly clear transmission. "Yeah roger roger, we have destinated Fred, we have destinated." For those who are offended by my views, I offer my apologies in advance. (Although I doubt it we have any thin-skinned whiners in our club.) And for those who maintain that the five stupidest practices "make us Hams distinctive," I can only say "Yeah, and a big roger-dodger there good buddy!"

By Neil Herber VE3PUE Ottawa P.A.R.C. Taken from December Issue of The Ontario Trilliums A.R.C.

HAMILTON AMATEUR RADIO CLUB SWAPSHOP LISTINGS

To list items: VE3NCF (146.760) Tuesday 8pm., OR call John (VE3JWJ) 578-4275. Or leave a message on the VE3DC Packet BBS (145.590) or via modem on BBS at 575-4745.

Items accepted should be related to the enjoyment of our common hobby. Amateur Radio this has been interpreted to include also computer equipment, C.B. and other electronic gear that can be used or converted to Amateur Radio use. All prices are negotiable unless otherwise stated. Listings are read over the air for four weeks, published once in The Hamilton Amateur, and posted on the packet and computer BBS VE3DC (Sysop VE3JSJ - Gord) 145.590 and 575-4745. The Swap Shop meets every Tuesday evening, except the summer months at 8:00 p.m. on VE3NCF 146.760. During the Swap Shop, a telephone number is usually provided for those without 2 meter capabilities (SWL's, new hams, etc) to provide access to the net. Number in front of listing is the number of weeks already on.

ITEMS FOR SALE LIST

- 1 VE3NKO, RICK (519)753-9691
ICOM 730 SOLID STATE HF RIG, MATCHING AT-100 TUNER, MANUAL, MOBILE BRACKET \$750.00
- SWAN 1KW ANT TUNER, EXCELLENT SHAPE \$125.00
- TANDY PORTABLE COMPUTER 8K RAM, MANUAL, SERVICE MANUAL. \$125.00
- 1 VE3CCF, CHRIS (416)847-0090
KWD. CW FILTER YK-88C 500 HZ. \$55.00
- KWD. 231 2M 50WATTS OUT. NEW CONTROLLER MIKE \$350.00
- KANTRONICS KAM WITH CABLE AND MANUAL \$350.00
- 1 VE3XBR, BRIAN (416)575-9733
KWD. R5000 RCVR. YK8AT 6K AM FILTER DC#2 DC POWER CORD FOR MOBILE CIG LIGHTER...\$900.00
- 1 VE3DXC, DEREK (416)387-2936
101ZD HF RIG. MANUAL LIKE NEW MIKE, CABLE SERVICE MANUAL \$600.00
- 1 VE3RNL, RICK (416)689-7294
2 MTR AMP. SIN-30 OUT \$50.00
- 800 XL COMPUTER, 64K, 1050 DISKDRIVE, GAMES B&W TV \$150.00
- VIC20 COMPUTER \$20.00
- 2 VE3FDJ, FRANK (416)383-9454
KWD TS-440S, MC-80 MIKE AND DESK MIKE MANUALS \$115.00
- 3 VE3NCM, KEN, (416)336-0080
ICOM HC-AT 2M HH. EXTRA BATTERY PACK, MANUAL SPEAKER MIKE, WALL CHARGER \$200.00
- 3 VE3ITY, BORIS (416)388-6200
YAESU FT-101ZD MK1 NO WORK BANDS WITH MANUAL AC/DC POWER CABLE \$400.00

MARK YOUR CALENDARS

ITEM 04. TO COMMEMORATE THE 25th ANNIVERSARY OF THE CANADIAN AMATEUR RADIO FEDERATION INC. (CARF). The DCC have authorized VE4XXV for use as a special event station from December 18-31, 1992 inclusive. by Ed Henderson VE4YU CARF assistant director mid-west section.

ITEM 05. WEDNESDAY FEBRUARY 3rd, 1993 C.I.D.A. DEVELOPMENT DAY. Again this year CARF hopes that amateurs will set up stations in public places to promote CIDA's work in the third world. C.I.D.A. provides colourful QSL cards and negotiations are in progress for special call prefixes for the day. More details later. For further info: Fergus MacLaren, C.I.D.A. in Calgary (403) 284-3286 or Dan Holmes VE3EBI, 613-746-0968 Ottawa. Special free QSL cards from Canadian International Development Agency, 5th floor, 200 Promenade du Portage, Hull, P.Q. K1A 0G4.

