GATEWAY

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

March 2025

Fun With Three Phase Power.

A.I. Horror Stories.

Raspberry Pi Pico & UDP.

And More

WIA Affiliated Club

Cover photo, Bruce holding a tinySA ultra spectrum analyser on the prac night. See page 15
(If you have any good photos, please send them in)

Contents.

Event Queue

March:

7th.	7:30	Prac night
8-9th.		South America 10 Meter Contest, Opportunity to catch SA station
15-16th.		John Moyle Memorial Field Day
21st.	8:00	General Meeting

April:

4th.	7:30	Prac night
11th.	8:00	AGM 2025
12th.		IARU 100th Anniversary Centennial QSO Party

May:

2nd.	7:30	Prac night
16th.	8:00	General Meeting

July:

5th.	10:00	GGREC Hamfest Sale 2025 – see page 5

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 March 2025

Dear Members,
I am pleased to provide you with an update on recent and upcoming activities within GGREC.

Hamfest – July 5, 2025

Preparations are underway for our annual Hamfest, scheduled to take place in Longwarry. A special thank you to Ian VK3BUF for his efforts in organizing this event. Tables are available for booking, and invitations have been sent out. We now require firm commitments from members willing to assist on the day. If you are available to help, please contact your Committee.

PracNight

Our PracNight sessions continue, led by Bruce VK3BRW, who is currently presenting on spectrum analyzers, their functions, and their practical applications. These sessions provide valuable technical insights and hands-on learning experiences for all members.

Financial Year-End & Membership Renewals

As our financial year concludes this month, membership fees will be due by the end of the month. We encourage payments via EFT; however, EFTPOS payments will also be accepted on General Meeting days and at the AGM.

New Members

Please join me in extending a warm welcome to our newest members:

* VK3QB Chris
* SWL San Martin
* VK3IFM Ian
* VK3XAX Grant
* VK3ZAU Chris
* VK3LOL Rob

We look forward to their participation and contributions to the club.
Ideas for Field Events & Activities

We are seeking input from members regarding potential field events and other club activities. If you have any ideas, please share them with the Committee so we can continue to provide engaging and enjoyable experiences for everyone.

Committee Nominations

If you are interested in joining the Committee, we encourage you to consider putting your hand up. Should you have any questions about committee roles and responsibilities, please reach out to any current Committee member for more information.
Thank you for your ongoing support and involvement. We look forward to seeing you at our upcoming events.

Best regards,
Fred Reid
President, GGREC

From The Editor

This month I seem to have been a tad busy, while I've presented some stories from my bench (come on the rest of you) there are some that will have to sit on the back burner for another time. Others, well not electronic, radio, or… oh well, you do what needs to be done then curse yourself for not fixing that leaking tap – again. – darn it's 10:05, I'm not working on that now.

One thing I have noticed is the web, in particular YouTube seems to be getting flooded with more and more junk, often AI driven. Too many seem to be trying to make a quick buck on a platform that is notorious for low earnings, as evidenced by the fact that most of the main channels are opting for Patrion and other money harvesting methods, YouTube used to pay well, now that most are on the platform, the 'holiday season' has ended and the bean counters are now out to try and reap the rewards.

Actually many sites on the web start out as idea's with no real thought to money – like Facebook, originally a university project for people on their campus to keep in contact, but as it took off it was soon realised that many more would be interested. They obtained some funds as a startup and once it was established – oh we better start paying back that money…. Here come the ads, data harvesting, kind of anything that was marketable that they could kind of get away with. Anyone remember Mr Trump's original election & Cambridge Analytics? – why did FB have all that nice data for them to harvest. Then there is the other corner, Microsoft, who once made all their money selling software, but now kind of give it away whilst doing all the tricks of making it a money generating platform – that none seem to like – especially me.

This month I kind of rediscovered programming, I burned the midnight oil trying to get my nut around Python (that's their logo at the lop) and Tkinter (TK interface), I never really got into Windows programming, however I'm getting a yearning to take that UDP data I mention in my 'Raspberry Pi Pico & UDP' article on page 13 and throw it up on the bottom of my computer screens. I can get it to create a Windows screen, and display some text, but then it all kind of freezes until I close that window – so obviously I'm missing the point somewhere. There has to be a good tutorial that does not burry you in oddball terminology, like trinkets, without really explaining their take on them. I had a trinket in Windows 2000, a clock, it kept advancing with no input from me, not like the Tkinter one that just stops my code stone cold.

Assuming I get it right then there is some more material for an article, as it would be nice to see some programming – making stuff, an activity in the club. By making I don't mean just assembling something someone else has dreamt up. Don't get me wrong, there are many kits out there I'd love to build, but we could do with some of our own GGREC designs. There is a saying about our radio bands, use them or lose them, the same is true with your grey matter upstairs, it needs exercising. We are built to 'do things', not just sit back and consume stuff off the TV or internet. So reapply that saying, use it or lose it.

Like Nike and their moto, 'Just do it', the same goes for non-sports activities

Paul VK3TGX

GGREC HAMFEST SALE 2025

On **Saturday, July 5** the Gippsland Gate Radio & Electronics Club will be hosting a Hamfest sale . the venue is at the **Longwarry Community Hall** at 14 Kennedy St. Longwarry, approx 60km East of Dandenong, Vic. The venue is easy to find. It is just 3 km South of the freeway interchange, 150 metres South of the Longwarry train station and level crossing.

