



# GATEWAY

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

## November 2012 - From the President ...

VK3JDI



Dianne Jackson

The November General meeting will be the last formal meeting for 2012 there will be an informal Prac Night at the Shack on December 7 (the night before our Christmas break up party) In January our first general meeting for the year will be on the 18<sup>th</sup>, there is no Prac Night in January

At the November meeting, we will be showing a short documentary from Bell Labs, about wave forms and wavw function machines.

This years Christmas party lunch will be held at Leigh Findlay's place in Pakenham, on the 8<sup>th</sup> of December. (See details elsewhere in this issue of gateway). As usual, it is bring your own everything, including, food, drinks, plates, cutlery, chairs, and a hat. The Christmas hamper will be drawn at the party, and there will be lots of fun and games (with prizes) as well. Come along and enjoy the fun. Start time is from around 11:30 am.

There have been some small changes to Incorporation laws that affect many clubs in Victoria, including ours. Read the article inside this edition of Gateway on how these changes will affect us and what we need to do to comply.

Our logo coffee mugs and glasses arrived at the last meeting and are proving to be popular. We still have some coffee mugs available for sale, but if you like the look of the engraved glasses, we will be doing another fresh order of these. See the advert for this inside...

Early in 2013 we intend to introduce a series of training sessions for people who wish to design their own circuit boards. This will be something to look forward to.

I'm looking forward to seeing you all at the November meeting.

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## GGREC Event Queue from November 2012

November 16<sup>th</sup> – Friday Night. General Meeting at the Cranbourne Guide Hall  
2000 hrs Video on Wave Function Machine from Bell Labs.

November 24<sup>th</sup> & 25<sup>th</sup> – Sat & Sun. Spring VHF/UHF Field Day  
See the WIA contest page at the website for more information  
<http://www.wia.org.au/members/contests/vhfuhf/>

November 25<sup>th</sup> – Sunday. Rosebud Hamfest  
Eastbourne Primary School Auditorium, Allambi Avenue, Rosebud, Victoria  
Contact [markybradio@gmail.com](mailto:markybradio@gmail.com) or phone 0407844063

December 8<sup>th</sup> – Saturday. GGREC Christmas Party  
From 1130 hrs see Page 3 for Details

January 11<sup>th</sup> – Friday Night. Committee Meeting  
Demonstration and Introduction to PCB design using Design Spark Software

January 18<sup>th</sup> – Friday Night. General Meeting at the Cranbourne Guide Hall  
Talk to Be Announced

February 1<sup>st</sup> – Friday Night. Prac Night at the Peter Pavey Clubrooms  
From 1930 hrs come along to socialise and have a chin wag  
or use the clubs transceivers for a QSO

February 15<sup>th</sup> – Friday Night. General Meeting at the Cranbourne Guide Hall  
2000 hrs Talk to be announced.

March 1<sup>st</sup> – Friday Night. Prac Night at the Peter Pavey Clubrooms  
From 1930 hrs come along to socialise and have a chin wag  
or use the clubs transceivers for a QSO

