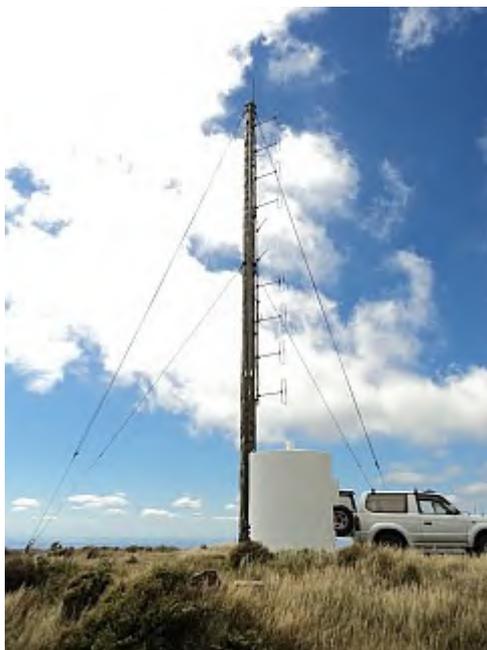


Ham Hum

April 2012



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



Next General Meeting
Annual Club Dinner : 18th April at 6:30pm
“The Cook”

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From the Editor

It's NZ V8 time again, and having a meeting at the club rooms, while not impossible, is really not recommended. So, instead, we will be having our Annual Club Dinner instead.

Club Dinner

6:30pm on 18th April

"The Cook" on Cook St, Hamilton East

Menu available at <http://www.thecook.net.nz/index.asp?PageID=2145879576>

RSVP to Phil at 07-847-1320 or z1pk@xtra.co.nz if you plan to attend.
He has got the names from the whiteboard at the last meeting already.

May I encourage those that enjoy using the repeaters and beacons provided by the Waikato VHF Group (such as '695 and '5675) to consider joining the group or sponsoring one of their repeater licenses. More info at <http://www.z1is.info/>

**Next Committee Meetings -
4th April & 2 May**

SB PROP ARL ARLP013

ARLP013 Propagation de K7RA

Eight new sunspot groups appeared this week, but the average daily sunspot number declined four points to 71.1. Average daily solar flux rose by less than two points to 103.7.

On Thursday, March 22 three new sunspot groups appeared, numbered 1441, 1442 and 1443. Two more groups appeared on Friday - 1444 and 1445 - and 1442 vanished from view. On March 24 group 1441 disappeared, and on March 25 new group 1446 emerged. On March 26, groups 1440, 1443 and 1446 faded away, but 1442 - not seen since four days earlier - re-emerged. On March 27 group 1444 disappeared and 1447 appeared, and on March 28 new group 1448 arrived.

For the short term, planetary A index is predicted to be 5 on March 30 through April 9, then 12 on April 10, and back to 5 on April 11-12, then 15 and 10 on April 13-14, followed by 5 on April 15-23. A similar pattern appears way out in May, when planetary A index is predicted at 12 on May 7, then 15 again on May 10. It's a good guess that this is probably based on the rotation of the Sun relative to Earth, predicting that an active magnetic area could appear again 27-28 days later.

The solar flux prediction shows flux values of 120, 130 and 135 on March 30 through April 1, then 140 on April 2-6. On April 7-11 the predicted solar flux is 130, 125, 120, 110 and 105. On April 12-15 the predicted solar flux is 100. It then goes to 105 and 110 on April 16-17, and back to 100 on April 18-21, then 105 on April 22-23, 110 on April 24-25, 120, 125, and 130 on April 26-28, and 135 on April 29-30. Another peak at 140 is predicted for May 1-3.

"Q-up Now" has a fascinating new set of real-time propagation tools at <http://www.q-upnow.com/>, developed by a team associated with the Utah State University Space Weather Center (<http://spaceweather.usu.edu/>) in Logan, Utah.

They use a real-time model of the ionosphere called GAIM (Global Assimilation of Ionospheric Measurements) which is updated every 15 minutes with 10,000 global TEC (Total Electron Content) measurements to simulate the F layers. Then they use the ABBYNormal Model (see <http://gcmd.nasa.gov/records/abbyNormal.html>) to model the D and E layers, and the two models are combined to give a complete representation of the global ionosphere.

On the first page you will see NVIS maps for Near Vertical Incidence Skywave propagation. These are not quite ready yet, and currently the maps shown are several days old.

Most interesting is the HF Availability (<http://www.q-upnow.com/hf-availability>) area

in which you can model real-time propagation for the frequency of your choice between any two points and beyond out to the antipodes. You can use latitude/longitude coordinates, but I found it easiest to just copy grid square data from call-sign servers such as <http://www.qrz.com>.

