



# Western Suburbs Radio Club Inc.

## August 2003 Newsletter

ZL1AC, Branch 03 NZART 3000 Great North Road New Lynn, PO Box 15-122, New Lynn.

President: James Moore ZL1WOT, Secretary: Merv Thomas

Newsletter Editor - John Neill ZL1NE - [john.neill@clear.net.nz](mailto:john.neill@clear.net.nz)

VHF Club Net Wednesday 07:30 146.525 MHz, HF Club Net Fridays 07:30 3.622 MHz

Website <http://www.qsl.net/zl1ac>

### Club Calendar

Monday	11 <sup>th</sup>	August	WSRC Dinner Avondale RSA 6 pm on.
Tuesday	30 <sup>th</sup>	September	Regional Coordinating Committee
Saturday		November	WSRC Used Equipment Sale

### Mid Winter Dinner Monday 11<sup>th</sup> August

It is time for our popular Mid Winter dinner at the Avondale RSA. Here is a chance of keeping in good with the XYL by taking her out for dinner and perhaps having a flutter on the Pokies. Please mark this date on your calendar.

### Last Club Evening



At the general club meeting of 14th July, Paul ZL1WGP talked on his recent experiences in the Marshall Islands. He had been there on business assessing the number and condition of Government buildings on the islands with a view to valuing the asset and then to develop a maintenance programme for the buildings.

While there he had taken many photographs of the islands and the island way of life. Paul delivered a most entertaining and interesting talk on the islands as he went through the photographs.

As the Marshall islands are made up of many small islands, often only 200 to 300 metres wide and a few hundred metres long, a useful method of communication is the HF Radio. Pictured at right is an Alinco Radio that is used for communication on the islands.



### Meeting Night Call In.

The club 2 metre rig will be on from 7 pm on Committee and Club meeting nights. Any member or visitor wishing to give their apologies or raise other matters should call in. Frequency 146.525 simplex, but may change if this does not work out.

## **EchoLink**

There are currently 572 ZL callsigns validated on EchoLink. EchoLink was first released April 2002; in early April 2003 node number 100,000 was validated; today there are 122,223 nodes validated. There are 3,708 Repeater call-signs and 7,225 Simplex Links have been validated covering 138 countries (based on ITU prefix). More information about EchoLink can be found at:

<http://www.echolink.org>  
<http://www.echolinker.com/>

## **EchoLink Radio Link ZL1VK**

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 radio stations, from computer to radio station, or from computer to computer.

The Papakura Club has set up an EchoLink Radio Station for anyone to use. The current Operating Frequency of the Papakura Radio EchoLink station ZL1VK-L is 146.500 FM simplex. And the Node No. is 120742. Any licenced amateur is welcome to use the station. Operating guide lines are as follows:

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. Keep overs short with about 3 sec breaks between overs to allow other stations in and also to hear announcements from the system.

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, 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 default Connection command is to simply enter the 4- 5-, or 6-digit node number to which you wish to connect on the DTMF keypad of your Radio. A full list of stations can be found on:

<http://www.synergenics.com/el/logins.asp>  
<http://www.synergenics.com/el/links.asp>  
<http://home.insightbb.com/~n9yty/>

To disconnect from a station or computer simply type in # (hash) on the DTMF pad on your radio.

The above is the basics of operating the system. If you need more information then contact John Neill and a MSWord file will be emailed to you. [John.neill@clear.net.nz](mailto:John.neill@clear.net.nz)

If you need any help or reporting any problems please contact the ZL1VK EchoLink Node Controllers

Nigel Goldstone ZL1UXD  
David Wilkins ZL1MR  
Geoff Reed ZL1AKY

## **Protect Your 12 Volt DC Gear**

In the field, and at home, Murphy's Law prevails. 12 volt Dc equipment will sooner or later be connected to the wrong polarity DC and whatever in-line fuse you have, probably will not blow before internal "hard to fix" components permanently die. Another incident could be that the AC to DC supply regulator gives up and applies a voltage exceeding the upper limit operating voltage of the rig with equally devastating results.

