



GATEWAY

The official journal of the Gippsland
Gate Radio & Electronics Club inc.

Incorporation Number A0016893M

From the President ... Dianne Jackson VK3JDI



As you will have noticed, the Club magazine is now formatted to A4 size, to make it easier to read and to print at home on your printer. We are also trying a new style for the Event queue. Your feedback will be appreciated on the new magazine layout, as well as any items or articles you may want to contribute.

In October, four GGREC members are heading to Vanuatu for a DXpedition. On our next prac night, Friday the 7th of October, we would encourage all who are interested to come to the Peter Pavey Club rooms at 7:30pm and we will try to establish direct contact on 40 meters.

This year, the annual GGREC Christmas party, will be held on Saturday the 10th of December. Historically, the best events are the ones staged at the home of a Club member. As yet, we still have not picked a venue, so if you wouldn't mind hosting this event at your home, please let the committee know at the next Club meeting.

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

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GGREC Event Queue from September 2011

September 15 – Friday Night. Gen. Meeting at the Cranbourne Guide Hall
Russ White VK3MWR will be giving a talk about his experiences as a commercial radio operator with the Police Department in the USA and the military.

Sept 28 to Oct 12 – DXpedition

Some GGREC members will be away at the Vanuatu DXpedition at this time. See the article in this edition of Gateway for details.

October 7 – Friday Night. Prac Night at the Club Shack

Among other activity on the night, a Sked has been arranged to the DXpedition at Vanuatu. We hope to make contact on 40 metres using the callsign YJ0VK.

October 16 – Saturday. JOTA at the Club Shack.

Operators needed. Please contact Graeme VK3BXG on secretary@ggrec.org.au if you can help out for a few hours during this afternoon.

October 21 – Friday Night. General Meeting at the Cranbourne Guide Hall

Our Guest Speaker will be Andrew Martin VK3OE on how he has successfully set up a remote control Amateur Station some distance from his home.

November 4 – Friday Night. Prac Night at the Club Shack

Theme to be announced.

Oct 29 to Nov 1 – Melb. Cup weekend in Yarra Valley

Some Club Members will be camping and enjoying themselves on this long weekend.

November 5 – Saturday Night. Pub night at the Cardinia Hotel

This is a pleasant venue just a little north of Beaconsfield. We will take \$5 booking deposits for this one at the October General Meeting.

November 11 – Friday Night. Committee Meet at the Club Shack, 8:00pm

November 12,13 – Saturday & Sunday. Foundation License Exam Event

For persons wishing to get an Amateur license, here is a great opportunity. Some introductory training, followed by an examination. Positions are still available.

Contact Graeme VK3BXG on secretary@ggrec.org.au for details.

November 18 – Friday Night. Gen Meeting at the Cranbourne Guide Hall

This will celebrate 40 years of the Yaesu 101 HF radio. See a range of early Yaesu equipment. Bring along your own early Yaesu radio.

December 10 – Saturday Afternoon. Christmas Break-up BBQ

Venue is yet to be confirmed, but put it in your diary now...