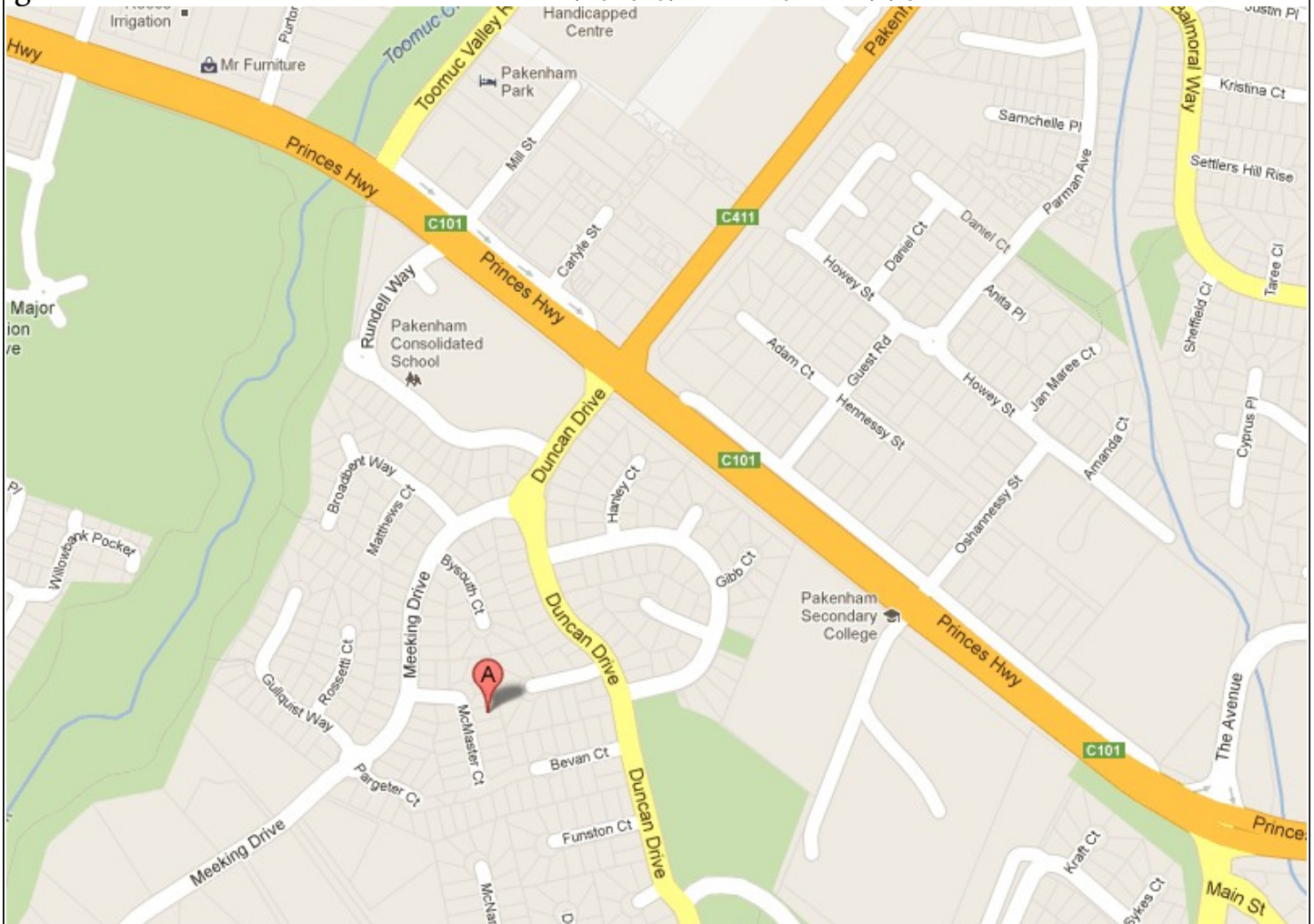
March 8<sup>th</sup> – Friday Night. Committee Meeting

March 15<sup>th</sup> – Friday Night. General Meeting at the Cranbourne Guide Hall  
2000 hrs Talk to be announced.

April 5<sup>th</sup> – Friday Night. Prac Night at the Peter Pavey Clubrooms  
From 1930 hrs come along to socialise and have a chin wag  
or use the clubs transceivers for a QSO

## **GGREC 2012 Christmas BBQ**

This year Leigh has kindly offered his place for our annual Christmas BBQ. His house is located in Pakenham at **13 Mc Master Court Pakenham**, this is in behind the Pakenham Secondary College. If you need to speak to Leigh about the BBQ or how to get there he can be contacted on 03 59417492 or 041300997.



Please remember to BYO everything, food, chairs, drinks etc. The club BBQ will be on site and Leigh has a great place with lots of under cover areas including a Veranda and Pergola, street parking is somewhat limited and we would like to ask that you take care to not block other driveways or access when parking.

The clubs Christmas hamper raffle will be drawn on the day, you can buy tickets for \$2 each or 3 for \$5 either at this months meeting or on the day of the Christmas BBQ. Remember we also need donations for the hamper you can even throw something in on the day of the BBQ if you need to but we would prefer donations this meeting.

There will also be games with a prize for the winners in each game.

Hope to see you all there and we are looking forward to a great day to round out the year.



