



Auckland Branch 02, NZART NEWSLETTER



General Meeting

The Committee has decided **not** to hold a General Meeting
this month — August, 2010 Refer Constitution 9. (c)

HAM radio at a glance:

- **Number of US Amateur radio licencees: 650,000**
- **Number first licensed in the past four years: 100,000**
- **Number licensed in 2009: 26,000**

Source: American Radio Relay League (ARRL), Newington, Conn.

Did You Know that exam candidates can join NZART and get one year free?

For details see the last section of the Radio 4A Form at:

<http://www.nzart.org.nz/exam/examprocedures.html#examproc>

Want to Bone up on Wireless Tech? Try Ham Radio

Abundant spectrum resources and an engaged research community are drawing wireless experimenters back into a hobby that many had forgotten. John D. Hays, an IT manager in Edmonds, Wash., devotes most of his spare time these days to helping develop a communications system that's designed to integrate portable two-way radios with the global telephone network. The project's goal is to create a failure-proof voice communications infrastructure that can immediately connect first responders with the outside world.

"Individuals with radios in the field could interconnect with the telephone system even when their cell phones are shut down by an emergency," he says. This would be useful in all manner of disasters, from natural to man-made....
http://www.computerworld.com/s/article/9139771/Want_to_bone_up_on_wireless_tech_Try_ham_radio

Radio Spectrum Management News

Within this section...

- Licence fee schedules have been updated
- Approved radio examiner prerequisites and examination requirements
- Interference from light emitting diode (LED) technology
- Annual licence fee renewals for current and transition FM spectrum licences
- Is the "900MHz" radio equipment you are using compliant?
- Power allowances in the 915MHz to 928MHz band
- Infringement fines for non-compliant radio products

Access the following URL for full details of each http://www.med.govt.nz/templates/MultipageDocumentPage_44597.aspx#A2

Revised GURL for Short Range Devices (SRDs)

Members may be aware that the MED has relaxed the conditions of use for Short Range Devices. The new conditions, which were put in place without any consultation with NZART, permit the use of walkie-talkies, wireless headphones, audio senders, etc., typically featuring very annoying, long duration transmissions in the input band of most of our 70 cm repeaters.

There is also a new allocation at 3.640-4.040 MHz for Auditory Aids which has potential to interfere with amateur signals in the 80 m band.

HF Contests

- WIA VK Remembrance Day 14/15-AUG Rules: <http://www.wia.org.au/members/contests/rdcontest/>
- Lighthouse/Lightship 14/15-AUG Rules: <http://ilw.net/>
- ALARA Contest 28-AUG Rules: <http://www.alara.org.au/>
- Doug Gorman FREQ MEAS 06-SEP Try Wellington VHF Group for rules at <http://www.vhf.org.nz/>

From The Editor Break-In

The invoice that came with your Break-In shows the wrong rebate. The correct rebate is \$15 **NOT** \$10 as printed. The subscription for 2011 invoice will be included with your next Break In due out at the beginning of August.

Call Book

The next Call Book will be published in October this year, please remember if you have recently moved that YOU need to contact Radio Spectrum on 0508 776 463 and advise your new address details. While you may have advised me of your new details I am unable to change the Ministry's database, therefore what ever address they have on file will be published in Call Book.

Notes from ZL1BRC at the clubroom during the week

1. Thanks to Wallace for loan of cage trap which is now set for our furry mate in the roof. It has been caught [Ed.]
2. Scarborough have removed all the pile of concrete paving blocks to East of clubrooms and have scraped that site clean. Likewise the area near the former wooden tower, and exposed the heavy metal machinery here. One presumes that heavy lifting gear will be brought in next week. I doubt if this cleared space is intended to be for our benefit.
3. Lots of other activity, much more than usual, but no clear pattern emerging yet except mud, mud, lots of it
4. Listening on HF, the residual noise in the FT1000 still needs attention, but do not let noise put you off from calling CQ on any band, 20 especially, which is open. Someone is generating local interference mostly below strength 1. More suppression is on the way, as outlined to Committee (hope it works, can but try)
5. In our morning time (sorry James) long path Europe on 20 should be productive.
6. Ten metres could surprise any time. Try beacons for a guide and then either VK between 28475 and 28495 in 5 kHz steps or Stateside at those frequencies or between 28395 and 28425, or of course 28530 at 2230hrs UTC.
7. Satisfying session on 20 to the States this afternoon after 0300 UTC. Twelve decent conversations with stations from Alabama to Texas to Minnesota to California. All were grateful to work ZL conversational mode.

