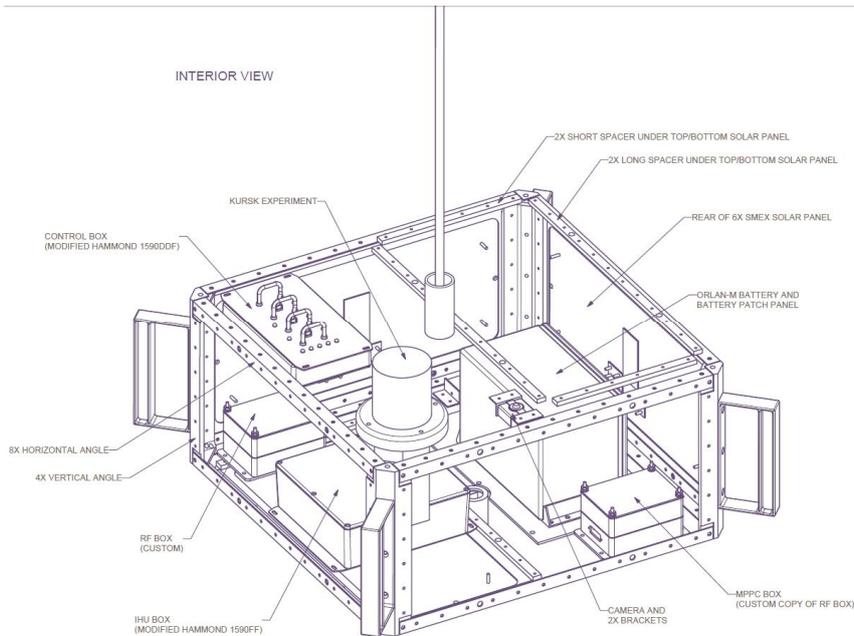


# Ham Hum

October 2009



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



## Next General Meeting

**21 October : TBA Listen to Club Nets for further information.**

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## **From the Committee and/or Editor**

The ZL1UX BBS system has been moved from the Operations Room to the Communications Room as part of the bigger project to better arrange the various aerials and feedlines in our clubrooms. A group of keen volunteers under the watchful eye of ZL1PK (our BBS sysop) worked hard to move the 7' cabinet, radios, computers and various other essential bits to their new location. Some temporary aerials were installed to give ZL1PK time to refurbish some old ones that, while working fine, appear to need cosmetic maintenance work.

About a half dozen Hams spent a recent Sunday at Kairangi with the Waikato Veteran & Vintage Car Club (WVCC). A fun event with some rain, some sunshine and a huge cloud of white smoke courtesy of one gentleman who runs a diesel pump into his exhaust. They put on an excellent BBQ lunch for us which was enjoyed by all.

Feel free to join in the weekly club nets. Monday at 1930 on 80m (3.575 LSB +/- QRM) and Tuesday at 2030 on 2m (146.525 FM simplex)

## **Next Committee Meetings - 7th October & 4th November**

## **SB PROP ARL ARLP039**

### **ARLP039 Propagation de K7RA**

This week we had a double-dose of good news. Right at the time of the Autumnal Equinox, on Tuesday, September 22, sunspot 1026, a new Cycle 24 sunspot, came into view over the Sun's eastern horizon. We watched this emerge a week ago on the Sun's far side via the STEREO project (see <http://stereo.gsfc.nasa.gov/>).

STEREO is a fantastic tool, because it gives us all a live view of nearly the whole Sun, and it displays very recent images. It turns out that images from each craft--the ahead (leading earth in its orbit) and the behind (trailing earth in its orbit) satellite--are updated approximately every 15 minutes! No more guessing about activity on the other side of the Sun, because we can see it live in animated form based on real time data.

On that animated Sun display you can see there are longitude lines every 30 degrees. Since there are twelve of them, and a rotation of the Sun takes approximately 27.5 days (it varies by latitude), then on average it takes about .0764 days (1 hour, 50 minutes) for the Sun's rotation to progress one degree longitude. Therefore, when we saw the sunspot at -120 degrees longitude, we could estimate that it would take about 2.2917 days (2 days and 7 hours) for the spot to reach the Sun's eastern horizon (at -90 degrees) and first become visible.

