



GATEWAY

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

January 2023



Invitation to learn Morse Code

Hi-Fi Repair Shop

Silence Please

And More



Cover photo, Sausage Sizzle behind the club rooms – in place of a January prac night, page 14.
(If you have any good photos, please send them in)

Contents.

- 3 – President's message
- 4 – From the Editor, Ubuntu & smoke
- 5 – Invitation to learn Morse Code
- 6 – Hi-Fi Repair Shop
- 11 – Silence Please
- 14 – Sausage Sizzle – in pictures
- 16 – Interesting YouTube Videos – Courtesy of Albert
- 18 – Club Information

Note: - club meeting minutes are now via a link in club emails sent out by the secretary.

Event Queue

January:

6 th	12:00	Sausage Sizzle – oops you missed it
19 th	8:00	HF Net, hosted by Mike VK3TDK
20 th	8:00	General Meeting - Fred VK3FWR presentation & Chris VK3QB talk on upcoming DX bootcamp
26 th		Australia Day – BYO everything Australia Day Contest (courtesy WIA)

February:

3 rd	7:30	Prac night
17 th .	8:00	General Meeting

**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

President's Message Jan 2023

Hi GGREC Members and welcome to 2023.

I hope everyone had a Merry Christmas and enjoyed seeing in the New Year.

The January General Meeting will be the first formal meeting of the year. Fred Reid VK3FWR will be giving a presentation about how he operated his transceivers remotely and the tools he uses to make it happen. Chris Chapman VK3QB will give a brief talk on the upcoming DXbootcamp at Norfolk Island.

The Committee is currently working towards the AGM in April, making sure the night goes smoothly.

Please consider standing for a Committee position. It's your Club so please support it.

The Club BBQ on the 6th of January was very well supported and there was lots of food for everyone to enjoy. Our next social event is the Australia Day BBQ on the 26th of January. This will be a BYO everything event as we have done for many years now.

Don't forget the GGREC HF Net is on every Thursday night, hosted by Mike VK3TDK. The Net is a good opportunity to get on HF and chat with friends and the Club thanks Mike for hosting it each week.

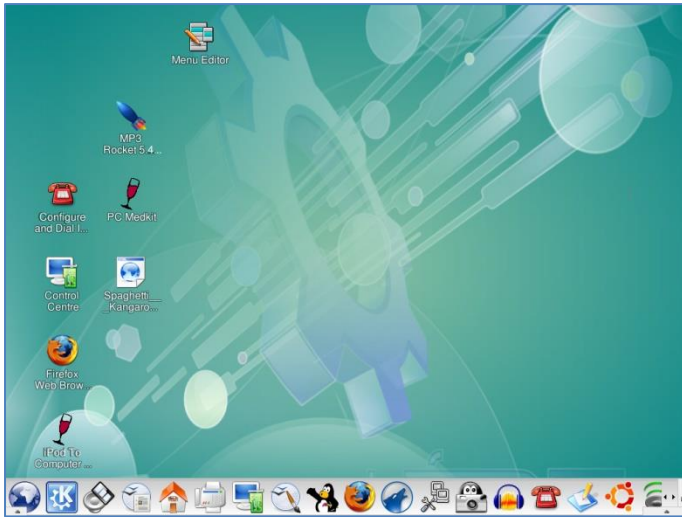
The Committee is always looking to help members get the most out of the Club, so if you have any ideas or events you would like to get involved with, please let the Committee know about it. You and other members should be prepared to put some effort in to make it happen.

Some GGREC members are away or about to go away on holidays and I wish them all a happy and safe trip.

GGREC is a WIA affiliated club and we encourage members to join the WIA. We need to maintain a specific percentage of members as WIA members to qualify for discounts with our Public Liability Insurance. The cost of insurance is dramatically increasing so any discount we can get is well worth it. As a WIA member, you also get to benefit from the offerings that the WIA makes available for WIA members.

Kind regards,
Bruno Tonizzo VK3BFT
President GGREC Inc.

