

SVARC GAP

SEAWAY VALLEY AMATEUR RADIO CLUB
P.O. BOX 462, CORNWALL, ONTARIO K6H 5T2

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DUMMY LOAD

Greetings ... As your club President I have inherited this column in the S.V.A.R.C. Gap. I will continue to use the header "Dummy Load", and have no problem with that title. I would at this time like to wish each and every one of the members and their families a very Merry Christmas and a Happy New Year!!!

The outlook for the club in the new year promises to be good. With the newly licensed amateurs from the most recent course, our membership has grown to a height that this club has never seen before in its history of operation.

The events of last year will be hard to compete with. As you may know the club has on several occasions held courses for the Basic qualification as well as C.W. courses. The instructors of these courses should be commended for their time and efforts, each of them have donated much time to make this a great success. They are Bob Branchard VE3ZBR, Dave Holford VE3HLU, Bob MacSween VE3KCP and Doug Pearson VE3HTR.

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The club also has held its first Hamfest in many years, and I hope to see it continued for years to come. I will personally enjoy organizing "Hamfest 94!" I have already started the ball rolling with the event and I can almost hear the phone ringing off the hook with table reservations !!! Hi, Hi!!

Again the members have proved themselves as talkers and no-showers. This was proved with the turn out for field day. Jim VE3ZPT made a valiant effort in the co-ordinating of this event and again a poor turn out. I too am also guilty of not supporting this event. Then the lack of member participation with the special event station is more evidence that this club needs a new direction to follow. It seems that only a hand full of members take full advantage of any HF operation that the club sponsors. The most important task of the membership in the year to come, will be deciding on a goal for the direction of this club. So I ask each of you to dig deep in your minds and think of suggestions for projects that the club could get involved with. I will be looking for ideas in the New Year.

I would at this time like to introduce to you the appointments made by your executive:

Technical Director: - Eric Meth VE3EI
Training Director: - Bob MacSween VE3KCP
Net Manager: - Yet to be filled !!!

I am more than sure that the above mentioned people will be a great asset to the club and I am personally looking forward to working with each of them in the future. The position of Net Manager is at this time held by myself, an appointment made by the past executive. I can no longer properly function at this level as well as operate as your President. If a replacement is not found soon I will have to resign as Net Manager and there for the net will cease to exist. If you are interested in becoming the net manager or have a suggestion for the position, both myself and the executive are interested in hearing from you. *(continued on p. 2)*

Trust me, the last thing that I would want to do is cancel the weekly net.

All in all I am looking forward to working with the membership and the executive to make this a club proud of its service to the Amateur community.

Regards,
Marc R. Tessier
VE3TES

S.V.A.R.C. EXECUTIVE

The 1993 Annual Meeting, held on Monday November 1, 1993 concluded with the acclamation of a new President, Vice President and Treasurer for 1994 - 95. Jim Devine VE3ZPT was unable to accept the position of Secretary due to personal reasons. The first meeting of the new executive took place on December 6, where two of the three appointed positions were filled.

As this is written (late December), the following individuals comprise the Seaway Valley Amateur Radio Club Executive Committee:

- President:	- Marc Tessier VE3TES
- Vice President:	- Tim Smith VE3HCB
- Secretary:	- ***VACANT***
- Treasurer:	- Andy Rugg VE2EM
- Past President:	- Doug Pearson VE3HTR
- Net Manager:	- ***VACANT***
- Newsletter Editor:	- ***VACANT***
- Technical Director:	- Eric Meth VE3EI
- Training Director:	- Bob MacSween VE3KCP

As you can see, there are three vacant positions, which means that their work has to be done by the existing executive. This is not fair to those who did step forward to help and now find themselves with more than their share to do! So, if you can see fit to fill one of these positions, we could certainly use the help. Contact any of the present or past executive members, or see us at any meeting.

Executive meetings are open to all members. They are generally held on the last Monday of each month, at the Miss Cornwall Restaurant, Brookdale Mall, Cornwall, at 8:00 PM. Time and location may vary but any changes will be announced on the Net. General membership meetings are held one week later, on the first Monday of each month, at 7:30 PM. The location is currently the Stormont, Dundas and Glengarry Highlanders Armouries, Fourth Street East, between Marlborough St. and McConnell Ave., Cornwall (across from the Bob Turner Arena). Thanks to Jim Devine VE3ZPT and

the S.D. & G. Highlander's Sergeant's and Warrant Officer's Mess for access to this excellent venue for our meetings.

