



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 - 3.62 MHz ± interference 7.00pm (try also 8.30pm), 2mx repeater 8.00pm

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:- Peter Rentsch (Temp) VK3FPSR Vice President:- Vacant
Secretary:- John Waters VK3PXJ Treasurer:- Greg Keegan (Temp) VK3POP
Membership Sec. :- Pat O'Shannessy VK3OV Newsletter:- Peter VK3FPSR & Rodney VK3UG
Technical Committee:- Phil VK3ELV, Ray VK3RW, Geoff VK3ZNA & Rodney VK3UG

November Newsletter 2014

Presidents Report for November 2014

Thank you to all those that attended the November meeting. It was obvious from Rodney's notes that some very good discussion took place. Thank you to Rod and Greg for organising and running the meeting.

There will be no newsletter in December, our next newsletter will be published in time as a reminder for the February meeting. Don't forget at our February meeting our AGM will reopen for the election of office bearers for the remainder of 2015. As I said in the last newsletter, if we cannot get an executive the Club will have to go into recess until such time this issue is solved. It would be a pity for this to happen after so many years of the Club being in existence. We have a group of keen, enthusiastic, cooperative and committed members that work well together in the common goal of increasing their and others knowledge of Amateur Radio. Let's not lose this!

Our Christmas meeting will be Lunch on Sunday 7th December at the Mooroopna Golf Club from 12.00 noon on. Cost of the smorgasbord lunch is \$17.00 per head. John VK3PXJ has booked the venue and we will be joined on the day by members of the Vintage Radio Club of North East Victoria. A great day was had last year in Benalla and I am looking forward to the joint luncheon again this year.

As this is the last Newsletter for the year Karen and I would like to wish you all a very happy Christmas and a safe New Year and we look forward to seeing as many of you as possible on the 7th December.. Whatever you do over Christmas and New Year, enjoy, relax and make sure you allocate sometime this great hobby.

Peter
VK3FPSR
President SADARC

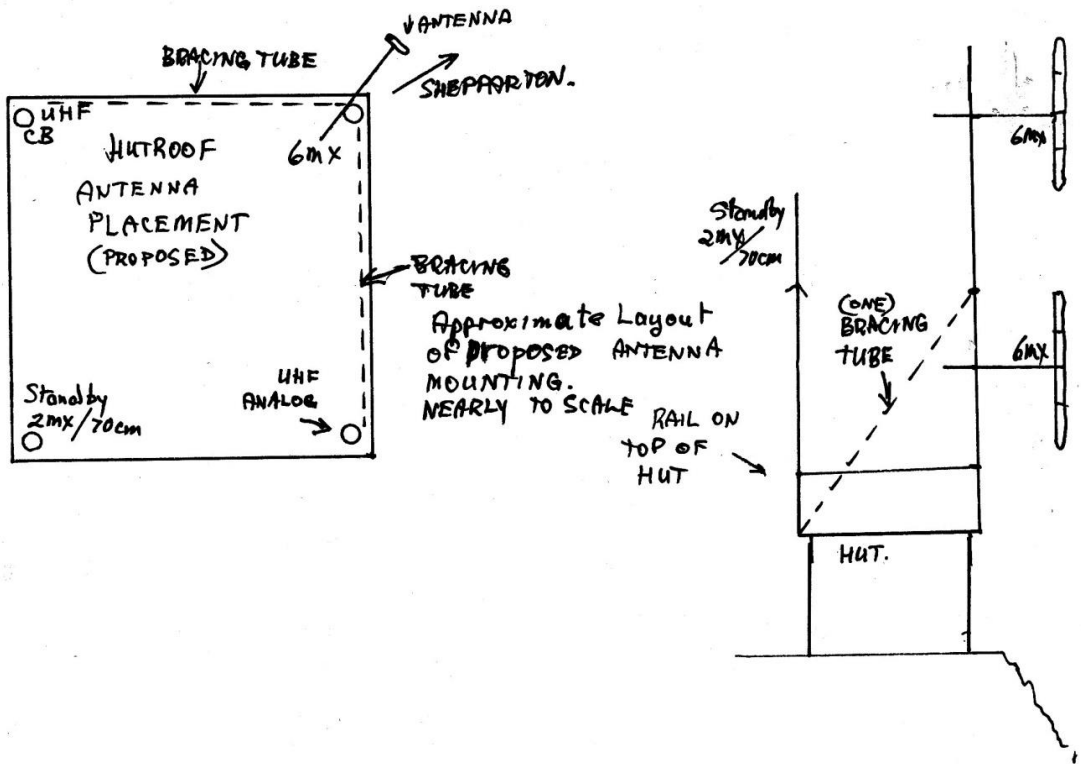
NOVEMBER 1ST MEETING

The meeting for 1st November did not officially occur as there were insufficient members to form a quorum. Initially at noon there were five members in attendance Greg VK3POP, John VK3PXJ, Kevin VK3BPH, Wayne VK3GMV and Rodney VK3UG. As time progressed the following members arrived, Barry VK3KBY, Neil VK3XNW and Jacek VK3TJS.