Doors open at 10:00 am for buyers. Entry fee is $7 Doors open at 8:30 for stall holders. Fees are $18 per table. must be paid for in advance of the event via EFT. A maximum of 30 tables are available. Table hire includes entry for two persons. EFT use BSB 633000 Account 146016746 Bookings are not confirmed until a booking number has been issued by the booking coordinator. No trading before 10:00 am please.

Direct enquiries to Ian Jackson VK3BUF via: hamfest@ggrec.org.au or call 5644 3118

A.I. Horror Stories

Recently I have seen many bad uses of AI, now don't get me wrong, AI, or Artificial Intelligence, does have some good uses, just have a look at the progress Tesla has achieved with self-driving cars. It appears that the human brain is kind of at its limits when it comes to writing complex software these days. Just look at the larger projects like Microsoft Windows, it's incredibly large and seemingly full of endless bugs. Most modern software uses an endless pile of libraries, functions, and software platforms. Authors rarely if ever directly talk to peripherals like a keyboard and mouse, or have to deal with writing maths functions, that's either embedded into the programming language, or if not, go looking for a library etc. Nobody can have all that code in their head, most only know the little bit they are fiddling with at the time.

Now try and of think how to write software that can take an image from a camera, figure out what all the elements in that picture are and their trajectories then control a car driving at speed to navigate around them. Another contender to this problem, Waymo is having all sorts of issues. Their vehicles need special maps of anywhere they want to go, and when anything complicated arises, they hand the driving over to a room full of humans, or just stop dead in the middle of the road and wait for an assistant to arrive to hop in and drive.

In a kind of recent event, Waymo coded the software so the cars would pull over to the side of the road, rather than stop dead, the trouble was a car had just run over someone, so it then effectively ground their body into the road as the car then took off to pull over to the side!.

So enter A.I. Whilst Tesla is having some great success, many others seem hell bent on making a quick dollar out of publically available AI engines to do all the heavy lifting, like write you university thesis etc. or as I have seen way too often, create video's for YouTube. YouTube does not pay much, or does one see much from any adverts placed in their video's. The main channels often seek memberships at a small fee, just so they can keep the lights on. However others just pump out great reams of video, often mostly done with AI. I doubt the authors ever read, or even understand the content produced, or even preview it before uploading.

I had seen that thumbnail before, it looked like an interesting video, someone had obviously put a lot of time into researching this.

It started out discussing the history of communications back then and went on to show that the telegraph/Morse code systems of the time were having all sorts of problems, with many miss received messages resulting in several calamities back then.

I found this a bit strange – I have seen many stories from back then and none of them attributed their issues to troubles properly transcribing Morse code transmissions, actually most issues to me were more from the later voice modes of communications, where dialect and local terms/lingo had really hampered things, putting planes into mountains etc.

Then the video said this

The telephone network had over 4, 000 telephones.
The telephone network worked differently than that of the telegraph. A caller began the process by removing the phone from the receiver.
This action known as taking the phone off the hook, would alert the local telephone office of the caller's request for service. The line attendant in the center office tasked with monitoring the local network and manually connecting the calls, responded to the query by submitting a dial tone signaling the caller to enter the desired telephone number. The number was then stored and connected to the recipient which would then trigger a ring in the event that the line is open.
Now if the line was outside of the center office the connection would go to an office that controls the recipient's number. As the telephone industry grew it quickly came into conflict with an entity…….

Photo taken 1955. Connie Latch(seated) connected WA's 1st telephone call on 1/12/1887. (Other telephonist Beryl Olders)

This has to be the most discombobulated description of a manual call I have ever heard, I had to listen to it several times to try and get my head around it. For starters, the original manual phones were basically a wooden box mounted at head high on a wall, the microphone, or 'Transmitter' as it was called was mounted in the front of that box, very early microphones were quite large, not something to be held in the hand, so hence in a box screwed to the wall. The receiver, or 'earpiece' was smaller and hung on a hook on the side of the phone box, you'd take that off its hook and hold it to your ear.

