

JAN 1993

# FEEDBACK

THE OFFICIAL NEWSLETTER OF THE  
GEORGIAN BAY AMATEUR RADIO CLUB

Sponsoring

VE3OSR FM REPEATER 146.940- Mhz

VE3OST FM REPEATER 145.290- Mhz

VE3GBT FM REPEATER 146.895- Mhz

## GBARC

The Georgian Bay Amateur Radio Club, founded in 1973, is based in Grey and Bruce counties. The club meets at 7:30 P.M. sharp on the second Tuesday of each month, except July and August, at the Billy Bishop Airport.

### NET SCHEDULE

Sunday 09:30 hrs 3.783 Mhz

### CLUB OFFICERS

President \_\_\_\_\_ VE3XOX Bob Vary  
Vice-President \_\_\_\_\_ VE3JD Gene McDonald  
Sec-Treasurer \_\_\_\_\_ VE3HIP Ian Trenholm  
Technical-Director \_\_\_\_\_ VE3PCK Carl Styan  
Program-Director \_\_\_\_\_ Vacant  
Bulletin Editor \_\_\_\_\_ VE3TSA Tom St.Amand

### FEEDBACK

The official bulletin of the Georgian Bay Amateur radio club, published monthly, except July and August. Contributions of articles/letters are encouraged and should be sent to

Tom St.Amand, VE3TSA,  
1232 3rd Ave. East, Owen Sound, Ont.  
N4K2L5

### DUES

\$25.00 per year

## MEMBERSHIP

VE3AEO TED	VE3MWU NICK
VE3AUB JACK	VE3NEM TOM
VE3BFV JIM	VE3PCK CARL
VE3BIS DICK	VE3RHJ BRAD
VE3BZC ROSS	VE3RLW ROB
VE3CC CY	VE3RSV RALPH
VE3CRV JIM	VE3RVG GERRY
VE3CLV ROSS	VE3TDF PAT
VE3DQ BILL	VE3TFQ JIM
VE3DKF JIM	VE3TFV KEN
VE3DTS JACK	VE3TSA TOM
VE3DXO DAVE	VE3TTV HENRY
VE3EBM ROY	VE3TUM RICK
VE3FFN WALTER	VE3TUP KLASS
VE3GDH DEREK	VE3TUQ AUBREY
VE3HIO RICK	VE3TUS BARRIE
VE3HIP IAN	VE3TWI OKKE
VE3HMZ BILL	VE3TWJ DAVE
VE3HXX IAN	VE3TWK JACK
VE3IEV JOHN	VE3TWL CATHY
VE3JD GENE	VE3TXB JOHN
VE3JOD GARY	VE3TYL JIM
VE3IXR MURRAY	VE3UIC JASON
VE3JLZ JACK	VE3UWW JERRINE
VE3JUO DON	VE3VTO DON
VE3LKD BOB	VE3WNW BILL
VE3LPD LAVERNE	VE3WWS VIHLO
VE3LPT MOE	VE3XOX BOB
VE3MTG LARRY	SWL STAN
VE3MTV NORM	SWL DAN
VE3MVS MERV	

## This Issue:

Minutes of last GBARC Meeting  
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SHORT BITS  
PACKET RADIO COURSE  
CW NET  
FOR SALES / WANTS

## UPCOMING EVENTS

**NEXT GBARC MEETING**  
FEBRUARY 9th 1993  
**BREAKFAST MEETINGS:**  
JAN 30th 1993  
FEB 13TH & 27TH 1993  
**PACKET RADIO COURSE**  
JANUARY 20th & 27th 1993



**MINUTES OF GBARC MEETING OF 8th DECEMBER 1992** The meeting came to order at 7:43 P.M. with 21 members present. As Ian HIP is away on a holiday to Manitoba, Tom TSA will be recording these minutes. The MINUTES of the November 1992 meeting were read. Accepted by John TXB, seconded by Jim TFQ..CARRIED

#### **OLD BUSINESS**

**DUPLEXERS for VE3OST** — Rick, HIO communicated to the group that the duplexers originally used for the DIGI/NODES at the

Macleam Hunter site would not be suitable for use with VE3OST FM repeater. However the old VE3OSR duplexers would be used in their place along with a device to allow use to use the same antenna along with John Hunter. Rick encouraged the club to purchase another set of duplexers for use with VE3GBT as the ones he has will be available to the club so long as he does not have a commercial use for them. Brand new duplexers cost around \$1500.00.

#### **MOTION**

A motion was put forward by Rick HIO that any further donations of equipment to the club must be done in the following manner. Donations of equipment must be sold to the club for at least \$1.00 with a corresponding bill of sale in the possession of the club. This will eliminate any misunderstandings regarding ownership of equipment. Moved by Rick HIO, seconded by Gene IJD....carried. An inventory of club equipment will be started shortly.

#### **1200/4800 BAUD PACKET**

Gene IJD, reports that 4800 baud packet will be used for the link to VE3LSR, but this is not yet the case as this will, for the time being, be kept at 1200 baud.

#### **INCORPORATION**

Bob XOX reports that benefit of incorporation would be that financial responsibility would be taken off the club executive in the event of an incident which resulted in a lawsuit. Rick HIO informed the club of CKCO's need for \$2,000,000 liability coverage for the Clubs use of their tower for VE3GBT.

#### **REPEATER SYSTEM**

Tom TSA gave a talk on the GBARC repeater system currently under construction. The VE3OST repeater controller is currently under construction with a completion expected in about a months time. Rick HIO, Henry TTV and Tom TSA meet Tuesday nights as a group to test/setup this hardware.

#### **SWAP MEET**

Bob XOX reported that the swap meet held here in Owen Sound was a great success with a turnout of 70-100 people. Costs were \$75.00 plus tax for the room with \$70.00 donated at the door in the form of admission -- cheap entertainment!!

#### **SANTA CLAUS PARADE**

A letter was read from the Kiwanis Club (Linda Droin) thanking us for our participation and communication during The Santa Claus Parade on November 21st.

#### **NEW BUSINESS**

**GROUP PICTURE**

John TXB, took a group photograph of those in attendance at the suggestion of Jack DTS.

**VE3GBT**

Rick HIO, encouraged all to use the 146.895- machine to give it a good workout so that any problems can be corrected before it is put into service on the CKCO tower. The machine is currently running 5 watts at Rick's QTH.

