

BREAKOUT

The Newsletter of the Hastings and
Napier Amateur Radio Clubs

Hastings Branch 13 NZART – Napier Branch 25 NZART

Volume 8, Issue 7, July 2010



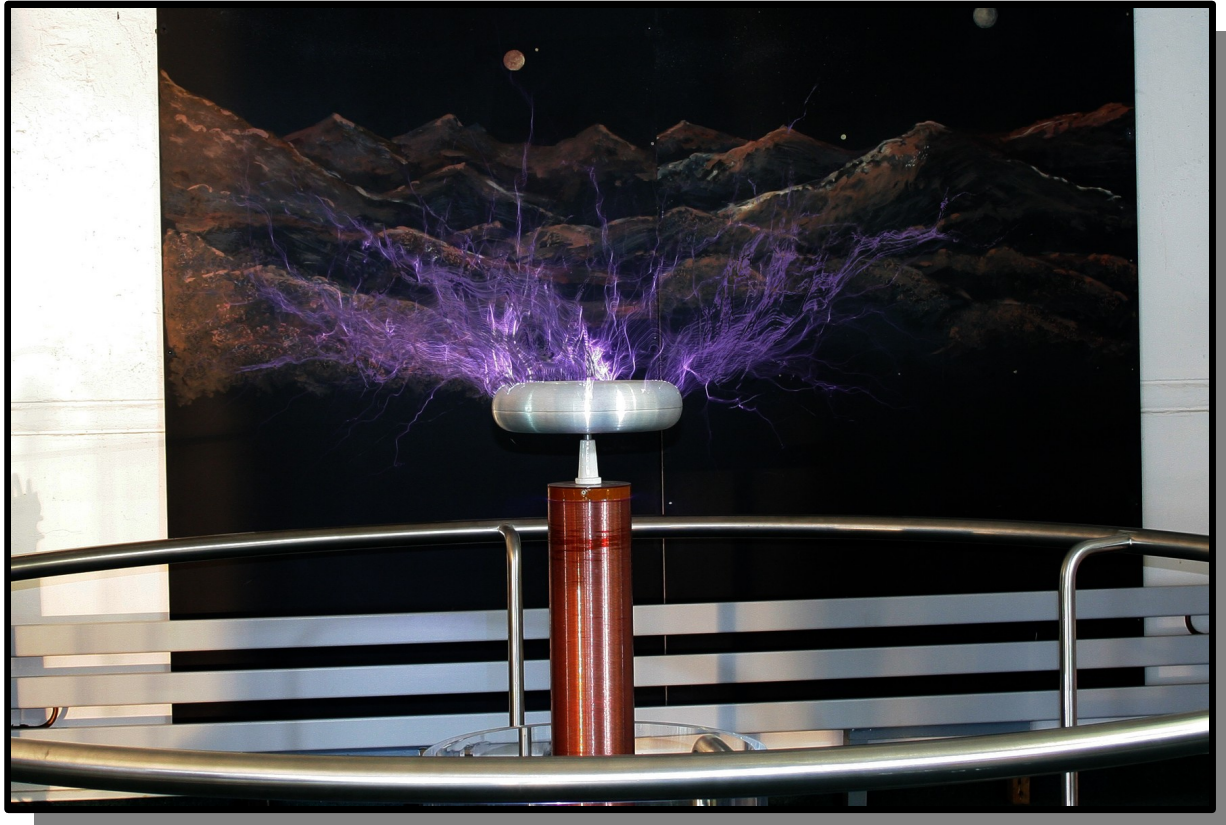
Hastings Br
13
Club Calls
ZL2AS
ZL2QS

Napier Br 25
Club Call
ZL2GT

IRLP
Node
6793
147.250

**Branch
Nets**
9.00 AM
Sunday
Morning
3615 Hz
147.250
MHz

Editor
John Newson
ZL2VAF



Our members enjoyed an interesting but cold evening at the Faraday Centre the other week.

Here is a photo of a Tesla coil in action there. This display made our members sit up and think!

