



REPEATERS VK3RGV 2m & 70cm  
VK3RGV B D-Star  
2m IRLP Node # 6992  
CLUB CALL SIGN VK3SOL

President:- Peter Rentsch  
Vice President:- Phil Dwyer  
Secretary:- Darren Glasson  
Treasurer:- Greg Keegan

VK3FPSR  
VK3ELV  
VK3HEN  
VK3PXA

### **Presidents Report January 2013.**

Welcome to 2013. Karen and I wish you all a very happy New Year. We hope your Christmas and New Year celebrations were an opportunity to spend time with family and plus fit in a little time for Radio.

As everybody would be aware the Murray QUAD that we were going to assist with the Radio Communications in December was postponed until a later date due to lack of entries. This is still planned to go ahead and the most likely date at this time is the 22<sup>nd</sup> February, 2104. I understand that this date is a long way in advance but the organising committee feel that it is better to have a long lead up to the event to promote it properly. The timing also fits in with other similar style events that those who are interested in participate in. I have not indicated to the committee out commitment one way or the other and this will need to be discussed in the near future.

During the month of December Rod VK3UG and his team went up to Mt Wombat and carried out some work on the hut. Their main task for the day was the removal of the centre pole from the hut. This was accomplished so the next stage of our projects has been carried out. I will let Rod explain in more detail in his report but, another job well done by a group of dedicated volunteers. Thanks for your work.

The Website is currently being revamped by Steve VK3DAG and he is simplifying it and making it more intuitive whilst bringing it up to date. Thanks for carrying out this task Steve, it is a huge job and very time consuming.

I will be in Melbourne on the 2<sup>nd</sup> February, the date of our next meeting attending my step daughter's wedding ( I know – get my priorities right) so Phil VK3EMV will be in the chair. Thank you Phil in advance for covering for me.

Prior to the March meeting I would like to have an Executive Meeting commencing at 10.30am followed by a BBQ Lunch for all at 11.30am and then our General meeting at our normal time of 1.00pm. You are all very welcome to come along to the BBQ and get to know your fellow members a little better. They are a good opportunity to socialise with other

members. In April we will also be having our usual meeting at Mooroopna with a guest speaker and also in April we will have our usual combined gathering at Goulburn Weir with the Midland Amateur Radio Club.

I hope you have a good meeting on the 2<sup>nd</sup> February and I look forward to seeing you in March.

Peter – VK3FPSR  
President – SADARC

## Minutes for SADARC

Sat Nov 3<sup>rd</sup>, 2012

Meeting open 1310 hrs at the Mooroopna club rooms

Present/ vk3mac,vk3hbw,vk3faln,vk3elv,vk3fbng,vk3nmk (visitor Mike),vk3chv,vk3bph,vk3pxj,vk3cop,vk3tjsvk3fpsr,vk3hen

Apologies/vk3vce, vk3dag, vk3ug, vk3bg

Previous Minutes, Corrections vk3bph/vk3pxj not listed as apologies

Moved as correct/1st vk3faln

2nd vk3fbng

Correspondence,

Inward working with children check for Terrence.h/EMDRC news letter

Outward nil

Treasures report,

Acma license paid

Technical report,

UHF CB mast to be repositioned on the hut at Mt Wombat .Still need to figure out the best way to remove from Existing position and install on new position on one of the 4 new masts. Also we need to send an Email to members to see who will be able to assist at Mt Wombat.

General Business:

Ron has been to Coats hire to get prices on the hire of a crane to remove antennas from wooden pole.

Working bee needed to be organized for the radio room and could be done at same time.

It was proposed that the beam be fixed if possible; proposed dates for these are 12th Jan or 19th Jan.

A motion was raised that a new BBQ be purchased to the value of \$150 1st vk3faln 2nd vk3tjs Greg will look into the BBQ.

Vk3tjs thought the dstar repeater might be unplugged from the internet. Jack will contact Toby to find out more.

Vk3fbng gave a brief talk on the meeting that Bruce, Peter and Darren had with Tim about what was required from the club for the quad.

Also a new filing cabinet might need to be purchased for the club. Greg will look into prices and get back with more Information on this.

RSL club booked for Xmas breakup (Sun 2nd Dec) 12.30 start all welcome.

A letter will need to be sent to Toby telling him the club might not pay the bills for the Dstar internet connection Suitable guest speakers required for next year keep an eye out for any possibilities.

Meeting closed 1410 hrs

Vk3hen, Darren.