– There is no General Meeting or Club Magazine in December –

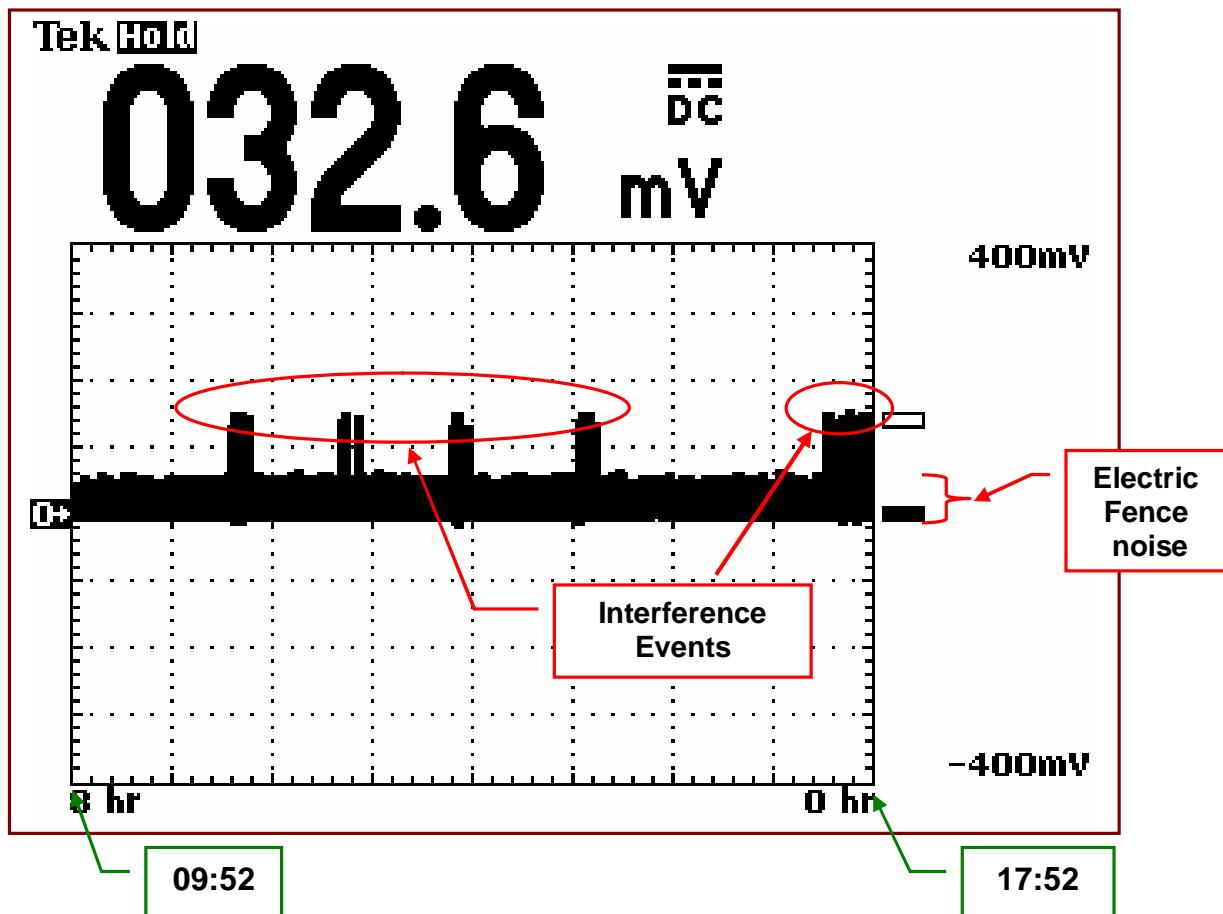
Mystery RDD Interference – The Plot Thickens

GGREC members are still seeking resolve the source of the interference that occasionally holds up the RDD Cockatoo 6M repeater.

The interference shows up on the input frequency to the repeater as general ‘noise’ for about 15 minutes at a time. Some work is being done to positively identify and eliminate the source of the noise

The plot below taken 30/8/2011 shows a typical day with an 8-hour block where the interference appeared at intervals. Because this noise is difficult to listen to, this is enough to prevent the repeater from being monitored by Club members.

Short of assembling a rampaging mob on-site, complete with pitchforks, fiery torches and spectrum analysers, we really need to sort this problem out. The Cockatoo location is quite good at covering our service area. With our brand new control system and repeater cabinet, it is worthwhile making the effort to fix this remaining problem.



This mission is a work in progress, so look for a follow up article in next months magazine.

Changes to Magazine Preparation

Susan Coleman VK3LOV has been the editor of this Gateway magazine since early 2008 and has decided to retire from this position. On behalf of the Club, we wish to thank Susan for producing the magazine these past years.

Presently, the magazine is being prepared by members of the GGREC Committee. We are inviting expressions of interest from members who may wish to take on the editorial role for a while. Access to the internet, a word processor and a few hours each month are the main prerequisites. Persons interested in this role should contact any of the GGREC committee.

DXPEDITION YJ0VK, VANUATU 2011

From the end of September four GGREC members will join the 14 day DXpedition to Vanuatu operating under the callsign **YJ0VK** from a few kilometres outside Port Villa.

Attending from the Club will be Chris VK3QB, Dianne VK3JDI, Ian VK3BUF and Michael VK3GHM

This is approximately 3,200km NE of Melbourne. There will be four separate stations operating from the beachfront on many bands and modes, with a special effort being made on the WARC bands.



