

- 4 VE3EJ, JOE, (416)680-1211 UNIDED. OVERIED to 10 MTR. 28.300. 28.875 TRADE FOR 2 MTR OR \$ 150.00
- 3 VE3IMS, GRANT, (416)544-4151 A1&1 UHIF 7300 COMPUTER W/MONO MONITOR, 1200 BAUD MODEM, 5 1/4 DRIVE 20 MEG HARD DRIVE, MOUSE. \$400.00
 - COMMODORE 64 51/4 DRIVE \$50.00
 - SEKO SHAW MOD. SP1800VC PRINTER FOR COMMODORE \$80.00
 - MEJ 1224 COMPUTER INTERFACE AND CABLES, CW, RTTY, AMTOR, ASCII MBA-TOR SOFTWARE CARTRIDGE \$125.00
- 3 VE3ITV, MIKE, (519)893-8747
 - CP13 CIG. ADAPTER PLUG \$15.00
 - RH77B RUBBERDUCK 2M AND 70CM \$30.00
 - CM2 ANTENNA CLIP (RUBBERDUCK) \$10.00
- 3 VE3DGG, DON, (416)528-4326
 TOSHIBA 1200XE 286.16MHZ, 20M HDRIVE, 31/2 FLOPPY, 1200 BAUDMODEM BATTERY CARRYING CASE, MSDOS VER. 6.0 \$500.00
- 4 VE3VD, PETE, (416)774-8766 ICOM IC-275A 2M, ALL MODE. 25 WATT BUILT IN POWERSUPPLY MANUAL. \$900.00
- 4 VE3JIS, JACK, (416)648-6443
 - D104 MIKE \$50.00
 - TUR-IER +3 MIKE \$50.00
 - KIM MULTI 2000A 2MTR. ALL MODE, BUILT IN PWR SUPPLY MIKE, MANUALS \$275.00
 - CDE AR30 ROTOR AND CONTROLLER \$60.00
 - RS DX-160 SW RECEIVER WITH BFO... \$125.00
 - 7 AMP PYRIMID PWR SUPPLY \$400.00
 - CHANNEL MASTER ROTER AND CONTROLLER \$60.00
 - ALLIANCE U100 ROTER AND CONTROLLER \$55.00
 - ALLINCO DJ-500T DUALBAND, XTRA BATTERY, CHARGER, MANUAL \$325.00
 - RINGO 2 MEIER ANT. \$35.00
 - PRO 2001 16 CHANNEL SCANNER \$90.00
 - CUSHCRAFT 270R 2MTR VERTICAL ANT. \$55.00
- 2 VE3KWR, TONY, (416)271-7780
 WILSON 4 ELEMENT 20M, LONG JOHN WITH 38FT BOOM, HAMA ROTOR, NO CONTROL BOX
 MOUNTED ON SELF SUPPORTING 65 FT DEIH TOWER, 100FT 213 COAX, 100 FT ROTOR CABLE, 4 YEARS OLD EXCELLENT SHAPE...\$550.00 OR TRADE
- 3 VE3GCF, CHRIS, (416)847-0090
 - KWD, TH26AT 2M HH, TONE PAD, CTCSS BOARD, COVER, PLUG IN CHARGER, 12V CIG ADAPT, 6 MONTHS OLD \$300.00
 - ICOM ICW2A DUALBAND HH, BP84.7.2V BATT. BP85 12 V BATT. BC72 DROPPIN CHARGER
 12V CAR ADAPTER, MANUAL, MINT SHAPE \$5560.00
- 3 VE3MWD, SERAFINO (416)662-4526 R/S HTX-100 10M RIG ASKING \$ 160.00
 LIKE NEW

ITEMS WANTED LIST
 ALL PRICES ARE NEGOTIABLE UNLESS OTHERWISE STATED

- 1 VE3OKA, CARL, (416)389-4307 UHF CRYSTALS WANTED
- 2 VE3WVC, BILL (416)572-3755 OLD COMMODORE 64 OR VIC 20 COMPUTERS ANY SHAPE.

The Hamilton Amateur

MAY 1993

HARC EXECUTIVE FOR 1992/1993

PRESIDENT:	VE3OQG	Everett Englehart	385-0879
PAST PRESIDENT:	VE3OQG	Flora Manga	578-1789
VICE PRESIDENT:	VE3JAI	Emsley Mitchell	627-0333
SECRETARY:	VE3LTD	Paul Webb	574-0818
TREASURER:	VE3DWJ	Dave Bruton	383-9803
MEMBERSHIP:	VE3OCD	Joe Urbanski	388-8383
	VE3VEH	Arie Verhoog	389-9259

HARC COMMITTEE CHAIRPERSONS FOR 1992/1993

AWARDS & CONTESTS:	VE3DWJ	Dave Bruton	383-9808
HISTORIAN:	VE3BIG	George Olenick	383-7338
PROPERTY:	VE3DWJ	Dave Bruton	383-9808
BULLETIN EDITOR:	VE3SON	Jim Walsh	689-6839
EDUCATION:	VE3EKY	Bernie Granby	527-7175
EMERGENCY COORD.:	VE3OQG	Flora Manga	578-1789
FIELD DAY COORD:	VE3JAI	Emsley Mitchell	627-0333
FLEA MARKET:	VE3DGG	Don Gray	528-4326
HEALTH & WELFARE:	SWL	Ellen Reinke	549-5119
PROGRAMS:	VE3JAI	Emsley Mitchell	627-0333
PUBLIC LIASON:	[Open]		
HOSPITAL COORD:	VE3OQG	Mary Urbanski	388-8383
SWAPSHOP NET CONTROL:	VE3JWJ	John Johnston	578-4275
CANWARN COORD:	VE3LTD	Paul Webb	574-0818
REPEATER:	VE3OCY	Don Graziano	560-1960
TECHNICAL:	VE3OCY	Don Graziano	560-1960
VE3DC LICENCEE:	VE3FHQ	Glen Gibson	385-2786
VE3NCF LICENCEE:	VE3MWH	Mark Gibson	389-4308
VE3RCB LICENCEE:	VE3GCP	Fred Robinson	575-5197
VE3WXH LICENCEE	VE3LTD	Paul Webb	574-0818
DESIGNATED EXAMINERS:	VE3EKY	Bernie Granby	527-7175
	VE3NDB	Lorraine MacPherson	389-7653
	VE3GCP	Fred Robinson	575-5197

ITEM 17. ANNUAL GENERAL MEETING SATURDAY 1 MAY, 1993 will be held in Guelph, Ontario at the University of Guelph, Family and Consumer Studies (FACS) Building, Room 103, 0900 hrs. CARF members welcome.

