

# B.A.R.G. News



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

**VOLUME 28 ISSUE 8 OCTOBER 2005**



President: David Tilson VK3UR  
Secretary: John Kennedy VK3AIG  
Treasurer: Gordon Cornell VK3GFC

**NEXT MEETING - FRIDAY October 29, 2005**  
At 7.30 pm

## Contacting us

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

The Secretary BARG Inc.  
Box 1261  
Mail Centre  
Ballarat. Vic. 3354

Or e-mail [vk3aig@barg.org.au](mailto:vk3aig@barg.org.au)

## DATES

Club meetings the last Friday each month at 7.30 pm

Committee meetings every 3rd Wednesday in the month at 7.30 pm

Construction nights are held on the second Monday each month at 7.30 pm

**President's Report:**

Well it is now official... The new licencing structure fro radio amateurs in Australia came into effect at midnight on the 19<sup>th</sup> of October. It is anticipated the new Foundation licence will hopefully result in an influx of new amateurs to our hobby. The Ballarat Airport Open Day will be our first opportunity to publicise the new classes of licences to the general public and I encourage as many members as possible to come along during the day to promote the hobby.

Yours in amateur radio,  
David Tilson, VK3UR

**New Members:**

Welcome to Andrew Whalen, **VK3WH** ex VK4WAC, who has recently moved to Ballarat and joined BARG.

**October General Meeting:**

The next General Meeting will be held on Friday, 28<sup>th</sup> October, commencing at the club rooms. Following the business of the meeting Craig, **VK3CMC**, will give an overview on the changes to the Australian Amateur Radio Service licences. Ian, VK3AXH, will discuss the forthcoming Hamvention and slot people into various jobs. The remainder of the evening will be spent reorganising the club rooms for the Ballarat Airport Open Day.

**IRLP / Web Site:**

Following a very interesting presentation from Mark Schmid, from Neighborhood Cable, last month Mark did some follow up with his technical staff as to why we were having the occasional dropout across our wireless internet link. As a result of their investigations the microwave antenna has been relocated to our main tower as the link path was slightly marginal at its original location. The signal is now rock solid and we thank Mark and the team at Neighborhood Cable for their ongoing support.

**Tower Update:**

Charlie, **VK3TCV**, has been working the world with his TH6 sitting on top of his new tower in Wendouree. Well done Charlie.

**Membership Fees:**

There are still a handful of members who haven't paid their membership fee for 2005/06 and this will be the last newsletter you receive. An invoice will be sent to members whose subscription is still outstanding. This year the fees are \$30 for a member and \$40 for a family membership.

**Repeater Update:**

Ian, **VK3AXH**, reports that the rebuilt 2m repeater, VK3RWA, is almost ready to be moved to Mt Ben Nevis. It will undergo some local testing in the Ballarat area over the next few weeks prior to its move.

### **Construction Group:**

Work started on the Construction Group's latest project, the HF Antenna Analyser, at the meeting last week. This will take a few months to complete.



### **New Australian Amateur Radio Licencing Structure:**

The new Australian amateur radio licencing structure came into force on Wednesday, 19<sup>th</sup> October, from the Australian Communications and Media Authority (ACMA). There are now 3 classes of licence for the Australian amateur radio service, being the Foundation, Standard and Advanced licence.

#### ***Foundation Licence:***

The Foundation licence can only use a transmitter that has been manufactured commercially, can only use voice, on either SSB, AM or FM or morse using a manually operated morse key, and not more than 10 watts output power SSB or 3 watts output power AM, FM or CW.

The Foundation licence can operate on the 80, 40, 15 and 10 metre bands as well as the 2 metre band and the band 430 to 450 MHz, subject to necessary bandwidth restrictions.

The new Foundation licence will utilise a new callsign structure comprising 4 letters in the suffix commencing with the letter F, eg: VK3FABC.

Discussions between the WIA and ACMA are currently underway in regard to the practicality of the 3 watt power limit for AM, FM and CW given that most commercial equipment operates has an output power of at least 10 watts.

