

Ham Hum

July 2013



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



Next Meeting :
Wed 17th July 7:30pm

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From the Editor

While cake decorating doesn't normally feature in Amateur Radio, in the case of the cover photo it was all about the Waikato VHF Groups 50th Anniversary. With a very good replication of the tower at Kaimai used for the National System, the 540 data node and a beacon on 2424.256.

Our Market Day is coming up next month. Make sure you're free to help Robin with all the tasks that need doing, browse all the goodies on the day, and socialise with everyone present. It's always an excellent event to go to with lots of goodies at good prices.



**Next Committee Meetings -
3rd July & 7th August**

SB PROP ARL ARLP026

ARLP026 Propagation de K7RA

Conditions were good for Field Day weekend last week. Only unsettled geomagnetic conditions (even quiet at times) affected us, no big flares or geomagnetic storms, and sunspot numbers also cooperated by peaking at 135 and 137 on Friday and Saturday. Geomagnetic instability was caused by a brisk solar wind, which was over by June 24.

At K7RA I used the ARRL Field Day Locator map at <http://www.arrl.org/field-day-locator> to contact a few club groups earlier in the week to see if they could use another CW operator. I've found in years past that with so many newer licensees who were not required to learn Morse code, that CW ops can be in demand at some sites. Not only are CW operators wanted at many Field Day locations, but the newer licensees are fascinated to see Morse code in action. I really don't think that some of us old-timers who worry about some imagined demise of CW have much to worry about.

At the last minute I changed my mind and decided to drag some gear accumulated over the past decade but never put on the air, and operate Class 1C, mobile single operator. Everything was last minute, including the antenna installation and power connections, with the radio sitting between the dashboard and the windshield.

The antenna was a very heavy kilowatt-rated screwdriver type antenna, about 20 pounds excluding any mounting hardware or a whip, although I swore it weighed twice as much. The plan was to mount it on a very heavy duty magnetic mount on the roof, perhaps with guying (this is not recommended by the manufacturer), but during assembly I discovered this would not work, as the mounting was not compatible with the antenna. So instead, during a fit of hacker improvisation, I leaned the heavy screwdriver assembly out the right-rear passenger window, (resting on the seat), and rolled up the window as far as I could to hold it in place. I cut the coax with PL-259 off the magmount, stripped back the other end, and attached the center wire to the base of the antenna.

The next surprise was that although I had a 7 foot whip, I lacked the adaptor that would screw into the top of the antenna assembly. So what to do? Just stick it in the hole, let it roll around, and pray. I now had an antenna (of sorts) leaning out the right rear of my old car, about 35 degrees above horizontal, at best.

To hook the DC cable from the radio to the car battery, I needed to go through the firewall below the dashboard. Despite finding diagrams and advice specific to my 13-year-old car model online, I could not get the cable through. So I grabbed one of those portable starter batteries (fully charged), put it on the front passenger seat,

and duct-taped the massive car battery connection clips (which are like jumper cables) to the DC cable from the radio, and another 12 VDC pair to the antenna tuning motor. In addition, to keep the battery charged, I tied in a very flimsy looking 12 VDC lighter plug in parallel with the whole mess, and plugged it into the dashboard lighter socket. This connector with wire was still in the bubble pack in my junk box after 20 years or more.

To finish it all off, I ran a couple of long counterpoise wires from the base of the antenna, out the rear doors and along the ground, attaching them to the coax shield broken out at the base of the antenna. I ran a heavy wire from the ground lug on the radio to a metal screw beneath the dashboard that seemed good for ground, at least at DC.

The whole thing worked, at least on 80 and 20 meters. 15 meters was marginal, and 40 meters I could not tune at all. Starting late Saturday evening, operating both SSB and CW, I lasted until about 1730 UTC Sunday morning. Most of the operation was from a local Seattle cemetery, on a nearby hilltop overlooking Lake Washington, east of the University of Washington. Very quiet, with power lines far away at the perimeter.

Back to solar activity, from the previous week, average daily sunspot numbers were up nearly 13 points to 109.7, and average daily solar flux rose nearly 7 points to 122. Geomagnetic activity was greater than the previous week, with average daily planetary A index rising from 4.3 to 12, and average mid-latitude A index rising from 4.9 to 11.9.

