GATEWAY

The Official Magazine of the Gippsland Gate Radio & Electronics Club Inc A0016893M

June 2023

Digitizing Video Tapes

Mid-Year Dinner

Raspberry Pi OS

And More

WIA Affiliated Club

Cover photo, Mark VK3PKT's handhelds, HD1 DMR and Dual Band FM 70cm/2mt, Kenwood TH-G71 Dual Band 70cm/2mt, YiNiTone Zello PTT (Uses 4G Network), Icom IC-T90A Triband 70cm/2mt/6mt. (If you have any good photos, please send them in)

Contents.

Event Queue

June:

16th.	8:00	General Meeting
24 - 25th.		Winter VHF-UHF Field Day – courtesy WIA

July:

7th	7:30	Prac night
15th.	6:30	Mid-Year Dinner – See page 5, booking required
15th.		Trans-Tasman Low Band Contest – courtesy WIA
21st.	8:00	General Meeting

August:

4th	7:30	Prac night
12-13th.		Remembrance Day Contest – courtesy WIA
18th.	8:00	General Meeting
26-27th.		A.L.A.R.A. Contest – courtesy WIA

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Club run events are only possible with the involvement of ALL members.
Without volunteers to coordinate and participate in club events the club will fail to prosper

President's Message

Hi GGREC members,
This month's report is coming to you while I'm on the road in central NSW.
I have some work tasks in Brisbane, so I'm writing this up under inverter power.
I won't be back in time for the meeting

This Friday night Klaus is going to be talking about pile up handling and contesting in the Guide Hall. What it means and how to go about preparing yourself for the task. There is a bit involved to do it right. Some time-and-motion preparation is in order. Klaus will give the lowdown on what you have to do. Having both a fridge and a coffee machine next to your radio is a distinct advantage.

Another reminder is due about our Mid-Year Dinner scheduled for 6:30pm, July 15 at the Dandenong Club, corner of Heatherton and Stud roads . You will see a more detailed advert elsewhere in this magazine. These events are a fun way to get together for all our members. You will need to book a spot in advance, so remember to drop an email to committee@ggrec.org.au so that we can get the numbers right.

We made some progress on the Club shack last Prac night. The small gate was compromised when the posts were spread to allow the latch to be withdrawn. Fred and I welded up the structure to prevent this from happening again. Other security features are currently being implemented at the shack site.

A couple of weeks ago I ran fresh feedlines from the shack to the top of the tower. The old cables were really old and lossy. When I hit the PTT it took about 2 days for the RF to reach the antenna. Several times I found a puddle of water on the shack bench. Initially I thought "*Oh great, a cat has snuck in and peed on my rotator box*". While I was somewhat relieved to find it was just plain water, it raised the question 'Where is it coming from?' It turns out that it was oozing out from the sheath of the 7-core rotator cable after heavy rain. Not a good sign! Placing the rotator controller in a potted plant was only a temporary fix. Anyway, I ripped out the old cables and it took a year before I put the new cables in place. Three runs of RG213 and a couple of runs of LL400, fresh rotator cable, Network cable for the SGC tuner, video cable for the tower camera and some 240V cable for the tower floodlight. All this had to be hauled 20m underground in the conduit that runs from the tower base to the shack, where it now terminates on a new patch panel.
I figured that it had been a while since the antenna rotator had been given an inside inspection, so I cracked it open for a look. All the bearings had rusted into a fossilised lump, like some kind of Antikythera artefact. My first reaction was '*Ok this is buggered, time to shop for a new one*.' I looked at some of the staggering prices of new rotators, then went back to the lump. I chiselled out the old balls, re-machined the surfaces in the lathe and re-stocked it with fresh, slightly oversized balls. I re-packed it in marine grease, replaced all of the bolts with stainless ones and re-sprayed it a pretty sky-blue. (or more accurately…1975 Ford Tractor blue) Total cost: about $60. It works well, except on a bright sunny day, it looks like someone has stolen it. Hopefully I'll get another 40 years out of it – then I'll buy a new one. (Maybe.) I'm going to write an article about the renovation process in more detail.

