GATEWAY

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

March 2020

Train & Hobby Show

Antennapalooza 2020

Train & Hobby show

Ian's Prize Winning Ball

And More

Cover photo, The GGREC stand at the Train and Hobby show, two more photo's on page 6

Contents.

Note: - club meeting minutes are on the club website

Event Queue

March:

20th	General meeting – 7:30, Video link (Coronavirus) see page 4 and club emails
21-22nd	WIA John Moyle Field Day 2020 (courtesy WIA)
28-29th	CQ World Wide WPX Contest for amateurs world-wide (courtesy WIA)

April:

17th	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 Report - Tony Doyle VK3QX

Hi Members,

Since the last GM the club has continued the Morse training thanks to Helmut's efforts and the learners are progressing with good reports from Helmut at the Committee Meeting on Friday night. Thank you for your efforts Helmut.

Rob will soon be commencing the QRP kit project and emails have now gone out to members to register their interest. These sessions will be scheduled in the near future.

On the Labour Day long weekend we manned a display at the Train & Hobby Show.
This was a great success and we met many people who were keen to talk about what we do.
Whilst many were not from our area, the visibility of what we do can only help our hobby in general.
Thanks to the following people who volunteered their time to help set up and run our display.
Bruce Williams, Max Hill, Bryan Simm, Craig Howie, Arthur Howie, Rob Streater, Tony Doyle, Michael Van Den Acker, Graham Eldrett, Dave Rolfe & Mike Ide.
A special thanks go to Bruce, Max, Bryan, Craig and Arthur who contributed several days of their weekend.

Without their commitment the event would not have been possible.

The lead-up to this event did raise some points in that we, the committee, failed to appoint an event co-ordinator from the volunteers to be the focal point for the event, formulate a roster and keep everyone informed as to what was happening.

This is a learning for future club run events.

Unless ALL members of the club are prepared to put their hands up and commit some time to assist with the organisation of these events, we, as a club, will inevitably fail.

This year, we've had fires, floods and now Coronavirus is spreading through the country and infection numbers are expected to continue climbing day by day.

Doctors are now estimating 10,000 cases by April 4.

This week alone we've seen public meetings of 500 or more banned and today this has been revised to 100 or more with many clubs cancelling face to face meetings and events for the near future.

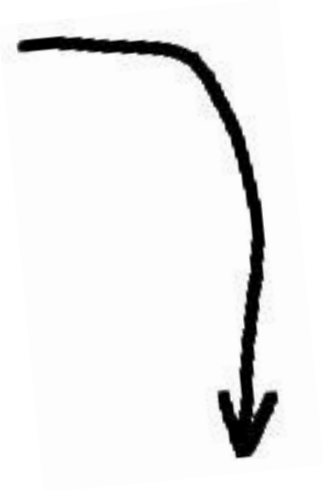
As you will be aware from the emails being sent out, the Committee has now taken the difficult decision of cancelling the face to face March GM and will be trialling an online video meeting format. The April GM, AGM and Prac Night will be reviewed as more information comes to hand.

This is to try to keep any vulnerable members safe from any unnecessary risk of infection from those of us who are out in public and exposed to unknown risks.

Peter Parker was coming to do a talk at the March GM on QRP antennas to compliment the QRP kit project. Peter's talk will be postponed to later in the year once the threat has subsided.

As already noted the April AGM is rapidly approaching but may be deferred.
According to the club rules, ALL committee positions automatically become vacant at the AGM.
Any nominations for the committee positions need to be submitted to the committee at least 7 days prior to the AGM and need to be seconded by another member. If you feel that you would like to contribute to the running of the club we will welcome your nominations.
The nomination form is included in this month's magazine. Page 17
Should the AGM be deferred, the existing committee members will act in caretaker mode until the AGM can be rescheduled.

We will discuss the process further on the Friday video GM.



Please stay safe.

73

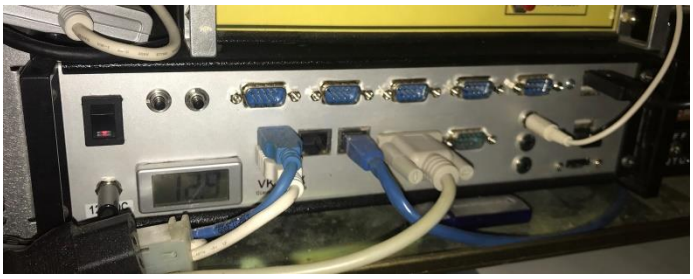
Tony

https://zoom.us/download

It runs on PC's Apple MAC's, phones and tablets.

