SHEPPARTON & DISTRICT AMATEUR RADIO CLUB

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

Repeaters VK3RGV Freq: 53.725MHz (1 meg offset) -146.65MHz(IRLP Node #6992) (600 kHz offset) - 439.775MHz (5 MHz offset) - 438.2MHz (D-Star) [D-Star not operational at this time]
Access to the analog repeaters is by sub-audible 123 Hz tone or noise mute (less sensitive).

Club Network informal on air get togethers. All welcome. Club callsign VK3SOL:-
Wednesday evening - 3.62 MHz ± interference 7.00pm, 2mx repeater 8.00pm

Meetings are held at 1pm 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 and days are normally notified in the preceding newsletter. Website – www.sadarc.org

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. You do so at your own risk.

President:- Greg Keegan	VK3POP	gregkgn@gmail.com	
Secretary:- John Waters	VK3PXJ	glengordon@bigpond.com	
Vice-President:- Barrie Halliday	VK3KBY	Treasurer:- Ron Burns	VK3COP
Membership Sec :- Pat O'Shannessy	VK3OV	Webmaster:- Dallas James	VK3EB
Station Manager:- Ian Ward	VK3CHV	Publicity Officer:- Peter Rentsch	VK3FPSR

Technical Committee:- Phil VK3ELV, Ray VK3RW, Geoff VK3ZNA & Rodney VK3UG
Newsletter:- Peter VK3FPSR & Rodney VK3UG rodlynn6@bigpond.com

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JUNE 2015 NEWSLETTER

Next meeting. 10.30am 4th of July.

There will be a barbecue, the general meeting and a Show and Tell.

The Show and Tell will be like we had a couple of months ago, where we had four items displayed and demonstrated- a loading coil for 630 metres, a home-made 30 position switch, a dual band base antenna for 2 metres and 70cm and a small 160 metre transmitter.

Bring your latest project to show and tell us about it and if practical demonstrate what it does too. As this is a rather laid back activity even bring along a project that isn't doing what it should and other members may be able to assist you in some way.

Editor's Ramblings

For the next few months Peter VK3FPSR will be doing the newsletter, so assist him by providing input for the newsletter his email pages.cobram@bigpond.com

Talks

During last month John VK3PXJ and Pat VK3OV responded to a request that someone from our club go to Harmony Village (retirement village) to give a talk on radio. Not knowing what was required and assuming that they wished to hear about amateur radio our members went prepared to talk on that. However, they found out that the Village was expecting a talk on Vintage Radio. Pat no doubt was able to provide some information as he is also a member of the Vintage Radio Club.

It would seem that we need to query those who wish us to talk to them that we endeavour as best we can to find out what aspect of radio communications they would like us to talk about.

Rodney VK3UG was asked to talk to the Goulburn Valley Motor Vehicle Drivers Club about radio. They were more specific about what they wanted which was about the use of radios of all sorts that may be relevant to them when they travel into rugged or remote country. They mainly wanted information on getting the best out of their UHF CB radios. However, they were interested to hear of other radio systems that may suit in outback areas such as the Simpson desert. Whilst I did get an opportunity to mention amateur radio it seemed that wasn't of great interest to them. However, some may remember what was said and contact me or our club in the future.

Examinations

One area the club is falling down in is assisting existing members to obtain a Standard or Advanced level qualification. Andy Ashley wants to get at least his Foundation level certificate so we need to provide this assistance for our members. I'm not familiar with the methods to assist members obtain the various certificate levels and it would be great if one or more members took it on themselves to investigate how we assist our members. This may involve some members becoming accredited to tutor and examine members**. Who is prepared to do the research on this need? It is desirable that it is someone outside the committee to lighten the load on committee members. However, if a committee member feels they have the time – go for it. Contact the WIA examinations section for details.**

Mount Wombat Repeater Site

During the month and at the meeting on 13th June, there has been considerable discussion about our repeater site. These involve improvements, sharing of the site and the long term viability of the site. We have been in discussion with Amateur Radio Victoria and Austereo with the aim of coming to a mutually beneficial outcome. As a result of this, the notice of motion by Ron Burns VK3COP concerning the sharing of the site with Austereo has been put on hold until a number of points concerning the conditions of occupancy can be resolved to all parties satisfaction. We'll keep you informed.

The Murray Quad

Some time back our club participated in this activity by providing communications. For doing this we were to receive a donation to our club. Regrettably the donation wasn't forthcoming due to

misunderstanding within the group we did the radio communications for. We have said that we will be interested in assisting in 2016 and have been assured that the misunderstanding will not reoccur.

Club Nets

The lack of members on the 80 metre net of a Wednesday was mentioned. If you can go on the net for a chat with other club members or others who may call in that would be great. I have a permanent commitment of a Wednesday night.

Batteries – Vehicle starting batteries.

