



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

VK3RGV repeaters and transmitter operating frequencies

- 53.725MHz (-1 MHz offset), **In Service**
- 146.65MHz (-600 kHz offset), **In Service**
- 438.2MHz (-7 MHz - offset -D-Star), **In Service**
- 438.650MHz (-7 MHz offset and 91.5 Hz tone access only), **In Service**
- 438.900MHz (-7 MHz offset- DMR repeater), **In Service**
- 439.775MHz (-5 MHz offset), **In Service, IRLP (node #6990)**
- VK3RDS, 438.7625 MHz (-7 MHz offset DMR repeater) **Shepparton, pending.**

Access to most analogue repeaters is by sub-audible 123 Hz tone or noise/carrier mute (less sensitive).
 Club informal on air get togethers - Wednesday evenings. All welcome. Club call sign VK3SOL:-
 2mx repeater 8.00pm 146.650 MHz, 3.63 MHz SSB ± interference 8.30pm.
 The vintage radio club have a sked at 11.00am Sunday on the 2 mx repeater.

Meetings occur on the first Saturday of the month from 10 am for informal chats and technical talks. A BBQ follows (a gold coin donation) then the business meeting at 1 pm (except January when no meeting occurs) at Vision Australia, Channel Road (just off the southern end of Archer Street), Shepparton.
 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 the page contact - Denny French on denny3782@gmail.com

Note: Want to get your licence? SADARC has examination assessors, contact the secretary for details.
 The following repeaters do not belong to our club but provide good signals for many members.
Mount Major VK3RDU repeaters, TX operating frequencies, 146.850 MHz and 439.875 MHz
UHF CB Repeater WBT03 Mt Wombat Channels 3- 33, 476.475 MHz, In Service 22/10/2019

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	peter@rentsch.com.au
Secretary: - Andy Ashley	VK3AJA	secretary@sadarc.org
Assistant Secretary:- Geoff Angus	VK3ZNA	
Vice-President: - Barrie Halliday	VK3KBY	
Treasurer: -Andy Ashley	VK3AJA	secretary@sadarc.org
Membership Sec: - Andy Ashley	VK3AJA	"
Webmaster: - Ray Gardner ray@etheira.net	VK3YNV	Publicity Officer: - Vacant
Communications Managers (External Events):- Bruce (VK3PNG) 0427 715 663 & Darren (VK3HEN) Glasson		
Tech. Committee: Geoff VK3ZNA, Ray VK3YNV, Josh Gardner & Rodney VK3UG – with power to co-opt.		
Newsletter: - Rodney VK3UG (Editor) rodlynn6@bigpond.com Peter & Andy (Printing/ Distribution)		

Presidents Report October 2019.

A successful meeting was again held with an excellent attendance being recorded for both the Meeting and the AGM that followed. Thanks to those who make the effort to attend. It's great to see some regular faces as well as some new ones.

As mentioned above this was our AGM and to all those who held positions last a big thankyou and again thank you for those who put their hand up to fulfil a role this year.

We have a very strong team of members who are very willing to support one another in there Amateur Radio endeavours and support and learning at our own pace is what this Club is all about.

In my Annual Report I made a comment that a number of members picked up about the Club "running reasonably well". So, what was I getting at by this comment? Well, there is always room for improvement in the day to day running's of the Club but I was more looking at the big picture of where we are going in the future. The fact that ACMA have relaxed some regulations for F Calls is indicative of what we as a Club need to encompass. Not only for F Calls but for anyone interested in electronics. How do we go about this process? Well let's put our thinking caps on and have a discussion about it at one of our meetings. I will throw the ball back in the Members court and give everybody the responsibility of coming up with an idea to encourage those interested in Electronics but not Amateur Radio to join us.

I personally have been playing much more Radio since the rules changed and have made many contacts on FT8 as well as DMR. Getting my brain around the Codeplugs has not been a walk in the park but I think I am winning. Ah, new challenges, don't we love them!