Whilst it was disappointing that a formal meeting was unable to take place (members must have taken time off for the Melbourne Cup or gone to Melbourne to it) a productive discussion took place about a number of matters involving the club now and into the future.

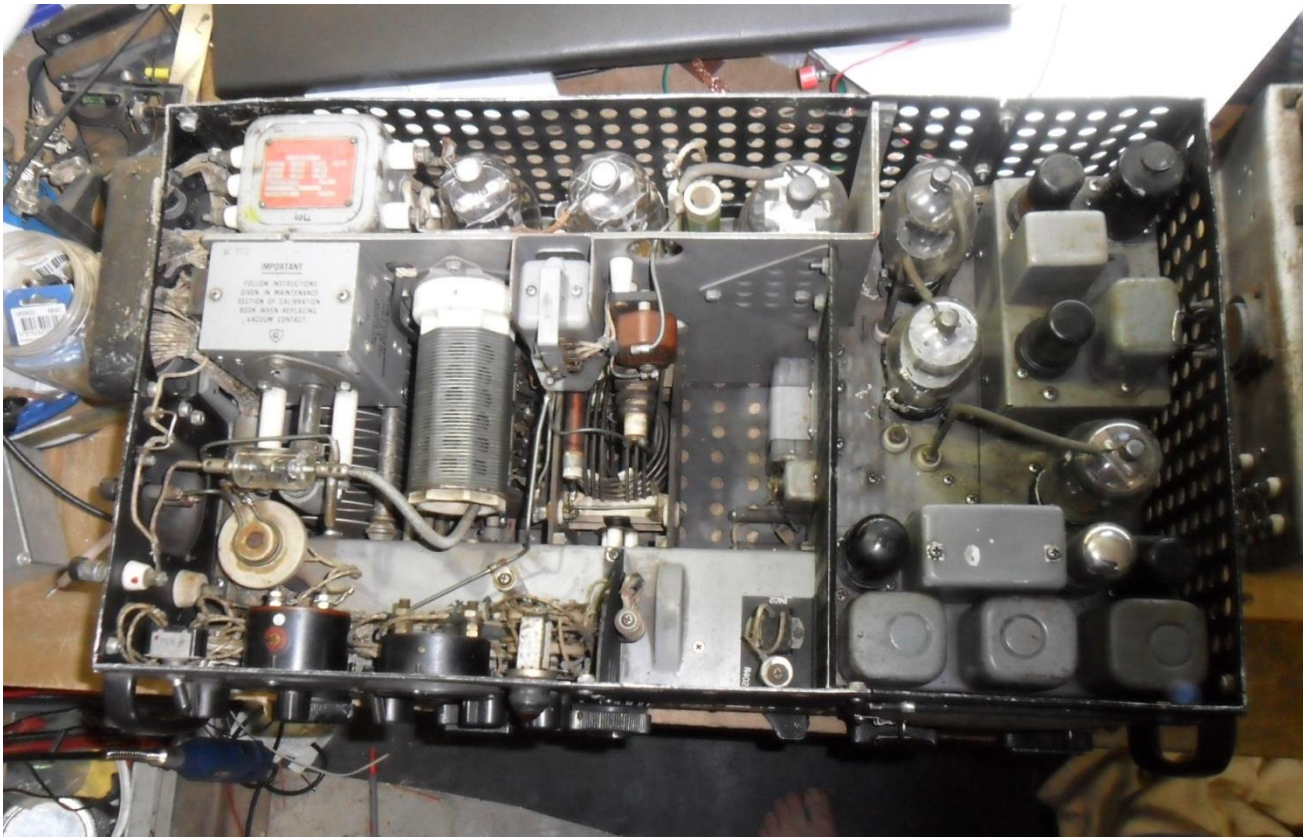
- It was suggested that members who would like to take part in the informal get together on 80 metres of a Wednesday night try a trial of both 7 pm and 8.30 pm times to find out which time best suits members during the summer.
- The end of year get together with the Vintage Radio club is to take the format of a smorgasbord (\$17 each) at the Mooroopna Golf Club, Fairway Drive, Mooroopna, 3629 at noon on 7th December. There will be a short meeting (one item important to the tech committee, if possible) but it will be mostly a feed and a chin wag.
- Jacek is having trouble with the IRLP and hopes to be able to get some help from Toby VK3PNF to solve the problems.
- It was discussed that we need to spend more time in publicity for our hobby (we do get regular publicity in the Shepparton News in Billboards), spend more time with scouts who may be interested in radio (fox hunting suggested as one activity), look at someone becoming an assessor for examinations. This would involve more members taking on some tasks.
- On the 27th October Mt Wombat copped part of the electrical storm that went through the mountains. Once again we lost power. It was decided to let the system run on batteries with only 2 mx and UHF CB repeaters operating until the low voltage cut-out shut down all services. On battery power the 6 mx and 70 cm repeaters are automatically removed from service to extend the battery life before power is restored. The system ran until Phil VK3ELV and Ray VK3RW went to Mt Wombat on Friday 31ST to determine what had happened. This time we were lucky as only the earth leakage circuit breaker had tripped with no damage done inside our repeater hut.
- The system ran for four days with very light usage, and on the measured currents being drawn and the amount of usage the repeaters got, the batteries still have around 100 AHC capability despite the savage treatment they got back in February. The club authorised the purchase of a pair of batteries and we are looking at the most suitable replacements including knowing the length of warranty. As the batteries have more capacity than we believed they would have after the savage treatment they received we have more time to select the most suitable replacements. However, in an emergency both the 2 mx and UHF CB could be heavily used for emergency use and then these batteries may last only 24 hours.
- Kevin suggested for a meeting early next year a talk on Digital TV reception about the problems people may already experience and/or what they may experience into the future and how these may be rectified.