Gateway is the official journal of the Gippsland Gate radio & Electronics Club.
It is published in good faith for its members and other interested parties. The articles here in do not necessarily represent the views of the committee or the membership.

From The Editor

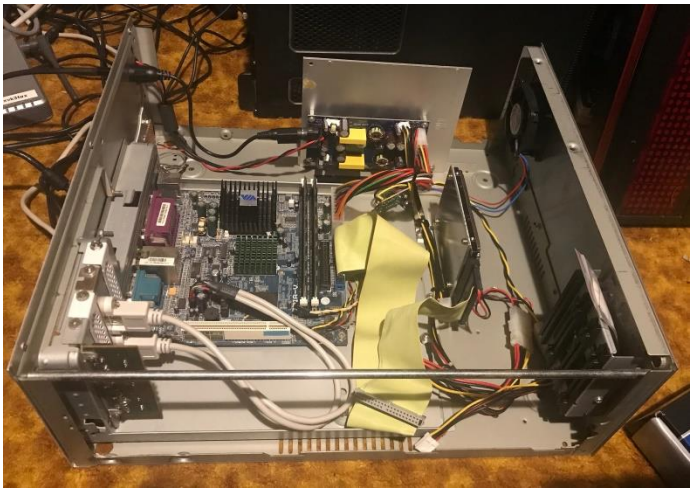


This month it was time for some fun with file servers. Back in January I lamented the woes that is Windows 10, and that I was looking into alternatives to that Microsoft product.

I also mentioned "Amahi" server software, that I saw in an online article. So the other day I downloaded a copy to evaluate it.

The first problem was what to run it on? I do have a few spare computers lying around; however I thought that using something a lot closer to what I intended in the end was probably a much better idea. The second pic being the current Win7 box in an equipment cabinet (almost a 19inch rack case)

So I used an identical Atom industrial controller, mounted on an adapter bracket I scored ages ago. I then screwed a hard drive to the back of it, standing up on one side – not ideal, but it's only a test bed. The fan is a last minute inclusion, probably too large, and held on with double sided tape, but boy is it quiet.



Mark VK3PKT mentioned "Open Media Vault" as another possible contender, so I thought I'd try and get it running on an old 'prototype' chassis I set up years ago. The box it a tad large for this build, but it matches a box already in my rack, so it would be an easy swap. This one started out as a box to run some media server software from a computer magazine years ago, it never worked out well and was pushed to the side – until now.

However it looks like I've left the run far too late for this now 'ancient' VIA mainboard (ancient in computer terms). It is only capable of running 32bit software, and has only 512Meg of RAM. I went through my junk box looking for RAM, no luck, however that is the least of its worries. The CPU is what is called i586 class, and does not have the later instruction set additions that came with the i686, that and the fact its only 32 bit is a real deal breaker these days. Everybody is only writing 64 bit code these days, and with all the hackers out there you really need to be using software that someone is maintaining – as in keeping it patched to cover all the latest hacks & viruses out there.

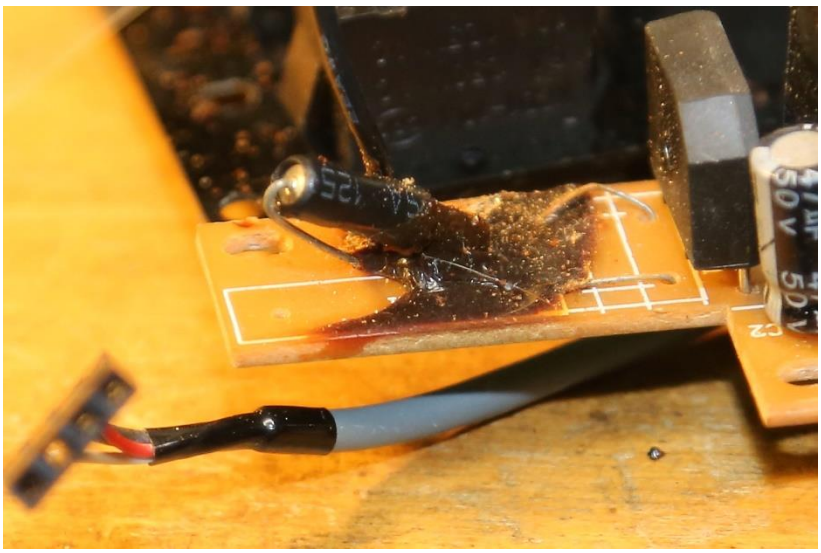
OpenMediaVault (as one word, the writers choice) runs under Debian Linux, and they do document running it in 32bit mode, so I downloaded the last version of Debian that supports an i586 (Just in support, by 2 months!), but try as I could, no luck. Yes it will install, but I cannot boot it – I am suspecting the Grub bootloader, However I think it's probably not worth proceeding. I have another almost identical board running as a DOS box, so this will be never needed spare parts for it…. More land fill, darn – I hate that.

