

# Ham Hum

October 2014



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



**Next Meeting 15th October : 7:30pm**

**ZL1BPU**

**“Chargers for Deep Cycle batteries”**

Disclaimer: The Hamilton Amateur Radio Club (Inc) accepts no responsibility for opinions expressed in this publication. Where possible, the articles source details will be published. Copyright remains with the author or HARC. All rights reserved.

### Contact Details

<b>Patron:</b>			
Russell Richardson	ZL1RWR		
<b>President:</b>			
"Jono" Jonassen	ZL1UPJ		<a href="mailto:z1lux@nzart.org.nz">z1lux@nzart.org.nz</a>
<b>Vice Presidents:</b>			
Gary Lodge	ZL1GA		
Gavin Petrie	ZL1GWP	843 0326	<a href="mailto:z1gwp@nzart.org.nz">z1gwp@nzart.org.nz</a>
<b>Secretary:</b>			
Phil King	ZL1PK	847 1320	<a href="mailto:z1pk@nzart.org.nz">z1pk@nzart.org.nz</a>
<b>AREC Section Leader:</b>			
Mike Sanders	ZL2MGS	855 1612	<a href="mailto:z2mgs@nzart.org.nz">z2mgs@nzart.org.nz</a>
<b>Deputy Section Leaders:</b>			
"Jono" Jonassen	ZL1UPJ		<a href="mailto:z1upj@nzart.org.nz">z1upj@nzart.org.nz</a>
Phil King	ZL1PK	847 1320	<a href="mailto:z1pk@nzart.org.nz">z1pk@nzart.org.nz</a>
<b>Treasurer:</b>			
Tom Powell	ZL1TJA	834 3461	<a href="mailto:z1tja@nzart.org.nz">z1tja@nzart.org.nz</a>
<b>Committee:</b>			
Colin McEwen	ZL2CMC		
Kevin Murphy	ZL1UJG		
Mike Sanders	ZL2MGS	855 1612	<a href="mailto:z2mgs@nzart.org.nz">z2mgs@nzart.org.nz</a>
Robin Holdsworth	ZL1IC	855 4786	
Terry O'Loan	ZL1TNO		
<b>Ham Hum Editor:</b>			
David King	ZL1DGK	579 9930	<a href="mailto:z1dgg@nzart.org.nz">z1dgg@nzart.org.nz</a>
<b>Ham Hum Printer:</b>			
John Nicholson	ZL1AUB	855 5435	
<b>ATV Co-ordinators:</b>			
Phil King	ZL1PK	847 1320	<a href="mailto:z1pk@nzart.org.nz">z1pk@nzart.org.nz</a>
Robin Holdsworth	ZL1IC	855 4786	
<b>Market Day Co-ordinator:</b>			<a href="mailto:harcmday@nzart.org.nz">harcmday@nzart.org.nz</a>
Robin Holdsworth	ZL1IC	855 4786	
<b>Webmaster:</b>			
Gavin Petrie	ZL1GWP	843 0326	<a href="mailto:z1gwp@nzart.org.nz">z1gwp@nzart.org.nz</a>
<b>BBS Team:</b>			
Phil King (sysop)	ZL1PK	847 1320	<a href="mailto:z1pk@nzart.org.nz">z1pk@nzart.org.nz</a>
Alan Wallace	ZL1AMW	843 3738	<a href="mailto:z1amw@nzart.org.nz">z1amw@nzart.org.nz</a>
Doug Faulkner	ZL4FS	855 1214	
Gavin Petrie	ZL1GWP	843 0326	<a href="mailto:z1gwp@nzart.org.nz">z1gwp@nzart.org.nz</a>
<b>Club Custodian:</b>			
Currently vacant			
<b>Equipment Officer/Quartermaster:</b>			
Colin McEwen	ZL2CMC	849 2492	
<b>QSL Manager:</b>			
Sutton Burtenshaw	ZL4QJ	856 3832	<a href="mailto:suttonb@slingshot.co.nz">suttonb@slingshot.co.nz</a>
<b>Net Controllers:</b>			
80m net—Phil King	ZL1PK	847 1320	<a href="mailto:z1pk@nzart.org.nz">z1pk@nzart.org.nz</a>
2m net—Phil King	ZL1PK	847 1320	<a href="mailto:z1pk@nzart.org.nz">z1pk@nzart.org.nz</a>
<b>NZART Examiners:</b>	ZL1IC, ZL1PK & ZL1TJA		

## From the Editor

We, Branch 12, will be hosting the NZART Annual Conference in Hamilton on Queens Birthday Weekend 2015 (May 29th to May 31st 2015).