- The antenna systems at the club rooms were discussed and it was thought that two sections of the five section mast on the club rooms would provide enough height for all the VHF and UHF activities we envisage from the rooms on those bands. A little less likely to be vandalised too.
- Quite a bit of discussion took place about the installation of the 6 metre repeater antenna system on Mt Wombat. The installation of the extra 6 metre antenna on the lattice tower at Mt Wombat revealed many problems with making it an effective and safe installation. (1) The guy wires will adversely affect the radiation pattern of the array, which would involve either cutting at least one guy wire into short insulated sections, or offsetting the antennas 3 metres from the mast which would under severe conditions cause twisting moments on the mast (we cannot get figures for this from the tower manufacturer). (2) It is a physically hard job for the rigger to mount such sizable antennas, and his safety is paramount, and Ian VK3CHV or any other rigger may not be available to assist us with such a job just when we would like it to occur, they have a life to lead too. Just when we believed we could do this work Amateur Radio Victoria (ARV) (licensee of the site) said that they would be having the guying points altered for OH&S reasons. It was to be done last June but we suspect it may not be done for years so this brought our planning to a halt. (All of Phil's calculation work came to a complete halt). Ian made the suggestion back in October that we should consider mounting the 6 mx antenna array (2 antennas in phase, 3dB gain) on the corner of the hut using the north western mounting position. The mount would consist of around a 7 to 8 metre tubular mast with the two antennas mounted one near the top of the mast and the other just above head height. They would be offset around $3/8^{\text{th}}$ of a wavelength (about 2.25 metres) to the north west of the hut top. The hut antenna frame network was not designed for such a long mast so pipe bracing would be used reaching 3 to 4 metres up the pipe mast and braced down to the south west corner and north east corner of the hut. **Diagrams below will give some idea of how this would be achieved.**
- Whilst it is possible to take down the 6 mx antenna off the lattice tower Ian suggested that it be left where it is and retained as the standby antenna, and that the club purchase an identical antenna to the one purchased a year ago and use the two to form a 3 dB gain array. Whilst this was never our plan to get another antenna or to put them on the hut roof, it is the only reasonable way to complete this project in the foreseeable future due to the problems stated above. There are advantages in placing this antenna array on the hut, (1) we do not have to be concerned about the effect of guy wires, (2) the antenna system is easy to access and safe to maintain, it can be tilted over for maintenance (in fact all antennas on the hut can be tilted over for maintenance), (3) we can experiment with a split antenna system, with the lattice mast antenna being the receive antenna and the hut mast antenna being the transmitter antenna or vice-versa, (4) we can swivel the direction of the antenna around whilst standing on the hut roof, (5) we can work on it without a riggers ticket, which can make work on it much safer and none of us are getting any younger so the easier and safer our work is the better. The existing standby 6 mx antenna would be brought back to the club rooms and installed there. The technical committee ask that you approve the purchase of the extra antenna.



The Collins ART13





At our Hamfest in September Steven VK3DG fell in love with a magnificent Collins ART13 airborne transmitter from WWII. Steve, as some members know, is a collector of Collins Radio equipment, and decided this unit was too good to pass up. I would agree, I was offered one of these units around 20 years ago and foolishly didn't take up the offer. I have been kicking myself ever since.

