



GATEWAY

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

May 2014 From The President

Well, I'm back home from overseas again and ready for another Club year. I loaded Echo link onto my tablet before I left Australia and was pleased to have brief contacts with Doug VK3AWO from both Dubai and Italy. It is amazing what you can do with amateur radio.

If you haven't already paid your membership fees please don't forget that they are now due for the 2014-2015 Club year. As the memory of hot summer days fades away and the sun starts to set earlier every day and please don't forget to get your deposit in to secure a seat at the Midyear Lunch. This year we are planning to lunch at the Marina restaurant and Bistro in Hastings.



Bruno Tonizzo

Preparation for this year's hamfest is going well and there are still plenty of tables left if you need to sell any surplus items.

See you at the May GM

Bruno VK3BFT

CONTENTS

| | |
|-----------------------------|--------------|
| <i>Hamfest Invitation</i> | <i>3</i> |
| <i>VK3RLP Repair</i> | <i>4-6</i> |
| <i>April GM Minutes</i> | <i>7-8</i> |
| <i>GGREC Mid Year Lunch</i> | <i>9</i> |
| <i>Where is the future</i> | <i>10-11</i> |
| <i>Club Information</i> | <i>12</i> |

Event Queue from April 2014

May 16th – Friday Night. General Meeting at the Guide Hall
From 2000hrs Video on WLW 500KW AM Radio Station

June 6th – Friday Night. Prac Night at the Club Shack
From 1930hrs

June 14th – Saturday. Midyear lunch Marina Bar & Bistro
Hastings from 1230hrs

June 20th – Friday Night. General Meeting at the Guide Hall
From 2000hrs Talk by John Watkins on the early days of GGREC

July 4th – Friday Night. Prac Night at the Club Shack
From 1930hrs

July 18th – Friday Night. General Meeting at the Guide Hall
From 2000hrs No talk tonight early finish for Hamfest

July 19th – Saturday. GGREC Hamfest
From 1000hrs Cranbourne Public Hall Melway 133 K4

GGREC Hamfest

AN INVITATION TO STALLHOLDERS

On Saturday the 19 th of July 2014, the Club will be conducting its annual HAMFEST for the sale of new and used electronics and radio equipment. As it was last year, the venue will be at the Cranbourne Community Hall on the corner of Clarendon and High streets, Cranbourne. High Street is part of the Sth Gippsland Highway. Melway's 133 K4.

The club takes pleasure in offering you the opportunity to become a Seller at our 2014 event. Forty one tables will be available for stall holders, but demand will be high as usual. Please book early to avoid disappointment. All the details can be found on our web page at <http://ggrec.org.au/hamfest>.

- Table hire will be unchanged at \$22 per table. A limit of four (4) tables per Stall Holder applies. Table Hire provides access for TWO people to operate the stall. It will also include two tickets to the door prize and free tea/coffee throughout the day.
- The \$22 fee must be paid in full to the Club within 7 days of booking your table. Cancellations made more than 14 days prior to the event will be given a full refund by cheque.
- To make a booking contact Steve Harding VK3EGD on 0408 878934. Or email details to hamfest@ggrec.org.au Payment may be made by sending a cheque or money order (payable to 'GGREC') to Post Office Box 1098 Cranbourne 3977 or by direct payment to: BSB 633000 ACC 146016746 with remittance advice to Steve upon transfer. If you do a direct transfer please include your "callsign/name" and "table fee" on the transfer.
- When making a table booking, Stall Holders will be asked to provide a Name, Postal address and Contact phone number.
- Upon receipt of the \$22 fee and contact details, a Booking Number will be posted with a receipt of payment. IMPORTANT! No booking is confirmed until this number has been received by the Stall Holder.
- Access to the Hall shall be from 8:30am for Stall Holders (not later than 9:30 am unless by arrangement).
- Transfer of your booking to another person is not permitted. Please contact Steve if you cannot attend or wish to discuss your booking.
- The doors will open for buyers at 10am with a \$6.00 entry fee.

Each year, this event is a great success with many hundreds of people through the door in our large Cranbourne venue making it a premier event for radio markets in this state. We look forward to working with you again.

On the Right Track?

I thought this story may get a laugh from those who can relate to how Murphy gets into things and you have to deal with him.