That's it for this month and I look forward to seeing you all on the 2nd November.

Peter – VK3FPSR
President – SADARC

Calendar

2nd November – 10.00am – doors open for Coffee and a chat. BBQ to follow, the Meeting with discussion and planning for 2020.

7th December – Christmas Lunch – Royal Mail Hotel – MOOROOPNA

1st February 2020 – Welcome back to our regular program

SADARC MEETING October 5th, 2019

At Club rooms Vision Australia Centre

Apologies;

VK3ZE Huntly, Vk3ECH Rob, VK3HEN Darren, VK3BPH Kevin, VK3NQS Colin,

In Attendance was;

VK3AJA Andy, Geoff R, VK3PNG Bruce, VK3TEX Les, VK3FPSR Peter, VK3POP Greg,
VK3UG Rodney, Josh G, VK3KJB John, VK3YNV Ray, VK3YYY Ian, VK3KBY Barrie,

VK3ZYZ Denys, VK3OV Pat, VK3AFD Arthur, VK3ZNA Geoff, VK3FNQS Jason, VK3ASK Peter, VK3FBEN Peter, Stevo, VK3TJS Jacek.

Minutes last meeting; Read by peter, moved by John, second Pat. All in favour

In;

Membership forms.

CB repeater documents just need proof of probate.

Email to Cadets in QLD re Wombat award.

Moved by Bruce, seconded Arthur. All in favour

Reports...

Financial report; held over to AGM, moved by Jason, Geoff. All in favour.

Tech; Ray spoke about new DMR repeater on test. All other equipment is in service.

Moved by Ray, Seconded by Jason. All in favour.

Murray Quad; 30 nov-1 Dec Bruce spoke about what is required, enough members have volunteered, moved by Bruce, second by Les. All in favour.

Hamfest; Peter suggested perhaps more volunteers would be helpful. Some other suggestions were put forward.

Andy presented figures from Hamfest, some suggestions for next year.

Moved by Andy, seconded Geoff. All in favour.

15 Minutes of Fame; Victim this Month is Peter Simpson. Once again, we know one of our members a little better!!

He has nominated, Denys!!!

General Business; Peter mentioned Xmas function, Andy to organise venue Royal Mail Mooroopna.

Rodney mentioned an invitation to Members to go to Markwood Winery presenting Tesla electric car. 26 October this year.

Andy mentioned; amendments on LCD, F calls can now use digital. Along with some other small changes.

The Quiz; this month's Winner was Ray!!

Meeting Closed. 2:25pm

Annual Report for the Shepparton and District Amateur Radio Club –2019.

It is with pleasure that I present the annual report for SADARC for the year 2019 and my 7th.

It is good to see a Club working reasonably well. We have committed members who value the knowledge of others, the friendship and care of others and the general comradery that is evident in our group. We are happy to share our knowledge and encourage all members in the pursuit of their hobby. Thank you to all those that share and contribute to the success of our Club in any way.

This year we have seen some major changes within our Club, the main one being the relocation of our meeting venue. This has worked very well for us and only seems to have brought addition life to the Club. The other change that we have seen is more projects, particularly of the "newer technology" type. It is good to see these projects and I encourage members to pursue these with those who present them.

More changes still have occurred as a direct result of having a venue that is suitable to do so. For the last three meetings Andy has been presenting some training and refresher information for those Members wishing to further their knowledge. This has been well received and I would like to thank Andy for the work he has done with this.

Our November meeting was cancelled due to a clash with the Funeral of our member, John VK3PXJ and as per normal we participated in the Murray QUAD with provision of Comms.

December saw Christmas Lunch held at the Royal Mail Hotel in Mooroopna. It was good to see such a good roll up and enjoy the combined fellowship of the Vintage Radio Club of North East Victoria members company as well. Thank you also to the partners that attended, it's nice to get to know the partners. I think this was about the fourth time that we had combined the two Clubs for our annual Christmas lunch and I think you would all agree that it is great idea and works very well. In essence we all have the similar interest of electronics; it's just that some choose a different facet.