Peter ZL2LF

<http://groups.yahoo.com/group/zl2as/>



Join the KIWI DX Group
Talk to ZL2AL for Details

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HASTINGS BRANCH 13

President: Warren Harris ZL2AJ 027 564 9284 or 929 9088 email warren@technaserve.com
Vice President: Robert Wallace ZL2SG Ph. 878 4993 email ffonzrjw@xnet.co.nz
Secretary: David Walker ZL2DW Ph 8760518, email david@apexradiocoms.co.nz
Treasurer: Bill Lowes ZL2UBG Ph. 877 5078 email bill.lowes@xnet.co.nz
AREC/CD: Robert Wallace ZL2SG Ph. 878 4993 email ffonzrjw@xnet.co.nz
AREC Deputy: Warren Harris ZL2AJ 027 564 9284 or 929 9088 email warren@technaserve.com

Committee: - Lee Jennings ZL2AL Ph. 844 1226 email leejen@paradise.net.nz
- Peter Dingley ZL2LF Ph. 843 2664 email peter.dingley@paradise.net.nz
- Charlotte Shuker ZL2QC Ph. 929 9088
- Rob Leicester ZL2 RFL ph 8786381 wk 8782828 email zl2rfl@yahoo.co.nz

Hastings QSL Distribution: Chris Johnson ZL2VC Ph.879 5219 email zl2vc@xtra.co.nz
Magazine Editor: John Newson ZL2VAF Ph. 027 230 3642 email john@thecomputerman.co.nz
NZART License Examiners: Lee - ZL2AL and Peter - ZL2LF
Club Call: ZL2AS and ZL2QS

Club Nights: Fourth Wednesday each month at 7.30 pm Surf Club Rooms, Windsor Park, Hastings

Hastings Branch 13 - President's Report

Hi all.

This months meeting we will be having Lee ZL2AL give a talk on vertical antennas for HF use. This should be technical and interesting for many hams out there.

Up and coming events

- 7th of August is the Gisborne Car Rally - some locals will be supporting this event
- 21st and 22nd of August - International Lighthouse Weekend
- 28th August - The Hawkes Bay Car Rally has been canceled.
- 4th and 5th of September - Gisborne Amateur Training Weekend - if they can get enough participants.
- 11th and 12th of September - Wairarapa Car Rally
- 26th and 27th of September - Local Amateur Training Weekend
- 2nd and 3rd October - SAR Training Exercise
- 30th and 31st of October - CQWW - the worlds largest radio competition.

The following few months are obviously busy so make sure you have your calendar filled in.

ZL2AS-1 has been established at Te Ahioateatua, near Ohuka, North of SH38. This digi will fill in for traffic on SH38 and in the northern parts of Hawkes Bay. ZL2AA-1 is now operating from Whakapunakee (690 repeater site) on 144.575. 690 Repeater has also had some major work done to it. The antennas, pole and feedlines have been replaced. The repeaters performance has been greatly increased and is now workable from high power mobile operation around Hastings and Napier.

With the up and coming amateur training weekend in late September - pass the word around people you know. Get them to touch base with me. This will build on the success of previous amateur courses we have run, and add to the amateur community.

Regards,
Warren Harris ZL2AJ

NAPIER BRANCH 25

President: Laurie Winton ZL2TC 843 8519

Secretary: Stan White ZL2ST 845 2422

Treasurer: Stan White ZL2ST 845 2422

AREC: Tony Wall ZL2RZ

email laurie@wilcom.co.nz

email stan.white@clear.net.nz

email stan.white@clear.net.nz

email ttwall@paradise.net.nz

Committee:

Tony Wall ZL2RZ 8354424

Gary James ZL2GAZ 843 9596

Michael ZL2FAR 843 4210

email ttwall@paradise.net.nz

email gazzaj@paradise.net.nz

Committee Meetings: Third Monday of the month 7pm at Club Rooms

Club Call: **ZL2GT**

Club Nights: First Wednesday each month (except January) 7.30pm at the Club Rooms:
123 Latham Street Napier

NAPIER NEWS...

The next Napier meeting will be on Wednesday 4 August at the clubrooms at 7.30 pm. Lee ZL2AL will give a presentation on vertical antennae.

At the last meeting Peter ZL2LF and Lee ZL2AL gave a digital modes demonstration in preparation for the kitset construction.

A good start was made to the digital modes kitset project on July 21 with constructors, supporters and helpers turning up. Lee had cut and drilled all of the pc boards in advance and constructors shaded the area to become track on the boards which were then etched by Laurie ZL2TC. A construction evening to fit the components and install it in the case will be held on Wednesday July 11 at 7 pm at the clubrooms. There are still a number of kits available for \$35. If you are interested contact Lee ZL2AL on 844 1226.

HF band conditions showed improvement during some parts of the last month with some good sunspots appearing at last. However it's a bit patchy particularly because we are in winter time. ZL2US reports some good signals on 20 metres.