## **Nikola Tesla Site Purchased for Museum**

The group known as the Tesla Science Centre formerly the Friends of Science East, have purchased 16 acres of land situated on Long Island in a bid to create a Tesla museum. They are a non-profit group and they have said that the purchase was a simple feat... only expensive. They had set out to raise US\$850,000 but have ended up raising close to US\$1.4 million to establish what will be America's first museum dedicated to scientist Nikola Tesla.

It is reported that the fund-raiser saw donations from people in over 100 countries. The land was purchased from the Agfa Film Corporation. They had used the land from 1969 to 1992 in the production of photography supplies, but decided to put it up for sale in 2009 after it sat unused for some time.



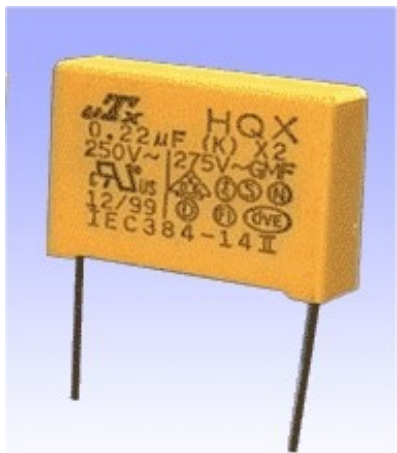
*The Boarded up Lab at the Tesla Estate, the future home of the Museum*

The area was known as Wardenclyffe, which is what Tesla called the estate, it was intended to be used as a facility for Trans-Atlantic communications, broadcasting, and wireless power. Wardenclyffe consisted of an incomplete 18 story transmission tower that topped off the laboratory that was surrounded by about 16 acres of land in Long Island in 1903. By 1917 Tesla had sold it for \$20,000 to pay debts at the Waldorf. The same year the transmission tower was demolished by explosives by the buyers and sold for scrap to recoup some of their expenses.

## If the cap fits.....It May still be wrong

A brief study into the weird world of mains filter capacitors. Ian VK3BUF

Any electronic circuit that has to work with 240V AC Mains will have some mains filter block capacitors lurking in the background. Sure, they will have a capacitance value stamped on them, like **0.1uf** or **0.047uf**, and they will also have a voltage rating stamped on them like **250VAC** or **275VAC**, which sounds like a reasonable thing to do. But what is all of this weird **X2**, **Y1** marking all about? What is the difference and where is one more appropriate than another?



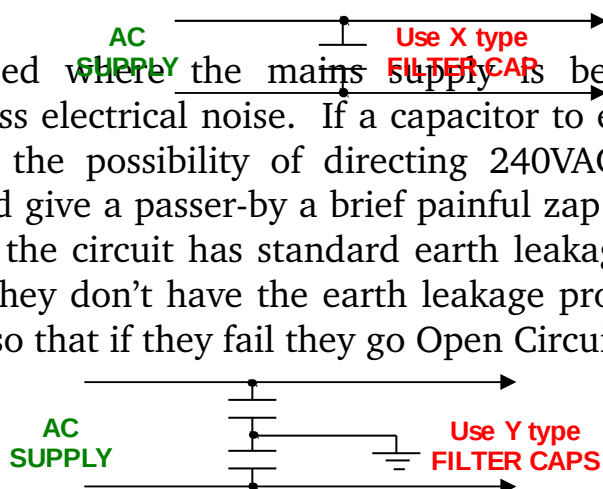
If questions like this loom large in your life, then perhaps you should get out more...

If you *do* have a social life that does not include parties with cardboard cutouts of famous people and still want to learn about X and Y type capacitors, then read on..

These capacitors are designed for use with AC mains. This means that the voltage rating will be a conservative RMS rating rather than a peak DC rating that you may see on a green cap or electrolytic capacitor. If a capacitor is rated to 275VAC then it means that it will happily withstand the instantaneous peak value of the AC waveform. To work out the DC voltage limit multiply it by the square root of 2. For example:  $275\text{VAC} \times \sqrt{2} = 275 \times 1.414 = 389\text{V D.C.}$

The X and Y ratings relate to where the capacitors are normally placed and their failure mode. X capacitors are placed *across* AC lines, (usually to filter out transients) so if they failed and became a dead short, they would hopefully trip out a circuit breaker and nobody would get hurt.