The Group shall be listening on Friday night the 7th of October on 40 Metres, 7.170 MHz (+QRM) at 7:30pm (Melbourne time) This lines up with a GGREC Prac Night, so you may be able to reach us from the Club Shack at that time.

For details about this special event, visit the website: yj0vk.odxq.org

The goals are to:

To work as many stations as possible, have some fun and enjoy a bit of a break on a beautiful Pacific Island!



The Rebirth of a Repeater.

by Albert VK3BQO

The Club's revamped 6m repeater, VK3RDD has finally taken up residence in its final location. After 2 years of rebuilding basically from scratch, it is finally in its home.

On Tuesday 9th August, Geoff, Bruno and I re-installed the VK3RDD repeater at Cockatoo. My vehicle was loaded to the gunwales with equipment plus a trailer with the new cabinet tied down to it.

The majority of the time on site was spent removing the old and remounting the new cabinet.

After that, the weather began to change so we quickly threw tools etc into the cars and installed the electronics. The rain started just as we were putting the final touches to the connections but it all went in without problems and when switched on, came forth with the goods.

Several members were listening for the signal and we received good reports from all. The audio was clear and the signal strength was excellent in areas that had not been able to give useable reports

before. It has been up for several weeks now and some interference has been noticed so a renewed interest will be shown in getting that addressed.. That means that the repeater can be used now.

The voice ident will play approximately every 10 minutes while in use (the CW ident will play if a conversation is taking place when it is time to ident) and the repeater will sleep without identifying when not in use.

I have used it several times now from Nyora to Dandenong without losing access. Even with my noisy handsfree unit in the car, others have said that the audio is quite clear and readable. Although the project will be ongoing, I think Geoff and I can safely move on to other projects. This has been a 2 year exercise but how much we have learned by doing this is immeasurable. As the Repeater Officer for GGREC, I would like to thank all those who either had hands on parts in the project or who supported it in other ways.

Two manuals have been written to describe the functionality of the repeater (controller); one which is a User Guide only and the other is an Administrator's Manual. These will not be widely available but are for the Club to store in case Geoff and I are not available to work on the equipment.

As users of the repeater, you have the ability to request a signal report for your transmission. To do this, transmit # # # on your DTMF keypad then wait in receive mode for the report. Although there has been some evidence of the old interference, the repeater is still very useable and we will now be working with ACMA to alleviate the interference.

We hope you get a lot of use from the repeater as we think it is greatly improved.

Albert VK3BQO



Albert VK3BQO & Geoff VK3ZGW; the two responsible for driving the new repeater project. Geoff wrote the software for the new repeater whereas Albert wrote the software for the old repeater in 1987.

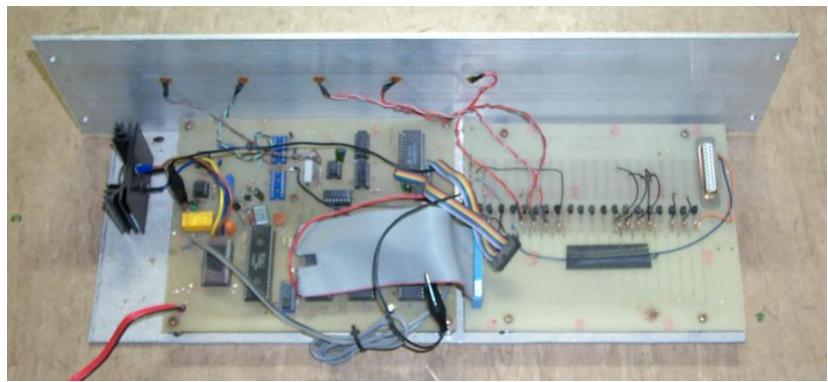


Inside the cabinet from the bottom up we have the backup battery, 240v power supply (which incidentally was one of only two parts kept from the old repeater), the Controller, Transmitter-Receiver Shelf and finally the duplexer (cavities - also kept from the old repeater). On the right side of the cabinet is the electrical switchboard and circuit breakers.