Our February meeting saw a great start to the year with a great roll up to our new venue and a presentation by Ray Gardner on "How to use your Oscilloscope"

March meeting was a Working Bee at Mooroopna to remove all our equipment to storage or to our new venue. After most of the hard work was done we enjoyed some Pizza.

At the April meeting we spent time discussing our new venue and how best use the facility that we have. This has been an evolving process as we can now all see as we now open the doors just prior to 10.00am, have training and social time, a BBQ and a meeting and more social time. It has become a full day for those who wish to attend.

Also in April was our annual gathering with BAREC. I did finally strike it lucky with the weather but attendance from both clubs was well down on other years. Thanks to those who made the effort to attend.

In May we had the usual BBQ followed by brief meeting and then a Car Pool trip for those that wanted to Mt Wombat. It was good to see all the work that has gone on up on the mountain and everything now has a place and there is a place for everything.

June saw us meet again at Vision Australia with a BBQ. We were supposed to have a presentation by Nic VK3BA on the Statewide IRLP Link but Nic was unavailable so Ray filled in for us.

On the June long weekend we again participated in the Echuca Steam Rally with a good attendance of members over the weekend. Radio conditions were very poor and it was difficult to make a contact but even so a good time was had by all. Thanks again Bruce for organising this again.

July meeting was the usual BBQ and a working bee at the new venue to tidy up around our room and start to set up the station at our new location.

Our August meeting saw us commence final planning for the Hamfest with BBQ as the social activity for the day. We also had a Show n Tell of your latest project which was well presented by those that had been busy with projects.

The September meeting saw us put in place final arrangements for the Hamfest preceded by training, a BBQ and a chin wag. Thanks to all those that contributed to the Hamfest in any way.

So, what else has happened during the year? All our repeaters and equipment on Mt Wombat are working properly and is well maintained by the Technical Committee. A special thanks to Ray who has spent many hours working on this equipment and also to Josh who is not on the Technical Committee but contributes to the ongoing work required to keep the gear running.

As mentioned earlier we are now with help of Andy presenting some training prior to each meeting. This has been very well received and if Andy is happy I would like to see this continue.

Some thankyou's need to be made. To the members of the executive and committee, thank you for the work that you have done throughout the year. To those that aren't on any committee but help out as best they can when they can, thank you. To all those members that turn up to the meetings thank you to you as well. It makes it worthwhile putting some effort into the meetings when you know you are going to get some appreciative members along.

I cannot let my Annual Report go by without paying recognition to Max VK3DSF. Max who passed away recently was a Life Member of the club and contributed greatly over the years. Recently and for as long as I have been a Member he has facilitated the 2M net on a Wednesday evening. Max will be missed from the Club and we thank him for his contribution over the years.

We also lost another long term Member with passing of Norma Matthey. Norma was not an Amateur but was a keen CB Operator. Thank you to Norma and Max Matthey for the efforts over the years.

A final thought that we now need to consider. As of the 20th September the ACMA changed some of the Regs particularly concerning F Calls. Foundation licensees can now access all Digital Modes and more importantly can use home brew equipment. This opens up a huge range of possibilities for us to encourage younger people to build their own equipment and integrate to a larger extent the new technologies that the young crave into Amateur Radio.

Respectfully submitted,

Peter Rentsch
VK3FPSR
President SADARC 2018-2019.

SADARC AGM 5 October 2019

Meeting started 2:47 pm Club Rooms Vision Australia Centre Shepparton.

In attendance, same as General meeting.

Apologies; same as general meeting.

Minutes of last AGM moved by Peter, seconded by Jacek. All in favour.

Reports; Presidents read by Peter, second by Peter O. all in favour.