Paul VK3TGX

Train & Hobby Show

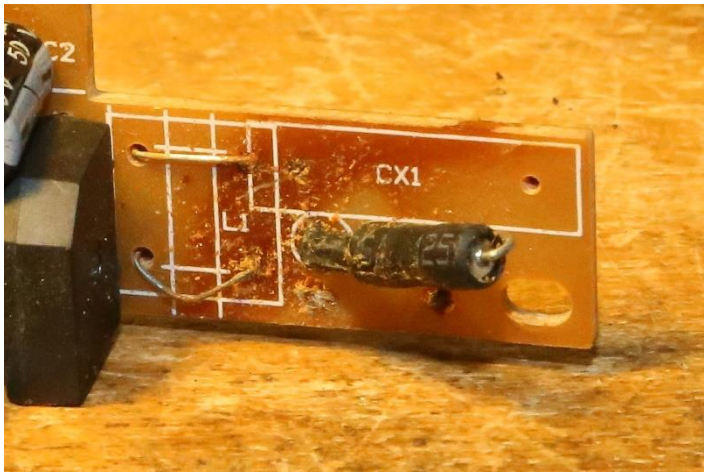
Plus the cover photo

“Brown Goo” repairs



Have you ever opened up a piece of electronics and observed this almost black glue?

Well I have a little news for you, it’s not supposed to be that colour, it was originally a light brown/thorn colour, very close to the colour of the edge of this board. What appears to happen is this glue becomes mildly conductive and slowly decomposes & bakes itself to death as it slowly devours any exposed metal surface, especially those with any voltage on them.



Here is another shot of that same PCB with most of that glue removed, as you can see it must have been carrying some current as the board material appears to have been baked.

(Ignore under the fuse, that is a shadow)

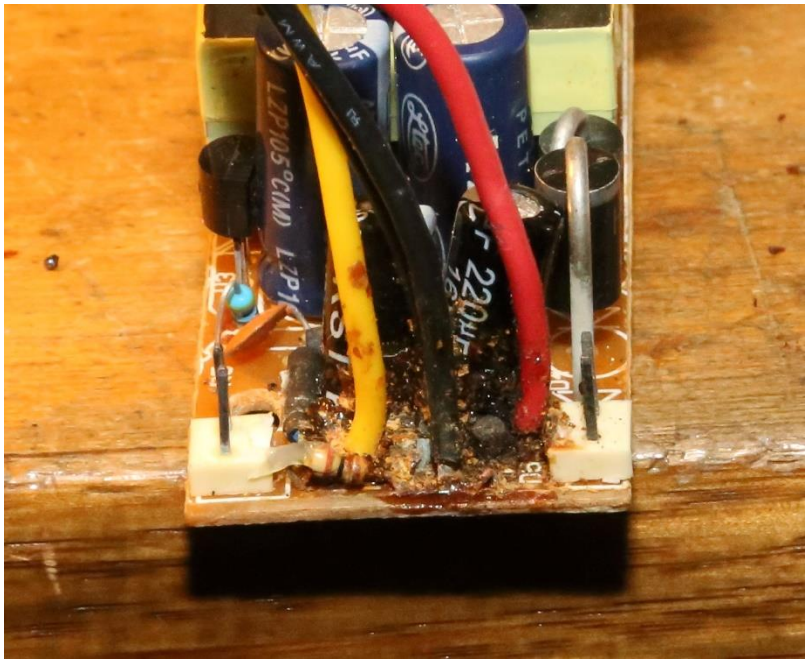
It’s the same on the boards back, also note the lower link, one end has had all the protective plating eaten away.