Accommodation can be tight during Queens Birthday weekend, so it is suggested that anyone outside Hamilton who wishes to attend check out accommodation earlier rather than later. The conference is at the Te Rapa Racecourse on Ken Browne Dr (off Garnett Ave). Some accommodation is within walking distance, some is a bit further out. There appears to be no scheduled racing on Queens Birthday weekend, so parking shouldn't be a problem. Anyone who wants to bring an RV style vehicle, please confirm arrangements with the conference committee [conference2015@nzart.org.nz](mailto:conference2015@nzart.org.nz)

Up to date information can be found at <http://www.z11ux.org.nz> or send an email to [conference2015@nzart.org.nz](mailto:conference2015@nzart.org.nz) Regular updates will appear in NZART publications such as Break-In, HQ Info-Line or the Official Broadcast.

**Next Committee Meetings -  
1<sup>st</sup> October & 5<sup>th</sup> November**

## **SB PROP ARL ARLP039 ARLP039 Propagation de K7RA**

Solar activity was down this week (September 18-24) when compared with a week earlier, but solar flux is on a rising trend.

Average daily sunspot numbers dropped from 124.9 (for September 11-17) to 80.9, and average daily solar flux slipped from 139.8 to 128.3.

The latest predicted solar flux and planetary A index has flux values at 165 on September 26-28, 170 on September 29-30, 165 and 160 on October 1-2, 155 on October 3-4, 150 on October 5-7, 145 on October 8-9, 140 on October 10-11, then 135 and 130 on October 12-13, 125 on October 14-15, and 120 on October 16-18. Flux values are then expected to rise to 155 on October 30-31.

Predicted planetary A index is 15 on September 26, 12 on September 27, 15 on September 28-29, 10 on September 30, 8 on October 1-2, 5 on October 3-14, then 8, 15 and 8 on October 15-17, 5 on October 18-19, 8 on October 20-21, 12 on October 22, and 15 on October 23-24.

Petr Kolman, OK1MGW makes geomagnetic predictions, and believes the geomagnetic field will be quiet to active September 26-27, quiet to active September 28 through October 3, mostly quiet October 4-7, quiet to unsettled October 8-9, quiet October 10-12, mostly quiet October 13, quiet to active October 14-15, mostly quiet October 16-17, quiet to unsettled October 18-20, and quiet to active on October 21-22.

Earth's geomagnetic field has been unsettled recently, with planetary A index at 25 on September 24 and College A index (high latitude) at 57. Spaceweather.com reports this is not due to a CME or solar flare, but a crack in the Earth's magnetosphere, opening a spot for the solar wind to pour in.

John Campbell, K4NFE of Huntsville, Alabama sent in an article and video explaining the difference between solar flares and Coronal Mass Ejections.

Read it at, <http://www.universetoday.com/114729/nasa-explains-the-difference-between-cmes-and-solar-flares/> .

If you would like to make a comment or have a tip for our readers, email the author at, [k7ra@arrl.net](mailto: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>. More good information and tutorials on propagation

are at <http://k9la.us/>.

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

Sunspot numbers for September 18 through 24 were 75, 91, 75, 72, 87, 90, and 76, with a mean of 80.9. 10.7 cm flux was 120, 122, 119, 124, 130, 138, and 145, with a mean of 128.3. Estimated planetary A indices were 8, 22, 6, 7, 9, 11, and 25, with a mean of 12.6. Estimated mid-latitude A indices were 7, 23, 4, 7, 9, 9, and 19, with a mean of 11.1.



## NZART Conference 2015

Branch 12 have offered to run the NZART Conference in Hamilton on Queen's Birthday weekend 2015. It will commence with registration checkins on Friday 29th May and conclude on Sunday 31st May. Mark it in your diary now! As usual the NZART AGM will be held on the Saturday morning, with AREC, and other groups having meetings on the Saturday or Sunday. We are also planning to have a number of forums on the Sunday, which will hopefully be of interest to all. The venue will be the Te Rapa Racecourse, with Hamilton Caterers looking after our inner needs. A small committee has been setup to make it happen.

This information is hot of the press, as it was only decided by the committee last evening (Thursday 21st) to run with it, as all the ducks lined up satisfactorily. Further details will be released in upcoming issues of HamHum.



## Amateur Radio Payload on Lunar-orbiting 4M-LXS To Transmit Messages from the Moon

With the right equipment you may be able to receive messages from the moon sometime late next month.

With the right equipment you may be able to receive messages from the moon sometime late this October! The Amateur Radio payload on the lunar-orbiting 4M-LXS spacecraft will carry up to 2,500 thirteen-character digital messages to lunar orbit for retransmission using the JT65B mode on 145.990 MHz..

