Western Suburbs Radio Club Inc.

July 2009 Newsletter

ZL1AC, Branch 03 NZART 3000 Great North Road New Lynn,
PO Box 15-122 New Lynn WAITAKERE 0640
President: Ian Sangster ZL1RCA, Vice President Ross Reddell ZL1VRR.
Secretary: Roy Milam ZL1WI. Newsletter Editor – John Neill ZL1NE
VHF Club Net Wednesday 07:30pm 146.525 MHz,
HF Club Net Fridays 07:30pm 3.623 MHz
Website http://www.qsl.net/zl1ac

Club Calendar

Saturday	11th	July	Club Meeting – Paul Well-Green on Papua New Guinea
Wednesday	22nd	July	Committee Meeting
Saturday	25th	July	Waitakere Sprint – Phone
Saturday	1st	August	Waitakere Sprint – CW
Saturday	8th	August	Club Meeting - To be announced
Wednesday	26th	August	Committee Meeting
Saturday	12th	September	Club Meeting - To be announced
Wednesday	23rd	September	Committee Meeting
Saturday	10th	October	Used Equipment Sale – **Note the New Date**
Monday	12th	October	Club Meeting - To be announced
Wednesday	28th	October	Committee Meeting
Monday	9th	November	Club Meeting - To be announced
Wednesday	25th	November	Committee Meeting
Monday	14th	December	Club Meeting – Christmas BBQ and Social

Winter Meetings

The June, July, August and September Club Meetings will be held on Saturday mornings. This should be easier than turning out on cold and possibly wet winter Monday evenings.

July Club Meeting

The guest speaker for the July morning club day time meeting will be Paul Wells-Green ZL1PWG with a talk on his recent time in Papua New Guinea. Come along and enjoy this talk. Start will be around 9:30 with coffee and the meeting will finish around 12:00 midday. Paul has some interesting storeys to tell of his time in PNG.

Club Subscriptions

At the AGM the club subscription was increased to $30. This is now payable to the Treasurer at PO Box 15-122 New Lynn WAITAKERE 0640, or make your payment directly to John Turnwald at the next club meeting. It has unfortunately been necessary to raise the club fees to cover the ever increasing cost of running the club and maintaining the clubs assets such as the building. Non payment by the end of June will be taken as an informal resignation from the club but we will be happy for you to rejoin.

Used Equipment Sale

The western Suburbs Radio Club Used Equipment Sale will take place on the 10th October 2009 (note the change of date). The Club is currently collecting surplus equipment that can be sold to raise funds for the club. This sale is the clubs main fund raiser each year and ensures the continued financial viability of the club. If you have surplus equipment, or know of any other non-club people that may have surplus equipment, that could be donated to the sale then please contact a member of the committee.

Waitakere Sprints

The Waitakere Sprints will be held again this year thanks to assistance from the Papakura Radio Club. As usual the sprints are for one hour durations from 10 pm to 11 pm NZ time. The Phone sprint will be on the last Saturday in July and the CW Sprint will be on the first Saturday in August. Full details will be available soon on both the Papakura and WSRC Websites. Dates of the Sprints are still to be confirmed.

Visit to Ruaotewhenua for 146.70 Repeater Maintenance.
Ian Sangster ZL1RCA

On Friday June 19th a maintenance visit was made to Ruaotewhenua to continue some fault investigation and carry out some maintenance, as a result of findings.

After some 20 years of service the repeater has been giving unpredictable results over the last year or so. The electronics have been recently overhauled. First man there was Vaughan, ZL1TGC, trustee and key holder, next John ZL1JD, myself ZL1RCA, then the comedy team of Franc ZL1SLO and Willy ZL1ACW.

Vaughan showed us evidence of darkening in the N connector which took the repeater output from the cavity filters out of the building to the antenna. We accessed the connector at the base of the antenna via Franc's ladder, and an inline Bird watt meter was placed in circuit. With the transmitter keyed some 3 watts was measured. The transmitter has an output of over 10watts.

