



Founded 1979 Incorporation No A6677 P.O. Box 692, Shepparton 3632

VK3RGV repeaters and transmitter operating frequencies

- 53.725MHz (1 Meg offset), **Operational.**
- 146.65MHz (600 kHz offset), **Off-air (being refurbished).**
- 438.2MHz (D-Star) **Off-air (to be re-installed).**
- 438.650 (7 MHz offset and 91.5 Hz tone access), **Operational.**
- 439.775MHz (5 MHz offset), **Off-air (to be refurbished).**

Access to most of the analogue repeaters is by sub-audible 123 Hz tone or noise mute (less sensitive). Club Network informal on air get togethers - Wednesday evenings. All welcome. Club call sign VK3SOL:-
2mx repeater 8.00pm (**On 146.850 MHz at the moment**), 3.63 MHz \pm interference 8.30pm.
Meetings are held at 1 pm on the first Saturday of the month (except January when no meeting occurs) at the Mooroopna Scout/Guide Hall off Echuca Road, Mooroopna. Variations in these times, days and location are normally notified in the preceding newsletter.

Website – www.sadarc.org Face book - www.facebook.com/sadarc.org Info for page contact Denny on denny3782@gmail.com

The local vintage radio club has a get together at 11.00am of a Sunday on the 2 metre repeater. Many of their club members are members of SADARC too, so join in for a chat.

The following repeaters do not belong to our club but provide good signals for many members.

Mount Major VK3RDU repeaters and TX operating frequencies, 146.850 MHz and 439.875 MHz

UHF CB Repeater Mt Wombat Channels 3- 33

DISCLAIMER. No guarantee is given as to the accuracy of information in this newsletter. Warning: - There is a danger of electrocution or injury when working on electrical/radio gear or working at heights doing antenna work. You do so at your own risk.

President:- Peter Rentsch	VK3FPSR	pages.cobram@bigpond.com
Secretary:- Andy Ashley	VK3AJA	andyashley@icloud.com
Vice-President:- Barrie Halliday	VK3KBY	
Treasurer & Webmaster:- Graeme Martin ,	VK3FCVT	biftek@gmail.com
Membership Sec: - Pat O'Shannessy	VK3OV	
Station Manager: - Vacant		Publicity Officer: - Vacant
Communications Managers (External Events):- Bruce (VK3PNF) & Darren (VK3HEN) Glasson		
Technical Committee: - Phil VK3ELV, Ray VK3RW, Geoff VK3ZNA, Kevin VK3BPH & Rodney VK3UG		
Newsletter:- Rodney VK3UG (Editor) rodlynn6@bigpond.com		Peter & Andy (Printing/ Distribution)

Presidents Report March 2018

Thanks to all those who attended our last meeting. It is very good to see such good attendances at our regular meetings. Thanks to John who acted as Secretary for the day. Our show and tell session consisted of an extended report from Geoff VK3ZNA on the progress of Mt Wombat and what is happening up there. This was followed by Mark who showed us some the work he has done with his 3d Printer and his CNC Machine. Bill followed Mark with another one of his projects that never cease to amaze me.

I hereby tender my resignation as the person responsible for selecting the date for our annual gathering with the BAREC group. This event was traditionally held in med April. The weather in mid-April can be fairly unpredictable so I chose a date in mid March hoping that would be better. Wrong again. So, next year someone else can select the date. Apart from the howling wind the day was very well attended and great time was held by all. Thank you to all those who attended.

Just to keep our thoughts focused on a new venue please keep your ears and eyes alert for any possible venue. The sooner we can get this organised the better so all the awareness we can muster is required.

At our next meeting John VK3KJB will be our guest speaker, so please come along and have a listen. On the topic of Guest Speakers I am trying to get speakers on a broad and varied range of Amateur Radio and Electronic Projects. If you have any ideas about what you would like to know about or topics for a speaker can you please let John VK3KJB know or myself and we will try and source a speaker for you, If we don't know what topics you would like to learn about we can't organise the speakers.

Till next time,

Cheers & 73

Peter – VK3FPSR
President – SADARC

Calendar of Events

April 7th – Regular Meeting at Mooroopna 1.00pm followed by guest speaker John Blackman speaking on “Mainframe Computers in the 60's”

May 5th – Regular Meeting at Mooroopna 1.00pm

June 2nd – BBQ at 11.00 am followed by our regular Meeting

June 9 & 10 – Steam Rally in Echuca – coordinator Bruce VK3PNG

July 7th – Regular Meeting at Mooroopna 1.00pm (note President Peter will be away at GippsTech)

Shepparton and Districts Amateur Radio Club

Minutes of General Meeting held on Saturday 3rd March 2018

Present:-

John VK3KJB, Graeme VK3PGK, Bruce VK3PNG, Rodney VK3UG, Ron VK3COP, John VK3PXJ, Kevin VK3BPH, Huntly VK3ZE, Michael VK3FMAA, Barrie VK3KBY, Dallas VK3EB, Geoff VK3ZNA, Mark VK3KMF, Wayne VK3GMV, Peter VK3FPSR, Terry VK3MAR, Pat VK3OV, Max VK3DSF, Trent, John Stevens, Peter Simpson, Bill Crocker.

