



Founded 1979 Incorporation No A6677 P.O. Box 692, Shepparton 3632
August 2022

SADARC committee

President:- Rob Hose - VK3BLD Vice-President:- Barrie Halliday - VK3KBY
Secretary:- Arthur Duke - VK3AFD Treasurer:- Ian Saunders – VK3YYY
Membership Sec:- Ian Saunders - VK3YYY Assistant Secretary:- Geoff Angus - VK3ZNA
Webmaster:- Ray Gardiner - VK3YNV Hamfest Co-ordinator:- Peter Rentsch - VK3AXI
Newsletter (editor):- Peter Simpson – VK3ASK
Tech. Committee:- Geoff VK3ZNA, Ray VK3YNV, & Josh Gardiner – power to co-opt.

To contact any member of the committee above, email committee@sadarc.org and specify who you wish to communicate with and the subject. Items for the newsletter newsletter@sadarc.org

Communications Manager (External Events):- Darren Glasson (VK3HEN) – subject to confirmation.

Meetings the first Saturday of the month from 10 am for informal chats and technical talks. A BBQ follows (a gold coin donation). Business meeting 1 pm (except January when no meeting occurs) at Flexible Learning Centre, 18 Channel Road (250 metres from Archer Street), Shepparton.

Variations in these times, days and location are normally notified in the preceding newsletter.

The next meeting will be held on Saturday October 1st.

DISCLAIMER: - No guarantee is given as to the accuracy of information in this newsletter. E. & O.E.

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. 25/08/2022

VK3RGV repeaters and transmitter operating frequencies Mt Wombat

53.725MHz (-1 MHz), **In Service** 146.65MHz (-600 kHz), **In Service**
438.2MHz (-7 MHz -D-Star), **In Service** 438.650MHz (-7 MHz 91.5 Hz tone), **In Service**
438.9MHz (-7 MHz - DMR), **In Service** 439.775MHz (-5 MHz), **Testing, out of service, IRLP (node #6990)**

476.475 MHz (+750 kHz) CB Repeater WBT03 Channels 3- 33, **In Service**

VK3RDS, 438.7625 MHz (-7 MHz DMR) **Shepparton on test @ VK3YNV QTH**

The three following repeaters are not the clubs but are allied to the club in one way or another.

Mt Major VK3RDU, 146.850 MHz, 439.875MHz. Mt Bruno VK3RWC 147.325 MHz **(-1.6 MHz 123Hz)**

Access to most analogue repeaters is by sub-audible 123 Hz tone or noise/carrier mute (less sensitive).

Your TX offset is shown in brackets

Club informal on air get togethers, all welcome. Club call sign VK3SOL:-

Wednesday- 2mx repeater 146.65 MHz 8.00pm, 3.63 MHz SSB ± interference 8.30pm,

Sunday – 2 mx repeater 146.65 MHz 2 pm & 8 pm & The Vintage Radio Club – 2 mx repeater 11 am

A number of semi-private HF skeds take place either daily or weekly, locally or further afield.

Website – www.sadarc.org or www.sadarc.org.au Face book Page – Shepparton and District Amateur Radio Club Direct Link: <https://www.facebook.com/groups/481867453084459>

Note: Want to get your licence? SADARC has examination assessors, contact the secretary for details.

In this Issue

- **Next Club Meeting**
- **Editors comment**
- **President's Report**
- **Minutes of the last meeting**
- **Hamfest Reports. By Peter Rentsch-VK3AXA & Geoff Angus VK3ZNA**
- **Hamfest Pictures. Thanks to Dallas James-VK3EB**
- **Amateur Radio over the Internet. A talk given by Stewart Mair-VK3PR, at our last meeting**
- **Duplexer for 2mx & 70cm, part 3. By Ray Gardiner VK3YNV**

Next Meeting

The next SADARC meeting will be held at the Flexible Learning Centre on Saturday October 1. 10am, classes conducted by Dennis and Ray on the skills to program Arduino.

11am, General chat and catch up

12.00 Lunch, gold coin donation

1pm Club meeting

Editor's Comments

I am extremely happy and honoured to be taking over the role of Newsletter editor. It will be hard to fill the shoes of Rodney, who has done such a great job for many years.

On the other side of the coin, I am sad that I needed to fill this position as I know that Rod would have been happy to continue if his health had not let him down.

I will do my best to continue the high standard that Rodney has set, but more important, I wish to extend my very best wishes to Rodney and his family and hope and pray that his health will soon improve. Rodney, take care, get well soon and we all look forward to seeing you back at our meetings.