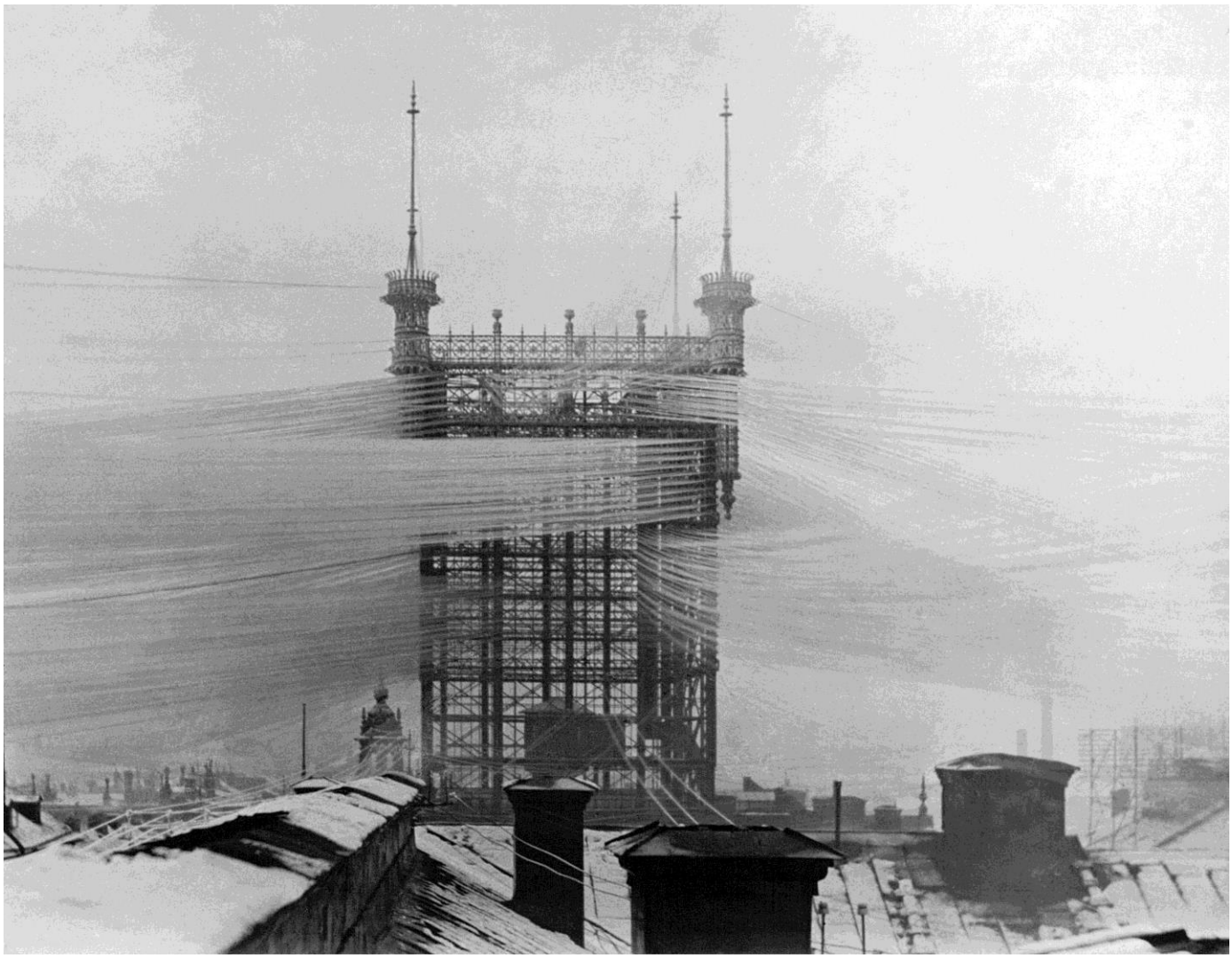
However going by this AI mess, you'd somehow leave the receiver where it was and remove the rest of the wooden box phone from it!!! Even considering various modern phones this description still does not work.

Then there is 'Dial tone', for starters these early manual operator type phones did not even have a dial. No, 'dial tone' came with the later automatic telephone exchange, as there was no longer an operator to say 'Number please', they needed something to replace that with.

To me this all sounds like the description of a manual call, and an automatic call, all somehow mangled together in one mess that makes no sense, kind of like what you'd hear from a young child trying to describe something to you that the just vaguely knew about, like the responses heard when my parish priest asked religious questing to the kids at our children's Mass.

Now when someone does not know what they are on about, their voice slows down, with many 'er's and blank stares, you know immediately they have no idea, totally out of their depth, However these A.I. bots churn this junk out like a seasoned professional presenter at a podium in a lecture theatre, all well-rehearsed, there being no question about the material presented.

So given how bad this part is, where I know the subject, how bad is the rest of it, that I am all but totally ignorant of. It's basically filling my head with PURE BS. I don't know about you, but I kind of value my head, I want quality input, not something to spoil and distort my knowledge.



For those interested, the picture they used for the video thumbnail is from Stockholm, the tower being built in 1887, when all lines were run overhead, like most power lines these days.

History

In 1887, Stockholms Allmänna Telefon AB ordered the construction of a tower allowing the connection of about 5,500 overhead telephone lines. The quadrangular metallic structure was 80 metres tall and soon fell out of favour with the local population. The company requested the architect Fritz Eckert to carry out embellishment work, which was when the four turrets were added.

The tower was quickly made obsolete as telephone companies began using underground cables in urban areas. In 1913, underground cabling for telephones was fully completed and the tower no longer served its original purpose. After 1939 it carried advertising for Nordiska Kompaniet. On 23 July 1952 a fire weakened the structure, resulting in its demolition in 1953 on safety grounds.[1]

This is a snippet from Wikipedia (as well as the picture)

https://en.wikipedia.org/wiki/Old_Stockholm_telephone_tower

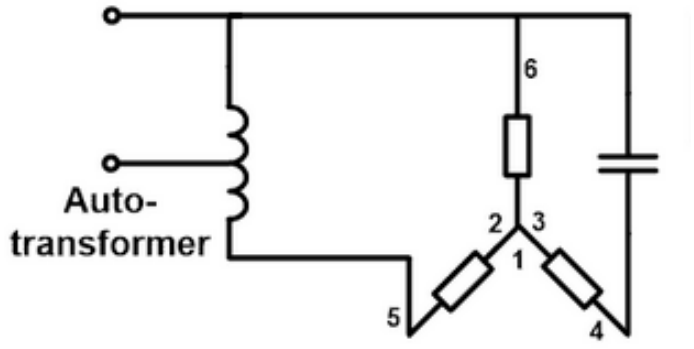
Wow have times changed – no I'm not talking about the technology, just the fact they were allowed to build this massive tangle of wires. About as tangled as our brains if we consume much of this AI dribble.

