



Hastings Br  
13  
Club Calls  
**ZL2AS**  
**ZL2QS**

Napier Br 25  
Club Calls  
**ZL2GT**  
**ZL2G**

**IRLP**  
Node  
6793  
147.250

**Branch's**  
**13/25**  
**Net**  
9.00 AM  
Sunday  
Morning  
670  
Repeater

**Editor**  
John Newson  
ZL2VAF



*What to do with an obsolete tower? Check out Page 7*

<http://www.zl2gt.nz/>

<http://www.zl2as.org.nz/>

**Emergency Call-in Frequencies: 3615khz and 670 repeater**



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## **NAPIER BRANCH 25**

**President:** Dave Crook ZL2MQ, 02102969006 email [davey.crook@gmail.com](mailto:davey.crook@gmail.com)  
**Secretary:** Karl Matthys ZL1TJ 845 4372 email [karl@waspnet.co.nz](mailto:karl@waspnet.co.nz)  
**Treasurer:** Stuart McLeod 8445706 email [stushe@slingshot.co.nz](mailto:stushe@slingshot.co.nz)  
**AREC:** Mike Bull ZL2VM 843 6052 email [rlb.mbb@xtra.co.nz](mailto:rlb.mbb@xtra.co.nz)

### **Committee:**

**Revell Troy ZL2SS** 0210742837 email [revelltroy@hotmail.com](mailto:revelltroy@hotmail.com)  
**Michael Mullins** 8434210 email [michaelmullins@xtra.co.nz](mailto:michaelmullins@xtra.co.nz)  
**Peter Breen ZL2CD** 0274721527 email [peterbreen@clear.net.nz](mailto:peterbreen@clear.net.nz)

**Committee Meetings:** 7:30 pm, 3rd Tuesday of January, March, May, July, September, November

**Club Calls:** ZL2GT, ZL2G

**Club Web Site:** <http://www.zl2gt.nz/>

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

## **Napier Amateur Radio Club**

Time Flies, here we are a couple of weeks away from the big weekend event, being the NZART AGM and DECO TECHO conference, to be held at East Pier. We have received 140+ registrations for various facets of the event.

Unfortunately, one of our presenters has had to pull out of the event. He was to present on the subject of QRP. His pulling out has opened up a slot in the technical programme. If you, or anyone you know would like to fill this spot then please let me know URGENTLY. Or maybe you would like to suggest a subject that you would like to hear about, and we may be able to find a presenter for that.

If you just want to come over to East Pier on the Sunday to look over the presentations, you can! Just please pre-register so that we can fulfil our obligations to health and safety etc. ICOM will be in attendance if you want to look over their stand. RWB has also donated a substantial part of the Conference Raffle, for which we are very grateful.

Ham Radio for me in the last little while has been monitoring the HF bands with the prototype Loop aerial which will be the subject of one of the presentations, I generally have been tuned to the FT8 portion of the bands that the aerial covers, and I have been fascinated with the number of countries represented there. I have spent some real time on QRZ.com. finding out where all these stations hail from, and being amazed at the performance of the aerial.

That's all from me right now, please support our Raffle, which will be available at Branch 13 meeting, and again at the last meeting of Branch 25 before Queens Birthday on Wednesday 2nd June , 7:30pm at our Latham St. Clubrooms.

73

Dave ZL2MQ.

## HASTINGS BRANCH 13

<b>President:</b>	Blue Smith ZL3TT	Ph 027 220 3724	email: <a href="mailto:kgsmithblue@nowmail.co.nz">kgsmithblue@nowmail.co.nz</a>
<b>Vice President</b>	Robert Wallace ZL2SG	Ph 878 4993	email <a href="mailto:ffonzrjw@gmail.com">ffonzrjw@gmail.com</a>
<b>Secretary:</b>	David Walker ZL2DW	Ph 876 0518	email <a href="mailto:david@apexradiocoms.co.nz">david@apexradiocoms.co.nz</a>
<b>Treasurer:</b>	Peter Moore ZL2HM	Ph 06 68577340	email: <a href="mailto:pikam@xtra.co.nz">pikam@xtra.co.nz</a>
<b>AREC/CD</b>	John Newson ZL2VAF	Ph 027 230 3642	email: <a href="mailto:zl2vaf@gmail.com">zl2vaf@gmail.com</a>
<b>AREC Deputy:</b>	Robert Wallace ZL2SG	Ph 878 4993	email <a href="mailto:ffonzrjw@gmail.com">ffonzrjw@gmail.com</a>
<b>Committee:</b>	Ray Barlow ZL2RB	Ph 06 878 6068	email: <a href="mailto:r.w.barlow@xtra.co.nz">r.w.barlow@xtra.co.nz</a>
	Rob Leicester ZL2US	Ph 878 6381	
	Peter Keong ZL2PW	Ph 027 217 1315	email: <a href="mailto:pkeong@xtra.co.nz">pkeong@xtra.co.nz</a>
	Brendin Graham-Ireland ZL2SB	Ph 027 777 2262	email: <a href="mailto:brendingj98@gmail.com">brendingj98@gmail.com</a>
	Stephen Simpson ZL2SPF		
<b>Hastings QSL Distribution:</b>	Wally Shuker ZL2MO	Ph 843 5497	email <a href="mailto:ZL2MO@hotmail.co.nz">ZL2MO@hotmail.co.nz</a>
<b>Magazine Editor:</b>	John Newson ZL2VAF	Ph. 027 230 3642	email <a href="mailto:john@thecomputerman.co.nz">john@thecomputerman.co.nz</a>
<b>NZART License Examiners:</b>	Peter – ZL2HM, Dave – ZL2MQ, Ray – ZL2RB		
<b>Club Call:</b>	<b>ZL2AS and ZL2QS</b>		

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

### From the Top Table

Well here we are and another month has gone by so fast it want be long till its Xmas again. I'm sure that the older we get the faster the time goes.

