



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** 23/6/2020

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

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

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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 June 2020

My ability to forecast what is the future was again dealt another defeating blow this week. You may recall my inability to pick the date for our Goulburn Weir gathering with BAREC was generally a failure and that run of failures has continued. I hoped and I forecast that all being well we would be able to meet face to face at our July meeting; well this week's announcements in relation to COVID 19 reinforced my lack of ability to forecast the future. **Consequently at this time the meeting will be an "on air" event again.** Ah, if we only had a crystal ball life would be much easier – or would it?

I hope everybody is remaining in good health and coping with the lifestyle that we now have to call the new normal. On a personal note both Karen and I are well with our only inconvenience being that we have not been able to catch up with the Grandchildren for a while. This will be rectified in the coming weeks with some intra state travel planned if the crystal ball allows.

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

I still believe we need to continue planning for our Hamfest but a decision will need to be made no later than the August meeting. In one way, the decision will be made for us.

As we are about to start a new financial year this brings about the payment time for our Annual Subs. As per normal the subs are \$25.00 per annum and the Secretary has included a membership renewal form with this newsletter. Subs can be paid either in cash, cheque or via Direct Deposit to our Bank of Bendigo account. Please, if you are paying by Direct Deposit use your call sign as the reference.

With this cool weather it gives us a great opportunity to play radio. There are lots of contacts out there so make them. Since the 1st June I have had over 400 contacts so they are there.

That's it for this month **and I look forward to hearing you all on the 4th July for our "on air" meeting (at 1pm via Mt Wombat repeater on 146.650 FM. Peter MC (editor))**

Cheers for now.

Peter Rentsch
President

CLUB CALLANDER

4th July – Regular meeting – 2m Repeater Mt Wombat 1.00pm

1st August - Regular Meeting – format to be advised.

SADARC June2020 Meeting Minutes 1:00 pm 6/06/2020

On air meeting via VK3RGV 2 M Repeater.

In attendance: Stevo, VK3FPSR Peter, VK3ZYZ Denys, VK3BPH Kevin, VK3FTRK Geoff, VK3PR Stewart, VK3TJS Jacek, VK3EB Dallas, VK3ASK Peter, VK3FNQS Jason, VK3AO Alan, VK3ZNA Geoff, VK3AJA Andy, VK3NQS Colin, VK3PGK Graeme, VK3YNV Ray, Josh, VK3UG Rodney, VK3PNG Bruce.

Apologies: VK3ZE Huntly.

Minutes from last meeting.

Were noted and moved by VK3BPH Kevin, second by VK3TJS Jacek. All in favour.

Inwards: RASA newsletter, Picture from VK3FTRK Geoff (RA weekend)

Out: none

Reports.

Financial: moved by VK3AJA Andy, second by VK3ZNA Geoff. All in favour.

Technical: Ray mentioned VK3FY Chris has contacted us re Wires-X repeater, possible install locations. This will be brought up at next club meeting.

Ray spoke about adding ALLSTAR function to 70 cm repeater, will speak about this next meeting.

Jason has mentioned ALLSTAR repeater was covered in Tech report. Jason still to confirm if this can run at the same time as IRLP. If not, He suggested IRLP should stay as it is popular. This is yet to be confirmed.

VK3UG Rodney has suggested an article for newsletter so we all know what an ALLSTAR repeater is.

Jason will provide some info.

Peter spoke about the new owners of RA site, and they do not want to take any action for at least 6 months

Geoff mentioned RA site is now on the back burner till new owners contact us.

Rodney mentioned he want to collect details from members on RA weekend so He can write an article for various publications. Please contact Him if you have some info.

Tech. report moved by VK3FTRK Geoff, second by VK3ASK Peter. All in favour.

Hamfest:

We will plan Hamfest as normal and hope restrictions are remove by then. Will remain at St. Augustine's all as normal, no changes

Moved by VK3ZNA Geoff, second by BPH Kevin. All in favour.