Until a Newsletter Editor can be found, the SVARC Gap will be produced on a bi-monthly basis. Your Past President (VE3HTR) has agreed to do this on an interim basis.

Articles or letters to the editor are always welcome, and may be sent to the club address (see page 1) or via packet: VE3HTR @VE3IGM.

CHRISTMAS DINNER 1993

This years annual Christmas dinner was held in the dining facilities of Branch 297 Royal Canadian Legion, Cornwall. This years meal consisted of a full dressed turkey dinner and an excellent dessert. I am pleased to announce that a total of 29 people attend this event. Oh I almost forgot to include the turkey < that makes 30 > Hi Hi !!! I can say that a good time was had by all that attended.

A brief meeting was held following the meal. At this time the announcements of the newly appointed directors was made to the membership. Then there was a draw for two door prizes, they were for a free club membership and a \$25.00 gift voucher for a Christmas turkey at Loeb IGA. Two visiting amateurs walking smiling. Congratulations !!! to VE2FED Fred & VE3PPB Pat. Strange enough the two winners were seated at the same table. But rest your mind, the ticket was verified by Andy Rugg VE2EM.

I would like to thank all that chose to support the Christmas dinner .

Marc R. Tessier
VE3TES

SANTA OVER RADIO

Once again the club went into the community to give children a chance to speak directly to Santa Claus at the North Pole via radio. At the Kinsman School in Cornwall, over 40 children took advantage of this opportunity. At the Hotel Dieu Hospital only 6 children unlucky enough to require a stay over Christmas and all spoke to Santa. Thanks to George Campbell VA3GWC (formerly VE3JSG), Dave Holford VE3HLU, Gord Horton VE3AXP, Marc P. Tessier VE3MTD, and our President, Marc R. Tessier VE3TES for taking part in what has become annual event for our club.

NEW AMATEURS !!!

The Seaway Valley Amateur Radio Club is pleased to announce the addition of the following new amateur radio operators to our ranks:

Michael Bertiaume	VE3HYB
Carolyn Branchard	VE3ZCD
Robert Branchard	VE3ZBR
William Dipasquale	VE7???
Diane Dumoulin	VE3YDI
Elizabeth Halliwell	VE3EZH
Evan Halliwell	VE3HEI
Alex Hamilton	VE3AFT
James McQuinn	VE3MQU
Don Tobiason	VE3XDT

All are graduates of the club's Fall 93 Basic Amateur Radio Course, taught by Bob MacSween VE3KCP, Dave Holford VE3HLU, Doug Pearson VE3HTR and Bob Branchard (now VE3ZBR).

There are at least two more students due to write the next exam, planned for mid January. So we're not finished yet!

There will be no Basic Amateur Course this winter. We are planning now for the Fall 94 Basic course.

MORSE CODE COURSE

Congratulations are in order for Al Pond VE3FIG, Elaine Fortin VE3UXZ and Hermanna Noorthoek VE3UNV, who qualified at the 12 WPM level and Joanne Battah VE3UYA who qualified at the 5 WPM level on the Fall 93 Morse Code Course. Instructors were John Wood VE3WJF, Bob MacSween VE3KCP and Richard Lemay VE3SPD.

NEW CALLSIGNS

The following members have recently changed callsigns. Please update your club member list.

George Campbell VE3JSG	now VA3GWC
Robert (Bob) Cyr VE3NPR	now VA3RC
Robert Fry VE3ARF	now VA3FR
Christina MacDonald VE3YGM	now VE3CGM
Frank Meredith VE3UKI	now VA3 FM
Andy Rugg VE2EM	also VA3TEE
Wayne Salhany VE3UGI	now VE3WQS
John Wood VE3WFJ	now VE3WJF

VE3YGM may still be heard in our area, as this callsign is now endorsed as a Repeater license assigned to Graham MacDonald VE3IGM.

