
VHF/UHF – An Expanding World

David Smith VK3HZ
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Weak Signal

David Smith - VK3HZ

Spring is definitely in the air, and with it were the first openings of the season across the two popular water paths.

On the evening of September 16th, Bill VK6AS in Esperance worked Colin VK5DK in Mt Gambier, Phil VK5AKK in Adelaide and Russell VK3ZQB in Port Fairy, all on 2 m. Bill was also hearing the Adelaide 2 m beacon. It's good to hear that Bill is back on air, as he had suffered significant damage to his large, 8 x 16 element yagi array from a windstorm.

On September 19th, Bill also heard the Adelaide beacon, but got no response to his calls. Later that day, Peter VK5ZLX on the outskirts of Adelaide was worked at S9+ strength by Leigh VK2KRR on 2 m. Peter then managed to work Chris VK2DO at S5 both ways, much to Chris' relief. Chris has reported hearing the Adelaide 2 m beacon from his new QTH frequently over winter, but hadn't managed to raise any responses to his many calls. Peter also worked Trevor VK3KEG, Ian VK3AXH and Jim VK3II.

On the afternoon of October 11th, the first contact occurred across the water in the other direction. Gordon VK2ZAB worked Nick ZL1IU on 2 m with S7 and S9 reports. Attempts on 70 cm were unsuccessful. Gordon reports that it is the 27th consecutive summer that ZL has been worked from VK on 2 m.

The opening to ZL remained for about 3 days. Ross VK2DVZ in Taree reports that on the evening of October 12th, he worked Nick ZL1IU on 2 m (S7), 70 cm (S7) and 23 cm (S1). He also worked Ray ZL2TAL on 2 m at S4. On the morning of October 13th, Steve ZL1TPH reports working VK2ZAB on 2 m, and VK2FZ and VK2TZ on both 2 m and 70 cm. On the same morning, VK4LC worked ZL2TAL. On the afternoon of October 14th, Trevor VK4AFL worked Nick ZL1IU on both 2 m and 70 cm. He was heard on 2 m by David ZL1BT, but no contact was made. David did manage to work Ross VK2DVZ on 2 m at S5. He also heard VK2HO working ZL1IU.

Speaking of the water paths, one of the stations that usually manages to work across the Bight into Melbourne at least once during the summer season is Wal Green VK6WG in Albany. I read recently that Wal is VK6's earliest licensed and oldest, active Amateur, having obtained his license on June 19th, 1936. Wal was born in 1911 and turned 93 in August. Apparently, he still climbs his own tower to perform repairs on his antennas!

Web Links

It's probably time for a quick update of the "must have" list of web links for the serious weak signal operator.

<http://pobox.une.edu.au/mailman/listinfo/vk-vhf> - the VK-VHF email reflector

<http://vklogger.brizwebz.com.au/> - the VK/ZL VHF-UHF Propagation Logger

http://home.cogeco.ca/~dxinfo/tropo_au.html - the Hepburn VHF/UHF Tropo Forecast

<http://www.vhfdx.radiocorner.net/> - The NSW VHF DX Group site

<http://www.users.bigpond.com/anvdq/> - The Australian National VHF DX Group

http://www.aca.gov.au/pls/radcom/register_search.main_page - ACA register of licenses

Operating Issues

With the onset of the busy season on the bands, it's probably appropriate to make some comments about possible improvements in some people's operating procedures.

Like many people, I usually monitor the 2 m calling frequency – 144.100 MHz – for extended periods while in the shack (which, for me, is also a home office). Unfortunately, it seems that many people are unable to tune away from the calling frequency, even when testing their rig. It is not unusual for the quiet hiss of the local power poles (!) to be rudely interrupted by an S9+ whistle as someone checks whether their rig is still able to transmit. Tuning up the linear also occurs on the call frequency. Please consider others when doing this, and tune away from the call frequency – there's plenty of space.

Another practice I hear sometimes is the use of FM-type calling – e.g. “VK3ABC listening”. Unfortunately, many times the station is well off frequency, so all that is heard is “Waark Waark Waark”. By the time the tuning dial is tweaked around to a frequency reasonably close, the station concerned has stopped transmitting. Were they calling CQ, or calling a specific station, or just testing? While extended, 5 minute CQ calls are also inappropriate on the calling frequency, please call several times to allow time for your signal to be resolved.

