



**HQ Infoline**  
A Service From  
New Zealand Association of  
Radio Transmitters



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## From The Business Manager ZL2DL

### Debby says...

Sorry folks, not sure what or how it happened but the full annual QSL Bureau report was omitted in Break In. The complete report is shown below.

I have also received notification that SMART along with other Ministry of Economic Development web sites were unavailable on Thursday 19th May. If you were searching for a call sign you will not have been able to access any information. Rumour has it, that it had something to do with the Government's announcement of the budget! Hmmm, scary.

2011 annual conference to be held in Upper Hutt, is now only two weeks away. If you would like your apologies noted at the AGM please let me know ASAP. Also if your branch does not have a delegate attending and you wish your branch votes to be counted, send me results and I will arrange for a proxy. I do need to know how many were actually in attendance at your branch when voting and how many for/against the remits. There are thirteen in total so quite a few to consider, and more importantly your opportunity to have a say.

Talk soon...Debby ZL2DL

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## NZART QSL Bureau: Annual Report for 2010

### Incoming Mail

DX: Packages/envelopes - 176, Cards - 33,218

ZL: Packages/envelopes - 436, Cards - 23,956

## Outgoing Mail

DX: Envelopes 431 (Cards - 23,382)

ZL1 Bureau: Forty kilogrammes of QSL Cards.

ZL2 Bureau: Thirty Six kilogrammes of QSL Cards.

ZL3 Bureau: Thirteen kilogrammes of QSL Cards.

ZL4 Bureau: Twelve kilogrammes of QSL Cards.

ZL7T: Four & a Half Kilogrammes of QSL Cards (Privately funded postage)

The NZART QSL Bureau's gross expenditure for this past financial year was \$1,539.97, an increase of \$215.69 on the year ending 2009. The nett cost to the Association was \$1105.98 as against \$900.98 for the previous year. Donations (\$424.95) and Non-Member Fees (\$10.00) made up the balance of the running costs of the Bureau for the year under review.

The Association's sincere thanks go to those of its members who, from time to time, saw fit to enclose a donation with their QSL cards. Their generosity has helped to keep down the Associations day to day running expenses.

Year 2010 saw an increase of four per cent in numbers of cards sent out by ZL operators whilst there was a two per cent decrease in the number of incoming cards from overseas amateurs,

During the past year, the NZ Post Office increased its postal charges partly due to the Government's decision to ramp up GST by 2 1/2%. This provided a windfall to the PO as it needed to round up its prices for stamps but despite this, the postage for large envelopes used for mailing QSL Cards to the ZL3/ZL4 Sub-bureaux suffered an increase of 20%! Over-all, there was a minimal inflationary effect on the Bureau expenses.

During the year Ross, ZL1BGB, assumed the position of ZL]-Prefix Sub-bureau Manager following the untimely passing of Ian ZL1BFB. The mailing details for the ZL1~Prefix Sub~bureau remain unchanged.

My thanks go to our four Sub-Bureaux managers, namely Dave ZL4OZ, Charlie ZL3CED and Ken ZL4HU, Tony ZL2AGY and Ross ZL1BGB, who attended to the stuffing of envelopes for all of the deserving during 2010.

B. E. Stewart ZL2RR, Manager

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## FMTAG Notes For HQ Infoline-230

Please click [HERE](#) to go to the FMTAG Applications Being Processed

Additional simplex channels have been requested for D-STAR, P25, and similar modes (Narrowband data calling channels, 16 kHz bandwidth or less).

The following frequencies appear to be satisfactory:

146.600 MHz 147.400 MHz 147.450 MHz 147.550 MHz

The following comments are invited from members:

(a) which frequencies are suitable?

(b) which frequencies are unsuitable, and the reason why they are unsuitable?