Anyway, enjoy Friday night and I'll see you all in VK3 in July.

Cheers, Ian VK3BUF

From The Editor

This month I was going to do a repair on a powered speaker I acquired, and say about some of the crazy choices made in its design, things like using a finned heatsink, good, but enclosing it inside a very small speaker box buried in a sheet of polyester speaker wadding, VERY bad.

Needless to say this thing does not work properly, otherwise I wouldn't be trying to fix it, however the other side of this, and I suspect many others is the downright crappy IC power amp chips used in them. Just look at the specs, often maximum power is quoted at 10% distortion, What on earth? (Minding the cussing) Who wants to listen to music bouncing into that much distortion?

Good quality amplifier modules, like the 'Humming bird' kit/project from Silicon Chip magazine, talk about 0.005% distortion figures, orders of magnitude better. So why have those who have designed this speaker gone down such a bad road. Is this why HiFi seems to have all but died, with most people's ears being blunted by awful sound to the point that they think that this is all music is capable of, so they don't seek anything better, equipment wise.

I remember working at Telstra where a few fellow workers would access some audio news feeds on the smart phones, and leave that playing though the internal speaker as the phone laid flat on their work bench. I found the screechy sound to be absolutely awful; I did my best to find something to do well away from their phones.

Back to this speaker, I have verified that the drivers are all ok, so now I keep tossing up between fixing it, and throwing all the electronics away, then either starting from scratch with a new amplifier, or just turning it into a passive speaker. I looked through my junk and I do have a board with the right amplifier chip on it, that I was going to use in a 'suitcase speaker' build, however looking up the relevant data sheet has got me rather depressed. Maye it's good that I find out now, rather than going through that build only to be somewhat disappointed thinking 'What a waste of time', why does it sound so awful.

Now I could head off to Altronics and buy a few humming bird kits, however last time I looked they were about $50 each (or was that when there was a sale on). I do have one kit, courtesy of a gift card from my brother. However putting $100 of amplifier in a dodgy at best suitcase speaker project, not to mention the power supplies to run it all, is frankly Nuts.

So all this will have to wait on the back burner as I have been well and truly distracted by playing around with my old Video8 tapes, with me and Marianna burning many hours watching this 30 plus year view of ourselves before we succumbed to older age, and obviously failing memory as I am having a hard time remembering all of this.

Now if I could find the tape where I was trying to use my camera's high speed shutter to catch the moment a LED blew itself in half as I 'over clocked' it with an electric fence energiser.

Paul VK3TGX

GGREC MID YEAR DINNER

Hi GGREC Members,

This year we will be having a Mid-Year Dinner to celebrate our great Club and the 2023 mid-year point.

This year we have booked at the Dandenong Club, which is located near the corner of Heatherton Road and Stud Road.

The Dinner will start at 6:30 pm on Saturday the 15th of July.