Gen Business:

Ray has mentioned QSL cards design has been finalised and we need to approve it for printing. BAI are organising printing (and payment)

VK3ZNA Geoff mentioned we made over 1000 contacts and perhaps we need to get 1200 printed. VK3FPSR Peter has suggested 1500.

Ray is hoping to use the database of contacts for printing. Not handwritten.

Jason was thanked for updating database from handwritten log.

Ray will email Rex with approval and get it rolling.

This was moved by VK3FTRK Geoff and second by VK3ZNA Geoff, all in favour.

Vision Australia: VK3ASK Peter mentioned the Education Dept. are moving into main building, we do not actually know what will transpire on club rooms at this stage.

Andy mentioned Education Dept. probably needs to have our contact, VK3ASK Peter will do this once they arrive?

We have had no contact with the new owners (Education. Dept.) yet.

VK3FPSR Peter mentioned he is hoping to have a regular face to face meeting next month. We will wait and see what regulations are still in place. AND a BBQ! **(meeting on air, no BBQ)**

VK3YNV Ray mentioned to register sadarc.org.au we already have registered sadarc.org but needs some qualifying document to achieve this.

Andy will draft a letter on club letterhead for this purpose.

Moved by VK3YNV Ray and second by VK3ZYZ Denys all in favour.

Meeting closed: 1:55 pm Next meeting hopefully at club rooms with BBQ. **(Meeting on air, no BBQ)**

Ray added that Andy will be required to provide licorice allsorts slice at next meeting. All agreed.

Vale Robert (Bob) Knaggs VK3AJN – 25/4/1925 – 23/1/2020

Bob was a man of many talents. Bob was a farmer and like many farmers of his era he could turn his hand to many tasks, both farming and to mechanical constructing many things from planning stage to completion. He built their home making the bricks and doing all the other things such as plumbing, electrical wiring only thing he didn't do was the plastering.

Bob had great interest in radio communications and fire fighting. He was a valued member of the CFA for many years from 1945 (when the CFA was instigated). His radio knowledge was put to good use to construct some radios for the South Wangaratta Brigade. This was at a time when very little in the way of radio communications equipment was available and the PMG allowed people to construct equipment as long as the circuits met with their (PMG) approval. In those days the communications was on HF (2660 kHz).

In the 1960s Bob gained his full amateur licence (VK3AJN) in times when examinations were essay type and you had to do morse at 14 words per minute. Bob used morse occasionally until relatively recent times. He built much of his equipment - transmitters, receivers, power supplies, antennas , towers – you name it. In later years this was not practical and like most of us he did purchase some commercial equipment.

Bob at his station in recent times – a mix of homebrew and commercial equipment.



Mobile Install Part 3 A : Antenna.

Les VK3TEX here to show you the 2nd to last part of my mobile install which were the mobile antennas for HF and VHF/UHF. And finally in part 3b next month, my portable antenna setup for when I am stationary mobile and camped somewhere.

For the mobile antenna situation I looked at several different types of solutions for HF.

1: Multi Tap HF Stick. Terlin or similar.

2: Screwdriver Antenna. I looked at the Diamond Screwdriver available here in VK, looked good and I had some good feedback from someone who owns one. I didn't bother with the ones from the USA, for the reason that there is no local supplier that I know of, or distributor support. Although there were a few interesting options....

3: Standalone auto tune antennas. Specifically, the ones made by Codan and Icom. The Codan has a couple of models; I looked at the 9350 in particular, but decided against it. Then I looked at the Icom solution. They had a couple, but I chose the AH 740 auto tune antenna. Reasons were number one; Icom offers a 5 year warranty on its products, and I just couldn't discount this. Cover for 5 years is a great attraction and gives peace of mind. Also the radio mates up perfectly with the AH 740, with almost instant tune and it provides good performance for what it is. In my opinion, it's a little expensive, but the warranty makes up for it, and it is a matched solution for the Icom system.

