

# BREAKOUT

The Newsletter of the Hastings and Napier Amateur Radio Clubs

Hastings Branch 13 NZART – Napier Branch 25 NZART

Volume 21, Issue 10, October 2021



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



*Blue's ZL3TT setup as referred to in his write up on page 3*

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

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

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



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## **NAPIER BRANCH 25**

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**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**

At last months Club Meeting we ran the annual quiz, winners were Revell ZL2SS and Stu ZL2XS, 17/20 correct. Prizes for all contestants, even if only a chocolate fish, this event went down well, with about 10 people having a go.

Next meeting is the AGM and following that the annual Home brew contest.. bring that project or anything else you have made, photos and / or video of your project are acceptable for large entries. Prize for this contest is the Pan Pac Trophy.

At the last Committee meeting a discussion was held about the AGM and in particular the election of officers, this discussion was precipitated by our current Secretary Karl ZL1TJ saying he would not stand for secretary this year, having occupied the post for the last 10 years. I would personally like to thank Karl for an outstanding job during this time, he has been a major asset to the Club.

On the face of it, there appears to be a reluctance among members to take up office, and this means that people get locked into roles for long periods. In the future I would like there to be an unofficial term of say 1~2 years for any of our executive roles ie Secretary, Treasurer and President, thus giving everyone a chance to contribute, and not letting the Club stagnate.

Think about supporting your club by standing for any of the officer positions or committee, . At least come along to support those that stand. The AGM is first Wednesday in November at 7:30pm (3/11/21). If we cannot fill the Secretary (or any other Roles) then the Club needs to consider its position as to viability, think about this and your possible role in any decisions made.

There has been some suggestions forwarded about the future of NARC which will be spoken of at the AGM, however I am not putting these ideas into this newsletter because I want you all to have a think about the direction the Club should head in, and hopefully pass those thoughts along at the AGM.

That's all for now, let's make the AGM a lively affair, don't forget to bring your Home Brew Effort for the Pan Pac trophy.

73 Dave ZL2MQ

## HASTINGS BRANCH 13

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<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

Giddy one and all, well here we are at the end of October and there is only 2 months till Xmas. Where has the year gone.

I have been told that there is a ham in the North Island that sits on a frequency that he works and if you go onto that band he comes up and tells you to move on. I don't agree with this if you do things right and ask if the band is being used and no one comes back then I

can't see why you can not use it without being told to move. No ham owns any band or frequencies and I for one would ask him for his call sign and then make a complaint to NZART and ask that they sort it out and if that don't work then the next step is RMS. Why should I move just

because this one person thinks he can control it and have it just for his or her use only. Yes it would be easier to move but we all have that right to use the bands, unless we are ordered not to use them for some reason. If you do have this happen to you be polite and do what you think is right. I am talking about HF bands not VHF or UHF unless you are on simplex. Most of us can just work together and share the bands like they were intended to be used, we are meant to be gentlemen and Ladies and we abide by the same rules and laws that are laid out for all of us. I for one do not condone this sort of behave and I hope that no one in Branch 13 does.

Well on a lighter note I have now got my station working just how I have always wanted it to work (see the picture). I know some of you have been buying up large of late like I have and from what I hear the Icom 7300 is very popular with quite a few of you. I still like my trusty Kenwood and I am also loving my new radio the Icom 7610. Boy it is one very good radio and I must say thanks again to Rob ZL2AN who sold it to me.



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



Next month is Branch 13's AGM and if you have an interest in the club I strongly recommend you make an effort to come along as we do need some new blood in the club. This will be my last year at the top if I don't get voted back on. Next year will definitely be my last as your President. Four or five years at the top is long enough and I would like to see some of the younger ones come on board so they can learn what it is like. You young'ns are the clubs future and need to step up while we are still around to show you the ropes. Don't be scared we don't bite, we can help you and guide you in the right direction without you being dropped in at the deep end. Something for you all to think about as a fair few of us are getting on in life.

Well that's it this month I look forward to seeing some of you down in Waipawa on Wednesday night so till then stay safe and wear your mask when out and about till we get back down to level 1.