Paul VK3TGX

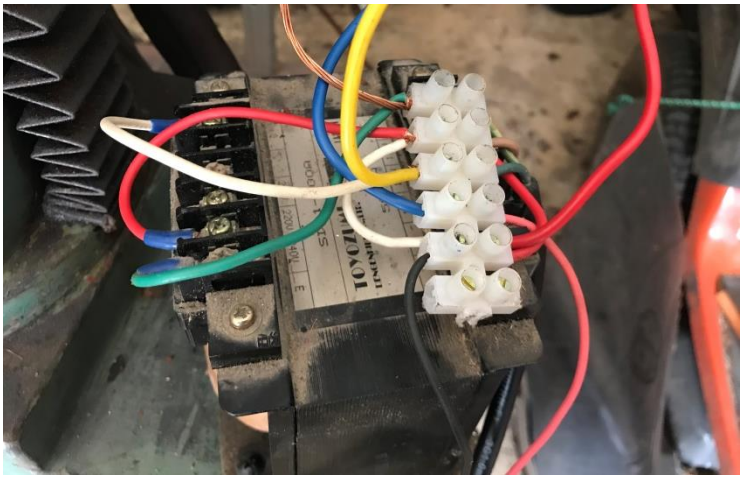
Fun With Three Phase Power

Recently my brother, Mark, scored a surface grinding machine from where he works, they were having a clean out and this particular unit went out the door, free to anyone who wanted it.

Trouble was it ran on 415V three phase power, as does most industrial equipment – bar hand tools of course. Now there are a few options here, replace the motor with a single phase unit, or adapt it to run on single phase. Unfortunately the motor was kind of highly integrated into the grinding head, with the motors end casting being the casting that made up 90% of the head. Whilst he did source another motor off a pump (where we wasted ages getting it to run in the right direction), hanging this off the back of the other partially dismembered motor, plus it's additional weight did not seem the right way to go, especially as the head position was controlled to thousandths or an inch by Vernier dials that probably would not appreciate any extra unneeded load.

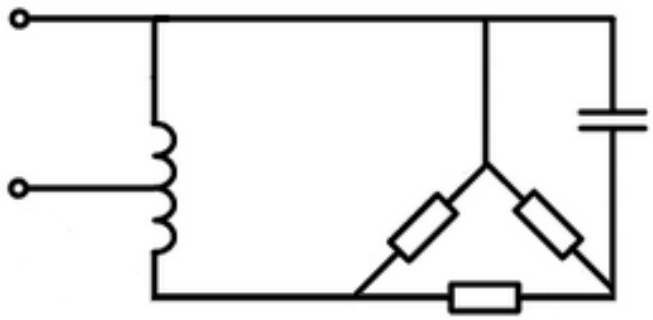


Now we could just go out and buy a three phase converter, however these are large and expensive affairs, mainly as they are intended to run several machines in a workshop, not just one small motor. There was one on eBay? But at $2000 we shied away. So we did the obligatory search on the web, that showed this circuit. It seemed kind of ok, however the auto-transformer and what size cap that is needed were a problem.



Mark had a transformer from a Japanese machine that cut 240V down to 100V, the domestic Japanese supply voltage (that must be the lowest in the world) that I quickly rejigged as an auto-transformer, while not giving us the correct voltage, it was a darn sight closer than just straight 240V.

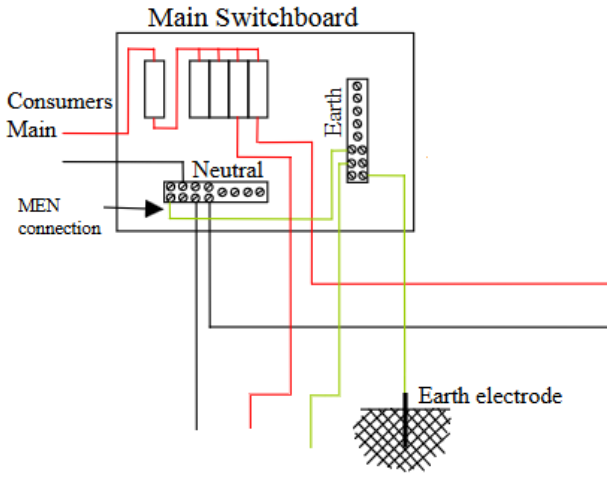
Success, it ran, However it got awfully hot real quick. Several posts on the web spoke of burned out motors, and seeing how quick this one heated up in no time at all I can vouch for those articles – don't do it unless you're playing with a throw away motor, and smoke is an acceptable outcome. I used a clamp meter to test the three motor coils current, one was like 600mA, ok, the next just shy of an amp, but the third was like 1.3A! Not good, they should all be the same. We played around with different motor run caps but that did not help much, yes a smaller cap dropped the current quite a bit, but it also severely reduced the motor's torque. Smaller caps with only a few mFD led to a motor that could be stopped by hand, so not really usable. Our torque/stall tests indicated we needed a larger cap, however it was getting way too hot in no time with what we had – so that path was just leading us to destruction. Maybe the problem is that diagram shows a star connected motor, where ours is Delta connected, normally if you rewire a motor from Delta to Star you have less voltage across the coils, so less torque. Some motors are connected with switching gear to swap configurations, generally the star is a 'starting' configuration used to get a machine running from stopped, then once it's up to a decent speed the motor is switched over to give full power as starting in a Delta config would draw way more power and cause overload conditions.