#### ***Standard Licence:***

The Standard licence includes the previous Novice, and Novice Limited licensees, who now can use any emission mode with a necessary bandwidth not exceeding 8 kHz on the 80, 40, 20 and 15 metre bands, and any emission mode with a necessary bandwidth not exceeding 16 kHz on the 10 metre band, the band 52 to 54 MHz, the 2 metre band, and the bands 430 to 450 MHz, 1240 to 1300 MHz, 2,400 to 2,450 MHz and 5.650 to 5.850 GHz, with no change to the current output power limits of 100 watts and 30 watts.

### **Advanced Licence:**

The Advanced licence includes the previous Unrestricted licence, the Limited licence and the Intermediate licence, who can use any emission mode with a necessary bandwidth not exceeding 8 kHz on all bands below 24.990 MHz, any emission mode with a necessary bandwidth not exceeding 16 kHz on the 28.00 MHz to 29.70 MHz band, any emission mode with a necessary bandwidth not exceeding 100 kHz on the 6 and 2 metre bands and any emission mode with no bandwidth restriction above 420 MHz, and with no change to the current output power limits of 400 watts and 120 watts.

### **WIA Accredited Assessors:**

Congratulations to Craig, **VK3CMC**, who has successfully been accredited as a WIA Assessor. Craig is now qualified to assess potential amateurs for the new Foundation licence. Well done Craig.

### **Ballarat Airport Open Day:**

BARG has agreed to open its door to the public as part of the Ballarat Airport Open Day to be held on Saturday, 29<sup>th</sup> October. A number of members will be assisting during the day and we will have operating stations on HF, VHF, IRLP and APRS. With the introduction of the new Foundation Licence we will have as much information as possible available to introduce people to amateur radio. Activities will run from 10am until 5pm. Come along and join in the fun. The WIA is providing some large posters depicting various amateur radio activities as well as information pamphlets for prospective amateurs. Strictly Ham has kindly provided a large range of brochures on different types of radio equipment that is commercially available. As the Open Day is the day after our next General Meeting we intend having a shortened General Meeting so that all of the displays can be set up in readiness.

### **Ballarat Hamvention:**

Ian, **VK3AXH**, our Hamvention Coordinator reports that plans for the Ballarat Hamvention, to be held on 6<sup>th</sup> November, are progressing well. The Hamvention has been advertised through a number of mediums including Amateur Radio magazine, various web sites and on the VK3RWA repeater. There has been a lot of interest from commercial and domestic traders so it should be an action packed day. The Committee has agreed to set up a club table, for members who wish to have pieces of equipment for sale, and can't justify a full table for themselves. We intend having quite a few prizes this year to supplement the normal door prizes, so bring along some loose change. Traders will be permitted to enter the area at 8:00am and the general admission will commence at 10:00am. **Trading prior to the 10:00am commencement time is strictly forbidden.**

An informal dinner will be held at the Ballarat La Porchetta's Restaurant at 8:00pm on the Saturday evening, 5<sup>th</sup> November. If you would like to come please contact David, **VK3UR**, on 5334-1888 (AH).

### **October Dining Night:**

The next Dining Night will be held on Friday, 21<sup>st</sup> October, commencing at 6:30pm. The venue for this month is the "Brothers In Arms" bistro at the Ballarat Minerdome. If you would like to come contact David, **VK3UR**, on 5334-1888 (AH).

## **FEEDBACK 2005**

- Do you have any feedback for the club?
- Have you seen something that could have been done better??????
- Do you know someone who is keen to help?
- Do you have any suggestions for our Newsletter?
- Do you have any suggestions for our website?

All suggestions will be considered

Forward all great ideas to: Harry Hekkema, vk3kgl  
Or e-mail: [vk3kgl@barg.org.au](mailto:vk3kgl@barg.org.au)

## **Propagation Report for September 2005**

This month has seen some good and not so good propagation on most of the bands HF and VHF.