MARK YOUR CALENDARS

ITEM 20. SMITHS FALLS ARC 9TH ANNUAL FLEA MARKET - Saturday, May 1st, 1993 at the Agricultural Fairgrounds, LOMBARDY, ON., 6 km south of Smiths Falls on Hwy #15. Parking for 1200 vehicles. Vendors 0730. Tables \$5. Doors open 0900. Admission \$2. Lots of commercial vendors. Talk-in VE3RLR 147.210 +600. refreshments. Info: Keith Carter VE3RFH (613) 275-2415 and Don Slater VE3BID (613) 283-3570.

ITEM 21. OTTAWA VALLEY MOBILE CLUB FLEA MARKET Saturday, May 15, 1993 at Canadian Forces Reserve Barracks, Dow's Lake, Ottawa, Ontario. Free Admission. Vendors 8 a.m., Public 9 a.m. Tables: Commercial vendors \$20, \$10.00 for all others, tables can be reserved by contacting Ken Barry VE3KJB 454 Woffdale Cres., Ottawa, Ontario, K1K 1N4 (613) 746-4823. Wheelchair accessible. Refreshments. Talk-in on VE3TWO 147.300 MHz+. Be sure to visit the CARF table.

ITEM 22. THE SKYWIDE AMATEUR RADIO CLUB ANNUAL SPRING HAMFEST AND FLEA MARKET, Saturday, May 15, 1993, 8:30 a.m. - 2:30 p.m. (Vendors set up 7:30 a.m.) WESTWAY UNITED CHURCH, 8 Templar Dr. Etobicoke. Church backs on Kipling. Templar is first east of Kipling. You get to Templar from Kipling via Holywell which is 4 blocks south of Dixon Rd. and one block north of Westway. Watch for signs. LOTS OF FREE PARKING. Admission \$4.00. Tables \$10.00 (includes one admission) Info: Ralph Westhouse VE3CBB (416) 743-2483 or John Young VE3CRB (416) 244-1292. Talk-in 146.985 (repeater) 146.52 (direct).

ITEM 23. NEAR NORTH HAMFAST, Parry Sound, Ontario, May 15th, 1993 at the Parry Sound High School, 10 a.m. - 2 p.m. Admission \$2. Free Parking, refreshments. Handicapped accessible. Door Prizes. Talk-in on VE3RPL 145.490/tables \$5. Vendors \$10. Contact: Parry Sound ARC, VE3PSH, 36 Beatty St., Parry Sound, Ont. P2A 2H7 or call 746-9115.

HOMEBREW NIGHT MAY 19, 1993

Crawford Trophy Competition

The Crawford Trophy is awarded annually for the best home made device for use in amateur radio. The name "home brew" proclaims the idea that the device was constructed in the home workshop; thereby requiring skill and patience in producing a product of quality. It also suggests that the device was made at home during leisure hours.

The purpose is to encourage Radio Amateurs to build their own equipment. The prime purpose for making a device would be for improved amateur radio communications, and/ or for testing of amateur radio equipment.

Rules:

1. The device submitted shall have been completed in the 12 months prior to presentation night May 19, 93.
2. Although a limited number of operations in the fabrication of the device may be processed outside the home workshop, the majority of the work shall have been done in the contestants own workshop, or that of a friend, during leisure hours.
3. A contestant cannot act as a judge for this competition.
4. Each contestant is to be given an opportunity to explain the purpose and operation of the device, and any other details he/ or she may deem helpful about the construction. Please let the Awards and Contests Chairperson know if you are entering the Homebrew Competition at least two weeks before May 19, 93.

73's de David Bruton

Minutes of the Hamilton Amateur Radio Club
General Meeting April 21, 1993.

The meeting was called to order at 8:04 PM. by our President VE3OQX Ev. Ev welcomed all visitors and members. Ev introduced VE3JAI, Emsley our Programme Co-Ord.

Emsley introduced our guest speaker to us. Ron Wheeler from D.O.C. Hamilton District Office.

Ron talked about antennas and how the more cities are changing zone bylaws. Most problems should be solved at a local level. If you cannot get a solution, please connect the D.O.C. All your needs cannot be responded quickly due to cutbacks in resources and manpower. Many questions from the audience included local problems, safety of towers, EMI emissions which fall under Health and Welfare, scanners and cellular phones. In the future, there may be transmissions that have a ID signal imprint so tracing will be easier. Emsley thanked the speaker. The HARC has benefited from the co-operation of the DOC over the years and should appreciate the privilege we now have and look to the future for more opportunities to discuss amateur needs.

Tim Reid, from the Weather Office, thanked Paul Webb VE3LTD for a great job of setting up Canwarn in this area. Last year was our first year of operations in Brantford, Hamilton Burlington areas. The new season starts May 3, 93. A intermission for coffee at 9:05PM.

BUSINESS

The business part of the evening started at 9:30PM with David VE3DWJ Secretary, reading the minutes of March 17, 93 General Meeting. A motion to accept the Report was made by VE3GCP Fred and seconded by VE3WVC Bill. Carried.

ELECTION CHAIRMANS REPORT

Elections for the 93 - 94 season will be held on June 16, 1993 at the Nash Auditorium during the General meeting.

My name is Mark VE3JY and I am your Election Chairman and I can be reached at 574-4370 for a verbal confirmation of the nomination you so desire. According to the Club Constitution and Bylaws, I must have the nominations in, 5 days before the Friday June 16, 1993. They must be in writing stating who you wish to nominate and three signatures, yours, a second, and the nominees. Here is a short biography of those nominated so far.

Lorraine Macpherson VE3NDB:

Lorraine has held her advanced ticket for nine (9) years and has been a designated examiner since October 1992 and a H.A.R.C. member for six months. She has been a resident of Hamilton for 25 years and works in the communications industry. She is also a Chairperson for Public Relations for W.N.Y.S.O.R.C. [Western New York Southern Ontario Repeater Council] Other interests are working at a dog obedience school.