After I demonstrated my portable 10 metre high antenna at the last meeting I dismantled it and by the time I have finished all other members had departed for their homes. Yours truly then went to start his vehicle and the result was NO START. The battery was flat after running the rig for only a short time, so I had to get a jump start from another vehicle. I made sure the battery was fully charged by Monday morning and went to one of the local battery places in Shepparton. I asked them to test the battery as I said I had some doubts about it and it was possibly going to fail. They did the normal high discharge test over around 30 seconds or so and the battery looked good. I asked if there was any other test that they could do, so another test instrument was put onto the battery and it indicated 80% - whatever that means. The battery was proclaimed as okay.

I was still not sure about the battery so I decided once again to make sure the battery was fully charged and then I put my own battery capacity meter onto the battery. This device discharges a battery down to around 11.4 volts and at this voltage the battery is claimed to have about 10% of its capacity left. I set the discharge at around 7 amps which if the battery were in 100% condition would take the device around 9 hours to discharge a 70 amp hour battery to the 11.4 volt cutoff. The battery was exhausted after 2 hours so the actual capacity was something like 16 amp hours. This means you couldn't sit on the side of the road and talk on your rig for long particularly if the rig runs 50 to 100 watts output!

The battery was replaced and I'm now sure I can talk on the rig on the side of the road for some time before the battery is flat. I suppose the moral of the story is the high discharge testers ONLY tell you that what is left of the battery that can start the engine a few times. A test with a tester like I use gives you a realistic idea of the actual capacity of the battery.

Rodney VK3UG

A visiting amateur from overseas.

Members. The following email was sent to John VK3PXJ on 20th. The only Sherwood in Mooroopna appears to be R.J Sherwood, 70 Hall Street, Mooroopna, 5825 5220. If anyone is in a position to have a chat with John Sherwood I'm sure he would appreciate it. His email address is souwow@hotmail.com

Hi Glen, I will be visiting Australia for the first time next week. I will be staying with my uncle Bob Sherwood in Mooroopna. Looking at your club website I have missed your Monthly Saturday meeting but was wondering if any of the members might meet up with me for a chinwag about radio in the area in the next two weeks after 20th.
Kind Regards
John Sherwood, HS0ZJX, EI7GN & G0EIU.

A Drew Diamond 40 metre home brew SSB transceiver and a portable HF antenna system

Ray VK3KUG has been busy in recent months building a 40 metre (7.0 MHz) SSB transceiver. On the 13th at the club meeting Ray had it running on a club room station antenna and signals were quite easily heard. It only puts out around three watts of RF so a quick CQ didn't bring any results plus there was a fair bit of noise in the shack. Here is Ray's description of what he did.

"The design came from a book by Drew Diamond VK3XU entitled "Radio projects for the amateur" 1995 and is called TCF40 (twin crystal filter 40M). The project started as a fun, simple, home built, portable transceiver that maybe I could have a bit of a go at making a contact if we were out on our property or camping. I kinda think that getting back to the roots of amateur radio is what it's all about.

The 3 pcbs are easy to make, the process is covering the blank pcb with packaging tape, tracing the pattern through carbon paper, cutting the outline of all the tracks and peeling the unwanted material off, and after etching the pcb comes out with very sharply defined and professionally looking tracks.
I made some modifications to the PCB to fit the gold plated surface mount SMA connectors and also modified the TX board to fit the TX/ RX change over relay.

The VFO was built in diecast box from Jacar with reduction drive fitted to front surface. The frequency counter is programmed through 2 push buttons to give an offset of the IF frequency.
I have built up a fair supply of SMD components and decided to use them where possible. I had to use leaded components where they straddle over tracks.

Drew's design is easy to build, align and works well considering the very low component count. Parts sourced:- Case , Shepp hamfest. SMA connectors, pre made cables, crystals, NE602s , toroids , freq counter , SMD parts, pots etc. China via internet sites. Transformer, reduction drive, chassis aluminium, etc, junk box."

Ray purchased the fluorescent display/frequency meter from China. The VFO frequency is read by the display/counter and the IF frequency is added or subtracted from this frequency to give the signal frequency. This is a nifty way of doing things.

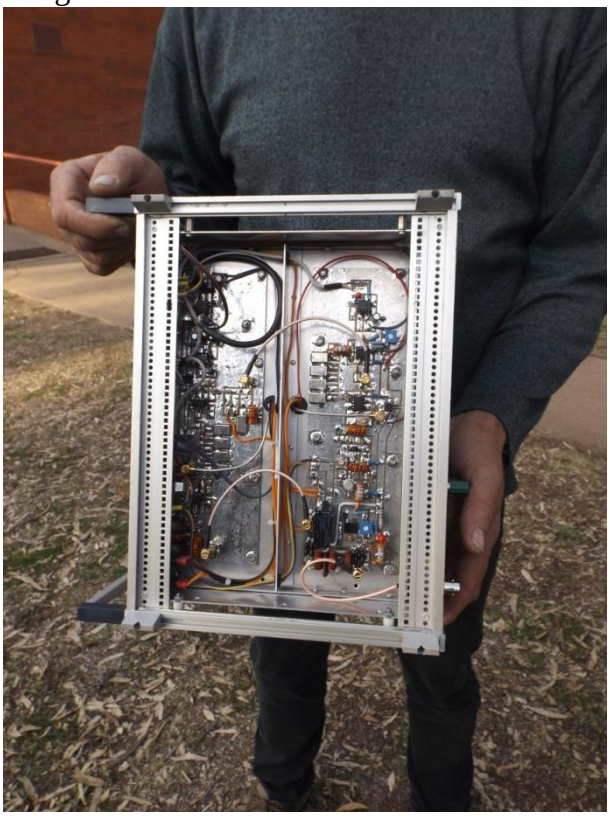
Rodney VK3UG has mobile capabilities on his vehicle for 160, 80, 40, 30, 20, 17, 6, 2, and 70cm. The vehicle is also set up for portable operation. Some time ago the club bought a batch of seven and 10 metre squid poles for use as portable antenna supports. Members bought poles to suit their perceived needs. StevenVK3DG was the first in the club (to my knowledge) to use a 10 metre squid pole to support a portable antenna.