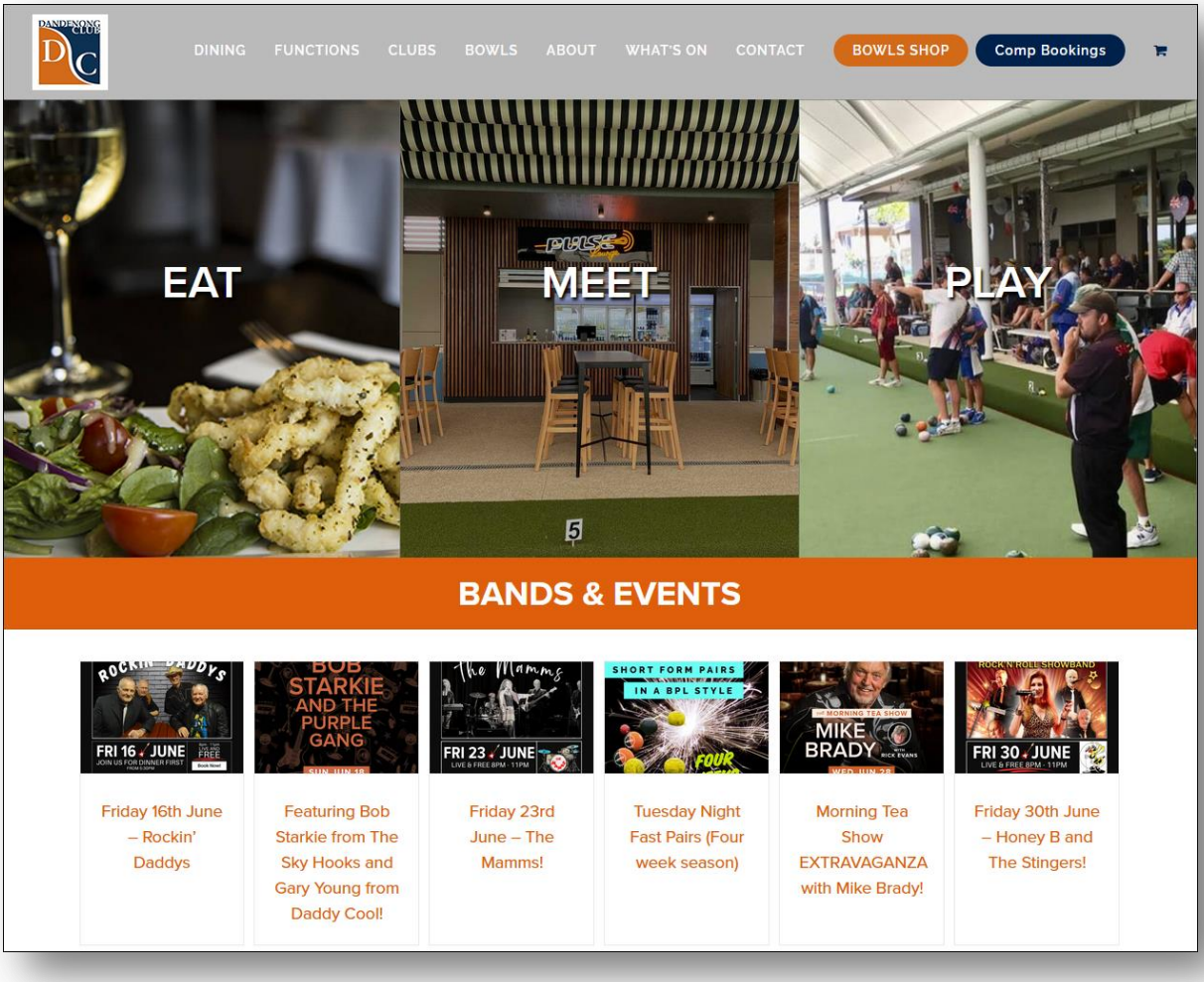
RSVP is essential to secure a seat and to advise the Dandenong Club of the numbers attending.

Please RSVP via email to committee@ggrec.org.au to secure a seat. Partners are welcome to come along and enjoy the night.

You can visit the Dandenong Club website at https://dandenongclub.com.au/ to see the venue and menu.

So come along to catch up with fellow GGREC members and enjoy a great meal.

GGREC.



Digitizing Video Tapes

Many many years ago I went shopping for a video camera, or camcorder as they were known as. With home video there were the two formats, VHS & Beta, I had taken the Beta path, as the video recorder I bought seemed to be producing the best picture of the lot in the shop. However the choices for a camera were different, it was basically VHS-C, or Video8. The VHS-C tapes were very short at 30 minutes, so I went for the Video8 system with a 1.5 hours run time. It wasn't until they release S-VHS (Super VHS) that I then jumped onto that bandwagon.

