



GATEWAY

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

March 2023



Arduino Morse Code Oscillator

Fixing the Log Periodic Antenna

WIA affiliation may be in danger

And More



Cover photo, Club Log Periodic Antenna repairs, See page 10
(If you have any good photos, please send them in)

Contents.

- 3 – President's message
 - 4 – From the Editor, Old computers & radios
 - 5 – News from the treasury
 - 6 – Notices - WIA affiliation may be in danger!
- Antennapalooza 2023
 - 7 – WIA membership form
 - 8 – Arduino CW Practice Oscillator, part 2
 - 10 – Fixing the Log Periodic Antenna
 - 11 – Meeting 17/02/2023 – Dave Rolf's certificate of appreciation, photo's
 - 12 – Interesting YouTube Videos
 - 14 – Club Information
-

Event Queue

March:

3 rd	7:30	Prac night
17 th .	8:00	General Meeting
18-19 th .		John Moyle Field Day (wia.org.au) - see member emails for all details

April:

7 th	7:30	Prac night
21 st .	8:00	General Meeting & Annual General Meeting (Nominations open on the 24 th March)

<p>Club run events are only possible with the involvement of ALL members.</p> <p>Without volunteers to coordinate and participate in club events the club will fail to prosper</p>
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President's Message

Have you heard of the Radio Amateur's Code? (No, not Morse Code).

I recently did a search to find a copy of the Radio Amateur's Code and I found many references to it although it seems to have been lost in time.

The ARRL website has a copy of the Radio Amateur's Code which I have reproduced here.

The Radio Amateur's Code

The Radio Amateur is

CONSIDERATE...He/[She] never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL...He/[She] offers loyalty, encouragement and support to other amateurs, local clubs, the IARU Radio Society in his/[her] country, through which Amateur Radio in his/[her] country is represented nationally and internationally.

PROGRESSIVE...He/[She] keeps his/[her] station up to date. It is well-built and efficient. His/[Her] operating practice is above reproach.

FRIENDLY...He/[She] operates slowly and patiently when requested; offers friendly advice and counsel to beginners; kind assistance, cooperation and consideration for the interests of others. These are the marks of the amateur spirit.

BALANCED...Radio is a hobby, never interfering with duties owed to family, job, school or community.

PATRIOTIC...His/[Her] station and skills are always ready for service to country and community.

- adapted from the original Amateur's Code, written by Paul M. Segal, W9EEA, in 1928

Although it was written in 1928, when the world was a very different place, it is still relevant today. It describes some of the best qualities that an amateur should have and demonstrate.

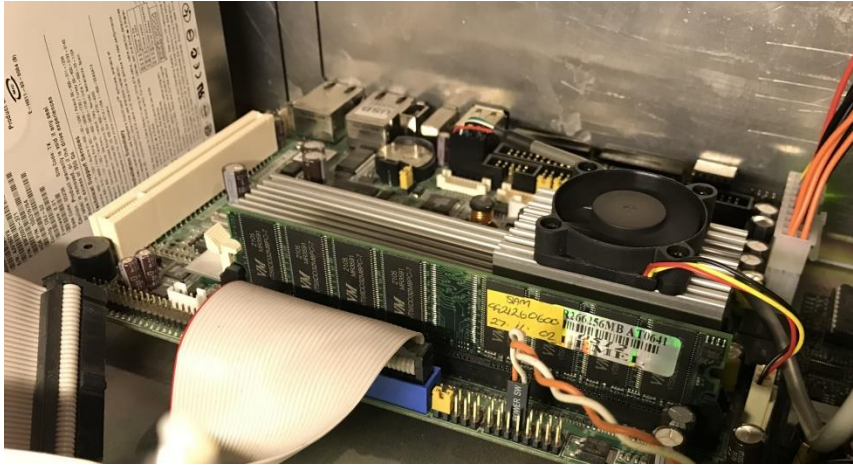
I was recently reminded of the Code when Ian Jackson spent a whole day fixing up the log Periodic antenna. At the end of the day, I thanked Ian for his time and all the hard work he put in to fix the antenna. Ian replied that it's all part of being an amateur, it's what we do.

There have been many examples over the years where members have gone out of their way to help out other members when assistance has been requested. A lot of the newer members would not have been around ten or so years ago when GGREC was buzzing with enthusiasm and nothing was ever too hard to do. We used to have elections for Committee positions at the Annual General Meetings because so many members wanted to be a Committee member.

I encourage all newer member to get involved with Club activities, as the old saying goes, you get out of a Club what you put into it. I have personally found that this saying is very true, so don't just sit back, get involved.

Kind regards,
Bruno Tonizzo VK3BFT
President GGREC Inc.