AUCKLAND BRANCH, NZART (inc.)

Minutes of Committee Meeting

Time / Date / Place: Tuesday, 3rd August 2010; 1940 hours; Clubroom

Attendees: Peter Ellis, ZL1LS (Chairman); Wallace Bottomley, ZL1WAL (Secretary / Treasurer); Selwyn Ross, ZL1BRC; George Marr ZL1TUU; Japie Nels; ZL1JJN, (AREC);

Apologies: Gwynne Rowe, ZL1AAR; Steve Miller, ZL1FS and Ray Chapman, ZL1AJR, (both at sea); Sustained ZL1WAL /ZL1LS

Ian Walker, ZL1BFB – Silent Key:

The meeting stood in silence for 1 minute and in prayer led by Brother Peter Ellis.

Minutes of the previous Committee meeting on 1st July 2010:

Taken as read and accepted ZL1TUU / ZL1LS

Correspondence In:

- Newsletters from branches: Hibiscus Coast; Western; VHF; Suburban; Papakura; North Shore; Franklin.
- Summary of meeting between Suburban Amateur Radio Club and Musick Point Trust re use of two rooms.
- List of equipment donated by Hugh Vogel – to be tested
- Letter from ASB Bank requesting term deposits. Their sponsorship of St John's is mentioned.
- Letter from Jeff Lowe confirming Woosh Account cost of \$27.50 / month for the remotely controlled station
- Email from Post Office seeking application for Community Post sponsorship
- Hamilton Market day on 14th August.
- Hibiscus Coast invitation to their 30th birthday celebration dinner on 21st August at Rotary House, Silverdale at 7pm; Call P. Kinnell for tickets (09)426-8152

Received ZL1WAL / ZL1AAR

Correspondence Out:

- Letter (by ZL1BRC) to Stuart Watchman, Manager of Jock White Field Day re ZL1LC using Branch 02 Branch Number without our permission.
- Application for Post Office Sponsorship of 400 envelopes for Membership drive.
- Application to ASB Bank for rebate of fees for using Fastnet Banking.
- Application to ASB Bank for additional signatory for Gwynne Rowe.

Approved ZL1WAL / ZL1JJN

Matters arising:

- George suggested that Wallace apply for Personal access to the FastNet Business account.

Finance:

- The Treasurer presented a Finance report for the year to date.
- Expenses requiring approval for payment: R Higgins - Lawns July \$30.00

Received ZL1WAL / ZL1TUU

Approved ZL1WAL / ZL1JJN

General business:

Maintenance (in order of priority):

- Since Ray's fall at the front step, Selwyn has repaired the porch wall. Gwynne has left sand and paint for the steps to be redone — fine weather permitting in mid-week.
- The possum has taken up residence again and is eating the poisoned wheat. Wallace will lend his trap.
- Sign at gate entrance needs cleaning / repainting its meeting dates and times.
- Selwyn has painted the new barge board.

Antennas (in order of Priority):

- A bamboo or aluminum pole for the 80 metre antenna is intended temporarily until the steel pole is erected when engineering skills and manpower become available.
- Realignment of the beam – wait until Steve returns in 2 months when his truck can be used.
- A 10m half wavelength vertical antenna has been permanently erected on a pole beside the front porch.