The basic information of the transmitter is that it will operate between 2 MHz and 18.1 MHz using the inbuilt VFO and has a crystal calibrator that allows accurate frequency setting. The selection and tuning of the transmitter is preset on up to 10 frequencies which can be selected remotely from the pilot's seat in the aircraft. It is capable of both AM and CW operation, and in the AM mode uses high level modulation using two 811 triodes operating in push-pull. Some of our members will remember the 811, as the upgraded versions are used in many HF linears. This is quite a potent transmitter which uses an 813 tetrode transmitting valve in the final giving a touch over 100 watts at the antenna. The 813 is capable of up to around 300 watts output in ICAS ratings.

Steve's next project is to build a power supply for the ART13. The ART13 requires 28 volts DC at more than 5 amps for the valve filaments and the auto-tune motors, plus 400 volts DC @ 225 ma and 1250 volts DC @ 250 ma. That will keep you busy Steve when you get some time off from work! Note the 813 has a thoriated tungsten filament that needs 10 volts @ 5amps to heat it.

FOR SALE – AMATEUR RADIO RELATED BOOKS, HAVE OTHER VINTAGE RADIO TITLES TOO

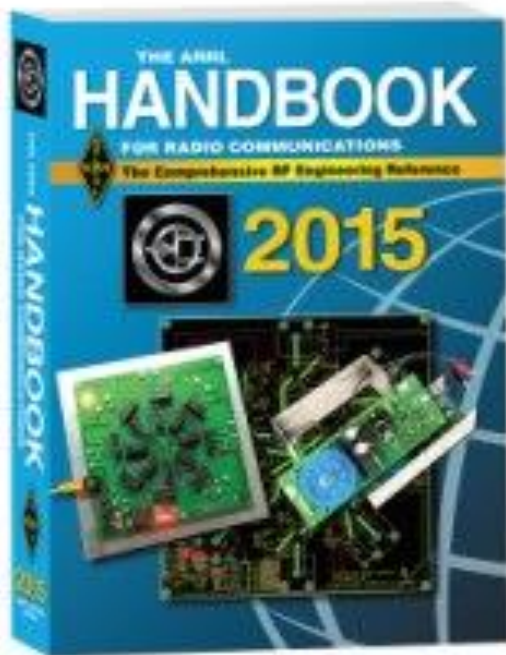
- Fifty years of ARRL ARRL 1981 151 pages \$5
- Radio Transmitter Principles and Projects Ed Noll Editors and Engineers 1973 320 pages \$5
- Radio Frequency Interference – How to identify it and cure it. ARRL 1986 80? pages \$5

- Radio Frequency Interference – Practical cures for Radio Frequency Interference ARRL 2007
Approx 300 pages \$15
- Specialised Communications Techniques for the Radio Amateur ARRL 1975 208 pages \$10
- Radio Communications Handbook RSGB 4th Edition 1968 Excellent text book. Some water staining, but generally in good condition. 700 to 800 pages HC \$15

Rodney VK3UG, rodlynn6@bigpond.com

Copies of the WIA Call book for 2015 will be available for sale at the December Christmas Lunch. The cost of the call book is \$30.00

Also available at \$60.00 will be the ARRL Handbook for 2015.



The ARRL Handbook is widely used by radio amateurs as a reliable and highly-respected guide to station design, construction, modification, and repair. Introduced in 1926 as the Radio Amateur's Handbook, each edition has remained true to this publishing legacy: a concise source of reference and information for applied radio electronics and experimentation. Chapter by chapter, you will discover the theory, practical information and construction details to expand your knowledge and skill as an Amateur Radio operator and experimenter.

This ninety-second edition of *The Handbook* is at the forefront of the growing field of wireless telecommunications. The book covers not only the fundamentals of radio electronics—analogue and digital—but also practical circuit and antenna design, computer-aided design, digital operating modes, equipment troubleshooting, and reducing RF interference. Many projects and construction articles are included to help enhance your station and expand your participation as an

active radio experimenter. Practical applications and solutions make *The ARRL Handbook* a must-have for hobbyists and technical professionals, finding its way onto workbenches, operating desks, and into university libraries and classrooms.

Dozens of contributors help ensure that each edition is updated and revised to reflect the latest advances and technologies:

New Projects

Simple Adjustable Tracking Power Supply

- Tri-Band Moxon Yagi Antenna
- A Legal-Limit Bias-T
- An Eight-Channel Remote Control Antenna Switch

New Information

Updated material on the state of Solar Cycle 24

- Recommended parts for modifying circuit designs and fine-tuning performance
- A package of useful applications on CD-ROM from Tonne Software, including a new version of the ELSIE™ filter design program
- Annual transceiver model review

CD-ROM Included! The CD-ROM includes all of the fully searchable text and illustrations in the printed book, as well as expanded supplemental content, software, PC board templates and other support files.