



GATEWAY

April 2009

NEXT MEETING Friday April 17 2009 at 8 pm

WHERE : Cranbourne Girl Guide Hall, Grant St off Sladen St.

SPEAKER : Ian Jackson GGREC Annual General Meeting

Like fruit cake and port?

Tired of Monday night television? Always starting sentences that begin with the words: *"I think the Club ought to..."*

Then a one-year association with the GGREC Committee for 2009 is for YOU!

THIS FRIDAY NIGHT when the new committee is to be chosen, be a part of the democratic process, leap up, put your hand in the air and say:

"Pick Me, Pick Me! I said Pick Me! First!"

Enjoy writing stuff...Then Be the Secretary. Like playing with money?... Be the Treasurer. Like being in charge of people who write stuff and play with money? ... Be the President.

Two General Committee positions are also available if you want to help the Club, but not by doing the three things above. Don't just sit very, very still in your chair lest someone confuse that nose scratch for volunteerism, be a productive part of the 2009 Committee.

There are all sorts of advantages to being on the Committee, and while I can't think of them right now, I'm absolutely sure they're all great!

See you Friday Night and get someone to nominate you.

Fine print: Some minor prerequisite conditions do apply, ie. You must be a Club member for at least one year. - see Club Rules for details

GATEWAY MAGAZINE IS THE OFFICIAL JOURNAL OF THE GIPPSLAND GATE RADIO AND ELECTRONICS CLUB inc.

WORDS WORDS WORDS

From Harper Collins

"Electric"

We may sometimes think that the word electric and its derivatives are of recent coinage, perhaps no older than Ben Franklin's experiments with his kite and lightning, but they are much older. They were in use three hundred years ago. Probably as far back as the seventh century B.C., it had been known by the Greeks that amber, after being rubbed, acquired the property of attracting extremely light substances, such as the dried pith of reeds. The Greek name for amber was electron (Latin electrum). Hence, in 1600, when the English physicist, William Gilbert, published in Latin, his researches on magnetism which were based upon experiments with amber, it was natural that he should use the Latinized word electricus. Through his own later lectures in English this he translated as electric, and the agency through which magnetism was effected he named electricity.

"Escape"

As the dictionary says, this is from the Latin ex, out, and cappa, cape. In olden days the meaning was literal. One slipped out of his cape or threw it aside in order to free himself for running, or it might be, he left it in the clutch of a would-be captor and made away from the spot. One is reminded of the young man mentioned by St. Mark who, when the servants of the high priests attempted to seize him by the garment he was wearing, "left the linen cloth, and fled from them naked".

PAUL STUBBS' SAVE THE VK3RDD DUPLEXER PROJECT



The duplexer almost completely stripped down. Unsoldering the helical resonators from their coax connections proved too hard, so I went for plan 'B' - only unsolder the troubled one.



Two of the helical resonators, at 50MHz true cavities would be enormous.

They are tuned by screwing long bolts from the top where it capacitively couples with the visible brass plates.

The bolts are visible in the previous picture, to the right of the aluminium tubes.



Bottom view, each resonator is connected via a capacitor to three lengths of coax. one in each adjacent section, the third being a quarter wave-length line.

GIPPSLAND GATE RADIO & ELECTRONICS CLUB

Club meetings are held on the third Friday of each month at the Cranbourne GirlGuide Hall in Grant Street. Prac nights are held on the first Friday night in the Peter Pavey clubrooms. Both nights commence at 8:00 PM. **Visitors will be made welcome.** Committee meetings are also held in the clubrooms.

President	Ian Jackson	VK3BUF (5625 2545)
Secretary	Phil Pavey	VK3YB (5995 7484)
Treasurer	Albert Hubbard	VK3BQO (5659 6562)

Committee Members: Max VK3TMK, Graeme VK3BXG,

Magazine Editor : Susan Coleman VK3FXXX

Magazine Photographer : Paul Stubbs VK3TGX

Magazine Printer : David Wright VK3 FW

Distribution Snail Mail : The Clifton Family VK3HGG

Distribution Email : Albert Hubbard VK3BQO

Club Station VK3BJA located in the clubrooms.