John Johnston VE3JWJ:

John has been an operator since Aug. and has his Basic Qualification and 12 w.p.m. He has been a member of the H.A.R.C. since Sept 92. John has also been the Net Controller for the SwapShop and types out the monthly bulletin each month for the club. He has lived in Hamilton since 1956 and other interests are Custom and Classic cars, wood carving and is a musician.

Dave Bruton VE3DWJ:

Dave has been an operator since 1990 and holds his Basic Qualification and has been a member of H.A.R.C. since receiving his ticket. He has been the secretary of the club for the past year and has been a resident of the Hamilton area all his life. [Note - Dave wouldn't say how many as he wanted to protect his age.] Other interests are photography, botany and zoology.

lets have those nominations in folks and keeps Canada's oldest Amateur Radio Club going strong.

Mark Zell VE3JY

ITEM 04. AMATEURS HONOURED BY THE HALL OF FAME - The Board of Trustees of the Cand Amateur Radio Hall of Fame have announced honours for three well known amateurs. Noel Eaton, VE3CJ, has been elected as a MEMBER of the Hall. Ralph Cameron, VE3BM, and Oscar Hierlity, VO1DI, each receive the Hall's "AWARD OF HONOUR". A trustee of the Hall will present the awards at the first Radio Amateurs of Canada (RAC) Board of Directors meeting to be held in Toronto on May 2, 1993. Following Douglas Lockhart, VE7APU and Arthur Blick, VE3AHU Noel VE3CJ is only the third amateur to be elected to the prestigious MEMBER level of the Hall of Fame. The full story behind the awards will be published in the June 1993 issue of "The Canadian Amateur" magazine.

ITEM 05. The call GMORSE has been allocated to the Morse Enthusiasts Group Scotland (MEGS). This unusual call can often be found on 3530 KHz.

ITEM 06. AT&T HAS NEW CELLULAR PRIVACY SYSTEM that scrambles the signal as it travels through the air. It is descrambled at the location where it is handed off to the wired telephone network. Eavesdroppers intercepting the AT&T system will hear only "chirping bird" sounds. The Electronic Communication Privacy Act of 1986 makes it a crime to monitor cellular phone calls.

Canada's Dept. of Communications has also proposed an amendment to the country's Radio Communication Act that would prohibit the unauthorized interception of cellular phone calls. Cellular service providers will be "strongly encouraged" to offer customers optional encryption services and telephone companies will be ordered to study ways to implement an audible signal that would allow users to identify any call made through a cellular service.

ITEM 07. EFFECTIVE APRIL 26th, THE FCC WILL NO LONGER CERTIFY SCANNERS WHICH COVER - OR CAN BE "READILY ALTERABLE" TO COVER THE CELLULAR TELEPHONE FREQUENCIES at 824-849 and 869-894 MHz. Six months later, no such scanner may be manufactured in or imported into the United States. The FCC will require scanner marketers to certify that their equipment meets the requirements.

ITEM 08. UNUSUAL EMERGENCY EXERCISE Recently the Saginaw Valley Club was called on for an ARES activity. The Saginaw Fire Department was going to have a monthly siren test, and wanted amateurs to monitor each siren. Ten amateurs cooperated. When the signal was given for the sirens to operate, nothing happened! They tried again, and none of the sirens in the city worked. They will try again in another month.

ITEM 09. THREADING THE NEEDLES. If you think the wires inside your HT are small, count your blessings. The NEC corporation in Tokyo, in doing semiconductor research, recently discovered how to make the smallest wires known: only a few atoms across. That figures out to about one and a half nanometres, or one and a half thousands of one millionth of a metre. The smallest wires commercially available are thousands of times larger. In addition, these microwires are not manufactured directly. They are formed by depositing lead vapour inside miniature pipelines made of carbon. The inventors say the only downside so far is that they are not sure yet if these microwires can actually conduct electricity well. But if they do you can be sure that computer circuits will shrink even more.

check...and patches...ahhh...and that Morris Code..."

"How come them fellas do all that stuff? Leaves no time for old fashioned rag chewing...don't get paid...or get to watch the telly...\$pose they give points for rag chewing?"

"I dunno. Some fellas just...ahhh...say, here's the Correspondence part. We could write some letters to the ED."

"I don't write so good."

"How about this DX column...The whole thing is call! Maybe we could work a DX station and write in about it..."

"Now, I don't speak them foreign languages too good."

"We neither. So how about something in the high frequencies column. I see a lot of calls in here."

"Ya gotta sit up too late to work them fellas."

"How about this YL News?"

"Nah, my YL wouldn't let me. What's next?"

"DX Century Club...wow, whole page full a calls...."

"Yeah, but ya gotta speak all them languages again...next?"

"Well, lookie here...Station Activities...ah haoo...all we have to do is write somebody a letter and tell 'em what we been doin'...and they print it...with your call...just what we been lookin' for!"

"Noooo, remember, we don't write so good. Besides, what are we gonna tell 'em we been doing?"

"Ahhh, we rag...chewed...down the block..."

hmm...well now, way back here we got the Ham Ad's...maybe...we could advertise...then they'd have to print our calls."

"Now ya got somethin'...yessir...not bad...how much?"

"Fifteen cents a word."

"Oh well, ya only operate once...let's take a chance. I'll pay half if you will..."

"OK, great. What are we going to advertise? Got anything you want to buy...or sell...?"

"Nape. You got anything?"

"Nahin'."

"You mean we got a chance to buy our calls into GST and we can't think of anything to...ya know, this breakin' into print is a lot tougher than I thought! They're gonna have to come up with some new columns for us to write in to...er stumppin'."

"Well, listen Charlie...ahhh, ole buddy...there's one regular column I seen in GST that I didn't ahhh...tell ya about. And one a these days, we'll both get our names in that column...for free, too. Yeah. But I want you to know that when the...ahhh...time comes...ahhh...I promise ya I'll send your call in to have it printed in that column. And I know you'd do the same for me...ole buddy."

"Oh yeah? What column you gonna put my call in?"

"Silent Keys."

"There ya go with them keys again. I told ya before I just ain't no good with that Morris Code."

From GST March 1972

NOMINATIONS for EXECUTIVE

Time to think about upcoming General Meeting elections. Candidates must be Members in good standing, and must accept in person or in writing. Please submit your nomination, with your secondor, to Chairperson of the Nomination Committee, P.O. Box 91215, Effort Square Postal Outlet, Hamilton, Ont., L8N 4G4.