## Proposals

1. That 146.600 MHz, 147.400 MHz, 147.450 MHz and 147.550 MHz be added to the

**Bandplan** on page 7-16 of the current Call Book, with the following label: ***Narrow digital mode simplex of up to 16 kHz bandwidth (including D-STAR, P25 and other similar narrow band digital modes)***

## **Final Recommendations to NZART Council**

1. **Branch 63 Upper Hutt** has applied to add the D-STAR DV digital mode to, and change the location of, its Mount Climie 860 repeater. The new location will be Topo50 map reference BP32 798.83 423.94. An Engineering Evaluation, in accordance with the MED's Radio Licence Certification Rules (PIB38), shows that the repeater's transmit frequency can remain on 438.600 MHz and the receive frequency can remain on 433.600 MHz, and that there will be no interference to other stations.
2. **Branch 74 Wellington VHF** has applied to increase the power of, and add the P25 digital mode to its 6625 repeater located at Hawkins Hill, Topo50 map reference BQ31 449.78 236.89. An Engineering Evaluation, in accordance with the MED's Radio Licence Certification Rules (PIB38), shows that the repeater's transmit frequency can remain on 146.625 MHz and the receive frequency can remain on 146.025 MHz, and that there will be no interference to other stations.
3. **Branch 74 Wellington VHF** has applied for a 32 cm repeater located at Colonial Knob, Topo50 map reference BP31 513.58 426.16. FMTAG has chosen a repeater transmit frequency of 927.800 MHz and a receive frequency of 921.200 MHz. An Engineering Evaluation, in accordance with the MED's Radio Licence Certification Rules (PIB38), shows that there will be no interference to other stations.
4. **Branch 74 Wellington VHF** has applied for a 6 m repeater located at Colonial Knob, Topo50 map reference BP31 513.58 426.16. FMTAG has chosen a repeater transmit frequency of 53.750 MHz and a receive frequency of 52.750 MHz. An Engineering Evaluation, in accordance with the MED's Radio Licence Certification Rules (PIB38), shows that there will be no interference to other stations.
5. **Branch 85 Mercury Bay** has applied for a National System repeater located at Opito Bay, Topo50 map reference BA35 513.81 313.73. FMTAG has chosen a repeater transmit frequency of 434.800 MHz and a receive frequency of 439.800 MHz. An Engineering Evaluation, in accordance with the MED's Radio Licence Certification Rules (PIB38), shows that there will be no interference to other stations.
6. **Branch 85 Mercury Bay** has applied for a National System UHF Linking Station (ULS) located at Opito Bay, Topo50 map reference BA35 513.81 313.73, to link to Mt Edgumbe. The link transmit frequency will be 434.975 MHz and the receive frequency will be 439.975 MHz. An Engineering Evaluation, in accordance with the MED's Radio Licence Certification Rules (PIB38), shows that there will be no interference to other stations.

## **Comments and Applications**

Please send your comments and suggestions on the above matters and recommendations, and on any other FMTAG matters, by e-mail to: [fmtag@nzart.org.nz](mailto:fmtag@nzart.org.nz)

Applications for repeaters, beacons, digipeaters, point-to-point links, and so on, should be made on the latest version of FMTAG Form 10. The latest versions of FMTAG Form 10, and the explanatory Form 10A, are available on the NZART web site:

<http://www.nzart.org.nz/nzart/fmtag/>

Completed forms should be sent by e-mail to [fmtag@nzart.org.nz](mailto:fmtag@nzart.org.nz)

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## **Google Maps View of Locations For Beacons & Repeaters**

The text below was extracted from an e-mail from ZL1TAT to ZL2NN

Greetings Jamie

Congratulations on your good work arranging the NZ amateur beacon and repeater locations in Google Maps.

This is very useful, as it allows the viewer to see a beacon/repeater location plotted over a map or terrain profile background, plus particularly when zoomed right in on satellite view, to see an aerial view of the site. Simplified line diagrams like those published in the Call Book are also essential. (These line maps are to be continued - ZL2NN)

I've listed each station below with an outline of where the antennas are mounted, along with a link to the Branch website listing where one exists.