Well around here it does anyway, things are moving along very nicely and the retaining wall along the front of our home has been replaced at long last and looking good. I don't think it will fall over again in one of our 250 years floods, funny that, I can remember floods back in the 60s,70s and that sure was not 250 years ago, oops hang on wasn't there one back in the 50s as well or was that some where else, hell I don't know can't quite remember back that far.

Radio wise I have been working 17 meters and some other bands and it is quite good if you are there at the right time. There is still a lot going on on long path into the rest of the world.

I have got myself a new mic for my rig and some say it sounds good others say its not as good as my other rigs well tea is tea and coffee is coffee so you can't compare 2 different makes of rigs in that respect as they are totally different. It took me some time to work out the settings on my rig but I'm getting there. Rome wasn't built in a day so as I work my way around things and as yet have not had a listen on the SDR to what it sounds like but who knows sooner or later I will get it

sorted.

The club is doing well and we would still like some of you to put your hands up to give as a talk or put stuff down on paper. It would be great to hear what you have been doing radio wise as I'm very sure there must be some good stories out there.

Ok conference is just around the corner and as it is in Napier it would be nice to see some of you local hams support it as well. If you don't want to pay you don't have to it just means you can't have a cuppa or meals but you can attend the forums.

Well that's it for this month so I look forward to seeing some of you at the meeting on Wednesday and remember we are starting at 7pm 1900 for those of you that work on 24 hour clocks, hi hi.

Blue ZL3TT President Branch 13 HBARC



*Branch 13/HBARC, Hastings, office bearers,  
David Walker ZL2DW (Secretary),  
Blue Smith ZL3TT (President),  
Peter ZL2HM (Treasurer).*

## Time to warm up your straight key

As the winter solstice approaches, that means it's time once again for Straight Key Night - Winter Edition.

One of the nice things about the winter edition, is that it's an hour earlier than the summer event, so you get better propagation - and you don't have to stay up late!

Straight Key Night is a casual CW contest, running for just one hour (8-9pm) on Sunday 13 June.

Here are some tips for newcomers:

- You need to send and receive the full SKN exchange, which includes things like "type of key" and "power level".
- To keep things interesting, we follow the "QSY Rule" - it's easy once you get used to it

Please see the full details, including special log sheets and summary sheets, at [maritimeradio.org/skn](http://maritimeradio.org/skn).

If you have questions, please contact ZL1NZ at [skn@maritimeradio.org](mailto:skn@maritimeradio.org).



NZART Conference (hosted by Branch 25) at Napier and the "Deco Techo" forums are happening during Queens Birthday weekend.

If you are planning on attending (even in a free section) do please register (for Health & Safety reasons etc) via <https://karl125.wixsite.com/nzartconference>



The Branch 13 July meeting will be the "Donated Junk Auction" so gather up the goodies you wish to donate and bring them along on the night. The Hall will be open early.



THE Branch 13/25 MID YEAR XMAS TEA will be held at the RSA, Napier on 25 June at 6pm, bookings to David ZL2DW (0274 502501)



## Rally of Hawkes Bay 2021

We will be providing safety communications for the Rally of Hawkes Bay on the 24<sup>th</sup> of July and need six field operators and three in HQ. Field operators need VHF as a minimum and preferable HF if possible. You will be static so can put out long antenna.

Please notify John ZL2VAF 027 230 3642 if you are interested.



## For Sale

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Offers are invited for the items listed below:

Offers should be emailed to [zl2vm@nzart.org.nz](mailto:zl2vm@nzart.org.nz)

All items are 'as is, where is'. Freight is additional. These two issues will be discussed with 'offerers'.

Item	Description	Notes	
4	Yaesu FT-1000MP + MH 31 Mic		
5	Dentron Clipperton Linear		
6	KDK 20-30 VHF TCVR		
7	TAIT PS 12V 6A + Speaker?		
8	PS 12V 25A ?	Home Brew	
11	Associated with Item 4		
14	Foot-to-Talk		
15	Kenwood TS-430 HF TCVR		
18	Compass		
21	2m? AE		

20	20m AE + in plastic Bin		
26	Flooby Dust		
27	Bag of cords 1		
28	Bag of cords 2		
30	HF Whip	Home Brew	
31	Aluminium mast		
32	Short piece of Pipe		
33	Long piece of Pipe		
34	Draw of Wire (Remit ?)		
35	Draw of Wire (WH / BL)		
36	Green Bag of Coax		
37	Wire Aerials 1 (loose)	White Insulators and coiled	
38	Wire Aerials 2	In plastic Bin	
39	80 m Aerial	On Orange Reel	

16	VDU for PC		
17	PC		
19	Keyboard for PC		
23	PC Speakers		

29	HF Multi Band Vertical Bits missing??	Possibly a Hy-Gain AV – 640 ??	
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Please contact me at 027 472 1758 if you want to view any items.

## Free to a good home ...

The attached photograph is of four home-brew transmitters / RF amplifiers that were given to me many years ago by ZL2JK. They have been stored in boxes in my garage attic for the last 20 years. I know little about them apart from them being home-brew CW transmitters or amplifiers, for 80, 40 and 20 metres. If a club member, or a visiting radio amateur, would like them, they are welcome to take them away. I would prefer that the person taking them, takes all four.

David.ZL2WT 022 500 2181



## Notes

*Or there is a space, it's late, and I can't find anything to fill it hihi*

## New Life for an old tower

Holger Hannemann, ZL3IO



*Figure 1: March - 2021, Old airport tower with 3L40m, 3L20m & 5L15m Yagi's installed*

Most of you will remember the two steel tube towers supporting a T-antenna at Napier airport. They were taken down about 10 years ago and donated to the Napier radio club. They consisted of three inch diameter steel tube segments. Each segment is about 2.5 m long and weighs about 15-20 kg. The non-conducting guy wires are sized to hold about 20 tons each and allow for a height of 15 m per tower. There was little interest by local Hams to take ownership. The reasons were likely the required real estate plus you couldn't climb them as they were no steps.