Steve VK3SE reports good contact to made on 40/20/15 to VK and ZL with the odd good opening on 20 into the USA and Europe. Steve report he worked K7C on 18.175 using split frequency and a huge dog pile for this station. There is also a rare station VP8 around on 40 which is attracting huge pile ups.

Ernie VK3DET reported finally working S79EC after chasing that country for quite a while. Ernie is well on the way to having worked all prefix areas which is a great effort.

Charlie VK3TCV has been heard working lots of stations on 20. Ian Vk3AXH has also had some contacts into the US and Europe on 40 and 20.

The VHF/UHF scene is bubbling along with regular contacts via repeaters both near and far as well as some tropo from time to time Ian VK3AXH now has in possession QSL cards from HB9Q for EME contacts on both 2 metres and 70cm during this last month.

Several of the 160 metre verticals are now operating with VK3AIG, VK3FGC, VK3AXH and VK3CMC almost there. Although the band has been a bit noisy there are some good contacts to be made locally and DX.

**Till next month 73 Ian VK3AXH**

# Paul Wild and the Italian connection!

I guess that most would know of our great Aussie Icon “The Dish” our 210 foot Radio Telescope situated at Parkes western NSW. Well it has a few smaller brothers or sisters I’m not sure of their gender but equally important to our overall results in the field of radio astronomy.

Six of them are situated out of Narrabri western NSW. This facility is known as “The Australia Telescope Compact Array” located at the Paul Wild Observatory and is managed by the CSIRO in Sydney.

It seems to have become a habit each year as we journey south to stop over at Narrabri and visit these towering monsters. Well this year was no exception but with a difference. At the center there is a large public display with all things relating from their construction to models of the feed horns, low noise amplifiers to photos of the signal processing computers at the control center.

The six dishes each of 22m diameter each weighing about 270 tonnes , the approximate weight of a jumbo 747. They are mounted on railway tracks about 10 m gauge! There are two tracks, east west and north south. Only five of these dishes are movable and the sixth is stationary. They are each individually powered and move along the tracks at about 4km/hour. The maximum distance between the dishes is 6 km.

Positioning the dishes relative to one another permits greater “resolving”power and they can be used in conjunction with the likes of Parkes or other dishes around the world. In conjunction with the long weekend in NSW the Paul Wild Observatory held some special lectures for the public. At the conclusion on one of these talks I heard a voice say would you like to see through one of the dishes, well I think I was second in line! After donning hard hats we were off. It’s a long climb to the radio hut and of course can only be reached when the dish is pointing straight up. At this point I recalled some words of wisdom from my Doctor about walking! The radio hut is quite small and houses the antenna feed horns on a turret assembly so the various bands can be changed bringing into focus the appropriate low noise amplifiers for the band of frequencies required.

In order to reduce thermal noise the amplifiers are cooled to  $-270$  degrees. Well there it was all the radio front end equipment and from there the signals went downstairs to the eventual specialised signal processing.

Of interest to us “Hams” is the wavebands that these radio telescopes use. 3mm, 12mm, 3cm, 6cm, 13cm and 20cm. Well some of these look familiar! Well the tour was made all the more palatable by a nice young Italian PhD student who was in charge of the current sky searching project.

Ps. Yes the car and caravan did swerve uncontrollably to the left approaching Parkes so I just had to sit and drool over a cup of coffee. I did wonder about the equivalent weight in Jumbo jets for this monster.

I see they are constructing a radio interferometer for Jupiter to one side of the car park. Its not finished yet but it’s the sort of thing we could assemble at BARG. I wonder if it’s to get schools involved in simple radio astronomy projects? Hopefully I’ll find out next year!

Bob. VK3BNC.



**Dish at Narrabri**



## ***BARG LIBRARY***



### **Some articles in the following issues of QST NOW IN THE LIBRARY**

#### **QST OCT 2005**

##### **PROJECTS**

- Automatic antenna switch controller, up to 5 antennas
- Build very simple Automatic Impedance Bridge to interface to your computer soundcard.
- Ideas to rejuvenate your club.