Y capacitors are used where the mains supply is being bypassed to an earth connection to suppress electrical noise. If a capacitor to earth was to become a dead short, then there is the possibility of directing 240VAC to the metal case of an appliance. This could give a passer-by a brief painful zap if they touch the metal of a faulty appliance and the circuit has standard earth leakage protection. (or a longer, more painful zap if they don't have the earth leakage protection) So essentially, 'Y' capacitors are made so that if they fail they go Open Circuit and not Short Circuit.



The number after the X or Y refers to the ability of the capacitor to withstand impulse voltages

CAP TYPE	IMPULSE TESTED	CAP TYPE	IMPULSE TESTED
X1	4000 Volts	Y1	8000 Volts
X2	2500 Volts	Y2	5000 Volts

X style capacitors are cheaper than Y style. They are made from self-healing metallised polyester or polypropylene and come in a flame-retardant plastic box casing. Normally they will have approvals stamped on them for different countries, *UL* for the USA, *CSA* for Canada, *VDE* for Germany. (and perhaps the letters *OZ* written in crayon for Australia)

There is plenty of general information around on capacitors and capacitance, but details on specialised types of capacitors are only spoken about in hushed tones around water coolers and car parks. The time has come for *XY* capacitor users to come out of their closets to speak openly and proudly of their experience and preferences. Through their efforts, the world may become a safer place.

From the Editor

Well it has been a nearly a year since I took on the role of Magazine editor for the club, I am really enjoying doing the magazine and look forward to many more editions. I am also enjoying being a member on the committee and helping to make decisions to improve the club. Remember that there is no magazine or meeting in December but don't forget we have the Christmas BBQ coming up.

If you have any articles for the magazine you can send them to me via email at [editor@ggrec.org.au](mailto:editor@ggrec.org.au) or if you are having problems sending email to this address you can send it to my personal email address [pockets@twistedsouls.com](mailto:pockets@twistedsouls.com) I am always looking for articles to put in the magazine and they can be Ham radio or electronics related or they could be about yourself and your escapades. I am always open to any suggestions you may have to improve the magazine.

## GGREC Glasses and Mugs



The club has mugs with the GGREC logo for sale and we will be taking orders at this months meeting for glasses with logo for delivery at the January or February meeting depending on the supplier. The price is \$14 each



## General Meeting of 19<sup>th</sup> October 2012

**Location:** Guide Hall Cranbourne.  
**Start Time:** Meeting commenced at 8:10 pm  
**Chairperson:** President Dianne VK3JDI.  
**Minutes taken:** Secretary VK3BXG.  
**Present, visitors and guests:** As per attendance sheet.  
**Apologies:** As per attendance sheet.

### **Correspondence received:**

EMDRC news letter.  
Wansarc news e-mail Link.  
Nerg news e-mail link.  
AR magazine.  
Letter from Tru Energy re future billing arrangement (from treasurer)  
Karen Ashton, e-mail, Cranbourne Guides, ready for JOTA/JOTI.  
Secretary, Eastern Zone e-mail re a four day motor cycle event, radio operators needed.  
Health Department, food handling registrations now to be done on line.

### **Correspondence out:**

Letter to Tru Energy re billing arrangement not satisfactory (Treasurer)  
E-mail to Guides re Hall hire payment (from Treasurer)  
Letter to Cranbourne Hall Committee re hall hire bond.  
Karen Ashton, e-mail, GGREC ready for JOTA.

**Minutes from September general meeting** – as distributed by e-mail to all members. Moved accepted by Dianne VK3JDI, seconded by Albert VK3BQO, all in favour, carried.

**Treasurers Report**, tabled. A total loss for the month was \$254.62, income being \$6.72 and expenses being \$261.34  
Moved Ian VK3BUF, seconded Reg VK3UK, all in favour, carried.

### **Business from the Previous Minutes.**

**Repeater Reports**, all repeaters are running with no problems Albert VK3BQO reported.

**JOTA.** All is in readiness for volunteers to arrive about 11am to set up our portable gazebo for the 2 meter operation outside.