I don't like working on faulty gear unless I built it; which is when I know how it works and can work my way through the circuit. However occasionally I stick my neck out and invariably get hit on the head by a curly fault. This time it was the Club's 70cm repeater (VK3RLP) which had decided it did not want to receive any signals.

The transmitter was merrily announcing its callsign every so often so I had no concerns about this section of the repeater. Well not at this time anyway. The repeater setup consists of separate Motorola Syntrx Plus radios for transmit and receive and the associated controller board from the same manufacturer. This equipment has been faultless since it was commissioned in 2006 (except for an antenna issue which I don't consider part of the repeater itself) so I suppose we cannot complain about having to do some work on it.

Regular maintenance would not have prevented this fault and quite often causes more faults than it prevents, but what came after fixing the original fault was certainly not routine or simple. As mentioned, the original fault was in the receiver and after working my way through the RF section and on into the audio part, I found one IC; a quad op amp that was the culprit. It was lucky that I had a copy of all circuits, a circuit description and the memory of having worked on this radio when it was first installed so it wasn't too hard to locate the problem.

The IC was of the SOIC type and was not available from distributors in Oz so I had to wait a week for the part (plus a spare for future) to come from the US. After changing the faulty IC, the receiver came back to life so all I needed to do was give everything a tweak and reinstall to site. Total time spent on this so far was about 3 hours which I could accept for an unfamiliar radio. Good, I can clear the bench and go back to what I was doing before this happened. Yeah sure!

I almost got to put the last cover on the unit but thought I should put the system fully through its paces first, when the transmitter started to hang in transmit mode for longer than the two second tail. This symptom got worse the more I caused it to transmit and then finally it would not switch back to receive. After disconnecting the receiver from the system (first choice for a culprit of course) the problem still existed.

The controller was not to blame either. Now I had a fault to fix in the transmitter as well. The PTT on the Syntrx radio is superimposed on the transmit audio line which is fairly common and the circuit was nothing extraordinary but I could not determine the actual component causing the problem. Keep in mind there are two diodes, a couple of resistors and one capacitor in the PTT section so how much can possibly go wrong that cannot be found.

After spending some time tracing the correct components on the PCB, I spotted what looked like bubbling solder mask beside an electrolytic capacitor. This cap. had deposited a fair amount of its internals out onto the surrounding board and the rot had set in. Cleaning up this mess is never easy even after removing nearby components but as the fluid had leaked onto a couple of components associated with the PTT circuit, I made the assumption (wrong of course) that this was the cause of my fault.

All components were reinstalled and some PCB lacquer sprayed onto the area to make it look pretty again but believe it or not, the fault persisted. A brief description of the circuit is that the PTT is pulled almost to ground to enable the transmit mode and a pull up resistor returns the PTT line (which is an input on the CPU) back to a logic high or roughly 5v for receive. Something was holding the PTT line to less than 2v and me removing all the associated components on the PTT line did not stop it doing so.

The PCB track for this runs around the board for about 150mm swapping sides as it needs using vias. I started drilling out the vias to isolate sections of the track to determine where the fault was and luckily on the second drilling, the fault disappeared.

The section of track that had been isolated went to a metering connector which was not being used so I left the section disconnected, reinstalled all the components and tested the transmitter again with it operating faultlessly.

The strange thing is that the entire length of this section of track is highly visible but nowhere could I see any solder hairs or breakdowns in the PCB and it went nowhere near the area that had been corroded by the leaky electrolytic. So I am still at a loss to locate the actual fault but at least the radio worked. So all being well, I assembled the system and again tested it. All worked as it should. But wait, there's more.

Some minutes passed by with me checking power levels and receiver sensitivity when out of the corner of my eye I saw a wisp of smoke rise from the controller PCB which is separate to either of the radios. (The "controller" controls the repeater operation) By now Murphy had a good grip on me and wasn't about to let me go any time soon. Naturally I did not see exactly where the smoke came from so it was back to visual inspection.

The burnt smell told me that it was another electrolytic that had gone bad. Sure enough, the goop had leaked onto the PCB, eaten through the solder mask and provided a nice short to earth which caused a chunk of the track to disappear and another mess to clean up.

To shorten the story from here on, I replaced two electrolytics in this area and inspected every capacitor on the radios and the controller boards to hopefully prevent any more leaky events. In total for this "simple" repair, it was eight electrolytic capacitors and one IC replaced plus one broken PCB drill bit (for the vias).