VE3SVC UHF REPEATER

Exactly one year after the UHF transmitter and receiver were presented to the club by Eric Meth VE3EI, VE3SVC UHF went on the air on 443.650 MHz. This event took place on Friday December 10, 1993. This announcement was made at the SVARC 1993 Christmas Dinner that evening by VE3EI, the club's new Technical Director. The repeater underwent initial testing at the VE3IGM residence, using a UHF yagi for transmit and a VHF yagi for receive, both pointing North. Six days later on Dec. 16 Graham MacDonald VE3IGM and Doug Pearson VE3HTR put the repeater on the bench for some alignments and then placed it temporarily at Transport Canada on a low gain omnidirectional UHF antenna on the VE3MTA tower.

The stand alone UHF repeater will be left on test at this location until mid January at least. This "burn-in" will hopefully uncover any problems with the transmitter, receiver, controller, duplexer or power supply prior to integration with the VHF repeater.

The new repeater is scheduled to be installed at the Hotel Dieu Hospital site on January 15, in the new rack cabinet donated to the club by IES Communications of Cornwall. The VHF repeater will be off the air for a period while it is connected to the UHF machine.

The two repeaters will be normally linked together, so signals received on either VHF or UHF will be retransmitted on both bands. It will be possible to unlink the two by entering the "#8" command on the DTMF pad, but this must be done on UHF. Users are asked to re-establish the link afterwards by entering the "*18" command, again via UHF. The design of the MCC RC-1000 Repeater Controller does not permit control from the VHF side.

The reason for leaving the two repeaters linked is to enable UHF users to gain access the auto patch on the VHF repeater. It is an effective way to share one telephone line (courtesy of the Hotel Dieu Hospital) between two repeaters. Operation of the auto patch will be unchanged, that is "" to turn the patch on, and "#" to turn it off after use. No speed dial numbers will change until April 94.

Thanks to all the amateurs who made VE3SVC UHF a reality. A special mention is in order for Graham MacDonald VE3IGM who spent many hours wiring and finishing the repeater chassis. Thanks also to Ed Halliwell VE3FHI for obtaining permission from hospital administration for us to install a second rack cabinet at the HDH site.

SCANNER NEWS

With so many radio amateurs owning either scanning receivers or transceivers that will receive outside amateur bands, there seems to be an interest in this aspect of radio communications. Depending on the response, this column will become an irregular (or maybe even a regular) part of the SVARC Gap. If you have any information on frequencies above 30 MHz. and outside the amateur bands, please share it with the rest of us. Even if it's only a new frequency or two, it may be something no one else knows about. Submissions may be mailed to the club address or sent directly to the editor via packet: VE3HTR @VE3IGM.

* * *

The new Haruteq Scanner Book, Ontario Edition, is out! It is billed as the 10th anniversary issue and is dated July 1993, but it did not surface in Cornwall until just before Christmas. This classic is now 190 pages, up from 162 pages in the previous edition. That doesn't sound like much until you realize many frequencies previously listed repeatedly for different cities are now identified by location as "Canada" or "Ontario". Thus the listings are not cluttered (I hesitate to use the word "padded") with, for example, the same railroad frequencies for city after city. This leaves more room for legitimate listings. Also, the type size is at least 2 points smaller (6 point, I would say), making even more space. (You might need a magnifying glass, however).

To give you an idea of the improvement, the previous edition has 23 listings for Cornwall, while the new version has 125! It is still of course incomplete, as any list compiled from listener observations rather than ISC (DOC) data must be. However, I can think of few companies doing business in Cornwall and which use radio communications equipment that are not listed here. Public safety and government allocations are also well represented.

One has to look beyond the Cornwall category to get the complete picture locally. For example, Avonmore has 11 listings, mostly provincial government agencies. Then there is Alexandria (14 listings), Lancaster (12), Maxville (11), Moose Creek (11), and a number of other nearby towns with 6 or fewer listings. And if you frequent the nation's capital, there are well over 1000 listings for Ottawa. At the back of the book are listings of all AM and FM broadcast stations in Ontario, and a very "user friendly" listing of amateur repeaters in Ontario, actually three lists sorted by frequency, callsign and location.

The new Haruteq Scanner Book is available from Radio Shack for \$21.95, RS 20-8007, and should also be available from Coles (the previous edition was), identified by ISBN 1-895604-06-0. Seaway Communications also carried the old version, and may have the new one as well. The author, Bart Veerman, often has a table at hamfests and flea markets where he sells his books. Failing all that, contact:

Haruteq
P.O. Box 61508
Hamilton, ON L8T 5A1

No, I don't have any financial interest in any of these companies. Yes, I'm impressed by the new Haruteq book and I'm sure you will be too. But there may soon be a better choice. See below.