From The Editor



This month as part of a 'wife led' cleanup, I had some fun with an 'ancient' copy of Ubuntu Linux on a small Dell desktop PC. At first looks it looked very childish, the icons on the lower bar seemed chunky and bright, kind of cartoonish hence my first thoughts of 'childish'. Although one of them is still the current icon for Audacity, a freeware audio editor that I still use today. I'm not sure what they did here, maybe it's just a side effect of this been quite old and of a lower on screen resolution, making everything look chunky.

How things have changed, add a pile of high resolution and things get smaller and look a tad more refined. Have a look at an early Windows release, like Win95, it can suffer from the same limitations, but this Ubuntu release excels.

So I had a quick look around, and I think it was only the second program I launched and the whole thing started falling apart. That program crashed the computer, and it took a few attempts to get it back up on the desktop as shown. About now I had decided to write here about it, so a screenshot seemed appropriate, however, apart from cheating and using a camera, it looked awfully like a race between me getting that screen capture, and this machine totally falling apart. I was using various keyboard shortcuts, like 'alt' 'PrintScreen', then trying to paste it into Gimp, a Linux graphics editor, only to see repeated messages that the clipboard was empty. I was trying all sorts of keyboard combinations, but I only ever got a part of the Gimp editor as a capture, not the underlying desktop. The machine prematurely dying was becoming less of an issue as I seriously contemplated throwing it through a closed window.

Eventually I discovered another desktop shortcut – not present in current Linux distro's, that allowed the direct saving of the clipboard to a file, without any other software being needed. Now what a good idea, it would have saved me much agro many a time, especially when using other people's machines. Pity it seems to have been discontinued, and never? in Windows.

Another surprise was when I plugged in the network cable, it could immediately see my entire network and I could easily move the screen capture off to somewhere safe before I trashed that computer. What a pity that the current builds of Ubuntu's networking is far from this level of polish. Unfortunately, and the same as Windows, using an old copy on-line is a very bad idea as it leaves you open to the many online hacks and viruses out there. That, and the fact this machine was sooo sloooow meant it was pointless preserving it, so screen capture done, time for the screwdriver – 'Take it apart' time as per David and his EEVblog.com

The next machine on the pile turned out to be a 64bit box, and booted reasonably quickly, so it was a keeper, not that I would use it as a 'daily driver', but as a test box, all ok-ish. It also had an oldish Ubuntu Linux distro on it, 16.04 from memory, way newer than the Dell, but several generations behind the current 22.04 LTS release, so feeling like a glutton for punishment, I clicked the 'ok' button to upgrade when prompted. Now part way through that, I noticed one of the case fans was not connected, so I started working on it. Trouble was shorting out the 12V fan connector with a meeter probe mid upgrade is NOT a good move....



Paul VK3TGX

Invitation to learn Morse Code

Gippsland Gate Radio and Electronics Club is organizing a CW training program for its members.



This will not be your traditional CW course, but a different concept of traditional training and guided self-learning will be trialled.



Aim is to utilize newest available technology and traditional training methods in a symbiosis of lectured session by an experienced operator, online tools and the software applications to enable the participants to gain an operational skill to work in morse code on the amateur radio bands. Training target is split in two segments a Basic and an Advanced segment.

This is a call for participants to the **Basic segment**, no pre requisite are required. The training is open to members of the Gippsland Gate Radio and Electronics Club. You will be required to pair up with another participant to enable peer to peer practice, monitoring and motivation.

A firm commitment is required from the participants for the basic segment for the whole period of 1 year or until successful completion. It is encouraged to take the **Morse Code Certificate of Proficiency** of FISTS Down Under Inc.

Pre requisite:

Internet access suitable to participate in ZOOM meeting sessions

Able to attend in person once per month

Able to commit 30min/day, 5 days per week to practise.

Later after being able to copy 50% of signs

HF Radio capable of CW operations with build in keyer (optional) or an electronic keyer with sound generator might replace the HF Rig

CW Morse code key:

a) El-Bug

b) LAMBIC key (paddle)

Read this about paddles

https://www.electronics-notes.com/articles/ham_radio/morse_code/cw-keys-keyers.php

Strictly no straight keyer

In this context I am still looking for further volunteer trainers / coaches to work with me, if you interested to assist. You need to be proficient in CW at speed above 25, with on the air experience in QSO and dx'ing and Contest operational experience would be nice to have.