I would also like to thank Denys and Ray for the great job they are doing in teaching us how to use Arduino. This is a great introduction to a part of electronics required for future projects.

In closing, I welcome any new articles for our newsletter and also remind everyone that we are happy to publish any items for sale, or wanted.

Regards Peter Simpson VK3ASK

Presidents Report

Unfortunately, our president is not able to publish a report this month. He is recovering from a serious eye operation and at this stage needs to rest.

The good news is that it appears that the operation was a success and hopefully Rob will be back with us soon.

I am sure his report would have contained the following.

“The September meeting was a great success with the Arduino course conducted by Ray to start the day, followed by a good BBQ lunch and a lively and informative meeting. Finally ending with the talk given by Stewart, which is covered later in this newsletter”
Get well soon Rob and hopefully we will see you at the next meeting.

SADARC Sept. 2022 Meeting Minutes.

Club Rooms, Shepparton

In Attendance: VK3BLD Rob, VK3FALN Alan, VK3YNV Ray, VK3BPH Kevin, VK3TEX Les, VK3AXI Peter, VK3KBY Barrie, VK3YYY Ian, VK3AFD Arthur, VK3OV Pat, VK3ASK Peter, Bill C. SWL, VK3EB Dallas, VK3TJS Jacek, VK3JSD Stevo VK3ZNA Geoff, VK3PR Stuart, VK3DP Steve and visitor Paul Letson.

Apologies: Geoff VK3GSR, Denys VK3ZYZ, Josh, Rodney VK3UG, Ray VK3KUG

Minutes of last Meeting: Read by Arthur VK3AFD, Moved by Rob. VK3BLD Seconded by Ian VK3YYY, all in favor.

Business arising:

1. Membership cards are now available thanks to Josh.
2. Fussion, It was decided that it would be a worthwhile addition to what we have. At least 7 members are familiar with Fusion. The tower installation would be the biggest difficulty. Ray VK3YNV moved that the project be left to the technical committee. Seconded Rob. VK3BLD all in favor.

Inward Correspondence:

1. Paul Letson. Interested in gaining his Foundation License.
2. Account - Etheira Technologies for Internet at Mt. Wombat, \$196.35.
3. QSL Cards -from bureau.

Outward Correspondence:

1. Forwarded from the SADARC committee a letter of appreciation to Rod VK3UG for his contribution to the club over many years.

Moved by Peter VK3ASK that Correspondence be accepted. Seconded by Kevin VK3BPH, All in favor.

Financial:

Ian VK3YYY Reported income of \$132.22, being \$0.08 in bank interest, plus \$107.14 Comms for O’Keefe trail and \$25.00 membership.

Moved by Ian VK3YYY Seconded by Les VK3TEX, all in favor.

Technical:

A trip to Mount Wombat is planned when time and weather permit. Crackle on 2 Meters not the same as previous, maybe it is related to fringe area operation. The repeater is working well, there have been some long contacts recently.

Moved by Ray VK3YNV seconded by Peter VK3AXI. All in favor.

General Business:

Electronics Group: President Rob.VK3 BLD Spoke of the club's expanding interest into electronics. Could we develop a sub- electronic group? Rob.VK3BLD to check if a local electronic group is already in existence. The constitution would need to be reviewed.

Ray VK3YNV Thought it would be a great idea, electronics could be the "introductory drug" to Amateur Radio. Arthur VK3AFD to check if Greg Keegan has a copy of the SADARC constitution.

Complaint. Peter VK3ASK received a stern phone call from The Flexible Learning Centre regarding the state in which the room was left after our August meeting. We should be more careful in the future.

Newsletter Editor: Peter VK3ASK has kindly volunteered to take over from Rodney VK3UG as editor until our next AGM.

License Assessors. There are now no club members qualified to do assessments, all examinations are conducted online by VK3AN.

Hamfest : 25 Table are booked apart from SADARC.

Club to buy 3 cones for traffic control. Moved by Bill. C., Seconded by Ian NK3YYY. All in favor.

Pat VK3OV will open the Hall at 6:00am

Christmas breakup.

Peter VK3AXI will ask Trevor at the Royal Mail hotel, if the 1st Sat in December. would be available for our function.

Meeting Closed. 1:50 pm.

Hamfest Reports

SADARC Hamfest 2022 Report, by Peter Rentsch-VK3AXI.

