

BREAKOUT

The Newsletter of the Hastings and
Napier Amateur Radio Clubs

Hastings Branch 13 NZART – Napier Branch 25 NZART

Volume 10, Issue 10, October 2012



Hastings Br
13
Club Calls
ZL2AS
ZL2QS

Napier Br 25
Club Calls
ZL2GT
ZL2G

IRLP
Node
6793
147.250

**Branch
Nets**
9.00 AM
Sunday
Morning
3615 Hz
439.175
mhz

Editor
John Newson
ZL2VAF



*Bob ZL1KY in the shack - a visit was made to see him by a local group
- more inside*

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



Join the KIWI DX Group
Talk to ZL2AL for Details

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HASTINGS BRANCH 13

President: Rob Leicester ZL2US Ph 8786381
Secretary: David Walker ZL2DW Ph 8760518,
Treasurer: Peter Keong ZL2PW Ph 8774529
AREC/CD: Robert Wallace ZL2SG Ph 878 4993
AREC Deputy: Peter Stiles ZL2AK Ph 8453534

email david@apexradiocoms.co.nz
email: pkeong@xtra.co.nz
email ffonzrjw@xnet.co.nz
email: p.a.stiles@slingshot.co.nz

Committee: - Lee Jennings ZL2AL Ph. 844 1226
- Peter Dingley ZL2LF Ph. 843 2664
- Wally Shuker ZL2MO Ph 843 5497
- David Sullivan ZL2OK Ph 06 8578853 wk

email leezl2al@gmail.com
email peter.dingley@paradise.net.nz
email ssplat@xtra.co.nz
email: bfr@xtra.co.nz

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

email zl2vc@slingshot.co.nz
email john@thecomputerman.co.nz

Club Nights: Fourth Wednesday each month at 7.30 pm Pakwhai Hall, Pakowhai Road, Pakowhai

TALK FROM THE TOP MAN

Hello all. It's well known that our Break Out publication gets around NZ but some may not know that it goes way further afield than this, to WH6OR and KD7YDK to name but two. It's an interesting concept to be in receipt of many other NZ Amateur Radio club magazines via electronic means and probably results in better interaction between many of us, especially those who are immediate neighbours of one another. And strangely I'm not aware of any recipients of various mag's that get them as a freebie that stops them being a club member in their respective area.....they are members and supporters in their area "because they want to be" and see the merits in belonging to their local club. In our Br 13 club there is only one member that gets a printed version (and that's "by arrangement"), all the rest are emailed out. This results in a good saving on costs to the Branch also.

A group of us recently attended the Manawatu "Table Sale" (and some locals were sellers as well). Thank you Br 20 for putting on this very "Social" event.....if nothing else.

It's a great time to catch up with many of you that we talk to.....and to maybe get a bargain. We wish Br 20 best wishes for putting on many more in the future. So who's had enough of the wind.....obviously the power pole outside our house had.....it blew down at 3-30pm on Sat. 14 Oct. so we were mains isolated until 9pm that night when repairs were completed. It didn't stop my station from operating on back up batteries though.....something to be aware of should an emergency circumstance arise in the future. There was also a slight decrease in local noise level too. There has been no aerial/mast damage at my place though due to the high winds.....so as the classic statement goes....."they're not up high enough" hi hi.

With quite a few CHB members within the HBARC it's an appropriate thing to do to have a meeting "at their place" (Waipukurau) so that's what we'll be doing on 24 Oct next.....see the separate notice elsewhere for details.

The Br 13 AGM is not far away and this also means Home Brew competition time, so get your finger pulled out and those projects completed so they can be brought along. Well this will do me for now, looking forward to seeing many of you at Waipukurau.....and on 30 Nov. for the combined Xmas Tea.

Regards, Rob (ZL2US, Pres. HBARC/Br 13, Hastings)

NAPIER BRANCH 25

President: Laurie Winton ZL2TC 843 8519 email laurie@wilcom.co.nz
Secretary: Karl Matthys ZL1TJ 8454372 email kmatthys@callsouth.net.nz
Treasurer: Stan White ZL2ST 845 2422 email stan.white@clear.net.nz
AREC:

Committee:

Lee Jennings ZL2AL 8441226 email leez2al@gmail.com
Gary James ZL2GAZ 843 9596 email karen.gary@vodafone.co.nz
Michael Mullins ZL2FAR 843 4210 email michaelmullins@xtra.co.nz

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

Club Calls: **ZL2GT, ZL2G**

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

Napier News...