From The Editor



I'm not 100% what the draw is for me with old computers, for This month I've been fighting this old industrial Windows 2000 machine.

I haven't figured out what I'm going to use it for, however it can never be anything serious. (online)

For any online work, you should only be using the latest software, anything else and you're really asking for it.

Probably the best example of this is the Lastpass hack, where an employee was accessing the companies systems with his home PC, where the hackers were able to get in via a vulnerability with his audio software. Now this is kind of an extreme example, as the hackers were working really hard to get into Lastpass. For the average home user you should fare better, however once a hack to something is found, the lower tier hackers, those after you bank details etc. will eventually get around to using it. The various parties involved will fix things, However if you are out of date it does not matter what anyone does as none of their fixes will apply to you.

To me the challenge is sorting out the machines woes, probably adding some pointless add-ons etc. (case illumination etc) It does have some software for accessing oddball peripherals, so that is good. Microsoft loves removing drivers etc. for older hardware rather rapidly, if you push them they will probably cite some financial reasons for doing so, however in the Linux world this does not happen anywhere near as much, I can plug in things that Microsoft has long cast aside and they work straight away. My favourite in an old Microsoft branded webcam, it now only works on Linux. (Mind you, the image is horrible, unusable – just as Microsoft made it)



I've always had fun hooking up odds and ends, seeing if they can be used for something. One on my radar is an old WinRadio card that I bought years ago, brand new for a ridiculous price, however I had mostly disposable income back then, so why not. (Marriage and unemployment have since fixed that one). My aim is to get it online via RCForb etc.

Currently I've been using either VNC, or Teamviewer. As you can see, I have it on my remote screen, and can control it, However with one BIG gotcha, no audio.

Oh well it looks like I'll have to keep playing with it for a while longer. Actually RCForb, or rather the 'orb' network is probably better, however they have no native WinRadio support, so I'm going to have to fudge it.



Paul VK3TGX

NEWS FROM THE TREASURY

From Klaus VK3IU

Membership fees

As our financial year draws to a close in March, we kindly remind you that your membership fees will be due soon. We have managed to maintain the same fees as last year thanks to the success of our fundraisers. The fees are due by the AGM in April 2023.

We prefer electronic fund transfer as the method of payment

GGREC BSB 633000 - Account 146016746

always identify your EFT payments with your call sign or for SWL with your last name.

Full Member \$50.00

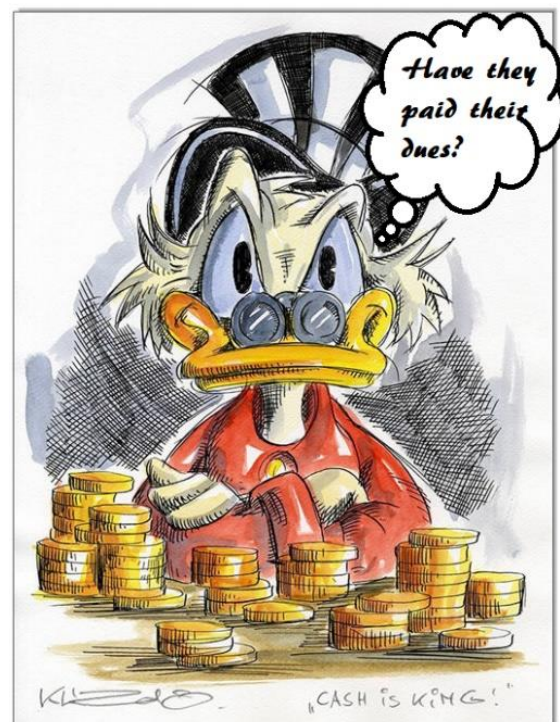
Pensioner Member \$40.00

Junior Member \$25.00

Extra Family Member \$20.0

We will confirm your payment by email within a week. If you don't receive a confirmation email after a week of making the payment, please contact us at treasurer@ggrec.org.au. No need to inform us that you have paid as we will see it in our accounts.

If any member is experiencing financial difficulties, we encourage you to reach out to our President in confidence so we can find a way to support you and ensure you don't have to leave the club.



If you decide not to renew your membership, please let us know by email before the AGM so we don't follow up on your payment.

Fund raising activities 2023

Our committee is planning a Bunnings sausage sizzle for 2023. The previous activity was successful in raising much-needed funds to run the club and maintain our current membership fees. We encourage all members to join and support these activities

WIA affiliation may be in danger!

We have received information from WIA that GGREC is may no longer be eligible to be an associated club due to our WIA membership percentage being consistently below the required 25% of GGREC licensed amateur members.

While we don't keep records of our members' WIA affiliation, we are requesting WIA members to let us know about their membership to get an accurate picture of our percentage.