**PACKET BBS**

Gene IJD, gave us a good rundown on the "STATS" function of the bbs. When you get the command prompt > type the letter F and hit return. A great deal of information will then be available regarding bbs usage, user lists, peak usage times etc. Outgoing mail will be forwarded at 7 minutes past each hour to either VE3JEZ or VE3OVV. A welcome was extended to Ted AEO and Nick MWU who have just recently been on packet.

**RADIO CLASSES**

Tom TSA gave a report on the current ham classes which are scheduled to be completed on the 9th of December. A more complete report will be given elsewhere in this issue of feedback....editor

**FIELD DAY**

Tom TSA reports that no mention of our entry for field day could be found in the November issue of QST. Whether this was because of disqualification or because it was late getting there is not known. However, next year we need to pay more attention to logging with proper dupe sheets.

**VE3AEO**

Ted AEO gave a talk on the contribution of ham radio operators during World War II. Every radio amateur received a letter from the Air Force requesting assistance in staffing wireless schools. As a result radio amateurs trained over 50,000 wireless operators, so when you walk down the street and someone asks you about ham radio, you can feel proud about the contribution hams have given to this country. Then as well as now radio operators provide an invaluable service to the general public in times of disaster, public emergency through the passing of traffic via the National Traffic System.....editor

**CLASSES FOR PACKET**

Gene IJD announced that there will be classes of instruction for those interested in packet radio. This will be a 2 evening course with the first night covering the basics, ie: hookups, bbs commands and operation. The second evening will cover more advanced topics including nodes and packet cluster. These are currently scheduled for January 20th and 27th. (snow date February 3rd) The course fee will be \$15.00 for the first night or \$20.00 for both nights. Proceeds will be used to purchase 4800 baud modems for use with the high speed link to VE3LSR.

**Motion to adjourn at 9:20 P.M. by Gene IJD, seconded by Bob XOX**

Winner of 50/50 draw was Walt FFN

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# THUNDERSTORM ALARM

*Don't be caught unawares by the sudden arrival of a thunderstorm with its accompanying wind and rain. This simple radio accessory gives an early warning.*

CALVIN R. GRAF

THUNDERSTORMS, AND THEIR ACCOMPANYING strong winds, rain, and possible hail, can make their appearance rather suddenly sometimes. This is especially so in spring and summer months, but they can actually sneak up on you at almost any time in some parts of the country. When camping out, fishing, picnicking, or just relaxing at home, it is important to know of any severe weather that might be approaching the local area. This is of special interest to those who have to conduct outdoor operations such as construction workers, farmers, and ranchers. Campers, away from their vehicles, can be warned to seek higher ground in case of flash floods.

The thunderstorm activity indicator described in this article will alert you to an approaching electrical storm through the flashing of two light emitting diodes (LED's) and the sounding of an audio alarm. The activity indicator is connected to the earphone audio output jack of a pocket transistor radio or connected across the speaker terminals of any radio receiver. The radio is then tuned to a clear spot near the upper end of the broadcast band (1600 kHz) where there are no stations being received. An AC power supply with 9-volt DC output can be used to operate the radio at home. With this supply, the receiver can be left on continuously and the receiver will consume little power but will provide an alert no matter the time of day or night a storm may appear. The AC-operated supply is inexpensive and can be purchased at any local radio store. A volume control is provided so that the audio alert level may be adjusted or turned down completely. A visual alert is still provided, however, by the continuous flashing of the LED's as a storm appears.

The circuit diagram shows how the alarm is connected to the receiver. Transformer T1 is a small transistor radio

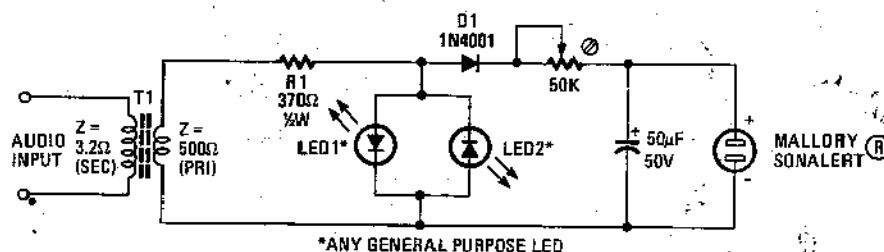


FIG. 1—THUNDERSTORM ACTIVITY indicator and alarm. The audio input terminals are connected to the speaker terminals of any AM broadcast radio receiver.

output transformer connected in reverse. It is used to raise the audio voltage across the loudspeaker (3.2 ohms) to a level that will cause the LED's to operate properly (500 ohms). Resistor R1 serves as a current limiting resistor for the LED's so that the voltage drop across them never exceeds a nominal 1.6 to 1.7 volts. The LED's are connected in reverse polarity parallel so that one will conduct in the forward (positive) direction of the audio signal and other LED will conduct in the reverse (negative) direction of the audio.

Diode D1 is used to rectify the alternating audio voltage so that only pulsating DC is applied to the Sonalert as its polarity markings must be observed. The Sonalert emits a pleasant 2900 Hz signal when the applied voltage is a nominal 1 volt DC. The capacitor charges up on the sharp noise impulses that occur each time there is a lightning flash. When the voltage across the capacitor rises to a value close to one volt, the Sonalert will emit a long "ping". The capacitor thus serves as an integrator and stores up lightning flashes before it causes the Sonalert to sound forth. In this manner, short noise transients on the power line that are radiated from light switches, air conditioners and the like, do not cause the Sonalert to sound. Output from the alarm is also dependent on the setting of the receiver volume control and it will sound out with a normal room level setting.

When a thunderstorm is 10 to 20 miles away, the audio output from the radio due

to atmospheric disturbances will cause the LED's to flash and the Sonalert to sound. As the thunderstorm approaches the local area, thunder may be heard following the "ping" of the Sonalert. Knowing that sound travels one fifth of a mile per second in air, the exact distance to the storm area can be calculated by counting seconds from the time the ping is heard until the thunder is heard. If you count to five, the storm is one mile away, and so forth. When the Sonalert sounds continuously, the electrical storm and accompanying rain are very nearby.

The approximate direction to the storm can be determined by "aiming" the receiver's antenna toward the storm area that produces maximum audio output from the Sonalert. The storm passage through the local area can be followed by plotting the relative bearing against time. Keep the volume level constant.