Financial; Moved by Andy, seconded by John. All in favour.

Tech; Same as per monthly meeting.

Membership; moved by Andy, second by Bruce. All in favour.

Newsletter; Moved by Rodney, second by Geoff. All in favour.

Website; Moved by Ray, second by Les. All in favour.

General Business; none.

Greg moved secretary & membership is one role Seconded by Peter. All agreed.

Election of Office bearers;

All positions were vacated.

Nominations were made and positions were filled as follows...

President, Peter. Nominated by Andy, Second by Ray.

Secretary, Andy. nominated by John, seconded by Jacek.

Assistant Secretary, Geoff A. Nominated by Ray, second by Barrie. All in favour.

Treasurer/membership, Andy Nominated by John, Seconded Jacek.

Vice President, Barrie nominated by Geoff, second by Ray. All in favour.

Technical 4 members...

Ray/Geoff/Josh/Rodney nominated by Group. Seconded by John. All in favour.

Newsletter, Rodney Nominated by Andy, second by Peter O. all agreed.

Web Page, Ray Nominated by Andy. Seconded by Arthur. All in favour.

Comms managers, Bruce & Darren, all agreed.

Meeting concluded 3:30 pm



That's how long it was!!! Denys VK3ZYZ demonstrating to Ray VK3KUG some point in his talk on Arduinos at the Vintage Radio Club meeting on 28th September. Members of the Vintage Radio club could see at the end of the talk how the use of Arduinos could be useful in vintage radio.

An Invitation.

From around 10am on the 26th October the **Vintage Radio Club of NE Victoria Inc** will be meeting at Rick Morris's winery (Markwood Estate), 135 Morris Lane, Markwood. Rick VK3VXI has been able to arrange for several **electric cars** to come to his winery for the Vintage Radio club members to hear about and see, including at least one **Tesla**. As well as vintage radio buffs coming, the invite is

extended to **SADARC** members to come as well, as it is believed that this day will be of interest to many. Note - many of our members are members of both clubs.

Rick will have BBQ facilities and hot water available in the aircraft hangar, but you will need to bring your own BBQ food, sandwiches, etc plus a **chair**. In addition if you are a drinker of non preservative containing wines you may want to have a look at what is available.

To get there if coming from Shepparton via Benalla travel up the Hume Highway till you come to the Snow road to the snow fields before reaching Wangaratta. Follow along this road going through Oxley and then Milawa and finally Markwood. Just as you finally go through Markwood you will see a sign to the winery and Morris Lane – it's not a big sign. If you are coming via Wangaratta and come along the Great Alpine Highway I would suggest turning off to the right just after Tarrawingee onto the Markwood Tarrawingee Road which will bring you out onto the Snow road near Morris Lane. There are other roads you can take and your GPS can show you.

Rodney Champness VK3UG President, VRC of NEV Inc

Getting your licence

- Geoff Russell has passed his Foundation Licence exam and is now waiting for his call sign to be allocated. With such a good site out in Ardmona his signals will be easily heard.
- Andy VK3AJA said that the procedure for conducting exams was in his opinion easier in many ways compared to when the WIA examination system was used. Not that cheap to do the exam at \$140 but it does ensure that examinees are serious about getting their licence or upgrading their existing licence. Andy often makes the point to our president that he should consider upgrading his licence. How about setting an example Peter!
- We have four assessors, Andy VK3AJA, Geoff VK3ZNA, Huntly VK3ZE and Alan VK3AO.

The AGM

- The committee for this coming year were elected with little change from last year, with Josh Gardner elected to the Technical Committee and Geoff Angus now takes on Assistant Secretary. Any changes to the general information on the club shows on the first page of the newsletter.

Repeaters

- The process of transferring the UHF CB repeater licence from Norma Mathey to the Shepparton Club is progressing steadily.
- The DMR repeater VK3RDS for Shepparton is being tested at Ray's VK3YNV before being relocated to Geoff's VK3ZNA tower.
- The repeaters are working well and the activity can be assessed by looking at the website.