So what's next – Mark found a cheap Chinese VSD, or Variable Speed Drive, these take in the mains AC, rectify it to DC then regenerate the AC power with a variable frequency – this allows you to control the motor's speed. However if you ignore that bit and just leave it on 50Hz (full speed) you are left with a three phase power 'generator'. All the VSD wants to see on its input is enough voltage to generate 415V three phase. Even DC will do. (How many 'D' cells is that?)

So what does one get when they rectify 240V, or 415V? Our domestic 240V is directly derived from the three phase power. If you look at the power lines running down your street there is generally 4 lines there, three phases and neutral. Your house is connected to one phase and Neutral, usually with your neighbour on the next phase etc. etc. If your street loses just one phase then usually every third house will be out.

Looking at the motor Star config, that centre point, labelled 1,2,3, is Neutral, although usually not connected to Neutral. If you wire a 3 phase transformer the same you can get Neutral, which is usually tied to Earth – the MEN, Multiple Earthed Neutral configuration we use.



So if one rectifies 240V we end up with about 340V, and as three phase is just three 240V feeds kind of in parallel shouldn't that just give us the same 340V, but with three times the current?

However if you do the math, rectified 415 gives us something like 587V, way more.

So what gives?

Anyway, back to the cheap VSD, the manual says it'll take either three phase or single phase, so we ran in the single phase as per their labels (actually just feeding one three phase input) and 'let it rip'

'E09' was the result, I interpreted that as 'Error number 9', so darn we've set it up wrong. Trouble was the manual was written with a seasoned VSD expert in mind – so nothing was standing out, configuration wise. It says single phase so it should just work – albeit with not a full 415 on its output. There are way more expensive VSD's out there that purport to do this, but this was only a cheapie.

Anyway we eventually found the error list, and yes it was complaining about low volts.

Now not wanting to blow Marks new toy I wanted to get my nut around what was happening.

	A	B	C	D	E	F	G	H	I
1	Angle	Phase 1	Phase 2	Phase 3		Max V	Min V		Diff V
2	0	0.0	293.9	-293.9		293.9	-293.9		587.7888
3	1	5.9	290.9	-296.8		290.9	-296.8		587.6992
4	2	11.8	287.8	-299.6		287.8	-299.6		587.4307
5	3	17.8	284.6	-302.4		284.6	-302.4		586.9832
6	4	23.7	281.3	-305.0		281.3	-305.0		586.3569
7	5	29.6	278.0	-307.6		278.0	-307.6		585.552
8	6	35.5	274.5	-310.0		274.5	-310.0		584.5688
9	7	41.4	271.0	-312.4		271.0	-312.4		583.4075
10	8	47.2	267.4	-314.6		267.4	-314.6		582.0684
11	9	53.1	263.7	-316.8		263.7	-316.8		580.5521
12	10	58.9	260.0	-318.9		260.0	-318.9		578.8589
13	11	64.8	256.1	-320.9		256.1	-320.9		576.9894
14	12	70.6	252.2	-322.8		252.2	-322.8		574.9442
15	13	76.3	248.2	-324.5		248.2	-324.5		572.7238
16	14	82.1	244.1	-326.2		244.1	-326.2		570.3289
17	15	87.8	240.0	-327.8		240.0	-327.8		567.7603
18	16	93.5	235.7	-329.3		235.7	-329.3		565.0188
19	17	99.2	231.4	-330.7		231.4	-330.7		562.1052
20	18	104.9	227.1	-331.9		227.1	-331.9		559.0203
21	19	110.5	222.6	-333.1		222.6	-333.1		555.7652
22	20	116.1	218.1	-334.2		218.1	-334.2		552.3408
23	21	121.6	213.6	-335.2		213.6	-335.2		548.7481
24	22	127.1	208.9	-336.1		208.9	-336.1		544.9883
25	23	132.6	204.2	-336.8		204.2	-336.8		541.0624
26	24	138.0	199.5	-337.5		199.5	-337.5		536.9718
27	25	143.4	194.6	-338.1		194.6	-338.1		532.7175
28	26	148.8	189.8	-338.5		189.8	-338.5		528.301
29	27	154.1	184.8	-338.9		184.8	-338.9		523.7236
30	28	159.3	179.8	-339.2		179.8	-339.2		518.9867
31	29	164.5	174.8	-339.3		174.8	-339.3		514.0916
32	30	169.7	169.7	-339.4		169.7	-339.4		509.04
33	31	174.8	164.5	-339.3		174.8	-339.3		514.0916
34	32	179.8	159.3	-339.2		179.8	-339.2		518.9867
35	33	184.8	154.1	-338.9		184.8	-338.9		523.7236
36	34	189.8	148.8	-338.5		189.8	-338.5		528.301
37	35	194.6	143.4	-338.1		194.6	-338.1		532.7175
38	36	199.5	138.0	-337.5		199.5	-337.5		536.9718