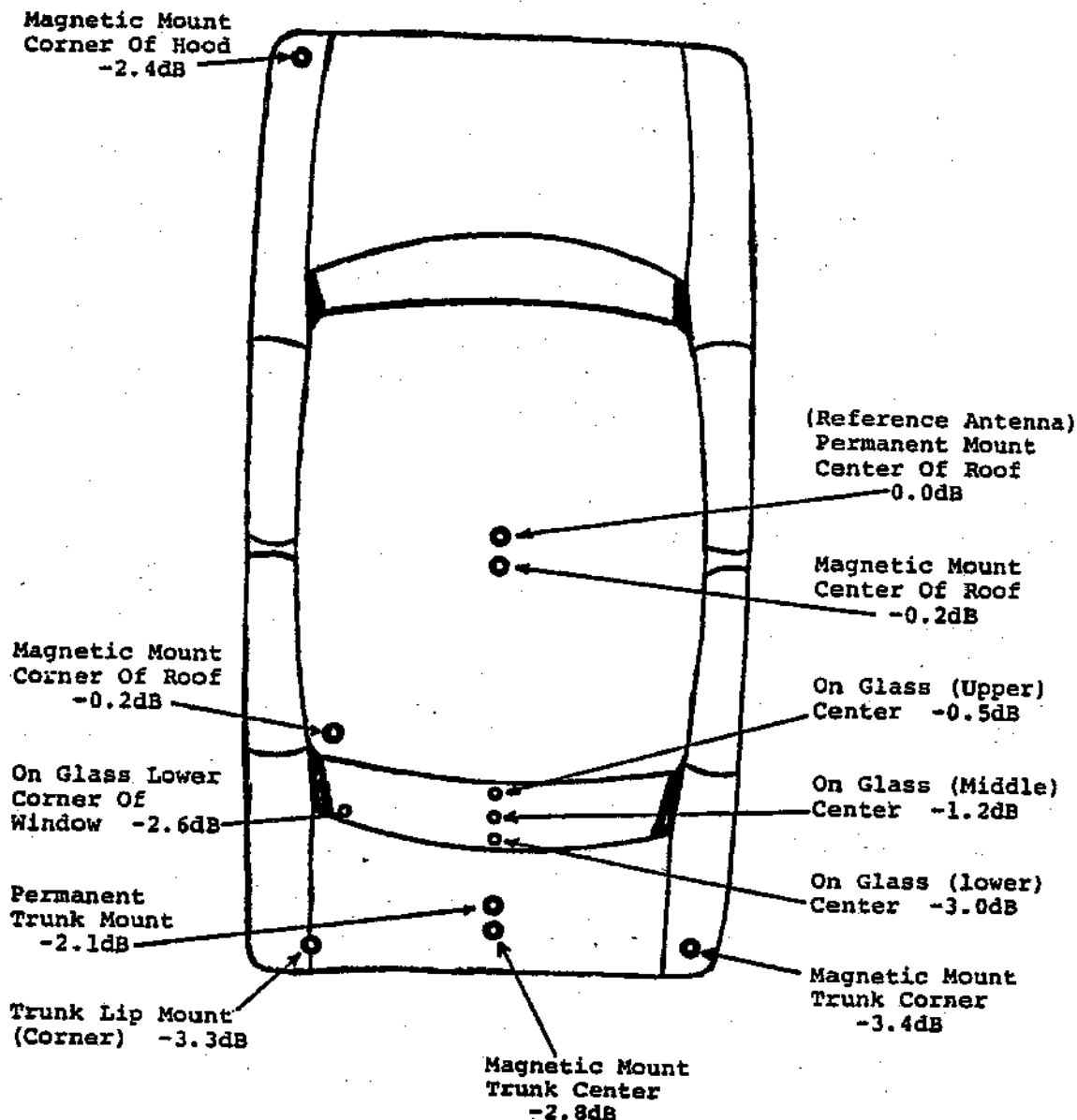
Remember, as the storm approaches, light intensity of the LED's and the sound duration from the Sonalert will increase. As the storm recedes, the relative levels of both light and sound will drop. The storm passage may last from 30 minutes to several hours. With a little experience, you will soon learn to recognize whether it is going to rain or not, in spite of what the weather man may say! (If you live in the cyclone or tornado belt consider using the Stormwarn alarm along with a tornado alert device based on light flashes on a blank TV raster.—Editor)

R-E

# ANTENNA LOCATION DIAGRAM

THIS DIAGRAM, SUBMITTED BY RICK HIO, SHOWS THE VARIOUS LOCATIONS ONE CAN MOUNT AN ANTENNA ON A VEHICLE BODY AND THE RESULTING LOSS ASSOCIATED WITH THAT LOCATION. NOTE THAT THESE FIGURES ARE FOR A 440 MHZ ANTENNA, SO THE LOSSES EXPECTED FOR 2 MTRS WILL BE HIGHER. THIS IS DUE TO THE GROUND PLANE REQUIREMENTS BEING LESS FOR 440 THAN 2 MTRS.

## 3dB Antenna Location



## Presidents Message

HI TO ALL THE FOLKS OUT THERE IN RADIO LAND.....HAPPY NEW YEAR...AND I HOPE SANT A WAS GOOD TO YOU ALL. WELL INTO A NEW YEAR AND AT THIS TIME THE GRASS IS AS GREEN AS IT WOULD BE IN JUNE...WELL ALL MOST.....SO FAR A VERY MILD WINTER....LET US HOPE IT STAYS THIS WAY..HI HI... NOT A WHOLE LOT NEW ON THE FRONT LINES HERE... OUR COURSES ARE OVER AND WE HAVE A PILE OF NEW OPERATORS AND CALLS TO MEET AND LEARN...A BIG HELLO, AND A WELCOME TO AMATEUR RADIO.....QUITE A FEW HAVE JOINED THE CLUB ALL READY AND THATS GREAT.....I HAVE HEARD AND TALKED TO A FEW ON THE AIR AND YOU GUYS AND GIRLS ARE DOING GREAT... WELL I BETTER GET OUT OF HERE...UNTIL WE MEET..73...CUL..BOB...VE3XOX...K

## dx news

KH5 AND KH5K, PALMYRA ISLAND AND KINGMAN REEF Pete, N0AFW, and some of the operators from the FO0CI group expect to be active the last week of February or the first week of March. Approximately 12 operators plan to be active for 9 days. They hope to be on from both locations at the same time.

KH1, HOWLAND ISLAND DXPEDITION - UPDATE. A multi-national team will activate Howland Island in early 1993. Team members are: W0RLX, K9AJ, F6EXV, W9IXX, K4UEE, G4LJF, W0CP, K0EU, PA3DUU and ON6TT. The team sails from T32 on January 19. The trip to KH1 will take about 6 days, and operations should start around January 26. Seven days of operating are planned, with 4 HF and 1 satellite/VHF station.

