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# VHF/UHF – An Expanding World

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## Weak Signal

David Smith - VK3HZ

There's not been a great deal of long distance propagation to report about this month. It might be almost time to pull down the tower, clean the cobwebs out of the matching harnesses and get everything ready for the next season.

At the start of May, a high-pressure cell settled over the southeastern part of the country, giving some enhancement from Adelaide over to the east coast. On the evening of 5/5, Roger VK5NY worked Rob VK1ZQR along a difficult path over the mountains. Rex VK7MO/5 in Port Lincoln managed some good digital contacts into Melbourne and beyond. (More about that later in the Digital Modes section.) Then on the morning of 6/5, VK5NY's keyer was heard at good strength by a multitude of stations in Canberra and Sydney, but unfortunately, no contacts resulted.

The morning activity (aircraft net) on 144.200 continues unabated with a number of stations (re)appearing with big signals. In particular, for the Melbourne stations, Chris VK2DO is putting a big signal into Melbourne on 2 m from his new QTH in the hills to the east of Canberra. Chris is currently "planting" a number of towers and so the signal could become even louder, and on higher bands, in the near future. Guy VK2KU is unpacking his station at his new QTH in QF55. He now has fewer neighbours and a good outlook to the east for EME. His path to VK3 is shielded by hills and so we in VK3 probably won't hear anything like the good signal that came from his old QTH.

The Wednesday evening net (144.150 at 2030 EST) run by Robbie VK3EK in Bairnsdale is attracting a larger crowd each week. Stations recently participating include VK3GOM and VK3KQB from Bendigo; VK3AXH, VK3IDL and VK3JTM from Ballarat/Ararat; VK3AJN, VK3KEG and VK3BG from northern Victoria; VK3XDK, VK3HZ and VK3AMD from Melbourne; and VK3ZYC, VK3RS, VK3WRE, VK3KAI, VK3HV, VK3YDK and VK3ZUX from the Gippsland area.

Russell VK3ZQB is testing new 70 cm and 23 cm beacons for Mt Gambier (VK5RSE) at the moment. All that is missing is a 10 W PA module for 23 cm. The current 70 cm beacon suffers from frequency stability problems, but is heard constantly in Melbourne – a distance of 410 km. Hopefully, the 23 cm beacon will also put out a strong signal.

Please send any Weak Signal reports to David VK3HZ at ...

## Digital Modes

David Smith – VK3HZ

The usual contributor to this section of the column – Rex VK7MO – has been travelling back and forth across the south of the continent, creating the Digital Modes news for this month.

As advised last month in this column, Rex travelled to Perth to give a presentation on "Weak signal DSP Techniques" to the WA VHF group, which, by all reports, was very well received – the meeting saw twice the normal turnout of people.

At the same time, he was taking advantage of the Eta Aquarids meteor shower and attempting Meteor Scatter contacts back to the east from a number of locations, using his remarkably compact, but very capable, portable setup.

Based on the results of contacts on his outgoing trip, where he was getting strong, regular pings at 1800 km from Melbourne, Rex decided that, on his return trip, he would see how far he could achieve a contact. After Perth, he headed back to Bremer Bay on the south coast between Albany and Esperance – a distance of 2336 km from Melbourne – where he succeeded in working VK3HZ and VK3FMD. Following that success (at one stage, there were 4 strong “pings” within 10 minutes), Rex moved 115 km further west to Albany to the location used by Wally VK6KZ to set the world 10 GHz record. Unfortunately, nothing was heard from there despite 2 ½ hours of trying. With the help of local Wally VK6WG, Rex found another location, still 86 km further west than Bremer Bay, for another attempt. Here, he worked VK5DK and was heard by VK3FMD. He also received a ping containing “FMD”. However, no contact was made back to Melbourne. It seems that there is a “brick wall” for Meteor Scatter at about the 2400 km mark. The contact from Bremer Bay to VK3HZ is a new national digital record for 2 m and is believed to be the furthest FSK441 digital contact ever achieved.

Rex then headed back east, operating from many locations along the way, and with a number of goals in mind. One of those – to work into Sydney from VK6 – was finally achieved at Eucla where he completed with VK2FZ and VK2FLR. From Eucla, he also worked VK7JG, back to the home state.

On 5/5, a stop at Port Lincoln coincided with very good conditions between SA and the eastern states. That evening, Rex worked a number of long distance tropo contacts using JT44, including VK3ZYC at Longford in eastern Victoria on 2 m, and VK3FMD and VK3HZ in Melbourne on 70 cm.

One of Rex’s other goals was to work from Adelaide into Perth. Rex had stirred up quite a bit of enthusiasm for digital modes and both VK6AO and VK6HK were working him regularly, when he had the beam pointing that way. In Perth, Rex parked his setup near the QTH of Roger VK5NY at Mt Wilson and looked west for contacts. He completed with VK6AO – a distance of 2140 km – and was heard by VK6HK in a “burn” more than 20 seconds long. VK6KZ also received a number of pings. Hopefully, this will spur the Perth stations on to working into further locations like Mt Gambier, and perhaps Melbourne (although no pings were received from the VK6 stations during monitoring of the VK7MO/VK6AO QSO at this QTH).

Rex would like to thank the stations that he worked during his trip including: VK2KRR, VK2FLR, VK2TK, VK2FZ, VK2EAH, VK3FMD, VK3HY, VK3HZ, VK3ZYC, VK3AFW, VK3KAI, VK3UM, VK5DK, VK6AO, VK6HK and VK7JG.

## **2 m & 70 cm FM DX**

Leigh Rainbird - VK2KRR

2 & 70 FM DX has been very quiet during April, with only one opening in the south east and also north QLD coast.

On Wednesday morning 7th of April, good conditions were present in the south east of the country from around 6 am till almost 2 pm. This duct occurred the morning after rainfall across the SE area.

Conditions were very good from here across to Adelaide with good strong signals both 2 m and 70 cm main repeaters.

Interesting call in on the Willunga Hill 146.675 repeater, south of Adelaide. Stations copied were VK5ZK, VK5ZPS, VK5KBJ, VK5YX, VK5AUE and VK5ACY. It was good to hear VK5ACY back in there after a return trip from Hospital, hope your recovering OK Bill.

Garry VK5ZK at Goolwa and myself tried simplex. Nice copy from Garry up to 4/5 on 146.500 and Garry was running only a 5/8th wave stick at 30 ft with 30 watts. Garry is 754 km from here.

Amazingly, conditions lasted till about 1.50 pm.

On Monday the 12th of April, Garry VK3KYF in Mildura was worked here at 5/7 on 146.500 @ 466 km.

Still deprived of much in the way conditions, slight relief was provided for some VK4 operators on Monday evening the 19th of April. Mike VK4MIK at Butchers Creek, 60 km south of Cairns, was able to make it to the Townsville repeater VK4RAT where he was able to work Phil VK4JOK, Felix VK4FUQ and Garry VK4ADW. Mike had a good S8 signal from the repeater and Garry had a good S5 signal from Mike direct.

If your looking for FM DX resources on the Internet, you may have noted the VK VHF FM DX Group website has not had an update for a while and the email group of the same name no longer exists. The site's activities have been incorporated into the Australian National VHF DX Group site [www.users.bigpond.com/anvdg/](http://www.users.bigpond.com/anvdg/). The existing FM DX email group has also been relocated to the ANVDG email group, which covers FM along with other modes. More details can be found on the website.

That's about it for this month. Please remember to send through any 2 & 70 FM DX reports to Leigh VK2KRR at ...