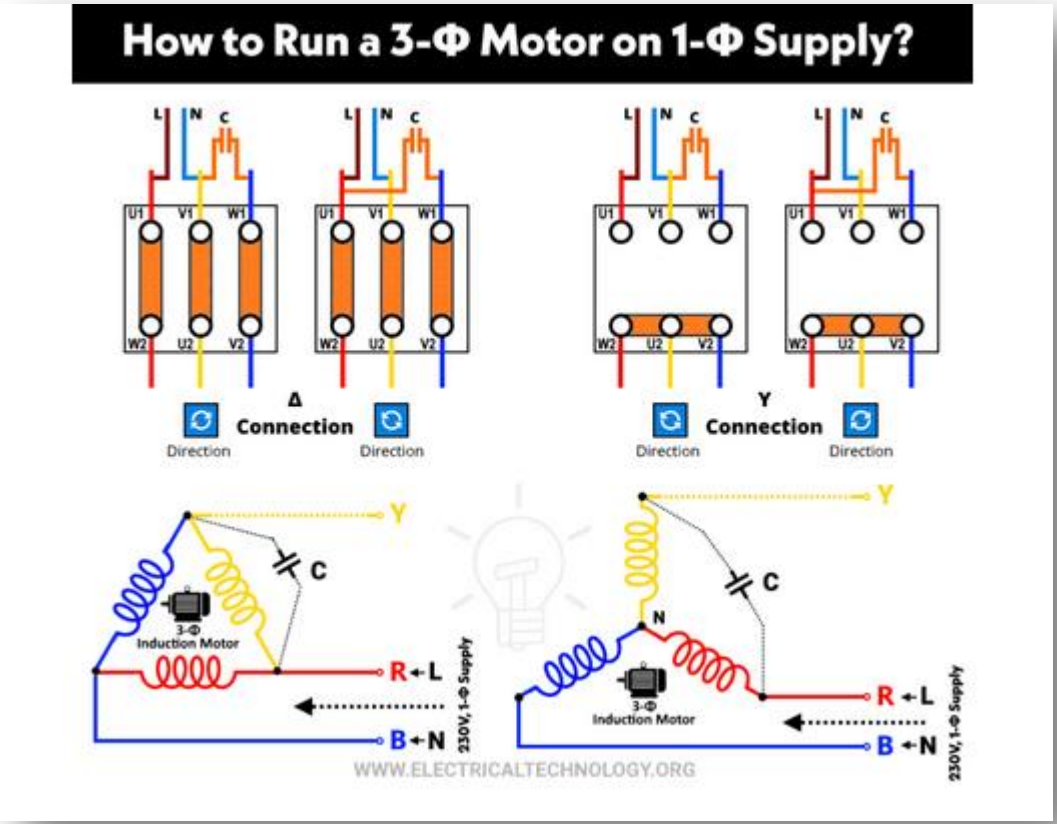
So I made up this Excel spreadsheet of three phase to see just what I'd see out of the rectifier.

And it was simply the rectified 415 number I got earlier – I was just over thinking it, although the way reduced ripple is way better than what we get from our regular single phase.

So where was I going wrong with my 3 phase rectifier assumptions, well in single phase the rectifier is between Neutral and live, on 3 phase its between multiple lives, so near twice as much – bar some loss as they are out of phase.

We fed the VSD with the 340V from our dodgy auto transformer and the VSD sprung to life, whilst not a full 415 it was close enough to avoid that pesky error message, just 75V low. I told Mark to not worry for now, just finish off his work on the grinder and give it a go, if it all works ok then no problems, otherwise we'll worry about it another day. we can just add more transformers until we get the rest of the volts.

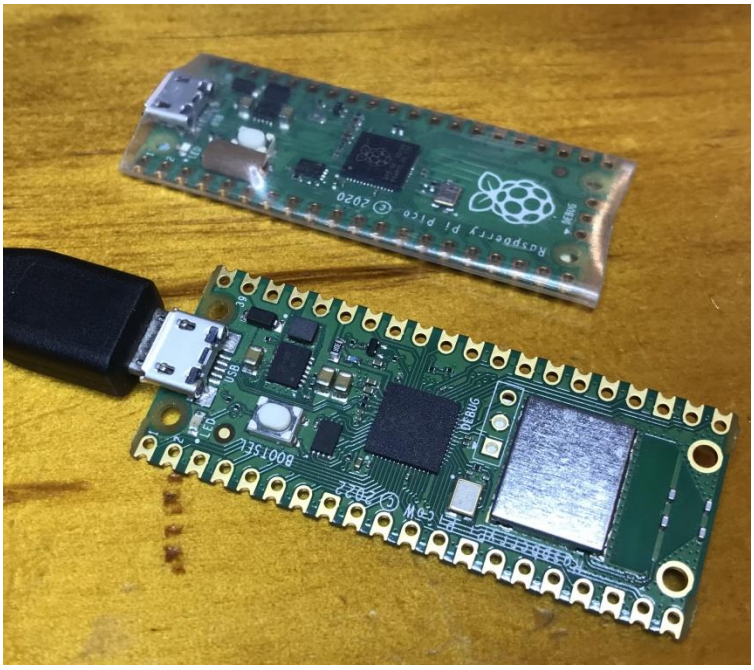
So how much torque now? Well Mark tried to stop it, but the motor didn't want to have a bar of that – so HEAPS better – even at the reduced volts.