Losing our WIA affiliation means our Club station will no longer be able to use the WIA QSL service, and we will lose our heavily discounted public liability insurance.

This will be a significant financial burden on the club, and we will be forced to increase our membership fees to cover the cost of public liability insurance.

Without Public Liability Insurance, we may also need to cancel or postpone some of our events, such as

- Field Days,
- Bunnings Sausage sizzles
- and Jamboree with the scouts
- PRAC nigh could be a further victim

We apologize for any inconvenience caused and thank you for your cooperation.



**2022 was too wet! Antennapalooza, now in its 8th year,
will return to Drouin West in 2023 on April 14, 15, 16
(The weekend after Easter)**

**The theme for 2023 will be 'Station Efficiency'.
It will include talks and demo's on different ways that
Amateurs can improve the way they operate.**

Visit: <http://antennapalooza.net.au/>

Play your part!!

Join today!

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WIRELESS INSTITUTE OF AUSTRALIA ABN 56 004 920 745

Phone (03) 9729 0400

Email nationaloffice@wia.org.au

MEMBERSHIP APPLICATION

Send to **WIA Membership**

PO Box 2042

Bayswater VIC 3153

Mr/Mrs/Ms _____

Given Names _____

Family Name _____

Preferred Name _____

Street Address _____

City/Town _____ State _____ Postcode _____ Country _____

Callsign _____ Date of Birth dd/mm/yyyy _____

Occupation _____

Tick which period and fee.

Membership

☐ 1 year ☐ 5 year

Member ☐ \$95 ☐ \$451

Overseas Member ☐ \$105 ☐ \$500

Concession Member* ☐ \$80 ☐ \$380

Student** ☐ \$35

Additional Family Member*** ☐ \$36

* Please provide pension health benefits card number.

** Please provide evidence below of being a full-time student.

*** Please provide name and callsign of primary family member residing at the same address.

Provide concession details

Home Telephone _____

Work Telephone (optional) _____

Mobile Telephone (optional) _____

Email Address _____

I apply for membership of the Wireless Institute of Australia and agree to be bound by its constitution (available on the WIA Website).

I enclose ☐ Cash ☐ Cheque or ☐ Money Order for \$ _____

or authorise payment of \$ _____ by way of debit

to my ☐ MasterCard ☐ Visa Credit Card CVC

Card No.

Expiry Date ____/____ Name on Card _____

Signature of Applicant _____ Date ____/____

Iambic CW Practice Oscillator, part 2

Initially this was going to just be a guide to building your version of the Arduino CW oscillator I published last month, However it's more a general guide to working with the Arduino's

Construction

At present, there is no circuit board as such, it depends on what you want, as in if you want to use a USB style 5V power, then no regulator supply is needed, and likewise if you opt for a piezo speaker, then no drive transistor is needed – so it's one Arduino and nothing else.



Here is the piezo speaker Jaycar are currently selling for \$4.50 - CAT.NO: AB3442 – I haven't tried one, however I tend to think its output would be a tad feeble

However the one transistor amp shown last month will allow any regular 8 ohm speaker to be used

A circuit board for one transistor and resistor seems excessive to me, hence not designing one.

Mounting an Arduino Nano



Brand new a Nano comes in a sealed bag, with the header pins supplied, but not fitted, now you could just stick the board into the bottom of a plastic box with some tape, or glue, after soldering wires directly to it, yes this works and I have come close to that style of building however here follows a few better options



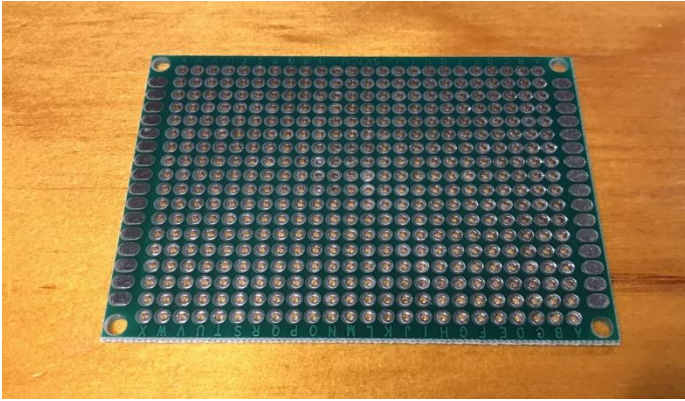
Where I once worked they designed a camera shutter test circuit on a proto board, when it was perfected, they just stuck it into a box, and said 'job done'.

These small proto boards are now quite cheap from China.

