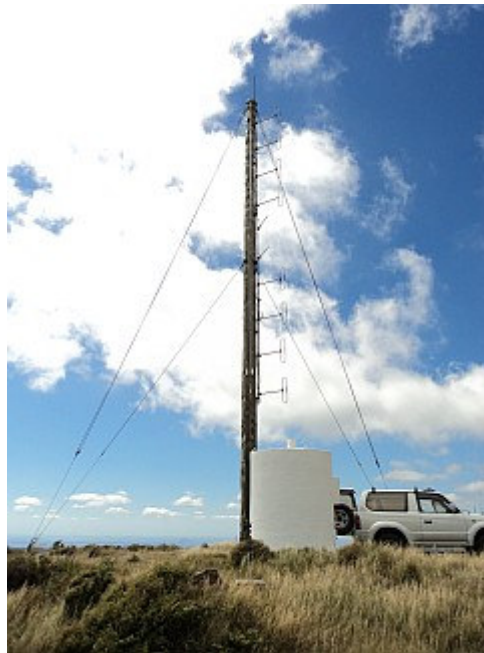


Ham Hum

June 2011



The official newsletter of
The Hamilton Amateur Radio Club (Inc.)
Branch 12 of NZART - ZL1UX
Active in Hamilton since 1923



Next General Meeting
15 June - 7:30pm at the clubrooms.

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From the Editor

The annual NZART Conference is happening again this Queens Birthday weekend. It will be happening down in Upper Hutt. Look out for the special Official Broadcast on the National System detailing happenings and decisions made.

Market Day is coming up again. Happening in mid August at the Waikato Table Tennis club rooms. A time to buy and sell, or just browse. Time to catch up with friends old and new. Or just an excuse to communicate without using RF.

The Jock White Memorial Field Days results are out. We did very well in the open class, coming 3rd behind Auckland (02) and Whangarei (28). A few more DX points would have been useful, however I do notice that our 40m CW was far better than the 1st place getter.....congrats to all.

As you can see from the cover photo, the 146.950 repeater has moved from Mt Te Aroha to Te Weraiti on the Kaimai's. Many thanks to the Waikato VHF Group (Br 81) for a very smooth transition. This is part of a longer term plan, which you can see from this [link](#). Please consider [joining](#) Br 81 to help support the continuation of these repeaters.

Next Committee Meetings - 1st June & 6th July

SB PROP ARL ARLP020 ARLP020 Propagation de K7RA

A decline in sunspot activity this week showed as a 23 point drop in average daily sunspot numbers, and nearly 9 point decline in average daily solar flux. These compare, of course, to the numbers for the previous reporting week, which always runs from Thursday through Wednesday.

But with this decline in activity there were three new sunspot groups on May 14, and then one new sunspot group each day following, through May 18. But on May 19, there was no new sunspot group, and the daily sunspot number declined from 65 on Wednesday to 36 on Thursday. Heightened geomagnetic activity occurred from May 15-17, with the planetary A index in the low double-digits.

The latest prediction from NOAA/USAF is for much lower solar flux than predicted on Wednesday, May 18. The forecast predicts solar flux readings of 84 and 82 on May 20-21, then 80 on May 22-26, jumping to 90 on May 27 and 110 on May 28-30. Predicted planetary A index is 7 on May 20-21, 5 on May 22-25, then 8, 22, 18, 15, 15 and 8 on May 26-31.

Geophysical Institute Prague predicts quiet conditions May 20-21, quiet to unsettled May 22, and quiet May 23-26.

On Wednesday, May 18 the solar flux was predicted at 92 on May 20-26, much higher than numbers forecast a day later and referenced above.

Last week's Propagation Forecast Bulletin ARLP019 mentioned that most sunspots lately appear in the Sun's northern hemisphere, but on May 19 they are all in the southern hemisphere. Go to <http://spaceweather.com/> and on the upper right check the archive for May 18. Note the two sunspot groups, 1214 and 1216, in the southern hemisphere. Now change to May 19, and note sunspot group 1218, also in the southern hemisphere. On May 20 it shows all sunspots only in the southern half.

Today the new June 2011 issue of WorldRadio Magazine is available online, for free. Go to <http://www.worldradiomagazine.com> to download the latest issue, and

check out Carl Luetzelschwab, K9LA's propagation column on pages 30-33. He gives an interesting treatise on solar flux and sunspot numbers.