6M Repeater **VK3RDD** : Freq. In 52.575, out 53.575 MHz

70cm Repeater **VK3RLP** Freq. In 434.475, out 439.475MHz

CTCSS 123Hz IRLP Node Number- **6794** (Using **VK3RLP**)

Call in Frequencies : HF on 28.325 MHz, USB, VHF 145.450 MHz, FM and UHF on 438.850 MHz,

Visit our internet site at: **www.ggrec.org.au**

Current GGREC Inc. Membership Fee Schedule

Full Member \$37.00, Pensioner Member \$22.00

Junior Member \$22.00, Extra Family Member \$17.00

Fees due after each April Annual General Meeting.

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

Please direct magazine articles to:

Susan Coleman email editor@ggrec.org.au

All other Club correspondence to P.O. Box 1098, Cranbourne 3977

or Email : secretary@ggrec.org.au

Disclaimer. The opinions expressed in this publication do not necessarily reflect the official view of the GGREC Inc and the GGREC Inc cannot be held responsible for incorrect information published.

Incorporation Number A0016893M

From the president ... *Ian Jackson VK3BUF*

This is the last President's Report coming from this keyboard for a while. One of my main objectives during this term was to execute the Survey of Members so that the Club could have a clear path for its future over the next few years. This was done and now we have a fair consensus of what we must now strive to achieve.

On Friday 17 April we have the Annual General Meeting where we must choose a new committee to run the Club for another year. As a matter of course, all positions are declared 'vacant'. I will put five titles up on the white board. President, Treasurer, Secretary, and two committee member positions. Have a good think about it and see if you can help to run the Club for another year. (You must



have been a Club member for at least 12 months to apply for any committee position.) If more than one person applies for each position, then we will perform a ballot vote on the night. This committee of five has the right to directly nominate two more general committee positions at their first committee meeting if they feel that there is sufficient work to warrant additional members, but essentially the committee will remain at five persons.

Chris Chapman will be our Hamfest Sale Coordinator this year. He was off on a DX adventure to Lord Howe Island. This trip should be good for a story or two... If you want to take a table or two for this year's sale, call Dianne on 5625 2545 to arrange a spot. As always, the first people to apply get the best places and the last people usually get disappointed as limited places are available.

A couple of Sunday's ago Albert VK3BQO, Henry Hu and myself, set up a temporary station at the top of the 22metre water tower near Cockatoo to see what the reception was like on the 70cm band. [Pics page 7] This is the same location as where the Club repeater VK3RDD is located on 6 metres. We had 14 stations call in and log signal strength reports from Clayton to West Gippsland. Generally, signals were very good, probably better than our existing 70cm repeater location in Cranbourne, but not overwhelmingly so. A couple of stations had worse signals than the existing site. Up the tower we were surrounded by mobile phone transmitters *see over*

From page 5

FROM THE PRESIDENT cont'd

and various dish antennas. (There goes my DNA integrity! Perhaps now I will spontaneously sprout a third arm. While this may improve my soldering, it would pay merry hell with my wardrobe) After the tests we did some Spectrum Analyser measurements at the site and confirmed that there is a bucket of intermittent noise & interference reaching far into UHF at this site. The final analysis was that while tempting, the site is not good enough to risk the agro of moving the repeater from where it is. (If anything our efforts would be more effective by elevating the height of the existing antenna)

Some thankyou's are in order. Pat VK3OZ took the time and effort to give the Club Shack a good interior clean. That extra sparkle leaped out at me when I entered the room and I knew that someone had detonated a legendary cleaning bomb. Thanks Pat! Also Ivan VK3ARV dispensed his construction skills in the form of a home brew paper towel dispenser for the Club shack kitchen area. A truly splendid bit of engineering. When you tear a towel segment against that delicate little serrated strip, it makes a little noise that distinctly sounds like 'ARVVVVV....'

At the last GM it was decided that this year the GGREC MidYear Dinner would be held at the Guide Hall and that we would get a catering company to come in and feed us. Being a Mid Year Dinner, this is likely to occur somewhere around the middle of the year.

I would like to thank the rest of the Committee, Albert, Phil, Graeme and Max, our magazine editor Susan, printer/distributors David and Geoff and photographer, Paul. Good Job!



To the anonymous person who likes to drive past my house with two wheels in the grass, bad..bad job!

Also, please check your front grille,
I want the top of my letterbox back!

*Ian Jackson, VK3BUF
[More pics opposite]*

Albert VK3BQO broadcasting from the top of the tower at the re-peater site



THREE MEN AND A REPEATER

*Photos and words Ian Jackson
See President's Report page 5*



Henry Hu checking out the signal strength on his mobile phone

Hauling the radio and battery gear up the tower with a cable loop.