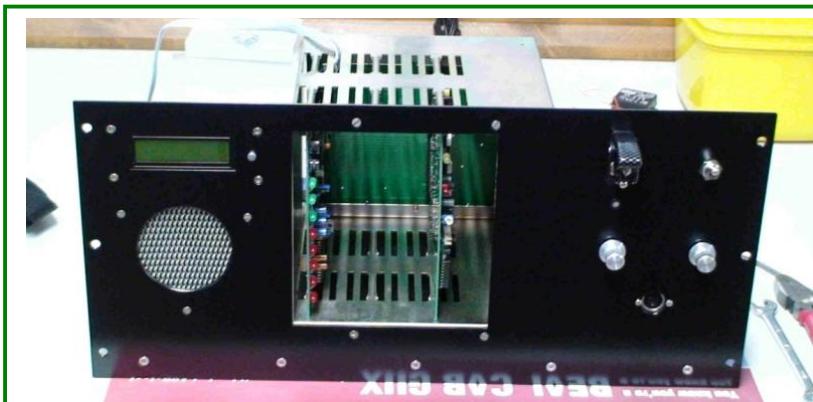
The repeater boasts the capability of reading forward and reflected power to determine if there is an antenna fault. It also has battery backup just in case. The power output from the transmitter is about 59 watts losing about half of that through the duplexer. De-sense is unnoticeable and sensitivity is about 0.2uV to open the squelch.



Bruno VK3BFT and Geoff VK3ZGW proudly display the new repeater.



Old Controller (circa 1988)



New Controller (2011)



Old Cabinet



New Cabinet

A Non towered Rotator Installation

By Phil Cardamone VK3HPC



Even though I have been a member of Gippsland Gate for a number of years I am probably the least known to the club and probably have the least amount of contacts made over the radio. I was first licensed in May 1998 where Ian Jackson took Di Jackson and myself through the theory so that we could sit the Novice License. I immediately became a member of Gippsland Gate till the year 2000 where I moved to Hong Kong for eight years and returned in December 2008 when I rejoined Gippsland Gate. My work requires me to travel approx. 200 days a year which means I miss most club nights and have minimal time on the radio. This does not ever dilute my enthusiasm for Radio however it does limit the practical side of it.

Back in 1998 we lived in Oakleigh East where putting up a Radio Mast on top of a garage or running a dipole from the greatest length of a property was not a problem. However, since moving to Beaumaris on my return to Australia, Antenna installation has become an issue. I made a mistake originally wanting to seek permission from the local council. After a few questions and answers I quickly learned to end the discussion as I was in a no win situation, with one regulation after another being given to persuade me to not install an antenna.

Living in Beaumaris probably puts me as Far East as you can go this side of the Bay. I have been using a Diamond Vertical antenna for 2mtr and 70cm mounted onto the eave of the second story of my home which amazingly gave me great coverage, but the limits of vertical

antenna's was very apparent when most of the times I could only get one side of a conversation with anyone East of Cranbourne, with East of Pakenham being almost impossible to pick up.

I knew the answer was a 2m and 70cm beam antenna with a rotator. I went off and researched and purchased Cushcraft Triband (because it looked like a large TV Antenna) with a Yaesu G650A Rotator. Opening the box of the rotator and reading the instruction manual I realized that installing a rotator to the mast is not that simple especially when I want to install it from the eave of my second story. The problem I found is that you really need

to mount a Rotator in a mast or some type of housing to allow the vertical mast of the Antenna to be supported. Hence my problem!! For the rotator to spin the Antenna 360deg I would need to use a length of mast about 1.5m so that the antenna would not hit my pitched roof.

After a couple of trips to Bunning's and Hills Industry to see what they had to install TV Antennas. I found that Hills had the basic components which I thought would help.

"D Clamps" to mount the Rotator to the eves and Stay Bars which were usually used to support Hockey Stick TV antenna mast. However what was missing was how to attach the Stay bars to my Terracotta roof and how to connect the Stay bars to the upper part of the Vertical mast and allow it to rotate?



D Clamp Bracket

In comes Ian VK3BUF, I have been discussing my problem with Ian and we scheduled a time to visit to see what I have got and what could be done to solve my problem. Ian agreed with what I had was probably as good as I could get and worth a go. Ian was confident that could bend a couple of brackets to attach the bottom of the Stay Bars to the roof and he had a bearing that a Mast could be inserted to and connected to the Stay Bars for vertical stability.