The only mail this week was from K4FNC, and is not the usual type of question about propagation, but he asked, "Can you tell me when is the best time to make contact with the space station on 2 meters or the 440 frequencies?" Quite a bit of information on ARISS is on the ARRL web site at <http://www.arrl.org/amateur-radio-on-the-international-space-station>.

If you click on the "Frequently Asked Questions" link on the left side, this gives you a lot of the details, such as how to track the space station. The link to AMSAT at <http://www.amsat.org/amsat-new/tools> even gives a method for tracking that doesn't need your own tracking software. Click on Online Satellite Pass Predictions, select ISS, and enter FM05nb for the grid square for K4FNC, click Predict, and this gives the time for AOS (Acquisition of Signal) and LOS (Loss of Signal) for his location.

If you would like to make a comment or have a tip for our readers, email the author at, k7ra@arrl.net.

For more information concerning radio propagation, see the ARRL Technical Information Service web page at <http://arrl.org/propagation-of-rf-signals>. For an explanation of the numbers used in this bulletin, see <http://arrl.org/the-sun-the-earth-the-ionosphere>. An archive of past propagation bulletins is at <http://arrl.org/w1aw-bulletins-archive-propagation>. Find more good information and tutorials on propagation at <http://mysite.ncnetwork.net/k9la/index.html>.

Monthly propagation charts between four USA regions and twelve overseas locations are at <http://arrl.org/propagation>.

Instructions for starting or ending email distribution of ARRL bulletins are at <http://arrl.org/bulletins>.

Sunspot numbers for May 12 through 18 were 29, 29, 64, 54, 63, 57, and 65, with a mean of 51.6. 10.7 cm flux was 92.8, 91.5, 91.4, 94.5, 92.2, 91.5, and 90.6, with a mean of 92.1. Estimated planetary A indices were 3, 4, 4, 11, 12, 10, and 6,

with a mean of 7.1. Estimated mid-latitude A indices were 2, 3, 3, 9, 10, 8, and 4, with a mean of 5.6.

NZART QSL Bureau

The following QSL Bureau report was missed in the latest Break-In

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 ZL1-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

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://fiinges.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

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



Jock White Results 2011

An excellent result for all concerned. Coming third behind the big guns of Auckland and Whangarei shows how well we can really do.

2011 JOCK WHITE MEMORIAL FIELD DAY CONTEST RESULTS

Montgomery Cup - Northern Region

CALL	80 metres						40 metres						Tot Mult	Total Score	Pwr Out	BRANCH
	QSOs			Branches			QSOs			Branches						
	Ph	CW	DX	Ph	CW	DX	Ph	CW	DX	Ph	CW	DX				
1 ZL1AA	391	257	5	33	16	308	43	23	25	10	84	325668	100	02 Auckland		
2 ZL1AM	400	232	5	33	16	212	132	6	23	12	84	316344	100	28 Whangarei		
3 ZL1UX	316	148	2	29	13	187	94	6	25	12	79	221121	100	12 Hamilton		
4 ZL1TEC	247	29	1	31	10	168	32	6	25	10	76	123120	95	88 Tauranga Emergency		

Also congrats to TCG (ZL1TEC), where the editor spent some time, for doing so well.

Some comments from the Field Days organiser (ZL2TW):-

Thank you to everyone who participated in this year's field day.

We were a few field stations down this year due to the disaster in Christchurch on the Tuesday before Field Day.

Propagation on 40 was improved this year but 80 was down this year during the day.

There seems to be a definite trend toward increased activity on 40 compared to two or three years ago looking at the number of branch points available on 40.

There were few adverse comments this year with regard to operating standards and signal quality which was pleasing.