CENTISBLE SOLUTIONS TO YOUR HYDRO BILL

The following questions were taken from the March meeting about Saving energy in the 90's. For those who missed the meeting.

GENERAL LIGHTING

ANSWERS

1. Par 38 60 watt spot light replaces a 150 spot. A saving of up to 40% can be seen on your hydro bill. FALSE. Up to 60%.
2. If you are in the habit of leaving a light on out side every night a motion sensor will not save you any money. FALSE.
3. Replacing a 7 watt string of Christmas lights with a 5 watt string will save 30% on electricity. TRUE.
4. 2 - 60 watt incandescent lamps put out more light than one 100 watt incandescent lamp. FALSE.
5. Dimmer switches save money when the light level is turned down. TRUE.

FLUORESCENT

1. Tests have shown that while frequent on/off switching may slightly decrease the life fluorescent lights, the energy dollars saved will more than pay for the price of a new tube. TRUE.
2. Fluorescent tubes use 60-80% less energy than incandescent lights and last 10-20 times longer. TRUE.
3. Replacing an old "core and coil" electromagnetic ballast with a electronic ballast c yield a saving up to 50%. FALSE. 25-30%
4. Electronic ballast produce one-fourth the noise of core and coil ballast. TRUE.
5. Demand Management goal is to develop and promote economic demand management programs dined at more efficient use of electricity that meet with gener. customer acceptance. TRUE.

APPLIANCES

1. Better to dry clothes in two small loads than one large one. FALSE.
2. Preheating oven when baking takes 20 minutes to reach 180 degrees C (350 degrees F). FALSE 10 minutes.
3. Microwave ovens uses the same amount of electricity as the conventional oven. FALSE up to 50%.
4. Microwave is only half as efficient as stove tops elements, so it is better to boil large quantities of water on stove. TRUE use proper size burner.
5. Electric kettle is by far the most efficient way to boil water for a cup of tea. TRUE use automatic shut off.

WINDOWS/AIR LEAKAGE

1. Air leaks in a home are responsible for up to 10% of the heat loss. FALSE 40%.
2. Foam gasket behind cover plates and electrical outlets does not reduce air leakage, especially on outside wall. FALSE.

Radio Amateurs Of Canada

FOR IMMEDIATE NEWS RELEASE REVISED EDITION

Kingston, ON 1 May 1993

RAC MEETS DOC DEPUTY MINISTER

Radio Amateurs of Canada had a positive meeting with DOC in Ottawa on 28 April 1993. We discussed DOC's approach to Canada's amateur radio service in a meeting with Deputy Minister Marc Rochon. RAC President, Farrell Hopwood VE7RD, stated "The Deputy Minister said he learned a lot from the discussions and that many of the issues we placed before him can be resolved by working together with his staff in Ottawa and in the Regions." M. Rochon became Deputy Minister in 1992.

The unlawful restriction of antenna tower heights was reviewed in detail including the list of municipalities carrying by-laws which challenge the powers of DOC over such matters. The need for more effective monitoring and enforcement of regulations and the need for responsible action by those who manufacture and sell electronic devices which are susceptible and not electromagnetically compatible (EMC) was discussed at length. Special emphasis was placed on the preservation of exclusive VHF/UHF amateur bands for the needs of our rapidly expanding numbers, (now over 35,000 Hams).

RAC remains very concerned over the loss of VHF bands. The need to preserve the remaining VHF amateur exclusive bands was discussed at length. FCC has asked to meet DOC to negotiate a band sharing agreement which could adversely affect the amateur segment 220-222 Mhz. The FCC wants an agreement before fully implementing Land, Fixed and Mobile services in the US. DOC told RAC that the needs of Canadian Amateurs will be an important part of any future decision on the use of the band. DOC will shortly issue a paper on the possible re-allocation of frequencies from 30MHz to 890 Mhz spectrum. Amateurs, among many others, will be invited to address 220-225 Mhz band use at that time.

Those representing RAC included Farrell Hopwood VE7RD, Dana Shun VE3DSS, Earle Smith VE6NM, Tim Ellam VE5SH and Bill Wilson VE3NR. Deputy Minister Marc Rochon's staff included Bob Jones, Director General Radio Regulatory Branch, Maurice Nunas, Director Spectrum Operations, S.N. Ahmed, Director General Engineering Programs Branch. A second meeting to address 220-222 Mhz matters was attended by some of the above and David Wames, Manager Long Range Spectrum Planning and Chris Lafkas, Chief, International Systems Radio regulatory Branch, who are involved with negotiations with FCC.

DOC reacted favourably to the RAC proposal for a permanent Amateur Radio Advisory board composed of key officials of DOC and RAC. It is expected meetings will be held at least twice a year beginning in the Fall of 1993.

the barrel only weighed about 15 pounds. I refer you again to weight in block no. 11. As you might imagine, I began a swift plunge down the side of the tower. Ago at about the 50 foot level, I met the barrel coming up. This accounts for my two fractured ankles and the lacerations on my legs, thighs, and lower body.

The barrel encounter slowed me enough to lessen my impact with the pile of tools and hardware and I was extremely fortunate to escape with only a fractured coccyx and three crushed vertebrae.

I regret to report, however, that as I lay there on the pile of tools in excruciating pain, unable to stand, and watching the empty barrel, 100 feet above me, that I again let go of the rope !!!

AUTHOR UNKNOWN

(From the March Issue of the Monitor Brantford A R C)

WARNING TO ALL HAM S

Reprinted from the newsletter of the Horseshoe Amateur Radio Club and contributed by Paul Mackanos, K2DB.

A reward of 500 Micofarads is offered for the information leading to the arrest of Hopalong Capacity. The unmodified criminal escaped from a Western Primary cell where he had been clamped in IONS awaiting the Gauss Chamber. He is charged with the induction of an 18 turn coil named MilliaHenry, who was found Choked and robbed of valuable Joules. He is armed with a carbon rod and is a potential killer. Hopalong Capacity is also charged with driving a dc motor over the wheatstone bridge and refusing to let the band pass. If encountered he may offer series resistance. The electromotive forces spent the night searching for him in the magnetic field, where he got to earth. They had no success and they believe capacity returned to ohm via a short circuit.

He was last seen riding a kilocycle with his friend eddy current, who was playing ohm on the range with his harmonic.

de The RaRaReg.

(Taken from the Peel Signal March 93.)