On Monday the daily sunspot number was 11, then on Tuesday and Wednesday a second Cycle 24 spot (number 1027) emerged in the Sun's Northern Hemisphere. Tuesday's daily sunspot number rose to 26, then on Wednesday it was 31 as the area of the spots grew. On Thursday the sunspot number was 32. From Monday to Tuesday the total sunspot area increased by seven times, then on Wednesday it doubled, then on Thursday rose about 29% over Wednesday's area. You can see the sunspot numbers, solar flux and sunspot area for each day at, <http://www.swpc.noaa.gov/ftplib/indices/DSD.txt>.

Checking <http://www.swpc.noaa.gov/ftplib/indices/DGD.txt> shows us that geomagnetic indices are extremely quiet and stable, so I suppose there are three pieces of great propagation news this week. Both sunspots have moved into their maximum geo-effective position (around zero degrees longitude, in the center of the solar

disc as viewed from Earth), led by sunspot 1027.

The current prediction from NOAA/USAF is for continued quiet conditions today with a planetary A index of 5, then on Saturday some unsettled conditions and a planetary A index of 12. It drops to 8 on Sunday, then back to 5 for the foreseeable future. Solar flux is expected to continue at about the same level through the first few days of October.

Geophysical Institute Prague has a similar prediction for geomagnetic values, quiet to unsettled September 25, unsettled September 26, quiet to unsettled September 27, and quiet conditions September 28 through October 1.

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## **Old Amateur Satellites**

Scientific American just put out a brief slide show about old satellites that are still operational and amongst them was AMSAT OSCAR 7. AO-7 was launched on 15 Nov 1974 from Vandenberg AFB, CA on board a Delta rocket. While the satellite was non-operational from 1981 to 2002 due to battery failure, it is currently operational whenever the solar panels are in direct sunlight. Listen for its CW beacon on 145.972.

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## **SB SPACE ARL ARLS007 ARLS007 South African Amateur Radio Payload Reaches Orbit**

After several delays, South Africa's SumbandilaSat satellite finally blasted to orbit aboard a Soyuz rocket from the Baikonur Cosmodrome in Kazakhstan on September 16. The main payload is a multi-spectral imager, but the satellite also carries an Amateur Radio component consisting of a 2 meter/70 cm FM repeater.

After SumbandilaSat is fully commissioned, the repeater will be activated with an uplink at 145.880 MHz and a downlink at 435.350 MHz; there will also be a voice beacon at 435.300 MHz. The transponder mode will be controlled by a CTCSS tone on the uplink frequency. The CTCSS tone frequencies have yet to be announced.

SumbandilaSat was sponsored by the Department of Science and Technology and was built at SunSpace in cooperation with the Stellenbosch University.

In addition to the SA-AMSAT amateur module, the satellite carries Stellenbosch University's radiation experiment and software defined radio (SDR) project, an experiment from Nelson Mandela Metropolitan University and a VLF radio module from the University of KwaZulu-Natal.



## **Wanted to Purchase**

A wireless modem, any make, so long as it works to the 802.11b protocol.  
Must be fully operational.

Computer Memory  
256 or 512 MB SDRAM PC133 168pin

Maybe somebody has something that is surplus to requirements.

Contact 7-843-0326 or [zl1gwp@nzart.org.nz](mailto:zl1gwp@nzart.org.nz)

-Gavin, ZL1GWP

## My Computer Problem

I was having trouble with my computer. So I called Richard, the 11 year old next door whose bedroom looks like Mission Control, and asked him to come over.

Richard clicked a couple of buttons and solved the problem.

As he was walking away, I called after him, 'So, what was wrong?'

He replied, 'It was an ID ten T error.'

I didn't want to appear stupid, but nonetheless inquired, 'An, ID Ten T error? What's that? In case I need to fix it again.'

Richard grinned. 'Haven't you ever heard of an ID ten T error before?'

No,' I replied.

