



Headquarters - Info - Line

... a service from ...

The New Zealand Association of
Radio Transmitters Incorporated



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Greetings Everyone!

Welcome to **Headquarters-Info-Line** a fortnightly bulletin of news from NZART Headquarters E-mailed directly to Branches.

It has never been easier to subscribe to the Info-Line distribution list and have Info-Line sent to you direct by E-mail. Just check into the NZART web page <http://www.nzart.org.nz>. Look for **Info-Line Subscribe**. Supply your name, callsign and e-mail address and that's all you need to do. You will receive an e-mail confirmation of your auto-subscription and you can un-subscribe at any time.

The NZART Business Manager Debby ZL2TDM Says:

Not much news this week, have been very busy receiving subscription payments for 2005. Remember you only have until the 30th November to take advantage of the \$15 rebate for Transmitting/Non-transmitting membership.

Also a reminder to have your remits ready for discussion at branches and sent to me by the 31st December 2004.

It is pleasing to see a few new members step forward for consideration on NZART Council. I am looking forward to seeing an elected Council, where you all have the opportunity to vote for those who you feel can best represent you in your respective area.

I will be sending out a Branch circular at the beginning of December, so if there is anything that you would like to include please let me know before the end of the month.

Talk soon.....Debby ZL2TDM

Contest Information from the VHF/UHF Contest Manager:

Field Day Contest - 50 MHz and up. Saturday the 4th and Sunday the 5th of December 2004. 1600-2200 NZT Saturday, 0800-1400 NZT Sunday.

Cliff Betson Contest - 50 MHz and up. Saturday the 15th and Sunday the 16th of January 2005. 1600-2200 NZT Saturday, 0800-1400 NZT Sunday.

Contest Rules were published in September/October 2000 Break-In. The rules are also available on the NZART web page. <http://www.nzart.org.nz/nzart/Update/Contests/vhfcontestrules.html>

Next Australian VHF/UHF/SHF/EHF Contest is the Spring Field Day Contest. Saturday the 6th and Sunday the 7th of November. The rules are unchanged from 2003. Full details on the WIA web page. <http://www.wia.org.au/>

Branch Spot:

Branch 20 NZART - First up in this issue, is a recent addition to Branch web pages, it's that of the Manawatu Amateur Radio Society Branch 20 NZART. Take your browser to <http://www.zl2ko.orcon.net.nz/> and have a look about.

Branch 65 NZART - ZL1VK-L HF EchoLink Node – With Nigel Goldstone ZL2SEA

Are you struggling with the band conditions on HF to make contact with your ham friends?
Are you running a QRP rig in the outback and want to make contact to a distant country?
Have you been tuning up and down the band calling CQ but find no reply?
Do you want to make contact with some interesting Hams around the world?
Then the ZL1VK-L HF EchoLink node is available to provide some interesting HF fun.

The Papakura Radio Club has established an HF EchoLink node. This node, ZL1VK-L, is currently operating on 80 M SSB **3.750 MHz** (6:00 AM till 7:30 AM and nights from sunset till 10:00 PM approximately) and 40 M SSB **7.075 MHz** during the day 7:30 am till sunset.

For questions and answers regarding this link and more information refer to the documents attached to this edition of HQ-Info-Line.

Dates to Remember:

- **30th November last day to take advantage of the \$15 rebate for Transmitting/Non-transmitting membership.**
- **Next NZART Official Broadcast 8pm & 9pm 28th November.**
- **Final HQ-Info-Line for 2004 Sunday 12 December.**
- **Final Official Broadcast for 2004 Sunday 19th December.**
- **First HQ-Info-Line for 2005 Sunday 16th January.**
- **First NZART Official Broadcast for 2005 Sunday 27th February.**

73

Jim Meachen ZL2BHF
Editor

Papakura Amateur Radio Club
EchoLink Radio Link ZL1VK Node No. 150308 on the 40 / 80 M HF Band

Introducing EchoLink

EchoLink is software which allows Amateur Radio stations to communicate with one another over the Internet, using voice-over-IP (VoIP) technology. The program enables worldwide connections to be made between stations, from computer to station, or from computer to computer.