VK3 RDD CONTROLLER

by Geoff Williams VK3ZGW

Through many years of faithful service, the 6m repeater at GGREC's site at Cockatoo has given exemplary service. Recently RDD has encountered some problems with interference and cavity faults, but it continues to service the 6m needs of many amateurs. Articles about maintenance visits to the site have appeared in this magazine recently detailing the ongoing works on the repeater, and a much talked about upgrade of the controller has been a topic of discussion by some of our members for some time.

The current controller was designed by Albert VK3 BQO many years ago and has given great service with no significant maintenance required in that time. But in Albert's words, it's time we updated the controller to later technology and take the opportunity to increase the features available. Recently an exercise between a number of members was commenced to 'brainstorm' the likely design of a new controller. This new controller should be generic in order to be adaptable to other repeaters such as our VK3 RLP 70cm repeater, thus providing commonality of equipment with the inherent ease of maintenance that this would afford. Earlier this year Albert emailed an invitation to members to comment on the features such a controller should offer. The small response was not that encouraging, but those who did take the time to list their ideas contributed to a 'wish list' that has been taken into account by the project's coordinators VK3 BQO and VK3 ZGW. There is much work to be done and all members are encouraged to have some input about the construction, design and realisation of this ambitious undertaking. This is not a short term project and its hoped that with careful planning and design, the new controller will last at least as long as the current microprocessor one.

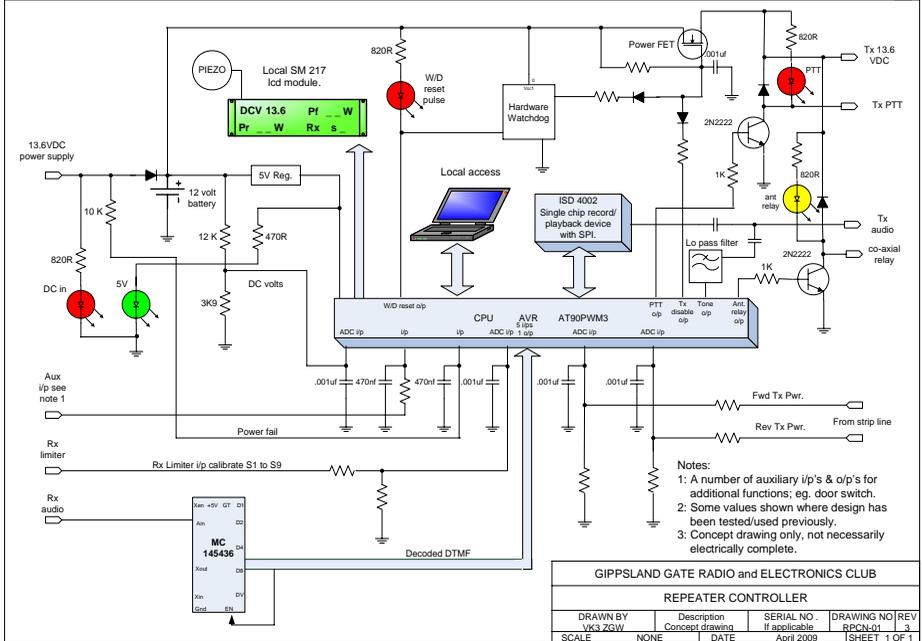
Included in this article is a concept drawing of the proposed controller. Whilst not an electrical drawing, it shows the components of the controller and its proposed features. Building on our Club AVR course conducted by Ian VK3 BUF, the heart of the controller is its CPU utilising the AT90PWM3 AVR chip. Although there are some in the Club fortunate enough to be conversant with higher level programming languages, it has been decided to stay with assembly level software, as many will be familiar with the .asm format from the course. The construction of the code will be modular so that anyone can write a routine for a function independently, with the final assembly being the product of group sessions later.

So what features are we proposing? Having the flexibility of an AVR, if we provide sufficient hardware interfacing to utilise the capabilities of the Rx/Tx, then with local programming, modifications, additions and deletions become very easy to conduct on site. This means that the controller can be adapted to various repeaters as the need arises in the future.

Some of the proposed inclusions of this project are;

- authorised remote tone access to control features of the controller
- user initiated signal strength voice read back (S1 – S9)

REPEATER CONTROLLER



- authorised remote maintenance capability
- IRLP, EchoLink capability
- time of day announcing
- setting of parameters locally and some remotely
- battery backup with mains failure notification
- roger beep
- replacement of the existing cabinet.