At home, you can take the rig to the repairman in your own good time, but out in the field you need that gear now! Protection is cheap and easily installed; always providing the in-line fuse is not greater than 15 amps. Across the DC input line to the rig, and after the fuse, connect a P6KE15A zener diode. Part number 4470661 from RS Components.

If the polarity is connected wrong, the current through the zener will blow the fuse. In the case of normal polarity, should the voltage exceed circa 15.5 volts, the current flow through the zener rapidly rises to an effective short circuit and will also blow the fuse. At circa \$2 per item, these zeners are well worth the price. The size of the zener is a little larger than a 1N4004.

## **Broadband Over Power Line**

Broadband Over Power Line (BPL) technology poses significant interference potential to HF and low-VHF spectrum use between 2 and 80 MHz. There are two main categories of Broadband Over Power Line (BPL) Access BPL and In-Building BPL. Access BPL uses the electrical distribution lines, overhead or underground, to deliver broadband Internet access to homes and business. Because the wiring is

physically large and often overhead and extends across entire communities, access BPL poses a significant interference potential to over the air radio services. Access BPL uses a number of different techniques, from spread spectrum to multi carrier systems. In-Building BPL systems are designed to use the electrical wiring within the building to network computers and other devices.

Field trials have been conducted in a number of overseas countries. Trials are just getting underway in a number of States the US. To date none of them have specifically included Amateur Radio nor have any incorporated interference studies. The FCC has issued a notice of enquiry and the ARRL is encouraging Radio Amateurs to take interest in the technology and to comment on its implications. More details can be found on the ARRL website.

#### **Western Suburbs Radio Club**

##### **Branch 03, N.Z.A.R.T. Inc:**

##### **Minutes of the 5th: meeting for 2003 of the elected Committee.**

**Monday 21st: July 2003.**

**Attendance:** James Moore ZL1WOT, President; Merv Thomas ZL1SK, Secretary; John Turnwald ZL1JT, Treasurer; Barry Williams ZL1ACZ, Newsletter Liaison; Brian Huggard ZL1MW, A.R.E.C; Ross Reddell ZL1VRR;

Meeting commenced at 1928 hours.

**Apologies:** Nil

**Minutes:** as circulated by email by the secretary were taken true and correct record Moved: John Turnwald ZL1JT.  
Seconded: Barry Williams ZL1ACZ

**Matter Arising:** Ross Reddell ZL1VRR reported on the shifting of the outside automatic lights and Brian Huggard ZL1MW described the advantage of that shift to the installation of the H.F. vertical antennae radials. The secretary informed the committee that he had had contact with Warren Harding with regard to him giving a talk on the Skytower radio installations. The offer to talk to be confirmed by the secretary and a date set. Appreciation of the last meeting's talk by Paul Wells-Green on a non radio-related subject was expressed by the committee members as a very successful presentation.. The committee reviewed last months suggestions compiled by John Turnwald ZL1JT and felt that all relevant details had been achieved except for a "supper/tea monitor" appointment

**Correspondence:** Inwards - VHF Branch newsletter and a Com-Centre 1 page catalogue and a "Communicator"  
Outgoing - Nil.

The secretary read a draft letter he had composed intended for all non-financial members and other possible members taken from comprehensive list of names lifted from various sources pertaining to amateur operators in or around western suburbs area.

The treasurer John Turnwald ZL1JT Moved that a budget of \$30-00 be approved to cover postage and paper for sending up to 55 copies of the letter. Seconded Barry Williams ZL1ACZ. He further suggested that purchase of 2 reames of paper and a black cartridge for his printer be approved for his secretarial work.

Moved: John Turnwald ZL1JT Seconded: Ross Reddell ZL1VRR

Ross Reddell ZL1VRR enquired about what has been done if anything about the club's set of rules. The secretary reminded the meeting that he had printed out the existing ones for the club plus a further set of suggested rules that might be applicable to the club but typically, no feedback had been received. The meeting decided to stick to status quo.

**A.R.E.C.:** Brian Huggard ZL1MW reported that he was still waiting for Civil Defense to supply a list of 'Relief Centers'. When the list has been received an exercise is due to be organized. He has also written to the Marlborough club requesting a costing for the construction of the W.S.R.C./ S.T.S.P. repeater and its delivery to an Auckland address.