Lee - ZL2AL and Stan (ZL2ST) (both sk) saw potential in them for the ZM4T contest station and so they ended up at our old site at Jim Tait's farm north of Napier. A few attempts to erect them there in one piece without a crane failed. With frustration our team gave up and put them aside.

A few years passed by and in late 2015 we took down all remaining antennas to move ZM4T for good to the new location in the Waimarama Heights. The old airport towers were also loaded onto the truck and when we sorted the remains of the old ZM4T antenna farm we decided to give them another chance here. I was sure we could apply the same erecting method to them as for my lattice tower by using a gin pole and a winch. As a matter of fact, I was planning on using the exact same gin pole and winch.

A few drawings were produced for our metal workshop of trust to manufacture the required adapters plus plenty of steps to be able to climb the tower. Additionally, we ordered special tower mast plates and tons of 80 mm U-bolts. That was done the same time we got the heavy-duty rotor arm for the lattice tower to allow to mount and rotate beams at half tower height. By this time, it was 2016. The full focus was still on the lattice tower and antennas. The airport towers were a project for the blurry future.

We took some time to discuss where to install and how to use them. The first years on this place taught us that wind is our biggest challenge here. Therefore, the idea grew to have towers with antennas fixed to them for dedicated directions. Aluminum is cheaper than the constant hassle with rotors and their maintenance. It would allow to have bigger beam (more elements) plus it would simplify the control and automation. Our site slopes over some 50-60 height meters and the upper part would have much advantage towards South America/ Europe long path. No higher point in that direction until we get to the Andes in South America.



*Figure 2: Nov -2016, Xenia - ZL4YL applying the primer to the tubes*



*Figure 3: Nov-2016, Xenia painting steps, gin pole support and winch base plate*



In 2016 Xenia and I managed to clean them, remove the old silver color, and apply a new dark blue paint to tubes, new steps and other support tools. In 2018 the location for the SA tower was identified and the hole for the concrete foundation dug out. By mid-2019 we had the first three segments erected in one piece and concreted into the ground. At this time, I was already very weak from the autoimmune disease I got in late 2018 and unable to climb myself anymore.

As you may know we had invited young HAMS multiple times to operate contests from here as part of the international YCP program (youth contest participation). Our own youngsters (ZL2EM, ZL4WW, ZL4YL) were regulars here anyhow but now we got a few new faces. The CQWW DX contest in late October is undoubtedly the biggest and most important SSB contest of the year. In 2019 we had a group large enough to operate in M/2 class (multi operator two radios). With all those young folks around I sure enough had planned some antenna work. It was like a lottery win for me when I learnt that our international guest Marek - OK1MV works as a professional tower climber for Telecoms in Europe. With Marek on the tower and a large ground crew it we had to get the tower segments installed to at least 15 m height.



*Figure 4: Oct-2019, L-R Alec-ZL1HAZ, Marke-OK1MV, Holger-ZL3IO, Mike-ZL2MY*

On Friday and Saturday morning before the contest we had called for a working bee. The youngsters supported by some of our older wines (ZL2MY, ZL2IFB) made a coordinated effort to erect the tower according to the German project planning. Things played out well and we were finished with the job before the contest started.



*Figure 5: Oct-2019, Marek-OK1MV on the tower installing the gin pole for the next segment*

Two months later in December 2019 we got a visitor from Germany. Alexander, DL5LED had met Xenia & Jaidyn in the 2019 international youth camp in Bulgaria. Alex is a young electronics technician and was commissioning a project on a mine site in New Caledonia. While already in the Pacific he added four weeks holidays in New Zealand. He stayed with us for two weeks before heading down south to climb Mt Cook. Alexanders another hobby is mountain and ice climbing. Do I need to say more?

Together with Alex we assembled the 3 element Yagi for 40 m that was meant to go on top. Alex and I had prepared everything under the tower for the installation. Some strong men were called in again for working bee (Thanks again to ZL2MY & ZL2IFB!!!) and one evening after work we got the monster up the tower and installed. Merry Christmas 2019! What better present can you get than a three element Yagi for 40m installed on the tower?



*Figure 6: Dec-2019, Alex-DL5LED installing the 3 element 40 m yagi in the last daylight*

The first half of 2020 I spent mostly in hospital battling for life. My so far last surgery was in late July'20 and since I slowly recover and gain back physical power. For the 2020 CQWW DX SSB contest we again had small youth group coming. In a working bee before the contest we installed a 3 element for 20 m on the tower and took down the 5 element 15 m Yagi for repair. It has lost half of a director in one of the storms plus needed a general overhaul. Since the tower is about 130 m away from the radio shack the losses on coax runs are substantial. Hard line coax for multiple antennas were out of reach cost wise. We decided to test a 600 Ohm line instead. Most of the needed components were on hand or could be acquired for reasonable cost. During my recovery period I couldn't climb towers, but I could build 600 Ohm lines and baluns. From earlier projects I still had a large drums of stranded copper wire (1.5 sqmm). To keep the wires at distance I used cable ties and heat shrink tube as seen in the picture.



Figure 7: 600 Ohm line, stranded copper wire using cable ties & heat shrink method

The baluns were a bit more challenging. I recalled ZL6QH at the time also used 600 Ohm feeding and their antennas were designed for 600 Ohm. Unfortunately, I couldn't reproduce the performance of their baluns. My versions would never be as broad band as theirs (160-10 m) but with some adaption to the winding numbers we were able to create baluns that work for 3-4 bands in the lower or higher HF range. Since we planned for multiple 600 Ohm lines, they would get frequency area dedicated baluns. The toroid used here and by ZL6QH is an FT240-61. While ZL6QH needed only one balun at the shack to feed their 600 Ohm design antennas we have 50 Ohm antennas. Therefore, we need 2 baluns (1:12 ratio) with short 50 Ohm coax runs going up the tower and into the house.