This list is simplistic in its description and does not reflect the many complexities of the programming that will be required. It is also not exhaustive nor conclusive, as much of what ends up as the finished product will depend on the level of input, not just by those who have until now been involved with the repeater controller replacement, but by all members. Currently some of the routines produced have been run in the AVR simulator. Now preparations are underway for the construction of some hardware that will facilitate the design and testing of the various features of the controller. Progress on the project will be reported at Club meetings from time to time.

Geoff VK3ZGW

GGREC EVENT QUEUE

EVENT	DETAILS
April 17	Annual General Meeting
April 27	Committee meeting at Club Shack
May 1	Prac night at the Club Shack
May 15	General Meeting



From opposite But, luckily only one capacitor was burnt. Words & pics by Paul



PAUL
STUBBS'
SAVE THE
VK3RDD
DUPLEXER
PROJECT

The burnt out capacitor - too many volts and it arc'd over.



Now what
value was
it?

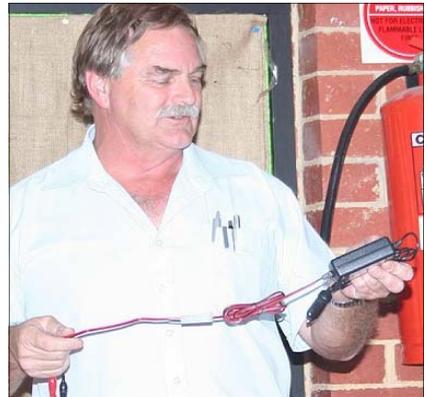
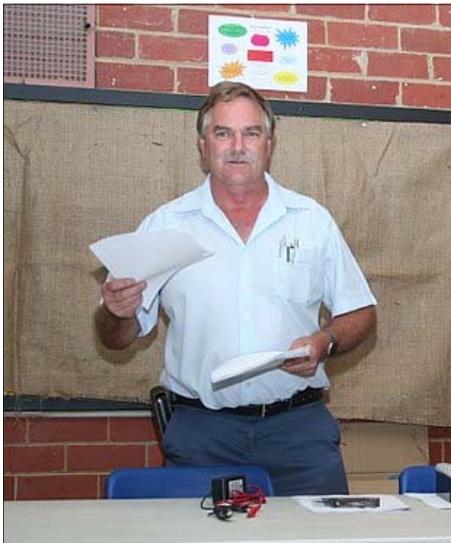
Also, that particular resonator is acting as a band pass stage, rather than a band stop as all the other resonators are, Maybe it's associated quarter wave line is faulty - further investigation? *Continued opposite*



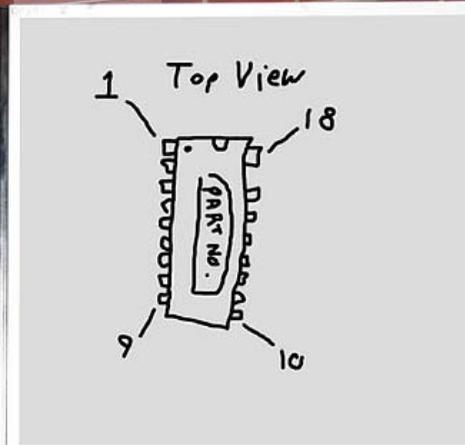
Antenna Analyser construction talk 20/3/09



Handing out the antenna analyser kits... and here are some notes.... and now for some accessories - a 12V powered battery charger. [More opposite.]



Words and Pics by Paul VK3TGX



Ian VK3BUF covering IC pin numbering & orientation. Words & pics by Gateway photographer Paul Stubbs TGX

28th March 2009

YL's



GENERAL MEETING MINUTES March 2009

Date: 20 Mar 2009

Start time: 08:10 PM.

Location: Guide Hall Cranbourne.

Chairperson: Ian Jackson VK3BUF

Minute Taker: Phil Pavay VK3YB

Present: See Attendance Sheet

Visitors and Guests: Ravi (waiting for callsign)

Apologies: Grahame Coleman VK3YCG, Judy, Naree and Mike VK3KTO, Ross VK3ZAP, Geoff VK3ZGW, Steve VK3EGD & Maria.