The ZL1VK-L node is currently operating on 80 M SSB 3.750 MHz (6:00 AM till 7:30 AM and nights from sunset till 10:00 PM approximately) and 40 M SSB 7.075 MHz during the day 7:30 am till sunset.

DTMF Functions

In Sysop mode, EchoLink can be configured to accept commands through the local receiver using DTMF tones. Each command consists of a sequence of digits (or the special keys *, #, and A through D). For more information on how this is done refer notes bellow.

Operating guide lines.

1. Announce your call before using the DTMF codes to operate the station
2. **Wait** for the announcement that you are “**connected to node (XXXXX)**” before starting your over and check that the frequency is clear before calling CQ etc.
3. Remember to leave about a 3 sec breaks between overs to allow other stations in.

Remember the quality of the QSO on EchoLink is governed by a lot of factors. The bandwidth speed, the sound card settings, computer settings at both ends, QRM on HF, so not every QSO is going to be perfect. Depending on the conditions you may get some packet loss and breaks in communication. As technology improves so will this station.

The table below lists each of the DTMF commands.

Command	Description	Default
Connect	Connects to a station on the Internet, based on its node number.	num
Random Link	Selects an available link or repeater (-L or -R) at random, and tries to connect to it.	01
Random User	Selects an available single-user station at random, and tries to connect to it.	03
Disconnect	Disconnects the station that is currently connected. If more than one station is connected, disconnects only the most-recently-connected station.	#
Disconnect All	Disconnects all stations.	##
Reconnect	Re-connects to the station that most recently disconnected.	09
Status	Announces the call sign of each station currently connected.	08
Play Info	Plays a brief ID message.	*
Query by Node	Looks up a station by its node number, and reads back its call sign and status.	06+num

More information about this node and answers to questions can be found at the **Papakura Radio Club** web site www.qsl.net/zl1vk

More information about Echo Link can be found at ... <http://www.echolink.org>

For a list of EchoLink stations can be obtained at ... <http://www.echolink.org/el/logins.asp>
<http://www.echolink.org/el/links.asp>

EchoLink Maps

<http://www.echolinkmap.org/>

Have fun and enjoy EchoLink

Operation Guidelines

How do I use DTMF on HF?

You need to have a way of generating DTMF tones with a DTMF mic on your HF set or another way of generating DTMF example software on a computer you can.

There are a few tricks with DTMF on HF. First you must be on the exact frequency as the node to send DTMF. To get on the exact frequency tune to the frequency specified, give your call sign to open the voice operated squelch on the node then send the "*" DTMF code. If you are on the exact frequency you will here an answering message "ZL1VK Link" or similar. If you don't here any reply then adjust the frequency and try again till you do. Once you are matched to the output frequency all the DTMF commands will work as per a normal VHF or UHF EchoLink node. But remember to give your call sign first to open the squelch.

Connect

The default for the Connect command is to simply enter the 4- 5-, or 6-digit node number to which you wish to connect

To enter a node number (for the Connect or Query by Node commands); enter the 4-, 5-, or 6-digit node number. If the specified node is not among the stations currently logged on, EchoLink will say "NOT FOUND".

Examples

To connect to node number 9999:

Enter: 9 9 9 9

EchoLink responds with: "CONNECTING TO CONFERENCE E-C-H-O-T-E-S-T"

followed by "CONNECTED"

because 9999 is the node number of conference server "*ECHOTEST*".

To connect to a random link or repeater:

Enter: 0 1

EchoLink responds with: "CONNECTING TO K-1-O-F REPEATER"

followed by "CONNECTED"

because K1OF-R was selected at random.

If you need any help or reporting any problems please contact the ZL1VK-L EchoLink Node Controller

The system operator is ZL2SEA Nigel Goldstone available on the ZL1VK-R , Ponga repeater 147.325 or zl2sea@nzart.org.nz or the Papakura Radio Club zl1vk@nzart.org.nz

For more information and answers to other questions will be available on the Papakura Club Web Site at www.qsl.net/zl1vk

ZL1VK-L HF EchoLink Node

Are you struggling with the band conditions on HF to make contact with your ham friends?

Are you running a QRP rig in the outback and want to make contact to a distant country?