ITEM 06. THE NIAGARA PENINSULA AMATEUR RADIO CLUB INC. is holding it's 15th Annual BIG EVENT, a Hamfest and Dinner-dance on February 6th, 1993 at the C.A.W. Hall, 124 Bunting Road, St. Catharines, Ontario. Admission \$5.00, tables \$12.00 commercial and \$5.00 non-commercial. Talk-in on 147.24/84. For further information please write N.P.A.R.C. Inc., P.O. Box 692, St. Catharines, Ontario. 12R 6Y3 telephons: (416) 934-3231 or VE3KIM @ VE3KIM. Dinner-dance tickets available only in advance.

John Hunt, VE3JWH, secretary

ITEM 07. CONGRATULATIONS - VE3HC FRED HAMMOID well known amateur of Guelph Ontario. Fred was 80 years old on December 15, 1992. CONGRATULATIONS AND BEST WISHES from your many amateur friends.

ITEM 08. SEASONS GREETINGS TO ALL FROM CARF HQ. Debbie, Maureen, Olive, Cheryl and Ferd. VE3GRS. Steve and yours truly VE3JFU. Bill will be back with the news bulletin on January 15th.

CARF HQ OFFICE CLOSED from noon December 23 to 9:00 a.m. January 4, 1993.
DON'T FORGET CARF WINTER CONTEST Sunday 27 December. Starts at 0000Z which is Saturday p.m. in Canada.

There are so many things I have to do - it's hard to know which to neglect first.

Have you noticed how the speaker who says, "I could go on and on" usually does?

73 and Season's Greetings from VE3VCA Steve VE3GRS at the keyboard

THE PACKET CORNER

PACKET OPERATING HINTS & PROCEDURES INTRODUCTION TO PACKET RADIO - PART 3 - by Larry Kenny WB9LOZ

In Part 2 I talked about how to get on the air and make your first QSO. Now let's take a look at some of the commands that are available in your TNC to help improve your station operation.

TNC COMMANDS: The TNC, or Terminal Node Controller, that "little black box" we've talked about in the past, has more than 100 different commands for you to use. You're able to customize your packet operating with these commands and turn on and off various features as you wish. Not all TNCs are exactly alike, but all have pretty much the same functions. I'll be using the commands used by the TNC2 and clones in my examples.

We covered a few of the commands previously: CONTROL C for entering command mode, MYCALL, MONITOR, CONNECT, and DISCONNECT. Now let's discuss a few that can change the way your station functions.

ECHO: This command tells the TNC whether or not it should send what you type back to the monitor screen. If you don't see anything when you type, set ECHO to ON. If you see ssssss ddduuubllleee, like that, set ECHO to OFF. This setting will depend on how your particular computer system functions.

CONV: (converse mode): Your TNC will automatically switch to this mode when you connect with someone, but you can also do it by entering CONV [CR] at the Cmd: prompt. When in converse mode, anything you type will be transmitted via the path you set with UNPROTO. (See the next paragraph.) Anyone in monitor mode will be able to read what you transmit. Packets in converse mode are sent only once and are not acknowledged, so there is no guarantee that they will get through. This mode is used frequently for sending CG's.

UNPROTO: This command designate the path used when in converse mode. The default is CQ, but you can enter a series of digipeaters if you wish, or a specific group or club name. Some examples: CQ v WB6SDS-2, 6SG-1, AJ7L. Remember, you have to change UNPROTO for use on different frequencies, unless you leave it set simply to "CQ".

FRACK: This determines how long your TNC will wait for an acknowledgment before resending a packet. It shouldn't be set to short, or you simply clutter up the frequency, yet it shouldn't be too long, or you'll spend too much time waiting. I us FRACK set to 7, and have found that to be an overall good value.

DWAIT: Used to avoid collisions, DWAIT is the number of time units the TNC will wait after last hearing data on the channel before it transmits. I have DWAIT set to 16, and have found that to work well.

PACLEN: Determines the number of characters in your packets, ranging from 1 to 256. The more characters you send per packet, the longer it takes to transmit the information and the greater your chances are of noise, interference or another station wiping it out. I've found a PACLEN of 80, which is the length of one line, to be a good value. When working a station nearby, PACLEN can be increased. When working a distant station, it should be decreased.

THE PACKET CORNER

PACKET OPERATING HINTS & PROCEDURES
INTRODUCTION TO PACKET RADIO - PART 4 - by Larry Kenny WB9LOZ

USING DIGIPEATERS AND NODES:

DIGIPEATERS: Digipeater is the term we use to describe a packet radio digital digipeater. Unlike the FM voice repeater, most digipeaters operate on simplex and do not receive and transmit simultaneously. They receive the digital information, temporarily store it and the turn around and retransmit it.

Your TNC will allow you to enter up to eight digipeaters in your connect sequence, but using more than 3 usually means long waits, lots of repeated packets, and frequent disconnects, due to noise and other signals encountered on the frequency.