Shelving for library and parts:

- Wallace reported that since the seller reneged on his winning bid, he has filed a claim with the Disputes Tribunal. Thus his gift of these shelves is delayed until settlement / judgment, say, in two months.
- The function of the Librarian was raised, with respect to filing incoming newsletters and deciding which cartoons of magazines should be thrown out. Wallace to contact Bob Murphy.

Program for General Meetings:

A working bee to tidy up was deferred. Secretary will be away for two Saturdays. With no other suggestions, it was decided to dispense with a General Meeting on 21st August. Refer Constitution 9 (c).

Minutes of Committee Meeting (Continued)

Batteries:

- The power had recently been turned off at the mains, thus disabling the charger, surveillance, etc.
- Selwyn is monitoring a SLA battery left by Steve. It is presently at 13.1v, but may not hold its charge.

Phone line:

- George suggested that we allow Brian Wilson 8 weeks until he can do the repair and lay the conduit.
- George has donated an ASDL 2+ modem for it.
- Meanwhile the Woosh modem is working, albeit slow and causing latency.

Computers:

- James is our expert. He will install Belarc Advisor to report the specs of the computers in the clubroom.
 - HP with 1 Gb memory for general purpose use
 - HP with 256 Mb for host of the Remotely Controlled Computer. More memory may be needed.
 - Laptop for surveillance
 - PC at HF Station 1
 - Three older PCs that could be located near each of the other stations
 - 4 desk-jet printers.
- All PCs can run an internet session from the 12 port splitter.

RFI:

- Selwyn encountered RFI on all bands last week. He tracked it down to have been caused by a ground loop between the mains earth on the east side of the doorway and an RF earth on the west side of it. Ferrites will be fitted.
- Direction finding equipment was discussed to track sources of RFI in our area.

QSL:

- While Ray is away, the relabeling of the QSL card rack is deferred.
- Selwyn pointed out that collection of cards from Suburban RC needs to be assigned to someone.
- We have adequate stocks of QSL cards so will continue to send them rather than adopt eQSL or LoTH.

Promotion of Membership:

- 26,000 new amateur licences were issued in USA last year
- NZART are urging Branches to conduct a membership drive.
- Japie has 100 NZART pamphlets that he will overprint contact details in readiness for distributing them.
- Selwyn was given a mandate to advertise under "free Tuition" for new candidates.
- An advertisement in Craccum magazine was suggested to reach uni students as potential members.
- Another Examination Supervisor may be needed. Also a Tutor or two. Peter and James volunteered.

Remotely Controlled Station:

- Subcommittee: George, ZL1TUJ (Station Manager); Steve, ZL1FS, Wallace, ZL1WAL, James ZL1KNI
Elected ZL1BRC / ZL1JJN
- The objectives of this project as defined in "Remotely Controlled Station" as circulated to the Committee, was agreed. (This is not for circulation since it documents passwords, etc.)
Project is authorised ZL1TUJ / ZL1JJN
- James recommended that Branch activity should now be directed towards:
 - Branch members in retirement homes. Invite them in, provide a PC – donated by George – and oversee installation at their QTH. He will write a simplified operation manual for such users.
 - To be used as a marketing tool for recruitment of members, rather than open slather as offered by other branches who have a remotely controlled station. Applicants will be sent selected information.
- James has reformatted the host computer's HD and reinstalled Windows XP with SP3.
- It is running using the 40 metres antenna. Provision of a hardware firewall is being considered.
- George stated that automatic antenna selection equipment may come from Elecraft. He has already obtained an Elecraft Pan adaptor and modifications for the K3 that need to be installed in due course.

AREC matters:

- The regional net controller is barely audible—a worry for this important position.
- Japie reported that he will attend a meeting on 10 August about repeaters.
- He will familiarize himself with the 10m FM station now that it has been commissioned.