NORTH KOREA. Ed, NT2X, spoke with P5RS7 on 20 meter SSB on December 8 and reports the operators are in good spirits, but their situation is rather uncomfortable. Romeo sustained an injury to a hand, and one of the team members was sent back to Russia for reasons unknown. It is not known how much longer this operation will be active. A word to the wise is to work this one now. QSL via JA1HGY.

MADAGASCAR. 5R8DG showed up on 15 meter RTTY on December 29 around 1500z. QSL via F6FNU. JH8CLU and two other Japanese ops should be active January 10 through 15 on all bands, including RTTY.

BANGLADESH. Erik, WZ6C, is now licensed as S21ZG. QSL via W4FRU.

MOUNT ATHOS. The DXAC is taking action to determine if this one should be considered for deletion from the DXCC Countries list.

BELAU. Oklahoma DX Association members WV5S, W0RRY and N5OK will be returning to Belau and signing KC6SS, KC6RR and KC6OK respectively. This operation is slated for February 10 through 28 with activity planned for CW, SSB and RTTY on 160 through 2 meters. Emphasis will be on the low bands, WARC, and 6/2 meter EME. They will be active in the ARRL International DX Contest as KC6OK. QSL to PO Box 73, Owasso OK 74055.

BAKER AND HOWLAND ISLANDS. A one week operation by 10 ops will start January 26. Plans are for two sites to be active so they can run CW and SSB simultaneously. This should be an interesting operation.

GHANA. The Ghana constitution reverts back to civilian rule soon. It is hoped that the current ban on ham radio activity will be lifted sometime around January 15.

PITCAIRN ISLAND. VK4CPU and WK3D will operate VR6JJ and VR6BB starting January 10 through sometime in March. Look for their CW, SSB, RTTY and FM. Plans are to operate 160 through 6 meters, including the WARC bands. QSL via JF2KOZ.

# An Introduction to packet

by  
Larry Kenney WB9LOZ

Over the next 2 issues of feedback will be a set of articles which do a very good job of explaining packet radio. This is good reading for the packeteer as well as the new comer. Even if you don't have a TNC or do and don't seem to get the most of it, read on and take the mystery out of all those wierd commands.....*editor*

## INTRODUCTION TO PACKET RADIO - Part 11 - by Larry Kenney, WB9LOZ

In this part of the series we'll take a look at many of the TNC commands available to you that we haven't covered in previous articles. We will be discussing the commands used in the TAPR TNC2 and TNC2 clones. You might find that some of the commands are not available in your particular TNC or that they're used in a slightly different manner than the one explained here. Please refer to your owner's operating manual for specific details on how to use these commands in your TNC.

**8BITCONV:** This command enables the transmission of 8-bit data in converse mode. Used with **AWLEN** - see below. For normal packet operation, such as keyboard to keyboard transmissions, use of bulletin boards, and transmission of ASCII files, **8BITCONV** should be **OFF**. If you need to transmit 8-bit data, set **8BITCONV ON** and set **AWLEN** to 8. Make sure that the TNC at the receiving end is also set up this way. This procedure is normally used for transmission of executable files or a special non-ASCII data set.

**AWLEN:** This parameter defines the word length used by the serial input/output port of your TNC. For normal packet operation, as described above, **AWLEN** should be set to 7. Set to 8 only if you're going to send 8-bit data.

**AX25L2V2:** This command determines which level of

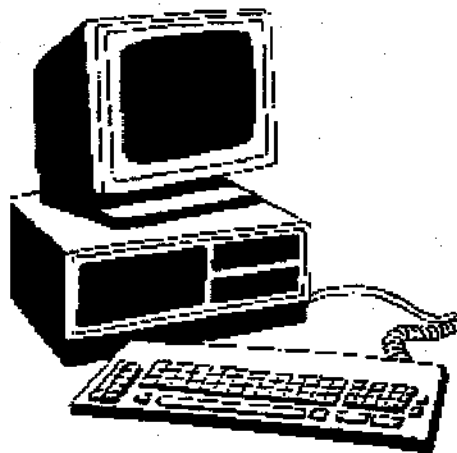
**AX.25** protocol you're going to use. If **OFF**, the TNC will use **AX.25 Level 2, Version 1.0**. If **ON**, the TNC will use **AX.25 Level 2, Version 2.0**. Some early TNCs will not digipeat Version 2.0 packets. Version 2.0 has added features. See the **CHECK** command below. Many operators have suggested that Version 2.0 **NOT** be used on the HF bands as it tends to clutter the frequency.

**BEACON:** Used with **EVERY** or **AFTER** to enable beacon transmissions. **BEACON EVERY n** - send a beacon at regular intervals specified by **n**. **BEACON AFTER n** - send a beacon once after a time interval specified by **n** having no packet activity. **n = 0 to 250** - specifies beacon timing in ten second intervals. **1 = 10 seconds, 2 = 20 seconds, 30 = 300 seconds or 5 minutes, 180 = 1800 seconds or 30 minutes**, etc. For example, if you set **BEACON EVERY 180 (B E 180)**, the TNC will transmit a beacon every 30 minutes. If you set **BEACON AFTER 180 (B A 180)**, the TNC will transmit a beacon after it hears no activity on the frequency for 30 minutes. **B E 0** will turn the beacon

off. The text of the beacon is specified by **BTEXT** and can contain up to 120 characters. The path used for the beacon transmission is specified by the **UNPROTO** command. **YOU SHOULD USE BEACONS INTELLIGENTLY!** Beacons are often a point of controversy in the packet community because they tend to clutter the frequency if used too frequently.

You should keep your beacons short and infrequent, and they should only be used for meaningful data. Bulletin boards use the beacon for advising the community of who has mail waiting for them, clubs use beacons for meeting announcements, beacons are used for weather warnings, etc.