Ideally we would like to see the solar flux and sunspot numbers as high as possible, and the A index low, at least for 40 through 10 meters. On 160 meters we would like to see sunspot numbers low as well. I hear lots of complaints about this weird, weak solar cycle, but the 160 meter operators have absolutely no problem with the low activity.

Yesterday on Thursday, June 27 the solar flux dipped below 100 to 99.5, which is below the average for the previous seven days (122). Nothing significant about 100, it is just one of those nice round numbers, like when your odometer reaches 100,000 miles, or the atmospheric carbon dioxide reaches 400 ppm at Mauna Loa.

The 99.5 flux number is directly from the observatory in Penticton, British Columbia, but the NOAA site shows it at a nice round value of 100 (see <http://www.swpc.noaa.gov/ftpdir/latest/DSD.txt>). This is because NOAA has always reported this value in whole numbers, similar to the way the press reported recently that atmospheric carbon dioxide reached 400 ppm. The actual average value for the month of May was 399.77 ppm, but for all practical purposes you could say that it is 400 ppm, just as solar flux was 100. Any differences are very small.

The most recent prediction (Thursday, June 27, 2013 by forecasters Carr and

Lash) from NOAA/USAF has 10.7 cm solar flux at 100 and 105 on June 28-29, 110 on June 30 through July 2, 105 and 100 on July 3-4, 100 on July 5-7, 115 and 120 on July 8-9, 125 on July 10-13, and 120 on July 14-16. Flux values then reach another peak of 130 on July 21.

From the same forecast, planetary A index (which was 8 on Thursday, below the average of 12 for the previous seven days) is 17 and 9 on June 28 and 29, 5 on June 30 and July 1, then 7, 10 and 7 on July 2-4, 10 on July 5 and 6, 5 on July 7-16, 10 on July 17, 15 on July 18-20, then 18, 10 and 8 on July 21-23, and 15 on July 24 and 25. It looks like some unsettled geomagnetic conditions are in the forecast for July.

You can check for daily updates on this forecast out to 45 days ahead at <http://www.swpc.noaa.gov/ftpmenu/forecasts/45DF.html>. A new daily forecast generally appears some time after 2100 UTC daily.

Just received before release on early Friday morning, spaceweather.com reports earth-directed solar flares from sunspot groups 1777 and 1778. The two flares were C-class, and the CME could deliver a glancing blow to our Earth.

F.K. Janda, OK1HH believes that the geomagnetic field will be active to disturbed on June 28, quiet to unsettled June 29 through July 1, quiet on July 2, quiet to active July 3, active to disturbed July 4, mostly quiet July 5 and 6, quiet to unsettled July 7, mostly quiet July 8 and 9, quiet July 10-15, mostly quiet July 16 and 17, quiet to active July 18, mostly quiet July 19, active to disturbed July 20, and quiet to active July 21 and 22.

NOAA has a projection for the rest of the solar cycle, updated monthly, showing predicted smoothed sunspot numbers resolved to one-tenth, instead of whole numbers. The smoothing is a 13-month moving average, centered on any month of interest. Sunspot numbers are always whole numbers, so the resolution to one-tenth is an artifact of the averaging or smoothing process.

For any current month, the number represents an average of the previous 6 months plus the current month plus the predicted values for each of the next 6 months. The first and last months in the calculation are factored in at 0.5.

Before the last day of June 2013, the smoothed sunspot number for February 2013 represents 10 months of known values and 3 months of predicted values, June through August 2013. These are based on the reported numbers from the Sunspot Index Data Center in Belgium. These numbers are always lower than the Boulder sunspot numbers, which are recorded at the bottom of each bulletin and in our own 3-month moving average, reported here monthly.

The predicted average sunspot numbers for March, 2013 through July 2014 are 67.5, 70.1, 72.7, 75.7, 78.6, 81.6, 84.7, 86.3, 86.9, 86.7, 86.4, 85.6, 84.7, 83.7, 82.6, 81.4 and 80.2. Note that the peak is centered on November 2013, or perhaps

October 2013 through January 2014 to broaden the scope and hedge our bets. A similar prediction for monthly smoothed solar flux tracks this very closely, also peaking in November 2013. Let's see how this looks after the beginning of the new month.

