



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 on test @ VK3YNV QTH**

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 \pm 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 at 1pm. Due to the pandemic temporarily they will be conducted on air via our 2 metre repeater and Peter VK3FPSR will officiate as President.

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** * 31/5/2020

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/GV

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

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Membership Sec: - Andy Ashley

VK3AJA

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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 May 2020

I hope everyone is coping relatively well with the situation as it exists. We are slowly coming back to some more socialisation and hopefully soon we may be able to meet face to face again.

Thank you to those who made the effort to call in at our last meeting which was on air. Our June meeting will have to be done through the same process but I am hoping we can all catch up for the July meeting. Watch this space to find out what is happening.

In the back ground of this Club a number of people have been busy discussing what may be the future direction we as Club go. With the changes that are occurring at Radio Australia we have to keep our finger on the pulse to ensure that our Club is in the forefront of the new owners and any other interested parties. To date I believe we have done a good job of this and the work that Geoff, Rodney and Ray are doing will greatly benefit all members, current and in the future if, what we hope comes to fruition. It will be a slow process but rest assured it is being worked on.

At this time I still envisage that we will be able to have our Hamfest so planning is underway for that. John and Geoff are working on this project. If we can proceed with our Hamfest it is a fair chance that it will be the first one for VK3 this year so this may present us with an opportunity to make it bigger and better than ever.

Please continue to enjoy your radio and keep this great hobby of ours firing. With the exciting start we had to the year and now the lockdown it may have put some negativity into our thought processes. This hobby and our club have a great future so let's get involved.

That's it for this month and I look forward to hearing you all on the 6th June for our "on air" meeting.

Cheers for now. Peter Rentsch President

CLUB CALLANDER

6th June – Regular meeting – 2m Repeater Mt Wombat 1.00pm

4th July – Regular meeting – format to be advised.

SADARC MEETING May 2, 2020

on air VK3RGV 2m repeater

(Due to COVID-19 lockdown)

Apologies: none

On air were: VK3ASK Peter, VK3YYY Ian, VK3EB Dallas, VK3FTRK Geoff, VK3ZE Huntly, VK3AJA Andy, VK3ZYZ Denys, VK3FALN Alan, VK3KBY Barrie, VK3BF Alan, VK3PNG Bruce, VK3UI John, VK3TEX Les, VK3BPH Kevin, VK3JNC Ian, VK3ZNA Geoff, VK3UG Rodney, VK3FAVI John, VK3AFD Arthur, VK3YNV Ray, Josh, VK3PGK Graeme, VK3AO Alan, VK3KUG Ray.

Details from last meeting: Read by Peter Moved by VK3ZNA Geoff, VK3ASK Peter.

In: emails requesting QSL cards.

Out: emails regarding QSL cards. Moved by VK3ASK second VK3UI.

Reports:

Tech: Geoff spoke about RA event; He has submitted proposal. Waiting for reply. Geoff also had an article in the Shepparton News. Ray has suggested a list of questions to be asked should be put together.

Rodney spoke about the radio interviews on the ABC. We do have access to recording file if anybody wants it. Dallas has the file. Dallas.vk3eb@gmail.com

Rodney has had an email or two and a phone call so far and was surprised by the interest generated!

Ray has mentioned the audio file is available on the SADRC website.

Repeater has been offered by VK3TIM, details not yet known. Some repeaters need to be updated at MT. Major. Further details will follow when known.

Ray is also looking through old gear from RA and will make sure nothing good gets thrown away.

Report moved by VK3ZNA Second by VK3FTRK

Financial: read by Peter. Moved by VK3AJA Second by VK3BPH

Rodney has indicated if we want to produce a report on RA weekend, we need to get info. Send to Him. Before we all forget! Dallas said to email any pictures they have of RA event.

Bruce has mentioned Steam rally has been cancelled.

Peter did get a dinner with the Murray Quad group and enjoyed it.

General Business: QSL cards are still being decided on and Ray has advised that final artwork has not been seen yet. BAI were to fund these cards. Stations that have emailed asking about QSL cards, have been advised that card will be sent once printed.

Geoff has suggested we update the QSL list.

General Business continued...

Peter (VK3ASK) has mentioned the vision Australia has been contacted re doors left open and new air cons have been installed at club rooms. Peter (FPSR) has also advised he called them and sorted it out.