Expression of interest to VK3IU@QSL.NET

Hi-Fi Repair shop



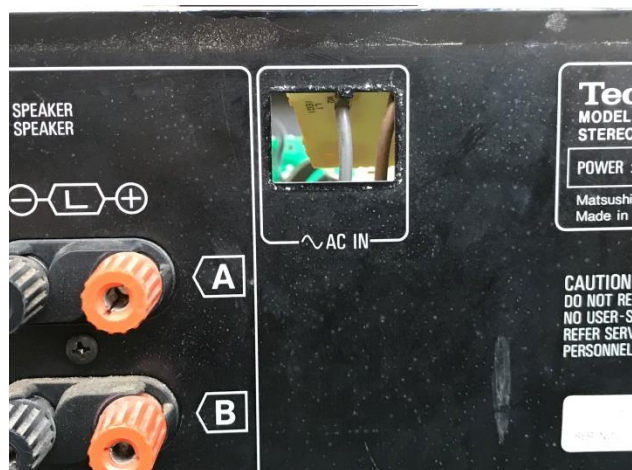
First cab off the rank is this Technics SU-3000 amp. The owner said he'd lost all bass in one channel – kind of strange, I would have been suspecting a speaker fault – maybe, in any case he failed one simple test – swap the speakers over, the great advantage of stereo, you have basically two identical amps and speakers that you can compare with each other. The other test is to swap the input leads over and see if the fault changes sides. This amp also has a mono switch, that when activated makes both channel sound dead identical – depending on your audio source, this can make comparing the two channels a lot easier. (Some early Beatles releases had the singers in one channel and all the instruments in the other)

He arrived whilst I was in the middle of sorting a pile of computer parts, so with this hastily parked on the floor amongst a sea of computer stuff, for a quick test, and with him trying to talk the hind legs off a cow, I came to the wrong conclusion of one dead channel. So I sent him on his ways and had a look later. Apart from been exceedingly grubby and dusty inside, I could not fault it, so apart from some contact cleaner and a good cleaning there was not much to do. He came back, took it home and says it never sounded better..... winner winner??

If your stereo/sound system suddenly act us, first, did you hear a thud/bang, and there is now a loudish hum and smell, Quick turn it off, pull the power lead out, then monitor it for a few minuted for smoke etc. If it's a lot more subtle and no imminent damage is likely, then try and figure out if the trouble is in both channels or just one. Wind your balance control all the way to the left, then the right to see if one channel only is your problem. Now swap your speaker leads over, does the fault swap channels, now try the input leads. Whilst you may not be able to fix it yourself, the more info the better, especially when talking to a repair man.



The next kid, A Technics SU-610 came with a strange fault description 'No power supply' and an extremely weird story that I won't try and explain – I don't want to be 'sectioned'



As you can see there is a bit of a void in the back panel – and a busted AC input sub-board inside.

Trouble was the hole was a tad too big for a two pin power socket I had (the amp is double insulated), and a bit too small for a IEC style 3 pin socket. Now I could go online to find the answer, but an easier route was to just ask the customer – he opted for the three pin, so with a little filing I soon had a snap-in IEC socket fitted.

And that was it, a 98% repair....