'Write it down,' he said, 'and I think you'll figure it out.'

So I wrote down: I D 1 0 T

I used to like the little prick.



## Free Yagi antenna designs

If you enjoy constructing your own homebrew antennas, especially Yagi beam antennas, then read on.

Derek Hilleard, G4CQM - a professional antenna designer with more than 15 years experience - has now published, free of charge, a collection of homebrew/diy vhf, uhf and shf yagi designs for fellow radio amateurs to build for themselves.

You'll find a range of designs for Yagi antennas covering 50MHz, 144MHz, 432MHz and 1296MHz (the 6m, 2m, 70cm and 23cm bands).

You can find Derek's website at:

<http://myweb.tiscali.co.uk/g4cqm/>

-Southgate

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## NZART AGM and Conference – 2010

The combined Auckland Branches of NZART invite NZART members to Auckland for the AGM and Conference, Queens Birthday Weekend, 5th - 7th June, 2010. It is to be held at the Alexandra Park Raceway, Greenlane Road West, Epsom, Auckland.

See <http://www.nzartconference.cjb.net/nzartconference/index.html>

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## SumbandilaSat making progress

SA Amsat reports that the ground control station is making good progress in checking out the various systems on the satellite.

Radio Amateurs will still have to wait some time before the amateur payload will be activated.

Paterson AFB in USA informed the SunSpace team that they had incorrectly la-

belled SumbandilaSat as Fregat-IRIS. They are part of the radar tracking network responsible for uniquely identifying over 20 000 objects in Earth orbit!

The team has up to Thursday last week been tracking the Fregat-Iris (35 867) instead of SumbandilaSat (35 870).

After correcting the TLE information, communication with the satellite is more consistent and reliable which should speed up the activation process.

The elements and up to date information is regularly posted on [www.amsatsa.org.za](http://www.amsatsa.org.za).



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## November general meeting

Hamilton Astronomical Society on Brymer Rd, use Hamilton Zoo carpark for parking. If weather is clear there will be an opportunity to use the societies 24" Classical Cassegrain telescope. Other equipment will be on display including their radio telescope facilities.

<http://www.has.org.nz/>

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## Annual Club BBQ

The Annual Club BBQ will be held in the first half of December. Either Saturday the 5th or 12th at the clubrooms. Keep watch for more details closer to the event.

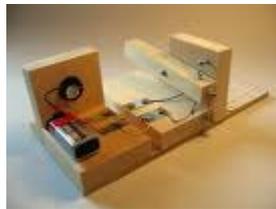
## Upcoming Happenings & Events

<i>Date</i>	<i>Happenings &amp; Events</i>
<b>3rd October</b>	<b>Manawatu Table Sale</b>
<b>3-4 October</b>	<b>Microwave Contest</b>
<b>3-4 October</b>	<b>Oceania Contest (Phone)</b>
<b>4th October</b>	<b>NZART HQ Info-Line</b>
5th October	HF Net, 3.575 MHz, 19:30
6th October	VHF Net, 146.525 MHz, 20:00
<b>10th October</b>	<b>Western Suburbs Junk Sale</b>
<b>10-11 October</b>	<b>Oceania Contest (CW)</b>
<b>11-17 October</b>	<b>"GET READY GET THRU" Disaster Awareness Week</b>
<b>12-16 October</b>	<b>14th IARU R3 Conference (Christchurch)</b>
12th October	HF Net, 3.575 MHz, 19:30
13th October	VHF Net, 146.525 MHz, 20:00
<b>17-18 October</b>	<b>JOTA/JOTI</b>
<b>17-19 October</b>	<b>Admin Council of IARU (Christchurch)</b>
<b>18th October</b>	<b>NZART HQ Info-Line</b>
19th October	HF Net, 3.575 MHz, 19:30
20th October	VHF Net, 146.525 MHz, 20:00
<b>25th October</b>	<b>NZART Official Broadcast</b>
26th October	HF Net, 3.575 MHz, 19:30
27th October	VHF Net, 146.525 MHz, 20:00
<b>31st Oct-1st Nov</b>	<b>Bridge to Bridge (AREC)</b>