1. (091) Kakatarahae 7075: Antenna is on a wooden pole (beside a well camouflaged hut) at the N/E end of it's shadow. The helicopter landing clearing can be identified 20m north of this pole.
2. (019) Tairua 6975: Antennas are on the lattice tower (visible immediately east of the building). Additional info at <http://www.zl1is.info/tairua.html>
3. Mercury Bay Nat Sys 480: When this new (Branch 85) National System repeater is commissioned later this year, it will be on the end of the Opito Bay peninsula.
4. (141) Maungakawa 5575: Antennas are east of the building's north end on a wooden mast (at the N/E end of its shadow). This repeater is planned to be commissioned later in 2011).
5. (050) Te Weraiti 695: Replaces Te Aroha from beginning of June 2011. Antennas are on a wooden mast. Additional info at [http://www.zl1is.info/te\\_weraiti.html](http://www.zl1is.info/te_weraiti.html)
6. (017) Takaurunga 12cm beacon, Kaimai NS repeater and 540 data repeater: Antennas are on our tower immediately east of the fenceline (beside our hut which is visible) 30m south of the (Telecom building and tower). Additional info at <http://www.zl1is.info/kaimai.html>
7. (013) Raglan 5675: Antennas are on the wooden mast (west of the building's south end). Additional info at <http://www.zl1is.info/raglan.html>
8. (023) Hamilton 465 digi: Antennas are on the tower (at the north end of the red-roofed club rooms in Seddon Road). Additional info at <http://zl1ux.tripod.com/bbs.html>
9. (140) Raglan Branch 9425 and 5350 at Ward Street (Hamilton): Antennas for these Br83 repeaters are on the rooftop platform. This is the dark grey-roof building (No.40) north of the Ward Street intersection with Worley Place.
- 10.(104) Waikato 2m, 23cm and 70cm beacons: Antennas are on the south/east corner of the penthouse parapet (on Telecom's building at the south/east intersection of Anglesea Street and Caro Street). Additional info at: <http://www.zl1is.info/hamilton.html>
- 11.(139) REG 7125 and 8875 repeaters: These are located at their clubrooms within the building (No.211) on the north side of Peacocks Road.
- 12.(103) Nat Syst Hamilton 9975 repeater: Antenna is on the monopole tower at the north end of the smaller building (off the east end of Transpower's larger building on the north side of Hall Road, No.25). Additional info at: <http://www.zl1is.info/rukuhia.html>
- 13.(033) Hairini 7225 repeater: Branch 55's repeater is located on Puahue Road.
- 14.(030) Waitomo 465 digi (Br81), plus Br55 Nat Sys 9925, 7375 and 870 repeaters are all located on the Rangitoto Range. Additional info at: <http://www.zl1is.info/rangitoto.html>

Your work will be appreciated by all who view locations for these assets.

73's

Ian Brown ZL1TAT

Branch 81 trustee, and technical advisor to Branch 85

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## Online NZ Repeater Maps

In the last Infoline the new online repeater maps were introduced. The ones hosted on the Wellington VHF Group website at <http://www.vhf.org.nz/maps> are generated from information from

two sources as follows:

1. The technical data is sourced from the RSM's SMART system, if this is incorrect please notify the owner of the licence and ask them to submit a form 10 to get it corrected (Note: if the licensee is NZART please contact the branch not NZART itself). The actual data from SMART is as follows:
  - a. Frequency (the input frequency for repeaters is calculated)
  - b. Type
  - c. Site Name
  - d. Map Reference
  - e. Coordinates
  - f. Licence Number
  - g. Licensee
2. Other data is sourced from the NZART call book and any corrections received. For corrections to this data please email [zl2wal@nzart.org.nz](mailto:zl2wal@nzart.org.nz). The actual data fields are as follows:
  - a. Callsign
  - b. CTCSS
  - c. Branch
  - d. Trustees
  - e. Notes

The tool used to generate the maps is open source and therefore is under active development. The map generator can be downloaded from <http://projects.wallace.gen.nz/projects/nzrepeaters/files> both as a source archive for any platform and an installer for Windows.

