

# Ham Hum

September 2009



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



**Next General Meeting  
16th September**

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## From the Committee and/or Editor

The Possum Bourne Memorial Rally went well for all concerned. Well, apart from some cars that didn't seem to survive the distance. The selection of our clubrooms to house the HF equipment, attached to the club HF dipole, went very well. Other equipment attached to our club UHF and VHF aerials worked without any problems as well. Congratulations to all concerned. *{Picture by ZL1AMW}*



eDay is happening on 12th September. An excellent opportunity to recycle electronic waste via the drop-off point at Habitat for Humanity at 29 Bryant Rd, Te Rapa from 9am to 3pm. See <http://www.eday.org.nz/> for more information.

Our annual Hamilton Market Day was another success attracting visitors and vendors from Wellington to Whangarei. Everyone enjoyed themselves and had a good time. With ongoing renovations and construction at the Event Centre things will look a little different in coming years but one thing is certain, our Market Day will continue to be one of the main events in the amateur radio calendar.



## Next Committee Meetings - 2nd September & 7th October

## **SB PROP ARL ARLP036**

### **ARLP036 Propagation de K7RA**

This week we saw another one of those fast-disappearing sunspots. It lasted just two days, over the last day of August and the first of September. No other sunspots were observed during the month of August.

The monthly average of the daily sunspot number, January through August 2009, is 2.8, 2.5, 0.8, 1.3, 4, 6.6, 5.1 and 0.4.

The three-month moving averages of daily sunspot numbers for October 2008 through July 2009 were 4.5, 4.4, 3.6, 2.2, 2, 1.5, 2, 4.2, 5.2 and 4. This takes into account all the daily sunspot numbers for September 2008 through August 2009, and those numbers are for the center months of each of those three month moving average periods.

The latest figure, for July 2009, is an arithmetic average of all daily sunspot numbers for June through August. The previous figure, for June, is an average of daily sunspot numbers for May through July. In other words, sum all the daily sunspot numbers from May 1 through July 31, which equals 478. Divide by 92, which is the number of days in those three months, and it equals approximately 5.196, or 5.2 rounded off.

For June and July we saw the moving average drop from 5.2 to 4, and if September has no sunspots after the one on September 1, then the three-month average centered on August will be 2.

So what is coming up in the near term? Continued low solar flux and possibly no sunspots. Geophysical Institute Prague predicts quiet to unsettled conditions for September 4 and 8.

We received many tips and comments this week about the lack of sunspots, and a link at, [http://science.nasa.gov/headlines/y2009/03sep\\_sunspots.htm](http://science.nasa.gov/headlines/y2009/03sep_sunspots.htm) to an article titled, "Are Sunspots Disappearing?"

It concerns the work of Livingston and Penn at the National Solar Observatory in Tucson, and their observation that magnetic fields from sunspots are declining. It is important to note that most of their measurements are after the peak of Cycle 23, so this may be normal during the decline of a cycle, not just this one. Also, when they say there may be no sunspots by 2015, this is an extrapolation. Since we do not know what has happened in previous cycles regarding this more accurate measurement of magnetic fields from sunspots, it may be unrealistic to assume that the trend will continue.

NW7US interviewed Dr. Penn this week in his podcast, which you can download from <http://tinyurl.com/NSWARPP-E04>. Very interesting interview with lots of details on his research.



## French amateur radio callsign confusion

Ever wondered how the French Call Sign system is derived?

**F1** is an old call issued for only 144 MHz and up but allowed in the HF bands since 2003.

**F2** (two letter suffix) is an old call sign issued between the 1950 and 1955's

**F3** (two letter suffix) is an old call sign issued between the 30's and 40's

**F4** is an old FA1 or a regular without CW on 144 until 2003 and on HF after 2003. (A licence without CW allows only automatic CW, not manual)

**F5** is a regular full licence of the 1950s (with a two letter suffix), or an old **FB1** (with a three letter suffix) or a regular full licence from 99 to 2003

**F6** with a three letter suffix is a regular full licence from between 1968 and 1998.

**F7** with a two letter suffix, was issued to an NATO member ham in France between 1949 and 1967

**F8** is an old licence from pre WW2 (with a two letter suffix) or an old **FB1**, with CW certificate (with a three letter suffix), of a new ham with a full CW licence issued after 2003.

**F0xxx** call signs (with three letter suffixes) are novice licences for phone only on 144, 10 watts.

F2, F3 or F9 are old call signs reissued to full new licensees just after WW2.

An **F8Kxx** licence is issued to a Radio Club.

Some National Ham Associations have call signs as follows:

F6PTT - the National Postmen's Association.

F8UFT - the Union Française des Telegraphistes.

F8AFH - the French national Association for Blind or Disabled Hams,

It is worthwhile knowing that the old F2, F3, F9 licences never had a 3 letter suffix.

For the overseas French territories, it's the same mess.

Need some more information? Write to [f5nql@aol.com](mailto:f5nql@aol.com)

Maurice has an interesting and extensive personal profile on [www.qrz.com](http://www.qrz.com)



## **MFJ Purchases Cushcraft Amateur Radio Antennas Product Line**

[MFJ Enterprises, Inc.](#), Starkville, Mississippi has purchased Cushcraft Amateur Radio Antennas Product Line from Laird Technologies, St. Louis, Missouri effective July 31, 2009.