**Christmas Hamper**, has now been started and donations are now needed, Dianne **VK3JDI** reports. The tickets are now on sale at \$2.00 each or 3 for \$5.00 and the ticket will be drawn at the Christmas barbeque on 8<sup>th</sup> December.

**Christmas BBQ party**, Dianne **VK3JDI** reports that Leigh Findlayson has kindly offered his home in Pakenham as a venue for the event.

**Coffee Mugs**, Michael **VK3GHM** reports are available now, as well as the glasses, for those who ordered them. Cost for mugs will be \$14.00

**Cup Weekend Camping**, Is still going ahead at Kilcunda. If there are others interested in joining in, positions are still available Dianne **VK3JDI** reports.

**Club Shack Carpet** Brian **VK3BSN** is taking the old removed carpet and negotiated with Ivan **VK3ARV** to also take some.

### **New Business.**

**Change to Incorporation Rules** Dianne **VK3JDI** reports that the public officer role will now be the job of the secretary. Further changes will also need to be checked. But it is now the secretary's responsibility to send a copy of the minutes of the annual general meeting to Corporate Affairs.

**UHF repeater**, do we want another I, **VK3BXG** asked? Call sign, **VK3RWD**, 438.575 out. 433.575 in; registered as being at my home in Drouin. The set was shifted as a trial to Jindivic late 2008 but was vapourised on black Saturday and ceased to exist although the licence has been maintained. By consensus Albert, **VK3BQO** was requested to do a feasibility study of the matter of its potential resurrection and use.

**Graham Brennen** of G&C Communications, Russ White **VK3MWR** reports is now in the United States having sold out of all of his amateur radio stock. Carol (his wife) is at the moment running the business.

By consensus a letter of thanks to Graham from the club needs to be sent to thank him for all the help he has given to the club. Discussion arose over the fact that Yaesu have restructured and now only have three dealers in Australia.

**Four Day Enduro** event in the bush north of Warragul, I, **VK3BXG** report that operators who might be interested to see me for details.

**Membership List** requested by Wayne Cooke **VK3ZWC** – an updated version needed.

Advised by Albert **VK3BQO** to get a password off Steve and access it from our web-site.

Meeting Closed at 8:40 pm.

No formal talk this evening but rather a display of portable equipment.



## Important Changes to Club Rules

The Department of Justice for Consumer Affairs Victoria have notified all incorporated clubs (including ours) of a series of changes to take place from November 26. Most changes are small and will have little impact on how the GGREC conducts its business, but there is one important change that will affect the title of some committee positions.

This article describes the changes, then puts forth a motion to amend the Club Rules to reflect these changes. Like all changes to Club Rules, two months notice must be given, then the proposal must be ratified by a 2/3rds majority at a General Meeting. This will be put to the vote at the January 2013 General Meeting.

### How it is now...

Presently we have a **Club Secretary**, who is re-elected at every Annual General Meeting each April. This Secretary, takes minutes, sends and receives correspondence and is usually one of the three signatories to the Club Accounts. Like all Committee positions, the Secretary can only serve for a maximum of three consecutive years before they must give the job to someone else.

We also have a **Public Officer**. This person only has one task. After each Annual General Meeting, the Public Officer gathers up a copy of the AGM minutes, adds a cheque for about \$37, then sends it to Consumer Affairs Victoria. This gives our club an 'incorporated' status which provides members with a degree of liability protection. Unlike the committee positions, the Public Officer has no time limit for the position. The Public Officer is ratified by a members vote at each AGM. Changing Public Officer requires an identification process and the completion of special forms for Consumer Affairs Victoria. For about the past 15 years Ian Jackson, VK3BUF has been the GGREC Public Officer.

### Legal Change affecting our Club

From November 26 the Public Officer of any incorporated club *must* be the Club Secretary. This is difficult for us as our Secretary always changes every few years. However, the Incorporation Act allows that administrative tasks normally carried out by a Secretary can be allocated to another position with a different title. We can use this provision to make the minimum number of changes necessary to bring our existing Club Rules into line with the new laws.