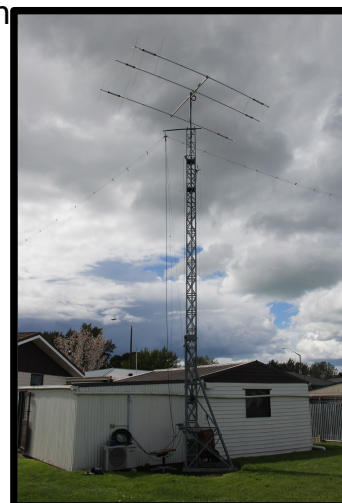
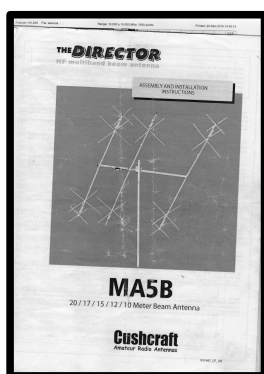
Your President

Blue ZL3TT Branch 13 HBARC.



## Telescoping tilt over tower for removal after reasonable offer

It is situated on Kennedy Road opposite Anderson Park. This is a serious piece of kit and will require the use of a truck to remove. It has a yaesu rotator and controller included and on top is a Crushcraft multibander and a 80m-40m ? Dipole. This is in good nick with very little rust or corrosion. Enquires to Jeff Wallace ZL2HT on 0226198891.



## Branch 13/HBARC October meeting

(non formal)... will be held at Waipawa. It will be the "CHB Meal and Meeting" at Skinny Mulligans, at 6pm, on Wed. 27 October, extended family welcome.

Booking numbers to David ZL2DW (0274 502501 or via david@apexradiocomms.co.nz) before 5pm Monday 25 October

There will be NO meeting at Pakowhai Hall on 27 October. This is a time to visit the patch of our CHB members and enjoy some social time.



## Branch13/HBARC, Hastings, NOTICE OF AGM

(and Homebrew Competition)

At Pakowhai Hall , Wed., 24 Nov., 7-30pm, following the normal General Meeting. Get those Homebrew project finished off and bring them along to present.

## BALUNS

The interweb abounds with information (and mis-information) about what is basically a very simple, but frequently mis-understood device. i.e. the humble balun.

So what follows is a brief description of baluns and how they work, that might help make the function of a balun a bit clearer. You can find more extensive information on the function and construction of baluns in the various ARRL and RSGB handbooks, and of course, on the internet.

The primary purpose of a balun is to isolate, or decouple, the antenna from the feedline, so that the feedline does not become part of the antenna.

Sometimes a balun is also used to effect an impedance transformation e.g. 50 to 200 ohms, but this is a secondary function. What a balun will not do, is cure a high VSWR. This is a different problem, with a different solution.

Connecting a balanced load e.g. a half-wave dipole, to a coaxial feeder, will cause the balanced antenna to become unbalanced, resulting in RF currents flowing on the outside of the coax feed-line. It is possible to have RF current flowing in one direction on the inside of the shielding braid, and RF current flowing in the opposite direction on the outside of the shielding braid, because high frequency RF currents flow on the surface of a conductor, and not through it as is the case with low frequency AC or DC. This is an undesirable condition known as common mode current.

So the coax feeder now becomes part of the antenna, with unpredictable results. i.e. radiation from the coax on transmit, and noise pickup on receive. Other effects are the VSWR being affected by changes in the position or length of the coax feed-line. ( And sometimes causing the transceiver chassis to become "hot" with RF.)

Obviously it is possible to have an antenna work satisfactorily without a balun by getting just the right combination of antenna height and feed-line length on a particular band, but it's a bit hit or miss.

A properly constructed balun will choke off or suppress the unwanted common mode currents. For medium to high frequencies, there are two types of balun in common use. The first is an RF transformer known as a Ruthroff or "voltage" balun. The second common type is a transmission line or "current" balun. A frequently used device is known as a common mode choke, which works on the same principle as a current balun. As long as they are properly constructed for the frequency band in use, either type will work satisfactorily. The "voltage" balun will work over a wider frequency range, but requires the antenna to be symmetrical i.e. the two legs of the dipole must be about the same height and length.

Further info at: <http://en.wikipedia.org/wiki/Balun>

de ZL2TC



## UNDER CONSIDERATION...

a visit to Taraponui (4300 ft asl, site of '725 and '405 repeaters, inland from Lake Tutira) in early Dec. 2021 or in Jan. 2022. You will need to be (preferably, talk to ZL2DW) an NZART member to go on site. Some car pooling with folk with 4WD vehicles should be arranged. Bring a camera, cold weather clothing and lunch. If you're interested please let David ZL2DW know so some planning can occur.