This all worked to plan with Ian pre-bending up at his home two, 1/4inch mild steel brackets and attaching a bush-bearing to a mast to which the guy bars could attach. Only a few minor adjustments to the brackets were required and courtesy of his Mitsubishi bull bar and a very large shifting spanner this was not an issue at all. We found that attaching the bracket to one of the rafters of the roof by 3 Hex Screws with the bracket laying at the junction of two rows of tiles.

The adjacent pictures show this clearly.



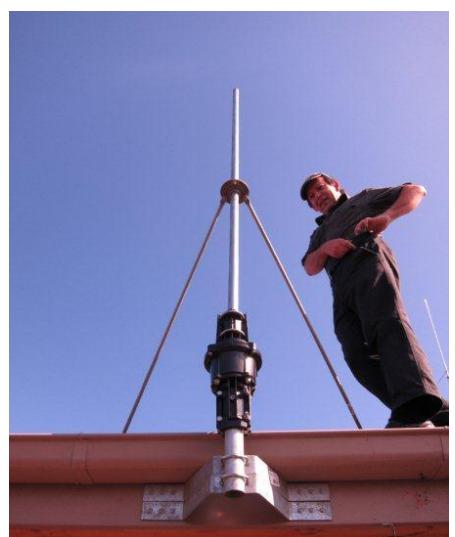
screwed to the eave just below the cutter. Hills D Clamps are designed so that the Mast will miss the gutter.

The two Stay bars connecting to brackets that Ian had made and the bush bearing that Ian supplied. Please take note of Ian's huge shifting spanner it also worked wonders as a clamp holding the brackets to the roof joist as the final bending was performed in site. You can also see the tip of the Stay bars protruding from the terracotta tiles



The only hurdle of the installation was setting up the Rotator, as I learned that most Rotators are set up for Northern Hemisphere with their stops at North, however for us it is the opposite where we want to set up our stops for South as most of our contacts are North of us. (No disrespect intended for our Tasmanian Hams)

The two D Clamps attached to bottom of the Rotator and



The final stages of installation before the antenna went up..

.....and the final product.



Ian doing a final check of the antenna.



R-TTY by Paul Stubbs VK3TGX

At the last meeting night (19/8/2011) we had an RTTY night, I tried to dig out my old equipment, and have a demo going, however it all depended on me finding a cassette tape of RTTY test message's I'm sure I had somewhere – darn, At least Ian VK3BUF was a bit more successful then me.



When I started my first job, with Telecom as it was then, I was in the Telegraphs and Data department, in a repair shop fixing the very machine that Ian brought to the club, A Siemens M100 mechanical telex machine, later Telstra had the M100 Mk2, followed by equipment from the French Sagem company, the TX20, (same functionality as Ian's M100) T10 (receive only) then the upmarket TX35 & Telex 2000, both with screen's disk drives and memory to permit preparation of messages before going on line.

In Victoria, Telstra had one Telex exchange in Melbourne, close in customers were connected by a 'single current' service (40 mA, either on or off), then for a bit more range we had 'Double current' connection, with this a normal telephone pair of wires was split into two, one

side was transmit, the other receive, with the return path via an earth rod. – With all the faults that come with dry earth rods, they were quite reliable actually.

A double current service normally ran at 50mA, a Mark was -50mA, Space +50mA, at up to 50V – very much like an RS232 signal. Between calls, the idle current was dropped to 10mA,

both to save current at the exchange, and also save the earth rod.

Bush customers were connected to one of several rural terminals where their double current signal was converted to audio tones by a multiplexer, 24 subscribers could be run down one telephone channel (this ‘channel’ was then frequency multiplexed with other ‘normal’ telephone calls and sent on mass via coax cables or radio links back to the Melbourne.

the exchange woke up and then

To make a call you pressed the ‘Line’ button on the machine, the exchange woke up and then sent ‘GA’ to you, meaning Go Ahead, enter the number you want. If you were successful you would receive the ‘answerback’ message from the far machine, so you could verify who you were connected to. A bad call (faulty machine, or non-existent number) resulted in ‘DER’ being received back from the exchange (I never found out what the letters stood for)