**CHECK n** Sets a timeout value for a packet connection. Operation depends on the setting of **AX25L2V2**. The value of **CHECK (n)** determines the timing. Value may be 0 to 250. Check set to 0 disables the command. If a connection between your station and another exists and the other station seems to



"disappear" due to changing propagation or loss of an intermediate digipeater, your TNC could remain in the connected state indefinitely. If the CHECK command is set to a value other than 0, the TNC will attempt to recover. The setting of AX25L2V2 will determine what action is taken. If AX25L2V2 is ON, the TNC will send a "check packet" to verify the presence of the other station if no packets have been heard for  $n * 10$  seconds. ( $n = 1 = 10$  seconds,  $n = 5 = 50$  seconds,  $n = 30 = 5$  minutes, etc.) If a response is received, the connection will remain. If no response is received, the TNC will begin the disconnect sequence, just as if the DISCONNECT command had been sent. If AX25L2V2 is OFF, after no packets are heard for  $n * 10$  seconds, the TNC will not send a check packet, but will begin the disconnect sequence.

**CMSG** Enables the automatic sending of a connect message when-ever a station connects to your TNC. If CMSG is ON, the TNC will send the message contained in CTEXT as the first packet of the connection. CTEXT can contain up to 120 characters. This feature is often used when the station is on but the operator is not present. The connect message is used to advise the other station of that fact, and often says to leave a message in the TNC buffer. If CMSG is off, the text message is not transmitted.

**MAXFRAME** Sets the upper limit on the number of unacknowledged packets the TNC can have outstanding at any time. (The outstanding packets are those that have been sent but have not been acknowledged.) It also determines the maximum number of contiguous packets that can be sent during one transmission. Value can be set from 1 to 7. The best value of MAXFRAME depends on the frequency conditions. The better the conditions are, the higher the value you can use. If conditions are poor due to the amount of traffic on the frequency, noise, or other variables, (shown by lots of retries) MAXFRAME should be reduced to improve throughput. The best value of MAXFRAME can be determined through experimentation. MAXFRAME of 1 should be used for best results on HF packet.

**MHEARD** An immediate command that causes the TNC to display a list of stations that have been heard since the command MHCLEAR was given or the TNC was powered on. This command is useful for determining what stations can be worked from your QTH. Stations that are heard through digipeaters are marked with an \* on most TNCs. On the AEA PK-232, the stations heard direct are marked with the \*.

(Check your TNC manual.) The maximum number of stations in the list is 18. If more stations are heard, earlier entries are discarded. Logging of stations heard is disabled when the PASSALL command is ON. If the DAYTIME command has been used to set the date and time, entries in the MHEARD list will show the date and time the stations were heard.

**PASSALL** Causes the TNC to display packets that have invalid checksums. The error-checking is disabled. If PASSALL is ON, packets are accepted for display, despite checksum errors, if they consist of an even multiple of eight bits and are up to 330 bytes. The TNC attempts to decode the address field and display the callsigns in standard format, followed by the text of the packet. PASSALL can be useful for testing marginal paths or for operation under unusual conditions. PASSALL is normally turned OFF.

**SCREENLN n** This parameter determines the length of a line of text on the terminal screen or platen. Value may be 0 to 255. A (CR-LF) carriage return and line feed are sent to the terminal in Command and Converse modes when n characters have been printed. A value of zero inhibits this action. If your computer automatically formats output lines, this feature should be disabled.

**TXDELAY n** This parameter tells the TNC how long to wait before sending data after it has keyed the transmitter. All transmitters need some start up time to put a signal on the air. Some need more, some need less. Synthesized radios and radios with mechanical relays need more time, while crystal controlled radios and radios with diode switching require less time. External amplifiers usually require additional delay. Experiment to determine the best value for your particular radio. TXDELAY can also be useful to compensate for slow AGC recovery or squelch release times at the distant station.

There are many additional commands available to you. I've only covered the ones that I thought would be the most useful to you. Spend some time reading the owner's operating manual that came with your TNC to discover some of the surprises the other commands offer. New versions of the TNC software have added several commands that you might find useful in your packet operating.



**INTRODUCTION TO PACKET RADIO -- Part 12 by  
Larry Kenney, WB9LOZ**

In this article we're going to look at the White Pages. Not your local telephone directory, but the packet radio directory known as "White Pages". You help supply the information for "WP", and you can also use it to find the home BBS, QTH and zip code of your friends on packet.

"White Pages" was initially designed by Eric Williams, WD6CMU, of Richmond, California. It's a database of packet users showing their name, home BBS, QTH and zip code. It's updated and queried by packet message, allowing stations from all over the world to take advantage of it. Hank Oredson, W0RLI, later added a WP feature to his packet bulletin board software. As users enter their name, home BBS, QTH and zip code into the BBS user file, the software automatically assembles a message once a day containing all of the latest user information and sends it to the WD6CMU White Pages. Hank has now expanded the WP feature, and each BBS running the W0RLI software can now elect to operate its own White Pages database. Each BBS, however, continues to send a daily "WP" update of new or changed information to the WD6CMU White Pages. You can easily make use of the packet White Pages information, both at your local BBS and at WD6CMU.

If your BBS is operating with its own WP database, you may make inquiries of it using the "P" command. Simply enter P followed by the callsign you'd like information about. If you wanted information on WB9LOZ, for example, you would enter: P WB9LOZ.

Information from the WD6CMU White Pages is obtained by sending a message to "WP @ WD6CMU". You can also update the database with new information. One message can contain several lines, including a combination of queries and updates. Since the messages are read and answered by the WP software, not a person, each line must have the correct format. One of the following formats must be used: <callsign> QTH? <callsign> @ <BBS> <zip code> <name> <QTH> DE <callsign> @ <BBS> The first form is a query. It will cause a message to be returned to you giving the home BBS, QTH and zip code of the person with the given callsign. If the information is not available from the WP database, the return message will tell you so. The second form adds or changes the entry for the given callsign, and the third form provides a return address for the requested

information. Replies will be sent to the originating station at the BBS specified. If the return address line is not given, the WP program will attempt to determine the originating station and BBS from the message headers.

Here are some examples of messages to the WD6CMU White Pages database: Suppose you wanted to know the home BBS of K9AT. You would send a message to WP like this: (Your BBS) W6BBS> SP WP @ WD6CMU Enter title of message: Query Enter text: K9AT QTH? DE N6XYZ @ W6BBS (Control Z) Capital and lower case letters may both be used within the message.

If you wanted to update or add information to the White Pages, you would send a message like this: (Your BBS) W6BBS> SP WP @ WD6CMU Enter title of message: Update Enter text: N6XYZ @ W6BBS 94199 John San Francisco, CA AD6ZZ @ WB6ABC 94015 Anne Daly City, CA DE N6ZYX @ W6BBS (Control Z) When updating or adding an entry to WP, you should make sure that the information is accurate.