There's an old adage, especially amongst dxers, that if your antenna didn't come down in the Spring gales, it wasn't big enough or high enough. My 6 metre yagi stayed up, but the rotator has jammed, so there's another job.

The ham shack at the Napier clubrooms has been getting a bit of use lately, and that's what it's for. The facilities will be open for use from 7.00 pm on meeting nights, and for half an hour or so after meetings. Next meeting on

December 7th will be the Napier AGM, and the topic for December will be VHF fox-hunting techniques. Nothing too technical, but there are some proven techniques that hams who haven't been on a DF hunt may not be familiar with. Recently ZL2DW and myself located the site of an interfering transmitter on 433 MHz in Hastings. Using standard D/F techniques we found it within about 20 minutes. A 2 metre fox-hunt as a club event is planned for February, so a lightweight 2 or 3 element yagi could be a good Xmas holiday project.

Also don't forget the combined clubs Xmas tea in November, venue is the Napier RSA, numbers to David ZL2DW.

Investigations re an alternative location for our present club rooms haven't met with any success, apparently our building is not deemed suitable for shifting to either of the two sites we were looking at, so our options are fairly limited, but we'll keep looking.

See you all at the AGM.

ZL2TC

SHACK VISIT to ZL1KY

A group of us recently traveled to Whakatane and called on Bob ZL1KY for a shack visit (thank you Mary and Bob for hosting us). While there Bob gave us a run down on his station and equipment and rather than me present you waffle Bob has very kindly given me below the spec's and situation regarding his station so have a read and enjoy.

David ZL2DW

The box at the base is for remote tuning of the 7Mhz parasitic half loop, as either a director or reflector. It can also be fed rf as a series, or L-match to any frequency from 1.8-30Mhz. The 7Mhz driver loop is quarter wave stub matched to 50 ohms. Coax relays for the feeder routing, ceramic relays for the high impedance switching.

The L/Series Match is a rebuilt Collins 180L-3 Motor driven L & C. Full remote control from the shack.

The yagi is all home built, 11 elements in total, No traps or loading coils. Basically 3 full sized yagis on a common boom. 3el on 20m, 3el on 15m, 5el on 10m.

All elements isolated from the boom with insulators made from 15mm thick, sheet Teflon, all stainless hardware etc. Elements are mounted under the boom to accommodate the phase matching bars and the balun.

Each driver is adjusted for resonance in their respective band, and their respective director is adjusted in length and spacing until the balanced feed point of each driver is 30 ohms, (30 ohms is the optimum feed impedance for power transfer/bandwidth/gain/ FB ratio) this measurement is done with a calibrated digital analyser, with a 1:1 balun. As all elements are isolated from the boom there is very little interaction from the unused elements, and there are no spurious element / boom resonances.

The 3 yagis are fed with a single 50ohm , RG213 coax, and a 5kw ferrite, W2FMI current balun.

The 50 ohm balanced feed from the balun, is applied to the 3 x 30 ohm drivers via a pair of 20mm square section phasing bars with an impedance of 80ohms.

The 3 driver elements are then trimmed very slightly, after the phasing network is attached, to make them appear slightly capacitive reactance at resonance, similar to a hairpin match.

Precipitation static bleed, and lightning protection is provided at the base of the mast.

Performance appears to be as per any full sized 3el mono bander on 20 & 15 meters.

Performance on 10 meters is excellent with sharper forward lobe than the other 2 bands due to the extra directors on 10m

The 3 reflectors were optimised for maximum F/B ratio on each band, using the analyser as a remote signal source at the rear of my 3 acres.

SWR readings are as follows

14.00 - 14.20	- 14.35	1.2 - 1.0 - 1.3
21.00 - 21.25	- 21.45	1.4 - 1.1 - 1.5
28.00 - 28.50	- 29.00	1.4 - 1.0 - 1.5

Using a fully balanced feed and matching network, the small side lobes are symmetrical, the nulls are very deep. The forward lobe is also directly inline with the boom, not skewed as is the case with off set gamma or omega match systems.