Apologies:-

Andy VK3AJA, Neil VK3XNW, Daren VK3HEN, Alan VK3FALN, Alan VK3AO

Minutes of the previous meeting were confirmed as correct Moved Kevin VK3BPH
Seconded Rodney VK3UG Carried.

Business arising from the Minutes:-

None.

Correspondence In and Out:-

A request for interest in participating at the Anderson Mill for "Mills of The Air" at Murchison, Andy VK3AJA to give more details next meeting.

Reports:-

Treasurer:

Move to Bendigo Bank for club account still to be finalised.

Financial report tabled.

Report accepted: Moved Graeme VK3PGK Seconded Michael VK3FMAA. Carried.

Technical:-

Rodney VK3UG gave an update on the Mt Wombat site

He is looking for more history of the repeater after 1981.

Bruce VK3PNG gave an update on the Echuca Steam Rally on the Queen's Birthday weekend 10/11 June. A motion was moved that we attend

Proposed John VK3PXJ Seconded Mark VK3KMF. Carried.

Bruce also gave a heads up for the Murray Classic later in the year.

General Business: -

The meeting was informed of the Passing of Jim Linton VK3PC. Jim has done a huge amount for Amateur Radio in Australia over many Years, his funeral will be held on

Monday March 5th.

A BBQ, boot sale and get together with Bendigo and Castlemaine Radio Clubs at Goulburn Weir on Sunday March 18th starting at 10:30, bring your own food and drink. Proposed John Moyle contest to be located at the Shepparton Lake 17th and 18th March those interested see Andy VK3AJA or Michael VK3FMAA.

A general discussion about finding a new venue for the club as the existing facility has many draw backs. E.g. No secure storage for BBQ, Kitchen is often found untidy
It was moved that a committee be elected to look for a better facility.

It was moved that Mark VK3KMF and Michael VK3FMAA do some research for such a place.

Moved Graham VK3PGK Seconded Mark VK3FMAA Carried.

Newsletter: do we need to have two kinds Paper mailed out and Email one which would be a later more up to date. It was unresolved.

The meeting Closed at 1:35 By President Peter

The meeting had some interesting "Show and Tells"

Editors Rambling's

- Thank you to John VK3KJB for taking over the role of secretary on the 3rd March whilst our secretary was swanning around the Riverina. A job well done John.
- My apologies. I had expected to put an article on HF DXing into the newsletter, but I have mislaid it so until I find it, it won't appear.
- Gradually I'm getting information on the history of our repeater system on top of Mt Wombat. Any information you have (no matter how little) would be appreciated. I do have information from 2009 onwards, but for earlier periods I'd like members who have been involved with the repeater site to provide me with information even if only verbal, but preferably in writing. **Please help.** Some have put up their hand but the more info the better.
- This also applies to the UHF CB repeater. What information can you supply Norma and Max? Whilst not ours we do endeavour to keep it in good working order as we consider it and the 2 mx repeater as essential services in cases of fire or power black outs, etc..
- If you are a member of the club did you realise that Jaycar in Shepparton on the Goulburn Valley Highway to Melbourne will give you a discount of around 10% when your purchase (most items) exceeds \$10 – provided you ask for it and show your current membership card. So if you are not a current member of the club maybe it is time to join. Jaycar is the only general electronics store still in Shepparton since the closing of Dick Smith.
- I would appreciate articles and photos for inclusion in newsletters; after all it is your newsletter.
- The meeting on 3rd March was well attended and the BBQ proved to be a hit with only one downside a number of the snags hit the deck having accidently been knocked off the BBQ. Snoopy (Charlie Brown's dog) missed out on a good feed!!!! (see photos) We all still had enough and thanks

to Bruce VK3PNG for being the BBQ chef. Getting access to the BBQ and the gas bottle proved difficult and our full bottle was found to be empty – not of our doing.