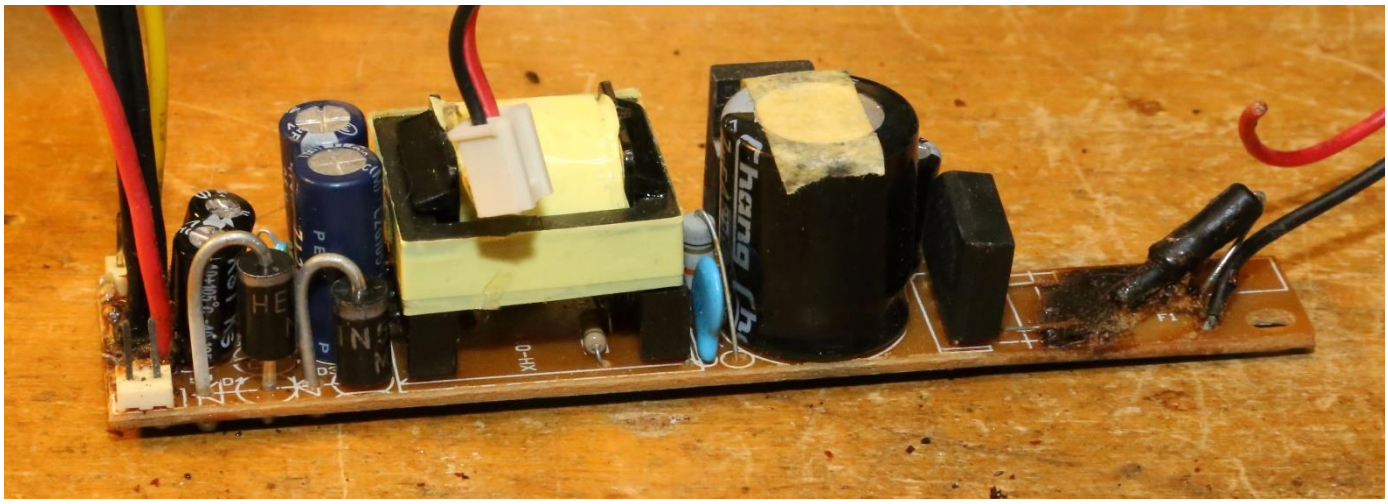
This glue was hard and brittle, a testimony to long baking sessions.

Here is the other end.

Whilst the board after cleaning didn’t have the burnt discoloration of the last picture (The 240V end) it did cause quite a bit of corrosion style damage. It completely destroyed an output protection diode (The board says it was a diode) causing it to go short circuit – the original problem with it.

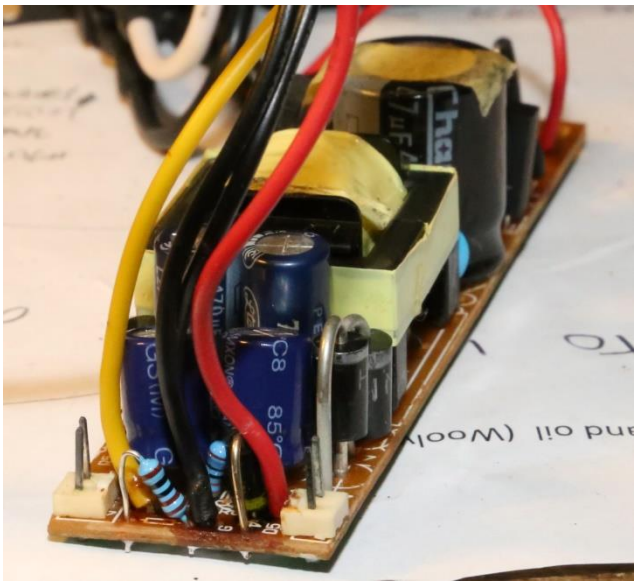
After most of that goop had been removed, alongside the remnants of that diode, the short magically disappeared.





Here is a complete picture of the power supply, as I was positioning it to take this pic the active mains wire broke free, courtesy mainly to corrosion, I had to trim it back a ways to find fresh wire that would take solder. Luckily this happened on the repair bench, but it could have easily happened in the field, potentially leading to an electric shock – nice one.