When entering the list of digipeaters in your connect sequence, you must make sure that you enter them in the exact order that your signal will use them. You must separate the calls by commas, without any spaces, and the EXACT callsigns must be used, including the SSID, if any. That means you need to know what digipeaters are out there before you begin randomly trying to connect to someone. Turn MONITOR ON and watch for the paths that other stations are using.

Here are some examples of proper connect sequences:

C W6PW-3 V W6PW-1
C N6ZYX V WA6FSP-1, WB6LPZ-1
C W6ABY-4 V K6MYX, N2WLP-2, AB6XO
The "V" means VIA. In the first example the sequence show means: Connect to W6PW-3 via W6PW-1.

Something to remember when using digipeaters is the difference between making a connection and sending information packets. If the path isn't all that good, you might be able to get a connect request through, but will have a difficult time with packets after that. The connect request is short so it has much less of a chance of being destroyed by noise or collisions that a packet containing information. Keeping information packets short can help keep retries down when the path is less than ideal.

NODES: Net/rOM, TheNet, G8BPQ packet switch and K-A-Node are the names that refer to a device called a packet node, another means of connecting to other packet stations. Later on in this series you'll find a complete review of node operation, but for now we'll cover the basics so that you can begin using the node network. The difference you should note here is that you connect to a node rather than using it in a connect path as you do with a digipeater.

First, you need to determine what nodes are located close to you. You can do this by monitoring and watching for an ID or by watching to see what other stations in your area are using. You'll note that most nodes have an alias ID in addition to its callsign. Once you determine the callsign or alias of a local node, you connect to it the same way as you connect to any other packet station. You may use either the callsign or the alias to make the connection. For example, the node I operate has the alias ID of SF and the callsign of WB9LOZ-2, so you could connect to it using "C SF" or "C WB9LOZ-2". Either one will work.

Other matters seem to be working against DOC's Client Procedures Circular CPC-2-0-03 as an effective process in the management of the issues. Firstly, it is not well written DOC officials wish to keep the procedural language general in nature, however the lack of specifics leaves details of obligation and procedure too much to chance. This causes costly misunderstandings for all concerned. There is confusion over the distinction between commercial and amateur licensees in the process. It also groups antenna appearance and the concern with the proximity of electromagnetic fields as similar issues. Secondly, some DOC Regions appear to have neglected to work more closely with city officials and municipal associations to ensure federal jurisdiction, policy and procedures are clearly understood and accepted. We are told that Ottawa DOC cannot always influence the operational actions of Regional managers over such matters.

Both CRRI and CARF take the position that municipalities should not be able to enact bylaws or legislation wherein individual amateurs have to ask permission to site antenna structures. While DOC has stated that amateurs are not obliged to request permission, we advise amateurs to follow DOC policy and consult with neighbours and municipal officials. Let those concerned know your intention! Be open, courteous and co-operative! Follow siting practices which protect you and your neighbour's property. Err on the side of caution over matters of structural integrity and safety. Keep structure and apparatus appearance consistent with current practice, e.g., a regular tower (Delhi, Hy. Gain, Rohin, Tylon, etc.) and tri-bander will function adequately in an urban setting and is not out of step with the use of similar structures around the world.

We recommend that club executives engage in meetings and friendly discussions with municipal planners and elected officials pointing out the many ways amateur radio enhances life in a community. Your national organizations are working on a "communication package" of a video tape and an explanatory paper on antennas and amateur radio which we can all use to communicate our story to our neighbours and community officials. In the meantime, we will work in co-operation with DOC, RABC and with provincial and local governments to ensure the law and reasonable policies are clearly understood and that effective procedures are followed. We will keep you informed on this disruptive and threatening matter as actions and issues unfold.

Dano Shtun, VE3DSS, President - CRRI
J. Farrell Hopwood, VE7RD, President - CARF

FRANK AND ERNEST



Packet part 4 continued....
 Because of this, retries are greatly reduced, and your packets get through much faster.

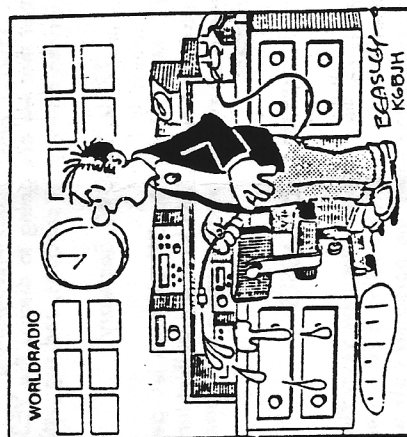
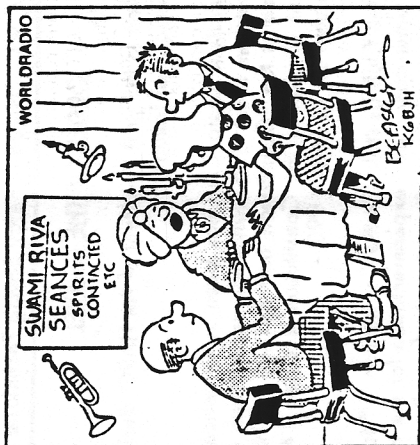
When you're finished with the QSO, you disconnect in the normal manner—go to Command Mode on your TNC and enter "D" <CR>. The entire path will then disconnect automatically for you.