Jeff Hartley, N8ll of Shepherdstown, West Virginia is in grid square FM19qj, about three miles southwest and across the Potomac River from the Antietam National Battlefield, which is actually in Maryland.

On June 26 Jeff wrote: "This summer on HF at least below 12 meters has been one of the most interesting and exciting periods I can remember, despite the lack-luster solar activity. Many nights 17 meters is open until midnight local time to southeast and northern Europe and, 15 is often open to Asia and Europe around 0200-0400 UTC.

After years of disappointment, the All Asia DX contest June 15-16 had above average conditions on 15 meters for most of the weekend. Just on 15 meters, I worked just short of 200 Asian stations with 106 prefixes in a part-time effort.

Saturday morning around 1200 UTC was a losing battle against the European stations into all parts of Asia. Saturday afternoon I returned after a long break at 2045 UTC to find very loud JA's who stayed loud until 2230 UTC, then gradually faded down until not many were audible by 0130 UTC. Sunday around 1200 UTC only JO3JIS had a good signal here from Japan; he was the most consistently loud JA here. A few signals from Central Asia were loud, such as UN/UP's.

Around 1350 UTC I returned to loud signals from all of Asia including Japan, which is fairly rare for this QTH, but had occurred several times the week before. Activity between Europe calling CQ and Asians extended from 21.0 to 21.07 MHz! I don't think JA ever faded out completely all afternoon, but signals weakened about 1545 UTC. Our toughest area, Southeast Asia around 1500 UTC was quite loud, working three 9V1's with 9V1YC over S9! XW0YJY was heard, but I could not break thru the European pile-up. All total, I worked 58 Japanese prefixes and 19 from Asiatic Russia where activity was somewhat less than expected.

Almost every night, there is a good 20 meter opening to western Asia and Europe/Russia/Ukraine and Scandinavia from 0200-0400 UTC. Some of the DX worked late in the evening here include on June 11 FK8DDM, ES5, ER3, UY5, OM3, then on 15 meters RA3TO/P and IZ7. On June 13, RV9CPB/9 on 17. June 14 featured ES3, EU7, and SM0 on 17 meter phone followed by on 15 meters, SM6, YL2, R4, RX4, RV9, RM5, HA8, UA6, UA4, UR4, R8, RZ6, UT9, UR0, and UA3T ending at 0312 UTC.

The sporadic E season on 6 meters has been disappointing. I missed European openings on June 13. On the June 19, W6XK in CM97 and N6JK in CM98 were logged on 6 meter CW around 0230 UTC. Finally, on June 23 and 24 we had a good opening to South America and Mexico, all multi-hop Es. At 2102 UTC, I

worked PV8ADI with a S7 signal, the first ever Brazilian for me on Es; he stayed in for an amazing 2 hours plus longer! Then, 9Y4VU was found on SSB at 2107. YV1 was also heard along with VP2V. CO2WF was logged at 2304. Between 2331 UTC and 0039 UTC, five XEs over a wide area were worked mostly in XE2, good for some new grids. On June 24, PV8 was heard again with FM5WD being logged at 2224 UTC."

Thanks, Jeff! He mentions years of disappointment regarding working Asia, but here where I am on the West Coast, this is not a problem. This is just like Europe being easy to work from the East Coast.

For more information concerning radio propagation, see the ARRL Technical Information Service 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://arrl.org/propagation>.

Sunspot numbers for June 20 through 26 were 128, 135, 137, 118, 82, 91, and 77, with a mean of 109.7. 10.7 cm flux was 126.3, 133.2, 130, 128.2, 120.6, 109.2, and 106.5, with a mean of 122. Estimated planetary A indices were 11, 17, 14, 15, 15, 8, and 4, with a mean of 12. Estimated mid-latitude A indices were 12, 17, 13, 16, 14, 9, and 2, with a mean of 11.9.



ZL9HR DXpedition surplus fuel raises \$1,100 for NZ Child Cancer Organisation

The ZL9HR DXpedition team with the Captain and Crew of the 'Evohe' have donated the surplus dxpedition unleaded fuel and 20L plastic fuel containers to the NZ Child Cancer Organisation.