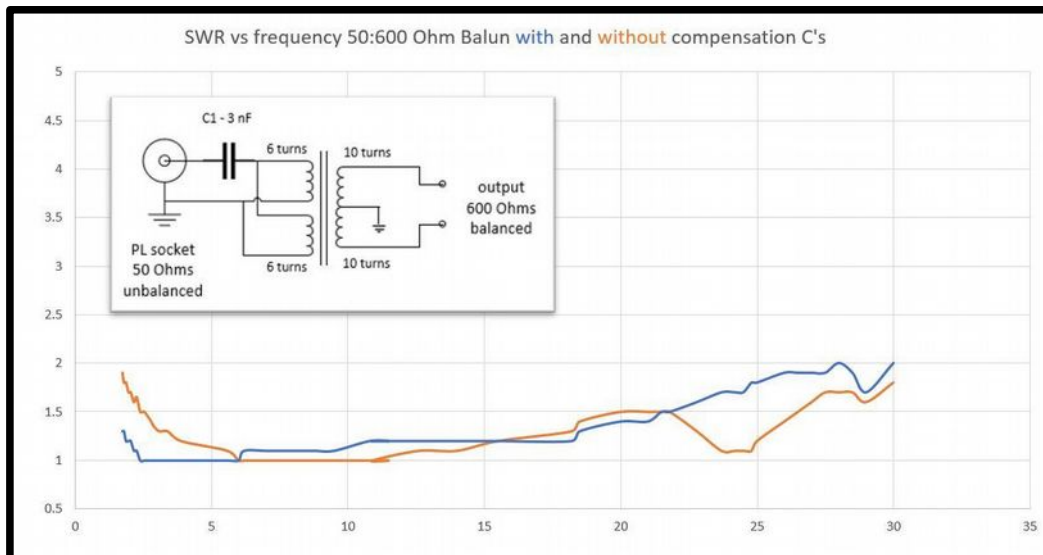


Figure 8: trying to optimize 1:12 baluns, SWR vs frequency



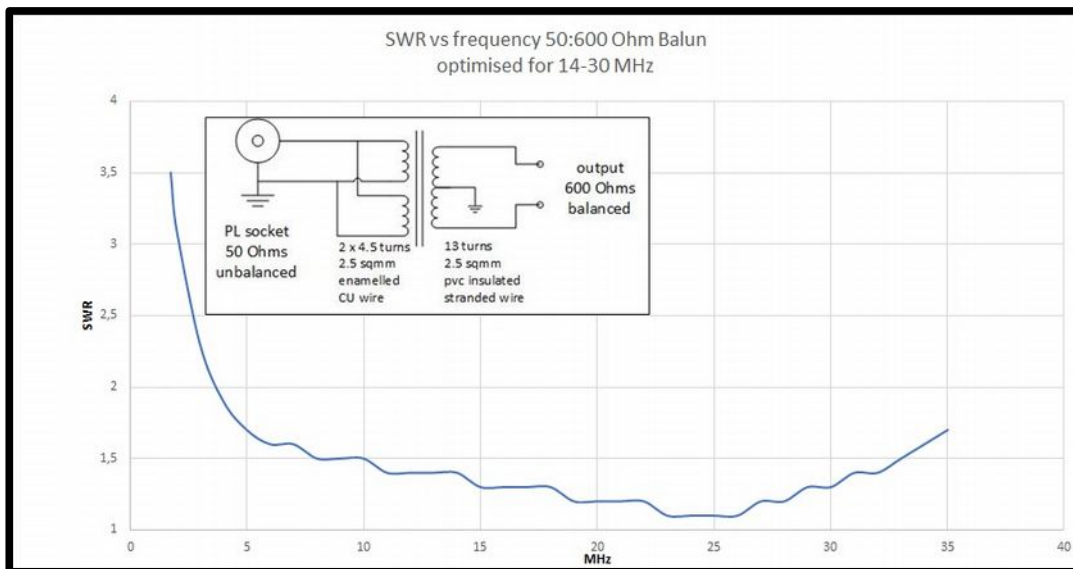


Figure 9: finally a version that works at higher hf bands

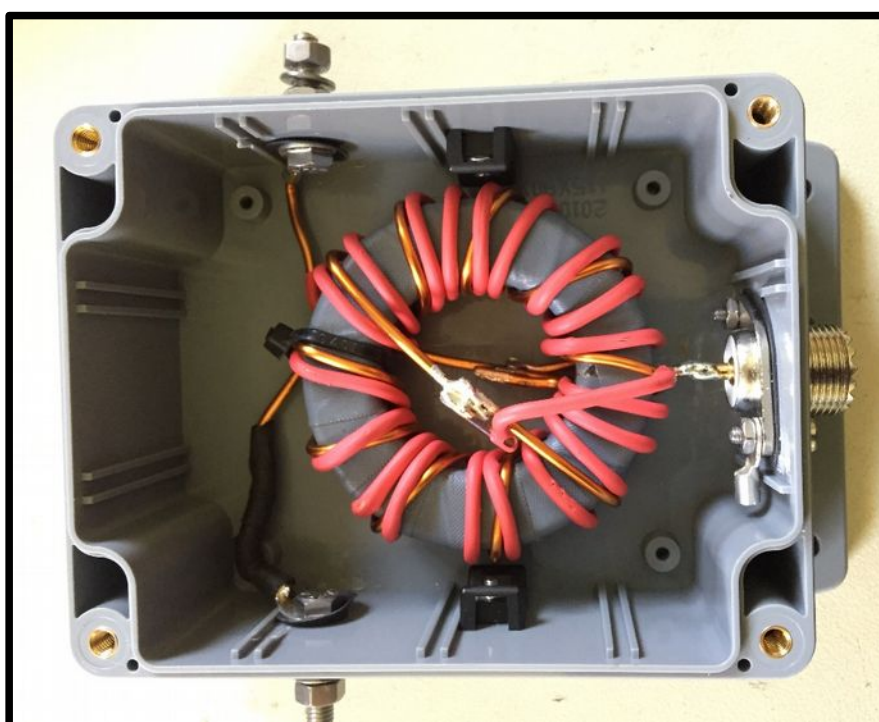
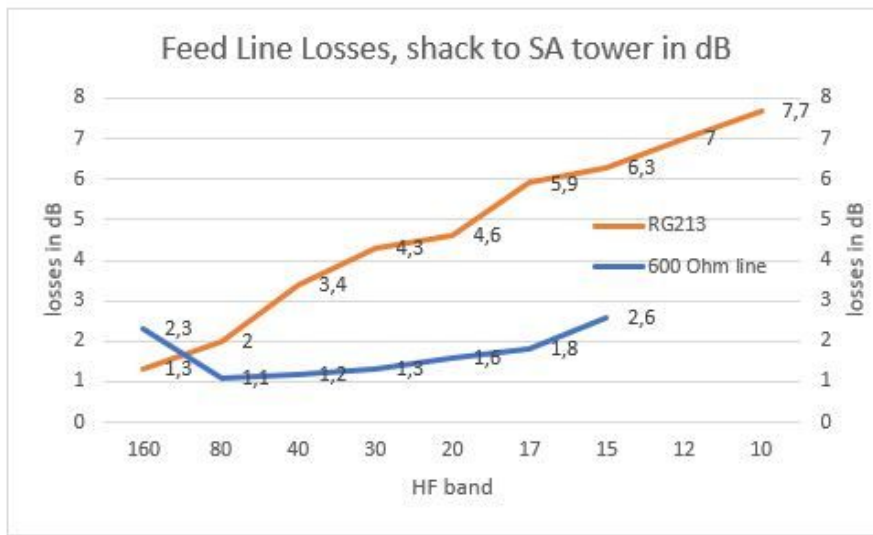


Figure 10: Balun 1:12 installed in its outdoor box

In late November 2020 Xenia came back home from her first year at university. With her help we made good progress. We installed support poles to hold the 600 Ohm lines, added the terminations for the baluns to coax on both ends. Then the first line was put in place and we did measurements to compare losses over frequency between the pure coax run and the 600 Ohm lines. The measurements included for the coax the complete coax run from radio shack to tower base and for the 600 Ohm line the coax run from the radio shack to the first 1:12 balun, the 600 Ohm line and the second 1:12 balun at the tower base. There we terminated with a 50 Ohm dummy load. The final coax run up the tower and top the antennas was excluded for both measurements. They are relatively short with around 12-15 m.

The results are shown below and were kind of shocking to us. On 10 m we burn 84 % of the power on the long coax run. Even on 40 m over 50 % of the power never reaches the antenna. The baluns used for this measurement work well from 80-20 m. The increasing losses at the outer ends of the blue curves are related to the balun performance and will be lower with band dedicated baluns.





