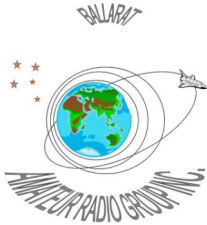


# BARG News



Official Newsletter of the Ballarat Amateur Radio Group Inc. # 6953T  
ABN 44 247 200 143

**VOLUME 34 ISSUE 4 APRIL 2011**



President: Craig Cook      VK3CMC  
Secretary: Doug Ellery      VK3FDRE  
Treasurer: Bill Wells      VK3PAL

**NEXT MEETING - FRIDAY April 25, 2011**  
At 7.30 pm

## Contacting us

You can write to the club at the address below, or e-mail the secretary.

The Secretary :    B.A.R.G. Inc.  
                          Box 1261  
                          Mail Centre  
                          Ballarat. Vic. 3354.



Or E-Mail:            [vk3bml@barg.org.au](mailto:vk3bml@barg.org.au)

## BARG INC. LIFE MEMBERS

Gordon Cornell	VK3FGC
Norm D'Angri	VK3LBA
Harry Hekkema	VK3KGL
Kevin Hughes	VK3WN
Ian McDonald	VK3AXH
Phil Seddon	
Charlie Stewart	VK3DCS
Bob Terrill	VK3BNC

## CLUB INFORMATION

### REPEATERS and BEACON

VK3RWA*	(2 m Voice Repeater) ( Uses CTCSS of 91.5 Hz to access)	147.100 MHz	Mt Ben Nevis
VK3RPC	(2 m Packet Repeater)	144.750 MHz	Mt Warrenheip
VK3RBU	(70 cm Voice Repeater)	438.475 MHz	Mt Hollowback
VK3RMB	(70 cm Beacon)	432.535 MHz	Mt Buninyong
VK3RBU-1	(2 m APRS Repeater)	145.175 MHz	Mt Hollowback
VK3RBT	(2 m Voice Repeater) ( Uses CTCSS of 91.5 Hz to access)	146.650 MHz	Green Hill

\* IRLP Node 6310 using VK3RWA

**CLUB e-mail** [vk3bml@barg.org.au](mailto:vk3bml@barg.org.au).

**CLUB NET** VK3BML 3.608+/- QRM Thursday Nights at 8 pm E.S.T (Summer & Winter)

**WIA Broadcast** Sunday 11.00 am via VK3RWA (IRLP Node 6310)

**NEWS ITEMS** Send to Harry VK3KGL

Or mail to Box 1261 Mail Centre BALLARAT 3354 or e-mail membermember [member.vk3kgl@barg.org.au](mailto:member.vk3kgl@barg.org.au)

#### **Broadcast Times and Dates on VK3RWA Repeater**

Every Sunday at 11.00 am, WIA National News.

Every Monday night at 9.30 pm, ARRL News

Every Tuesday night at 9.30 pm, WIA National News Repeat



## QST Report with Craig, VK3CMC

Content review of current QST in  
library



### QST Review 2011 – 3 March

This is the Annual Antenna edition. What to find in this month edition.

- P4/5 Index this month
- P9 Editorial “BPL raises it’s head again”
- P30 Four Wire Steerable V Beam for 10 – 40 m. Interesting project.
- P34 Digital VOX Soundcard interface.
- P37 Limited Space Antenna.
- P40 160m Rotatable Roof mount receiving antenna.
- P43 Own mount on car for brackets.
- P46 Near End Fed antenna for 20m operations.
- P46 Use a Noise Bridge and Spectrum Analyzer for AT adjustment.
- P50 Choosing a HF antenna.
- P52 A 20m Flagpole.
- P53 Product review. ICOM IC – V80 Handheld.
- P55 Product review. ICOM IC – T70A Handheld dual bander.
- P57 Review. Array Solutions Vector Network Analyzer.
- P60 Tech Correspondence Watching Wire Gauge sizes & using right angled coax connectors.
- P 62 The Doctor. Use 75R coax, Baluns & T match for VHF, Auto tuner problems, Interference with Ethernet routers.
- P64 Short takes looks at the “Shakespeare PL-259 Coax connector” For non soldering connections.  
[www.shakespeare-marine.com](http://www.shakespeare-marine.com)
- P65 Getting on Air. Ready for Sunspot Cycle 24. Explain the effects on the D, E, F1 and F2 layers  
And how to make good use of them.
- P67 Hands on Radio. Experiment 98 Linear supply Design.
- P69 Hints and Kinks. Fan speed controller for 50W amp, Home brewing Cabinets, Rotator break  
Out boxes.
- P71 How to utilise amateur radio while Hang Gliding.
- P73 Art of Conversation. Worth reading for beginners to learn to listen and talk to other amateurs and  
Conduct balanced conversations on air.
- P74 How to Program & store Local Repeater memories. Use simple steps.
- P76 Focused Frequencies. Looks at band sharing with different modes and need to have plans for all  
Users to share.
- P81 Public Service Emergency Comms. An example of simple “Ready to Roll” Handheld TxRx Go-Kit.  
Some good ideas from other set ups.
- P84 Op\_Ed. Preserving what we have. Looks at Nets and our attachments to people via radio comms.
- P92 Hows DX? Most Wanted Entities.
- P94 World above 50 Mhz. How we should maintain the station during winter month. Band reports  
Include ZL and VK.
- P101 Electric Technology. “Keeping Sounds on the Level”
- P102 Vintage Radio. “The very first amateur radio operator” claim by K2AE born in 1865. Always an  
Interesting read about the old timers.
- P104 75, 50 and 15 years ago.
- P164 Has the index to advertisers and includes their web addresses.