PARSER CORNER

Well we have come to the end of our Packet Corner and I hope that a few people learned a few things from the tutorial. The following is from VE3OY Keith who a major player in Packet in the Southern Central Ontario area and these are a few helpful hints that he suggests all packeters follow. This captured from VE3OY bs.

Packet Etiquette Primer

Here are some friendly reminders about operating on packet and what we can do to help in making the use of the packet network and its resources more enjoyable for all:

1. If you are a DXCluster operator, connect to the Cluster only when you are in the shack and can actually use the information that the Cluster is going to generate. Coming back to the shack to get a spot that is 2 hours old serves you no purpose at all. On a more important note, if you are accessing the Cluster through a network node, you are using a virtual channel and the node can only handle a finite number of virtual connects. Please be responsible.

RAC and The Canadian Amateur

CONTACT "Radio Amateurs of Canada" (RAC) TODAY!!!

Be sure to get your copy of the July 1993 issue of

"THE CANADIAN AMATEUR" (TCA)

The start-up of "RADIO AMATEURS OF CANADA" (RAC) May 2, 1993 marks the beginning of a new era in Canada's national amateur radio affairs. If you're not a CARF or CRRL member now, you will want to ensure that when they dissolve May 2nd you'll start receiving RAC's new expanded amateur radio magazine each month, AND ESPECIALLY THE "JULY" ISSUE, which will contain the story of the CARF and CRRL merger. It will be a great HISTORICAL SOUVENIR! You will want to get on board by joining "RADIO AMATEURS OF CANADA" right NOW!!!

As a member of "RADIO AMATEURS OF CANADA" you get so much GREAT SUPPORT from the following:

FREE OUTGOING "QSL" BUREAU SERVICE
INTERNATIONAL REPRESENTATION - "International Amateur Radio Union"
REPRESENTATION WITH GOVERNMENT (DOC)
REPRESENTATION WITH PROVINCIAL AND LOCAL MUNICIPALITIES
REPRESENTATION ON "Radio Advisory Board of Canada" (DOC & Industry)
NATIONAL ADVISORY COMMITTEES on every major aspect of the hobby
NATIONAL FIELD ORGANIZATION (ARES, NETS & TRAFFIC SERVICE)
THE CANADIAN AMATEUR RADIO HALL OF FAME
AFFILIATE CLUBS PROGRAM
RECIPROCAL LICENSING SERVICE
AWARDS AND CONTESTS
DOC EXAMINATION "Certificate Study Guides" and "Question Banks"
CANADIAN REPEATER GUIDES
CANADIAN CALL SIGN AND ADDRESS INFO (books and PC diskettes)
AND MUCH, MUCH MORE!

AND "The Canadian Amateur" magazine 11 times a year featuring:

- * Up-to-date news on DOC affairs and regulations
- * Information on international affairs
- * Great columns on DX, Contests, Packet, Computers, Propagation, EMC Matters, GRP, Antennas, YL News and A host of feature stories about Canadian amateur radio from coast to coast
- * Valuable operating guides and information
- * Canadian amateur equipment advertising
- * Product reviews
- ... and MUCH, MUCH MORE!!!

CONTACT - RADIO AMATEURS OF CANADA
Administrative Office
P.O. BOX 356
KINGSTON, ON K7L 4W2
TEL OR FAX: 613-545-9100

2. If you can connect to a Cluster on a direct VHF or UHF channel, please do so - again for the same reason listed above. I have discussed this with the DXCluster ops and they have assured that they will have direct connect ports available for a 1 March deadline.

3. When you are sending a message please consider the intended audience, for example, do not send FOR SALE messages outside of North America as they will be deleted/killed by non North American Sysops. If you want to know what goes where, here is a sample list:

ALLONT - All Ontario
ALLCAN - All Canada
CANADA - All Canada
ALLUSA - All United States
WW - World Wide Coverage
TPG - Toronto Packet Group

As another example, do not send a want out for a tower to WW, do you really want to pay the shipping charges from Burma??

4. If you are going to send a long message to another BBS more than 100 miles away, please break the message into several 3-4k byte long pieces. Some of the links it may traverse may be HF and sending the message over an HF path can be tricky at best.

5. FOR SALES - Messages that have items for sale must be amateur radio related - selling a tower that includes a house does not qualify - don't laugh, it has been tried. If you are wanting the message to have USA coverage, do not include the price as most American BBS' will delete it. It is not allowed in the States.

6. When using nodes, do not try accessing them through backbone channels. The frequencies associated with them are unpublished for a reason and they work well because they do not suffer from hidden transmitter syndrome. Your cooperation is desired and while not exercised, you can be excluded from using them.

7. If you can communicate directly with another station, please do so. If you have a long file or message to transfer to them do so on a separate frequency. This especially applies to those wishing to do YAPP transfers.

8. When requesting a YAPP file transfer from a BBS, do so during non-peak periods. If in doubt ask your sysop. Also, YAPP transfers do not work well over a network and you will be disappointed with the results if you try..

To ALL from VE3OY

HOW TO GET YOUR CALL IN QST MAG

BY JOHN G. TROSTER, W6ISQ

HEY CHARLIE, how come we never get our calls in GST?

"I dunno. Must be a oversight on their part."

"Well, I been sittin' here reading the new GST and, ya know what?"

This mag is full of calls. How you suppose all them fellas get their calls in there and we don't? "Yeah, we been rag chewin' on this same frequency for 30 years. Ya think the word would get around and they'd print our calls for ...ahhh..."

"Aw, it shouldn't be so tough to break into print here. Lessee here what we could do. I'll start reading and we'll go through this mag and find us a place to get out call in. Now...Himmim...they print your call if you write a article. How about that?"

"About what?"

"Ahhh, ok, what else we got here? How about a Hint or a Kink? Any ideas that would be helpful?"

"Now, most of my ideas is Kinks....not Hints. What's next?"

"Maybe we could write a Technical Correspondence."

"How about if we could find a mistake in a article published last month and write a Feedback?"

"Now, they don't give your call credit for making Feedbacks. But how about a contest? Ya know, they publish everybody's call who sends in a log."

"Which contest?"

"Any of 'em. All we gotta do is work a few stations and send in our logs."

"Waall, trouble is, if you don't win top spot they only print your call in little tiny letters, not real big ones where everybody can see 'em."

Yeah, guess so. and ya gotta spend all that time working stations. Cuts into rag chewing time....say, how about taking a picture of us and sending it in?"

"Doin' what?"