The amplifier in the picture is home built. It started life in Germany, but was never completed I acquired it as a 2 boxes of high power components, and commenced a full rebuild and commissioning. It uses a single Eimac 3CX1500 , Jennings Vacuum capacitors in & out of the Pi Coupler, vacuum relays, silver plated everywhere, etc. The biggest challenge was building and testing the tube protection network, the tube is protected against excess drive, over temp, excess swr etc. Timers for,- 10sec slow filament warm-up, 3 min cathode warm up, 3 min blower over run at shut down.

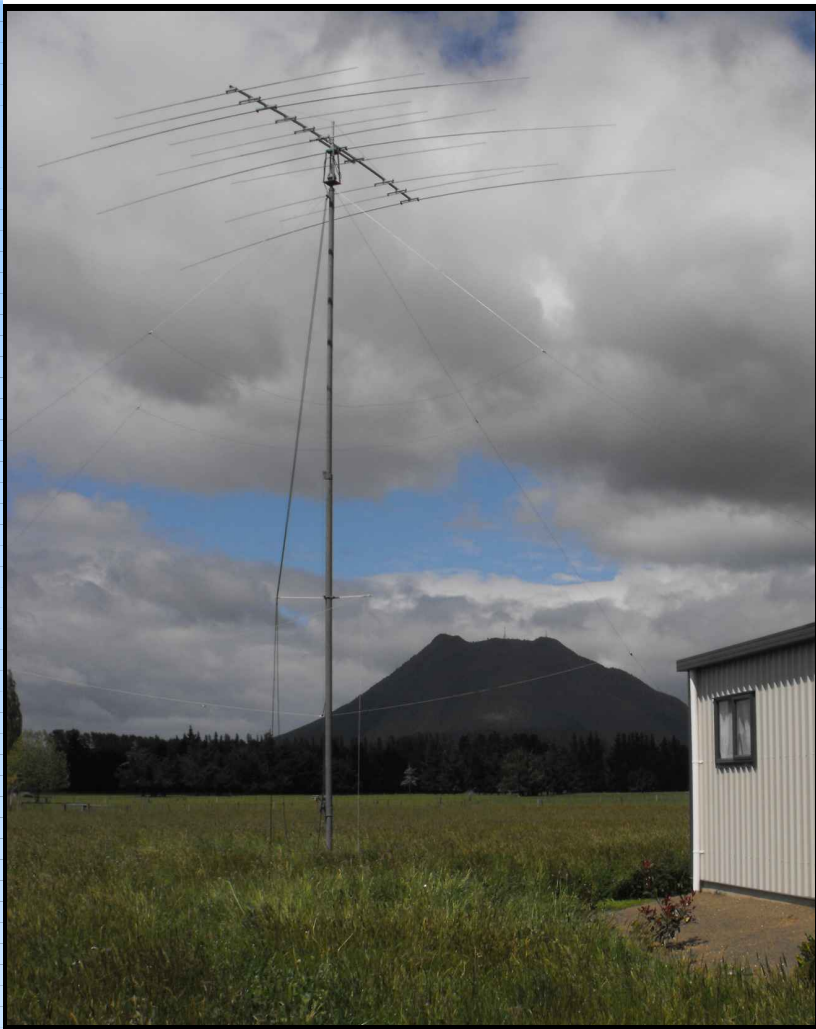
Separate 4Kv power supply with 3 stage progressive start up, PSU on floor- very heavy- oil filled caps etc

Amp runs cool at our legal limit, so hopefully I will never need the spare 3CX1500 that came with it, although I do swap them every 6 months to avoid cathode poisoning.

Hope this description inspires others to build their antennas or amplifiers, or at least dream about it !!.

