



REPEATERS VK3RGV 2m & 70cm

VK3RGV B D-Star

2m IRLP Node # 6992

CLUB CALL SIGN VK3SOL

Repeater Frequencies: 6 meters: ( 53.725Mhz Out, 52.725 In. 123Hz tone)

2 meters ( 146.650Mhz Out, 146.050Mhz In 123Hz tone)

70cm ( 439.775Mhz Out, 434.775Mhz In 123Hz tone)

D-Star (438.200Mhz Out, 432.800Mhz In 123Hz tone)

President:- Peter Rentsch

Vice President:- Phil Dwyer

Secretary:- Darren Glasson

Treasurer:- Greg Keegan

VK3FPSR

VK3ELV

VK3HEN

VK3POP

**WEBSITE: WWW.SADARC.ORG**

## **Presidents Report May 2013.**

A great attendance at our last meeting, it was good to see so many there. A working bee was held first to do some tidying up and to look at the antennas on the building. As we were not able at the time to hire a Cherry Picker at the right price the antenna inspection was delayed. Greg, VK3POP has now been able to get a Cherry Picker at the right price and the antenna inspection and repair will now go ahead at a date to be organised. This was followed by a BBQ and then our meeting with a Mark Tell from the ACMA being our guest speaker. Thank you Mark for a great presentation that I think all those that were present got something out of. I personally found out a significant amount of information from Mark that affects me in a positive way. The old urban myth of what an F Call holder is allowed and not allowed to do runs rife within the Amateur fraternity, Mark cleared up all those myths for me and yes, they were myths. Thank you Mark for an excellent presentation and giving up your time to visit the Club.

The other well attended event for the month was our annual BBQ / Car Boot Sale held at Nagambie Weir. This was great day with a good attendance from the Midland Club and also our Club. A number of visitors from Melbourne and other places were also in attendance and we could not have asked for a better weather. A great presentation from Kevin VK3CKC (story and photo later on in the Newsletter) was given to us all on the construction of his tricycle and the end result of being able to tricycle mobile on the Bendigo to Axedale Rail Trail when it is be opened shortly. Thank you to all those who attended.

Some members of the Club are keen to operate in the field. For this to occur there is obviously a need for portable antennas. Consequently there has been some interest shown in purchasing some Squid

Poles for portable antenna use. Rodney received a quote from Haverfords in Sydney for purchasing of the Squid Poles. A 10 metre pole would be \$45.00 and the 7 metre would be \$34.00. If you are interested in purchasing one or more can you please let me know at the June meeting and we will go ahead and order a box if there are sufficient orders. These prices are based on us purchasing a box of 12.

This then leads me onto a suggestion that the Club set up a station at the Rotary Club of Cobram's Swap Meet/ Show' n Shine. The Vintage Radio Club already takes two tables undercover to display their items and I am suggesting that we share the space with the Vintage Radio Club (if they are in agreement ) The event is on Sunday 11<sup>th</sup> August at the Cobram Showgrounds. We would need a number of members that are willing to participate during the day to operate under the Clubs Call sign. Can you please give this some thought as I will raise the issue during general business at the next meeting and open it up for discussion. It is a great way of promoting Amateur Radio with minimal expense

At our next meeting we will have Felix, VK3FAR as our guest speaker. Felix is a very keen Amateur Satellite operator. His talk will cover Space Communication and Amateur Satellites. A history of Amateur Satellites and AMSATS history as well as operating hints and getting started in Amateur Satellites.

So, please come along and support your Club at the next meeting and listen to a great guest speaker on a topic that I daresay not too many of know much about.

That's it for this month and I look forward to seeing as many of you as possible at the next meeting.

Peter – VK3FPSR  
President – SADARC

## Minutes of SADARC 4<sup>th</sup> May

Meeting opened 1300

Present

VK3fjhm,vk3fbng,vk3eb,vk3pgk,vk3bph,vk3atx,vk3kby,vk3ug,vk3qw,vk3chv,vk3ahtBill Crocker (SWL),vk3faln,vk3xmt,vk3gmv,vk3dp,vk3cop,vk3hen.