Xenia and I also repaired the 5L15 Yagi. By January 2021 I was able to climb again and in February the 5 element Yagi for 15 m went up the tower. So that is where we stand today.

We will add a 10 m beam to it as well. We have the 4 element 10 m Yagi from the old ZM4T site still laying around here, but we also have enough parts to build a 6 element Yagi. Of course, we also looked at Yagi designs for 600 Ohm but they require a driver consisting of three closed elements. That adds extra complexity to it. Figure 11 shows different Yagi feeding arrangements. The parasitic elements have an impact on the impedance but for simplicity lets just state A - low impedance feeding (~50 Ohm), B - 300 Ohm feeding, C & D - 600 Ohm feeding, where in case of D the element diameters must have a ratio of around 1 :3.

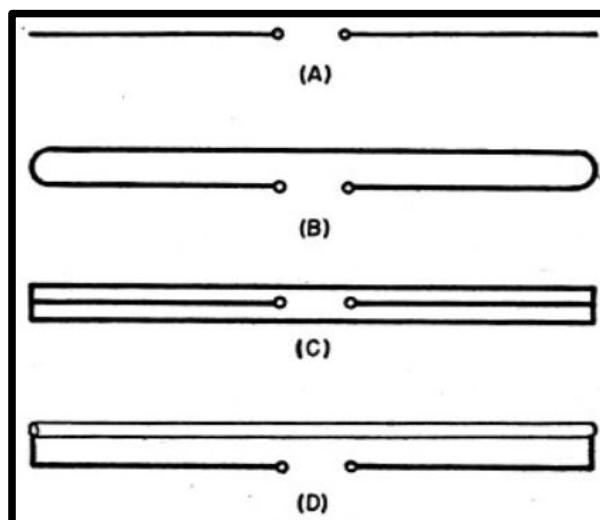


Figure 11: Driven element configurations for Yagi's

I looked at quads and 600 Ohm feeding. After going in circles for a while I came across a possible solution. Now it looks like I have a design for a multiband quad with direct 600 Ohm feeding. A 600 Ohm quad would be less complex plus I might be onto a solution using a single and common feed line for 20/17/15/12/10 m. But that would be a topic for another article.