Modes offer a variety of other features besides allowing you to connect to other stations, and we'll look at those in parts 10 and 11 of this series.

PART 5 and 6 Next Month..Enjoy !!

UPCOMING SWAPS

January 3, 1993	South Bend Hamfest, Indiana. Sunday
" 17,	Southfield High School ARC Southfield, Michigan. Sunday
31,	Wheaton Community Radio Assoc., Villa Illinois. Sunday
February 6, 1993	Niagara Peninsula ARC St Catharines, Ont Saturday 8am to 2pm
21,	Livonia Amateur Radio Club Dearborn, Mich Sunday
March 20, 1993	Michigan Crossroads Hamfest, Marshall, Michigan. Saturday
21	Toledo Mobile Radio Association, Toledo, Ohio. Sunday
April 23, 24, 25	DAYTON
May 16, 1993	Tri-County Hamfest, Fulton County, Ohio. Sunday
July 18, 1993	Van Wert ARC, Van Wert, Ohio. Sunday
August 1,	Eastern Michigan ARC, Pt. Huron, Michigan. Sunday



MIRIAM! --- DID YOU HOOK MY RG-8 TO YOUR GARDEN DRIP SYSTEM Y?

WORLD RADIO.

THE HAMILTON AMATEUR RADIO CLUB

P.O. BOX 91215, Effort Square Postal Outlet, Hamilton, Ontario L8N 4G4

CLUB MEETINGS:

Meetings are held on the third Wednesday of each month except July and August at the Nash Auditorium, Chedoke Hospital. Start time is 8:00pm. Non-members and friends are welcome, coffee and donuts are on the house!

EXECUTIVE MEETINGS:

The Board of Directors meets at 8:30pm on the fourth Wednesday of each month in the Radio Room, Red Cross Building, 400 King St East, Hamilton. Members are encouraged to attend.

CLUB STATION:

The HARC maintains an emergency radio station in the Red Cross Building, 400 King St East, Hamilton.

MEMBERSHIP:

Membership in the Club costs \$25.00 per club year, 1 September to 31 August. Additional family members (no bulletin) are \$1.00 per year.

EDUCATION and LICENSE TESTING

Amateur radio license courses are regularly scheduled. License testing through the Club is performed on the second Tuesday of each month (by Appointment). Contact the appropriate person responsible listed on the front cover. Just testee and testor to be present at time of testing.

REPEATER:

VE3NCF 146.760 MHz (input-600), located on the Hamilton escarpment, is available for use by all amateurs. Special features (mailbox, link info) are privileges of membership. Part of the VE3RPT link system. Contact the executive for codes.

FIELD-DAY:

The HARC operates a multi-station site during Field-Day. Contact the Field-Day Coordinator on the front page for more information.

SWAP NET:

A swap net is held on VE3NCF every Tuesday night at 8:00pm except during the summer. The buy and sell listings are also available on the club packet BBS VE3DC operated by VE3JSJ on 145.590 or via modem 575-4745.

FLEAMARKET:

A fleamarket is held during September each year at the Ancaster Fairground. The 1993 fleamarket has yet to be set. The time will be 9.00am.

BULLETIN:

The Hamilton Amateur, the official news bulletin of the Club is published ten times a year and sent to all members (families share a bulletin).

CRESTS:

Anyone wanting a Club Crest or a Club Certificate contact VE3VEH Arie Verhoog.

6. The total points calculated by rule 5 will be adjusted by a DX multiplier of 1, 2, or 5 points per DX country in relation to the power levels listed above. A contact is considered DX if it is on the current A.R.R.L. DX Country List. There will be no DX multiplier for the U.S.A.

7. A valid QSO will be NAME, RST and QTH.

8. The point total from rule 6 will be adjusted to take into account years licensed according to the following:
more than 3 years licensed - subtract 25% from score
licensed 2 to 3 years - subtract 15% from score
licensed 1 to 2 years - subtract 10% from score
licensed less than 1 year - full score

OLD EQUIPMENT MANUALS

Did you know that there is a source (collector) of service manuals for old equipment? If you write to Hi-Manuals, PO Box 802, Council Bluffs, Iowa, USA 51502-0802 and advise them of the Manufacturer and model of any radio that you have, they will advise you of the cost of the manual. This is a boon to all of us who would like to see the older tube-type communications receivers live a little longer!