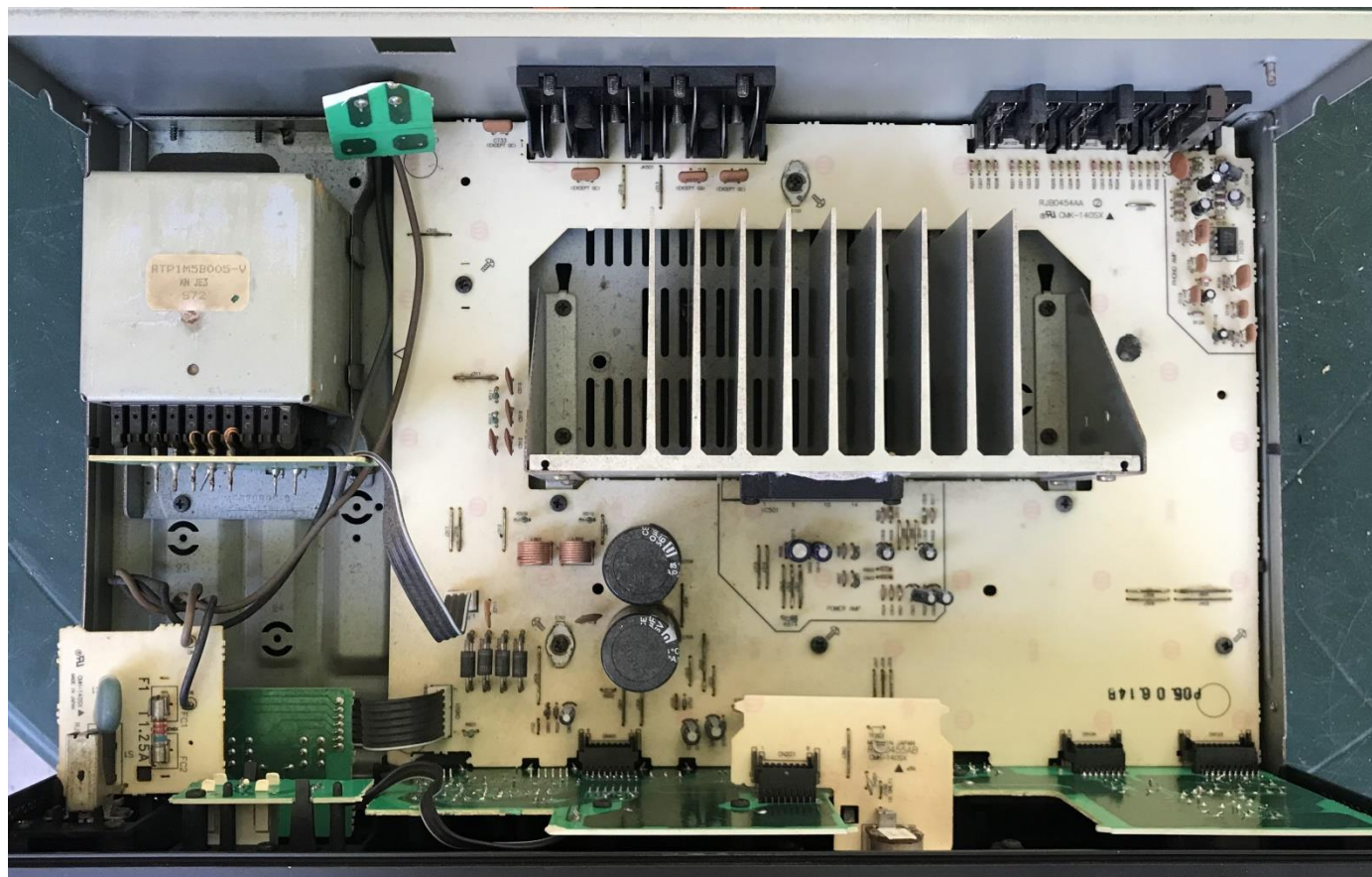
Another issue was a crackly tape monitor switch, I tried my best with some contact cleaner, but I'm not so sure I got any inside the switch as it was well sealed, however with some squirting and multiple clicks on the switch it was much better. Other than that I could not believe how much dust was in this amp, almost as much as on the air filter of my clothes dryer, unreal!



This just left a long held question, what is 'new class A', I remember seeing these when they came out years ago, I never thought I'd get my hands on one. Inside the power supply and heatsink tell the story that this is definitely nothing like a traditional class A amp. A real, as in traditional class A amp will

constantly consume about 3 times the power the amp is rated to output – as in ALL the time, even with on signal input and nothing going to the speakers. So these amps get really hot and have whopping great heat sinks to get rid of all that heat, usually on the case exterior.