##### **INTERESTING READS**

- The Dr. is in—Q & A
- Hands on radio  
EXP 33 learn about the transformers.
- Technical  
Baluns and Unbalanced Feedlines Q and A

Interested in Transequatorial Propagation  
Look at this article starting with part 1.



**One of the dishes at Narrabri**

#### **QST AUG 2005 Annual Antenna Issue**

- Dual band wire ant. For 17 and 12 m
- Short dipole for 160 m
- 2 m antenna designed as a WX vane

- The Dr. is in Q & A
- Hands on radio  
Experiment # 31 The multi vibrator
- Hints and kinks.

Review Yaesu FT DX 9000 HF and 6 m.

Microwave: make your own Horn antenna from sheet brass



**“The Dish” at Parkes**

**CLUB INFORMATION**

**REPEATERS**

VK3RBA	(Voice)	146.750	Mt Buninyong
VK3RWA	(Voice)	147.100	Mt Ben Nevis
VK3RPC	(Packet)	144.750	Mt
Warrenheip			
VK3RBU	(Voice)	438.475	

**BEACON**

VK3RMB		438.475	Mt Buninyong
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**IRLP** Node 6310 using VK3RWAS

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

**CLUB NET** VK3BML 3.610+/- QRM Thursday Nights at 8 pm E.S.T (Summer & Winter)

**WIA Broadcast and Club Call Back.** Sunday's 11.30 via VK3RWA (IRLP Node 6310)

**NEWS ITEMS Send to Harry VK3KGL**

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

**Annual Subscription & Club Register**

**B.A.R.G. Inc.**

(Ballarat Amateur Radio Group. Inc #6953T)

ABN 44 247 200 143

**Annual Subscription & Club Register Check**

**Date:** \_\_\_\_\_

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**Phone Work** \_\_\_\_\_ **Y/N**

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**Subscription Paid \$** \_\_\_\_\_

**MOB** \_\_\_\_\_ **Y/N**

If the Club decides to publish a Club Directory, are you willing to have the above information included? Yes/No. If there is any information you want excluded; please circle Yes/No (Y/N) on each entry above.

**Signature**



## BARG Calendar

Month:	Construction Group:	Committee Meeting:	Dining Night:	General Meeting:	Notes:
October	Mon 10 <sup>th</sup> 7:30pm	Wed 19 <sup>th</sup> 7:30pm	Fri 21 <sup>st</sup> 6:30pm	Fri 28 <sup>th</sup> 7:30pm	Sat 29 <sup>th</sup> Oct Ballarat Airport Open Day
November	Mon 14 <sup>th</sup> 7:30pm	Wed 16 <sup>th</sup> 7:30pm	Fri 18 <sup>th</sup> 6:30pm	Fri 25 <sup>th</sup> 7:30pm	Sun 6 <sup>th</sup> Nov Hamvention @ Ballarat Showgrounds
December	Mon 12 <sup>th</sup> 7:30pm	Wed 21 <sup>st</sup> 7:30pm	Fri 23 <sup>rd</sup> 6:30pm <b>XMAS BBQ</b>	<b>No General Meeting</b>	
January	<b>No Construction Night</b>	Wed 18 <sup>th</sup> 7:30pm	Fri 21 <sup>st</sup> 6:30pm	Fri 27 <sup>th</sup> 7:30pm	

### MOWING ROSTER – AGAIN

It is that time again when we publish the mowing roster for the Club rooms. The mower and fuel are at the rooms, but when the fuel is getting low please contact the committee to get a refill. Any new “mowers” will be fitted in.

**Oct. VK3DMK & VK3FGC**

**Nov VK3AXH & VK3TJW**

**Dec. VK3NBV & VK3VBA**

**Jan VK3CMC & VK3IDL**

**Feb. VK3DMK & VK3FGC**

**Mar. VK3AXH & VK3TJW**

### ANNUAL SUBS.

At the AGM the subs for the year 2005/6 were fixed at the same level as last year namely \$30.00

Many members have paid in advance so they will be pleased that they do not have to pay any extra.