Trouble was my Sanyo Video8 camera had a somewhat short lifespan, just bumping into the end of an extended warranty. Luckily I was able to talk Sanyo into fixing it, although that fix was an awfully short lived job, so onto the shelf with all its tapes it went. My camera's troubles were with the tape mech, I thought they were mechanical at the time, as it was having a hard time winding all the levers around to get into the mode I needed (loading tape etc.) This meant it's been near 30 years since I've been able to play any of my tapes, will they even play? (Yes)

Then along came a deceased estate sell off, the Amateur op was a video/TV man, and there were two camcorders available, so I grabbed both, along with my original I now had three, hopefully something can be made of this lot

Unfortunately one of the two had been opened and would not respond when powered, however the second, whilst having a dead camera could be coaxed into playing a tape, Yippee.

So how does one preserve your old video treasures? Well I could plug the recorder into a DVD reorder and burn them to disc, however I was not super impressed with previous results of converting S-VHS tapes to DVD, however this was because my VHS's were 3 hours long, and single layer DVD is only 2 hours, so I had to go for long play, with lot lesser quality. In hindsight 2 hours would be ideal for Video8 at 90 minutes…. Oh well.

Then one day I went searching on the web for a HDMI capture device, I had two uses in mind, one been for part of my church live streaming efforts, the other digitizing my old video's and the various recordings I had grabbed with a Sony PVR (Personal Video Recorder). The only way to save anything from its hard drive is to burn them to DVD, and as mentioned, with a 2 hour limit for best quality, not good. Then there is the elephant in the room called HD video/TV, everything these days is HD in some form or another, however DVD is not. You need Blu-ray for that.

So could I run the camcorder's (PAL composite video) through the Sony PVR and take its HDMI digital output and feed that into my converter? Luckily for me the answer was **Yes**.

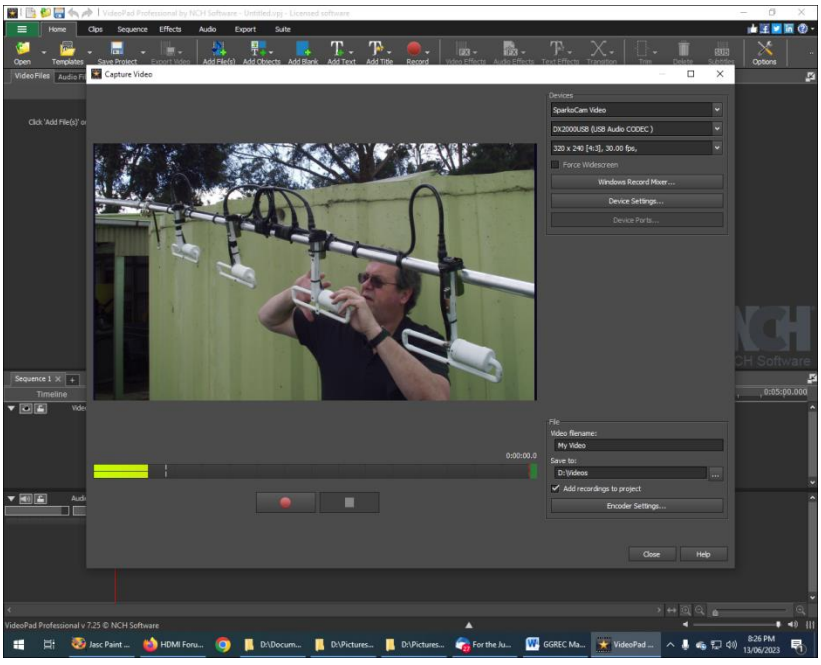
Well, that was the second take, I actually have two Sony PVR's, one in my TV/HiFi setup, the other in a 'spares' pile. Now my computer is not that close to the TV, so I tried the spare Sony, however it was not happy, with the input picture from the camcorder squirming all over the place, plus it would occasionally just shut down. I'm guessing its power supply is cactus. I tried running HDMI from my TV cabinet to the computer room, however pressing play, then running to the other room to press record sucked big time.