Andy will get a padlock and lock assy. to replace the one at clubrooms that was cut for off. (During Aircon install)

Presidents report:

HAMFEST may be ok to go ahead all going well. Will need to start planning.

John (VK3UI) has suggested he will be happy to do bookings again.

Rodney suggested we put a display (video) at HAMFEST.

Ray has suggested we see if we can do HAMFEST at RA?

Geoff (VK3FTRK) Moved holding HAMFEST at RA site Second Les.

All in favour.

Alan (VK3FALN) has mentioned tables and chairs will be required.

Denys may be able to help with this.

Dallas has suggested perhaps car boot sale in ground as plenty of room at RA.

John (VK3UI) has suggested a working group for the HAMFEST and RA site. John will enlist (Kidnap) members as required for the task.

Dallas and Kevin have offered to help. Geoff (VK3FTRK) has offered his work truck to pick up tables if required.

Peter mentioned articles for different magazines, and he has also taken the role of secretary publications committee for WIA AR magazine.

Denys mentioned an article on Arduino code and modifying CODAN radios may be of interest.

Les mentioned his articles on mobile noise reduction may also be of interest.

Ray mentioned Josh has draft copy of RA writeup.

Meeting closed 2:12 pm.

June meeting format yet to be confirmed.

SADARC Committee meeting 31st May – Peter VK3FPSR + committee

The meeting was conducted at Ray VK3YNV QTH. Thanks Ray.

The hamfest was discussed and it is hoped that it will go ahead in September – possibly the first for the year if Covid-19 restrictions are lifted enough. The location will likely be at the Anglican Church hall as usual. More info later.

Discussion took place on means to expand our membership and appeal to more people (younger ones in particular).

The possibility that the Radio Australia site may become a museum was discussed. There is a lot of work to be done, with Geoff VK3ZNA as the club spokesman. This will be a long process.

Please, send any information or your thoughts on the Radio Australia weekend on 14/15th March that you have to Rodney so an article(s) can be assembled for publication. I have some info, but need more so if no more maybe no article(s). It's as simple as that.

Editor's Ramblings

- The on air meeting on 2nd May was attended by over 20 members who joined in via the 2 mx repeater. Others may have just listened. This is a good result and Peter conducted the get together well.

Next on air meeting Saturday 7th June 1 pm.

- Congratulations to Peter VK3FPSR on taking on the position of Secretary of the WIA *Amateur Radio (AR)* publication committee. If the committee is anything like what it was in the early 1970s when I was a member it will be a very productive group. He estimates that it will take around eight hours a week (I think I got that right) of his time.
- Denys and Les have indicated that they would be interested in submitting articles to *Amateur Radio*, Denys on his Arduino frequency control of his HF rigs and Les on his series of articles on his mobile amateur radio installation; which is being presented at this time in our newsletter.
- Articles on all sorts of subjects relating to amateur radio are always welcome in both AR and our newsletter.
- We need to put together a report for our newsletter and AR on our successful weekend of 14/15th March at Radio Australia. If anyone involved would either send it to me or if someone would like to do it, either put your hand up or send to me. I am waiting on some info from a couple of sources.
- Any who may wish to hear the ABC interview about the proposed communications museum contact Dallas VK3EB on dallas@melbpc.org.au for a copy of the MP3 file. Publicity on local radio or newspapers appears is providing awareness of what the club is about as well as amateur radio in general.
- Just a reminder the Echuca Steam Rally is off.
- Geoff VK3ZNA spoke on the communications museum proposal but has not heard back from the consortium as to their thoughts on the matter. See later in newsletter for updated information.
- Being positive, the club believes that the restrictions that have been imposed because of Covid-19 may well be largely lifted by the time that our Hamfest is due to be held. Several suggestions were made about what format it may take. One thought is that we have video and other information of the 14/15th March weekend. Another is that if the consortium that have bought the RA site are agreeable that the Ham fest could be held at the Radio Australia site.
- A new Australian Record. LoraWAN (VK2KRR) to Mt Wombat. VK2KRR was using a LoraWAN radio running a few milliwatts (Probably less than 50 mW) (3 AA batteries) and a PCB antenna. RSSI -123 dB S/N -16. The distance 214 Km. This is a low digital rate data system on 900 MHz. Talk with Ray VK3YNV if you would like more information.

Mobile Radio Project Part 2 (b) (4th instalment in the Newsletter)

The last step with the cable install was the VHF/UHF cable needed to be terminated in a RG58 plug as it came unterminated from the store. I used a standard UHF CB mount for the antenna which will be seen later.