Hamspeak is no longer printed at the rear of the magazine but all technical terms used in articles are now included within each article. Still worth the time to read them.

**73, CRAIG, VK3CMC**

## VK3AXH - 1296 EME (Earth Moon Earth) Project

Having had some success using 2 metres for EME I thought my next challenge would be to have a go at 1296MHz EME. Given the layout of my backyard and to avoid the fairly heavily treed area's the most appropriate manageable sized dish selected was 3.7m (12ft) diameter.

A support pole was fabricated and installed on the back corner of my garage for the dish which would mean some remote operation would be required to control its movement and to avoid coax cable loss from my shack about 12 metres away. Initially the installation was designed to enable the dish to be wound up in height by another 3 metres. However I found there was little to be gained so it's operated in the down position.

Moving the dish in both azimuth and elevation was achieved using an aircraft prop pitch motor and satellite screw jack respectively. Position information was achieved using a kit from Germany that employed rotary encoders at the dish end and a digital display in the shack. The encoders were driven using a square toothed belt for Az and direct drive for El.



Prop Pitch Motor and Square Toothed Belt/Gear driving Azimuth Encoder



Screw Jack for driving Elevation

The dish feed uses a Septum (not shown) arrangement where there are separate antenna's for TX and RX. A G4DDK preamp (typically 0.35dB nF) was assembled and used to boost RX signals and transmit power uses a couple of 150 watt combined amps from Alan VK3XPD giving 250 watts at the feedpoint after cable losses. As the dish has approx 30dB of gain the radiated RF is quite dangerous so care has to be observed when transmitting as there is around 250kW of radiated power. This power is over a very narrow beamwidth of 3-4 degrees. On receive approx 10dB of sun noise is realised which indicates one measure of receive performance.

A control box was made to remotely turn on the preamp (at the dish feed) and linear amp (at the base of

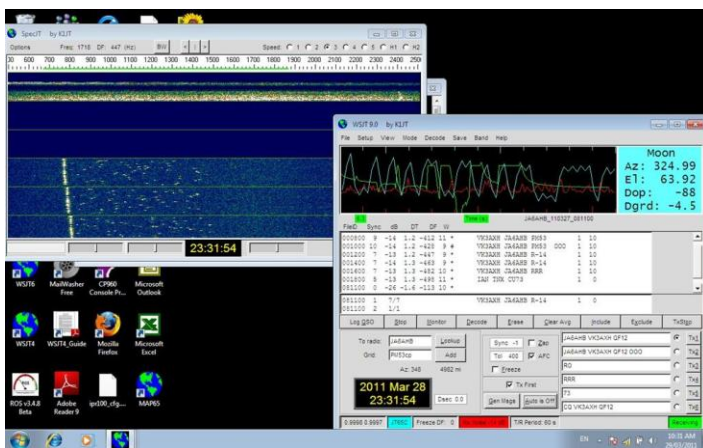
the dish) which is requiring some fine tuning and is still a work in progress. Remote RF power indication is also built into the control box to ensure the transmit side is working correctly.

Initially I received a couple of signals to make sure that part was working ok before taking the plunge to transmit. I've now had 2 EME qso's. One to HB9Q in Switzerland (15m dish unknown power but big) and secondly JA6AHB (5m dish 500watts) in Japan and hope to have many more using CW and SSB with some of the bigger stations.

Pictures of received signals from JA6AHB using WSJT digital software are shown below. His signals could clearly be heard in the speaker so CW was an option but not done at the time.

From the date of this picture you can see it's taken some time to get the system running. Thanks to Ian VK3IDL for his assistance to mount the dish on the support pole.