### Our proposal to be put to members on Jan 18, 2013 :

- All references to '**Secretary**' in our existing Club Rules will be changed to '**Administration Secretary**'. (Every reference and responsibility that presently applies to the GGREC *Secretary* will henceforth be carried out by the *Admin Secretary* position)
- All references to '**Public Officer**' in our existing Club Rules will be changed to '**Secretary**'. (the function of this new '*Secretary*' position to be limited to the activities previously carried out by the '*Public Officer*'

**Moved:** Ian Jackson, (existing Public officer)    **Seconded:** Graeme Brown (existing Secretary)

In practical terms everything remains as it is, except the fellow taking meeting minutes etc. will be known as the **Admin. Secretary** and the Public Officer will henceforth be called **Secretary**.

### This is what the changes look like:

#### Before Proposed changes

#### After Proposed changes

Public Officer	—————>	Secretary
President	—————>	President
Secretary	—————>	Administration Secretary
Treasurer	—————>	Treasurer
Committee Member #1	—————>	Committee Member #1
Committee Member #2	—————>	Committee Member #2

The existing GGREC Rules may be viewed at the Club web site by selecting the '**Incorporation Rules**' link from the **About Us** tab, or directly click on this link: [Club Incorporation Rules](#)  
(Note that as an Incorporated Association, Consumer Affairs Vic. *Model Rules* also apply to GGREC)



# Information for Club Members



General meetings held at 2000 hrs third Friday of each month at the **Cranbourne Girl Guide Hall in Grant Street, Cranbourne.**  
Prac nights are held on the first Friday night in the **Peter Pavey clubrooms**, (at the rear of the Guide Hall) they commence around 1930 hrs.

**Visitors are always welcome to attend.**

## Office bearers

President:	Dianne Jackson	VK3JDI
Secretary:	Graeme Brown	VK3BXG
Treasurer:	Ian Jackson	VK3BUF
General Members:	Michael Van Den Acker	VK3GHM
	Mark 'Pockets' Clohesy	VK3FWSP
Public Officer:	Ian Jackson	VK3BUF
Distribution Email :	Graeme Brown	VK3BXG
Property Officer:	Bruno Tonizzo	VK3BFT
Repeater Officer:	Albert Hubbard	VK3BQO
Web Master:	Stephen Harding	VK3EGD
Magazine Editor:	Mark 'Pockets' Clohesy	VK3FWSP

## Call in Frequencies, Beacons and Repeaters

- The Club Station is **VK3BJA** which operates from the Cranbourne Clubrooms.
- 6m Repeater at Cockatoo is **VK3RDD** : Freq. In **52.575** MHz, Out **53.575** MHz  
The 6m Repeater requires CTCSS tone access of **91.5 Hz**
- 70cm Repeater Cranbourne is **VK3RLP** Freq. In **434.475** MHz, Out **439.475** MHz  
The 70cm Repeater requires CTCSS tone access of **123 Hz**  
The 70cm Repeater supports Remote Internet access (**IRLP**) **Node 6794**.
- Simplex VHF - **145.450** MHz FM
- Simplex UHF - **438.850** MHz FM
- VK3RLP** Beacons **1296.542** MHz & **2043.532** MHz (2.04Ghz Beacon inactive for repairs)

## Membership Fee Schedule

Standard Member rate	\$37.00	Junior Member rate	\$22.00
Pension Member rate	\$22.00	Extra Family Member	\$17.00

- Fees can be paid by EFT to **BSB 633000 - Account 146016746**.
- Always identify your EFT payments.
- Membership Fee's Are Due at each April Annual General Meeting.

Please direct all magazine articles to: [editor@ggrec.org.au](mailto:editor@ggrec.org.au) or [pockets@twistedsouls.com](mailto:pockets@twistedsouls.com)

All other Club correspondence to: [secretary@ggrec.org.au](mailto:secretary@ggrec.org.au)  
or via Snail Mail : **PO Box 1098, Cranbourne 3977**

**GGREC Web Site** & Archive may be viewed at: [www.ggrec.org.au](http://www.ggrec.org.au)

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**The deadline for magazine items is the Tenth day of each month.**

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Ad Copy to be sent by email to [editor@ggrec.org.au](mailto:editor@ggrec.org.au) by the First of the month in PDF, JPG, PNG, ODT or DOC