Stan ZL2ST



Internet Link

The radio room on the USS Pampanito (a WWII submarine) - use your mouse to change the camera angle:

http://www.nonplused.org/panos/uss_pampanito/html/05.html

(if you follow the links at the bottom of that page, you can also view the rest of the sub)

73's De ZL2WRW Ross

This Months After Meeting Talk

It will be a Power Point presentation and talk about verticals:

*Do they radiate equally poorly in all directions
or are they simply getting bad press?
And Why Vertical Antennas?*

A bit of theory, a lot of practical straight talk with some examples of great verticals and very bad but very expensive commercial verticals.



The Future Of Radio?

from:

<http://www.physorg.com/news193551675.html>

I wonder if this can be made to work with longer wavelength photons (radio frequencies instead of light)

- Quantum teleportation achieved over 16 km
May 20, 2010 by Lin Edwards

Enlarge

a, A birds-eye view of the 16-km free-space quantum teleportation experiment. Charlie sends photon 1 to Alice for BSM. Classical information, including the results of the BSM and the signal for time synchronization, is sent through the free-space channel with photon 2, to Bob, before decoding and triggering of the corresponding unitary transformation. b, Sketch of the experimental system. See the original paper for more details. Image copyright: Nature Photonics, doi:10.1038/nphoton.2010.87

(PhysOrg.com) -- Scientists in China have succeeded in teleporting information between photons further than ever before. They transported quantum information over a free space distance of 16 km (10 miles), much further than the few hundred meters previously achieved, which brings us closer to transmitting information over long distances without the need for a traditional signal.

Quantum teleportation is not the same as the teleportation most of us know from science fiction, where an object (or person) in one place is "beamed up" to another place where a perfect copy is replicated. In quantum teleportation two photons or ions (for example) are entangled in such a way that when the **quantum state** of one is changed the state of the other also changes, as if the two were still connected. This enables **quantum information** to be teleported if one of the photons/ions is sent some distance away.

The Future of Radio? - Continued

In previous experiments the photons were confined to fiber channels a few hundred meters long to ensure their state remained unchanged, but in the new experiments pairs of photons were entangled and then the higher-energy **photon** of the pair was sent through a **free space** channel 16 km long. The researchers, from the University of Science and Technology of China and Tsinghua University in Beijing, found that even at this distance the photon at the receiving end still responded to changes in state of the photon remaining behind. The average fidelity of the teleportation achieved was 89 percent.

The distance of 16 km is greater than the effective atmosphere thickness of 5-10 km, so the group's success could pave the way for experiments between a ground station and a satellite, or two ground stations with a satellite acting as a relay. This means quantum communication applications could be possible on a global scale in the near future.

The public free space channel was at ground level and spanned the 16 km distance between Badaling in Beijing (the teleportation site) and the receiver site at Huailai in Hebei province. Entangled photon pairs were generated at the teleportation site using a semiconductor, a blue laser beam, and a crystal of beta-barium borate (BBO). The pairs of photons were entangled in the spatial modes of photon 1 and polarization modes of photon 2. The research team designed two types of telescopes to serve as optical transmitting and receiving antennas.

The experiments confirm the feasibility of space-based **quantum teleportation**, and represent a giant leap forward in the development of **quantum communication** applications.

The paper is available in full online at *Nature Photonics*.

More information: Xian-Min Jin, Experimental free-space quantum teleportation, *Nature Photonics*, Published online: 16 May 2010. doi:10.1038/nphoton.2010.87



More Internet links

Historical

This Day in Tech

May 7, 1952: The Integrated Circuit ... What a Concept!

<http://www.wired.com/thisdayintech/2010/05/0507integrated-circuit-concept-published/>

More on Solar storms

<http://www.npr.org/templates/story/story.php?storyId=124125001&ft=1&f=1007>

(Is this something that we need to consider for AREC purposes?)

<http://www.solarstorms.org/SRefStorms.html>

NOTICES

Gisborne Car Rally
7th August



International Lighthouse Weekend
21st & 22nd August



Rally Wairarapa
11th & 12th September



Local Amateur Training Weekend
26th & 27th September



SAREX
2nd & 3rd October



**CQWW - the worlds largest radio
competition**
30th & 31st October

*Please feel free to send notices to
john@thecomputerman.co.nz*

Buy – Sell - Etc

TET- Emtron TE-33
Yagi Beam Antenna
For 10,15,and 20 Meter Band
3 element HF
Boom two piece
2 x 50mm x 1.6 x 2m AL Tubing ,with joiner
Also 8 page Instruction Manual
This Antenna spent more time in the shed rafters than in the Air

TI Looks Brand New
will list on trade me in Two weeks
QRZ.com for my details Cheers ZL2 WL

*Please feel free to send you Buy, Sell or Trade
notices to john@thecomputerman.co.nz
Free listing to Branch Members*