### 73, Ian - VK3AXH



### Engineers: they always were a problem

A wife asks her husband, a software engineer; "Could you please go shopping for me and buy one carton of milk, and if they have eggs, get six!"

A short time later the husband comes back with six cartons of milk.

The wife asks him, "Why the hell did you buy six cartons of milk?"

He replied, "They had eggs."

## Solutions for connecting you...

- Ballarat's fastest broadband<sup>1</sup>
- Affordable Chatphone VoIP phone service
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For commercial subscriptions call Heather James on 0427 007 893, For residential subscriptions call our Customer Service Centre on 1300 366 248.

### Terms and Conditions

Standard Neighbourhood Cable Terms and Conditions apply.<sup>1</sup> Speeds vary depending on a number of circumstances including network traffic, customer hardware, equipment and operating systems, download site traffic, download site bandwidth and size of file being downloaded.

## HEWITT & WHITTY Pty. Ltd.

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**Damien Hennessy**

Sales / Spares

Mobile: 0417 313 811

Email: damo\_611@hotmail.com



## PLEASE NOTE !

As the BARG has been nominated by many amateurs for the central collection of QSL cards from the WIA QSL bureau could the following people make some arrangements to pick up cards from the BARG club rooms. We are currently holding cards for the following:

**VK3KJH, VK3KIT, VK3UR, VK3FMC, VK3DS, and VK3KXG.**

Some of these contacts date back to 2005 so you may have forgotten about them.

If anyone knows these amateurs and they are not club members could you please let them know there are some cards to be collected.

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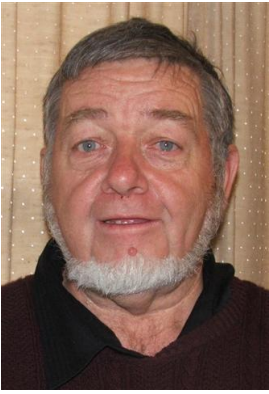
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**Articles for MAY Newsletter have to in by  
MAY 21, 2011 !!!!!**



**Craig - VK3CMC**

# *Presidents Report*

Here we are at the start of May. Nearly half a year has gone again as we look back then look forward to what's ahead. Firstly the clubs 2M FM repeater is now up and running well from Green Hill but I haven't heard a lot of members using it. I know it's nice to have the security that we know it's up and available BUT it needs to be used a lot more. I have spoken to a few people who have tried it and given reports and it is accessible from down the highway towards Ballan as well as at Cape Clear. It does cover up towards Maryborough and out to the west to Ararat.

Last Friday night we had twelve members and partners attend the dine out at the Midlands golf club and while we were down in numbers with a couple of regulars it was great to welcome Steve VK3ALL and Glenda to the club having just joined. Another new member is Peter VK3HEX and we welcome them to the club and hope to hear them on air soon.

On the Welfare front we still have Hutch VK3FHUT in hospital in Melbourne and hope to see him back home soon. I think the contacts on his key may be going rusty without some CW being sent to his mates on 40M net. I will post the latest by email as I hear from him. Betty Terill has also had some minor surgery and we hope the knee is well enough to make next months dine out night.

The airport open day provided a constant string of visitors through the club rooms and while Gordon VK3FGC had his portable station with Squid pole antenna set up on the front lawn and working HF stations he then channeled visitors inside to see the club shack and workshop facilities and to ask more questions about the hobby. Please remember that Gordon has organised two days at the Damascus College Mt Helen on the 11/12 May for two sessions each day to bring the hobby to the students and let them see what we do as radio amateurs and try and kindle some interest to gain a license. If you would like to assist on either day, morn or afternoon then let Gordon or myself know.

Good to hear Bob VK3NBV back on air with a comfortable signal again on 80M now that he has been able to raise his new antenna. The next we need to encourage is Warren's signal from VK3FWJW to get onto the club net on a Thursday evening.

Finally I wish to acknowledge the passing of Bill Hewlett VK3PH, a member of BARG for many years. The club has sent condolences to his family.

Another SK is of Cec Andrews VK6AO who was an active VHF operator from 6M to 23cm.

Well that's about all to report for the time being, so hope to see you at the next meeting or catch you on air.