"I dunno....just standing there I guess....hmmm....oh well, how about this Brass Pounders League....losta calls here?"

"What's that?"

"Aw, ya gotta write down a lot of messages for other people....spend a awful lot of time. I hear some fellas spend maybe a hour a day just sendin' messages back and forth. All for free. Some of 'em even use code."

"Use what?"

"Code....the Morris Code....like ya send with a telegraph key."

"Naw, I'm no good at all with a key and the Morris Code."

So what else we got?"

"Now here on the next page....Public Service Honor Roll. Hey, maybe this is it. Be nice to see you call in there for dain the Public a Service."

"Maybe they'd get the mayor to give us a trophy. What we have to do to

get our calls in for that one?"

"Lessee. It says down here in the corner....ahhh.... check into

cw nets....ooooops, that's Morris Code, Sorry Charlie....or you can check into phone nets....then there's 'laison' something, whatever that is....and here's making phone patches...."

"Ya gotta do all them things to Service the Public....just to get your call in GST. That might take hours." "Yeah, that would be a lot of

3. Heat loss through a window can amount to 15 - 20% of the heat loss per home. TRUE.

4. Ontario Hydro offers \$ 10 per square foot for "low E" that qualify under the Residential Window Program. FALSE \$5.00/sq.ft.

5. Under the Ontario Hydro Incentive Program an operable window with minimum qualification will save \$7.60 per year (11 square foot window) over a standard double glaze window. TRUE.

WINTER HEATING

1. Furnace filters should be cleaned once a month during heating or cooling season. TRUE.

2. Programmable thermostats can reduce your annual heating bill up to 1% per degree lowered. FALSE up to 5%.

3. Heat loss through a basement wall can amount to 20 -30% of the heat loss per home. TRUE.

4. Going from electric heat to gas heat a saving of 50% is possible on your heating bill. TRUE.

5. Going from electric hot water tank to gas a savings of up to 20% is possible on your electricity bill. FALSE up to 48%.

WATER SAVINGS

1. A leaky tap at a drop a second wastes 800 litres (175 gallons) down the drain a month. TRUE.

2. Faucet aerator reduce hot water consumption by 20% per tap. FALSE 25-50%.

3. Energy efficient shower head can cut the amount of hot water used by 30%. TRUE 28,000 litres.

4. Greatest loss from the pipes on the hot water tanks is the first 2 meters (6 feet) on the hot side and first meter (3 feet) on cold supply side. TRUE.

5. Toilet dam results in a 20% reduction in water. FALSE 30-50%.

"TOWER WORK"

A ham writing a letter to his insurance company explaining a recent misfortune....." I am writing in response to your request for additional information in block no. 3 of your accident reporting form. I submitted "poor planning caused the accident." You say in your letter to "explain more fully." I trust the following information will prove to be sufficient.

I am an amateur radio operator, and on the day of the accident I was at work on the top section of my 100 foot tower. When I had completed my work, I discovered that, over the course of many trips up and down the tower, I had brought up about 300 pounds of tools and spare hardware. Rather than carry the now-unnecessary tools down by hand, I decided to lower them using a small barrel and my "gin pole" still attached to the top of the tower. Securing the rope at ground level, I went up the tower and filled the barrel. I then went back to ground level and united the rope, holding it tightly, to insure a slow descent of the 300 pound load. You will notice in block no. 11 that I had given my weight as 150 pounds. Due to my surprise at being suddenly jerked off the ground at such a rapid rate, I momentarily lost my presence of mind and forgot to let go of the rope. Needless to say, I proceeded at a rather rapid rate up the side of the tower. In the vicinity of the 50 foot level, I met the swiftly descending barrel. This explains my fractured collar bone. After momentarily slowing, I resumed my rapid scent, not stopping until my hands were three knuckles deep in the pulley.

Fortunately, by this time, I had regained my composure and managed to hold onto the rope despite the excruciating pain. At about this time however, the loaded barrel hit the ground and the bottom fell out of the barrel. Now, without the 300 pounds of tools,

EDUCATION CHAIRMAN'S REPORT

Exam's were held recently for the students of the H.A.R.C Basic Radio course. The following successfully passed. Not all call signs are available.

J. Marsden Eedson	Basic	+5 W.P.M	VE3QEE
Ross Ruch	Basic		VE3ZAT
Don Reid	Basic		VE3DRA
Bill Zsepeczki	Basic	+5 W.P.M	VE3EKE
John Tiley	Basic		
John Sythes	Basic		

Hearfelt congratulations are extended to all of the above.

During the past season an attempt was made to offer an Advanced Amateur Class, but unfortunately this class had to be cancelled. There were just not enough students registered. This was too bad; I believe most Basic license holders would like to upgrade, so another attempt will be made in the near future.

It is now time to look forward. The club has 3 more meetings left for the Club year. After Field Day most of us will be taking a rest from club activities. The club will resume activities with the new executive in September. We will again run classes in Amateur Radio. Registration for the course will be Sept. 11, 1993. Exams for this class are tentatively set for Dec. 14, 1993. To register call Bernie 527-7175, you can leave a message on the answering machine.

We are uniquely fortunate, through our association with the Canadian Red Cross to be able to offer our radio courses. Costs in the education field through the various boards of education are increasing every year. We hope to continue our present cost structure in the year to come. A nice way for all of us to show our appreciation to The Red Cross is to support their various activities especially the Blood Donor Service. I will be out on Field Day as captain of the 40 meter C.W. band. Volunteers are needed. Setup and take down gets more tiring every year. Help would sure be appreciated. Old age is setting in I guess Hi Hi.... A trailer or a mobile home would sure make operating a lot more comfortable.; the old tent is on its last legs anyway.

To everyone who has helped me in the past, Thank You. C.U. There AR

Bernie (Ben on CW) Ed. CHRMIN

CARF NEWS BULLETIN 06-93, 15 April, 1993
 Issued at CARF Headquarters
 P.O. Box 356
 Kingston, ON, K7L 4W2
 Editor: William (Bill) H. Mason VE3NFU
 Packet Transmission: Bill Butterill VE3MNV

ITEM 01. FCC AND DOC TALK ABOUT 220-222 MHz IN CANADA Canadians do not need unwise and unnecessary "band takeovers" to add to our "Free Trade" problems! However, that could easily happen if DOC allows FCC to influence the re-allocation of the 220-222 MHz band in Canada. CRRL and CARF want this crucial Amateur "exclusive" band protected for the use of our fast growing amateur population and for digital network linking. A powerful service industry lobby was behind this same band segment loss in the U.S. We encourage every Canadian Amateur to write the Minister of Communications demanding the Canadian "exclusive" amateur allocation this band be maintained.