The decision was made to replace the coax. The new coax was taped to the end of the old and fed from the reel outside toward the transmitter rack inside. It passed through a vent filled with two pot waterproofing foam at the building entry just below roofline, then into a ceiling-level cable tray running above the repeater racks. An inspection of the removed coax showed the outer sheath had chafed through and braid visible at the building entry point. It is likely that water had entered the coax here.

The new coax was terminated by Vaughan, hooked up, and Bird meter tests repeated. Now the transmitter delivered slightly more than 10 watts to the antenna with nil reflected power noted.

After a tidy up, the party departed and the repeater seems to have been working well since, drawing an increasing amount of interesting IRLP traffic.


The 670 Repeater


Fitting the new Coaxial Cable


670 Antenna is the Vertical but it has friends

73 Ian ZL1RCA.

Radar Dome

Also at the same site as the 670 repeater is the Ruaotewhenua Radar Dome used for domestic aircraft control. The following notes are copied from the Airways web site:

http://www.airways.co.nz/about_airways/op_radar.asp

Radar Surveillance

Airways provides surveillance for domestic air traffic management via a combination of primary and secondary radars located throughout New Zealand.

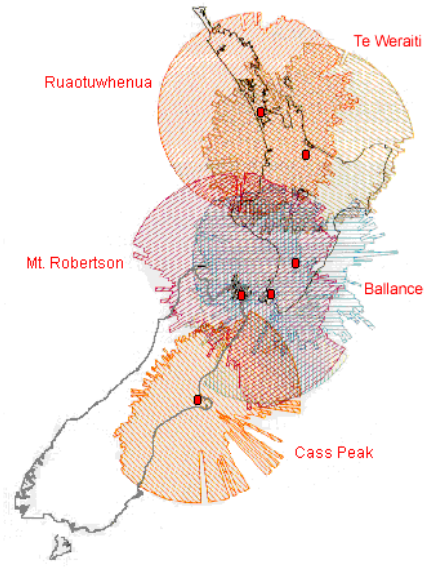
Airways' current radar network was installed into sites around New Zealand in 1989/90 and became operational in 1991. Those sites are located at Ruaotewhenua (in the Waitakere's), Te Weraiti (in the Waikato), Balance (near Palmerston Nth), Hawkins Hill (Wellington), Mt Robertson (in the Marlborough Sounds) and Cass Peak (near Christchurch). Primary radar coverage is provided at Auckland, Wellington and Christchurch airports.

Radar Explained

Radar allows aircraft to operate at significantly reduced separations (ie, from 30 to 50 nautical miles down to 3 to 5 nautical miles). This then allows for maximum efficiency at airports, particularly at peak times, and allows aircraft to be directly routed to airport approaches which reduces the actual miles flown by aircraft - so reducing the fuel burn and making for a quicker trip. Our radars - a combination of four primary and six secondary radars - provide aircraft positioning information to ATC displays with positions updated every five seconds.

Primary radars find their target by detecting aircraft via 'pulses' which bounce back to the radar head, which are then translated by the air traffic control system into a target on a controllers' display. They don't rely on any equipment working on the aircraft, so the controllers can see everything within range, but the downside is that they don't provide as much information as secondary radar. The best analogy is that they work like a torch shining into a dark room - they can only pick up what they 'see'. We operate them at high-density traffic areas at Auckland, Wellington, and Christchurch where it's important that controllers can see every single aircraft in that airspace.

Secondary radars rely on transponders on board the aircraft. Our six secondary radars provide overlapping dual coverage over most of the country apart from the regions in the lower South-West of the South Island. They can provide more information to controllers than primary radar, including altitude and aircraft ID (squawk code), but the aircraft need to be fitted with a special transponder. Continuing the torch analogy, secondary radar is like the aircraft also shining their own torch back at the radar.