## **Upcoming Dates for BARG members.**

<b>Thur 21 Apr</b>	<b>10AM Beechworth Bakery</b>
<b>Mon 25 Apr</b>	<b>Anzac day</b>
<b>Fri 29 Apr</b>	<b>1830 Gen meeting. Speaker Ian VK3AXH. Demo.</b>
<b>Mon 9 May</b>	<b>Construction night. Tue 12 May Coffee at Club.</b>
<b>Sat 14 May</b>	<b>Geelong . Visit goal, radio display and BBQ lunch. Need to know numbers attending for catering purpose</b>
<b>Wed 18 May</b>	<b>Committee meeting</b>
<b>Thur 19 May</b>	<b>Beechworth Bakery morning.</b>
<b>Fri 20 May</b>	<b>Dining night. Yet to be advised where.</b>
<b>Fri 27 May</b>	<b>Gen meeting, talk on Radio Astronomy. Bob VK3BNC.</b>
<b>Sun 29 May</b>	<b>1200 George Fowler auction and lunch.</b>



# George Fowler Memorial Auction



**The “George Fowler Memorial Auction”  
Will take place on Sunday 29th of May  
At the clubrooms.....**

**Come along and enjoy this great day  
DON'T FORGET your junk....  
Soups and bread rolls supplied for lunch starting at midday...**

**Please Note...**

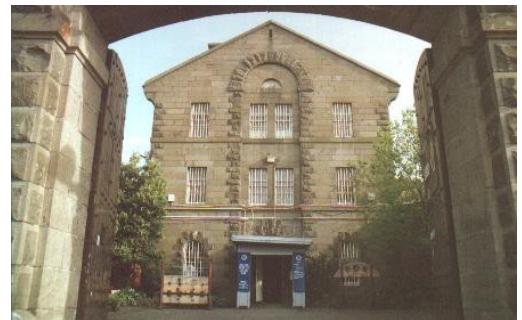
**Sat 14 May**

**Trip to Geelong.....**

**Visit gaol, radio display and BBQ lunch.**

**Need to know numbers attending for catering purpose .**

**Take your partner.....**





## 2.4GHz Portable operation from Mount Buninyong

On Monday the 25<sup>th</sup> of April arrangements were made amongst the microwave amateur fraternity to blow the cobwebs out of our gear on the 2.4GHz band and higher bands if equipped to do so.

Three Ballarat stations namely John VK3AIG, Ian VK3IDL and Ian VK3AXH ventured up Mount Buninyong to give it a try not knowing the effect the trees would have on propagation.

The 2 mx band was used to establish contact amongst the various field operating stations and after setup contacts were made with several stations located at various portable locations around Victoria and South Australia.

You will see from the photo's the setup of 2 of the 3 stations (I forgot to take a picture of my setup) that were being used.

The entire exercise began around 8:30am and we were back at the qth of Ian VK3AXH for coffee by 10:30am.

Contacts were made with each of the stations as follows.

VK3KH – Arthurs Seat

VK3PY – Lara

VK3ALB – Lara

VK3MQ – Nr Mt Dandenong

VK5NC – with VK5DK at The Bluff, Mt Gambier

VK3QM – Mount Rouse nr Hamilton.

In almost every case signals were in the order of S7 to S9+. Each of our stations were using Mini Kits transverters with ex commercial modified amps giving around 10 watts SSB output.

This is the sort of activity that should generate some enthusiasm amongst the local amateur fraternity to perhaps take on some projects so you can also join in the fun.

73, Ian – VK3AXH



## **More on BARG to Geelong visit.....**

A reminder that we have a visit to the Geelong GRES clubs radio display in the Geelong gaol and then a catered BBQ lunch at their club rooms afterwards on Sat 14 May. We do not have a bus available so direct car travel and pooling is order of the day. I do need to have numbers for catering purpose to inform GRES. Early report would be appreciated direct to me. Organise the XYL now! All welcome.

We will meet outside Geelong gaol at 1030am. Awaiting further details re any entry cost and afterwards we go to their rooms at Unit B/237 High st BELMONT which is at top of hill and next door a nursing home with a pedestrian crossing right outside. Room for parking off street in front of the hall. Club rooms behind the hall by walk down the RHS.

Craig, vk3cmc

## **UP FOR TENDER**

BARG's committee has decided to place the following items out for purchase by tender. Club rules require that these items be offered to "Financial Members" firstly and if not sold then can be offered to other interested persons.

Members will need to put their tender (e-mail is considered satisfactory) into the Club Secretary by Monday 16<sup>th</sup> May for consideration by the Committee at their meeting on Wednesday 18<sup>th</sup> May 2011.

The highest tender may not necessarily be accepted and the Committee's decision will be final. The successful tender ( if there are any) will be announced at the BARG meeting on Friday May the 27<sup>th</sup> 2011.

**Item 1. Kenwood "Kenpro KR-400". Consisting of the rotator motor and the associated indicator. This is the old club rotator which has been replaced and no longer required. The motor will require some maintenance and the housing that clamps the antenna shaft does require a bit of aluminum welding.**

**Item 2. Icom IC-22S VHF radio. The unit is faulty and is sold as is.**