The mission is scheduled to run slightly longer than eight days, with the lunar flyby occurring about halfway through the mission. The orbiter is one of the test models for Beijing's new lunar probe Chang'e-5, which will land on the moon, collect samples, and return to Earth.

[LUXspace](#) said the 4M spacecraft will transmit continuously on 145.980 MHz (+/- 2.9 kHz) at 1.5 W into a simple quarter-wave monopole antenna. "The transmission is based on a 1-minute sequence and a 5-minute cycle. The transmission will start 4670 seconds (77.8 minutes) after launch." You will need the free WJST software to decode the signals.

More details are available on AMSAT UK's [4M-LXS Lunar amateur radio payload web](#) page and LUXspace's [Manfried Memorial Moon Mission \(4M\) website](#).



## Ham Radio balloon to commemorate Sputnik

South Africa's **Secunda Amateur Radio Club** will launch two balloons carrying amateur radio equipment from the Vryburg airstrip FAVB on October 4, 2014 at 0600 to 0800 CAT (0400-0600 UT)

This date marks the start of Space week 2014. They will commemorate the launch of the Sputnik satellite on October 4, 1957 by attaching an active model replica of Sputnik to one of the balloons. The replica will transmit a Morse message on 144.076 MHz.

Please e-mail ([christo.kriek@live.co.za](mailto:christo.kriek@live.co.za)) a screen print of the decoded message with date, time, GPS location, radio and antenna used to receive a special certificate from the launch team, if you are one of the lucky ones that can "decode" by

ear please mail above info without the screen print. The transmitter used is a flea power transmitter.

The South African National Space Agency (SANSA) and eight High Schools (80 children) form part of the program. Each school programmed their own data logger with 2 sensors. The 8 data loggers with sensors will be part of the payload of the balloon payload. Each of the school children had to write a Radio Amateur test (10 Questions) as part of their registration and the results will be used to allocated to their final presentation.

There will be a web link with cameras from the launch site at Vryburg airport, one camera at Hartbeeshoek and one at Secunda High School. Please send your e-mail info to [christo.kriek@live.co.za](mailto:christo.kriek@live.co.za) to get access to the webcams on the internet.

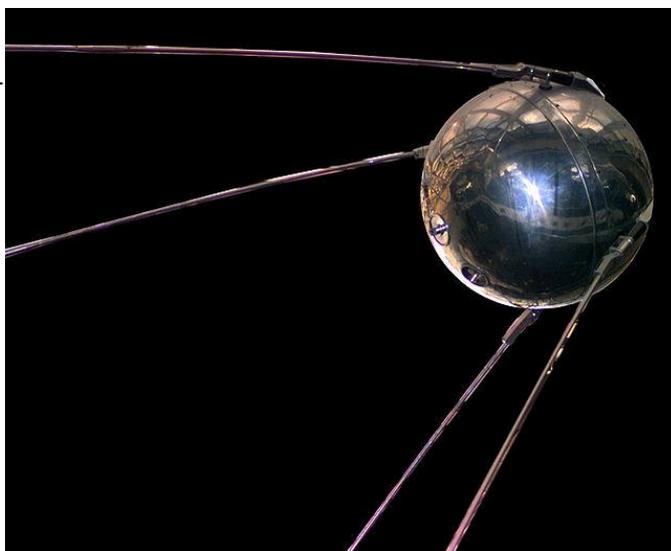
The first balloon will be launched anytime from 0600 CAT (0400 UT) onwards.

The ground stations will use HF on 3.650 MHz or 7.080 MHz or 20m 14.280 MHz between the ground control, chase cars, Secunda High School and Hartbeeshoek. The bands/frequencies may change due to propagation. If your hear the ground stations operate please keep the frequency clear for ground control operations. If you have any feedback in tracking the balloons specifically on descent please report it on the mentioned HF frequencies.

Due to the low APRS Digipeater and IGate density in the Vryburg area radio hams in the adjacent areas are requested to also help track the payloads as well.

It is vitally important to retrieve the payloads since there are data loggers on-board from several schools in the Secunda area. They need the data to complete their assignments.

A High Altitude Glider will also be launched the same morning as the High Altitude Balloon Experiment, HABEX on 4 October 2014.



On the same day at Secunda High School, Secunda, Unisa University will also have a ROBTICS exhibition. SANSA will also have a presentation via the webcam about GPS's the same day.