CARF AND CRRL encourage amateurs from coast to coast to write to Perrin Beath Minister of Communications, asking for his assurance that Canada's valuable 220-222 MHz "Amateur Primary" band segment will not be allocated to commercial use under any circumstances. Send a copy to your MP and to CRRL/CARF. Remind the Minister that amateur radio bands are a "natural resource" which must be nurtured and protected for future generations of Canadians.

ITEM 02 .HISTORIC TCA EDITION FOR JULY/AUGUSTI

Want a special KEEPSAKE - an HISTORIC MEMENTO in the annals of Canadian Amateur Radio? We've got just the thing.

The July/August edition of The "Canadian Amateur" (TCA) magazine, with columns added from "QST Canada", will be chock-a-block full of articles and news highlighting the startup of the new national organization, "Radio Amateurs of Canada" (RAC)! This excellent national amateur radio magazine is a MUST in every Canadian shack! TCA will be provided to all RAC members!

Paid-up CARF and CRRL members don't have to worry - they will be on the mailing list. If you have let your membership slip you ought to renew RIGHT NOW! Become new RAC member after MAY 3, 1993 and receive TCA for complete coverage of Canadian news, updates on DOC and special articles and events.

Write or call today to:

RADIO AMATEURS OF CANADA INC.
 Administrative Office
 P.O. Box 356

Kingston, Ontario, K7L 4W2

Tel: 613-545-9100

"DON'T MISS THE STORIES AND NEWS BEHIND THIS HISTORIC EVENT"

ITEM 03. CARF/CRRL TO MEET DOC DEPUTY MINISTER - Key CRRL/CARF leaders will meet with Marc Rochon, deputy Minister of Communications, on April 28, 1993 in Ottawa. The meeting is to review the serious issues confronting amateur radio operators as a result of current DOC policies. Antenna structures policy, lack of EMC standards and spectrum management enforcement problems, among other issues, will be discussed. The relationship with the newly formed Radio Amateurs of Canada will be touched upon. Regrettably, the Honourable Perrin Beath is unable to meet with the delegation.

The Treasurer's Report was read by Joe, VE3OCD. He stated the following: Opening Balance \$35.58 \$0.00 Credits and Debits of \$296.07 for a New Balance \$3,639.51.
Petty Cash Opening Balance of \$139.60 less Debits of \$19.21 = \$ 120.39.
A motion to accept the Report was made by VE3OQG Fiore and seconded by VE3OKA Carl. Carried.

Membership, VE3VEH Arie handed out membership certificates.

Emergency Co-Ord VE3OQG Fiore mentioned the equipment at RCB is in fine shape. The HF rig and 2 Meter rig will be stored in the Radio Room. Update on emergency services by HARC, we are at level one. Would like to train more members of the club for emergencies. In a few months update on what level one means. Red Shield campaign is May 3, 93 and all positions are filled with reserves on hand.

Field day Co-Ord. Emsley stated June 26/27 1993 is the weekend and has been booked with RBC. The site is the same as last year.

NEW BUSINESS

VE3GFE Stan made a motion to nominate VE3DGG, Don Grey to be Fleamarket Chairperson. Seconded by VE3WVC Bill. Carried.

VE3GFE Stan made a motion to nominate VE3JCJ Mark to be Nomination Election Chairperson. Seconded by VE3DGG Don. Carried.

Steve VE3— stated that the quality of sound from tape recorder for doing CW testing was terrible. He would like to know what can be done about it. Bernie VE3EKY Designated Licencee on behalf of the DOC examiners stated that the equipment did not belong to the club. The equipment will be examined and any deficiencies will be noted and corrected.

No future business, the meeting was adjourned with a motion to close by VE3OKA and seconded by VE3GCP. 10:10PM.
Attendance 37.

PRESIDENT'S MESSAGE

The discourse by Ron Wheeler from the Department of Communications was most informative and gave practical explanations to some problems facing amateurs now and in the future. As Mr. Wheeler explained there will be certainly be pressure by commercial interests to seize portions of the 220 Mhz band in the U.S.A.

Only a united protest by amateur groups will forestall further erosion of the amateur bands.

Many thanks to VE3GCP Fred Robinson for his long hours and hard work that he has spend as Public Liason Committee Chairperson.

A request was made by Fiore Manga VE3OQG for volunteers for the Red Cross Emergency Committee. This committee requires more than a minimal amount of time and dedication. Fiore would greatly appreciate help in this area as this committee calls for backup personnel in case of an emergency situation.

Field day is getting under way due to Emsley VE3JAI's organizational skills and the bands are being chosen anyone wishing to participate, please see Emsley.

73, VE3OQX Everett

ITEM 10. W2HD is "HAM OF THE YEAR" Former ARRL president () top Hamvention award. For the third time in the past four years an ARRL dignitary has been named the Dayton Hamvention Ham of the Year. This year the winner is Harry J. Dannels, W2HD, ARRL president from 1972 to 1982. Dannels was cited for his three decades of volunteer work on behalf of Amateur Radio in ARRL positions ranging from section manager to the top spot as president.
The ARRL Letter

ITEM 11. THIS WILL BE THE LAST CARF NEWS SERVICE BULLETIN The next bulletin will be issued May 15 and will be called RAC NEWS SERVICE which will be mailed and sent out on packet as usual on the 15th of each month except July and August.

ITEM 12. WANTED - AMATEUR RDF INFORMATION - Amateur Radio Direction Finding (ARDF) receives little press attention in Canada. This should be corrected! Its a useful fun-filled pastime which more Canadians would enjoy if they knew more about it.

ARDF skills are becoming more in demand as the nuisance and free-loader pastime types become more daring and disruptive on our bands. There must be organized Fox Hunt or Transmitter Hunt groups or clubs who would be willing to tell us what ARDF is all about in Canada and would be willing to help others get started. The Canadian Amateur magazine would welcome club reports, interesting articles (with photos and graphics), operational activities, technical designs or whatever, to pass along to our readers. So lets hear from Fox Hunt or I-Hunt enthusiasts!