General Info

- Bruce VK3PNG has our input to the Murray Quad communications sorted out and further info on it follows in the newsletter.
- The Hamfest and how it went and what improvements we can make for next year were discussed in the meeting of 5th October. Overall the hamfest proved to be well run with only one or two minor alterations needed for next year.
- Remember to show your SADARC membership card at **Jaycar** to get up to 10% discount on a number of items. They are a helpful crew down in South Shepparton.

- At most meetings we have a talk by some “victim” who tells us of his radio history. Peter Simpson.VK3ASK told us of his radio history from his youth until now as an amateur. What really impressed me was the work that Peter did professionally with Channel 7 in Melbourne for around 30 years. I hope you don’t mind me saying this Peter; I was most impressed that you were able to do so many hands on technical work considering your extremely poor eyesight. Congratulations Peter. Next month’s victim is Denys VK3ZYZ
- It was decided that our end of year get together on the 7th December will be at the Royal Mail Hotel in Mooroopna next door to the Ridley silos in McLennan Street at around noon. Andy will be making arrangements with the licensee.
- A getting to know a little more about morse code was undertaken before the meeting on the 5th October. There were four takers who would like to spruce up their ability to use morse – after all it is a digital mode. The takers were Ray VK3YNV, Andy VK3AJA, Arthur VK3AFD and Les VK3TEX. Further assistance to get up to a reasonable speed will occur before most meetings.
- During September Kevin VK3BPH reached a milestone getting his “O.B.E.” 80 and in November Ron VK3COP will notch up 94 years young. Congratulations to both of you.
- I have it on good authority Ray VK3RW has retired off the farm to go into Benalla. Let’s hope that electrical interference is not too much higher than the low level you would have had on the farm.
- Members if you have some of the clubs equipment or other items in your possession for storage or in use, please give the Editor a list of what you have as Peter has asked me to compile a list so we can deal with them in a way that suits the club.

MURRAY QUAD 2019

Preparations are well on the way for the running of this now annual Murray Quad. SADARC have been included in the communications Management Plan since the first Murray Quad was held several years ago and have been invited to assist once again this year.

This year it will be run on Saturday the 30th, of November and Sunday the 1st. of December. The format will be much the same this year as last year; we will meet at the Tocumwal Town beach sometime around noon for our check point allocations and instructions for the Sunday. The canoe section will start at Thompsons Beach Cobram at 2pm.on the Saturday, the last canoe should arrive at the finish at Tocumwal at around 6pm. Five radio operators will be required for this event on the Saturday.

Upon the completion of the canoe event we will travel to the Rowing Club venue at Yarrawonga ready to set up comms. for the Sunday.

On the Saturday evening any members of SARARC assisting at this event are welcome to set up camp at the Rowing club for the night. There will be a BYO BBQ soon after setting up camp. Only three radio operators will be required for the foot race starting at 7am. On the Sunday.

Some of us will arrive at Tocumwal on the Friday prior and will monitor 146.500 until the start of the event.

Tim Roadley and the Murray Quad Event Management team wish to thank those members of SADARC who are once again assisting the community in the running of this event. We have the required amount of SADARC members for this event but if any other members wish to come along they will be most welcome.

Bruce VK3PNG and Darren VK3HEN,

Any queries call Bruce VK3PNG on 0427715663. Darren VK3HEN on 58521092 or Andy VK3AJA on 0409 716713

Email [bnglasson @bigpond.com](mailto:bnglasson@bigpond.com).

NanoVNA - first impressions.

The NanoVNA is an open source vector network analyser covering the range from 50 kHz to 900 MHz; it is capable of measuring a wide range of frequency dependent parameters, like VSWR and insertion loss of filters.