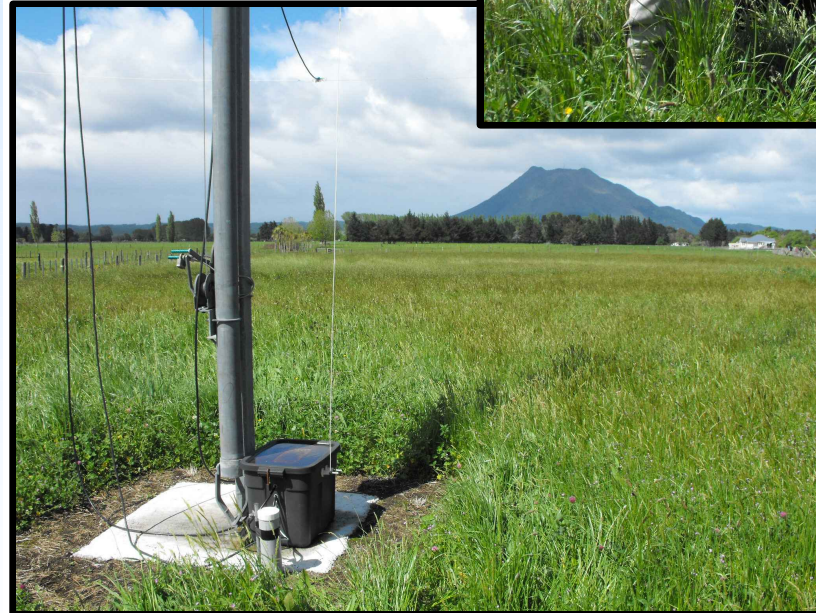
cheers,

Rob ZL1KY / ZL2AN



Tower, antenna and Mt Edgecombe

ZL1KY, ZL2US, ZL2AGD



Tower base and "box" with Mt Edgecombe beyond to the south

Switch off signals end of TV era

ROGER MORONEY | Monday, October 1, 2012 16:38

0 1
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In the course of his work as a communications technician, Hastings man David Walker has been up to the Mt Threave TV4 transmitter site from time to time to carry out maintenance work.

And in the course of that work he has flicked a few switches here and there.

Yesterday, at the prescribed time of 2am, he flicked one switch to the "off" position for the last time.

It was the switch that powered the transmission of analogue television signals across Napier and Hastings.

"It took less than a second to shut it down ... it was quite literally the flick of a switch," Mr Walker said afterwards.

"It all went perfectly."

The TV4 signals were shut down first, almost instantly followed by TV3, TV1 and TV2.

While the nearby Mt Erin transmitter was able to be electronically shut down from Wellington, the Mt Threave transmitter (between Mt Erin and Pakipaki) needed the personal touch.

It was his familiarity with the site and its communications systems that led to Mr Walker effectively staking his place in television transmissions history, with television transmissions - first beginning 50 years ago.

"It is significant because it is a change which affected a lot of viewers. They had to make the change to continue to get television."

Having seen changes in technology involving transmission and reception through the years, Walker said the move to digital was "a good thing".

The switchover went without a hitch, and while it took less than a second to shut it down, Mr Walker spent about two hours at the site dismantling some of the equipment.

"I feel quite chuffed to be part of our local Hawke's Bay electronics history and would like to thank the guys that first brought us analogue television way back in 1962 - but now it's the turn of the new digital transmissions for an improved technical result."

It was being packed up and sent to Auckland where it was likely to be recycled.

Hawke's Bay and the West Coast are the first two regions to make the switch, and Going Digital general manager Greg Harford was in the Bay last week checking out the final stages.

As he and his team had predicted, there was a "last minute" rush by people to pick up Freeview top boxes so they could continue to watch pictures, rather than the static that descended at 2am.

Sustainability Hawke's Bay's Erin Simpson said there had also been a surge over the past fortnight in people discarding their older-model television sets.

On Saturday, the day before the switch, he said there were enough televisions dropped off at the environment centre depot in Russell St "to fill a couple of trailers".

Sets could be dropped there for a \$10 charge. They would be packed aboard pallets and shipped to depots in Auckland and Wellington where they would be dismantled, with parts recycled or properly disposed off.

Mr Simpson said he had come across some people who believed older sets would not work in the digital age.