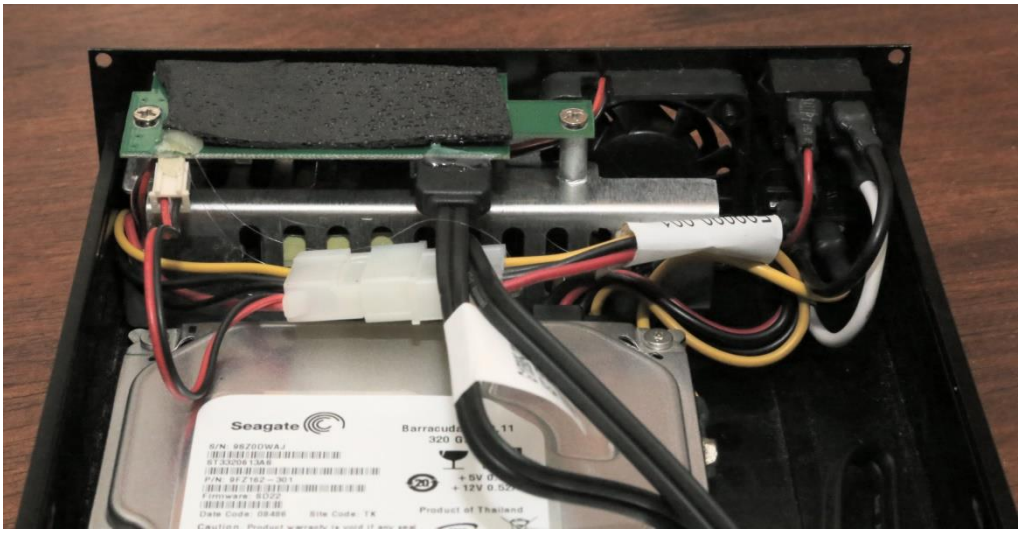
This brown contact adhesive, affectionately called ‘gorilla snot’, was a very popular glue years ago and can be found in lots of gear, these days it has been supplanted by silicon & hot melt glue. I used it quite a lot, luckily not around bare live conductors. (That I can remember!)



Here it is after a re-build, with new components, as you can see it looks a lot better, and more to the point it actually fired up on the first try.

The power supply was out of an external hard disk / optical drive case I picked it up at a flee market somewhere long forgotten.

As I had spent some time putting in a hard drive, and then spending more time with adapter cables etc., I was more wanting to get it going rather than just tossing it. Most external drives these days run on plug-packs etc., which can be a pain at times, not being very power board friendly.



Now I have a choice.

Paul VK3TGX

Antennapalooza 2020

March 14,15 saw the successful Antennapalooza event for 2020 come to pass.
This was the sixth such event since 2013.
About 38 visitors attended, including some day visitors.

It was sponsored by the clubs:

GGREC	Gippsland Gate Radio & Electronics Club
FAMPARC	Frankston and Mornington Peninsula Amateur Radio Club
EMDRC	Eastern Mountain District Radio Club
SPARC	Southern Peninsula Amateur Radio Club
SCRC	Sherbrooke Community Radio Club

It also received sponsorship by

RASA	The Radio Amateur Society of Australia
NewsWest	The Amateur Radio News service based in W.A.

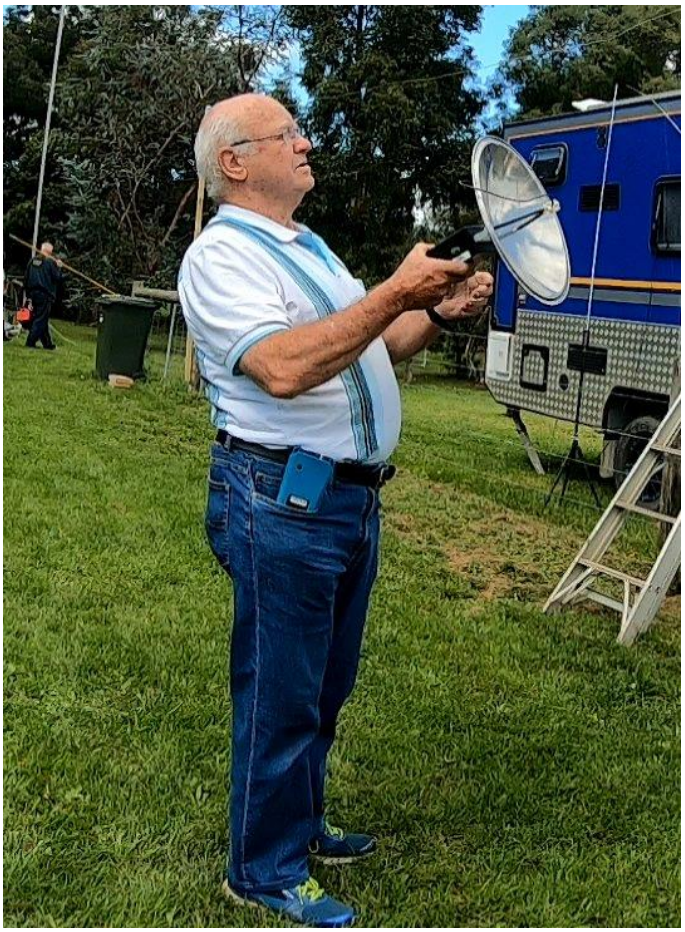
Many thanks to all of these groups who helped to make the event the success it has become.

On the Friday beforehand we had a few visitors who came to set up early. Light rains didn't present a problem. On both the Saturday and Sunday, the weather was mostly fine and still. A very good outcome on that front.