The original hardware and software design is documented here <https://github.com/ttrfttech/NanoVNA>

Being an open source project numerous Chinese manufacturers have cloned the original design, some have done a better job than others.

One thing to look for is the shielding on the input output circuits.



I now have one of each and have yet to see much difference between the two types. I suspect the differences might become more obvious with the accuracy at higher frequencies.

The signal source is pretty accurate, I checked the CW output frequency at 300 MHz and it's within 100 Hz, higher frequency measurements are done with harmonics and rely on the calibration to provide the accuracy.

The one I think is closest to the original design and reasonable quality is from here. It was \$US60

https://www.alibaba.com/product-detail/Original-2-8-Touchscreen-50KHz-900MHz_62232701280.html?spm=a2700.galleryofferlist.normalList.9.10e74755YIx0nI

Also there are plenty on ebay which look like they might be ok, but buyer beware, as always.

Denys VK3ZYZ has designed a 3d printed case for the system which includes a drawer for storing the calibration standards.

In operation it's vital that the calibration is done with the cables and connectors that you intend to use for the measurements. A more detailed description of how to calibrate and use the device will have to wait for another article, but just to give an idea, here is the VSWR of a 2M co-linear that I

got at the hamfest, it's obviously designed as a paging antenna since it's resonant at 148.1, but still covers the 146-148 MHz band nicely.

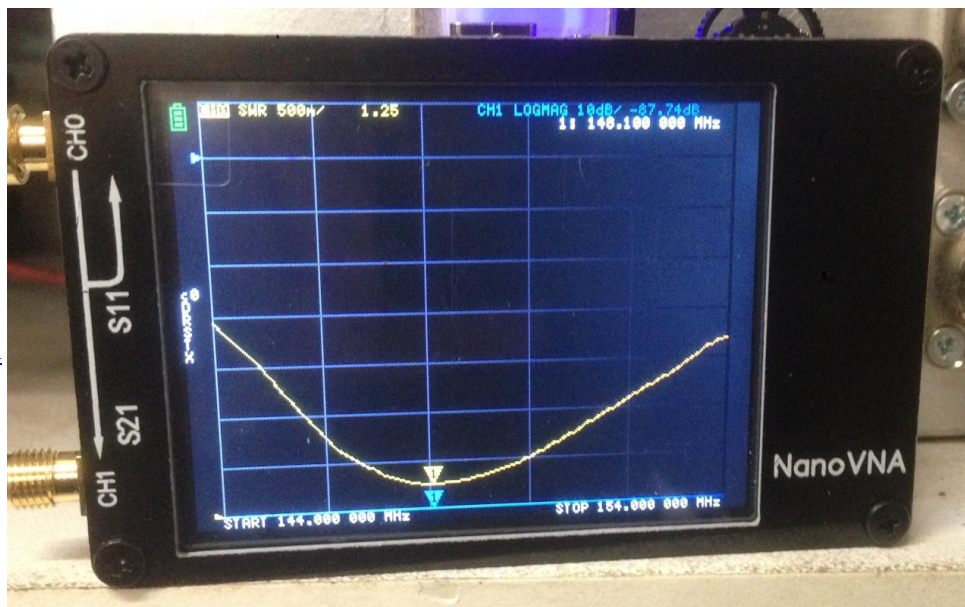
There is a lot of activity currently going on around this amazing little device, including PC software and firmware modifications.

Some handy links for more information.

Google Groups
<https://groups.io/g/nanovna-users>

Nano VNA Saver
<https://github.com/mih-tjel/nanovna-saver/releases/tag/v0.1.3>

Ray Gardiner
VK3YNV



COAXIAL CABLE



Thank you folk for all of your input. A lengthy epistle with not many pictures. If you want to see electric cars this Saturday accept the Vintage Radio Club invite earlier in the newsletter. Thank you for the two submissions from Ray, the coaxial cable explanation and the more serious Nano VNA.