By the way, the three cables were pre-installed in the conduit before the conduit was installed. It was then trimmed (Conduit) with a Stanley blade to fine tune the length to suit the rear end at back of vehicle.

So I was happy with the cabling arrangement, as all of it was far enough away from the rest of the vehicle wiring as not to interfere with any systems of the car, namely the ECM control module etc. It was also all nice and hidden and I didn't have to drill through the vehicle fire wall or try and squeeze any wires through grommets in the fire wall that would not allow it...

Next, on to the front of the vehicle this is probably the most important part of the project and installation. The ICOM 7100 comes with a fantastic little remote head unit that is very compact and just needs a small space to fit into.

Having seen a lot of different installation pictures (on the internet) of the 7100 head unit in various places in different set up's I was not happy with what I saw... I was leaning heavily towards a NO DRILLING IN DASH installation so I did more research and found the perfect solution for the head unit install.

Found a large and popular company called "RAM Mounts" and they do all sorts of different mounts for mobile phones, Tablets, Laptops and anything else you could imagine that fits into a vehicle.

The mount I chose was a 45cm goose neck mount which one side bolts to your seat bolt on the passenger side for a VERY sturdy base. Once tightened down, it does not move.



Picture shows the goose neck bottom mount. The actual neck itself is a very rigid ½ inch aluminium rod that can be bent to any shape you want, with-in reason of course...

The 7100 head unit has a very convenient ¼ inch standard hole in the bottom of it, much the same as many cameras have. This is for tri pod mounting, so with this I was able to purchase just the right fitting from RAM to adapt the 7100 head to the RAM mount.



First picture is the screw in adaptor, next the front of the unit and then the rear of the unit. Note how there is a clamp which mounts the ball to the stalk. The head unit could be removed very easily from the vehicle by simply unplugging the two rear connectors (clip in RJ 45's) and loosening the T piece handle and removing the unit with the ball attached. Then, very quick to re-install when needed.

To mount the Microphone securely I ordered another different type of RAM mount and did a bit of a mod on the front of it so I could mount the mic clip holder to it. All come up real well.



Mic mount with clip.



Mic and cable out of the way and can be adjusted into any position you like, as the mount has a top and bottom ball so there is lots of possibilities with positioning.



I am VERY HAPPY with the way it's set up. Safe and within arm's reach. Mic and control head close also. No chance of cords getting stuck in legs or other body parts. Not on dash or in front of air bags where it would become a projectile if they went off... No interference to dash console at all. I can operate the head unit by feel if driving while keeping my eyes on the road.

This part of the project I am most proud of, as I feel I have found the perfect place to mount the head unit and mic. So easy to glance down briefly at the head unit while driving and it's not distracting at all.

I have also programmed the 7100 with all the frequencies and repeaters in the memory so it's really easy to change to other frequencies just by the manipulation of two concentric knobs on the same shaft.... Couldn't get easier than that, all while your eyes are on the road, not on the radio. Excellent...

The next step was to install the body of the radio in a spot where the unit would get sufficient air flow through so the unit would keep cool. I mounted the body at the rear of the wagon, NOT under the front seats as some do, as this would put undue stress on the body and electronics from any heat build-up that would occur in an enclosed space.

This worked out well. Although the body is visible, it is out of the way and does not interfere with anything else in the rear of the wagon.

The external speaker was mounted a short distance above from the body in the rear of the wagon and pointed towards the front of the vehicle where the driver's seat is, producing a nice loud audio to fill the cabin when the volume is turned up.

This location was chosen as it was out of the way, and not in a position where it could get knocked or hit, like for example the drivers or passengers foot well. I have had speakers mounted in these locations in the past, and they have always had issues with speakers getting damaged from knocks and jolts from legs getting in and out of the vehicle.



The body is mounted in the factory mounting bracket. The DC cable is then routed to the battery box and plugged into it via a good quality Anderson Plug. The rear seats are not used so the cables do not have any foot traffic to contend with and are safe where they are.



Pictures of the IC 7100 body and the battery box in the rear passenger seat foot well. The rear seats are not used so the battery box has a good home for the time being, until I find a more permanent place for it. As can be seen, there are plenty of Anderson plug sockets for anything that requires 12 volts in the rear of the vehicle.