A strange side effect is they actually get cooler when working hard into the load (speakers)!



Inside, this has to be the emptiest/barest cases I've ever seen, where are all the parts? That little bit in the top corner is the phono pre-amp, the tone control circuits are on the front PCB, leaving the majority of the actual amp inside that plastic blob on the front of the heat sink – a heatsink with a bit more heft, aluminium wise, than is normally seen in medium power amps, with many using just sheet aluminium.



All I can find on the web is it's good for 30W a channel, at 0.07% distortion.

The web was a tad disappointing this time, I was hoping for some mention of the 'New class A' and what this has to offer, however it appears to be nothing more than some case decoration. Pity, no audio breakthroughs here.

If this was a real class A amp, with what we see inside, you'd be lucky to get 10 watts a side. Remember what I said earlier, at 10 watts a side, the heatsink would have to dissipate about 60W constantly, it would be real toasty, as in don't touch.

I powered it up and after a few minutes the heatsink was just a tad warm, and a mains power meter said the amp was only drawing 10.7W (no signal). After a good session of music the heatsink was a tad warm, maybe more than normal for this sized amp. During that run the power in didn't go crazy, maybe 25 to 30W, nothing unusual. Kind of disappointing for 'new class A'. Looks like the marketing department was in overdrive again.



And now for speaker woes. Many many years ago, my parents purchased a Pioneer Prelude 500 system (or was it 300?) Anyway it consisted of a 10W a side amp, belt drive turntable, and a pair of single driver speakers – so basically an entry level system.

After they passed away the amp and speakers ended up at my aunts, she used the amp, but not the speakers – they stayed in a spare room disused for 12 years. (50 odd years total?)

Recently she has started to slowly clean out her place, and asked me to 'take them away'. So I brought them home, only to find one seemed to be kind of burned out, as in feeding any music in resulted in a very distorted sound, like you get when an over-heated voice coil has become detached from its former. Taking out the driver and manually moving the cone gave the crunchy feel normally associated with a cooked coil, but with no smell.



So with nothing to lose, I got to work with a hammer and chisel to separate the magnet assembly from the basket, a task I have done many a time in order to salvage the magnets.

Magnetic antenna base anyone?

Normally that's as far as I go, as I figure trying to remove the metal "cheeks", or pole pieces from the actual magnet would just destroy it – no point going any further.



Anyway, as you can see from the previous picture, the whole assembly just fell apart in my hands (the magnet has broken free, sitting off to one side) – I have never seen that before.

What's more the voice coil was in good condition, what was causing all the trouble was all that corrosion on the pole pieces, it was fouling the voice coil. Normally when I remove the magnet assembly, the voice coil stays attached to the speaker cone – usually undamaged, however this time it was so fouled that pulling off the magnet ripped the coil and its former right off the cone.



Whilst the other driver still works ok, applying a little sideways force while manually moving the cone shows that this one will soon suffer the same fate.

The now completely separated magnet is quite weak, they are much better with the pole pieces in place.

“Silence Please”

As a “nipper” I used to go to work with Dad at every opportunity on the weekends. Dad was a Marine Engineer who had his “Chiefs Certificate” in both Steam and Diesel engine which meant for a few years while I was in Primary school (and Dad was at sea again) I would meet up with him on the ship when it was berthed here in Melbourne. Even at this age I was also interested in Radio, tuning into VNG Lyndhurst every Saturday morning to check and if necessary, reset the 2 clocks in the house. Life was so simple back then...

Whilst on board the ship, most of our time was spent in the engine room or his cabin but occasionally, we would have a walk around the decks and even go up on the bridge for a look see. When we were out and about, I would always ask to have a look at the radio room to try to learn as much as possible about it and my radio hobby.

Marine communications over 50 years ago were pretty simple, the radio room (usually) having a VLF receiver to assist with navigation, a HF and possibly a VHF transceiver for communications, a Direction finding loop, radar and a few other things that I couldn't work out. This was back before Satellites, GPS, INMARSAT, AIS etc. which leads me to where I am going with all of this, the Maritime Radio operator's clock.