Here's an example of a message that has both queries and updates: (Your BBS) W6BBS> SP WP @ WD6CMU Enter title of message: Update/Query Enter text: K9AT QTH? WA6DDM QTH? N6XYZ @ W6BBS 94199 John San Francisco, CA AD6ZZ @ WB6ABC 94015 Anne Daly City, CA DE N6ZYX @ W6BBS (Control Z)

Just like all other packet messages, messages addressed to WP @ WD6CMU are forwarded from BBS to BBS toward their destination. When a message containing new or updated information passes through a BBS operating the W0RLI WP program, he sotarerecognizes the WP format and extracts the information from the message for its database. The W0RLI WP program also collects data from any WP responses it sees and from the message headers of every message that passes through. In addition, if a BBS operating with the W0RLI WP sees a query, it will respond with any pertinent information that it has available. As a result, you might receive more than one response to your WP query.

The information on each call in a W0RLI WP database is usually deleted in 60 to 90 days if it's not updated. This keeps each local database current and at a manageable size. The WD6CMU White Pages directory retains the data for a longer period of time.

It is important to note here that when you check into a new BBS, you should always enter the same information that you have at previous times. Choose ONE BBS as your home BBS, the one where you want all of your messages delivered, and enter that callsign every time you're asked. If you enter two or more different BBS calls at various times, your mail could end up being sent from BBS to BBS.

When a message arrives at the destination given in the "@ BBS" column, the latest software now checks the White Pages information to make sure the message was delivered to the right place. If it finds that you have a different BBS listed as your home BBS, it will insert the new BBS callsign and send the message on its way. You may never get it.

If you move or change your home BBS, you should then make sure that you update the information for your call in the White Pages database. If you use a BBS with WORLI software, the BBS will send a WP message for you if you use the NH, NQ and NZ commands to update the information. If these commands aren't available on your BBS to make the changes, you'll have to send a message update yourself to WP @ WD6CMU. Making sure that the information in the White Pages is correct will help to get your messages delivered to the correct BBS.

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**INTRODUCTION TO PACKET RADIO - PART 13** by Larry Kenney, WB9LOZ

In this article, let's do some reviewing. I'm going to present a short quiz on packet, covering the basics that I've presented in the past 12 columns. Let's see how well you can answer the following questions without looking back at the past articles. In Part 14, I'll discuss each question and give you the correct answers.

1. What are the three TNC modes of communication?  
a. Connect, Converse, Terminal b. Command, Converse, Terminal c. Command, Converse, Transparent d. Command, Connect, Transparent
2. What TNC command is used to set the transmit path for beacons and CQs?
3. What is the TNC command CHECK used for?
4. While you're connected to another station, what

command is used to monitor other traffic on the frequency?

5. If you saw one of the following lines on your screen when in monitor mode, what would the asterisk indicate? W6ABC-3>N6XYZ,W6PW-1\*: Hi Bob W6ABC-3>W6PW-1\*>N6XYZ: Hi Bob (Displays vary with various TNCs, so both common types are shown.)

6. Why do the NET/ROM and TheNet nodes improve communications?

7. If you're connected to a station in New Mexico using NET/ROM or TheNet, how do you disconnect?

8. If N6ZYX-2 connected to you via a NET ROM or TheNet node, what would the SSID of the station become at your end of the connection?

9. When you're connected to another station, what are the two most probable causes for packets not to be received by the other station?

10. There are several basic commands used on a packet bulletin board system. Indicate what you would enter to perform the following: a. Receive a list of messages. b. Download a file in the General (ID G) directory called FCCXAMS.89. c. Enter a private message to Jim, WA6DDM, who uses the W6PW BBS. d. Read message 7134 with complete headers. e. Find out what stations have been heard on port B.

11. To send an NTS message via packet addressed to Tom Smith, 123 Main Street, Keene, NH 03431, telephone (603) 555-4321, what would you enter at the BBS prompt?

12. If a message has a STATUS of BF, what does that indicate?

13. If you received a message from a friend in Chicago that had been forwarded to your home BBS through four other BBSs and the message had a Date/Time of 0316/2245 when you listed it, which of the following is a TRUE statement? a. The message was written at 2:45 pm on March 16. b. The message was entered into the BBS by your friend at 2245 on March 16. c. The message was forwarded by your friend's BBS in Chicago at 2245 on March 16. d. The message was received at your home BBS at 2245 on March 16.

14. If you wanted to send a message to your friend John, W4IP, but you didn't know what the call of his home BBS was, what could you do to try and find out

what the call is?

15. BONUS: What is the maximum value for MAXFRAME? If you're working a station on 30 meters and are sending a lot of retries, should you increase or decrease MAXFRAME?

Well, how did you think you did? We'll take a close look at these questions and more in part 14 of this series.

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## SHORT BITS

### A BRIEF HISTORY OF THE VE3WWD DIGI/NODE AT WHITECHURCH, ONT.

Packet activity in the area of Huron and Bruce counties got off to a slow start, but quickly grew once a local BBS was established, VE3WZL at Goderich. The BBS user base was mostly located to the north and north-east of Goderich in places like Kincardine, Port Elgin, Hanover, Varney, and Wingham. It quickly became clear that in order to have a good reliable path to the BBS, an intermediate station or digi was a necessity.

Thus the idea of VE3WWD was born. The first order of business was to figure how to finance the plan and we decided that a local packet user group would be the way to go. The Experimental Amateur Repeater Club, E.A.R.C., had existed on paper for some time, but now became a real entity with a purpose. All of the charter members contributed \$100.00 toward purchasing the equipment for a digi and the search for a good site began.

We found a site near Whitechurch that suited our needs and worked out a very good deal with the owner who wanted to put on a commercial VHF repeater. We were given free use of the site, including the shed to house the equipment and hydro, in exchange for helping to erect the 140 foot tower. The antenna was even given to us by the site owner, Joe Ducharme, of Goderich.

Over a period of 3 or 4 weekends a volunteer group of labourers under the guidance of Weazle, VE3EAR, who works in the tower business, put the tower up. If I

tried to name everyone who helped out either by donations of material or by pitching in with the labour I'm sure that I'd miss someone, but suffice it to say we had lots of help and it was very much appreciated.

When the tower was finally up and the equipment shed was finished, the hardware consisting of a Mocom 70 transceiver and a TAPR TNC-2 running TheNet software was installed and fired up. VE3WWD was on the air!! Aside from a few down-times due to lightning strikes, it has served us well over the years.