So I installed this mini Acer Windows computer into my HiFi cabinet making things are a lot easier, a no cost solution for me. (or maybe use a decent laptop)

There is one potential problem, HDMI is a proprietary standard and to manufacture gear for it you have to sign up to the HDMI forum (not cheap) and you must implement HDMI copy protection (HDCP). Devices like DVD players etc., must encode their outputs with HDCP to prevent piracy, this means problems trying to capture and digitize it. I just watched a review of a name brand PCI based capture board; lots of things could not be captured because of HDCP, so in a way you are better off with a $12 no-name device like I have where they were not so worried about this requirement. It tends to be kind of hard to sue a no-name in China etc.

So if you have a few old tapes of family holidays, the kids growing up, weddings, etc. then act now whilst you can still get the gear to play those old tapes. Copy them onto a memory stick etc., as DVD's seem to be on their last breath, plus cheaply made recordable media won't last. I was amazed at some of my tapes, not bad, but others had heaps of dropouts etc., **Don't wait**.

Part of my AV cabinet, kind of congested, however I may need to fit a fan for that computer, in winter it's warm in there with the doors open, I'd hate to see how it goes in summer.



Now all you need is some software, if you have a video editor, take a look as some of them will directly talk to your capture device. Here is NCH's VideoPad, a paid for program. I have been using OBS studio, a bit tricky to get going in my case on this Acer, however it is free. OBS (Open Broadcaster Software) is more aimed at doing livestreams, but is quite usable for this use. The main bit I liked was I could crop the normal 16:9 widescreen image from the PVR and take it back to the 4:3 old school format used back then.

This is how I did it, as HDMI is the main format these days & PVR's and modern VCR's have HDMI out's. If you tapes are VHS, then you should be able to just use a HDMI equipped VCR, or alternatively you may have success sourcing a direct composite capture device, however I figured the Sony would do a far better job.