Lessons learned - none; because Murphy had got me at other times before this.

Fun had - well you have to laugh because what else can you do.

VK3BQQ

General Meeting 11th April 2014

| | |
|---------------------|--------------------------------|
| Location: | Guide Hall Cranbourne |
| Start Time: | Meeting commenced at 2010 hrs. |
| Chairperson: | Bruno VK3BFT |
| Minutes taken: | Graeme VK3BXG |
| Present and Guests: | As per attendance sheet. |
| Apologies: | As per attendance sheet |

Correspondence in
Graeme Lewis email regarding the Moorabbin Hamfest.
EMDRC news letter.
NERG news (e-mail) link.
Napier / Hastings NZ email news letter.
WIA, Robert Broomhead with a PR4AR reminder
Star News Invoice for our advertisement.
Rob VK3BRS with his estimate for the beacons project.
Rotarua, NZ email news letter.

Correspondence out
Advertisement to the Star News, Pakenham

Treasurers Report:- Pending to the next general meeting Ian VK3BUF reports as the books were closed on 30th March for auditing; however the clubs profits were down \$350 on the previous year due primarily to the VK3RWD project. The auditor's report was presented to the meeting and for the admin-secretary for filing and a full treasurers report will be presented to the May general meeting for the member's vote.

Previous Meeting minutes as per our April "Gateways" magazine distributed.

Moved accepted Ian VK3BUF, seconded Helmut VK3DHI, all in favour, carried.

Business arising from the previous minutes.

VK3RLP Problems is now in Albert VK3BQO's hand having been removed for tests and repairs Rob VK3BRS reported. An IC in the receiver had been found to be faulty and has been replaced but now the transmitter also seems to have a problem. Whilst out the duplexer will also be checked and it is also hoped it can be reprogram for 91.5Hz CTCSS for standardisation.

Beacon Project Rob VK3BRS reports that he has submitted an estimate of costs to the committee and the project is well under way acquiring the necessary items.

Barbeque Knobs, Ian VK3BUF reports is still an issue and suitable types may have to be manufactured.

Prac-night Ian VK3BUF reports Rob VK3BRS has been sourcing balun kits off e-bay and kits have been ordered.

New Business

Mid-year Dinner it has been agreed Ian VK3BUF reports is now at Hastings Marina Saturday 14th June.

Antenna Weekend, Ian VK3BUF reports will be the last weekend in October and already the Marquee has been secured for that weekend. Advertising will go out in May and other clubs may be invited.

A Donation of a book "Edwards Wire Rope" was made by Russ VK3MWR to the clubs library with appreciation and acknowledgement shown by the members present.

Meeting closed at 8:21 pm.

Membership Dues

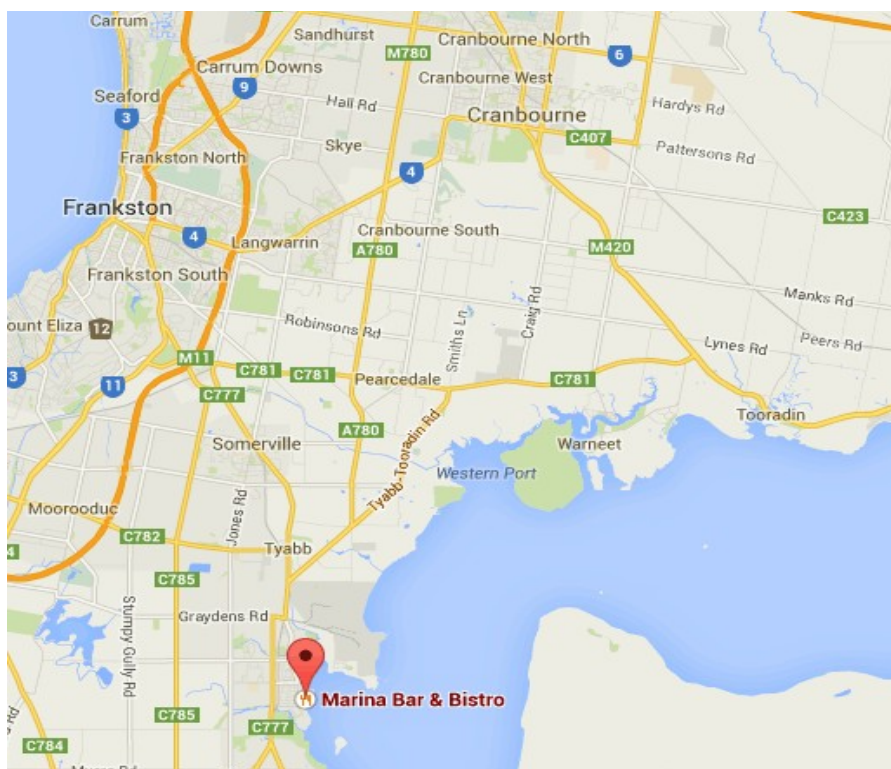
A reminder from the committee that all members must pay their yearly membership fee by the end of May. All members who are not financial will lose voting privileges and club shack access when the treasurer reconciles membership in the month of May, see the last page of the magazine for membership fee amounts and bank details if paying by EFT. The treasurer will also be taking cash payments at the meeting this month.