So if you see something like this offered up as a solution on the web, don't bother. It may be good as an interesting play thing, so long as you don't expect any mechanical power, but lots of heat, then go ahead. Also if you see posts about people complaining about using a VSD saying you get no power, well it's way better than this capacitor hack, just make sure your getting the full 415V from its output, as in you do or don't need a step up transformer.

Paul VK3TGX

Raspberry Pi Pico & UDP



The other day I was looking at a Raspberry Pi Pico I had previously programmed, I assumed it was a fake, or rather a Claytons GPS time receiver. That software takes NTP time from the internet and turns it into NEMA style GPS data, so if you have a clock that needs GPS data to function, but you have no GPS reception, then this software will get you up and running. Unfortunately it was just not playing ball, until I discovered the errors of my way, wrong Pico, this one was programmed with an older version of Basic – however that basic, MMBasic had WiFi extensions and could do NTP (Network – *as in the web*, Time Protocol), so I was hooked and just fiddled with it. In next to no time I had the internet time function up. However the UDP functions listed in the manual were a no-go, that was until I updated it to the latest version, 6.0.1

To program a Pi Pico, you just need the firmware file, as downloaded from the web, and a USB port on your computer. You plug the Pi Pico in like a USB memory stick whilst holding down its little white button (as soon as the plug is all the way in, you can let go). The Pi will then appear on your computer as a USB memory stick, so just copy that uf2 software file you downloaded onto it. Once the copy is complete the Pi will reboot running the software you just copied to it.

The front Pico above is the WiFi version, running WebMiteRP2040V6.00.01 firmware, as above, the other one at the back, in clear heat shrink tubing, is loaded with 'Mouse Wiggler', if you plug that one into your computer, the computer will see it as a mouse, a mouse that makes a one pixel wiggle every 10 seconds, so little that you have to look real hard to see it, but enough to stop your computer going to sleep. Yes you should be able to control sleep/standby with your OS, however just plugging this in can be way easier, as setting the sleep function whilst installing – Windows etc., can be a bit tricky.

The MMBasic running on the Pico comes in a few flavours, the Pico has a dual core processor, MMBasic runs on one core, leaving the other for either WiFi, USB, VGA Video, or HDMI/DVI video. Unfortunately the Pico is not powerful enough to run more than one of these. Both the newer RP2350 and the original RP2040 as I have are supported. So 12 software variants.

See https://geoffg.net/webmite.html for software, manuals, and more.

One nice function of the WebMite is you can access it via Telnet over WiFi, this means the Pico can be buried somewhere, maybe a backyard weather station, or up in your roof space etc., however as long as it's in WiFi range you can connect to it and see what it's up too, including editing the program it's running – the only downside is there is no security, as in no password etc. If someone has access to your network, then they have full access to the Pico. If that's a no-no then you can leave telnet turned off, however you'll need physical access with a USB cord for any updates etc.

The WebMite can generate a basic web page, so even if telnet is off you can still see what your software wants you to see – like that backyard weather station etc.

```
> list
5 Print : Print
10 WEB ntp +11, "192.168.0.8"
20 WEB udp interrupt myint
30 Print
40 GoTo 40

Sub myint
  Rem If mm.message$<>Chr$(10) Then Print mm.message$;
  Print mm.message$;
End Sub
>
>
>
> run

ntp address 192.168.0.8
got ntp response: 19/03/2025 00:32:34


 25 03 19  0034
 25 03 19  0034
 25 03 19  0034
 25 03 19  0034
 25 03 19  0034
 25 03 19  0034
 25 03 19  0034
 25 03 19  0034
 25 03 19  0034
```

←This is my plaything for now, line 10 pulls NTP time from one of my boxes, the web is the normal source of this however I was playing.

The rest pulls UDP network packets from my network, originating from my ancient Baudo Time & Date gen, not the final target of my endeavour's, but it was there already connected to my 'server', so why not use it, It was already feeding some Python code that converts its Baudo output to ASCII, so all I needed was a few more lines of code so that data could be blasted over my network as UDP packets to all (as in .255) stations on my home network. Normally I can access it via telnet, however Telnet only allows one connection at a time, I wanted multiple, so hence playing with UDP - User Datagram Protocol. There are no checks made with this, it's up to the users to implement any if desired. I see it more like a HF radio transmission, yes it went out, whether it's received by anyone is another story. Maybe this will end up badly, I'll have to see, that's the fun of it all.

UDP over my wired Ethernet network seems fairly stable, however over WiFi it's another story, with the Pico on my desk, a few feet from my WiFi router it worked fairly well, as you can see in the above screen capture, no glitches, however it degraded quite a bit as I moved away. There seems to be issues, the main one being the Pico contending with WiFi from multiple sources, when I pulled my WiFi range extender's power the Pico was much happier.