Correspondence Received: EMDRC news, FAMPARC news

Correspondence Sent: nil

Treasurer's Report: as tabled. Read by: Albert VK3BQO Moved By: Albert VK3BQO Seconded By: Russ VK3MWR Carried: Yes

Income: \$ 834.90 Expenditure: \$636.40 Balance: \$191.50 Total Worth \$6313.41

New Call signs: Nil

Previous Minutes: As printed in Gateway. Moved Bruno VK3BFT Seconded Henry VK3FHTV

Bruno noted that motion was carried

Business Arising from Previous Minutes:

6m repeater – Ian reported Paul checked cavity filter. 1 stage not working properly. 1 stage out of tune. Should be revivable

Labour day week – Ian reported on Doon Reserve campground. Suggested club could return.

Albert taking balance of monies owing on antenna analyser kits – you can then take kit away. Albert will also give talk tonight on construction hints.

Next Friday night a construction session in the shack for those interested (antenna analyser 7:30pm)

Sunday week 29th April 3pm RF test from RDD repeater site. (70cm). 438.850 simplex

Hamfest Coordinator Thankyou Chris Chapman VK3QB

New Business:

Ian announced we have purchased a world map for shack for \$27.95 laminated

Club Shack – please make sure the door or gate is locked on meeting nights when we are all in the hall

AGM next month. All positions vacant. Please consider standing for a position. Ian will chair AGM.

Discussion on club fees. No increase recommended by committee as we do have a hamfest coordinator. Revisit after budget.

Ian spoke about reason for moving banking to Bendigo bank, including read-only access to account which will help with hamfest co-ordination. Diane will again take bookings for hamfest.

Megan spoke about topics she would cover in C language course. Will put on paper to review. Lots of interest shown by members – some asked for an intro course.

Chris VK3QB gave a quick rundown on the VK9LA Lord Howe Island Dxpedition in which he will be a participant.

Midyear dinner. Megan suggested a quieter venue. Some discussion on using club hall. Lots of interest. Most want catering.

Meeting Closed at around 8:30 PM.

Guest Speaker: Albert more on aerial analyser **Next Committee Meeting**: Contact Ian Jackson.

Next Prac Night: Friday April 3rd 2009 **Next General Meeting** : April 17th 2009.

ANNUAL GENERAL MEETING MINUTES April 2008

Date: 18^h April 2008

Start time: 9:05 PM.

Location: Guide Hall Cranbourne.

Chairperson: Albert Hubbard VK3BQO

Minute Taker: Bruno Tonizzo VK3BFT

Present: As per attendance sheet.

Visitors and Guests: Michael and Keith

Apologies: Kerri-May Pavey VK3FDSD, Ross Jackson VK3ZAP, Bobbie Bishop, Chris Chapman VK3QB, Val VK3FVMB & Ian VK3K SZ Benson, Max Hill VK3TMK, Bill Jones VK3DQS, Elizabeth King VK3FLIZ

Correspondence Received: Nil

Correspondence Sent: Nil

Treasurer's Report: as tabled. Albert presented preliminary report as yet to be approved by auditor.

Read by: Albert Hubbard VK3BQO

Income: \$ 7267.71 Expenditure \$ 6508.34 Balance \$ 5764.91

Previous Minutes: Bruno Tonizzo VK3BFT. **Moved by:** Bruno Tonizzo VK3BFT

Seconded by: Albert Hubbard VK3BQO

Business Arising from Previous Minutes: nil

New Business: Bruno opened meeting by thanking Albert for stepping in as Treasurer when Andrew was unable to continue, Phil for being secretary

All the members of the committee for their efforts during the year

David & Geoff for magazine productions, Susan & Ross for magazine editing

Bruno declared all positions vacant

Albert reported auditor had asked for further information on books which have been supplied

Club Assets \$38,760 – includes shack building

No proxies or written nominations received for committee

Ian Jackson was nominated by Geoff VK3ZGW from the floor as president. Albert Hubbard was nominated by Reg VK3UK as treasurer. General committee nominations from the floor were Max Hill, Paul Stubbs, Graeme Brown, Megan Woods, and Reg Goddard.

Reg could not stand under constitution as had held position for 3 consecutive years. Megan could not stand under constitution as had not been member for 12 months. An election was held and the successful general committee members were Max Hill and Graeme Brown.

The nominations for president, treasurer and secretary were elected unopposed.

Incoming president Ian Jackson thanked Bruno for his work as president and the outgoing committee. Looking forward to an interesting year ahead. Will be encouraging members to become involved in club activities and understand where they see the club going for next 10-15 years.

Meeting Closed at around 10:50 PM.