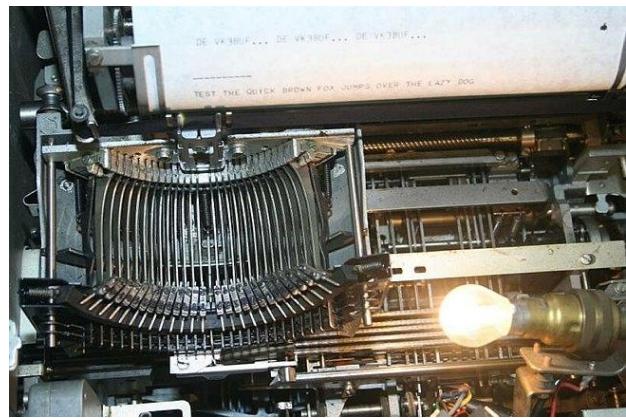
As for Radio TTY, back then I didn’t have a license, and was a receive only station, firstly I tried using a Tandy TRS-80 model one, but the RF noise from these was unbelievably bad, I then tried an NEC APC3 with much better results. (Pre IBM PC days) the old NEC machine has long gone, and the TRS-80 is now a ‘keep sake’ in the corner of my lounge room – maybe I should see if I still have the software? (I would have written it in Turbo Pascal, so conversion to PC format is not impossible) for a demodulator I used an EA kit and an oscilloscope as a tuning indicator (as was common in those days) – Today’s pc software (MMTTY), as demoed by Ian emulates the old tuning indicator on screen.



Early Tandy CoCo2 running RTTY

Today if you would like to try the mode, first off I would recommend you download a copy of MMTTY from the web, <http://hamsoft.ca/pages/mmtty.php> Then connect your sound card to your radio, the same as done for slow scan and other digital modes (isolation transformers are always a good idea) then use either use your radio’s VOX for transmit control, or connect the PTT line to a serial port etc, but just remember, especially on HF, RTTY runs your rig at 100% tx, unlike SSB voice, so to avoid cooking your rig, back it off quite a way (ie 100W rig, try 20W) . Some modern rig’s may well be able to transmit RTTY at full power – consult your manual, otherwise, back it off! Also, if you are feeding the audio in via your mic socket, disable any speech processors as they will only distort the signal and offer no improvements what so ever.

Ian mentioned that some radio's apparently have an RTTY input on the back where you can pull the carrier by 170Hz, but MMTTY does not seem to support this. I also wanted to connect my old EA demodulator kit up to it, but again MMTTY only seems to support audio in/out via your sound card. – a pity My FT897 has a 'digital modes' input on the back, but this is actually an auxiliary audio input – ie hook up your sound card. Again, if in doubt, read your manual.



Paul VK3TGX

General Meeting Minutes - August 19, 2011

Date : 19th August 2011

Start time : 20 : 00 pm.

Location : Guide Hall Club rooms.

Chairperson : Dianne Jackson VK3JDI, president.

Minute Taker : self, VK3BXG

Present : As per attendance sheet

Apologies : As per attendance sheet

Visitors: David VK3BJV. Clinton VK3MJC.

Correspondence received :

- E-mail from Steve, VK3EGD regarding the "hamradioisfun" web-site – do we wish to continue with it?
- E-mail from David McAulay, FAMPARC advising of the fox hunt antenna talk Sat. 23/7/11.
- E-mail from Tony Hambling regarding the National Parks award in conjunction with the ILLW.
- E-mail from Carter and Carter regarding "A Taste of Tamworth" at Hallam pub Sat. 10/8/11.
- E-mail from Chris VK3QB that he has the refund from Parks Victoria for Wilsons Promontory cancellation.
- E-mail from New Zealand regarding the Waitakire Sprint Saturdays 30/7/11 and 6/8/11.
- E-mail from Michael Cotter, MAK electrics seeking Brian VK3BSN contact details.

Correspondence sent :

- E-mail from David McAulay forwarded to members
- E-mail reply to Tony Hambling advising of the cancellation of Wilsons Promontory ILLW.
- Letter to Andrew Martin VK3OE requesting he give a talk on his remote Harcourte station.

Treasurer's report : (Copy attached).

Moved : Ian VK3BUF.

Seconded: Doug VK3KMN All in favour.