Mid Year Lunch

The mid-year lunch will be at the Marina Restaurant, Cnr. Mullet & Skinner Street's in Hastings (Mel. 154 K12). The lunch is from 12.30pm on Saturday 14 June 2014.

The restaurant boasts a wide selection of foods to choose from, (including an extensive seniors menu), at prices to suit all budgets.

Could interested persons let the admin-secretary know ASAP. A \$10 per person deposit (to the Treasurer) is required at the May general meeting, this will be returned on the day and is non refundable if you dont show up



Where is All the Cool stuff we were promised ?

“The only thing more uncertain than the future is the past”
(Russian Proverb)

Next year is an important one in History. By October 2015 we will all have fusion powered flying cars and no child need not live without a Hoverboard. This dazzling future has been foretold in great detail by Marty McFly. The problem is...here in 2014, I look around and don't see this exciting stuff materialising around us. Gazing up and down the street I just see regular cars driving at 60kph between regular potholes.



So what has gone wrong? It seems like we all got a future different to the one that we had ordered back in 1985. Instead we got the internet and smaller mobile phones and something called 'apps', which sounds more like a skin disease than technology. (*I'm off to the pharmacy to buy a cream to treat my apps*) It's like there is a tremor in the Force and something has altered the direction of our density, I mean 'destiny'. I am seeing a conspiracy here. I have no evidence, but since when has any good conspiracy theory needed evidence? The vibe of the thing all points towards tampering with time. Could it be that something happened to the inventor of the hoverboard? Has an assassin come back from another future (somehow looking a lot like a young Arnold Schwarzenegger) located a young teenage hoverboard inventor and terminated that time line? Unfortunately we don't know what we don't know and far be it from me to fill a void with fiction and guesswork. Too many religions have started that way.



Lets examine this thread a little more closely. What were we doing in 1985? We were certainly listening to different music. In what must be a really dim memory now, Madonna reminisced about what it was like to be a virgin. Dire Straights was making money for nothing, Tears for Fears was lamenting how everybody wants to rule the world and Bryan Adams was still firmly wedged in the Summer of 1969.

At the cinema Harrison Ford was having an adventure with the Amish, Mad Max was in his Thunderdome, Roger Moore had his final fling as James Bond and in his spare time Michael J Fox was a teenage werewolf.

The *Jetsons* were still coming out in new episodes, but I'll write a fresh article in 2062 for Gateway to lament on how *that* projection turned out.

The cars we were driving back then were a lot more boxy than today. Square shapes and high wind loading being the style at the time. Mitsubishi chose 1985 to formally launch their new 4WD van series, so it wasn't the worst year in the world to live in.



The latest in collectable matchbox toys circa 1985

Back in 1985 the GGREC was in full swing, (except back then it was just GGRC, the 'E' having been invented the following year) Lots of camping trips were on the agenda at the time, as were the first Horse Endurance Ride communications events and AOCP classes. Many Gateway magazines were typed on Siemens teleprinters. Meetings were held in Heyington Crescent, Dandenong and the Club Treasurer was Ian VK3BUF, which somehow sounds vaguely familiar. Mobile phones were the size of small photocopiers, Photocopiers were the size of small fridges and the fridges were also the same size as fridges, but full of Swan Larger.



Here's the thing. We did get a lot of cool stuff, but not what we were expecting. Phones are now small enough to fit into shoes like Agent 86 enjoyed, but it turns out that shoes are not very nice things to talk to. I was looking forward to Moon Base Alpha on the far side of the moon, but 1999 came and went and the moon remained a bright, unoccupied dot.