Remember that all fees have to be paid by the end of October to retain your membership.

## Ballarat Amateur Radio Group Inc

Minutes of General Meeting September 30 2005  
Meeting opened by president David @ 1931 hrs  
Welcome to Brian Vk3kqb now a resident in Wendouree.

Apologies. Vk3bnc. Vk3kgl. Vk3cfh. Vk3hrz, Vk3det, Vk3pal,

Minutes of August meeting as circulated. Moved by Vk3vba /Vk3dcs. Carried.

Correspondence In City of Ballarat a/c. Letter of appreciation Norm deAngri.QST.

Out. Meynderts Family. Powercor.

Moved that correspondence be accepted. Vk3nbv/Vk3bvi.

Committee Report. President David e-mail to JOTA expressing the committies approval to take part in the coming Jota 15/16 October. Vk3axh. Vk3se. Vk3vba. Vk3adx. Vk3nbv. Indicated their support.

Airport open day on Saturday 29 Oct. All Clubs and businesses invited to display their interests. BARG to take part. Vk3axh. V k3nbv. Vk3dcs, Vk3cmc  
Vk3fgc. Vk3ash.  
Indicated their support.

Hamvention Report. Ian Vk3axh reported that 16 have booked tables, Extra door prizes. Homebrew comp finalized. 3 Categories @ \$50.00 prize.  
Strickly no trading before 1000 hrs. Members asked to be vigilant re security, Charlie Vk3dcs and John Vk3aig to run BARG table.

WIA assessor program. Craig Vk3 cmc gave a comprehensive report on the present state. Foundation Licence holders to have four letters in their call sign, 100 assessors appointed around Australia. Strict conduct required. Police checks etc.

John Vk3aig reported on 3 computers donated by Powercor.

General Business. Steve Vk3se questioned why the life members names have been dropped from the front of newsletter. Club to reintroduce practice.

Dining Night. Next get together Brothers in Arms Minerdom 21 October.

Get together prior to Hamvention La Porchettas. 5 Nov.

Construction. Ian Vk3axh reported that the Antenna kits arrived and will make start next meeting. John Vk3aig has 160 m vertical in operation.

Technical. Ian Vk3axh reported that new repeater Vk3rwa now ready for testing.  
k3ur.

Amenities, Doug Vk3vba reported new fence Clubrooms.

Financial, Statement and a/cs passed. Moved Vk3fgc/axh Carried.

Gordon Vk3fgc to arrange copies on new 2006 Callbook.

Meeting closed at 2020 hrs.

President David welcomed Guest Speaker. Mark Schmidt, Neighborhood Cable.

# Diners and Winners!

Well its nice to be back to our dining group and just catch up. A bit like old times seeing Brian KQB and Beryl in our midst and also great to see Merv ADX and Betty enjoying the meal at the Ballarat basketball restaurant for the first time.

Two rather unusual absentees were Ian and Kathy who had another engagement for the evening as did Ian and Debbie.

Next month will be the last dinner for the year and we would love to see others who may like to join in just before Christmas? This will be at the Pancake Kitchen at the usual time of 6.30 pm on Friday 18<sup>th</sup>. As the group is expanding could you please book with either David, UR or Bob BNC . If you're a regular booking then don't worry unless unfortunately you can't make it.

The December get-together will be the usual BBQ at the club rooms and I'm sure President David will let us know more about this. Bob BNC.

**RADAR Club members (Rockhampton Radio Club)**  
BNC and KGL usual Friday morning Coffee Meeting  
in beautiful surroundings.

RADAR Club Website: <http://radarclub.tripod.com/>



Bill, VK4FGN, Leigh, VK4YLW, Merv, VK4DV And Les, VK4QI



John, VK4KDN and visitor Len, VK3BGM



Les, VK4QI and Bob, VK3BNC relaxing over a cup of coffee



Les, VK4QI in his radio shack