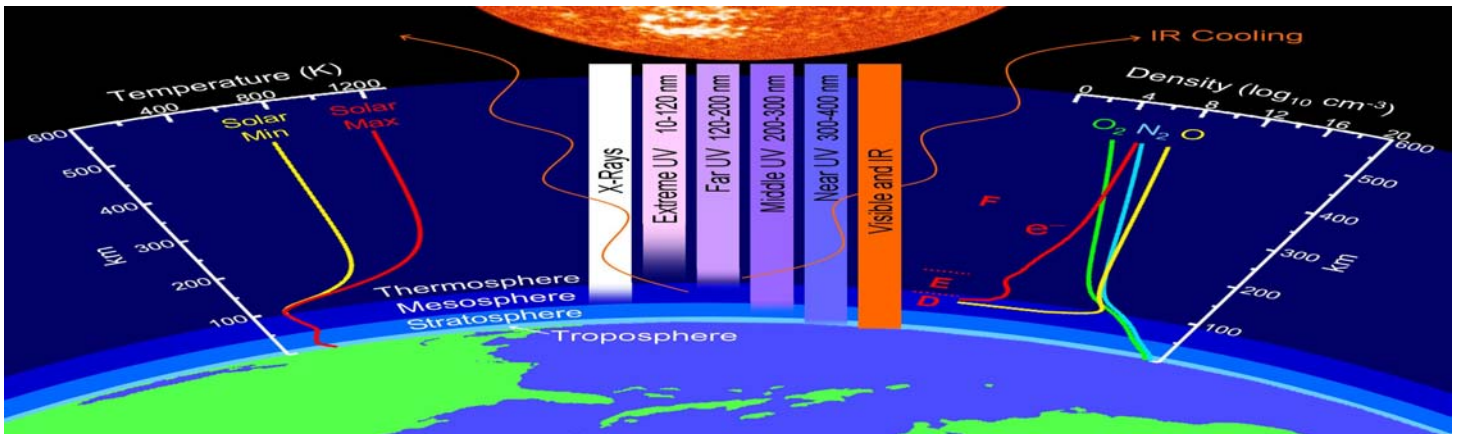
Meeting Closed 21:15 followed by supper with scones baked by Peter, ZL1LS.

Signed _____ Date _____
(Chairman)

A Puzzling Collapse of Earth's Upper Atmosphere

July 15, 2010: NASA-funded researchers are monitoring a big event in our planet's atmosphere. High above Earth's surface where the atmosphere meets space, a rarefied layer of gas called "the thermosphere" recently collapsed and now is rebounding again.

http://science.nasa.gov/science-news/science-at-nasa/2010/15jul_thermosphere/



"This is the biggest contraction of the thermosphere in at least 43 years," says John Emmert of the Naval Research Lab, lead author of a paper announcing the finding in the June 19th issue of the Geophysical Research Letters (GRL). "It's a Space Age record."....

The collapse happened during the deep solar minimum of 2008-2009—a fact which comes as little surprise to researchers. The thermosphere always cools and contracts when solar activity is low. In this case, however, the magnitude of the collapse was two to three times greater than low solar activity could explain.

"Something is going on that we do not understand," says Emmert.

One possible explanation is carbon dioxide: When carbon dioxide gets into the thermosphere, it acts as a coolant, shedding heat via infrared radiation. It is widely-known that CO_2 levels have been increasing in Earth's atmosphere. Extra CO_2 in the thermosphere could have magnified the cooling action of solar minimum.

Important clues may be found in the way the thermosphere rebounds. Solar minimum is now coming to an end, EUV radiation is on the rise, and the thermosphere is puffing up again. Exactly how the recovery proceeds could unravel the contributions of solar vs. terrestrial sources.

These plots show how the density of the thermosphere (at a fiducial height of 400 km) has waxed and waned during the past four solar cycles. Frames (a) and (c) are density; frame (b) is the sun's radio intensity at a wavelength of 10.7 cm, a key indicator of solar activity.

Note the yellow circled region. In 2008 and 2009, the density of the thermosphere was 28% lower than expectations set by previous solar minima. Credit: Emmert et al. (2010).