* * *

Our very own Jim Devine VE3ZPT is a well known writer in the field of VHF/UHF monitoring, and his work has graced these pages in the past, as well as those of DX Ontario, the ODXA monthly journal, on more than one occasion. The good news is that Jim is putting the finishing touches on his new book and it promises to be a winner! It will focus on VHF/UHF frequencies that are active or capable of being received in the Cornwall area, and examine the equipment and techniques necessary. Jim says it should run 70 to 75 pages! This is a much more complete listing than has ever been available for this area in the past.

All information comes from *very reliable sources* and all listings have been checked for validity. If you've ever seen the VE3ZPT discone antenna at 75 feet, then you know why Jim hears more than most of us.

The book, yet to be named, should be in print before the next issue of the SVARC Gap arrives.

* * *

It's no secret that the Cornwall Police Force primarily uses 142.035 MHz. for dispatch. This is not lost on the criminal element, who monitor in sufficient numbers that the effectiveness of the Force is reduced. This will change soon. Expect budget approval in 1994 for a new (probably 800 MHz.) system employing digital encryption. This is essentially impossible to decipher. If you've never heard digital encryption, give a listen to the Anti Smuggling Task Force on 422.100 MHz. (There's a surprising amount of unencrypted traffic here also.)

Next issue: What's on the tower at St. Andrews West now that the OPP have abandoned the site?

PACKET NEWS

The Cornwall Packet Group local node, alias "CORNWA" is presently located at the Transport Canada Training Institute with callsign VE3MTA. It is using the Cushcraft Ringo Ranger on top of the VE3MTA tower, about 100 feet above the St. Lawrence River. If anything, coverage is too great for a local VHF user port. The RF hardware is an old Motorola VHF high band base station with about 10 Watts output. The TNC is a PacComm Tiny-2 running TheNet X-1J firmware.

TheNet X-1J is Z-80 machine code permanently stored in an EPROM (hence the term "firmware") which replaces the factory provided packet user station software. This changes the personality of the TNC to that of a packet node or switch. For those unfamiliar with nodes, they are modern day versions of "digipeater". Nodes accept a packet, immediately issue an acknowledgment, and then assume all responsibility for delivering that packet to its destination, or at least the next node down the line, if the node cannot reach the final destination directly. This is in contrast to digipeaters which blindly retransmit the packet. Digipeaters, or "digi's" worked OK in the early days of packet (10 years ago or so) when there were few people on and most servers were only one hop away, but suffer badly in today's crowded band conditions. The chances are great that the acknowledgment from a distant destination will get "trashed", or collide with someone else's packet. The node concept neatly avoids this problem with its local acknowledgment scheme.

TheNet X-1J was written by Dave Roberts G8KBB and has to be customized (using an MS-DOS compatible computer) for things like callsign, alias, and defaults for commands like HOST and BBS, etc. before one can "burn" the EPROM. The documentation fills 63 printed pages and the User Guide alone is 8 pages, which is why I have extracted a condensed version of it for inclusion here. If you would like a copy of the complete User Guide, or for that matter the entire package, contact me (via packet): VE3HTR @VE3IGM.

One reason for choosing TheNet X-1J was its inclusion of support for a deviation meter. This feature adds an Analog to Digital Converter (ADC) to the TNC, which measures the audio level of each station it hears. When the "MH" command (MHeard) is given, a list of the last 16 stations heard is displayed, with one column of that list devoted to Deviation. If you try it right now (late Dec. 93), every station listed has a deviation of 0.0 (KHz.). Bob MacSween VE3KCP is working on a printed circuit board for this modification.

Once that is completed, it won't be long before any user can check their packet rig's deviation without any test equipment of their own. It should make the task of setting up a new transceiver or TNC that much easier.

Almost any aspect of the node's operation can be altered remotely, avoiding a trip to the node site, or worse, having to program a new EPROM. There are also node and network management capabilities, and audit functions available to the system operator (Sysop).

A user would normally start by connecting to the local user port, in our case on 145.030 MHz., with the command "C CORNWA". "I" gives information on the node, "?" gives Help, "N" lists the other nodes that this node thinks it can connect to (using the "C" command), "MH" lists the last 16 stations heard, and "B" disconnects from the node. Entering "BBS" will connect you to the VE3NUU BBS (same as entering "C BBSNUU"), and "HOST" connects to VE3NUU-4 (same as "C VE3NUU-4" or "C CORNWL"). This is VE3EI's node at Monkland, which is a stepping stone to other nodes in the network.