The theme for this years event was 'Dealing with Interference'. We saw talks detailing the QRM Guru website, how to track power line noise using ultrasonic reception, how best to use ferrite products for noise suppression and a presentation on how the ACMA deals with locating interference.

Of course, this years event took place just before many gatherings had been shut down. The Corona virus is now taking its toll on all social events. We tracked the progress of this closely and it was decided to proceed as it was an outdoor event, with lots of space between people. A hand sanitiser station was set up and its use was encouraged. Handshakes were discouraged. Given the low number of cases in circulation at that time, the risk to visitors was small and the event went forward without problems.

The next event is a choice for the future, but as it is a great opportunity for different clubs to get together, we should do it all again



Here is a pic of Bob VK3XP tracking down power line noise on our demonstration power line

QRM talk

Some Banners

Plywood Ball

Do you remember Ian & Diane's plywood ball that was on show at the GGREC Christmas party?

From Ian,

Remember my plywood ball project? We put it into the Berwick show this year and won best woodwork exhibit for the year.

A bit of fun

Good on you Ian, Keep up the good work

Building a Plywood Ball

Ian VK3BUF & Dianne VK3JDI

(This article was originally written for the first mag after the Christmas party, but got put aside, Ed)

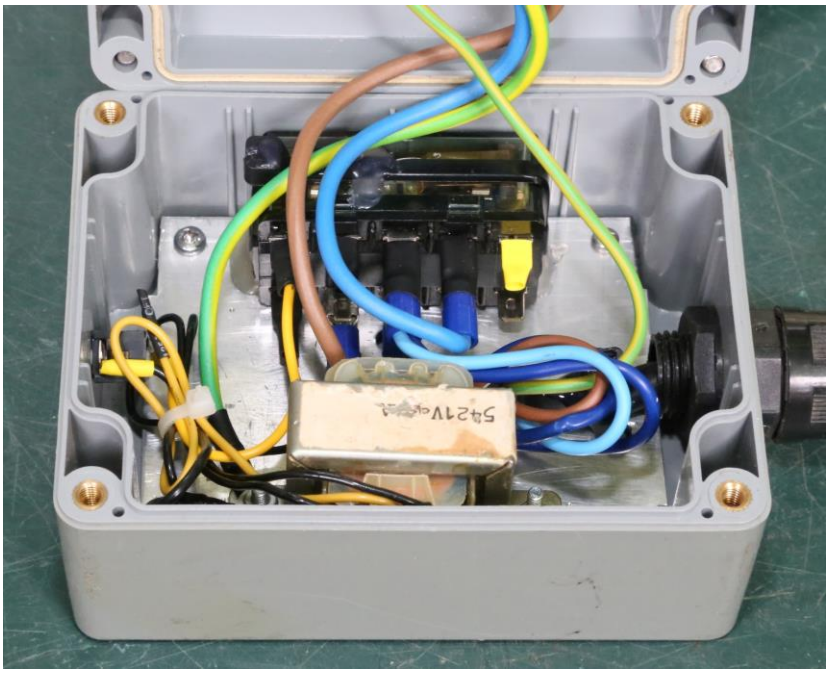
Many thanks to Leigh VK3FACB for hosting the GGREC Xmas breakup barbecue at his home in Pakenham. Dianne and I brought along a woodworking project we had been working on recently. It was a wooden ball made from plywood. This I would add, has nothing to do with either radio or electronics. In a way, that was part of its attraction as we are normally knee-deep in software and electronic projects, so it was fun to work on something unrelated. Many at the barbecue asked how such a thing had been put together The short answer is that its complicated. I did put together a video clip about how this was achieved. You can view it via this You Tube link. https://www.youtube.com/watch?v=MQDXOB2oDRI

Mains Power Switchers

In my radio shack, the power point where most of my gear is plugged in is far from being easily accessible.

So a remote power-up/on device seemed like an ideal solution.

Originally at the back of my bench I had a portable earth leakage breaker (safety switch), however I needed a long rod with a rubber tip on its end to reach it.