This tool also works on 160 meters, which the propagation prediction programs that many of us use do not. Of course the major difference with this tool is that it tells you what the propagation should be over any path right now, but they are planning on offering a predictive tool.

Have fun!

Torsten Schwarz, XE2/K5TOR wrote:

"On Sunday 03/25/2012 at 9:00 local time (1500 UTC) I was surprised that I was hearing a US FM Radio station on my radio (103.1 MHz) as clean as if it were a local station. At that time I was driving from my home QTH (Saltillo, MX grid DL95ml) to work and all that time the signal was very strong. I also managed to transmit an APRS Packet with no problem (Saltillo has no IGate or digi) you can look it up on <http://www.aprs.fi> (Call: K5TOR-9). I have no idea what propagation that was as it was at least 30min and there was hardly any fading."

Using the <http://radio-locator.com/> site I searched for stations on 103.1 MHz in Texas. A likely candidate was KPAS FM, and the distance to Torsten's grid square from the transmitter site was 530 miles. Perhaps some solid E layer skip was helping it along that day.

Pete Heins, N6ZE of Thousand Oaks, California wrote: "After various parts of the US experienced long haul 6 meter DX to South America and the Pacific on Wednesday and Thursday, 28/29 March 2012, I worked FK8CP at 0342 UTC, on 29 March on CW: 51N/41N. I did not ID any other DX stations, but heard a few other SoCal stations make a few contacts. My rig is 100 watts with a 5 element Yagi up only 14 feet."

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://myplace.frontier.com/~k9la/>.

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

Sunspot numbers for March 15 through 21 were 85, 104, 89, 54, 58, 74, and 62, with a mean of 75.1. 10.7 cm flux was 110.6, 98.5, 102.4, 102, 101.8, 99.6, and 99.9, with a mean of 102.1. Estimated planetary A indices were 30, 20, 20, 10, 10, 4, and 4, with a mean of 14. Estimated mid-latitude A indices were 24, 17, 15, 11, 8, 4, and 4, with a mean of 11.9.

The 2012 Ross Hull results have now been finalised.

In Section A, the top two scores were gained by Bob McQuarrie ZL3TY and Stephen Hayman ZL1TPH - the first time the Ross Hull Contest has been won by a station outside Australia.

Coming third as the top scoring VK station was Ted Thrift VK2ARA.

Next in line was Barrie Burns VK6ADI.

In the digital section, top score went to Dave VK2JDS with a log of 1296 MHz EME contacts, followed by one station from each of VK1, 4, 6, 7 and ZL.

Full details are available on the contest web page.

<http://www.wia.org.au/members/contests/rosshull/>

-John VK3KM

Jock White Results

The 2012 Jock-White results are out. We came in 3rd place again this year in the Open Class. Congratulations to all involved.

2012 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	Ph	CW	DX	Ph	CW				
1	ZL1AA	336	209		32	16	339	163	13	23	12	83	333245	100	02 Auckland
2	ZL1AM	400	200	1	33	17	228	164		22	12	84	311976	100	28 Northland
3	ZL1UX	291	107		30	16	341	19	8	23	8	77	200662	100	12 Hamilton
4	ZL1ZLD	350	68		32	14	55			19		65	101075	100	86 Suburban RC

-NZART

USB DVB-T stick as SDR-Radio

I came across some interesting details involving using a digital terrestrial TV USB stick (USB DVB-T) to create a software defined radio (SDR-radio).

In particular, the RealTek RTL2832U chipset which supports FM, DAB, DAB+ and DVB-T (MPEG-2, MPEG-4, AVC / H.264), has an IF of 4.57MHz or 36.167MHz or none at all (via a 28.8MHz crystal).

http://www.linuxtv.org/wiki/index.php/RealTek_RTL2832U



Freq response for Elonics E4000 device is 64MHz to 1700MHz. No good for HF, or even SSB, but a very cheap way to get into SDR and to learn what it has to offer.

-ZL1DGK

The return of active sunspot AR1429

Sunspot AR1429, the source of many strong flares and geomagnetic storms earlier this month, is about to re-appear following a two-week trip around the backside of the sun.

Although the sunspot has probably decayed since its heyday, there are signs that it might still be a potent source of solar activity.

Check <http://spaceweather.com> for images and updates as AR1429 rotates into view during the next ~24 hours.