# So You Still Have Your License but Haven't Operated in Years:

## A Guide to Getting Back into the Hobby

Posted by Anthony Luscre, K8ZT on July 17, 2020 at 2:04 pm

One of the problems of writing an article like this is that Hams who have not been active for years probably don't know about "OnAllBands" and won't find this article. So I'm asking for your help. Please dig out that old club roster, find the Hams who have not been active, and email them the link to this article. If you don't have an email address for them, print out a copy, jot down "www.onallbands.com" on it, and mail it to them. You might just make an old friend's day and reawaken a dormant Ham.

To the inactive Hams out there, I would like to welcome you back on the air. It's time to dust the cobwebs off that old equipment or acquire new gear to replace what you sold or gave away. Much about the hobby is still the same, but a few things have changed thanks to computerization, online activities, and other advances in the world of telecommunications. As you will notice, many of the changes involve three-letter Acronyms or Initialisms, such as DMR, SDR, and FT8.

### VHF/UHF FM and Repeaters

Let's start with 2M, 440 MHz, and your local repeaters. Most of the repeaters are still there, but you may find four big changes:

For more information on Digital FM, here are a few resources:

Repeaters are not as busy as they used to be, mainly due to cellphone use. Previously they were one of the only ways to keep in touch with other Hams when we were out of the house or in the car.

Most repeaters no longer have Autopatch. This connection to a phone line allowed us to phone home via the repeater to non-Ham family or friends. Again, you can thank cell phones for this.

Some repeaters have switched from analog to Digital FM or added digital to existing analog setups. D-STAR, DMR, C4FM, and other digital protocols have become very popular. These systems allow repeaters around the world to be linked, so that VK4ABCD callsign from Australia you heard on the local 2M repeater was real!

EchoLink uses VoIP (Voice Over IP) and allows voice QSOs between Hams. When coupled with a repeater, it allows operators from around the world to access and use a local repeater. EchoLink operates in one of two modes. In Single User mode, EchoLink provides point-to-point communications over the Internet between two Hams using computers. In Sysop mode, a VHF or UHF radio is interfaced with the computer and used to connect to a local repeater, just as anyone using an HT or base station would.

Word of the Day: D-STAR

Amateur Radio Relay Group: DMR

Digital Mobile Radio Presentation, Ken Dorsey, KA8OAD

Discover D-STAR from ICOM

Digital FM requires radios that have these modes. You cannot simply use that old

IC-02AT HT in your junk drawer. DX Engineering has a variety of VHF/UHF handhelds, mobile radios, and base stations capable of operating D-STAR, C4FM, and DMR. Another option is to use a "hot spot" to connect your analog HT, via the Internet, to these modes. Here's a video on hot spots from Ken, KA8ODA: Establishing Hot Spots for Your D-STAR Radio.

### HF Bands

A returning Ham will find many familiar signals and types of operation on the HF bands. You'll also find major changes, including these:

New Amateur Radio bands: Depending on how long you have been off the air, the so-called WARC bands, on 30, 17, and 12M, might be new to you. Same goes for allocations at 60M (5.3 MHz), 2,200 meters (135 kHz), and 630M (472 kHz). For the complete rundown of all Amateur Radio allocations, visit the ARRL Graphical Frequency Allocations page.

New modes by the dozens: Often called Digital Sound Card Modes (DSCM), many new modes have been developed for HF bands. These include PSK, PACTOR, CLOVER, HELLSCHREIBER, JT65, and more. These modes require a computer to both modulate and demodulate the signals on the radio.

Two of these modes have become dominant. FT8 and FT4, part of the WSJT-X suite, are giving CW and SSB a run for many Ham's total on-air time. The big advantage of these modes is the ability to make contacts with very weak signal levels. This means that bands that seem dead can now support contacts. Hams with suboptimal antennas, such as those facing homeowner restrictions or other impediments, still have an opportunity to make contacts on HF bands. Here are three articles with details on FT8 and FT4:

## FT8—What Is It and How Can I Get Started?

### FT8/FT4 An Introduction

### FT8/FT4 Quick Start User Guide

With CW proficiency no longer required to get your license, you might think that Morse code transmissions have dwindled to a mere trickle. You would be wrong, as there are still lots of CW signals filling the bands. There are a few trends in CW, though, because many still using this mode or learning it seem to be focusing on:

Fewer rag-chew QSOs

Fewer slow-speed QSOs

More CW contesting entries

Trying to work that rare one for multiple modes

Using a keyboard to send CW

Taking advantage of technology for decoding CW, including multiple signals at one time with software like CW Skimmer

DX spots used to come via friends' phone calls or packet-based DX clusters. Today, most spots come via Internet-based sources. Many CW and digital spots are actually collected automatically by receivers with software-based decoding. The Reverse Beacon Network and PSK Reporter are two examples of these. For more on spotting and propagation visit [www.k8zt.com/propagation](http://www.k8zt.com/propagation).