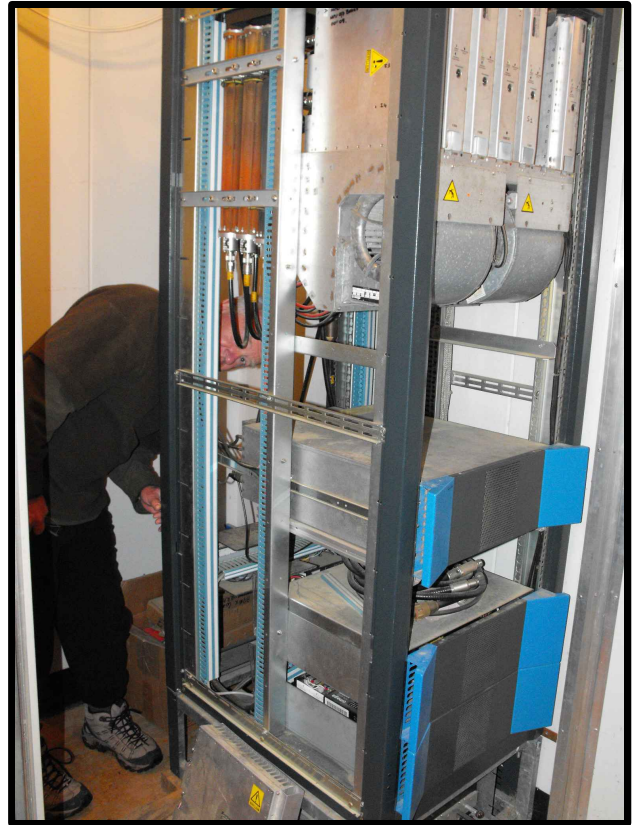
"They didn't realise all they needed was a top box."

Not that appliance stores were complaining, one salesperson spoken to describing the last week as "pretty full on" for new flat-screen digitally equipped televisions.

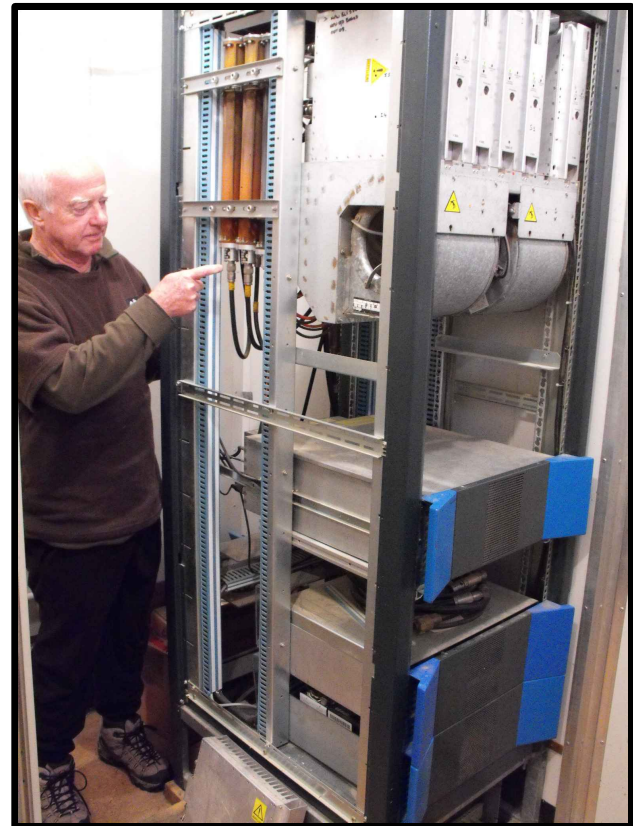
Going Digital research showed about 96 per cent of Bay households had made the switch.



ALL OFF: Technician David Walker about to flick the switch at the Hawke's Bay TV4 analogue transmitter which had long served Hastings and Napier. SUPPLIED PHOTO



Wot's this man doing ?



*and wot's he doing here
Mike ZL2VM helping with the TV4
"analogue switch off"*

Some pictures from the Palmerston North Table Sale Day, 6 Oct 2012



*Michael Bull
ZL2VM*



*Laurie Winton
ZL2TC*



*Table Sale
hall view*

NOTICES

The AGM of HBARC/Br 13 will be held at the Pakowhai Hall at 7-30pm on 28th Nov 2012, it will follow the normal monthly meeting.



After the AGM will be the "Home Brew" competition. Please bring your entries along and if they cannot be brought through the door then photographs are acceptable.



The combined Xmas Tea of Branches 13 and 25 will be held at the Napier RSA on Friday 30 Nov. Drinks at 6pm and meal at 6-30pm. A smorgasbord meal, \$27 per head, numbers attending bookings to Rob ZL2US or David ZL2DW.



There is NO Br 13 meeting in Dec., our next meeting will be on 23 Jan. 2013 at the Pakowhai Hall, 7-30pm.