See you all next year on the 25th and 26th February



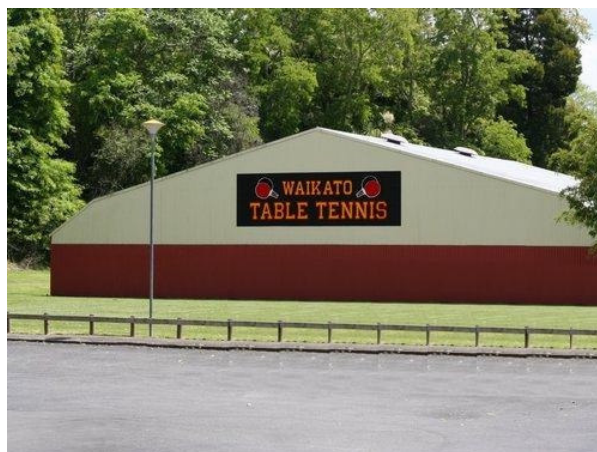
Hamilton Market Day

mid August 2011

Waikato Table Tennis Clubrooms

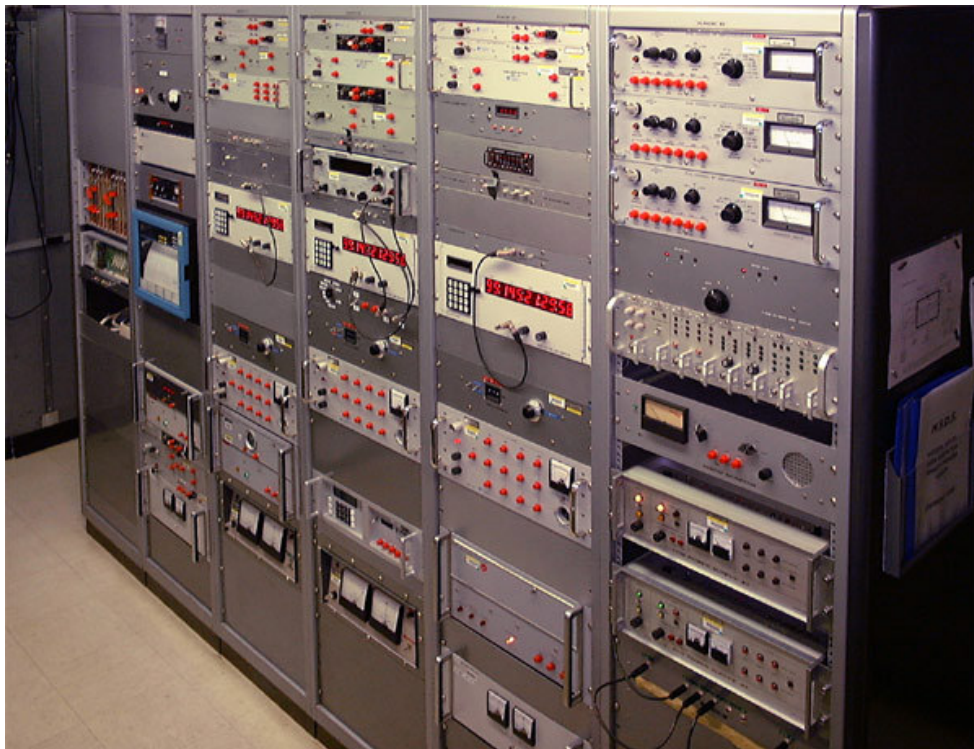
Edgecumbe St (off Ulster St)

Doors open 10am



WWV/WWVH to Drop Space Weather Reports

The Space Weather Prediction Center will discontinue its regular geophysical alert messages on WWV and WWVH as of this coming September 6, according to the *ARRL Letter*. These messages include solar flux readings, A and K indices and reports on current and predicted space weather storms. The reports, which currently air on WWV at 18 minutes past each hour and on WWVH at 45 minutes past, will continue to be posted on the SWPC's website. Comments and questions may be directed by e-mail to <swpc.wwv@noaa.gov>.



Time and Frequency Rack: Digital recorders, Multi-channel chart recorder, Clock A, Clock B; Clock C, & Error detection/auto-switching system at WWVH



There is only one
NEW ZEALAND ASSOCIATION
of
RADIO TRANSMITTERS.

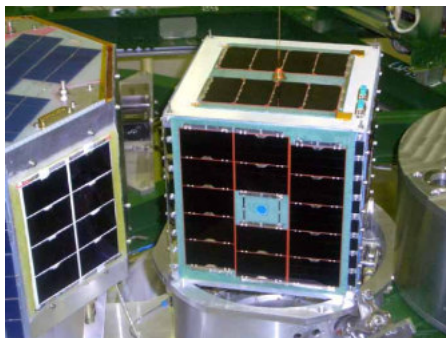
It serves you at
 local, national and international
 levels.

*It deserves our full support
 if we are to continue to have
 the frequencies and operating privileges
 we currently enjoy.*

**The Association
 is what you and I make it.**

Battery Issues on AO-51

It also appears that the batteries aboard the AO-51 satellite are failing. AMSAT officials report that the batteries are in very poor condition and that the satellite will not retain the upload of eclipse periods
 ting its solar panels.
 vice says it is uncer-
 the satellite will be
 operation.



flight software during
 when no sunlight is hit-
 The AMSAT News Ser-
 tain when, or whether,
 able to return to normal