An annual user fee of \$20.00 is collected from regular users of VE3WWD to provide a fund to cover licencing costs and maintenance/upgrading of the hardware. I'm sure those that use it would agree with me that they more than get their money's worth from VE3WWD, the West Wawanosh Digi (now you know what the call is based on).

### VIA VE2QST/VE2ALE QST VE3QST HR CRRL BULLETIN 15 CRLE015 FROM CRRL HEADQUARTERS LONDON ON DECEMBER 18, 1992 TO ALL RADIO AMATEURS

SB CRL CRLE015 CRLE015 CRRL NEWS

1. BOTH CANADIAN AMATEUR RADIO ORGANISATIONS ARE WORKING TOGETHER ON SUCH ISSUES AS TOWER BYLAWS. CRRL AND CARF NEED YOUR HELP! THE RADIOCOMMUNICATIONS ACT GIVES COMMUNICATIONS CANADA CONTROL OVER ANTENNA INSTALLATIONS. SOME MUNICIPALITIES ARE ENACTING BYLAWS WHICH ATTEMPT TO OVER-RIDE COMMUNICATIONS CANADA 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: ANTENNA BYLAW WATCH C/O EARLE SMITH VE6NM 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.

## short bits

MANY CITIES AND MUNICIPALITIES ARE CHOOSING TO IGNORE FEDERAL JURISDICTION. YOUR NATIONAL ORGANISATIONS CANNOT ACT WITHOUT EVIDENCE. WE ARE RELYING ON YOU TO GET IT US.

2. MERGER PROGRESS CONTINUES. PROGRESS IS SLOW BUT STEADY AS THE LAWYERS AND ACCOUNTANTS WORK THROUGH THE FINAL ITEMS. THINGS HAVE SLOWED SOMEWHAT HOWEVER WE ANTICIPATE MERGER TO BE COMPLETE NO LATER THAN MID YEAR, 1993

REMEMBER TO RENEW YOUR MEMBERSHIP IN CRRL TO CONTINUE YOUR MEMBERSHIP IN RAC. ONCE MERGER HAPPENS, YOU WILL BE AMONG THE LUCKY ONES TO BE WITH THE NEW ORGNISATION ON START-UP.

3. HF BANDPLANS. THROUGH THE EFFORTS OF CRRL AND THE OTHER MEMBER SOCIETIES OF THE INTERNATIONAL AMATEUR RADIO UNION (IRAU), REGION 2 BANDPLANS HARMONIZE MUCH OF OUR HF OPERATIONS WITHIN ALL THREE ITU REGIONS. NOTE THAT RAC WILL BE THE MEMBER SOCIETY FOR CANADA WHEN MERGER IS COMPLETE.

VHF/UHF BANDPLANS. IT IS IN EVERYONE'S INTEREST TO BE FAMILIAR WITH THE CURRENT VHF/UHF BANDPLANS. THEY ARE GUIDELINES FOR INTERFERENCE FREE OPERATION ABOVE 50 MHZ.

IF YOU ARE PROVIDING TRAINING TO NEW AMATEURS, BE SURE TO INCLUDE THE BANDPLANS AS PART OF THEIR INTRODUCTION TO THE WONDERFUL WORLD OF AMATEUR RADIO.

4. CONGRATULATIONS TO THE MONTREAL AMATEUR RADIO CLUB THAT RECENTLY CELEBRATED ITS 60TH ANNIVERSRY WITH A HIGHLY SUCESSFUL PARTY AT BILL WONG' RESTAURANT. OVER 200 PEOPLE ATTENDED THE GALA EVENT; THE HALL WAS FILLED TO CAPACITY; LAST MINUTE ARRIVALS COULD NOT BE ACCOMMODATED DUE TO SPACE LIMITIONS.

PICTORIAL MEMORABILIA DATING FROM THE CLUB'S EARLY DAYS OF 1932 THROUGH THE YEARS TO 1992 WAS ON DISPLAY. THE OLDEST HAM IN ATTENDANCE WAS DICK BIRD VE2XO IN HIS 87TH YEAR.

5. ON BEHALF OF THE OFFICERS, DIRECTORS, HDQ STAFF AND THE HARD-WORKING VOLUNTEERS IN THE CRRL FIELD ORGANISATION, I WISH ALL MEMBERS A VERY MERRY CHRISTMAS AND HAPPY AND PRODUCTIVE 1993.

END OF BULLETIN

73 DE VE2QO

**MARS**, THE MILITARY AFFILIATE RADIO SYSTEM, IS CURRENTLY HANDLING HOLIDAY AND GREETINGS MESSAGES FROM TROOPS IN SOMALIA TO FAMILIES BACK HOME IN THE US. A DEPARTMENT OF DEFENSE-SPONSORED PROGRAM, MARS IS COMPRISED OF SELECTED AMATEURS WHO ARE SPECIFICALLY AUTHORIZED BY THE MILITARY TO MEET ON RESERVED FREQUENCIES JUST OUTSIDE THE AMATEUR BANDS TO HANDLE TRAFFIC. AT PRESENT, IT IS DIFFICULT TO SEND MESSAGES TO SOMALI-BASED TROOPS AS SOLDIERS ARE CONSTANTLY MOVING. HOWEVER, MESSAGES ARE BEING SENT FROM TROOPS THERE TO MARS OPERATORS HERE IN THE US FOR RELAY AND DELIVERY TO ADDRESSEES.

MARS OPERATORS OFTEN NEED ASSISTANCE FROM THE NATIONAL TRAFFIC SYSTEM IN OBTAINING OUTLETS FOR "MARSGRAMS." NTS OPERATORS WILLING TO ASSIST IN THIS EFFORT SHOULD CONTACT THEIR SECTION'S FIELD ORGANIZATION LEADERSHIP FOR DIRECTION, AND INFORMATION ON LOCAL MARS EFFORTS. ARRL HQ STAFF WILL BE SENDING A LIST OF MARS CONTACTS BY STATE TO ALL SECTION TRAFFIC MANAGERS SHORTLY. ARRL IS ALSO SENDING A LIST OF THE NATION'S STMS TO MARS CONTACTS FOR COORDINATION.

THE AMATEUR COMMUNITY CAN TAKE GREAT PRIDE IN THE SERVICE IT RENDERS TO THE MILITARY AND THEIR FAMILIES THROUGH MARS AND NTS CHANNELS. FOR A BROCHURE ON THE MARS PROGRAM, CONTACT ARRL HQ.