## **TECHNICAL COMMITTEE REPORT – January 2013**

Over the last 12 months quite a bit of work has been done on the Mt Wombat Repeater site and much of it has been previously described in the annual report of the Technical Committee at the Annual General meeting in October. I would recommend that you read this to see where a number of the projects were started prior to 2012. Note the Technical committee since the AGM has been given the task of looking after the antenna systems at the club rooms.

The work done in 2012 was as follows:-

A large working bee was held on 18<sup>th</sup> February to reinstall the refurbished two metre Polar antenna, put up a S/H but good six metre folded dipole obtained from Greg VK3ZKV and to shift a few other antennas around either on the new hut masts or the main lattice mast. Ian VK3CHV and Danny VK3FDTH worked on the main mast refitting the Polar antenna to the top of the mast and fitted the

six metre dipole off the side of the mast. Not an easy task. Ray VK3RW and Rodney VK3UG altered antennas on the hut, with the six metre standby antenna and the 70 cm FM repeater antenna being put on the same pole. Phil VK3ELV worked on the six metre repeater making sure it was operating properly and fitting the digital signal processing (DSP) module to it. Greg VK3ZKV tested the various antennas to make sure that all were working correctly.

A First Aid kit and various safety items including hard hats and safety vests obtained by Ron VK3COP were brought to the site and are kept on site for use when members are working there.

Much of the bracken fern was slashed and got rid of, with access to the hut improved as well as a reducing the fire risk to our site. The inside of the hut was also cleaned. There were several other club members in attendance assisting, Steve VK3DAG and Clint VK3CAF and Daryl VK3KL. This was a very successful working bee.

In late March Rodney gained access to the shire building from which we believed interference was being radiated into the six metre repeater. The CFA equipment power supply was found to be the source. On the 16<sup>th</sup> April Ray VK3RW and Rodney VK3UG went to Mt Wombat with Warren Brown of the CFA to look at ways of overcoming the interference. Two clamp-on ferrite lead chokes were fitted to the leads radiating the interference and its level was reduced by greater than 10 dB – enough to mean the repeater is now interference free, even if the new repeater receiver is installed later on. Trevor VK3VG did some calculations on the electromagnetic radiation from our services, and the results show that no transmitter radiates signals in excess of those considered safe. However, if the standby six metre antenna is used it would not be difficult to climb near it and be in the zone where radiation would exceed that considered safe. However, this is expected to be a rare occurrence.

In early December Bill Crocker and Rodney VK3UG went to Mt wombat to assess the best method of removing the central mast on the hut. Bill suggested that the 15<sup>th</sup> December would be a suitable date before Christmas to do this work and this would give him time to assemble a suitable portable structure to remove the mast safely. The weather unfortunately turned nasty for that date but the forecast for the 16<sup>th</sup> looked good so a team consisting of Bill Crocker, Max Mathey (CB station licensee), Steve VK3DAG, Ray VK3RW, Phil VK3ELV and Rodney VK3UG arrived on the mountain mid morning. However, the weather turned nasty and although the dismantling frame was largely in position, rain and fog came in which stopped any further work. We were close to deciding that it was too dangerous to continue, but decided to have lunch and reassess the situation afterwards. The weather cleared and the ropes etc dried out and it was decided to continue with this rather delicate work. With all hands to the task in hand the central mast was steadied, then cut off at waist height and gently lowered. The UHF CB antenna was removed with no damage to it or the LDF4-50 coaxial cable. All of the scaffolding was removed and the second part of working bee took place.

The UHF CB repeater had been out of commission for a couple of weeks so Ray and Phil checked the repeater and found a loose connection which was the cause of the trouble.

The two remaining 4 metre antenna masts were installed onto the top of the hut. On one of these the UHF CB repeater antenna was placed after some minor repairs were done around the connector

at the base of the antenna. The antenna cable was able to be shortened and redressed into the hut and according to Max the performance is slightly improved, which was expected. Access to the antennas on the hut is now no more than a two man job and can be done safely at ground level.

The day before we went to Mt Wombat, the D-Starr repeater was reported to be off air and hadn't been on air for several weeks. Neither Phil nor Ray was able to get the repeater working. It would seem Toby VK3PNF is unaware of the failure of the repeater as he is the person who would normally maintain it.