Below are the payload frequencies:  
Main balloon: APRS Tracking RX 144.800 FM  
CW Telemetry RX 432.075 FM  
Sputnik CW RX 144.075 FM  
Crew Comms HF 40/80M  
Webcam

2nd Balloon: APRS Tracking RX 144.8 FM  
RTTY 433.92 USB/ 50 baud 500 shift ascii7,n,1  
Crew Comms HF 40/80M  
Webcam

3rd Balloon: Remote Glider  
Webcam

Skype/Web Camera: Please register at <http://www.anymeeting.com/> and send your email address to: [christo.kriek@live.co.za](mailto:christo.kriek@live.co.za) to get access to live webcams.

Secunda Amateur Radio Club  
<http://secradio.org.za/>

Source SARL <http://www.sarl.org.za/>

---

## **New challenge coin premium for AMSAT Fox donations**

AMSAT is excited to announce that a new premium collectable is now available for qualifying donations to the **Fox** satellite program.

AMSAT has commissioned a unique challenge coin for donors who have contributed at the \$100 level or higher. This challenge coin is shaped as an isometric view of a Fox-1 CubeSat, complete with details such as the stowed UHF antenna, solar cells, and camera lens viewport.

Struck in 3mm thick brass, plated with antique silver, and finished in bright enamel,

the coin is scaled to be approximately 1:4 scale, or 1 inch along each of the six sides. The reverse has the AMSAT Fox logo.

The design may be seen at <http://www.amsat.org/?p=3275>

The coins are scheduled for delivery just prior to the 2014 AMSAT Space Symposium, and will be first distributed to donors attending the Symposium.

Coins will also be made available to qualifying donors that have contributed since the Fox-1C announcement on July 18, 2014 upon request. Donations may be made via the AMSAT website at [www.amsat.org](http://www.amsat.org), via the FundRazr crowdsourcing app at [fnd.us/c/6pz92](http://fnd.us/c/6pz92), or via the AMSAT office at (888) 322-6728.



The Fox program is designed to provide a platform for university experiments in space, as well as provide FM repeater capability for radio amateurs worldwide. Fox-1A and 1C are set to launch in 2015, and Fox-1B (also known as RadFXSat) is awaiting NASA ELANA launch assignment.

Further information on the Fox project can be found at [www.amsat.org](http://www.amsat.org).

73,  
**Drew KO4MA**



## The Mighty KBC Listener Appreciation Contest

The contest runs from May 1, 2014 until December 31, 2014.

### Prize

Brand new Tecsun PL-660 receiver including rechargeable batteries, ear buds, manual and soft case. More Tecsun PL-660 information at the KBC Import/Export website.

### Contest Rules

Send a valid reception report of a Mighty KBC broadcast. One report/entry per person per broadcast is acceptable. Please include the following items in the reception report.

Date of reception.

Time of reception.

Frequency of reception.

Program Details.  
Program Comments.  
Reception Conditions.  
Receiving Equipment.  
Contact information as we need a way to contact the winner.

Program comments are very important. Only a report including program comments are considered as a valid contest entry. Please do not send same comment every time. Also, please send something meaningful other than "I really liked the show", etc. Tell us what was enjoyed about the show. Tell us what was not liked about the show. Tell us if part of the show is very enjoyable compared to the other parts of the show. Tell us if a part of the show should never be heard again!

Good or bad program comments are OK. Please describe/explain comment.

Send report indicating The Mighty KBC Listener Appreciation Contest either by email or postal mail.

Email address is [themightykbc@gmail.com](mailto:themightykbc@gmail.com)

Postal address is

The Mighty KBC

Argonstraat 6

6718 WT Ede

The Netherlands

The more valid reports, the better chance a listener has of winning the contest.

Winner Selection and Notification

One winner is determined in a random draw by KBC Import/Export.

KBC Import/Export decision is final.

Winner is responsible for paying any import taxes, duties, etc.

Prize is not transferrable.

Prize is not exchangeable.

Winner agrees to allow KBC Import/Export to use winner's name and country of residence for promotional purposes.

Winner provides a valid mailing address as we'll be sending the prize via the postal mail. If winner does not provide a valid mailing address within a reasonable amount of time the winner is disqualified and KBC Import/Export has the right to draw another random name of valid entries as the winner.

The Mighty KBC Listener Appreciation Contest is open to listeners around the world. Employees of KBC Import/Export, The Mighty KBC DJs/personalities and employees of the Nauen, Germany transmission site are not permitted to participate in the contest.

The Mighty KBC Listener Appreciation Contest is sponsored by KBC Import/Export and Kraig Krist, KG4LAC.

<http://www.kbcradio.eu/>

Our thanks to **Mike Terry** for the above information



## Tim Allen gets his ham licence

**Tim Allen**, the famous American actor comedian who has appeared in many popular films, has just passed his ham licence.