Let's go back to our new South America tower. Does it work? You bet! At 2-3 pm local time we can start running South America on 40 m. Shortly after EU via long path will start. Same for 20 m. We always struggled with South America on 15/10 m from here. The CQ WPX SSB contest last weekend of March '21 was the first real test for the 15 m beam up the tower and we worked about 2 times the SA- stations of earlier years on this band. The only Europeans worked on 15 m this year were via long path. And the conditions in general were rather bad. Below picture show a comparison between the 2018 and 2021 WPX SSB QSO's with South America only. And in 2018 we in total made over 300 QSO's (or 15%) more than in 2021.

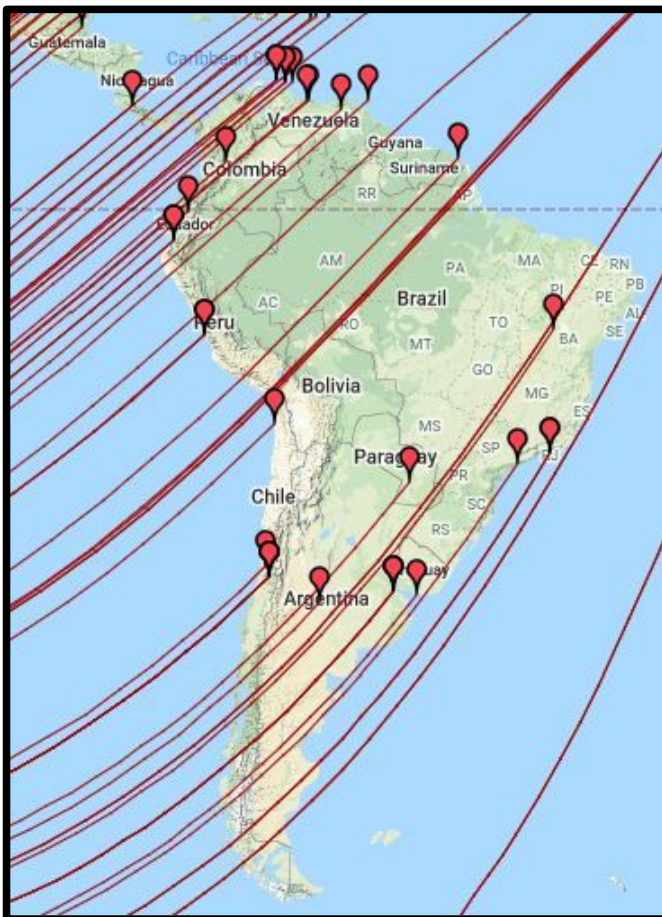


Figure 12: 2021 WPX SSB contest, QSO's with SA

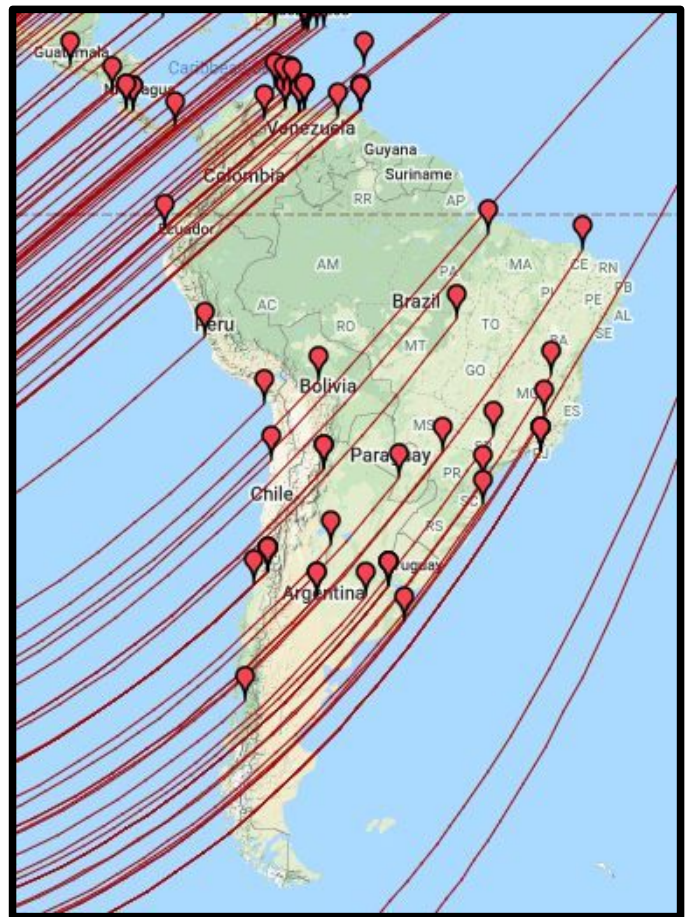


Figure 13: 2018 WPX SSB contest, QSO's with SA

The majority of our Europe QSO's in this year's contest were made long path.

Below are some log extracts for the 40 m band. Look at the time! In April/May we are UTC+12 hrs meaning the time is also NZ time in pm.



Edit Log ZL3IO									
Year		RST							
Mon.	Day	UTC	kHz(MHz)	Mode	Call	Find	Sent	Rcvd	Name
Apr	11	0421	7004	CW	LZ1NP		599	599	LUBO
Apr	11	0422	7004	CW	OK2BOB		599	599	
Apr	11	0423	7004	CW	UA6YX		599	599	
Apr	11	0423	7004	CW	CX5FK		599	599	
Apr	11	0424	7004	CW	LY7T		599	599	
Apr	11	0424	7004	CW	SM7ZDI		599	599	
Apr	11	0425	7004	CW	OM5DX		599	599	PAVEL
Apr	11	0426	7004	CW	RD5D		599	599	
Apr	11	0426	7004	CW	LZ2TW		599	599	
Apr	11	0427	7004	CW	OH5VX		599	599	
Apr	11	0427	7004	CW	HA8YA		599	599	
Apr	11	0428	7004	CW	EV1R		599	599	
Apr	11	0428	7004	CW	RW3PL		599	599	
Apr	11	0429	7004	CW	LZ1QI		599	599	PETKO
Apr	11	0430	7004	CW	UR2MO		599	599	STAN
Apr	11	0430	7004	CW	SP4FKS		599	599	
Apr	11	0431	7004	CW	UR5TLN		599	599	
Apr	11	0431	7004	CW	HA9RP		599	599	
Apr	11	0432	7004	CW	HA2ERO		599	599	
Apr	11	0432	7004	CW	E77F		599	599	
Apr	11	0433	7004	CW	HA5OW		599	599	LACI
Apr	11	0434	7004	CW	K1WGM		599	559	
Apr	11	0434	7004	CW	IK0VTG		599	599	
Apr	11	0435	7004	CW	OK1NK		599	599	