Have you been tuning up and down the band calling CQ but find no reply?

Do you want to make contact with some interesting Hams around the world?

Then the ZL1VK-L HF EchoLink node is available to provide some interesting HF fun.

An HF EchoLink node has been established by the Papakura Radio Club.

The ZL1VK-L node is currently operating on 80 M SSB 3.750 MHz (6:00 AM till 7:30 AM and nights from sunset till 10:00 PM approximately) and 40 M SSB 7.075 MHz during the day 7:30 am till sunset.

Some Answers to Questions

1. So what's the idea putting an EchoLink Node on HF?

The reason for putting up an EchoLink node on HF is to allow hams to make long distant contacts by using the HF band to do the short haul 80 M / 40 M and the Internet to do the long haul. It also allows computer users to have access to some HF bands to make contacts with their friends if they are not able to put up HF aerials etc.

2. Do I have to be connected to the Internet and registered with EchoLink to use this node?

No, if you have an HF SSB rig and can operate on the 80M or 40M band anyone can answer calls.

3. Can I make calls using DTMF tones as with other VHF/UHF EchoLink or IRLP Nodes?

Yes, if you have a way of generating DTMF tones with a DTMF mic on your HF set or another way of generating DTMF example software on a computer you can. But there are a few tricks with DTMF on HF. First you must be on the exact frequency as the node to send DTMF. To get on the exact frequency tune to the frequency specified, give your call sign to open the voice operated squelch on the node then send the '*' DTMF code. If you are on the exact frequency you will here an answering message "ZL1VK Link" or similar. If you don't here the reply adjust the frequency and try again. Once you are matched to the output frequency all the DTMF commands will work as per a normal VHF or UHF EchoLink node. But remember to give your call sign first to open the squelch.

4. Why have the frequencies been chosen as 3.750 MHz & 7.075 MHz?

The frequencies have been chosen to try and find a location that has minimal QRM, commercial traffic. In the 40 M band this is especially difficult due to the small amount of band that is available to just amateur use. The frequencies chosen are not set in concrete and will be tested for a month or so to make sure there are no problems.

The setup of the node has been designed to have the minimal impact and to work as closely as possible as someone on a normal radio. All beacons and connection / disconnection messages have been turned off.

Instructions are given to the computer users to call to see if the frequency clear before use. It is designed to allow ease of communication with your ham friends and not to cause QRM with other users.

Any positive suggestions of other suitable frequencies are welcome.

5. We have a XYZ net every Thursday on 40 M 7.075 MHz, is the node going to cause interference to our net?

No, the link should not cause any problems for anyone running a net on the operating frequency. All identification announcements for the link have been turned off, so it will not beacon or announce when stations connect or disconnect. It should not allow the link to transmit if the frequency is being used. Instructions are given to connecting stations to call QRZ is the frequency clear before using the link and calling CQ. The Link will announce its call "ZL1VK Link" once every 15 minutes during a QSO if it is transmitting. If you wish to let others in via the link please remember to leave a 3 second break between overs.

6. Can the frequencies for the HF node be changed from a computer user logging on and sending text commands?

No, the radio is not computer controlled and the frequency changes are done manually.

7. We have a XYZ net every Sunday on 40 M 7.072 MHz, is the node going to cause interference to our net?

No it should not as the node generally should not be able to transmit if it is receiving another signal or strong QRM due to someone operating less the required 3 kHz spacing for SSB. Of course your net running so close to the operating frequency will cause QRM on the node and stop its use. It may be a good idea to move your net to the operating frequency of the node to allow some of your other ham friends to join into your net or listen on the side.(remember to leave a 3 second break between overs). Or if you want to run an exclusive net as you may like to move to 3 kHz from the operating frequency of the node as a courtesy to others.