There are many more commands besides these which TheNet X-1J recognizes, but they are either Sysop commands (password protected), or are relevant only to features or modes of operation which are not implemented at the CORNWA node. The few mentioned are sufficient for almost all day to day packet operation.

For a more complete (but general) description of TheNet X-1J user commands, see the abbreviated User Guide below. Also, the Packet User's Notebook column on page 74 of the September 1993 issue of CQ Magazine is devoted entirely to the construction of the deviation measuring circuit and the user commands of TheNet X-1J.

* * *

The Packet Seminar conducted on November 27, 1993 at Transport Canada by the Cornwall Packet Group and the VE2RM (Montreal) Packet Group was an overwhelming success! More than 25 amateurs attended to hear Keith Goobie VE3OY, explain and demonstrate the basics of packet radio. Assisting Keith were Bert Lang VE2BMQ and Eric Meth VE3EI. The books provided were worth the \$35.00 tuition fee alone. The net proceeds were sufficient to purchase two new TNC's, one for each sponsor. These will be used to further expand the local area packet network. (If you're not quite sure what a "TNC" is, maybe you're a good candidate for the next basic packet seminar!).

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PACKET NEWS *(continued from p. 5)*

Two more seminars are planned for the first half of 1994. In the later part of February an Advanced Packet Seminar will be held, and will focus on TCP/IP, FTP, Internet, etc. Later in the year another Basic Packet Seminar will take place for newcomers to this aspect of amateur radio. If you are interested in either of these seminars, contact Eric Meth VE3EI at 346-2489 or via packet: VE3EI@VE3NUU.

The seminar was also a chance to renew old friendships. It turns out that Keith VE3OY was formerly VO1LX and we knew each other well in the mid 70's when he was an officer cadet at the Royal Military College in Kingston and I was an Electronics Engineering Technology student at the Kingston campus of St. Lawrence College. Small world!

73 de VE3HTR

USER GUIDE FOR TheNet X-1J

This brief note is intended for users of TheNet X-1J, and explains the basic commands. Configuration and sysop features are not covered fully.

TheNet X-1J is an extension of TheNet 1, and provides a number of new features.

The switch provides the following user commands :

Connect	Info
Nodes	Routes
Users	Talk
CQ	BBS
Host	MHcard
Bye	DXcluster
IProute	ARP
QUIT	

Not all commands may be available on every node as certain commands might have been disabled. If a command has been enabled, it will be displayed when you type an invalid command such as '?'. In addition, there are some commands that are available but are not displayed. The main ones of interest are :

Links	Mode
Parms	Stats
IPAddress	DXCAlias
BBSAlias	HostAlias
MTU	

In general, commands take parameters, for example to connect to GB7MXM, the command to be entered is CONNECT GB7MXM followed by return. Usually, commands are not case sensitive (although node aliases may be), and commands may be abbreviated.

Connect: If the connect command is given on its own, then assuming that the sysop has set it up correctly, you will get connected to the local BBS.

If you give another callsign, either of a local station or a node, the node will attempt to connect you to that station either by a level 4 connection or by downlinking. If you are downlinking, you may also specify digipeaters.

In either case, you get either a connected message or a message telling you of the failure to connect. If you enter any other command at this stage, the connection attempt will be aborted.

If you attempt to downlink with digipeating, or attempt to downlink to an invalid callsign such as a node alias with an SSID, you may get an error message depending on how the Sysop has configured the node.

Finally, if you connect to the node, then connect to another station, and that station disconnects you (e.g. connect to a BBS and use the 'Bye' command of the BBS), you will either get reconnected to the node or disconnected completely depending on the configuration of the node.

If you enter a node alias and get an 'invalid call' message, it can either be because the node is not recognized or it can be because the Sysop has made node aliases case sensitive.

Info: This command gives information about the node as a combination of a message stored in the EPROM and a message entered by the Sysop.

Nodes: This command gives information about the distant nodes that this node thinks it can get to. With no parameter, it shows the alias and callsign of all the nodes except those starting with a '#' character. If a parameter of '*' is given, those 'hidden' nodes will also be shown.