My 10 metre pole has a clamping bracket and a plate so that it can be attached to the front nudge bar. The bottom of the squid pole is anchored to the earth with a couple of tent pegs driven into the soil and strapped to the pole. Just above the nudge bar is mounted an ICOM AH4 automatic antenna tuning/matching unit (ATU). An insulated wire is attached to the tip of the pole and is wound with a wide spaced spiral down to the ATU antenna terminal. The spiral winding prevents the squid pole top sections from bending over with the weight of the antenna wire. The tip of the wire has a ring terminal on it to prevent corona discharge when transmitting. Corona discharge can cause the wire to glow and melt, plus there is a loss of RF output. Three radials of no specific length but at least 10 metres long are attached to the nudge bar and radiate forward and one to either side. The vehicle is the other counterpoise/radial.

Two cables go from the ATU to the transceiver, one being the RG58 coaxial cable and the other the control line for the ATU. To tune the ATU it is a matter of pressing the tune button on transceivers that are equipped to be used with this type of ATU. The ATU will tune from 80 metres to 6 metres. However, the radiation pattern on the higher frequency bands may not be optimum. I chose not to go over 17 metres to keep the radiation angle as low as practical.

As with Ray's set no actual contact was made with any stations due to electrical noise and quick CQs often don't get immediate results. Both Ray's transceiver and my antenna set up were brought along to show members things that they can do and how to do it.

Ray VK3KUG with his Drew Diamond designed 40 metre transceiver.



An under chassis view of Ray's transceiver. Quite a bit of surface mount componentry has been used.

A front panel view of the 40 metre transceiver with a digital frequency readout.

The 10 metre squid pole is attached to the nudge bar on Rodney VK3UG's vehicle. The Icom AH4 ATU is clamped to the squid pole and the antenna radials can be seen at the centre bottom of the photo.

The top of the antenna wire is attached to the top of the squid pole via builders twine. Note the use of an eye terminal for the top of the antenna wire..

Rodney VK3UG's portable 10 metre squid pole antenna mounted on the front bumper of his vehicle. The pole is secured to the nudge bar by clamps. The base of the squid pole is anchored to the ground by tent pegs driven into the ground and tied to the squid pole.

Minutes of meeting held 13/6/2015

Apologies :- VK3FJHM John,VK3FALN Allan, VK3JNC Ian, VK3HEN Darren ,VK3PGK Graham

Those in attendance:- JOHN VK3 PXJ, GREG VK3POP, RON VK3COP, ANDY ASHLEY, HUNTLY VK3ZE, PHIL VK3ELV, BILL CROCKER SWL, RAY THAUS VK3 KUG, ALLAN VK3AO, BRUCE GLASSON VK3FBGN ,PETER RENSCH VK3FPSR, MAX JOHNSON VK3DSF, PAT O'SHANNESSEY, Ian VK3CHV, Dave VK3VCE, Les VK3TEX, Kevin VK3BPH, Jack VK3TJS, Neil VK3XNW, Barrie VK3KBY

Inward mail:-
Thankyou card from Geoff Angus on the death off his mother.
Account from the scout hall committee for hire of building.
A letter from the Murray quad committee.
A membership renewal from Ray Wales VK3RW

It was moved by Peter VK3FPSR, that we support the Murray Quad in principle.
Ron VK3COP moved the financial report be accepted, seconded by Bruce VK3FBNG and carried.
Ron moved that an account for eleven dollars 74 centsd be paid to him, seconded by Peter VK3FPSR.
Rod VK3UG presented the technical report. The report was accepted and seconded by Huntly VK3ZE.

There was extensive discussion held on the talk of Southern Cross Austereo using our facilities on the Mount Wombat site. There will need to be a lot more discussion before a final decision is made. Motion move by Huntly VK3ZE, that Ron's VK3COP motion be held over to next meeting. The club is to approach the WIA for legal advice, seconded by Barrie VK3KBY, motion carried.

The next meeting will commence with barbecue from 10.30am and the theme for the day will be a show and tell.
The meeting closed at 2.30pm
John Waters, VK3PXJ Hon. Secretary