Paul VK3TGX

Meeting 19/05/2023



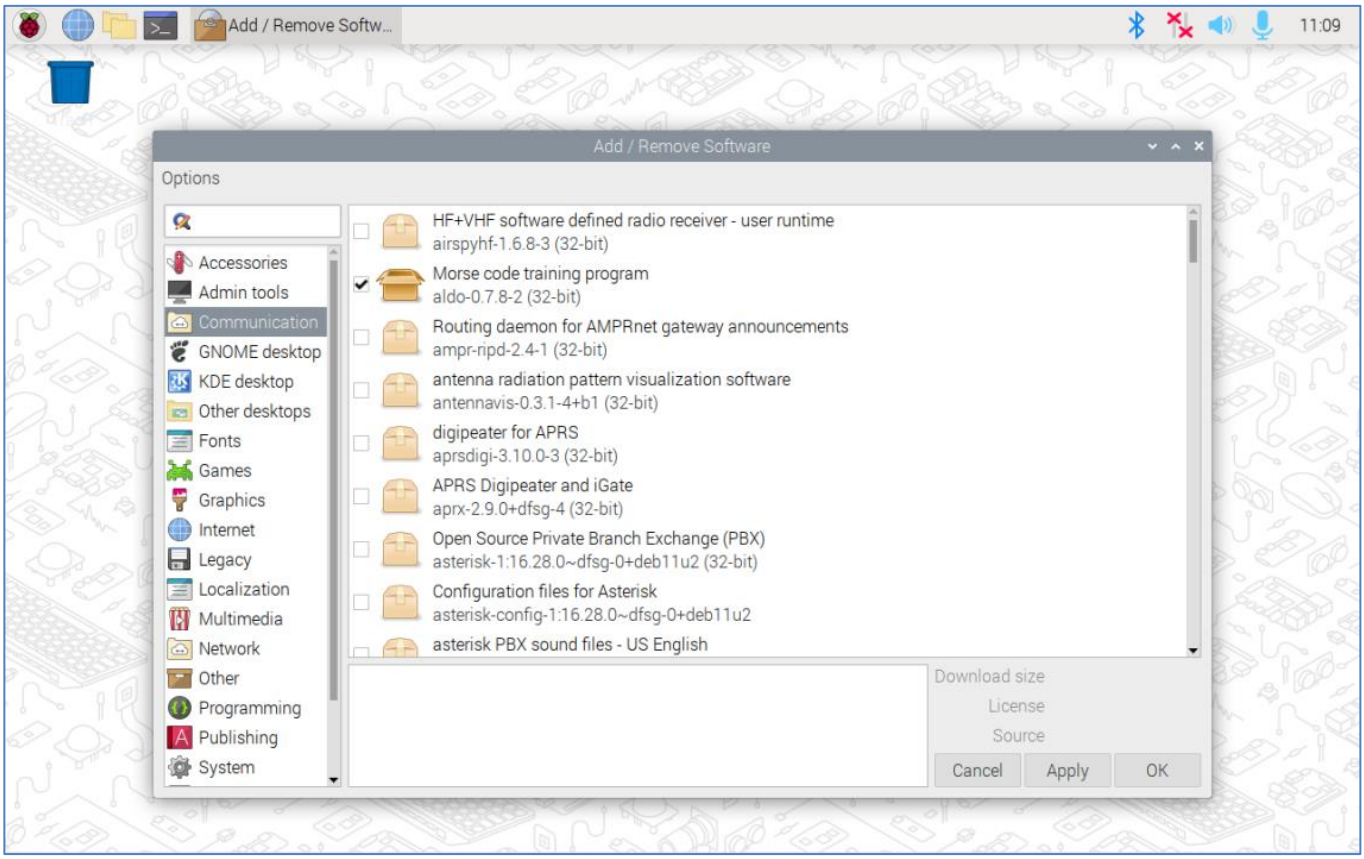





Laptop Raspberry Pi OS

Do you have an old computer that can't really run the latest OS, well it's not quite the end yet. With Microsoft pushing us all to Windows 11, there is going to be a lot of casualties out there. I have quite a pile of computers, but none of them are deemed suitable by Microsoft, throw them all away they say? **No.**

The other day I was running my Raspberry Pi 400, and suddenly remembered they also have a version of their Linux for regular X86/Intel based machines, as in 32bit, just what my crappy old laptop could do with. I have been alternating between Windows 10 & Ubuntu Linux on that machine, unfortunately Ubuntu has cut support for 32bit, and Windows, well it still runs but cannot do that much. Yes I can receive emails & browse the web, however video is kind of out, and unfortunately with so many web sites that insist on pushing out crappy ad's that are basically video's, that kind of kills this laptop.



So how does it run with this new OS, well not exactly fast, and video's do drop quite a few frames, but at least it doesn't descend into a frozen non responsive mess.

Then I took a look around to see what was on offer straight out of the box, it has an office suite, an email client & a web browser, plus I had no trouble loading my favourite, FireFox (ESR release only unfortunately) browser

But then I had a further look around, and there were development tools like on any Raspberry Pi, & an app store with many titles (Typical of Linux distro's) and most surprisingly a heap of Armature radio related titles.

So this is kind of drawing me over to the maker & radio side of things which can only be good, less TV etc., and more time in the shack being productive has to be good. Many years ago I was listening to a radio show, where they were saying what men should do as they go towards retirement and beyond, the interviewed guest said to get a big shed, and fill it with all sorts so that when you are permanently at home (as in not working) you can wander out there and keep yourself busy.

So what are the downsides? Well it's still an old laptop, the battery is stuffed, and the WiFi is temperamental to say the least. Also with so much software out there being written for DOS and Windows, Linux is a bit restrictive here. Yes there are ways, but unless you are prepared to put in many hours to learn about 'Wine' and 'DOSbox', you will have no joy here.

One quick and kind of messy solution for me, is it's quite easy to swap hard drives, two screw, a shove and it's in my hands, unfortunately many laptops are not built like my Dell, and make getting to the drive a long drawn out saga, so this probably won't apply to you.