Upcoming Happenings & Events

<i>Date</i>	<i>Happenings & Events</i>
4-5 June	NZART Conference (Upper Hutt)
5th June	NZART HQ InfoLine
5th June	NZART Official Broadcast (Conference)
6th June	HF Net, 3.575 MHz, 19:30
7th June	VHF Net, 146.525 MHz, 20:00
11-12 June	NZART Hibernation Contest
12th June	NZART HQ InfoLine (Conference Issue)
13th June	HF Net, 3.575 MHz, 19:30
14th June	VHF Net, 146.525 MHz, 20:00
15th June	Club General Meeting
19th June	NZART HQ InfoLine
20th June	HF Net, 3.575 MHz, 19:30
21st June	VHF Net, 146.525 MHz, 20:00
25th June	VK/trans-Tasman (160M)
26th June	NZART Official Broadcast
27th June	HF Net, 3.575 MHz, 19:30
28th June	VHF Net, 146.525 MHz, 20:00
29th June	Branch AREC Meeting (AREC)

2-3 July—NZART Memorial Contest
3rd July—NZART HQ InfoLine
10th July—Break-In copy due
17th July—NZART HQ InfoLine
20th July—Hamilton General Meeting
31st July—NZART Official Broadcast
Mid August—Hamilton Market Day
6-7 August—NZART Brass Monkey Contest
7th August—NZART HQ Infoline
13th August—NZART Boat Anchor Sprint
21st August—NZART HQ Infoline
28th August—NZART Official Broadcast
31st August—Branch AREC Meeting (AREC)
5th September—NZART Doug Gorman Freq Measuring Contest
1-2 October—NZART Microwave Contest
1st October—Oceania All Bands SSB Contest
8th October—Oceania All Bands CW Contest
5th November—Papakura Sprints (Phone)
6th November—NZART Straight Key Night
12th November—Papakura Sprints (CW)
3-4 December—NZART VHF Field Day Contest
4-5 February 2012—NZART DX Weekend Contest
25-26 February 2012—Jock White Memorial Field Days
7-8 April 2012—NZART Low Band Contest

AREC Event Operators Page

WRC Rally NZ/ Possum Bourne Rally	7/8 May 2011	Organiser : ZL1DK
Please contact the Section Leader with your team information and he will pass it on to Auckland.		

Rollo's Marine Bridge to Bridge Water-Ski Race	November 2011	Organiser : ZL1UPJ
<u>Position</u>	<u>Saturday Operator</u>	<u>Sunday Operator</u>
Base		
Start Boat		
Rescue Boat		
X-Band		
A.	Ngaruawahia/Taupiri	
	Start/Finish at Point	
B.	Ngaruawahia Ramp	
C.	Ngaruawahia W/S	
D.	Horotiu	
E.	Pukete Ramp	
F.	Days Park	
G.	Fairfield Bridge	
H.		
I.		
J.		
K.		
L.		

Kairangi Hill Climb	Sunday September 2011		Organiser : ZL1IC
<u>Position</u>	<u>Operator</u>		
1.			
2.			
3.			
4.			
5.			
School C ycling	July 2011		Organiser : ZL1IC
<u>Position</u>	<u>Operator</u>	<u>Position</u>	<u>Operator</u>
1.		5.	
2.		6.	
3.		7.	
4.		8.	
Colville Connection	10th March 2012		Organiser : ZL1PK
<u>Position</u>	<u>Primary Operator</u>	<u>Secondary Operator</u>	<u>Other Operator</u>
Base			
Stony Bay			
Fletcher Bay			
Hill 1			
Hill 2			
Fantail Bay			
Stand B y			

For Details about and to help w ith these events, contact the person indicated as the organiser for the event. See Page 1 for their contact information.

Club Information



Contacts :-

Business Meeting: 1930 First Wednesday of each month
88 Seddon Road, Hamilton

General Meeting: 1930 Third Wednesday of each month (except Jan)
88 Seddon Road, Hamilton

Homepage: <http://z1ux.tripod.com>
eMail: branch.12@nzart.org.nz

HF Net: 3.575MHz LSB 1930 Mondays
VHF Net: 146.525MHz simplex 2000 Tuesdays

2m Repeater: 145.325MHz -600kHz split
STSP 146.675MHz -600kHz split
Repeaters: 438.725MHz -5 MHz split
ATV Repeater: 615.250 Ch39 (off air)

Cover Photo: New 146.950 repeater location at Te Weraiti on the Kaimai's. With thanks to the Waikato VHF Group, and ZL1TAJ for the photo.

Sender	Hamilton Amateur Radio Club (Inc) PO Box 606 Hamilton 3240
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