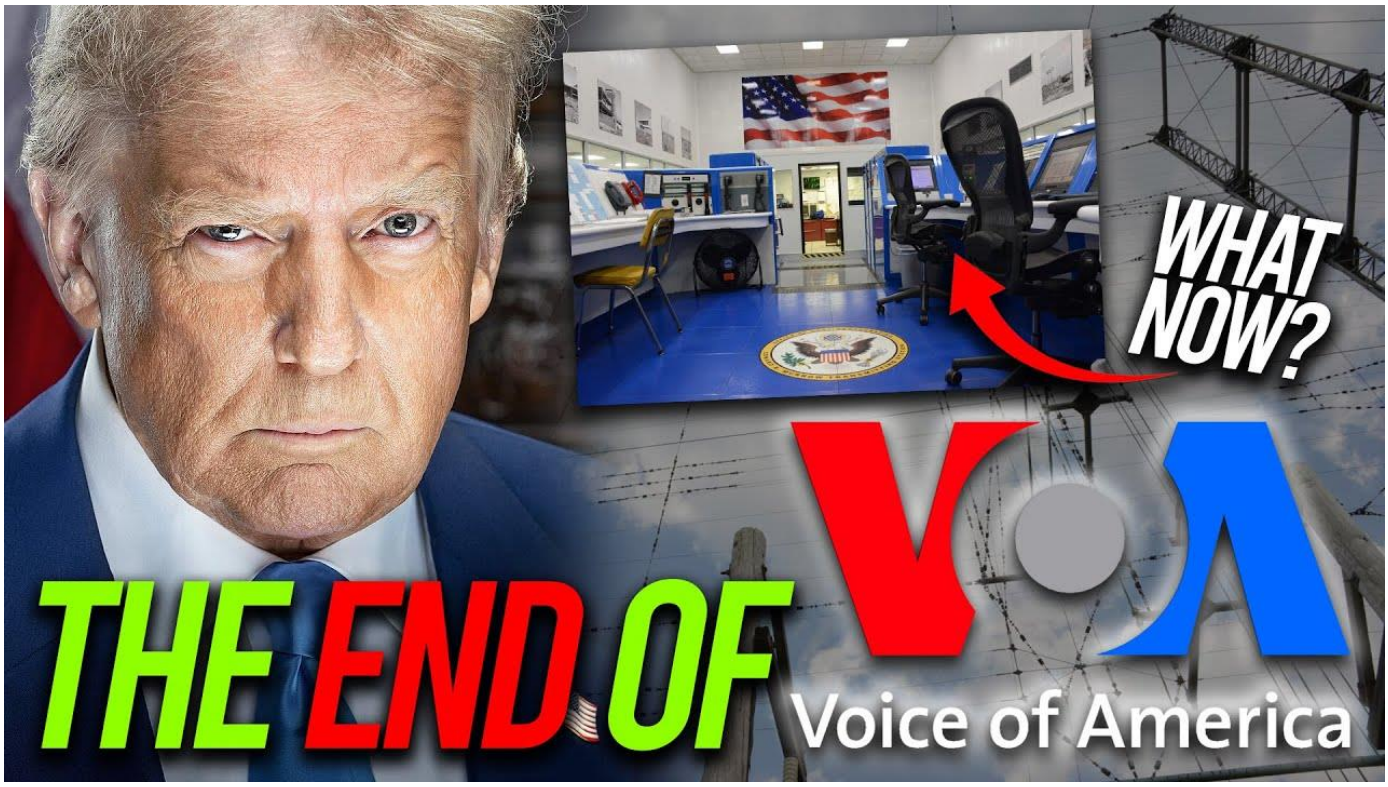
The UDP packets I'm currently sending are rather strange, normally each contains a message of up to 64K, however mine are at the lower extreme of just one byte of data, and they come at a fair flurry of one every 150ms, now as network gear is not real time, it's not that hard for the packets to arrive out of order, the UDP packets have no data to let you know if they are in or out of order. Higher level protocols like TCP have headers with sequence numbers etc., TCP is a connection based protocol meaning handshaking and transmission verification, UDP has none of that, it's all up to you. With the higher level protocols there is a specific session between you and the source, if five more devices want that data, then the server has to manage five additional and separate sessions. For a PC that is not hard, however if the originator is a Pi Pico, then you are limited to 4. On the web this kind of gets nutty, several hundred people wanting to watch your video, then the server has to send out several hundred separate 'transmissions', the bandwidth at the server can easily go nuts, and everybody's feed starts to buffer & stutter.

I'm trying to do things the good old radio way, one 'transmission' to all nodes, no hand shaking, if the received packet/message is bad, then just deal with it. With up to 64K of room available I should be able to add a fair amount of redundancy – maybe even FEC – Forward Error Correction, kind of like how a CD works, it just has to deal with it, it cannot go back to the originator and ask for a fresh CD. Not that my antics are allowed on the web, these broadcasts cannot get past my router, even if I hack it – because the whole web would crash if this were allowed. So just a bit of fun at my end. – Maybe a personal VPN would…..

Paul VK3TGX

Prac Night 7/03/2025

Interesting YouTube Videos



VOA Dismantled - Will The Transmitters Be Switched Off?
https://youtu.be/vtFdSsfh2HM

Let's Make an Oscilloscope From a Raspberry Pi Pico and Android Phone (or Tablet)
https://youtu.be/fR8VwuvkIAc

WIA Affiliated Club

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

We also give Thanks to

Jaycar Electronics

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

ALTRONICS
Build It Yourself Electronics Centre®

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	Fred Reid	VK3FWR	General 3		
Admin Sec	Klaus Illhardt	VK3IU	Web Master	Mark Clohesy	VK3PKT
Treasurer	Bruce Williams	VK3BRW	Magazine Editor	Paul Stubbs	VK3TGX
General 1	Leigh Findlay	VK3BOW	Property Officer	'committee'	
General 2	Ian Jackson	VK3BUF	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
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