Most of us have heard the term “Radio Silence” and equate that to some sort of covert operation by the military or the authorities but for many years (starting just after the sinking of the Titanic) the commercial maritime sector coordinated and has religiously adhered to a strict protocol of radio silence for the main reason of safety at sea. At 4 predetermined times for 3 minutes during every hour the ships radio operator would cease all transmissions and listen to 2 frequencies for distress calls from other ships in need. Any ship in distress also knew to transmit their distress call at these times (if they could) to maximize their attempt at being heard without any interference from “other traffic” on the airwaves.

Below is a picture of my working “radio operators” clock, actually salvaged from a decommissioned ship.



Immediately after the [loss of the Titanic](#), the radio frequency of 500 KHz became an international calling and distress frequency for Morse code maritime communication. For most of its history, the international distress frequency was referred to by its equivalent wavelength, 600 metres, or, using the earlier frequency unit name, 500 kilocycles or 500 kc. The red segments on the clock face indicate the time for radio silence while listening on 500 KHz.

2182 KHz was added later and transmissions on 2182 KHz commonly use single-sideband modulation (SSB) (upper sideband only). However, amplitude modulation (AM) was often used in some parts of the world. The green segments on the clock face indicate the time for radio silence while listening on 2182 KHz. Maritime coastal stations used to maintain 24-hour watches on these frequencies as well, staffed by highly-skilled radio operators.

A lot of things have changed now including 500 KHz being dropped and in some countries 2182 KHz being demoted as the primary Emergency frequency to monitor in favour of 4125 KHz. Satellites and GPS etc. has led to many advances in the safety of worldwide maritime operations as we know it today, including AIS (Automatic identification System for tracking ships at sea) GMDSS, DSC as well as Internet etc.

As for me, I like “the old stuff” and enjoy looking back at where we came from and remembering things from my earlier years 😊

If this has piqued your interest in Maritime Radio there are a few interesting resources on the Internet, do a search for “Maritime MF HFrado”, one in particular is the broadcasts on HF around Australia regarding weather information

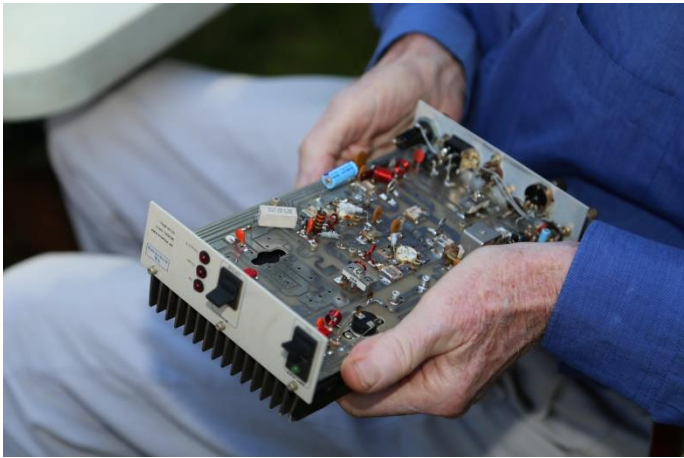
<http://www.bom.gov.au/marine/radio-sat/voice-services.shtml> and if you are really keen, here is a link to the Maritime licensing LCDs published by the ACMA
<https://www.legislation.gov.au/Details/F2019C00504>