-Southgatearc

Operators wanted for Campbell Island DXpedition

The **Hellenic Amateur Radio of Association of Australia** (HARAOA) is organising a DXpedition to ZL9 Campbell Island (OC-037) New Zealand between November 17th and November 30th 2012.

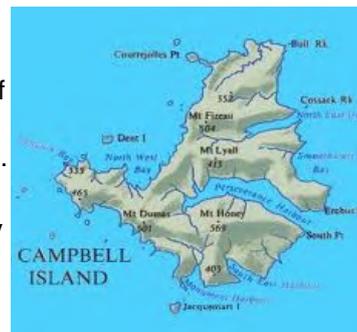
ZL9 Campbell Island NZ is Number 15 on the current DXCC most wanted list.

The ZL9HR DXpedition team will consist of a total of nine (9) team members including Tommy VK2IR (Team Leader) and John VK3YP (Team Co-Leader).

We are inviting any experienced operators who would like to attend this DXpedition to email Tommy vk2ir@vk2ir.com for more information.

Website: www.zl9hr.com

73'



John VK3YP

World Amateur Radio Day - April 18

On April 18, 2012, radio amateurs will be celebrating **World Amateur Radio Day**, on the 87th Anniversary of the founding of the International Amateur Radio Union, IARU.

This year's theme for the World Amateur Radio Day is "Amateur Radio Satellites: Celebrating 50 Years in Space" in remembrance the launching of OSCAR 1 on December 12, 1961 and the launch of OSCAR 2 on June 2, 1962.

For this reason there will be several special event stations from IARU's Member Societies active on different dates during April:

6H6IARU by the Federación Mexicana de Radio Experimentadores who has commissioned this operation to Grupo DXXE. This station will be active from 13 to 18 April in all modes and bands. QSL via LoTW and N7RO, direct or bureau. Daily logs uploads will be available in ClubLog.

3G87IARU by the Radio Club de Chile. This station will be active throughout the month of April. QSL via CE3AA.

LZ1WARD by the Bulgarian Federation of Radio Amateurs also will be active throughout the month of April. QSL via bureau.

EL2RL by the Liberia Radio Amateur Association will be active on April 18, 2011 on 10, 15, 17 and 20 meters. Direct QSL to EL2BA.

HB9WARD by Union Schweizerischer Kurzwellen-Amateure to be active also on April 18, 2011. This first time callsign will be on the air by HB9JOE and a group of radio amateurs from Bern. QSL via HB9JOE.

HF87WARD by members of the SP-CFF (SP0CFF). This station will be active from April, 17 to 30. QSL via eQSL.cc and WFF LogSerach.

For those who want to send card direct, please send SASE to: Polish Club Flora & Fauna, Suchacz, Wielmozy 5b, 82-340 Tolknicko, Poland. They will even have an award for this operation.

IARU Region 2

<http://www.iaru-r2.org/>

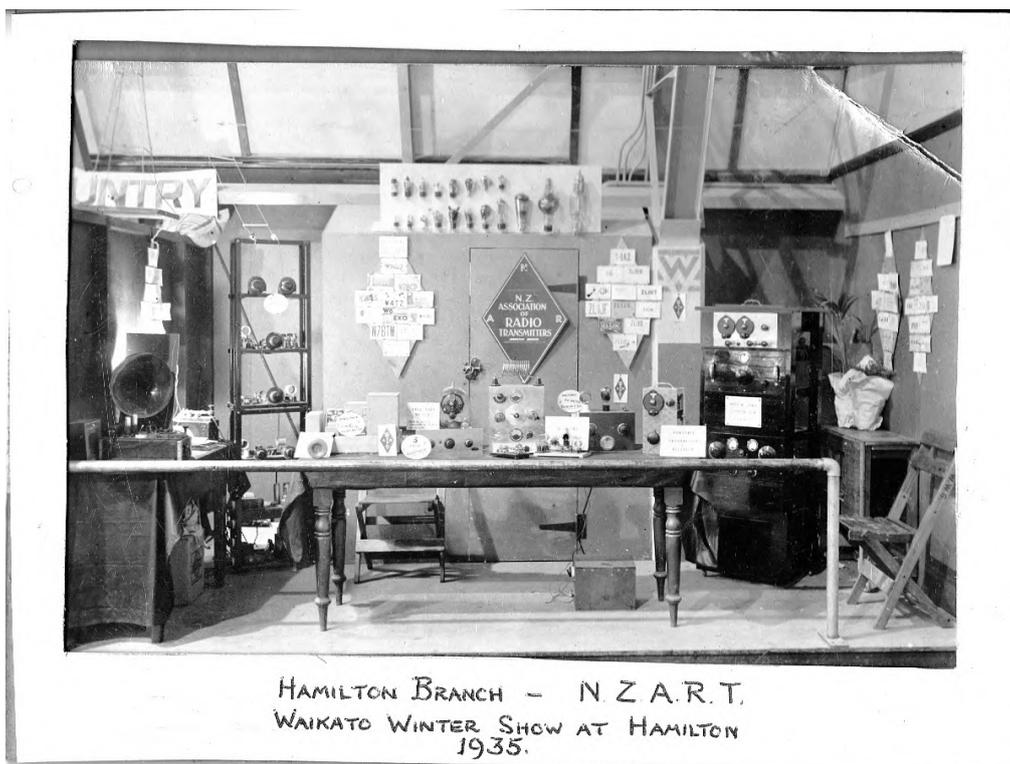
Digital Amateur Radio is advancing again.