### HF Radios

Radios for HF (and in many cases UHF/VHF) have had a few big changes in the last ten years.

Software Defined Radios (SDR): Whether they are run through an attached computer interface as in the Flex series or built into a stand-alone radio with buttons and knobs, as with the extremely popular ICOM 7300, SDRs have drastically changed radio technology.

Many of today's transceivers feature multicolor LCD displays that include band scopes. Also known as spectrum scopes or waterfall displays, band scopes allow you to see signals on adjacent frequencies without moving your tuning knob.



Adjustable filtering is built into most new rigs. Previously there was a significant post-purchase cost associated with adding additional filters to your new radio.

Built-in sound cards: As explained above, Digital Sound Card Modes have become very popular. Manufacturers have responded by installing a sound card in the radio. This allows easy access to these modes with a simple USB cable between the radio and your computer. This single USB cable has replaced the older RS-232 or proprietary interfacing cables required to connect your radio to your computer.

Most HF radios include 6M and some even have 2M and 70cm.

Some radios now have built-in CW and/or RTTY decoding.

DX Engineering has a wide variety of HF Radios, from budget-minded to full-featured. Below is a table comparing some of the most popular rigs.



Brand	Radio	6M	HF (160-10M)	2M	70cm (440 MHz)	Sound Card	CW Decode
ICOM	<a href="#"><u>IC-7300</u></a>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	
Yaesu	<a href="#"><u>FT-991A</u></a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Kenwood	<a href="#"><u>TS-590SG</u></a>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
ICOM	<a href="#"><u>IC-7100</u></a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Yaesu	<a href="#"><u>FTDX-3000</u></a>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
Yaesu	<a href="#"><u>FT-891</u></a>	<input type="checkbox"/>	<input type="checkbox"/>				
ICOM	<a href="#"><u>IC-705<sub>(Q)</sub></u></a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Yaesu	<a href="#"><u>FT-818<sub>(Q)</sub></u></a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Yaesu	<a href="#"><u>FT-450D</u></a>	<input type="checkbox"/>	<input type="checkbox"/>				
ICOM	<a href="#"><u>IC-718</u></a>		<input type="checkbox"/>				
Alinco	<a href="#"><u>DX-SR8T</u></a>		<input type="checkbox"/>				
	Q- QRP Radio <10 Watts						

### Activities to Try

As you get back on the air, it's important to have support and resources when learning how to operate new modes or new equipment. I suggest a multi-pronged approach:

Join and attend your local Amateur Radio Club's meetings. You can meet Hams using the new modes and equipment, get advice on purchasing new equipment, and find Elmers who can help with station setup or operation. To locate a local group, you can search for ARRL-affiliated clubs here.

Join the ARRL, the national organization for Amateur Radio in the U.S. One recent change is that members now have access to all four of ARRL's major publications—QST Magazine, On the Air (publication for new Hams), QEX, and National Contest Journal.

If you are interested in specific areas of Amateur Radio, consider joining a special interest club. There are groups for DXing, Contesting, VHF, QRP, and other branches of the hobby that can provide support for these activities.

Get in the know by plugging into Amateur Radio News—"Keeping Up with Amateur Radio News and Events."

On-air activities to try:

New modes: FT8 and FT4 are good candidates, especially if you have a limited antenna.

Try a contest: State QSO Parties are great low-key contests for newer contesters. This year there is also a composite competition, the State QSO Party Challenge.

Get on HF and try to work all 50 states and 100 DX countries, even if you already have your WAS and DXCC awards. The challenge of doing it again (especially on a new band or mode) can be invigorating! Read "Top Secret: Techniques for Working 50 States and 100 Countries" for a little encouragement and some tips.

### QSLing

Our last topic is QSLing. Traditionally, Hams have exchanged paper postcards acknowledging contacts with other stations. Many awards require these as proof for applicants. In the past, there were two ways to exchange cards—directly via mail or via the ARRL QSL Bureau. Logbook of The World (LoTW) from the ARRL is an online paperless QSLing system. Another system is eQSL. In addition, many DX stations are accepting a hybrid type of QSL exchange called OQRS. For more information on all of these QSLing changes and more, read "QSLing in an Online World."