Apologies,

Vk3hbw,vk3pxj,vk3plw,vk3vce,vk3ao,vk3elv,vk3jnc.

Minutes accepted from last month.

Correspondence out,

Letter of sympathy sent to Gwen Dobson.

QSL cards sent to various people.

General business,

Greg to check on venue for Xmas break up.

Quote back on Insurance for equipment on Mt Wombat but will need to query a couple of things.

A list of equipment to be made up if you have any of the clubs equipment please let us know.  
A loan book will be made up to record equipment loaned out.  
Working bee to remove the beam has been put on hold as price of cherry picker was too expensive, another has been found at much better price.  
Dstar radio will cost \$55 for a quote from ICOM on repair costs.  
Peter Freeman can get squid poles at good price if he buys 20 or more please contact if want one of these.  
Vk3far to come to next meeting to talk on Sat Communications.  
Thanks to all the people who attended the BBQ at Nagambie.  
Vk3fbng to find out if any scout groups would be interested in JOTA.  
Discounts at Jaycar will finish soon.  
Steve will put an update on the website about the Xmas get-together

Technical report,  
Rodney gave a report on the gear on Mt Wombat. Phil might check 6 mtr cavaties.70cm repeater has new antenna and performing well.2 mtr performing well. Need to update list of equipment on the hill.

Meeting closed 14.00  
VK3hen,Darren

## **TECHNICAL COMMITTEE REPORT – May 2013** (18/5/2013)

### **70cm D-Star Repeater**

The repeater is not operational at this stage and it has been out of service for around six months. It has been sent to Icom for a quote on repair. We have not had a report from Icom as yet.

### **70cm Analogue Repeater**

The repeater is working well with between 2 and 3 dB improvement in signals with the newly installed antenna.

### **2 metre Analogue Repeater**

The two metre repeater continues to provide good performance throughout the club's area, this being the prime communications medium for club members. However, give the other repeaters a try too, as both the 6 metre and 70 cm repeaters have been upgraded recently.

### **6 metre Analogue Repeater**

The new repeater has improved the transmitted signal by around 4 to 5 dB over the original repeater signals back in early 2012. The receiver has at least a 4 to 5 dB improvement in its sensitivity too, and this has improved by a further 4 or 5 db when the refurbished receiver cavities were installed earlier this month. The cavities taken out of service when examined were found to have damaged tuning

capacitors in them. It doesn't take much to upset the performance of equipment particularly in the likes of cavities which are extremely high **Q** devices where extremely high RF voltages occur.

The improvement from when the original repeater was installed is significant and users are enjoying the improved service and will enjoy even better performance when the additional antenna is installed. The new antenna has been ordered and delivery should occur shortly. Once we have it the mounting brackets will be made.

### **Miscellaneous**

The remainder of the central hut mast is to be removed from inside the hut. A general clean up around the site and checking of coaxial and 12 volt DC cables is to take place. The cold standby power supply is being built.

The antenna systems at the meeting hall are to be checked. The beam we know is faulty – you only have to observe it in the wind to know that it is faulty. Due to the price of hiring a cherry picker being quite high, the antenna checking did not take place prior to the last meeting. However, Greg VK3POP has been able to organise a cherry picker for a very attractive fee and this work will take place at a mutually convenient time.

### **A request**

Phil VK3ELV installed a digital signal processor (DSP) into the six metre repeater some time back. This has proved to dramatically improve the quality of the audio signal we get out of the repeater, as it reduces significantly noise on weak signals. The query we have is would you like these DSP devices fitted to the 70 cm and 2 m analog repeaters? Give us an answer at the next meeting, please. In the next month or so Phil may be in a position to purchase some of these, possibly at a better price than what is quoted lower in this report.

### **When**

It is nearing winter so little work will take place on Mt Wombat until spring time. The views in suitable weather from Mt Wombat are great, and if you are having a day out why not go up there. However, in winter it is very cold, wet and can be windy, which is unsuitable weather for antenna work in particular. Any major work will be undertaken when the weather is more conducive to our activities. We will invite members to assist us nearer the time.