Smooth seas and trailing winds everyone,

73,

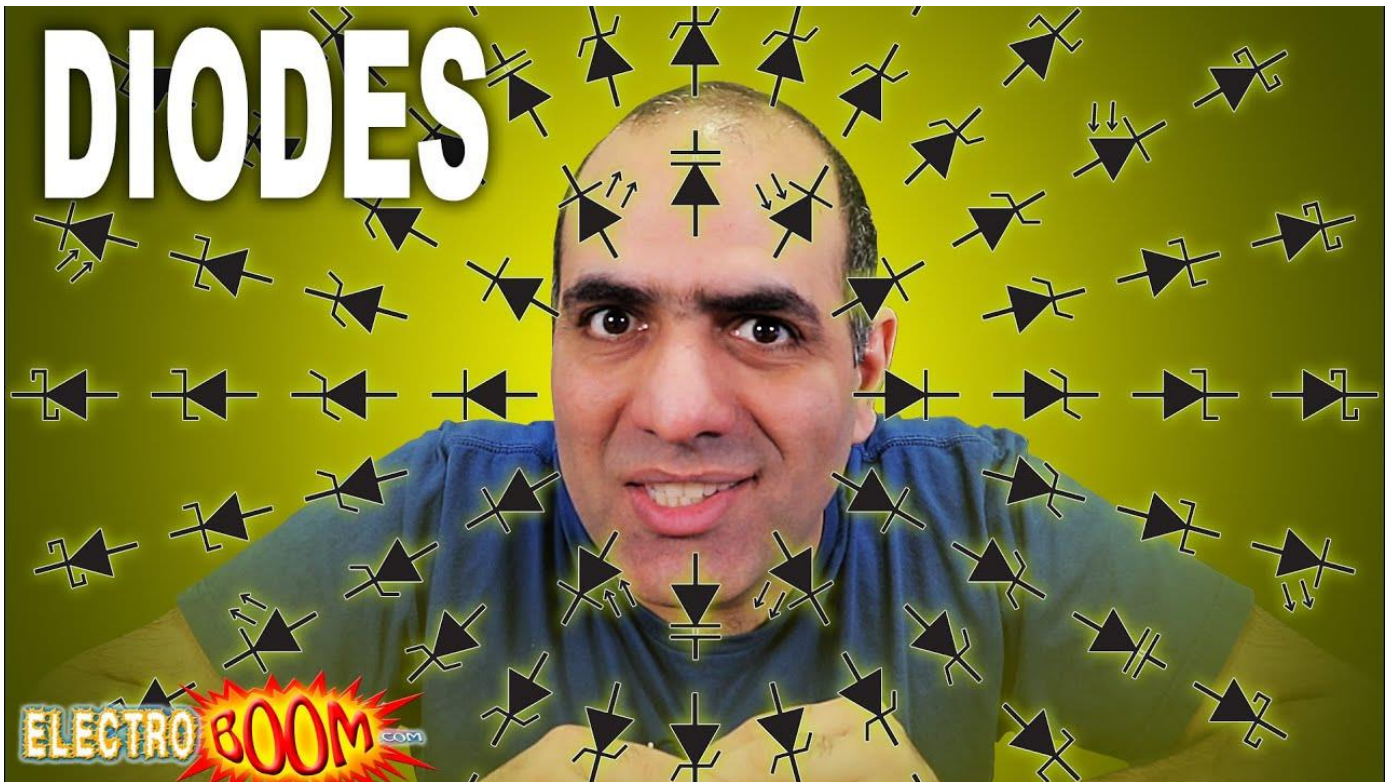
Rob de VK3BRS

Sausage Sizzle 6/01/2023





Interesting YouTube Videos



DIODES! All Sorts of Them and How They Work

<https://youtu.be/l2y-w9aS98k>



How to Turn an LED On - ElectroBOOM

<https://youtu.be/zGsQbOjXeEs>



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

WIA Affiliated Club

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	Bruno Tonizzo	VK3BFT	General 3	Bruce Williams	VK3BRW
Admin Sec	vacant		Web Master	Mark Clohesy	VK3PKT
Treasurer	Klaus Illhardt	VK3IU	Magazine Editor	Paul Stubbs	VK3TGX
General 1	Yarn Oncken	VK3NOV	Property Officer	'committee'	
General 2	Helmut Inhoven	VK3DHI	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 **'Testing'**

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

or via post : GGREC, 408 Old Sale Rd, Drouin West 3818

GGREC Web Site & Archive may be viewed at: www.ggrec.org.au

Website errors, contact web master: webmaster@ggrec.org.au

Facebook Page www.facebook.com/GippslandGate