If a callsign or alias is given that the node does not know, it gives an error message. If the callsign or alias of a known node is given, the node gives details of the routes it knows about that lead to that destination. The display shows one option per line, each of which consists of the path quality, obsolescence count and port followed by the callsign of the neighbour. If any route is in use, a chevron is shown against *(continued on page 7)*

the appropriate entry. If so configured by the Sysop, 'Slime trails' i.e. nodes without aliases that have not been the subject of a valid node broadcast, may be omitted from the nodes list.

Routes: This command gives information about the neighbouring nodes that can be heard. For each neighbour, the display shows the port number, the callsign, the path quality and the number of nodes accessible through this neighbour. If a route has been 'locked' by the sysop, then a '!' character is shown after an entry. The sysop may have configured the node to display nodes as callsign or as alias:callsign. If so configured, then if a node is shown as a callsign alone it means that it is not currently reachable as its node broadcasts are not being received.

Users: This shows who is using the node. It does not show other nodes that are using the node as a level 3 relay, nor does it show those users who have connected to the node but otherwise have done nothing.

The display shows the through connections, followed by those users who are connected to the switch and 'idle'. It also shows those users who are connected to the conferencing facility. The latter stations are shown connected to a destination called 'Talk', whilst in the case of connections, the two endpoints are shown. For connections, two symbols are used, '<-->' and '<.>'. The former is used for established connections whilst the latter is used for connections being established.

Talk: The Talk command allows a group of users to hold a conference call. It also allows a user to send a message to another user of the node provided that user is connected to the switch but is not patched through to another station and is not currently trying to connect to another station.

A user enters the conference by giving the command 'talk'. He/she gets a message informing them of this and reminding them that the command to escape from the talk command is '/exit'. Any other users currently in the conference get a message from the node telling them of the callsign of the user who has joined them. At this point, every line sent by a user in the conference is copied to all other users in the conference, preceded by their callsign.

To exit from the conference, the command '/exit' is used. This causes a response message to be sent to the user, and at the same time all of those left in the conference get a message from the node telling them of the station who has left the conference. If you force a disconnect, the other stations are not told of your departure.

A string of text may be entered on the same line as the talk command when the command is given. If this is done, before the user is connected to the conference, that string of text is sent to all the other users of the node who appear in the 'user' list but are not connected to anything else. For example if GxABC were to type :

```
TALK GyXYZ, Hello Fred can I
have a chat - type TALK
```

then other users of the node (including presumably Fred, would get the message :

```
GxABC>> GyXYZ. Hello Fred can I
have a chat - type TALK
```

on their screens. The only exception to this is that sysops are not sent the message.

Note that the TALK command will pass 8 bit data if set to by the Sysop.

CQ: This command is used to broadcast a CQ message. In addition, the fact that you are calling CQ is indicated in the USER list. The callsign will be your own with a different SSID, and anyone else can connect to you by connecting to the callsign with the appropriate SSID.

The CQ remains 'primed' for a while, and if any other command is given to the node the CQ will be canceled.

BBS: When you issue the BBS command, assuming that the sysop has configured it, you will be connected to the local BBS.

If you enter the command 'BBS ?', then the current setting of the BBS will be displayed.

Host: The HOST command operates just like the BBS command. It may have been disabled by the sysop, it may have been set to connect to the same station as the BBS, or it may have been set to connect to another host system.

If you enter the command 'HOST ?', then the current setting of the HOST will be displayed.

MHeard: If enabled, the heard list shows the last few stations heard. The number of entries is limited and set by the sysop so any stations not heard for a while may get pushed out of the list by others heard. Assuming that a station is not pushed out in this manner, the display shows the number of packets heard from that station since it appeared in the list and the time since it was last heard. The time is hours, minutes and seconds.

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The list also shows the port on which the station was heard (port 0 is the radio port), and if it hears IP frames or Net/Rom frames, it adds a note to show that the station is a node and/or a TCP/IP station.

If the list is long enough so that a station is not heard for 12 hours, it will get deleted anyway.

The list may also show a column headed 'Dev.'. This will only be present where the sysop has added to the node a small hardware add-on that measures the received signal audio level. Specifically, it gives an indication of the peak audio level. By means of a software configuration control and prior calibration, this gets converted into an indication of the transmitting station's signal deviation. It does this by sampling the audio level after every valid packet.