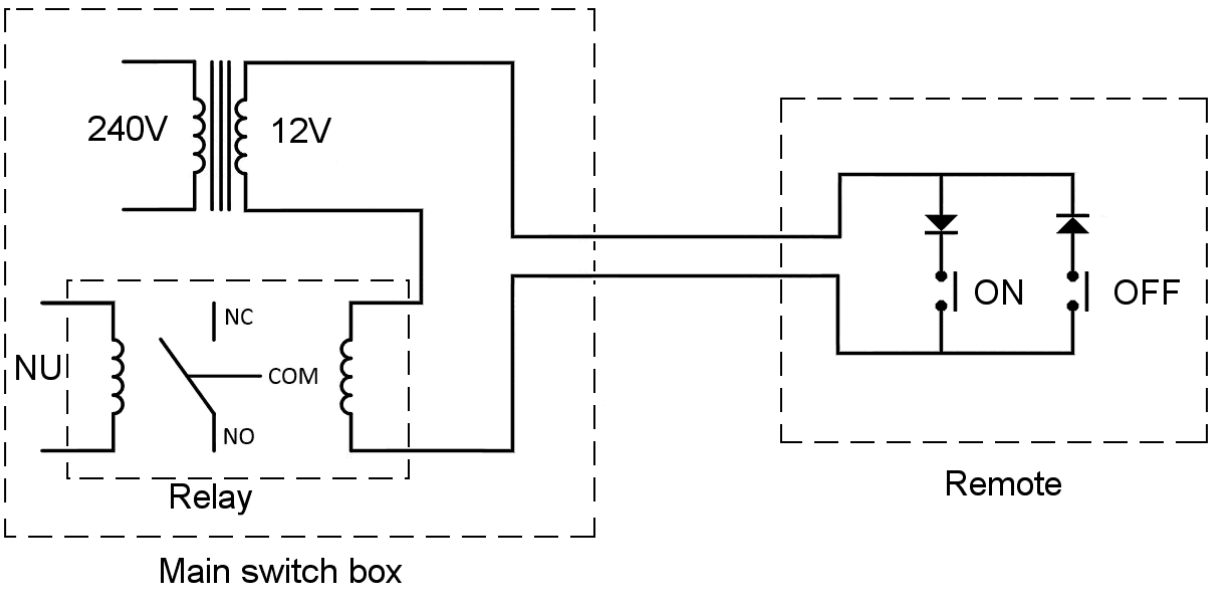


Of course, the magic smoke ended up pouring out of it.

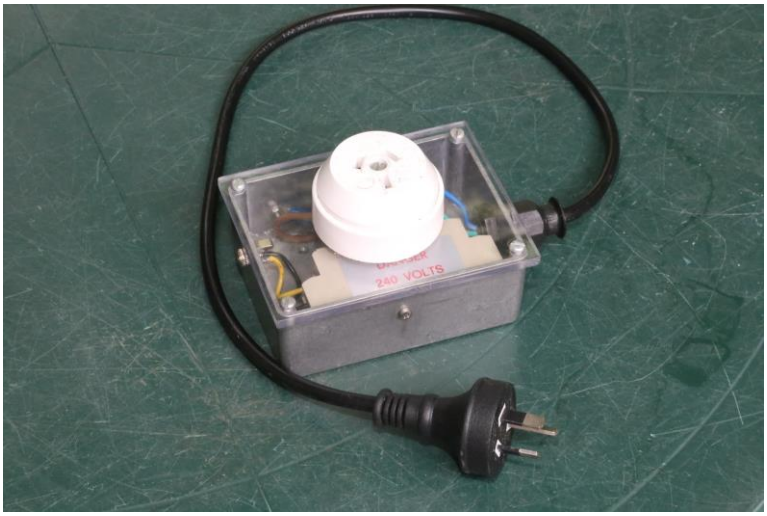
So I've started making up these relay boxes to make life a lot easier.

This one uses a self-latching relay, it only needs a momentary burst of power to turn it on, it then stays that way, even if I have a power fail. It actually has two coils, so you can have separate on and off pulse circuits; however I just use one and reverse the polarity of the applied signal to flip it to the off state.

In the box is the relay and a small 12V power transformer to drive the relay, what's not very visible is the 3.5mm mono socket on the end, where a remote control box plugs in. Here is a simplified circuit.