Edit Log ZL3IO									
Year		RST							
Mon.	Day	UTC	kHz(MHz)	Mode	Call	Find	Sent	Rcvd	Name
May	03	0246	7074.8	FT8	LU8VLE		+05	-14	
May	03	0249	7074.8	FT8	CA4COQ		-01	-11	
May	03	0250	7074.8	FT8	IK8WJZ		+01	-23	
May	03	0253	7074.8	FT8	UT5MB		+01	-16	
May	03	0254	7074.8	FT8	UR4QRH		-08	-22	
May	03	0256	7074.8	FT8	LU6VEK		+01	-13	
May	03	0257	7074.8	FT8	LW5DMG		-06	-13	
May	03	0258	7074.8	FT8	LW5DR		-10	-18	
May	03	0301	7074.8	FT8	IU0ILH		+03	-17	
May	03	0302	7074.8	FT8	R7WA		-01	-20	
May	03	0303	7074.8	FT8	UA4APN		-06	-18	
May	03	0304	7074.8	FT8	EA3CFV		-09	-19	
May	03	0307	7074.8	FT8	HC1OOT		+00	-20	
May	03	0309	7074.8	FT8	M00IA		-06	-19	
May	03	0312	7074.8	FT8	LU2VH		+00	-01	
May	03	0315	7074.8	FT8	LU5BPT		-13	-16	
May	03	0318	7074.8	FT8	DH8WR		+00	-14	
May	03	0320	7074.8	FT8	LU1FI		-14	-17	
May	03	0321	7074.8	FT8	IV3OSC		-01	-10	
May	03	0322	7074.8	FT8	DL7VBJ		-06	-14	
May	03	0323	7074.8	FT8	UT7HA		+00	-10	
May	03	0324	7074.8	FT8	LA9BM		-04	-09	
May	03	0327	7074.8	FT8	HA1SU		-07	-19	
May	03	0328	7074.8	FT8	HB9FAN		+01	-06	

Figure 14: extract from 40 m log in the early afternoons

Conclusion:

Some things take a long time and this second life project was one of those. Was it worth the effort? We say ABSOLUTELY. The elevated location of this tower is perfect for the path to South America/Europe long path and we're looking forward to a few more sunspots to life up 15/10 m. We now have three directional antennas for the bands 40/20/15/10 m. Our set-up allows us to use any combinations of the three independently for receive and transmit at any time. The antennas typically point into different directions (AS/EU sp, NA, SA/EU lp). That gives us great flexibility and instant coverage of the main areas.

Let's see how we can utilize the second tower. It is still waiting to find its new task.

73 Holger, ZL3IO for the ZM4T team



Not sure if you have seen this clip from the BBC but you welcome to circulate ✓

Ciao

Joseph G1XZL/ZL2SCI

<https://youtu.be/JP02gVOJkh8>

# THE NZART 2021 CONFERENCE

Saturday and Sunday June 5-6, 2021 : East Pier Conference Centre, Ahuriri, Napier

## Main Programme

### Saturday 5 June 2021

08:00 Registration, Coffee & Mingling  
09:15 Welcome  
09:30 Keynote Speaker .....

10:00 Morning Tea  
10:30 NZART AGM  
12:30 Break for lunch  
13:30 NZART AGM continued  
15:00 Afternoon Tea  
15:30 AREC Forum  
17:30 AREC Forum ends

18:00 drinks  
19:00 Dinner, Keynote Speaker .....

### Sunday 6 June 2021

#### Room One

09:00 WSJT new modes, ZL3RC  
09:45 Morning Tea  
10:15 Satellite Rx, link budgets and more, ZL4IG  
11:00 Session ends  
11:15 Fun with VNA's, ZL2WRW  
*12:00 Lunch*  
13:00 Low cost Mag loops, ZL2IT and ZL2MQ  
13:45 Session ends  
14:00 Forum: Arduino in Ham Radio, ZL2MQ  
14:45 Afternoon Tea  
15:15 Broadband transformers and Hi Q toroid inductors in RF design ZL3PAH  
16:00 Mix, mingle, discussion time .....

#### Room Two

09:00 Forum: Future of Ham Radio, ZL1VH  
09:45 Morning Tea  
10:15 Solid State Power Amps, ZL3RC  
11:00 Session ends  
11:15 DMR and evolving National Link, ZL4JY  
*12:00 Lunch*  
13:00 How the ZM4T Contest station works, ZL3IO  
13:45 Session ends  
14:00 How to set up for LOTW, ZL2IFB  
14:45 Afternoon Tea  
15:15 Attempts to receive noise from Jupiter, ZL4DK  
16:00 Mix, mingle, discussion time.....