Income : \$5875.45

Expenditure : \$1491.50

Balance : \$6722.20

Total \$6482.30

Previous Minutes :

Read : as distributed **Moved :** Dianne VK3JDI **Seconded :** Michael VK3GHM

Approved : yes

Business arising from the previous minutes :

- Newsletter now to be in A4 and will be E-mail copy only to all members as all members now have internet access.
- RTTY show and tell. Ian to talk after the meeting conclusion.
- ILLW definitely off because of the bad weather earlier this year and the park is not yet open.
- Cup Weekend at Yarra Junction, taking \$40.00 deposits tonight. Dianne reports she has made the booking
- Prac. nights, Brian reports the last one was the antenna analyser but because Albert was not informed he did not bring along the equipment needed. Brian suggests we need to know in advance the object of the night so the relevant equipment can be bought along. Next prac. night is a PSK31 demonstration; also planned for the future is tuning up the TS520, IRLP and coax termination.
- Mags from other Clubs are now on a link at the GGREC web site.
- RD contest, Michael VK3GHM presented the log in format for submission to the WIA for the contest. Points claimed are 249 for HF and 212 for VHF.
- Web Design class will probably go ahead in November. Henry VK3FHTV is trying to organise a person to present a talk and demonstration.
- Vanuatu. Frequencies will be published in next month's "Gateways". Four members from the club are now going
- Repeater VK3RDD, Bruno VK3BFT reported that last Tuesday (16th August) Albert VK3BQO, Geoff VK3ZGW and Bruno VK3BFT kitted out and refitted the new VK3RDD. To date it is working very well but still experiencing some interference.

New business.

- JOTA reminder for 22nd October. I, VK3BXG have indicated to the Guides that for catering purposes there should be about eight club members in attendance at various times during the course of the afternoon. Times will be from 1300 hrs until 1800 hrs.
- Foundation Course set for 12th November I, VK3BXG advised. If less than three people it can be done in one day but if more, then two days will be required – probably best to budget for two days. Brian VK3BSN advises to check with AR Victoria to make sure it does not clash with their monthly exam.
As an incentive I suggested that free yearly membership be offered to any successful candidate. Consensus – carried.
Megan, VK3HOP suggested that CBer's be bought in as members – Consensus is that our constitution does allow for anyone to be a member.
Megan further suggested a media release needs to go into local papers – Consensus agreed.
- A Yaesu FT101's display at the November general meeting is planned Ian VK3BUF reports.
- An incident to note, reported by Chris VK3QB is that a VK2 has been charged by the ACAMA for using an amplifier and excessive power and causing undue interference. A timely warning to all to do the right thing.

Meeting closed :20:48 pm



Information for Club Members



General Club meetings are held at 8:00pm on the 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) commence from around 7:30 PM.

Visitors are welcome to attend.

Office bearers:

President:	Dianne Jackson	VK3JDI
Secretary:	Graeme Brown	VK3BXG
Treasurer:	Ian Jackson	VK3BUF
Gen. Comm Members:	Paul Stubbs Russ White Michael Van Den Acker	VK3TGX VK3MWR VK3GHM
Public Officer:	Ian Jackson	VK3BUF
Distribution Email :	Graeme	VK3BXG
Property Officer:	Bruno	VK3BFT
Repeater Officer:	Albert	VK3BQO
WebMaster:	Stephen	VK3EGD

- **GGREC Web Site & Archive** may be viewed at: www.ggrec.org.au
- Club Station is **VK3BJA** which operates from the Cranbourne Clubrooms.
- 6M Repeater at Cockatoo is **VK3RDD** : Freq. In 52.575, out 53.575 MHz
- 70cm Repeater Cranbourne is **VK3RLP** Freq. In 434.475, out 439.475MHz
This 70 cm Repeater requires CTCSS tone access of 123 Hz.
It also supports Remote Internet access (**IRLP**) using Node Number 6794.

Call in Frequencies :

- VHF 145.450 MHz, FM
- UHF on 438.850 MHz,

Membership Fee Schedule: (due after each April Annual General Meeting)

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 134761279**.
- Always identify your EFT payments.

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

Please direct magazine articles to: 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 GGREC inc and the Club cannot be held responsible for incorrect information published.*