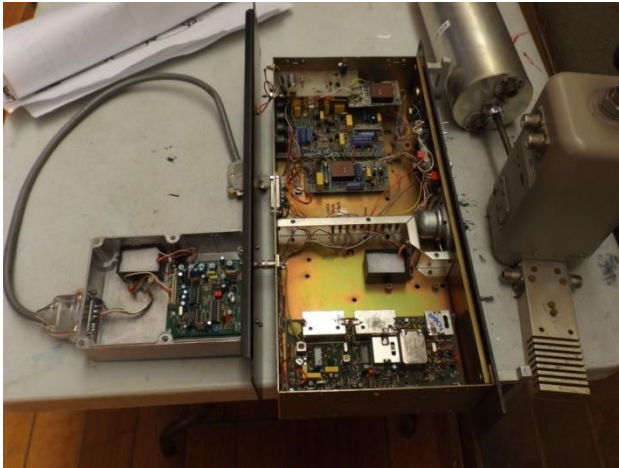
- The show and tell was very informative as detailed below.
- Geoff VK3ZNA showed us the various repeaters that are either being worked on (2 mx) or will be worked on to get our site to be one of the best in Victoria and maybe OZ. (see photos) We can be proud. Geoff also gave a short talk on cavities as many members are unfamiliar with what they do and how they do it. He also talked about the cavity and circulator system being used to accommodate the UHF repeaters, which we have not used up until this time when ARV supplied and fitted it. This system reduces the number of filters and antennas that are needed. An article sometime later will be put together to explain more.
- Mark VK3KMF showed us a large butterfly type tuning capacitor (suit a transmitter or ATU) he made and the reduction gearing system he made with a three dimension printer. Very interesting. The 3 D printer was from Aldi and certainly shows that even low priced printers can do a good job.
- Bill Crocker (no call sign yet), we'd love you to have one Bill, showed us the output of a comb generator he has built which was shown on his spectrum analyser. You may wonder what a comb generator is. In Bill's particular model it is a RF generator that operates on 1 MHz and generates many dozens of harmonics in multiples of 1 MHz, 2, 3, 4,.... up to at least 120 MHz. Bill has worked hard on this to achieve a good result. The spectrum analyser shows what this looks like and you can see it in a photograph attached. These outputs are used in things like Wadley loop receivers and are used to calibrate all sorts of equipment. Bill can tell you more. Note we normally suppress harmonics from our equipment which is the opposite of what the comb generator does. (see photos)
- I hear tell that there is a new 2 mx repeater on 146.975 MHz 123 Hz access and 70cm 438.6 MHz 7 MHz frequency split with 123 Hz tone access. These are located in the Wodonga area, not sure just where. I cannot hear it in Mooroopna, others further East may.
- Bruce VK3PNG is getting things organised for the Queen's Birthday weekend at the Echuca Steam Rally. Any help would be appreciated. The Vintage club is likely to be with us on the site.
- With regret we note the passing of three amateurs Ron Fisher VK3OM, Jim Linton VK3PC and Ken Nisbet VK2KP all of whom contributed much to amateur radio over their lifetimes. Rest in peace gentlemen.



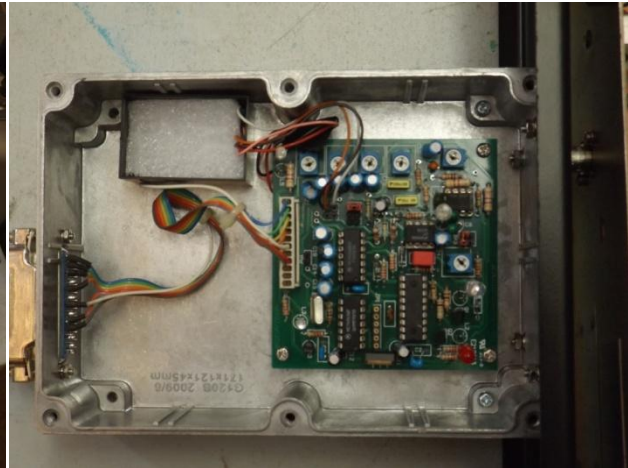
Snoopy's Sausages



Around the BBQ



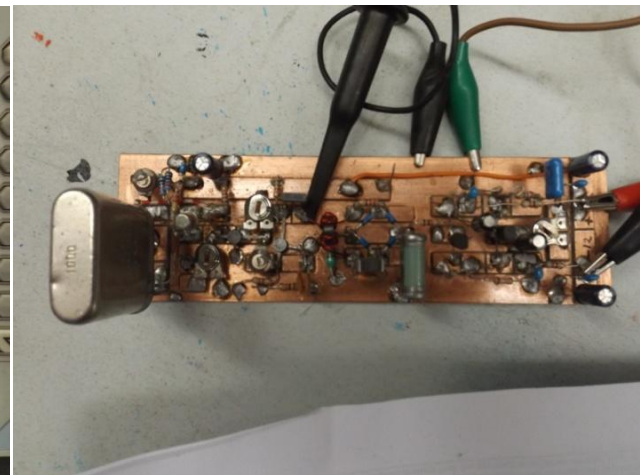
The 2 metre repeater receiver and controller



The VK5DJ controller for the 2 metre repeater



The output of Bill's comb generator shown on the spectrum analyser.