Towards the end of the day we were treated to an impromptu yarn spinning session by Bill Crocker (similar in style to Tammy Muir on the ABC breakfast show on 97.7 MHz), which brought to an end a successful but full on day of work on the mountain. For those who don't know Bill well will be unaware of his entertainment skills, such as yarn spinning and music, as well as his many technical skills. We are fortunate to have such a person as Bill in our club, and we certainly appreciate his expertise to safely remove the central mast from the hut.

A folder with EMR figures, coverage maps, some circuits and log sheets was left on the site to make work easier for working bee participants.

Ray has not been given the modem for the APRS repeater. When he is given the modem he can finalise the conversion of the repeater. There appears to be little interest in APRS so unless there is something to report nothing will appear in succeeding reports.

The analog, 70cm, 2mx and 6mx repeaters are all functioning well. All we need now is for members to use them more regularly.

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There are a number of projects to be worked on in the future and members may have ideas how some of these projects can be effectively done. The technical committee isn't the font of all knowledge. Members may have ideas on other things that may be desirable to do up on the mountain and what they can help with.

- Installing the heavy duty 70 cm repeater antenna onto a hut mast and commissioning it. (Antenna currently at VK3UG's) **(Give the repeater antenna system more gain, hence better range)** Assess whether some improvement to the 70cm repeater – power and sensitivity - are practical at this stage to give it better range.
- Checking all the lattice mast cables and connections – some are to be shortened. **(A general tidy up)**
- Install and trial the upgraded 6 metre repeater. This is being done by Phil VK3ELV at his QTH. Expected improvement is around 4 dB on transmit and at least 4 dB for the receiver, and if an additional folded dipole is purchased and added to the antenna the total improvement will be around 7 dB. (The cost of the antenna is around \$700.) **(Better performance in weaker areas, and will be better than two metres as six metres 'bends' around corners better)**

- 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)
- 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)
- General tidy up around the site. (better access to hut and less likelihood of fire damage)
- Check the batteries. (Need a charge/discharge cycle to assess capacity)
- 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)

The likely costs for all of this new proposed work would be around \$1100. The six metre antenna and harness \$700, two DSP modules @ \$160 each, plus some miscellaneous coax connectors and other hardware. We do need to factor into our budget the replacement of the two 12 volt batteries within a year or so. These costs are all the likely capital costs for some time with the exception of replacement batteries.

The technical committee appreciates the work that other members have done to make our job so much easier. As can be seen there has been a lot of work done on site over the last 12 months. If all the above tasks can be done and approval given for the items listed to purchase, the club will have a very good repeater site which we will be able to use even more effectively. Our repeaters are one of the best ways of keeping in touch with each other.

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**STOP PRESS:** On the 2<sup>nd</sup> of January Phil VK3ELV (with his wife Liz alongside him to make sure all was done safely) journeyed to Mt Wombat to install the new 6 metre repeater that Phil has been working on for several months. The repeater has an output of 50 watts compared to 20 watts from the current one, and the receiver also has at least 4 dB more sensitivity and very good overload characteristics.

All should have gone well but it didn't. The repeater lived up to its designed capabilities but the transmit cavities on the output of the repeater transmitter did not. With the existing repeater 12 watts is obtained out of the cavities but this only increased to 16 watts with 50 watts input. Therefore there are problems with the transmit cavities. Exactly what the problems are we don't know for sure. Before long one or both of the transmit cavities will be looked at and we believe that the problem will be found and soon corrected. We have spare unconverted cavities and one or two of these will be converted so that they can be swapped for those with the problems. This way the repeater will not be out of service for more than a few hours. Once this problem is solved and one or two other projects to do with this repeater are finished this repeater will be working as well as we know it can - we will have a repeater that is equal to the best in Australia. We appreciate any support and interest members show towards this 6 metre repeater project as a number of innovative ideas are being tried and are proving successful.

Rodney VK3UG for the technical committee consisting of Ray VK3RW, Phil VK3ELV, Geoff VK3ZNA and Rodney VK3UG.



Q: How many amateurs does it take to change an antenna? A: 4: One to climb the ladder and do the work, one to hold and steady the ladder and two to argue where best to put the antenna for best coverage!!



“To the right a little bit I said!! And don’t drop that spanner!!”



“ Good job everyone, Time for a Cuppa!”

Thanks everyone for your continued support, Please send me more material for the newsletter  
If you have anything to contribute, remember it's the members who make the newsletter, I  
just put it together! Hope everyone had a good Christmas and a safe New Year.  
See everyone at the next club meeting in February.  
Les, VK3TEX. Newsletter Editor.