**1st November—Straight Key Night**  
**8th November—NZART HQ Info-Line**  
**10th November—Break-In copy due**  
**14th November—Boat Anchor Sprint**  
**21st November—NI Secondary Schools Cycle Championship (AREC)**  
**22nd November—NZART HQ Info-Line**  
**29th November—NZART Official Broadcast**  
**??th December—Club BBQ**  
**5-6 December—VHF+ Field Day Contest**  
**6th December—NZART HQ Info-Line**  
**20th December—NZART HQ Info-Line**  
**20th December—NZART Official Broadcast**  
**March 2010—VHF mini-convention**  
**6-9 May 2010—WRC Rally New Zealand**  
**5-7 June 2010—NZART Conference (Auckland)**  
**21-22 August 2010—Lighthouse Weekend—ILLW**  
**22-25 April 2011—VHF Convention (Wellington)**  
**4-5 June 2011—NZART Conference (Upper Hutt)**

For more information on any of the above please contact myself or any committee member.





## AREC Event Operators Page

<b>Possum Bourne Rally</b>	<b>Saturday 6-9 May 2010</b>	<b>Organiser : ZL1DK</b>
Please contact the <a href="#">Section Leader</a> with your team information and he will pass it on to Auckland.		

<b>Rollo's Marine Bridge to Bridge Water-Ski Race</b>	<b>Saturday 31st October and Sunday 1st November 2009</b>	<b>Organiser : ZL1UPJ</b>
<b><u>Position</u></b>	<b><u>Saturday Operator</u></b>	<b><u>Sunday Operator</u></b>
<b>Base</b>	ZL1PK, ZL1GWP & ZL4QJ	ZL1PK, ZL1GWP & ZL4QJ
<b>Start Boat</b>	ZL1DK	ZL1DK
<b>Rescue Boat</b>		
<b>X-Band</b>		
<b>A.</b>	Ngaruawahia/Taupiri	
	Start/Finish at Point	ZL1IC
	ZL1IC	ZL1IC
<b>B.</b>	Ngaruawahia Ramp	
	ZL1LD	ZL1LD
<b>C.</b>	Ngaruawahia W/S	
<b>D.</b>	Horotiu	
<b>E.</b>	Pukete Ramp	
<b>F.</b>	Days Park	ZL2MGS
	ZL2MGS	ZL2MGS
<b>G.</b>	Fairfield Bridge	
	ZL1TCE	ZL1TCE
<b>H.</b>	Malcolm St	ZL1DGK
<b>I.</b>	Narows	
<b>J.</b>	Field Days	
<b>K.</b>	Between Pipe and F/Days	
<b>L.</b>	High Level Bridge	

<b>Kairangi Hill Climb</b>	<b>Sunday September 2010</b>		<b>Organiser : ZL1IC</b>
<u>Position</u>	<u>Operator</u>		
1.			
2.			
3.			
4.			
5.			
<b>School Cycling</b>	<b>Saturday 21st November 2009</b>		<b>Organiser : ZL1IC</b>
<u>Position</u>	<u>Operator</u>	<u>Position</u>	<u>Operator</u>
1.		5.	
2.		6.	
3.		7.	
4.		8.	
<b>Colville Connection</b>	<b>Saturday 13th March 2010</b>		<b>Organiser :</b>
<u>Position</u>	<u>Primary Operator</u>	<u>Secondary Operator</u>	<u>Other Operator</u>
<b>Base</b>	ZL1PK	ZL1DGK	ZL1LD
<b>Stony Bay</b>	ZL1TNO???	Sandy???	
<b>Fletcher Bay</b>			
<b>Hill 1</b>	ZL1IC		
<b>Hill 2</b>	ZL1TCE		
<b>Fantail Bay</b>	ZL1UPJ	Arthur	
<b>Stand By</b>			

For Details about and to help with 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://z11ux.tripod.com>  
**eMail:** [branch.12@nzart.org.nz](mailto: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: Interior of ARISSAT-1 (nee SuitSat-2)*

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