South East Radio Group

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Repeater report for AGM August 2026

This has been a maintenance year for the beacons and repeaters.

Beacons

The two metre beacons at Mt Graham (VK5RSE) have been maintained by Maxwell VK5AC. The 70cm beacon finals were again repaired for causes unknown. Despite checks on the antenna indicating there is not an issue, it is concerning that reliability is a little iffy. The two metre beacon chugs away although in recent times we have turned
the power down to 5W. Beacons are for weak signal reception and the difference between 5 watts and 20 watts is only 6dB. The reason for the reduced power was interference with the repeater. We do not receive many reports for the beacons so we believe there is reduced interest in recent years. Whilst our electricity costs are under control it's not an issue, however if circumstances change then we should re-examine the value of beacons. The 6m beacon is currently not in use at the clubrooms, it had a large impact on our power bill.

Repeaters

VK5RMG at The Bluff

Our ongoing relationship with Henk our site provider is excellent, thanks to the ongoing work by Nick VK5NJS who checks the Diesel Generator each month, checks the site for issues and along with Norbert VK5MQ watches over the solar cells and repairs where necessary. VK5RMG is a very complex site for us. The 2M system has the 2M repeater and three links to
(a) The Bluff to Naracoorte (our first link), which in turn links to Willalooka,
(b) The Bluff to Mt Graham which in turn links to Mt Benson.
(c) and lastly The Bluff to Mt Richmond.
Total power draw is just over 14 A when in use. Also at the site is an APRS repeater, a receiver for the Marine transmissions (AIS Vessel Tracking Receiver), and a C4FM digital FM repeater on 70cm (5A on TX). The Internet comms into the area are provided by a router connected to the nearby Telstra Cell. As well as providing for Henk's FM station we also use the data for a camera and a 230V charger for automatic emergency top ups on cloudy days during heavy use. This is mostly a problem on overcast wintry days. We now have better monitoring of the battery and load so this is helpful for the repeater team. By and large the site runs well from the solar. There has been discussion

about additional panels but no commitment yet. We are also looking to increase the battery size from 200AH to 300AH LiFePO4 sometime this year. Generally, this site performs well for us even though there are still problems, especially on Sundays with mixing products causing noisy signals. System power consumption is 4A on standby and up to 20 A when both repeaters are active.

VK5RKN on Mt Benson

Linked from The Bluff, VK5RKN works satisfactorily although at one stage there was some low level interference. As a result, Maxwell implemented an improved CTCSS decoder for the site. Unfortunately, our first visit to install this receiver didn't meet with success. Since then he has made necessary changes to the receiver and it sits in my shack awaiting installation. I seem to have too many 'round-to-its'. Sometime soon!

Tony VK5ZAI has an eye on this site and keeps it maintained. Thanks Tony. A new battery (LiFePo4) and charger are on order for VK5RKN.

VK5RNC at Naracoorte

This site belongs to the Naracoorte Amateur Radio Club but is full maintained by SERG and the licence paid by the WIA (as it is for VK5RMG and VK3RSW). The Naracoorte Club

helps where it can. All the equipment is owned by SERG. The link antenna to Willalooka
is about to be replaced in the near future. A 16 element, commercial, welded beam is
on order and will be installed as soon as possible. The link to Willalooka is very
marginal. Peter VK5BE and Nick VK5NJS are our key people maintaining Naracoorte.

VK5RBT at Willalooka

This is our repeater in the north and its' generally reliable apart from the link. VK5RBT is
currently stand alone as the link antenna is showing a very high SWR and is turned off
awaiting the new link antenna. Nick and Peter plan to replace the antenna with another
16 element yagi. This will be the same as Naracoorte's but Nick and Peter will replace
the RG213 with LDF450. Willalooka is a stand alone for the moment. The total cost of
the two special frequency antennas including delivery is about $1000.
There is no news on the second tower, we remain hopeful.

VK3RSW at Mt Richmond near Portland

This repeater has been super reliable. Running completely from solar it provides a good service into western Victoria as part of SERG's repeater system. We

haven't visited this site since its installation several years ago.

VK5RSE Mt Graham

This repeater provides good coverage along the Princes Highway and strong signals into Millicent, Southend and Beachport. Mt Graham is fed from the Bluff and relays through to Mt Benson. It currently hosts some passive radar equipment and for this we receive $600 per annum. This site only costs us the licence fee. This year Nick, Norbert and Peter (with an audience of VK5DJ and VK5NFT) installed a replacement two metre antenna and this has significantly improved its coverage.

VK5RMG UHF C4FM/FM

This repeater provides sterling service and because of its linking to the Internet provides wide coverage. There's a lot of daytime use from within Australia although there is some non VK chatter at night from overseas. Currently while it is winter and charging of the battery is an issue, Nick is turning off the transmitter in the SERG shack from 10:30pm to 6:00AM which prevents outsiders from accessing the system and discharging the battery. The repeater remains accessible 24/7 for locals.
We have had some issues with interference from C4FM into the 2M system. This was

random in nature and was traced to the unit overheating. Maxwell installed two new fans and added a temperature sensor for a successful fix. Thanks Maxwell.

The future

We still have our eyes on the great tower at Willalooka but that has hit a major hurdle. There is a proposal to expand our VK3 coverage further into Victoria. Very early days requiring discussions with Amateur Radio Victoria.

Finally

A huge thanks go to the team who work on our beacons and repeaters, people who keep our sites tidy (Tom VK5NFT, Hos VK5HOS, NARC), the engineers (Maxwell VK5AC, Norbert VK5MQ, Tony VK5ZAI, Peter VK5BE), the general doers who can always be relied on to assist e.g. Jack VK5EBA and Nick VK5NJS and all those who put their hands up to help when asked.

John VK5DJ (Repeater Coordinator)
August 2026