The rear external speaker is a little GME Electraphone CB unit and produces a fine sounding audio of good communications quality.

In the next article, I will talk about and show pictures of the mobile antenna installation.

Until then 73 and good mobiling!!

(Two more instalments of Les's mobile installation to go. This series of articles would go well in *Amateur Radio* as has been suggested, Editor)

Hi All,

As some of you know, on Friday past, the Consortium have the key to the Radio Australia site.

Today, I spoke with the Project Manager on the Museum Project, so here are the facts to date:-

1. The members of the Consortium are all Shepparton based none from interstate.
2. They are very aware of the history, documentation and artefacts within the building.
3. They had considered getting in touch with Geoff Allemand of the Heritage Society in Shepparton. I have already given Geoff a copy of the Proposal and the Shepparton News article.
4. At this time, they are not making any decisions as to the future use of the building. They wish to let the dust settle for the time being, for around twelve months, before proceeding further.
5. I have indicated that, when they wish to commence a tour of the site, we would make a number of the above Club members available, including Terry, to discuss the various historical items at the station.
6. I also mentioned that as a Club, we did not wish to 'run' the museum, but provide technical support for the various exhibits.

So, to move things along, we should consider the following suggestions:-

Consider a management structure and the various levels of 'helpers' who would not be Club Members. i.e. radio enthusiasts interested in historical aspects etc.

After a tour with the Consortium, commence documentation of the probable thousands of papers, manuals, documents, historical display items, transmitters, aerials, towers, former employees and anything else not listed here.

It has now been over 3 years since the last transmission; I hope our actions can speed this process up to allow access for the Club, sooner than later.

Regards All Geoff VK3ZNA

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/ttrftech/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.



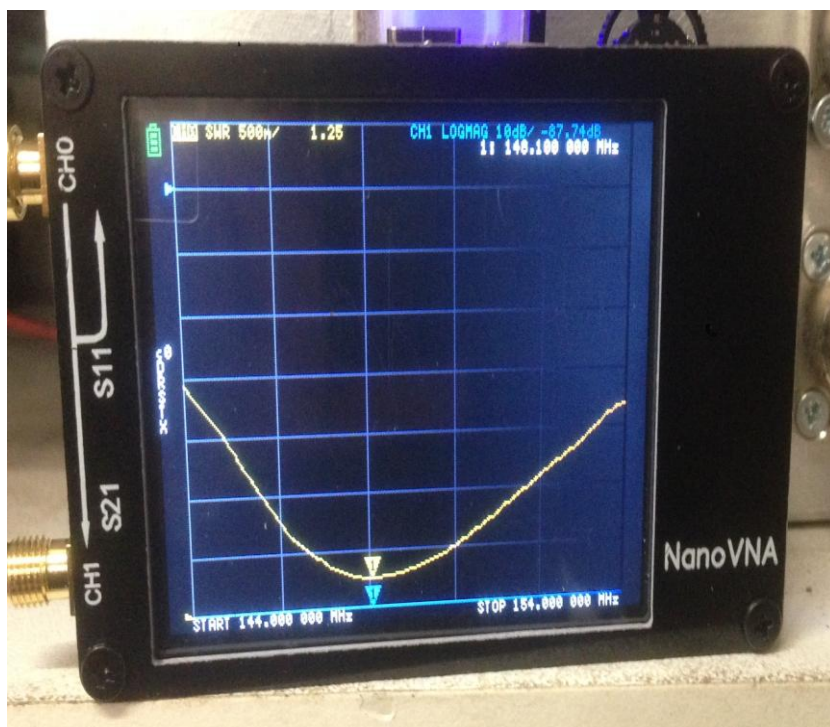
I now have one of each and have yet to see much difference between the two types. I suspect the differences might become more obvious with the accuracy at higher frequencies.

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/mihtjel/nanovna-saver/releases/tag/v0.1.3>

Ray Gardiner VK3YNV.

As Ray says a very interesting device and one which many of us could or should be using. It is also written up in *Silicon Chip* for April 2020 page 34. Looks like a suitable addition to my test equipment portfolio.

For Sale:-

Yaesu FT70DR Fusion Digital Wires X and analogue five watt 2mx and 70cm handheld, complete with cradle charger and spare battery. It is in excellent condition at \$150 ONO. Contact Graeme Koch VK3PGK email:- gkoc2114@bigpond.net au Tel: 0425 719 974