Care must be taken over its interpretation. It does not measure independently the two tone levels - it is assumed that whatever local standards that relate to pre-emphasis (i.e. use it or not) have been implemented.

Often, packet stations are set up, and the audio level tweaked until it appears to work reasonably error free. The idea of this add-on is that, having done that, you then connect to the node and display the heard list to see an indication of your actual deviation. It may then be fine tuned to set it correctly. Local advice must be taken over the correct setting as it depends on the channel spacing being used (e.g. 12.5, 25 or other KHz).

The meter will give the wrong answer on the following conditions :

- A badly distorted audio signal
- Badly off frequency
- Incorrect adherence to local pre-emphasis standards
- A noisy signal

If you connect, then correct your deviation to the correct display then find performance has deteriorated, it indicates one of the above problems. It is not that the meter doesn't work, it is an indication of a fault elsewhere.

It is in your own interest for those around you to use the correct deviation. The list also allows you to see the deviation of others - so apply peer pressure if someone over or under deviates. Remember it is NOT a case of the higher or the lower the better - it is having the setting RIGHT.

The system may also be used to migrate users towards a lower deviation in advance of moving to narrower channel spacing.

Links: The LINKS command shows the level 2 connections to the node. This is usually of academic interest, but I use it in testing. The display shows the links, one per line, with the two callsigns, the link state, the port number and the current number of retries.

Parms: This shows the node parameters as per TheNet 1.01 (I am not going to list them again here. Sorry).

Bye and Quit: These commands disconnects you from the node, closing the link. It says goodbye before disconnecting you if it has been so configured by the sysop. Quit does just the same as Bye does.

DXcluster If there is a local DXcluster, this command may have been configured by the sysop to connect you to it. It therefore operates in a manner very similar to the BBS command.

Stats:

The stats command gives lots of data about the node operation. A full description of the information is contained in the overview document.

BBSAlias,
HostAlias,
DXCAlias:

These commands are used to set additional aliases for the node. It can be configured by the sysop to accept connect requests (uplinks) to the node callsign, the node alias, or the 3 aliases shown by these commands. When the node accepts a connection to one of these aliases, it will immediately invoke the BBS, DXC or HOST commands for you. The way this would normally be used is as follows. Suppose your local (for example) BBS was not accessible on the frequency that the node operates on. The BBS alias can be configured to provide easy access across other nodes to the BBS. Hence in the case of the Ipswich nodes, GB7MXM does not have a port on 144.650, but the node IPS2 on 144.650 can get to it by means of another node and a 9600 baud link. If IPS2 is set to accept the extra aliases, and if BBSAlias is set to MXMBBS, then anyone who tries to uplink to MXMBBS in the Ipswich area would be automatically connected to GB7MXM. It goes without saying that if GB7MXM had a port on 144.650 itself, then chaos would ensue.

* * *

The above was extracted from the TheNet X-1J User Guide and does not discuss all commands, particularly those dealing with TCP/IP. For complete information, the reader should refer to the original documentation.

RAC 2 METRE BANDPLAN

* FOR ALL CANADA *

THE FOLLOWING IS THE OFFICIAL, AND "ONLY" SANCTIONED BANDPLAN FOR CANADA.
ACCEPT NO IMITATIONS. NO OTHER BANDPLANS SHOULD BE ACCREDITED OR USED UNLESS
VETTED THROUGH RADIO AMATEURS OF CANADA.
HAPPY NEW YEAR, AND HOPE EVERYONE HAD ENOUGH TURKEY THIS XMAS.