Before I go further, I would like to issue a WARNING to all who would like to use the Icom 7100 with any of their Icom automatic antenna tuners/antennas. If you want to use the 7100 with these units, be CAREFUL that your radio does not have the mods installed to increase modulation and ALC action of the radio. I learnt the hard way that the CAPACITOR MOD will make the radio malfunction when it is hooked up to the AH740 and the AH4 antenna tuners. They will not tune at all most times, and flackey tuning at best if it works at all. There is very little information on the net about this and I only found out about this after I hooked the system up. I tried all sorts of things and was able to isolate the issue to the 7100. The tuner worked OK with my 7300, so I knew IT was good...

Once I removed the CAPACITOR MOD, all was good and the radio performed perfectly and tuned perfect. Lesson here is some MODS affect a lot more things in a radio that you might not be aware of, so tread carefully...

With that warning out of the way, I will get on with the explanation of how the install went. First, the AH 740 is an all in one antenna tuning unit made specifically for mobile operation and comes in three separate parts. The tuning base unit, the spring base, and the rigid fibreglass whip section. The manual can be downloaded off the net easily for further information. Also included is a control cable. (Needs the radio plug end modified, so I just ordered a separate one (cable) specifically for the 7100. I don't know why the supplied cable has a DB9 connector which doesn't match the 7100 or the 7300... Now I have a spare control cable just in case I need it.) Also supplied is a 6m length of coaxial cable for the radio, which is a nice addition.

The package does not come with a mounting bracket however, so I had to supply one of my own, it has to be heavy duty as the tuning base unit weighs 3.5Kg. That is quite heavy and must sit on a solid bracket.

Just so happens, that my place of work is an engineering shop, and I have access to some good stainless steel bits and pieces which I could cut and chop to suit my needs. We also have a very good TIG welder which made life very easy.

I had a couple of spare right angle brackets which I could chop and change and shape the way I needed. I made two versions. I will call them version 1 and 2 Hi Hi...

Version 1 was a stainless steel right angle bracket that was originally made to accommodate another bit of equipment we use, but was surplus. So I chopped it a bit and drilled some extra holes and strengthened it to suit my bull-bar.



Picture at left is not very clear, but this was a crop from another picture... Showing the bracket mounted on my Bar. I welded an extra plate to the top for additional strength and a locking nut and bolt so it don't slip on the Bar. A 16mm hole was drilled for the tuning unit mounting. To the right the HF mobile tuning unit looking at it from the front. The unit mounts with a solid 16mm threaded rod, which provides a solid mount. The AH740 has 4 shock absorbers which isolates the tuning unit from the mount and bar. Thus the tuning unit comes with a very thick earth braid which must be hooked up to the vehicle chassis.

The antenna mount to the left of the picture is the VHF/UHF antenna. I will talk about this in detail later.



Left picture side view of the HF mount. Note the braid which goes from the tuner through the grille and onto a couple of earth points just behind the front of the vehicle. Centre picture shows the coaxial inlet, just a standard SO 239 socket. Right picture shows a special 5 pin plug for controlling the ATU.

The reason this was version 1 bracket was that some of the guys at the club thought that the bracket was sticking too far forward and were of the thought that I would be pinged for this by the police. Various states around Australia have different regulations/suggestions regarding brackets on bars, but in Victoria they are not really strict, only vaguely suggesting no SHARP edges...

Anyway, I thought about this and decided I could construct a different more compact bracket of similar construction. Thus I went to work on version 2 and was successful in being able to move the mount point back slightly and also reduce the incidence of sharp edges...(NOT that the original one had any sharp edges...)



This was the final mount arrangement. Similar to version 1, but now the large top base plate is replaced with a smaller but thick 4 mm Stainless plate which has its centre of gravity closer to the bar and there are no sharp edges protruding. Note also the bottom of the threaded mount has a padlock for anti-theft protection and the connectors have now been weather proofed with rubber butyl tape and electrical tape.



Version 2



Version 1

I could not mount the tuner on the inside of the bar no matter how I tried because the bonnet of the car would not open because the tuning unit was in the way.... So the tuner sits on the outside of the bar, but is still solid and works.