From what I could gather the Hamfest was a great success. Feedback to me has been minimal but what I have received has been good. I believe numbers through the door were about 180 which, if my memory serves me correctly is about 30 more than 3 years ago.

The number of tables booked was 38 which is 4 up on last time. Our income from the tables was \$475.00. These figures have not yet been confirmed by the Treasurer but should be close.

Thank you to everybody that helped on the day to set up, run the event and then tidy up. I did get a comment from someone that it is like a well-oiled machine and things just happen. Without the members help this could not be done. So, thank you. Thanks also need to be given to Jaycar who provided the prizes at a price that was very acceptable.

There were also a number of people that did some work prior to the event so a thank you goes out to them as well. Geoff, ZNA and I spent the Saturday afternoon emailing each other as late bookings came in. Thanks to Geoff who did a great job in organising the table booking locations. Finally, thank you to the ladies who worked in the Kitchen to keep the coffee coming, without that caffeine kick some of us become lethargic.

So, now let us consider next year. I believe our venue is very good and we have not outgrown it as yet. The supper room is a great meeting place and the food provided by Azim is good. There are always things that we can do better, and I would like some constructive comments and feedback. Let's give it some thought while it is fresh in our minds and come back to the next meeting with some ideas.

Peter Rentsch

VK3AXI

SADARC Hamfest Coordinator.

Report from Geoff Angus-VK3ZNA

We had traders from Queensland, NSW, ACT, Vic and SA.

We had Bargain Hunters from Sydney, Geelong, Melbourne, Swan Hill and Country NSW and Victoria.

I spoke with a few traders from Melb and Heathcote, they were generally happy with the Hamfest, although some said that numbers were down.

Azem provided the food from his van and generally happy with the day, again, he mentioned that numbers were down. This is to be expected in the light of the effect the Covid virus has had on Australians.

Geoff VK3ZNA

Pictures of Hamfest, thanks to Dallas James-VK3EB







If you would like more pictures, Dallas has many more available.

Amateur radio over the internet

At the club meeting on the third of September Stewart Mair VK3PR demonstrated a number of methods of operating amateur radio over the Internet.

Allstar, dStar, Brandmeister DMR, VK DMR P25, NXDN, Fusion and M17.

Allstar radio is VOIP from the FM handheld through an Allstar node mounted on a Raspberry Pi and through your modem to the Internet.

One can directly connect with other amateurs who have an Allstar node.

You can operate and transmit through your node remotely using apps called DroidStar, DV Switch Mobile and Node Remote on your mobile phone.

The two common means of connecting over the Internet with digital modes are through MMDVM, usually a PiStar hat on a Raspberry Pi, or through an openSpot which is now up to its 4th iteration.

Both can be spoken to using most digital modes from a handheld. They also can convert one digital mode to another, called cross mode, the Pistar on the web and the openSpot internally.

Making a Pistar is a fairly inexpensive, but satisfying project.

OpenSpot 4 is expensive presumably because of the price of the ICOM dStar encoder. However, it's many abilities including being able to crossmode to most modes owning only a DMR radio makes it well worth it for someone getting into digital modes.

Without a MMDVM or openSpot:

DroidStar Is worth putting on your mobile phone as it allows you some access to the digital modes. However, do not use it for transmitting dStar.

Echolink is also worthwhile on your phone as some All Star users have a link on echo link to their All Star node such as VK3PR-L.