**Below is a précis of the work projected to be done into the future.** The whole site is gradually being upgraded to provide better service to our members.

- Checking all the lattice mast cables and connections – some are to be shortened. (A general tidy up)
- Install another folded dipole to use with the current six metre antenna on the main mast. (This will improve the six metre repeater performance by 3 dB. The antenna capture area will then be similar to the two metre antenna. )

- Repair remainder of lightning damage in hut. (Safety, but not urgent)
- Tidy and label all DC cables and Coaxial Cables in the hut. (Easier to work in the hut)
- Possibly purchase and install a DSP module in the two metre repeater, cost around \$160. (It will give better quality audio with weak input signals) See above
- Possibly purchase and install a DSP module in the 70 cm analog repeater, cost around \$160. (It will give better quality audio with weak input signals) See above
- Build a 20 amp cold stand-by power supply. (Back up should main supply fail)
- Return D-Star to service. See notes above.
- General tidy up around the site. Check door locks. Complete an inventory of equipment and spares.
- Check the antenna mast and antennas at the club station. (Some concern about the safety of the wooden mast and the performance of some antennas. See above.)
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Rodney Champness VK3UG on behalf of the technical committee, Ray VK3RW, Phil VK3ELV and Geoff VK3ZNA.

## BATTERY CAPACITY

Greetings,

A number of us use lead acid batteries or one sort or another to power amateur equipment and other devices. I recently purchased a semi sealed deep cycle lead acid battery. I like to be sure that I am getting what I pay for, so I made sure that the battery was fully charged with a conventional charger and a little while later with a 3 stage smart charger.

In between each charge I discharged the battery with a tester I made up that will discharge the battery connected at any current between 0.8 amps and 12 amps as set, and when the voltage reaches 11 volts the whole device shuts down so the battery is not discharged below what is classed as flat. I have a quartz analog clock attached to the device so the amps by the time calculation will give me the useable AHC of the battery, to within a few percent of dead flat. I discharged the battery at the 20 hour rate and found that its capacity was around 60% of the stated capacity. This battery had been in stock for some time so this may explain this low AHC percentage, although I am beginning to doubt that. I returned it as I do want the stated capacity to run my equipment.

I got another new battery which had a claimed capacity of 120 AHC at the 20 hour rate. This gave me an AHC of 72 amp hours when discharged to 11 volts at the 20 hour rate, after having been charged correctly. This was returned and grudgingly I was given my money back. I visited a couple more battery suppliers one said he expected around 80% of the listed AHC capacity the other one estimated around 50 to 60% of stated capacity. They seemed to believe that this was normal, I don't, or if it is then we have deceptive claims being made about the batteries.

So I would suggest anyone who is obtaining a battery to run their equipment needs to thoroughly check that they are getting what is claimed on the specification plate on the battery. The batteries may meet the cranking amps but they are certainly not meeting the claimed capacity. Maybe the ACCC might look into this, certainly it could be claimed that the batteries are not fit for the purpose they were bought for as they do not meet their specifications.

Best Regards,

Rodney Champness VK3UG

### **Amateur Radio Rides to the Axedale Market.**

An amateur-radio-equipped purpose-built trike will be on the O'Keefe Rail Trail, between Hickey Road and the Axedale Market on May 25th, between 10 am and 2 pm.

Contacts with amateur radio operators around Australia will be made during the ride. Other O'Keefe Rail Trail riders are welcome to join in the fun!

An operating radio communications station will be set up at the market where you will be able to listen in, and even talk to the trike as it rolls along the O'Keefe Rail Trail. Progress of the trike will be displayed real-time on a laptop computer map.

Axedale Our Town-Our Future will be launching the new Axedale Community Plan on the day, and you will also have the chance to visit the Friends of the Bendigo-Kilmore Rail Trail information stand.



**Kevin, VK3CKC tries out his Tricycle Mobile.**

Thanks to all who contributed, see you all next month: Editor, Les VK3TEX.