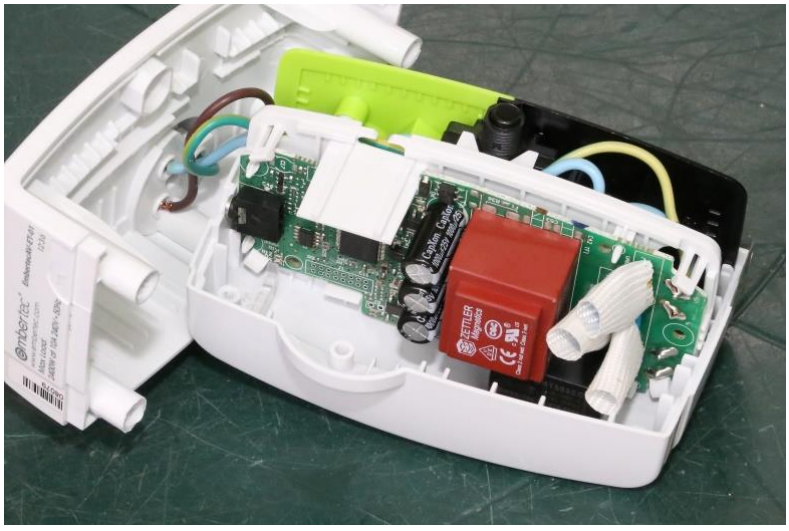


As you can see the circuit is fairly simple, it relies on the fact that these relays use a magnet to hold their contacts in place, and as such the coils are polarity sensitive. Normally 12V AC travels up the cord to the remote box, However when you press one of the buttons if forces half wave rectified DC into the relay coil causing it to switch one way. If you then press the other button it reverses the polarity of the half wave rectified DC, pushing the relay the other way. For the cost of two diodes I can now use cheap two core wire. Yes I could have used a stereo 3.5mm audio lead giving me 3 wires and no diodes, however I liked this approach. Light two core speaker flex has got to be the cheapest wire to buy. Actually the above comment about saving two diodes is not quite correct, as I would still have to put a rectifier after the transformer.



Here is another one I made out of junk, this time it's using a normal 12V relay and there is no transformer in there to run it, so an external source is needed. This one will be used to bring up a second work bench where my drill press and other more mechanical activities take place, I am going to wire it's input to my main shack 13.8 supply, so when I turn on the main switch (with the shack supply) the second bench will follow.

Many years ago I read about the idea of putting a master kill switch near the entrance to one's shack, so that if the worst should happen, and say a family member discovers you caught in the midst of getting a lethal shock, they can easily kill everything, adding that second switch would be dead easy. If you do put in a master kill button, regularly use it to turn off the shack, that way it will be well tested. (Safety switches will NOT trip if you are between Active & Neutral)

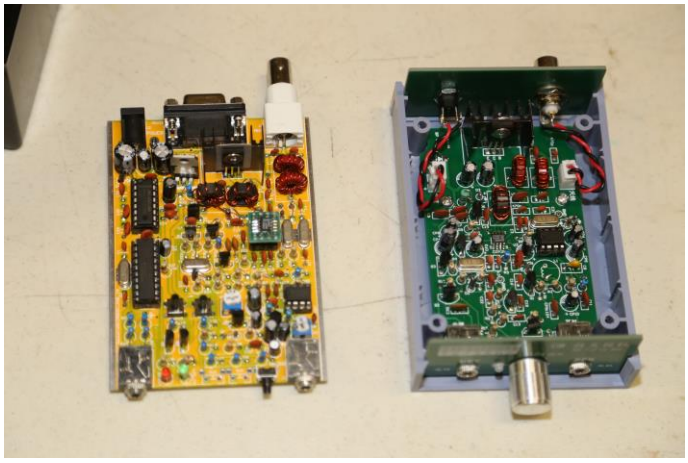


As a candidate for repurposing, there are heaps of these out there, they are very well built, and have all the components needed – including the self-latching relay that I based my unit on. I made one for my elderly aunt out of one of these.

I have 4, anybody interested?

Paul VK3TGX

Meeting Friday 21/02/2020



GGREC AGM Nomination Form

Candidates Name	Position Sought	Proposed by	Seconded By	Date

Candidates Name	Position Sought	Proposed by	Seconded By	Date

Candidates Name	Position Sought	Proposed by	Seconded By	Date

Candidates Name	Position Sought	Proposed by	Seconded By	Date

Candidates Name	Position Sought	Proposed by	Seconded By	Date

Club Information

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

Office bearers

President	Tony Doyle	VK3QX	Web Master	-	-
Admin Sec	Rob Streater	VK3BRS	Magazine Editor	Paul Stubbs	VK3TGX
Treasurer	Robbie Xin	VK3FAMT	Property Officer	'committee'	
General 1	Helmut Inhoven	VK3DHI	Assoc. Secretary	Rob Streater	VK3BRS
General 2	Leigh Findlay	VK3FACB			

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 434.475MHz Out 439.475MHz CTCSS 91.5Hz
VK3RGW Repeater supports Remote Internet access (IRLP), Node 6794.
70cm Repeater Seaview VK3RWD, In 433.575MHz Out 438.575MHz CTCSS 91.5Hz
Simplex VHF - 145.450MHz FM, Simplex UHF - 438.850MHz FM
VK3RLP Beacons 1296.532MHz & 2403.532MHz (currently inactive)

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
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