Bill's comb generator

Repeater Information (Tone Access)

More and more repeaters are becoming tone access only (such as the 438.650 repeater on Mt Wombat). A number of repeater users have older rigs which do not have CTCSS tone access facilities (such as me) so to gain access to these repeaters it is necessary to have a tone access board put into your rig. Rigs like Icom IC22S, Kyokuto, Yaesu FT480R, FT780R, FT680R and many others can have tone boards attached so that access to these repeaters is possible.

It could be asked why tone access was installed on an increasing number of repeaters. The answer – Interference problems mostly. With the proliferation of noise sources from myriads of electronic devices it was found that repeaters with noise/carrier muting systems often had the mutes opened with nasty sounding noise, so CTCSS tone access muting systems were introduced to overcome this problem.

On our repeaters up until now, we have had a dual mute system with the normal noise/carrier mute in operation plus the tone access mute. Why both you may ask. As interference will open the repeater system we have set the noise/carrier mutes up at around 1 microvolt so that interference has to be reasonably high to open the mute to cause trouble. However, the tone mute is relatively insensitive to noise so it will not open the repeater and therefore the mute can be set to higher sensitivity and ours are set at around 0.25 microvolt, which means that signals around a tenth of the power can access the repeater using the tone access when compared to sets without the tone access facility. If interference is present when tone access is being used the signal will be full of interference which may obliterate the incoming signal. However, interference is only present some of the time so tone access does work well at minimising problems. Some rigs do not have CTCSS tone facilities so we endeavour to cater for all.

I have tone access fitted to two of my rigs, a 6 mx FT680R and an Icom IC22S. Back in 2014 The Hunter Radio Group developed an add on CTCSS tone access board which can be fitted to most transceivers. The two sub audible tones normally used 91.5 Hz and 123 Hz can be switch selected. The board is 45mm x 30mm and the cost in 2014 was \$18 plus \$6.95 postage. If you are interested in this well made fully assembled board I'd suggest you contact Rodney Prout VK2CN rprout@idl.net.au (information correct April 2014)

Repeater Progress

As has been said in part before, the work on the repeater site over the last couple of years has been very extensive. All of the repeaters that we had operating before the work in the hut was undertaken back late last year have needed a thorough overhaul for a variety of reasons. Whilst the equipment was working fairly well, work was and still is needed to get them up to a better standard than what they were 6 months ago. To the casual listener all may have appeared to be in good order but us more technical types noted things that needed improvement to be compatible with other current or projected services.

We are commencing a new era with our repeaters. We will have our existing repeaters, overhauled and working better or new replacement equipment put in place with cold standby equipment ready to be put in place should a problem arise at the site. So in addition to our repeaters that have been installed for a long time we now have the new 70cm repeater and moves are afoot for the expected reinstallation of the DStar and quite likely DMR or similar and probably some linking to Mt Big Ben and also towards Melbourne. Regrettably, this is all taking more time than expected.

It had been the intention of the Technical Committee to have all repeaters reinstalled and operating before Easter. However, a problem with the ident for the 2 metre repeater has meant we have had to delay reinstallation until after Easter and hopefully before our next meeting on 7th April.

At our next visit to Mt Wombat it is expected that the 2 metre (146.50 MHz) and the 70 cm (439.775 MHz) repeaters will be fully operational and the power supply system will be completed.

The cavities in the diplexer which was used with DStar has been retuned to suit our repeater on 439.775 MHz and with an insertion loss of around 1.5 dB it is expected to outperform the current diplexer.

The DStar will be put onto a new filtering system which already has the new 438.650 MHz repeater connected to it.

For Sale

Hy Gain TH6DX tri band, 20-15-10 metres, beam, \$450.

Contact - Huntly VK3ZE, 03 5831 1630 mob. 0428 311 630

Mil spec (true it comes from a RAAF auction) RG58 cable new and unused.

\$1.00 per metre under 20 metres \$0.80 per metre for lengths 10 metres or greater.

Pirelli RG303 75ohm Teflon same size as 58 \$2.00 per metre

100metre rolls 1mm² PVC insulated copper \$20 ea

Aviation grade 4 core and shield ptfе insulation suit audio or control apps \$1.00 per metre

Contact Barrie VK3KBY 0427 116 101

Free: -

Lengths of twin shielded audio cable, with plastic sheath. Contact Rodney VK3UG 03 5825 1354