Radar Coverage at 9000 ft

The Ruaotewhenua Radar Dome (ZL1RCA photo)

Club Nets

VHF Net 146.525 MHz 7:30pm every Wednesday, HF Net 3623 KHz +/- QRM/QRN 7:30pm every Friday. All are welcome to check in on the nets. The full HF Net Roster can be found on http://www.qsl.net/zl1ac/wsrc-hf-roster.html

3-Jul-09	ZL1VRR	Ross
10-Jul-09	ZL1MW	Brian
17-Jul-09	ZL1NE	John
24-Jul-09	ZL1ACZ	Barry
31-Jul-09	ZL1WI	Roy
7-Aug-09	ZL1VRR	Ross
14-Aug-09	ZL1MW	Brian
21-Aug-09	ZL1NE	John
28-Aug-09	ZL1ACZ	Barry

Rally Of Whangarei Nac Insurance June 6/7th

After placing my request form for Richard ZK1EX to assist with 5km Safety Radio, I was given two stages on Saturday (SS1& SS5 Mangapai Caves) and two on Sunday (Waipu Gorge SS9 & 13). After we packed the trailer with equipment, fitted the radio's into to the Motor Home and the antennas we would need, we left Auckland and set off north travelling though the new tunnel which took off quite a bit of time compared to the old route. We prepaid our road toll on the internet so we did not need to stop. We stayed over-night at Ruakaka Camping ground where we set up and had tea before watching a bit of TV and sleep.

We had an early start with being on stage at 7:00am; this was a short trip in the dark before we arrived at our point at 1B. It was at an intersection with two bridges, one we parked on and the rally route turned left over the other bridge and onto gravel again after a brief time on tarmac. The antennas were erected and the dipole run out. We had called into base as we travelled, but once travelling downhill we lost base on VHF and the 560 repeater. So we had to call in on HF using the HF whip a trident antenna to register that we on site ahead of time. Once the dipole was up we did a radio check where our signal was reported to be down but readable. We could copy all the other field stations as they arrived on their sites and checked in. We waited for the safety cars to pass through to check the stage was ready. The stage went green on time and the first cars passed our point approaching the corner at different speeds attacking the corner with some going wide and others hugged the grass with a little dust as they hit the gravel. A brief light shower of rain came down, but soon cleared. You could see the different car speeds with the different classes. There were Asian Pacific cars, NZ group N, Ford Fiesta, Open Class and the Classic cars where only about two cars were running. Unfortunately there was the occasional crash and mechanical breakdowns.

On Sunday we were up early as we were again the first stage for the morning with an arrival on stage at 6:00am. There was quite a bit of fog around when we left for stages SS9 and SS13, Waipu Gorge Road which was run in the reverse direction from previous years. We were parked in a framers driveway and backing into it with the trailer on the back in the dark was a little difficult to position the motor home as far to the left to allow farm access if required. We got our mast up through some poplars along the driveway and were putting up our dipole when a share-milker came into the farm to milk some 200 cows. He got passed ok and said that he would stay in place until the time he could get out safely. We had a film crew present also to film the stage as there were three corners that the cars were able to tackle at speed as they came downhill towards the stage finish line. The cars made quite a sight as they powered past our site. The times seamed to improve again during the second run in the afternoon. We were able to catch the numbers on the cars quite well, as the road had a right hand camber away from us. Some stones did come our way, as the cars swept a line on the surface. Our dipole had to be placed across the rally road but we were able to get it high enough after climbing a tree. Quite a sight. The stages went to time and it was interesting to watch the leading cars match each others stage times. Richard Mason seams to have a dislike for this event as his turbo failed and he limped out of the stage. The Rally still had three stages to the finish, with the winner the green machine of Hayden Paddon in car three. We had reasonable weather with short sharp showers and good communications. Thanks to Richard and David at base who did a fine job taking messages of cars passing the safety radio positions, for some twelve hours each day. Thanks to all for a job well done. Looking forward to next years Rally. On inspection back at home I found some loose connections which were the reason for a low signal report. Sorry.

From Ross ZK1EKR