**General Business:** Brian Huggard ZL1MW expressed thanks to John Neill ZL1NE for the loan of a ground roller which he had used on Saturday 21<sup>st</sup>: July 2003 to level some of the tyre ruts created by un-invited cars.

Brian also expressed a requirement for a tantalized pole to support the 15 foot aluminum pole for the radials. John Turnwald ZL1JT offered a post hole borer and a post of power pole heritage for the purpose.

Brian Huggard ZL1MW reported that a couple of club room walls are getting covered in moss. Barry Williams ZL1ACZ offered to clean up the walls.

Brian Huggard ZL1MW reported that he had placed another 4 bags of gravel in the troubled driveway.

Chairman, James Moore ZL1WOT thanked Brian Huggard ZL1MW for his industrious efforts.

A reminder that the 'Sprint Contest' will be held on Saturday 26<sup>th</sup> July 2003.

A working bee was organized for Tuesday 29 July 2003 at 9 a.m. depending on weather.

A discussion on the morse requirement for a full license followed.

Barry Williams ZL1ACZ suggested we put together an article for 'Break In' with pictures for the Branch Section of the magazine when all the antennas and rigs are fully operational.

John Turnwald ZL1JT offered to repair the two faulty water taps in the kitchen area.

The meeting concluded at 21-25 hours.

Merv Thomas ZL1SK, Secretary / Scribe. 22nd: July 2003.

## Morse Code

At the recent World Radio Conference, CW was removed from the international radio regulations as a licensing requirement. It remains for individual countries to change their laws regarding the status of CW. A number of countries have already removed CW from the licence. In NZ it will need to go before parliament following a recommendation from the Ministry of Economic Development. To date NZART has written to the MED requesting that CW be removed.

## A Long, And Almost Interesting, Story

The Australian standard gauge and US standard railroad gauge (distance between the rails) is 4 feet, 8 ½ inches. That's an exceedingly odd number.

Why was that gauge used? Because that's the way they built them in England, and English expatriates built the Australian and US Railroads.

Why did the English build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used.

Why did "they" use that gauge then? Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel spacing.

Okay! Why did the wagons have that particular odd wheel spacing? Well, if they tried to use any other spacing, the wagon wheels would break on some of the old, long distance roads in England, because that's the spacing of the wheel ruts.

So who built those old rutted roads? Imperial Rome built the first long distance roads in Europe (and England) for their legions. The roads have been used ever since.

And the ruts in the roads? Roman war chariots formed the initial ruts, which everyone else had to match for fear of destroying their wagon wheels. Since the chariots were made for Imperial Rome, they were all alike in the matter of wheel spacing.

The United States standard railroad gauge of 4 feet, 8.5 inches is derived from the original specifications for an Imperial Roman war chariot. And bureaucracies live forever.

So the next time you are handed a spec and told we have always done it that way and wonder what horse's ass came up with that, you may be exactly right, because the Imperial Roman war chariots were made just wide enough to accommodate the back ends of two war horses.

Now the twist to the story.

When you see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are solid rocket boosters, or SRBs. The SRBs are made by Thiokol at their factory in Utah. The engineers who designed the SRBs would have preferred to make them a Bit fatter, but the SRBs had to be shipped by train from the factory to the launch site. The railroad line from the factory happens to run through a tunnel in the mountains. The SRBs had to fit through that tunnel. The tunnel is slightly wider than the railroad track, and the railroad track, as you now know, is about as wide as two horses' behinds.

So, a major Space Shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by the width of a horse's behinds.

And you thought being a horses backside wasn't important....

## Club Nets

VHF Net 146.525 MHz 7:30pm every Wednesday HF Net 3622 KHz +/- QRM/QRN 7:30pm every Friday  
HF Net Roster, Branch 03 The full roster is on: <http://www.qsl.net/zl1ac/wsrc-hf-roster.html>

15 August 2003	ZL1VRR	Ross
22 August 2003	ZL1MW	Brian
29 August 2003	ZL1JL	John
5 September 2003	ZL1NE	John
12 September 2003	ZL1ACZ	Barry
19 September 2003	ZL1WI	Roy
26 September 2003	ZL1VRR	Ross