*{This is the gentleman also known as "Tim the Toolman" from "Home Improvement" - Editor}*

He has the callsign **KK6OTD**

Tim stars in the weekly Last Man Standing show which is watched by 8 million Americans.

The show features ham radio and on the show Tim uses the fake callsign ka0xtt

<http://www.arrl.org/news/em-ham-radio-in-hollywood-em-last-man-standing-to-feature-ham-radio-in-upcoming-episode>

Over the weekend **k6h** was on the air on many bands including a live video web-cast on batc and w5kub from the Last Man Standing set on stage 9 at CBS tv centre in Hollywood

**73 ian g3zhi**



## 60 GHz: Multi-Gigabit WiFi

Multi-Gigabit WiFi is a new technology that operates in the 57 – 66 GHz frequency range and can deliver speeds of up to 7 Gbit per second over some tens of meters. A popular Multi-Gigabit WiFi technology uses the IEEE standard 802.11ad.

RSM is modifying the General User Radio Licence for Short Range Devices (GURL-SRD) to ensure that Multi-Gigabit WiFi and standards such as 802.11ad are permitted. The modified GURL-SRD will be set to align with USA and European Standards.

RSM will also modify the General User Radio Licence for Fixed Radio Link Devices (GURL-FRLD) to add the frequency range 57 – 64 GHz for point to point fixed links,

enabling new backhaul options for users. The new provisions are similar to those in the USA.

New editions of both the GURL-SRD and GURL-FRLD will be published shortly on the [RSM website](#).

Users of both the GURL-SRD or the GURL-FRLD should read the new editions carefully to ensure that they comply with the new licence conditions.

-RSM/MBIE

---

## Inductive systems at 7.4 – 8.8 MHz

The 7.4 – 8.8 MHz frequency range is permitted in Europe for inductive applications and is typically used for Radio Frequency Electronic Article Surveillance (EAS) systems. EAS is a technology used for the identification of items most commonly used for security purposes preventing theft in retail stores.

A new edition of the General User Radio Licence for Short Range Devices will be published shortly on the [RSM website](#) and include the 7.4 – 8.8 MHz band.

-RSM/MBIE



**FOR SALE - \$50.00** 50% of new price.

Belkin, N300 Wireless N Modem-Router

This modem-router is brand new (only 2months old) and comes in original box complete with all accessories. Has only been used to set it up, but has now been reset to the factory default settings.



#### **FEATURES**

##### **MultiBeam Technology**

High-powered signal throughout your home

##### **Speed**

Up to 300Mbps\*

##### **Easy Setup**

EASY START gets you set up in 3 easy steps

##### **4 Ethernet LAN Ports**

For fast and reliable wired network connections

##### **Preset Security**

Security settings are preset to get you up and running safely

##### **Lifetime Warrant**

#### **SPECS**

<b>Antenna Form Factor</b>	Vertical
<b>Compliant Standard(s)</b>	IEEE 802.11b IEEE 802.11g IEEE 802.11n
<b>Form Factor</b>	Vertical
<b>Integrated Switch</b>	4-port switch
<b>Modem Included</b>	Yes
<b>Switching Protocol</b>	Ethernet
<b>Browser Based Management</b>	Yes
<b>Radio Frequency Band</b>	2.4GHz
<b>WPS Push Button Security</b>	true
<b>Data Transfer Rate</b>	Up To 300Mbps
<b>Max WLAN Connections</b>	16
<b>Ethernet ports</b>	1xWAN, 4xLAN
<b>Plug &amp; Play</b>	Yes

If interested, please contact Gavin Petrie at - Ph: 07 8430326 or Email: [gavinwp@ihug.co.nz](mailto:gavinwp@ihug.co.nz)



**2nd November—NZART Straight Key Night**  
**7th November—NZART HQ-Infoline**  
**19th November—Club General Meeting**  
**21st November—NZART HQ-Infoline**  
**30th November—NZART Official Broadcast**  
**6-7 December—NZART Field Day Contest**  
**12th December—NZART HQ-Infoline**  
**21st December—NZART Official Broadcast**  
**28 Feb/1 Mar 2015—NZART Jock White Memorial Field Days**  
**30 May/1 Jun 2015—NZART AGM & Conference (Br 12, Hamilton)**

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

### Club Information



#### **Contacts :-**

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

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

**Homepage:** <http://www.z1ux.org.nz>  
**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:** Off air pending channel changes

*Cover Photo: A tree surrounded by a concrete wall? Actually, this is a cell phone that is more pleasing to the eye. See more at <http://pavanmickey.blogspot.co.nz/2010/04/camouflaged-cell-phone-towers.html>*

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