The performance of the AH740 is good for a mobile antenna, however, not having anything to gauge its performance by I can only comment on my observations. With the supplied spring base and 1.5m fibreglass whip, it's pretty good.



Showing the antenna mounted on the bull bar. The spring base is very thick and solid as is the whip. So when driving at highway speeds, there is no movement of the whip or spring, but it has got enough give, so if you do hit a low flying duck, the whip should survive, but it will be a bad day for the duck....

So far after having the system for a few months I have made some good contacts around VK on 40 meters, a couple on 80, but signals were down, as could be expected. The higher bands from 20 to 10 meters have been a bit quiet, so I have not had much luck there. With summer around the corner I hope to get out more, both mobile and mobile stationary to work some of the higher bands including 10 meters with some seasonal sporadic E openings.

The real beauty of this system is I just push one button on the radio for almost instant tune of any frequency I'm tuned to. Could not be easier. There are no stops to change antenna taps, or stops to change whips. No long tune times from one band to the other in the case of screw driver antenna's... So it's really just tune and away you go. Ease of use was also near the top of my list of requirements. It is very easy to use... And may I say well done to ICOM, for a well matched system of the 7100 and the AH740, they work very well together.



For VHF/UHF I have installed a standard GME Electrophone 76mm stainless steel bracket. On it I have the medium duty spring base and SO 239 socket and cable assembly. This is all that is needed and works well with my Diamond ½ wave 2m and 2x 5/8 wave 70 cm antenna. The model number is NR-770HB. It's rated to 200 watts and is 1.02 meters in length. Comes with a PL 259 plug connector as a base which mates to my mount perfectly.

The SWR is very low on both bands and works well on even the 7 MHz split repeaters on 70cm. The antenna works well, being able to hit all the Mt Wombat repeaters from a clear location around Echuca; however, it struggles a bit from my backyard, which is to be expected. But once mobile and on the road it performs adequately.

I have been happy with the matching on both bands as I expected a poorer bandwidth but I was surprised. I had a similar type of vertical mobile whip years ago and that worked very well also. Can't beat Diamond quality. I have always had good results with their products.

The last instalment of Les's articles will be next month.

Editor's Ramblings

- As Peter has said a tumultuous month with Covid19 restrictions varying every few days. It makes it hard for things to be planned as you all well know. However, keep on doing things like Peter has with over 400 contacts for the month on air – mine are in the single figures. I have been working on equipment and antennas in between doing things for others, as I'm sure you all have too.
- Some members are purchasing the VNA devices that Ray has suggested. There is a site that you may care to look at that explains how to use a Nano VNA to tune an antenna – <https://www.youtube.com/watch?v=xa6dqx9udcg>
- Some information has been provided on our Radio Australia 14/15th March weekend so that I can collate an article that is a combination of many of the operator's experiences over that weekend and before and since. If you have information please submit to me so I can collate it unless you would like to take over that task –which would be okay by me. I would forward on to you anything I have.
- Geoff VK3FDRK nearly has his new shack up to scratch. Sound really good and perhaps we'll have an opportunity to visit the shack and hear how well things work from a good location.
- Geoff VK3ZNA is busy overhauling quite a few pieces of equipment for others and himself.
- There are some books that are really priceless. Members may like to read a bit of the history of broadcasting in Australia since our Radio Australia weekend. One that I consider to be in that category is *Radio Broadcasting Technology – 75 years of Development in Australia 1923- 1998* by *John Ross AM*. This book which is 30.5 cm high by 22cm deep and four cm thick and has 599 pages of information. It is printed on high quality paper and contained in a red hard cover. If you ever see one of these grab it as it is full of an enormous amount of our radio history. A couple of others also are very interesting too *Australian Radio the Technical Story 1923-83* by *Winston Muscio* and *A History of Radio in South Australia 1897-1977* by *John Ross* .I doubt any of these books are in print so just keep an eye out and you might be lucky enough to get a copy of one or more of these books.
- **Remember our next meeting is on air again at 1pm 4th July.**