Cushcraft Amateur Radio Antenna products will continue to be manufactured in Manchester, New Hampshire.

"We are excited to have the Cushcraft Amateur Radio Antennas product line alongside our other five companies," said Martin F. Jue, President and founder of [MFJ Enterprises, Inc.](#) "This product line increases our ability to offer our customers a wide range of antenna options at different prices. Customers will be able to choose from Cushcraft Amateur Radio Antennas, [Hy-gain](#) and MFJ antennas through one

source." MFJ purchased [Hy-gain](#) in 2000.

Cushcraft Amateur Radio Antennas will bring over fifty new products to MFJ's impressive amateur radio product line. Cushcraft Amateur Radio Antenna products have long been a popular source for a wide range of HF/VHF/UHF vertical, beam and yagi antennas for the amateur radio community. "We will add more new products to this antenna line and will continue the Cushcraft Amateur Radio Antennas name long into the future. Cushcraft Amateur Radio Antenna product customers will appreciate continued and expected top-quality manufacturing of this product in New Hampshire and the MFJ commitment to superb after-the-sale service and tech support in Mississippi," said Jue.

This announcement comes right during MFJ catalog time. The new MFJ 2010 Catalog will be a whopping 120 pages and will include the entire Cushcraft Amateur Radio Antennas product line. A special customer support line is set up in Starkville, Mississippi by dialing 662-323-5803. This line will handle any Cushcraft Amateur Radio Antenna product technical support, part requests, and customer services.

[MFJ Enterprises, Inc.](#) also owns [Ameritron](#), [Hy-gain](#), [Mirage](#) and [Vectronics](#).



## **NEW 3cm 10368 MHz SSB record verified and listed**

Recently Stephen ZL1TPH and Ted ZL2IP re-submitted their record claim that was declined earlier this year.

The claim errors have been corrected. The claim now complies with the published NZART claim rules.

I am pleased to announce the following SHF record:

3cm 10368MHz Int. ZL1TPH/p-ZL2IP/p 04/01/2009 SSB 551 TD

Confirmed as a new New Zealand record and a milestone record. It is to date the longest terrestrial distance contact at 551kms made on the 3cm microwave band.

**ZL1TPH operating from Cape Reinga at 175 M ASL.**

**ZL2IP operating from North Egmont at 960 M ASL.**

The actual frequency used was 10368.1 MHz and the signal path used a Troposphere Duct.

Congratulates to Stephen ZL1TPH and Ted ZL2IP.

Please publish this in the next Break-In if possible and NZART news page.

- John ZL2TWS

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## **SB SPACE ARL ARLS006**

### **ARLS006 SuitSat-2 Now Called ARISSat-1**

The SuitSat-2 project -- an Amateur Radio satellite housed in a Russian spacesuit - now has a new name to go with a new shape: ARISSat-1. On Wednesday, August 19, Amateur Radio on the International Space Station (ARISS) Chairman Gaston Bertels, ON4WF, announced the new name for the satellite and project. According to ARRL ARISS Program Manager Rosalie White, K1STO, the project team is moving ahead, using the same hardware that was to fly in the Russian Orlan suit. Russia will continue to call the satellite Radioskaf-2, so ARISS is designating it ARISSat-1/Radioskaf-2.

Due to storage considerations, the two surplus Orlan space suits in storage on the ISS were discarded via the Progress Cargo Vessel earlier this year. One of these suits was to be used to house the electronics for the upcoming SuitSat-2 mission; the batteries were to be mounted inside the suit, solar panels attached to the extremities with the electronics, video cameras and antenna mounted on the helmet by the ISS crew prior to deployment during an extra-vehicular activity (EVA), commonly called a spacewalk. The removal of the Orlan space suits from ISS removes the "Suit" component of the deployment and the new name reflects the change in configuration.

White told the ARRL that the ARISSat-1/Radioskaf-2 team, through Gould Smith, WA4SXM, made the final decision for the satellite to be square, with solar panels on all 6 sides. "The team is mounting a 70 cm quarter-wave whip on the bottom and a 2 meter quarter wave whip on the top," she said. "All of the hardware and software goes inside the square, and cameras go on the outside." The experiment being developed by Russia's Kursk State University is expected to be integrated into the electronics once the US-produced equipment is delivered to Russia this

fall.

AMSAT and ARISS pointed out that the importance of this project to both organizations is not diminished. "ARISS sees this mission as an important component of education outreach, as it will provide an opportunity for students around the world to listen for recorded greetings from space, as well as learn about tracking spacecraft in orbit," White said.