The NZ Child Cancer Organisation has raised \$1,100 through of sale of these donated items.

www.childcancer.org.nz

- Southgate ARN

MARKET DAY:

Waikato Table Tennis Stadium

Edgecumbe Street

Hamilton

Saturday, 17th August, 2013

Selling commences at 10am

New Logbook of The World Software Eases Uploading:

The recently released version of Trusted QSL (TQSL) software for Logbook of The World (LoTW <http://www.arrl.org/logbook-of-the-world>) makes it much easier for users to upload logs to the worldwide contact repository. TQSL v. 1.14.1 may be downloaded from the LoTW page.

The new software lets users upload log files to LoTW directly from Trusted QSL, saving steps. It also will automatically check for updates, prompting users to download and install. Among other new features, any QSOs that have been successfully uploaded to LoTW or saved to a file are registered in a database, and exact duplicates are automatically stripped from future logs (this feature may be disabled).

More than a half-billion contact records have been posted in LoTW since it began operation in 2003, resulting in some 72 million contact confirmations. Upgrading to version 1.14 is not mandatory. Full information [http://www.arrl.org/files/file/LoTW%](http://www.arrl.org/files/file/LoTW%20Software/LoTW%20Software%201.14.1%20User%20Guide.pdf)

[20Instructions/Upgrading%20to%20TQSL%2014.1.pdf](#) on the advantages of upgrading is available on the LoTW website.

Source:

The ARRL Letter

DX News from the ARRL

28 June, 2013

This week's bulletin was made possible with information provided by KC9FFV, NC1L, ON4LEM, XQ7UP, The Weekly DX, the OPDX Bulletin, 425 DX News, The Daily DX, DXNL, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites. Thanks to all.

RODRIGUES ISLAND, 3B9. Robert, 3B9FR has been QRV on 20 meters using CW around 0230 to 0330z. QSL via HB9SLO.

SENEGAL, 6V. Vlad, RK4FF will be QRV as 6V7S from Ngaparou from July 1 to 16. Activity will be on 80, 40, 20, 15 and 10 meters using CW, SSB and RTTY. QSL to home call.

GHANA, 9G. Hans, PB2T will be QRV as 9G5AA from July 2 to 7. Activity will be on the HF bands using all modes in his spare time. QSL to home call.

BAHRAIN, A9. Dave, EI3IO is QRV as A92IO until mid December. Activity is on 80 to 2 meters, including two channels on 60 meters. QSL to home call.

MOZAMBIQUE, C9. Antonio, EA4GBA is QRV as C91GBA from Matola until December 15. Activity is on the HF bands using SS. QSL direct to home call.

CHILE, CE. A group of operators will be QRV as VR77RG during the month of July to commemorate the 77th anniversary of the Radio Club Rancagua. Activity will be on all bands using SSB and PSK. QSL via CE4RG. In addition, a group of operators will be QRV as XR3PN during the month of July to commemorate the birth of Chilean poet and diplomat Pablo Neruda. Activity will be on all bands using SSB, RTTY and PSK. QSL via CE3OEV.

JAPAN, JA. Special event station 8N5CLEAN will be QRV from Shikoku, IOTA AS-076, from July 1 to October 31 during the Clean Reception Environment Month. QSL via bureau.

MINAMI TORISHIMA, JD1. Take, JG8NQJ is QRV as JG8NQJ/JD1 from Marcus Island, IOTA OC-073, until August 15. QSL via JA8CJY.

SVALBARD, JW. Winfried, DL2GW will be QRV as JW/DL2GW from Spitzbergen Island, IOTA EU-026, from June 28 to July 1. Activity will be on 160 to 6 meters using all modes. QSL to home call.

BULGARIA, LZ. Members of the Radio Club Blagovestnik will be QRV as LZ1722SN during the month of July to honor the memory of St. Nicodemus. QSL via LZ1KCP.

MARKET REEF, OJ0. Operators ON5JT, ON6QO, ON4CCP, ON4LEM and ON8VP will be QRV as OJ0V from July 1 to 6. Activity will be on the HF bands using CW, SSB, RTTY and possibly PSK. QSL via operators' instructions.

CURACAO, PJ2. Wim, ON6DX will be QRV as PJ2/ON6DX from June 28 to July 7. Activity will be holiday style on 40 to 6 meters using CW, SSB and RTTY. QSL to home call.