It is currently capable of generating output in the following formats:

1. KML - for display in Google earth and Google maps
2. KMZ - for display in Google earth and Google maps (this is a compressed version of the above file format so it is smaller to download)
3. CSV - spreadsheet that can be used in many tools including Libre Office/Open Office or MS Excel

At present the following enhancements to software and hence to the maps themselves are planned (for further information and to look at the progress see the development roadmap at <http://projects.wallace.gen.nz/projects/nzrepeaters/roadmap>):

1. Adding links in as lines between the repeaters
2. Splitting the repeaters etc. by band when viewed in the larger map or using the KMZ or KML file
3. Adding links to the pop-up bubbles to access information in SMART if possible:
  - a. Licensee to the licensee in SMART
  - b. Licence number to the licence in SMART
  - c. Site Name to the site in SMART
4. Adding links to branch information on the NZART website
5. Automation of the downloading of updated data files from within the software rather than having to download a new release
6. Displaying links between repeaters
7. Filtering by name eg: to make a map just showing the national system

Rob ZL2WAL

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## Interesting Links From John ZL1GWE

With a rise in power-line networking uptake across the UK, GCHQ reported earlier this year that the technology is causing interference with its highly sensitive antennae.

<http://thenextweb.com/uk/2011/05/17/does-power-line-networking-pose-a-national-security-risk/>

GNU Radio is a free software development toolkit that provides the signal processing runtime and processing blocks to implement software radios using readily-available, low-cost external RF

hardware and commodity processors. It is widely used in hobbyist, academic and commercial environments to support wireless communications research as well as to implement real-world radio systems.

<http://gnuradio.org/redmine/wiki/gnuradio>

Amateur radio interferometry

<http://fringes.org/>

Radar (RAdio Detection And Ranging) is widely used in both commercial and military applications. Air traffic control, mapping of ground contours and automotive traffic enforcement are just a couple civilian applications. Radar is ubiquitous in military applications being used in aircraft, missiles, ships, tanks, helicopters, ground stations, and more.

[http://www.eetimes.com/design/programmable-logic/4216104/Radar-basics---Part-1?cid=NL\\_CommsDesign&Ecosystem=communications-design](http://www.eetimes.com/design/programmable-logic/4216104/Radar-basics---Part-1?cid=NL_CommsDesign&Ecosystem=communications-design)

It's all about spectrum Explosive growth in wireless data services is once again transforming an industry well-accustomed to change. The rapid growth in traffic of the 2000s, driven predominantly by voice subscriber additions, is now being followed by an even more dramatic increase in data traffic, as smart phone market penetration accelerates and a flourishing ecosystem of smartphone apps drives explosive growth in the amount of data consumed per subscriber.

[http://www.eetimes.com/design/microwave-rf-design/4215852/Self-adaptive-RF-digital-signal-processing-enables-wireless-network-spectral-efficiency?cid=NL\\_CommsDesign&Ecosystem=communications-design](http://www.eetimes.com/design/microwave-rf-design/4215852/Self-adaptive-RF-digital-signal-processing-enables-wireless-network-spectral-efficiency?cid=NL_CommsDesign&Ecosystem=communications-design)

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## Upcoming Events

1. UPPER HUTT NZART Conference 2011 04/06-June-2011  
<http://www.nzart.org.nz/activities/events/2010-upper-hutt-conf/>

## Contest News

### VHF/UHF/SHF Contest

VHF++ Hibernation Contest (1st SAT JUN 2nd if Conf) 11/12-JUN-2011

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**Please think of the environment before printing this e-mail**

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## Housekeeping

1. **Break-In-Closing Date Reminder:** Copy for the JULY/AUGUST issue of Break-In-closes on 10-JULY-2011
2. **Copy for Break-In:** Copy is welcome in most electronic formats but word.doc files are preferred. Photos and other graphics should be send as separate discrete files (\*.jpg preferred); not as embedded pix in the body of the text. Please ensure that suitable descriptive captions/legends are included with your copy.  
All received copy will be acknowledged to confirm receipt.  
Thank you for your cooperation.  
John Walker ZL3IB Editor.
3. **Break-In:** Early receipt of copy is much appreciated

4. **Break-In-AREC Column:** The close-of-copy date is the 03-JULY-2011 for articles for publication in the AREC COLUMN OF BREAK-IN. Photos, if available, to be on a separate floppy or CD (with captions), posted DIRECTLY TO US. Use Call Book address. All other material can go to e-mail:  
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***Next HQ-Infoline e-mailed on SUNDAY 05-JUNE-2011***

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<http://www.nzart.org.nz/join/e-mail-lists/join-infoline-list/>

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