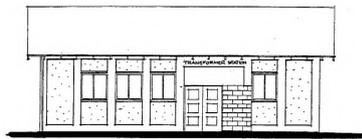
ICOM brought us D-STAR in 2004 using GMSK modulation and an expensive proprietary codec. Now Yaesu are bringing us C4FM modulation as used in the professional LMR market place.

Apparently a repeater using this Yaesu C4FM technology already exists in NZ down in Wellington on 438.0125 operating under the ZL2R callsign.

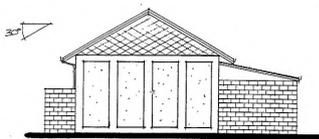
<http://www.yaesu.com/downloadFile.cfm?FileID=7146&FileCatID=151&FileName=DigitalCommunicationsGuide%5FE%5B1%5D.pdf&FileContentType=application/pdf>

<http://dmr-marc.net>

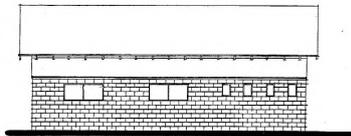




ELEVATION A



ELEVATION D



ELEVATION C



ELEVATION B

N.Z. HISTORIC PLACES TRUST
TRANSFORMER STATION
 DARREN RIX — MARCH '07 18100

HAMILTON BOROUGH COUNCIL
 HCC Heritage Items
 Heritage ID: H87 Ranking: C
 Geographic Significance: 3
 Heritage characteristics: a & c
 Planning map: 11

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.**

Upcoming Happenings & Events

<i>Date</i>	<i>Happenings & Events</i>
2nd April	HF Net, 3.575 MHz, 19:30
3rd April	VHF Net, 146.525 MHz, 20:00
6th April	NZART HQ Infoline
9th April	HF Net, 3.575 MHz, 19:30
10th April	VHF Net, 146.525 MHz, 20:00
14-15 April	NZART Low Band Contest
16th April	HF Net, 3.575 MHz, 19:30
17th April	VHF Net, 146.525 MHz, 20:00
18th April	Annual Club Dinner
20th April	NZART HQ Infoline
23rd April	HF Net, 3.575 MHz, 19:30
24th April	VHF Net, 146.525 MHz, 20:00
29th April	NZART Official Broadcast
30th April	HF Net, 3.575 MHz, 19:30

4th May—NZART HQ Infoline
10th May—Break-In copy due
15th May—Hamilton Club General Meeting
18th May—NZART HQ Infoline
19-20 May—NZART Sangster Shield
27th May—NZART Official Broadcast
30th May—AREC Section meeting
1st June—NZART HQ Infoline
1-4 June—NZART Conference—Nelson
2nd June—NZART Hibernation Contest
3rd June—NZART HQ Infoline
3rd June—NZART Official Broadcast
15th June—NZART HQ Infoline
21-24 June—Rally New Zealand NZRC/WRC (AREC)
24th June—NZART Official Broadcast
7-8 July—NZART Memorial Contest
28th July—Waitakere Sprint (Phone)
4th August—Waitakere Sprint (CW)
4th August—NZART Brass Monkey Contest
August—Hamilton Market Day
6th October—NZART Microwave Contest
31st October—AREC Section meeting
4th November—NZART Straight Key Night
30th November—AREC Section meeting
1st December—NZART VHF+ Field Day
Easter 2013—NZART Technology Conference - Auckland

AREC Event Operators Page

WRC Rally NZ/ Possum Bourne Rally	21-24 June 2012	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	December 2012	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 2012		Organiser : ZL1IC
<u>Position</u>	<u>Operator</u>		
1.			
2.			
3.			
4.			
5.			
School C ycling	July 2012		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: Te Weraiti site courtesy of ZL1IS and ZL1TAJ.

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