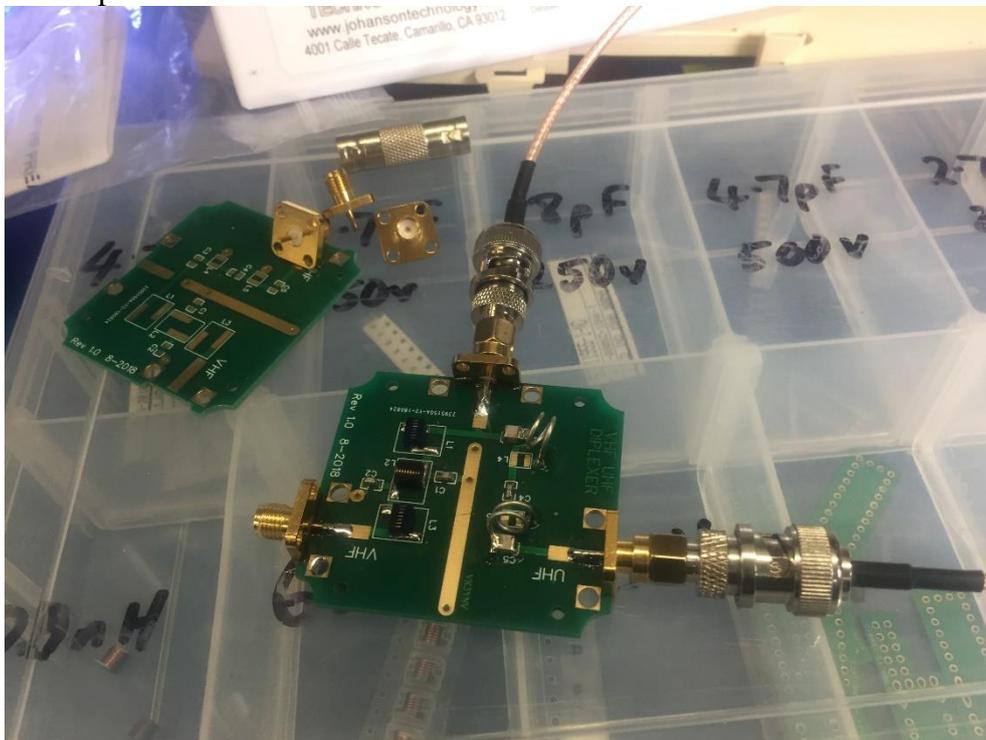
Stewart Mair-VK3PR

A duplexor Design for 2M 70CM (Part 3 of 3) --- Ray VK3YNV

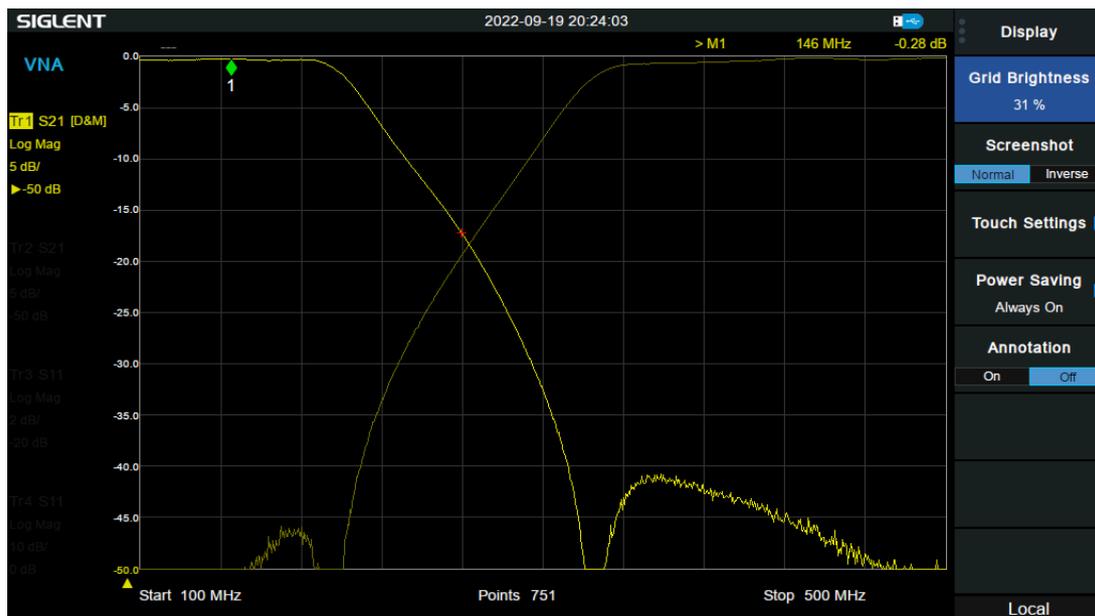
This part deals with testing the duplexor to see if it validates the design calculations.

The first and most obvious measurement is to do a S21 and S31 sweep across the frequency of interest.

Here is the test setup.



Measurements were recorded on a Siglent SVA1015X VNA.



The rejection of the unwanted band in both cases is around 50 dB, the insertion loss is about 0.3 dB Return loss (VSWR) was better than 1.1 :1 on all three ports.

The measurements agree pretty well with the original modelling,

Applications-

The duplexor can be used at either end of the coax, for example if you have a dual band antenna and two radios you can operate both at the same time with the one coax. Or if you have a dual band radio and separate antennae then you put the duplexor at the antenna end of the coax.

Power handling is a bit uncertain, I would rate it for 25 Watts continuous operation, and 50 watts intermittent. But I haven't done any long term high power tests.

If anyone want one I can build up a few between now and the next club meeting so if any one wants one let me know in advance.