SABA, ST. EUSTATIUS, PJ5. Frank, K3TRM is QRV as PJ5/K3TRM from St. Eustatius, IOTA NA-145, until July 6. Activity is on the HF bands and 6 meters using CW, SSB and RTTY. QSL to home call.

SINT MAARTEN, PJ7. Marco, KC9FFV will be QRV as PJ7FF from July 6 to 13. Activity will be holiday style on 40 to 10 meters using only SSB. QSL this operation via EA5GL.

GREECE, SV. Gabi, HA1YA will be QRV as SW8EA from Thassos Island, IOTA EU-174, from July 5 to 21. Activity will be holiday style on the HF bands, including 6, 4 and 2 meters and 70 cm using CW and SSB. QSL to home call.

IVORY COAST, TU. Dim, F5SWB is QRV as TU5DF from Abidjan until October. Activity is on 40 to 10 meters, including 6 meters, using mainly CW with some SSB and PSK31. QSL to home call.

CHRISTMAS ISLAND, VK9X. Fred, VK3DAC is QRV as VK9DAC. Activity is holiday style on 80 to 10 meters using SSB. QSL via operator's instructions.

INDONESIA, YB. Joy, YB0NSI and Jeffry, YC0LOU are QRV as YB0D from Damar Besar, Seribu Islands, IOTA OC-177, until July 1. Activity is on 160 to 10 meters using CW, SSB and various digital modes. QSL direct via YB0JZS.

Upcoming Happenings & Events

<i>Date</i>	<i>Happenings & Events</i>
1st July	HF Net, 3.575 MHz, 19:30
2nd July	VHF Net, 146.525 MHz, 20:00
5th July	NZART HQ Infoline
6-7 July	NZART Memorial Contest
8th July	HF Net, 3.575 MHz, 19:30
9th July	VHF Net, 146.525 MHz, 20:00
15th July	HF Net, 3.575 MHz, 19:30
16th July	VHF Net, 146.525 MHz, 20:00
16th July	Franklin Club Junk Sale
17th July	Club General Meeting
19th July	NZART HQ Infoline
22nd July	HF Net, 3.575 MHz, 19:30
23rd July	VHF Net, 146.525 MHz, 20:00
27th July	Waitakere Sprints SSB
28th July	NZART Official Broadcast
29th July	HF Net, 3.575 MHz, 19:30
30th July	VHF Net, 146.525 MHz, 20:00

2nd August—NZART HQ Infoline
3rd August—Waitakere Sprints CW
3-4 August—NZART Brass Monkey Contest
16th August—NZART HQ Infoline
17th August—Hamilton Market Day
21st August—Club General Meeting
25th August—NZART Official Broadcast
2nd September—NZART Doug Gorman Memorial Frequency Measurement Contest
6th September—NZART HQ Infoline
20th September—NZART HQ Infoline
29th September—NZART Official Broadcast
5-6 October—NZART Microwave Contest
7th September—SPAM Nostalgia Night
1st October—NZART/WIA Oceania Contest SSB
2nd October—NZART/WIA Oceania Contest CW
2nd November—Western Suburbs Junk Sale
3rd November 2013—ZL1AIH Straight Key Night
30 Nov-1 Dec—Bridge to Bridge Water Ski Classic (AREC)
1st December 2013—KDMG Twin Sprint PSK & RTTY 80m
7-8 December 2013—NZART Field Day Contest

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

AREC Event Operators Page

WRC Rally NZ/ Possum Bourne Rally	June 2013	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	Nov 30—Dec 1 2013	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	September 2013		Organiser : ZL1IC
<u>Position</u>	<u>Operator</u>		
1.			
2.			
3.			
4.			
5.			
School C ycling	July 2013		Organiser : ZL1IC
<u>Position</u>	<u>Operator</u>	<u>Position</u>	<u>Operator</u>
1.		5.	
2.		6.	
3.		7.	
4.		8.	
Colville Connection	March 2014		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



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88 Seddon Road, Hamilton

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

Homepage: <http://www.zl1ux.org.nz>
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: Off air pending channel changes

Cover Photo: The cake that helped mark the Waikato VHF Group (Branch 81) 50th Anniversary. With many thanks to ZL1PK's XYL.

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