The ARISSat-1/Radioskaf-2 transmitter and receiver will be based on a Software Defined Transponder (SDX) system. It will consist of two major components: The RF Module and the Digital Signal Processor (DSP) module. In the RF module, there will be an upconverter that receives a signal from the DSP module as a 10.7 MHz intermediate frequency RF signal with a 50 kHz bandwidth, and up converts it to 145 MHz signal of 50 kHz bandwidth centered on 145.9375 MHz. The receiver is a downconverter with a 50 kHz bandwidth centered on 437.6125 MHz. The output of the receiver is a 10.7 MHz RF signal with a bandwidth of 50 kHz. The DSP processor receives the 10.7 MHz signal from the receiver downconverter and processes it and outputs a 10.7 MHz signal to the transmitter upconverter. The DSP can also inject signals such as the CW ID, telemetry, audio and packet signals as determined by the software on the DSP.

AMSAT calls the deployment of the SDX "a critical milestone" for the organization. "This upcoming flight provides an opportunity to flight test the next generation of spacecraft hardware," Bertels said. "Lessons learned from this deployment will be applied to future flight opportunities as AMSAT moves towards a 'modularization approach' to spacecraft development with the expectation the future spacecraft missions will utilize a derivative of SDX and the associated hardware."

The ARISS International Team has been informed that there is still space available for shipment of the ARISSat-1/Radioskaf-2 electronics on the projected cargo flight to the ISS in January 2010, and the EVA scheduled for April 2010 still has a SuitSat-2 deployment on the schedule.

Plans to launch a second SuitSat-spacesuit-turned-satellite were the subject of discussions and presentations at the November 2006 AMSAT Space Symposium and ARISS International Delegates' meeting. Despite a weaker-than-anticipated 2 meter signal, SuitSat-1 -- a surplus Russian Orlan spacesuit fitted with an Amateur Radio transmitter -- sparked the imagination of students and the general public and turned into a public relations bonanza for Amateur Radio. ARISS hoped to capitalize on the concept by building an even better SuitSat that will include ham radio transponders.

The SuitSat.org Web site attracted nearly 10 million hits during the mission. Designated by AMSAT as AO-54, SuitSat-1 remained in operation for more than two weeks, easily outlasting initial predictions that it would transmit for about a week. SuitSat-1 re-entered and burned up in Earth's atmosphere in September 2006. ARISSat-1/Radioskaf-2 is expected to be live for at least six months.

## Upcoming Happenings & Events

<i>Date</i>	<i>Happenings &amp; Events</i>
1st September	HF Net, 3.575 MHz, 19:30
2nd September	VHF Net, 146.525 MHz, 20:00
<b>6th September</b>	<b>NZART HQ Info-Line</b>
7th September	HF Net, 3.575 MHz, 19:30
<b>7th September</b>	<b>NZART Doug Gorman Frequency Measuring Contest</b>
8th September	VHF Net, 146.525 MHz, 20:00
<b>10th September</b>	<b>Break-In copy due</b>
<b>12th September</b>	<b>eDay (electronic waste)</b>
<b>12th September</b>	<b>Nostalgia Night Contest</b>
<b>13th September</b>	<b>Kairangi Hill Climb (AREC)</b>
14th September	HF Net, 3.575 MHz, 19:30
15th September	VHF Net, 146.525 MHz, 20:00
<b>20th September</b>	<b>NZART HQ Info-Line</b>
21st September	HF Net, 3.575 MHz, 19:30
22nd September	VHF Net, 146.525 MHz, 20:00
<b>27th September</b>	<b>NZART Official Broadcast</b>
28th September	HF Net, 3.575 MHz, 19:30
29th September	VHF Net, 146.525 MHz, 20:00
<b>30th September</b>	<b>AREC Section meeting (AREC)</b>

**3rd October—Manawatu Table Sale**  
**3-4 October—Microwave Contest**  
**3-4 October—Oceania Contest (Phone)**  
**4th October—NZART HQ Info-Line**  
**10th October—Western Suburbs Junk Sale**  
**10-11 October—Oceania Contest (CW)**  
**11-17 October—"GET READY GET THRU" Disaster Awareness Week**  
**12-16 October—14th IARU R3 Conference (Christchurch)**  
**17-18 October—JOTA/JOTI**  
**17-19 October—Admin Council of IARU (Christchurch)**  
**18th October—NZART HQ Info-Line**  
**25th October—NZART Official Broadcast**  
**31st Oct-1st Nov—Bridge to Bridge (AREC)**  
**1st November—Straight Key Night**  
**14th November—Boat Anchor Sprint**  
**21st November—NI Secondary Schools Cycle Championship (AREC)**  
**5-6 December—VHF+ Field Day Contest**  
**March 2010—VHF mini-convention**  
**7-9 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 mem-





## AREC Event Operators Page

<b>WRC Rally</b>	<b>Saturday 7-9 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>		ZL1UD
<b>A.</b>	Ngaruawahia/Taupiri	
	Start/Finish at Point	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
<b>G.</b>	Fairfield Bridge	ZL1TCE
<b>H.</b>	Malcolm St	
<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 13th September 2009</b>		<b>Organiser : ZL1IC</b>	
<u>Position</u>		<u>Operator</u>			
1.		ZL1IC			
2.		ZL1LD			
3.		ZL2MGS			
4.		ZL1RGM			
5.		ZL1DGK			
<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>	ZL1UD				
<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:* Arowhana 685 repeater aerials.

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