Send your article or information to:

The Editor

The Canadian Amateur

P.O. Box 356

Kingston, ON K7L 4W2

The Editors

ITEM 13. C.N.I.B. AMATEUR RADIO PROGRAM "NIBs DAY" Wednesday, May 12, 1993. Frequencies: 1.4.150 MHz SSB 1000-1600 hours local time; 7.065 MHz SSB 1600-2200 hours local time. All amateurs, visually impaired and sighted, across Canada are invited to participate and contact the stations VE1NIB, VE2NIB, VE3NIB, VE6NIB, VE7NIB, and VE7NIB. Visually impaired and blind amateurs will be operating and contacting these stations and will be delighted to expand on their experiences to all amateurs.

Certificates will be awarded to any amateur exchanging signal reports with four "NIB" stations on submitting logs to: Will Melhuish, VE3AOY, Manager CNIB Amateur Radio Program, 1929 Bayview Ave., TORONTO, ON, M4G 4C8.

SPECIAL EVENTS STATIONS

ITEM 14. THE SPECIAL PREFIX CH6 may be used by amateur radio operators in Alberta from 28 May to 30 May 1993 to commemorate the Northern Alberta Hamfest '93 put on by the Northern Alberta Radio Club.

ITEM 15. TO COMMEMORATE THE ONTARIO PROVINCIAL PARKS CENTENNIAL, amateur radio stations in Ontario are authorized to use the prefix CF replacing VE on a voluntary basis from 1 July 1993 to 31 July 1993.

ITEM 16. TO COMMEMORATE THE 200th ANNIVERSARY OF THE CITY OF LONDON, amateur radio stations in the Province of Ontario are authorized to use the prefix CJ3 replacing VE3 on a voluntary basis from 15 June 1993 to 15 July 1993.

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 7:30pm 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, Ontario.

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 ONLY PLEASE). Contact the appropriate person responsible listed on the front cover. Just the testee and tester to be present at the time of testing.

REPEATER:

VE3NCF 146.760Mhz. (input -600), is located on the Hamilton escarpment, is available for use by all amateurs. Special features, mailbox, link, 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 Co-ordinator on the front page for more information.

SWAP NET:

A swap net is held on VE3NCF every Tuesday night at 8:00 pm 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 at 575-4745, or any major Paket bbs in Ontario.

FLEAMARKET:

A fleamarket is held during September each year at the Ancaster Fairground. The 1993 fleamarket date has yet to be set. The time will be 9:00 am.

BULLETIN:

The Hamilton Amateur, the official news bulletin of the Club is published ten times a year and sent to all members. Anyone wishing to contribute to the bulletin contact VE3DWJ Dave or VE3JWJ John. Please submit articles by 4th Wednesday of the Month.

CRESTS & CERTIFICATES:

Anyone wanting a Club Crest or Club Certificate please contact VE3VEH Arie Verhoop.

HAMILTON AMATEUR RADIO CLUB SWAPSHOP LISTINGS
AS OF MAY 11/93
ITEMS FOR SALE LIST

FOR INFO CALL VE3JWJ, JOHN (416)578-4275
TUESDAY NIGHT 8:00 P.M. VE3NCF 146.760 MHZ
ALL PRICES ARE NEGOTIABLE UNLESS OTHERWISE STATED

- 1 VE3MWO, RON, (416)664-4297
TRIPLITE PR25A 25 AMP REGULATED PWR.SUPPLY CROWBAR \$135.00
- 1 VE3CZN, RAY, (416)632-0344
- FSL 1000 RITY UNIT \$100.00
- 15 WATT PA AMP. \$10.00
- NEW MINISCRIBE 8450 40 MEG HRDRIVE \$125.00
- PORTABLE TYPEWRITER \$10.00
- R.S. PRO 2002 SCANNER \$10.00
- TH6 ANTENA \$125.00
- 1 VE3JUR, DAVE, (416)318-5380
DRAKE TR22C PORTABLE 16CH CRYSTAL TRANSVR. ALL CRYSTALS INCLUDED \$150.00
- 1 VE3CRB, JOHN, (416)244-1292
MICRO CRAFT CODESTAR CODEREADER \$200.00
- 2 VE3GRT, CRAIG, (416)648-0573
KNWD. 2MTR AMPLIFIER VB2530 2IN - 30 OUT \$60.00
- 2 VE3WWR, JOHN, (416)385-7694
- CUSHCRAFT 4 E1FM. 2 MTR BEAM \$50.00
- AEA ISOICOOP HF ANT. 10-30MHZ BRAND NEW \$400.00
- YAESU FT2400 2 MTR. MOBILE 50 WATTS,
30 AMP VARIABLE PWR. SUPPLY TO 16V BUILT IN METER
MFJ 921 2MTR TRANSMATCH SWR.PWR METER \$600.00]
- 2 VE3CIB, BOB, (416)383-2054
REEL TO REEL TAPE RECORDER. \$15.00
- 2 VE3WVC, BILL, (416)572-3755
RAMSEY FTR146 TRANSVR. KIT 2.5 WATTS IT HAS BEEN BUILT AND ALLIGNED,
6 CHANNEL, PROGRAMMABLE, SCHEMATICS MANUALS ETC \$125.00
- 2 VE3XBR, BRIAN, (416)757-9733
- 2 MTR. 10 ELEMENT BEAM \$30.00
- KNWD. R5000 GENERAL COVERAGE RECEIVER, AM FILTER \$800.00 OR TRADE
FOR DUAL BAND MOBILE..
- MARAGE B3016 2 MTR. AMPLIFIER 30IN - 160 OUT \$260.00
- 3 VE3NYX, RENZO, (416)521-1064
- PRESIDENT EXT SPEAKER \$10.00
- ICOM 2AT HH, THUMBWHEEL, 2.5 WATTS, TOUCHTONE PAD,CHARGER,MANUAL
\$165.00
- 3 VE3BLE, BLAKE, (416)529-4415
- ROLLAND RAVEN 24 PIN DOT MATX. PRINTER MODEL #PR2417 \$250.00
- WIRE PRINTER STAND \$15.00
- ALINCO DR.570T VHF-UHF DUALBAND MOBILE,DTMF MIKE, CTCSS TONE BOARD
FULL DUPLEX, MANUAL LIKE NEW \$375.00
- 4 VE3URL, LARRY, (416)574-1805
ICOM IC2AT 2M HH. BP3 BATT. WALL CHARGER \$175.00