So throw in the towel and save for a new laptop, unfortunately this will come, you cannot avoid it. The trouble here is the market is quite full of quite crappy hardware. One sees frequent ads for $600 laptops; however they are absolute minimum spec, and as slow as molasses. I have been giving an old boy a hand with his home recording studio (boy is 'studio' stretching it). He has a relatively recent laptop that runs on Windows 11, but boy is it slow, every time I ask it to do something there is this big pregnant pause before anything happens, you know the type, where you assume you missed with that last mouse click, so you try again only to be greeted by the action being taken twice (or an error message). 16Gig's or RAM used to be considered nice, now it's all but below par, when Windows runs out of memory (all the time) it takes a big chunk of memory and swaps that out to the hard drive as a 'swapfile'. The trouble is the less memory you have, the more often this paging of memory to the swap occurs, and this of course adds one hell of a big speed penalty to your system. Why they are allowed to make this crap I don't know. Cheap new laptops are not bad when new, but add a few updates, and then your favourite apps, like Microsoft Office etc., and you soon learn you bought the wrong machine.

I just looked at the Harvey Norman website, A HP with 8GB RAM and a 256GByte SSD, Say no more! A ways back a charitable family bought my church a new laptop, as we had been burgled. A few months ago I gave it a run, it's stuck in a Windows update loop, It downloads the latest updates, try's to apply them, but fails, then goes back to the start and tries again. This is kind of all in the background, but it is sucking heaps of data as it keeps retrying the downloads, then it does a reboot, crashes, recovers its self, then tries to get it right the next time.

Anyway, I've kind of run a tad off topic of the Raspberry Pi Linux, is it perfect, well no, but it looks like a lot of fun, provided you're not in a rush. The way Windows seems to be going we all need to learn Linux now, and an old laptop is safer than a blind install on your main PC.

Paul VK3TGX

Interesting YouTube Videos

The Secret Invention That Changed World War 2
https://youtu.be/Dtocpvv88gQ

Thanks Mark VK3PKT

This is not a wave.
https://youtu.be/ExhSqq1jysg

WIA Affiliated Club

The GGREC is an affiliated club of the WIA
https://www.wia.org.au/

We also give Thanks to

https://www.jaycar.com.au/

https://www.altronics.com.au/

For their generous support over the years

Club Information

Meetings 20:00hrs on third Friday of the month at the
Cranbourne Guide hall, Grant Street Cranbourne
Prac/Natter nights first Friday in the Peter Pavey Clubrooms Cranbourne 19:30hrs
Visitors are always welcome.

Office bearers

President	Ian Jackson	VK3BUF	General 3	Gerard Watts	VK3ZXC
Admin Sec	vacant		Web Master	Mark Clohesy	VK3PKT
Treasurer	Klaus Illhardt	VK3IU	Magazine Editor	Paul Stubbs	VK3TGX
General 1	Fred Reid	VK3FWR	Property Officer	'committee'	
General 2	Bruce Williams	VK3BRW	Assoc. Secretary	Bruno Tonizzo	VK3BFT

Call in Frequencies, Beacons and Repeaters

The Club Station VK3BJA operates from the Cranbourne Clubrooms.
6m Repeater Cranbourne VK3RDD, In 52.575 Out 53.575 CTCSS none
70cm Repeater Cranbourne VK3RGW, In 431.425MHz Out 438.425MHz CTCSS 91.5Hz
VK3RGW Repeater supports Remote Internet access (IRLP), Node 6794 **offline**.
70cm Repeater Seaview VK3RWD, In 431.575MHz Out 438.575MHz CTCSS 91.5Hz
Simplex VHF - 145.450MHz FM, Simplex UHF - **TBA**
VK3RLP Beacons 1296.532MHz & 2403.532MHz **(currently offline)**

Membership Fee Schedule

Pensioner member rate $40.00, Extra family member $20.00
Standard member rate $50.00, Junior member rate $25.00
Fees can be paid by EFT to BSB 633000 - Account 146016746
• Always identify your EFT payments
• Membership fees are due by each April Annual General Meeting (AGM)

Magazine Articles to editor@ggrec.org.au Cut off, 10th of the month
All other Club correspondence to: secretary@ggrec.org.au
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