#### Room Three

09:00 Restoring WW2 Radios ZL3KB-ZL3CK  
WW2 man-pack radio propagation experiments, how they compare with their handbook figures, and how they can be verified in theory ZL3KB, also: Of Boonton and Bakelite-The ARC-5 Radio, ZL3CK  
09:45 Morning Tea  
10:15 Softly softly, QRP, ZL2OZ  
11:00 Session ends  
11:15 Setting up for Jock White FD, ZL2QM  
*12:00 Lunch*  
13:00 80m DX, new ham perspective ZL2XC  
13:45 Session ends  
14:00 Whanganui-Taranaki wide area network, 2TC  
14:45 Afternoon Tea  
15:15 How to get going on 3cm, ZL3RC  
16:00 Mix, mingle, discussion time

#### Room Four

09:00 WARO AGM  
09:45 Morning Tea  
10:15 WARO continued  
10:45 Session ends  
11:00 OTC AGM  
*12:00 Lunch*  
13:00 SOTA up a hill near you, ZL2AJ  
13:45 Session ends  
14:00 Receiving Weather Satellites, ZL2SPF  
14:45 Afternoon Tea  
15:15 160m Contest sites and Aerials, ZL2DW  
16:00 Mix, mingle, discussion time

18:00 Drinks  
19:00 Dinner, speaker, Entertainment



# THE NZART 2021 CONFERENCE

Saturday and Sunday June 5-6, 2021 : East Pier Conference Centre, Ahuriri, Napier

## Alternative Programme

Saturday 5 June

**Am:** Art Deco Vintage Car tour (one hour). Departure 10:15 am from East Pier. Tour includes National Tobacco Co. Ahuriri, Bluff Hill Lookout, homes that survived the 1931 earthquake, the Napier CBD. Art Deco Centre, Earthquake documentary (20 minutes)

**Lunch** 12 Noon at the Masonic Hotel, Emporium restaurant.

**Pm:** Choice of visiting the local Museum's latest exhibits, the National Aquarium, playing Mini golf, or checking out the shopping in Emerson Street. Entrance to the Museum is free. A discount will apply to the entry fees for the Aquarium and Mini golf. Transport on demand by Napier Radio Club members, including return to Ahuriri.

Sunday 6 June

**Am:** Bus tour starting 10 am, visiting Ātea a Rangi Star Compass at Awatoto, Arataki Honey, Te Mata Peak look out, Havelock North Village.

**Lunch** 12 Noon at Mangapapa Lodge.

**Pm:** Craggy Range Winery, tasting 5 wines (\$15 charge not included, waved if some purchased). The Mission Winery, tasting 6 wines (\$10 charge not included) includes souvenir wine glass, history of the Winery.

*Return to East Pier by 4pm.*



# Amateur Radio

## What is Amateur Radio?

Amateur radio is a hobby of exploring the limits of radio, electronics and digital technologies. Once you've passed the licence exam, you'll allocated a worldwide-unique call sign and can operate (and build) radio equipment capable of international and space-based communication, from wherever and whenever you like.

What can you explore:

- Operating low power in the outdoors
- international communication from your backyard (without the Internet or cell phones)
- bouncing radio signals off asteroids
- talking to the International space station
- designing and building radio transceivers and antennas
- sending signals 2000km using just a Raspberry Pi and a micro-transmitter.
- exploring what can be done linking the Internet, radio and computers
- providing communications support for search-and-rescue (SAR), Civil Defence and Amateur Radio Emergency Communications (AREC).

## **When can I enrol?**

Enrolments are open for our "HamCram" study program from 5 April 2021 and close on 15 July 2021. We recommend enrolling early so you have the maximum study time.

## **HamCram weekend - Saturday Aug 7 and Sunday Aug 8 2021**

## **How do I enrol in the HamCram program?**

It is simple; just email the organiser at [newham@z12ko.org.nz](mailto:newham@z12ko.org.nz) to get your name on the list

If you are interested in knowing more about our local radio club go to [www.z12ko.org.nz](http://www.z12ko.org.nz)

# Beginners Classes

Although not essential to be part of the HamCram weekend we will be running Beginners Classes which will cover all but three of the topics covered on the HamCram weekend.

Tuesday May 25 – Class 1 – Safety / Measurement / Electronics

Tuesday June 1 – Class 2 – Resistance / Ohms Law / Power Law

Tuesday June 8 – Class 3 - AC Theory / Semiconductors / Devices

Tuesday June 15 – Class 4 - Meters / Harmonics / Review Ohms and Power Law

Tuesday June 22 – Class 5 - PSU / Regulated PSU / dB

**Saturday June 26 – Weekend Exercise – Practical sessions.**

Tuesday June 29 – Class 6 - Transmitters 1& 2

Tuesday July 6 – Class 7 - Receivers 1 & 2

Tuesday July 13 – Class 8 – Resonance / Transmissions Lines / Antennas

Tuesday July 20 – Class 9 - Propagation / Interference / HF Station

Tuesday July 27 – Class 10 - Operating 1 & 2 / Digi modes

Tuesday August 3 – Class 11 – Recap

**Saturday Aug 7 and Sunday Aug 8 – HamCram weekend and exam**

Tuesday Aug 10 – What's next? Where to from here now I have your licence?

Tuesday Aug 17– What's next? Your Amateur Radio Station

These Classes will also be run via ZOOM for those who have registered for HamCram

# ZL2KO



## Manawatu Amateur Radio Society

## HamCram Course - Enrolment Form

Name \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Email \_\_\_\_\_

Phone \_\_\_\_\_

### Enrolment

- The Complete Program includes exam fee and meals - \$150.00**

The compulsory manual must be downloaded and printed, it is available from <http://www.nzart.org.nz/exam/download-examination-files>

Enrolment forms must be completed and can be either posted to The HamCram Co-ordinator or emailed to [newham@z12ko.org.nz](mailto:newham@z12ko.org.nz)

### Payment Method

- Direct Credit or Direct Deposit**
- to Westpac Account: 03 1522 0161009 00
  - **put *your surname* as the reference, AND *hamcram* in particulars**

- Cheque** made out to the Manawatu Amateur Radio Society

Post your enrolment form and cheques to:

**The HamCram Co-ordinator**

Branch 20

24 Langley Ave

Palmerston North