This particular board is just big enough to hold a Nano and nothing else, so you'd be

better off with a larger one. Whilst putting a bread board into a box and calling it a day may seem a rather odd way to make anything, especially if you consider the design as finalised, never to be changed, it does make a lot more sense if you are not sure and may want to change things later, maybe quite radically, as in the CW case, you have gained (or given up) getting your CW skills, and now that oscillator has no purpose, well you can easily change almost everything, add a display & a keypad and turn it into an antenna rotator controller etc.....

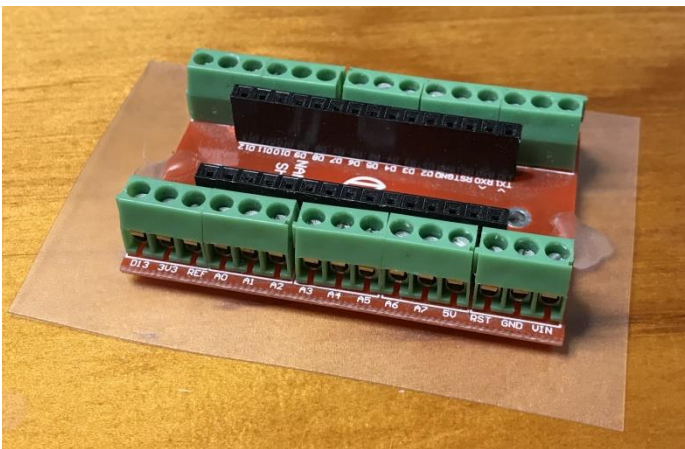
With 'proto board' type builds, transparent plastic boxes work well as you don't have to make any holes for displays etc., just the 'in' and 'out' connectors, making project recycling easier.



Assuming you have everything happy on a proto board, but prefer a soldered together solution – or just want to retrieve the proto board for something else, then there are these 'doughnut' boards, they have plated through doughnut on each hole, however personally I prefer the strip or Vero style boards over these doughnut boards as you have to either blob solder between pads to

link components together, or add heaps of links. They are basically a sea of open circuits. You mostly cannot put two leads into one hole so the through hole lead tends to be a component leg, with the extra lead blobbed on underneath. The downside of this is when it comes to desoldering a component as the link wire now either gets in the way of your desoldering tool, or just falls off – not good either way.

With strip board, multiple holes are connected together, so component leads and link wires get their own holes, making rework and repairs way easier. If (on Vero board) you take time and organise all you link wires into nice looms etc., you can end up with a very smart build. Having lots of wiring does not make it look amateurish, just a little 'old school', have a look inside a very old video recorder or military equipment, looms everywhere, no problem.



These screw terminal adapters are specifically made for the Arduino Nano, with the screw terminals labelled with their Arduino names.

This one has been attached to some insulating plastic, so it can be placed on a metal surface without risk of shorts, although the board does have mounting holes for standoffs for proper mounting inside an enclosure.



IF you would prefer using an Arduino Uno, then there are these plug in 'shields' as they call them, plenty of room for a transistor or two.

Paul VK3TGX



Fixing the Log Periodic Antenna

On Thursday the 2nd of March, Ian Jackson VK3BUF made his way from Drouin to Cranbourne towing his cherry picker. The trip took longer than normal due to the never ending roadworks on the freeway. Fred VK3FWR and I were at the Guide Hall preparing the antenna for Ian's arrival. The tower was wound down to a reasonable height so that it was easily reached with the cherry picker. When Ian arrived, a branch was removed from the tree next to the tower to facilitate access. The element mounts that Ian's friend had manufactured for us fitted perfectly and we soon had the element mounted back on the boom.

While Ian was up fitting the elements, he noticed that there was a lot of corrosion where the feedline (aluminium straps) connect to the elements. It was obvious that the antenna performance would be seriously degraded. Ian then spent considerable time replacing every nut bolt and washer with new stainless steel ones and cleaned up all connections with a wire brush. Ian put in a full days effort getting the Log Periodic antenna back to a useable state that will serve us well for many years.

Before Ian left the Guide hall we strapped the tree branch to the side of the cherry picker to be transported back to Drouin to be added to the Antennapalooza bon fire.

Thank you very much to Ian Jackson and Fred Reid for restoring the log Periodic antenna for all GGREC members to use.

Kind regards,
Bruno Tonizzo VK3BFT
President GGREC Inc.



Meeting 17/02/2023



Interesting YouTube Videos



**THIS will
Transform
how you
think about
Antennas**

Future of Antennas and RF Lenses using 3D printer

<https://youtu.be/3YMRfw0uWlw>



**Terran Space Academy
Superconducting
Breakthrough!
This Changes Everything!**

TSA-SOV-TTM-SCB-23071

Superconducting Breakthrough! This REALLY Changes Everything!

<https://youtu.be/BVw6iTZ2nW8>



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

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