- 8. How do I know that the station that I am taking too is on the link or working direct via radio?**
Instructions are given to users of the link to identify that they are on the ZL1VK HF node when calling CQ. The node will also identify itself at the end of transmission every 15 minutes while being used with "ZL1VK Link"
- 9. I have been listening on 7.065 MHz and I have not heard anything, how do I know its working?**
If you have EchoLink access you can look for the ZL1VK-L node. If you have internet access go to EchoLink web site under logins <http://www.echolink.org/logins.asp> and you will see the ZL1VK-L node listed. Or you could test with a DTMF command refer to answer to question 4
- 10. How do I know what frequency the ZL1VK-L is currently on?**
If you have internet access go to EchoLink web site under logins <http://www.echolink.org/logins.asp> and you will see the ZL1VK-L node listed with the current operating frequency. Or ask on the ZL1VK-R repeater. Generally it will be as specified. The Papakura web site will also have information about this node refer www.gsl.net/zl1vk
- 11. Does the ZL1VK-L HF node operate unattended? What if there is a problem?**
Yes, the node does operate unattended, but it is monitored at regular intervals. The link can be turned on and off remotely via the internet. There are a few hams that are monitoring the node via radio and report any problems. The system has various safety features to turn off the node if there is a problem and has timeout facilities to turn off the transmitter in case of a lockup in the TX. Any reports of problems with the link please contacting ZL2SEA on the ZL1VK-R link on the 147.325 Ponga repeater or email zl2sea@nzart.org.nz, or zl1vk@nzart.org.nz
- 12. I think this is a great idea, but I have a net on another frequency or band. Would it be possible to change frequency and band so that our ham friends can join into our nets that currently are not able too due to band conditions?**
Yes we will be happy to change the frequency or band for a specific net event, the node can currently operate from 80M, 40M, and 20M bands. Please send requests to the contact details bellow.
- 13. Why does the node get turned off at night?**
The link operates out of ZL2SEA's QTH in Papakura, the computer is under his bed in the caravan and it's too noisy to have it on when he is trying to sleep. When the commercial rig is installed we will be working towards a 24/7 operation. (If anyone can offer a more permanent site so that it can operate 24/7 we would like to here from you). Any requests for operation outside the current operating hours would be welcome.
- 14. The link appears to be transmitting off frequency why is that?**
Yes the radio being used for the link does drift up and down the specified frequency as the temperature changes, but should generally be within +- 0.5 kHz. We do have plans to replace the rig with a more stable fixed frequency commercial rig over the next few months. Note: - do not adjust the RIT to receive a clear signal, adjust your rig to match the transmitting frequency of the node as the receiving frequency is the same as the transmitting frequency.
- 15. I have connected to the ZL1VK-L via computer and all I herd was a lot of QRM and could not transmit. Why is this happening? Is there something wrong with the link?**
No, there is nothing wrong with the link, if there is QRM on the band the link will not work, please try again later. Unfortunately QRM is part of the HF radio fun.
- 16. Is the ZL1VK-L the same as the ZL1VK-R? When I connect to the ZL1VK-R node does my QSO go out on HF?**
No the ZL1VK-L operates completely independently to the ZL1VK-R on the Ponga repeater. But it is always possible for anyone to connect the HF node to any EchoLink repeater if required.
- 17. I am planning a bush tramp on Stuart Island and will be taking my QRP rig. I would like to make contact with my ham friends in the EI2AIR-L node. What is the node number for the ZL1VK-L that I can give them to contact me?**
The node number for ZL1VK-L is **150308**
- 18. Can we use this node for AREC or JOTA?**
Yes, this node can be set up for private or closed nets, or for AREC work if required. Please contact ZL2SEA or the Papakura Radio club to discuss your requirements.

19. Are there any other HF nodes on EchoLink?

Yes, there are quite a few, a few examples are...

VK7VKK-L 80M 3.585 MHz, N8AD-L computer controlled all bands 160M to UHF all modes, KQ6XA-L 5.3715 MHz

VK3JTM-L 3.590 MHz, KQ6XA-L 14.3425 MHz

20. I think this is a great idea, how can I get involved and support this node?

The best way to support this project is to monitor the frequencies and make calling in stations welcome. If you have any suggestions for improving this link or have technical expertise, we would like to here from you.

21. I have some more questions who do I contact?

The system operator is ZL2SEA Nigel Goldstone available on the ZL1VK-R or zl2sea@nzart.org.nz or the Papakura Radio Club zl1vk@nzart.org.nz For more information and answers to other questions will be available on the Papakura Club Web Site at www.qsl.net/zl1vk