Things did advance quite a lot, but it was in small increments of small technology and we hardly noticed it happening. In many respects it was the falling price of technology that was the biggest advance. We got cheap GPS technology, which was a huge leap

forward. We got Digital TV which allowed that broadcast television would reduce in bandwidth, but instead took up the same available space with a vast amount of reality tv crap. To make up for that lapse in taste, we also got Google Earth, allowing us to zoom in on much of the earth's surface from almost any computer. We got Ebay, allowing us to buy obscure parts from obscure places at low, low prices. We managed to persuade our youth to stay longer at school and study hard at university. (Which in turn has given us a record number of unemployed lawyers.)

The fact is, that in 2014 in Australia, not much of the big stuff changed very much at all. We have abandoned our capacity to manufacture almost everything, then dispose of and re-import our technology at an alarming rate. We *still* have no train to Tullamarine airport. We still burn coal for power. For some inexplicable reason we still have Knighthoods.

The truth is that if you want to see a taste of what Marty McFly experienced in his future, you don't look for it in Australia, not even in the USA or Europe. You have to go to China. While we wrestle with the controls on PVR's and cappuccino makers, the real action is in Asia where the future is being built in spades.



It's not that I don't like 2014, its just that it isn't what I was expecting it to be. A bit like closing your eyes and waiting for someone to spoon trifle into your mouth, but receiving pavlova instead.



Back in 1981 ELO launched their hit song '*Ticket to the moon*' with the famous lines:

*"Remember the good old 1980s?
When things were so uncomplicated?
I wish I could go back there again
And everything could be the same..."*



Well we can't go back there again, like they can't un-make "*Snakes on a plane*" and many people wish both were possible.

October 21, 2015 is the date when Marty McFly went Back to the Future. On that day I will enjoy what 2015 has to offer, I will also be marking the occasion with a T-shirt that says :

"Where's my hoverboard".

VK3BUF

Above:
Chinese rockets, Hangzhou East train station and what appears to be a Chinese 'Stargate'



Club Information

Meetings 2000hrs on third Friday of the month at the Cranbourne
Guide Grant Street Cranbourne

Prac nights first Friday in the Peter Pavey Clubrooms Cranbourne 1930hrs
Visitors are always welcome to attend

Office bearers

| | | | | | |
|-----------|---------------|---------|------------------|-----------------|--------|
| President | Bruno Tonizzo | VK3BFT | Repeater Officer | Albert Hubbard | VK3BQO |
| Admin Sec | Bryan Simm | VK3FOAB | Web Master | Stephen Harding | VK3EGD |
| Treasurer | Ian Jackson | VK3BUF | Magazine Editor | Mark Clohesy | VK3PKT |
| General 1 | Mark Clohesy | VK3PKT | Property Officer | Bruno Tonizzo | VK3BFT |
| General 2 | Wayne Cooke | VK3XF | Secretary | Ian Jackson | VK3BUF |

Call in Frequencies, Beacons and Repeaters

- The Club Station **VK3BJA** operates from the Cranbourne Clubrooms.
 - 6m Repeater Cockatoo **VK3RDD** In 52.575, Out 53.575 CTCSS 91.5
- 70cm Repeater Cranbourne **VK3RLP** In 434.475 Out 439.475 CTCSS 123Hz
VK3RLP Repeater supports Remote Internet access (IRLP) Node 6794.
- 70cm Repeater Drouin **VK3RWD** In 433.575 Out 438.575 CTCSS 91.5Hz
 - Simplex VHF - 145.450 MHz FM • Simplex UHF - 438.850 MHz FM
 - **VK3RLP** Beacons 1296.532 MHz & 2043.532 MHz

Membership Fee Schedule

Standard Member rate \$40.00 Junior Member rate \$25.00

Pension Member rate \$25.00 Extra Family Member \$20.00

- 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.

Magazine Articles to editor@ggrec.org.au or pockets@twistedsouls.com

All other Club correspondence to: 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

Facebook Page www.facebook.com/GippslandGate

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

Commercial Advertising is \$10 full A4 Page or \$5 ½ A4 Page per edition

The opinions expressed do not necessarily reflect the official view of GGREC Inc

The Club cannot be held responsible for incorrect information published.