# PACKET RADIO COURSE

REQUESTS HAVE BEEN COMING IN FOR A PACKET RADIO USERS COURSE TO BE PUT ON IN OUR AREA. THE MANAGEMENT OF THIS BBS WILL OFFER A 2 NIGHT 6 HOUR SEMINAR. IT WILL BE HELD ON WEDNESDAY NIGHTS , JANUARY 20 & 27 , 7pm TO 10pm. THE LOCATION WILL BE WEST HILL SECONDARY SCHOOL , REAR ENTRANCE OFF 10th STREET ACROSS FROM HARVY'S RESTAURANT AND THE WEST SIDE OF TOWN. THERE IS LOTS OF PARKING. THE COST WILL BE \$20.00 PER PERSON , IN ADVANCE OR AT THE DOOR BUT ALL PERSONS MUST BE REGISTERED WITH MYSELF. THERE WILL BE A CUT OFF AT 25 PEOPLE. ALL MONIES COLLECTED WILL BE PUT INTO NEW EQUIPMENT FOR THE PACKET RADIO BBS AND NODE OPERATIONS IN THE AREA THROUGH THE GBARC RADIO TREASURER. EVERYONE WILL RECIEVE A DETAILED LIST OF FBB BULLETIN BOARD COMMANDS AND G8BPQ NODE AND SWITCH COMMANDS AS WELL AS NODE MAPPINGS FOR SOUTHERN ONTARIO. TOPICS TO BE INCLUDED WILL BE GETTING STARTED---WHAT I NEED TO BE IN PACKET INTRO TO PACKET-- WHAT THE %\$#@&^\* IS PACKET ANYWAY? DOS AND COMPUTERS---THE MISSING LINK TEMINAL NODE CONTROLLERS--TNC FBB COMMANDS---IN DETAIL AND MORE G8BPQ NODE AND SWITCH---IN DETAIL AND MORE ALSO IF TIME ALLOWS BRIEF DESCRIPTIONS OF AP-LINK, NOS, TCP/IP, THE NET\* AMTOR, PACKET CLUSTER AND HF PACKET.

IF YOU HAVE A FRIEND YOU CAN REGISTER FOR THEM ON PACKET TO ME AND I WILL ACKNOWLEDGE ALL EITHER ON PACKET OR PHONE.

REGISTER WITH GENE MCDONALD , VE3IJD @VE3IJD.#SWON.ON.CAN.NA OR PHONE 934-2380 ANSWERING MACHINE AVAILABLE ,LEAVE NAME ,MESSAGE AND TEL NUMBER AND I WILL RETURN CALL.

## COURSE OUTLINE

### PACKET USERS GUIDE

---INDEX---

1. Getting Started, Packet Who?
2. Equipment Required
3. Computers & DOS commands
4. Terminal Programs
5. BBS's ---Intro & commands
6. BBS --- FBB commands for Files
7. Nodes & Linking thru Gateway
8. Intro to TCP/IP, Addressess

Gene McDonald VE3IJD

## CW NET

There will be a weekly CW net starting in the new year...The frequency will be 3670 +/- QRM, VE3OSR will also be used as a backup. The first net will be January 6th at 8:30 P.M. look for the ID'ER "QRL QRL?"

*CQ CQ CQ DE VE3TTV VE3TTV VE3TTV FOR THE GBARC CW NET. NET CONTROL IS VE3TTV HENRY IN OWEN SOUND, ONT. CALL NOW PSE K' tHE ID'ER WILL BE SENT AT 10 WPM. After the ID'ER, just start checking in one at a time and kindly space out your checkins, there it is, plain and simple....join in and have fun.....*

### shortforms

trx.....thanks bk.....break es.....and wx.....weather  
 ur.....your rpt.....repeat rst.....signal report tx...trans-  
 mit fb.....fine business rx.....receive om.....old man  
 k.....anyone call kn.....specific station call

This is an informal net so relax and don't sweat it...hi...

73.....HENRY VE3TTV

**FOR  
SALE**

**VE3AEO TED 376-9004**

**HF BEAM** - BUTTERNUT MINI-BEAM, IN ORIGINAL  
CARTON, NEVER USED \$200.00

**DENTRON DIPOLE ANTENNA**- ALL BAND HF FED  
WITH 450 OHM LADDER LINE \$35.00

**VE3JMK JOHN 519-369-2095**

YAESU FC757AT AUTO ANTENNA TUNER THAT  
CAN BE USED ON THE 757GX, 747, 980 OR ANY  
OTHER HF RIG \$395.00

YAESU FT77 HF TRANSCEIVER..80 - 10 M AND  
WARC..INCLUDES FP700 HD POWER SUPPLY AEA  
MODEL ET1 300 WATT TUNER PLUS VOICE  
SYTHESIZER FOR 20,40 AND 80, MOBILE DC CORD,  
HAND MIKE AND OPEATING MANUAL \$925.00

**PRO2002** SCANNER 50 MEMORIES..30 TO 512  
MHZ WITH MANUAL \$200.00

6JS6C (2) \$10.00 EA , 12BY7A (3) \$5.00 EA,  
PROGRAMMING COURSE FOR C-64 \$30.00, COPY  
OF MANUAL FOR KENWOOD TR2400A \$10.00

**VE3DSS DANA 416-763-1761**

**HF TRANSCEIVER** ICOM IC-720A 100 WATTS HF  
COVERS ALL WARC BANDS, SPEECH PROCES-  
SOR,FAST BREAKIN,NOISE BLANKER,OFFSET AND  
PASSBAND TUNING INCLUDED. C/W MIC AND  
SERVICE MANUAL \$550.00

**VE3HIP IAN 371-5479**

**REFLECTED POWER METER** (SWR METER)

HEATHKIT MODEL HM15

10-160 METRES SO-239 CONNECTORS \$20.00

**WANTED**

**VE3BZC ROSS 371-4326**

**COILSTOCK** - 15 TURNS #12 WIRE, 2 1/2 " IN  
DIAMETER, 6 TURNS / INCH

**TUBES** - 6EW6, 6GK6, 6HF5, 6BN8, 12BE6, 12BZ6,  
12BA6, 12AX7, 7360, OA2

**VE3TSA TOM 371-9805**

**CARTOONS / ARTICLES FOR FEEDBACK.... I  
NEED SUITABLE CARTOONS AND/OR ARTICLES  
FOR USE IN FEEDBACK**

**MEMBERSHIP DUES**

**\$25.00**