73 DE DANA SHTUN
VE3DSS, 1ST VP RAC/FREQUENCY COORDINATOR.

JANUARY 1994: THE RADIO AMATEURS OF CANADA BANDPLAN
BAND: 144 - 148 MHz
STATUS: EXCLUSIVE

FREQUENCY (MHz.) MODE UTILIZATION

144 - 144.1		MOONBOUNCE AND TERRESTRIAL CW
144.1	C	CW CALLING FREQUENCY
144.1 - 144.2		CW/SSB WEAK SIGNAL
144.2	S	SSB CALLING FREQUENCY
144.2 - 144.275		AM NARROW BAND MODES (ACSSB, SSB BW <= 2.5 KHz)
144.275 - 144.3		PROPAGATION BEACONS
144.3 - 144.5	O	EXCLUSIVE OSCAR SUB BAND
144.5 - 144.6	R/T	REPEATER INPUTS PRIMARY, LINEAR TRANSLATOR INPUTS SECONDARY
144.6 - 144.9	R	REPEATER INPUTS
144.9 - 145.1	P	PACKET (See footnote 1)
145.1 - 145.2	R/T	REPEATER OUTPUTS PRIMARY, LINEAR TRANSLATOR OUTPUTS SECONDARY
145.2 - 145.5	R	REPEATER OUTPUTS
145.5 - 145.8	E	EXPERIMENTAL MODES (See footnote 2)
145.8 - 146.0	O	EXCLUSIVE OSCAR SUB BAND
146.01 - 146.37	R	FM REPEATER INPUTS
146.4 - 146.58		FM SIMPLEX (See footnote 3)
146.52	F	NATIONAL FM CALLING FREQUENCY
146.61 - 147.39		FM REPEATER OUTPUTS
147.42 - 147.57		FM SIMPLEX (LOCAL OPTION)
147.6 - 147.99		FM REPEATER INPUTS

Footnotes:

- (1) Digital (Packet) operations on 20 KHz channeling 144.91 through 145.09 MHz. 10 channels.
See note 2.
- (2) Operation in this sub-band is on a TEMPORARY basis for experimentation and development work. RAC requests that the frequencies such as 145.5, 145.525, 145.55 and 145.750 MHz be kept clear for INTERNATIONAL Space Shuttle and MIR FM voice communications. RAC urges Amateurs to conduct experiments on other bands such as 50 MHz, 220 MHz, where utilization is high on 2 metres.
- (3) The frequencies 146.40, 146.43, 146.46 MHz continue to be used as repeater inputs in some areas.

PLEASE PUBLISH THIS BANDPLAN IN YOUR CLUB BULLETIN. PLEASE ENSURE THAT ALL AMATEURS ABIDE BY IT. TO DO OTHERWISE IS TO ACCEPT CHAOS.

REPEATER OPERATING PRACTICES

(from the ARRL Repeater Directory 1993/94 Edition)

- 1) Monitor the repeater to become familiar with any peculiarities in its operation.
- 2) To initiate a contact simply indicate that you are on frequency. Various geographical areas have different practices on making yourself heard, but generally, "This is VE3XYZ monitoring" will suffice.
- 3) Identify legally; you must identify at the beginning and end of a transmission or series of transmissions and at least once each 30 minutes during the communication.
- 4) Pause between transmissions. This allows other hams to use the repeater (someone may have an emergency). On most repeaters a pause is necessary to reset the timer.
- 5) Keep transmissions short and thoughtful. Your monologue may prevent someone with an emergency from using the repeater. Your transmissions are heard by many listeners including nonhams with "public service band" monitors or scanners; don't give a bad impression of our service.
- 6) Use simplex whenever possible. If you can complete your QSO on a direct frequency, there is no need to tie up the repeater and prevent others from using it.
- 7) Use the minimum amount of power necessary to maintain communications. This regulation minimizes the possibility of accessing distant repeaters on the same frequency.
- 8) Don't break into a contact unless you have something to add. Interrupting is no more polite on the air than it is in person.
- 9) Repeaters are intended primarily to facilitate mobile operation. During the commuter rush hours, base stations should relinquish the repeater to mobile stations; some repeater groups have rules that specifically address this practice.
- 10) Many repeaters are equipped with autopatch facilities which, when properly accessed, connect the repeater to the telephone system to provide a public service. The DOC (ISC) forbids using an autopatch for anything that could be construed as business communications. Nor should an autopatch be used to avoid a toll call. Do not use an autopatch where regular telephone service is available. Autopatch privileges that are abused may be rescinded.
- 11) All repeaters are assembled and maintained at considerable expense and inconvenience. Usually an individual or group is responsible, and those who are regular users of a repeater should support the efforts of keeping the repeater on the air.

The next meeting of the Seaway Valley Amateur Radio Club will be held at 7:30 PM on Monday, February 7, 1994. Guest speaker will be Eric Meth VE3EI and the topic will be Packet Radio. Eric was a pioneer in the establishment and the expansion of the packet network in the Toronto area. Our club is fortunate indeed to now have such a talented individual not only as a member but as Technical Director. Be sure to attend!