Finally, a subject that has also been the topic of some discussion recently on the VK-VHF Reflector – that of stations not Netting to each other's frequency. Like many, I find that weak SSB signals are more intelligible if the signal is tuned to sound higher than natural. Unfortunately, if you do this with the main tuning dial, then your signal to the other station will be low, and much less intelligible. In cases of very weak signals, the other station may not even hear you simply because you are off frequency. It is quite common to hear two stations working with a frequency difference of 100's of Hertz. There may be technical reasons for this - rig not transceiving, coarse frequency resolution of digital tuning. Yes, the Clarifier / RIT can be used by the receiving station to resolve these differences. However, the best operating practice is to firstly net onto the other station's frequency and then use your own Clarifier control to get the audio signal that you desire.

Microwave

Over winter, a group of Microwavers headed north to the warmer climate of VK4 with the aim of setting some new records. The expedition comprised Bill VK3AMH, Alan VK3XPD, Russell VK3ZQB, Colin VK5DK, Errol VK4ZHL and Neil VK2EI. Doug VK4OE joined them for the VK4 24 GHz part of the expedition.



Alan VK3XPD and Bill VK3AMH setting up for a record attempt

Propagation conditions were flat for the entire trip, and many challenges were presented, mostly not involving the radio side of things. Nevertheless, following much hard work, they did manage to set new VK4 records for 5 GHz, 10 GHz and 24 GHz and a new VK2 record for 10 GHz.

A more detailed report will appear in an article next month in AR.

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

Digital Modes

David Smith - VK3HZ

Our Digital Modes correspondent – Rex VK7MO – is currently travelling through VK5 and VK8, busily creating the Digital Modes news for this month.

As reported last month, Rex is gridsquare hopping northwards from Adelaide to Alice Springs and beyond, working many stations on FSK441 Meteor Scatter. Rex has a new 4WD vehicle enabling him to get to more difficult hilltops and he has also built an extension piece for his 2 m yagi, bringing it up to 19 elements and 11.7 m (38 ft) long – only used when the weather is calm! This setup has also allowed him to work several larger EME stations using JT65B including I2FAK, HB9Q and DL8GP.

After some long sessions particularly with the more distant VK1, 4, 6 & 8 stations, Rex achieved his objective of working All States (VK1 to 8) in one day on 2 m meteor scatter (FSK441B mode) from the Coober Pedy area. The only hiccup was his petrol generator temporarily running out of fuel.

The stations worked by Rex were VK1WJ, VK2FLR, VK2KRR, VK2EAH, VK2AWD, VK3HZ, VK3II, VK3CY, VK3AXH, VK4TZL, VK5DK, VK6HK, VK7JG, and VK8RH.

Well done, Rex.

Please send any Digital Modes reports to Rex VK7MO at ...

2 m & 70 cm FM DX

Leigh Rainbird - VK2KRR

After two months of quiet conditions, 2 and 70 FM came alive for one morning in September in the southeast. Some activity in north Queensland, but not as much as hoped.

Sunday morning the 19th of September saw a lovely calm day under the presence of a high-pressure cell. This duct came on in typical summer style. Signals started building from around 3 am. Initial signs were good at 7.30 am, Adelaide 2 m beacon was 5/9 signal. Conditions did not seem to favour VK3 a great deal.

Initially, Brian VK5UBC and Peter VK5ZLX were worked on 146.500 in the 740 km area. 439.000 was tried, but contact was not made there.

Of particular surprise to me was being able to access the Port Lincoln repeaters on both 2 m and 70 cm. The 70 cm repeater on 438.225 was first noted at 5/7 signal from 1026 km. The 146.750 repeater was also very good at 5/9 signal from 1019 km.

Later in the morning, showing just how strong conditions were in the Adelaide area, Brian VK5UBC was able to easily work into the Port Lincoln 2 m repeater from his mobile parked in his driveway at Gawler, around 250 km.

Overall, this opening was quite exceptional for the time of year. It is quite rare to hear the Port Lincoln repeaters, even more so at such good signal strengths. Port Lincoln being the last stop before VK6. Signals at this strength would indicate the possibility of a Bight Path, but unfortunately a low-pressure trough near Esperance put a stop to any signals in that direction being heard.

From up north VK4 way, Mike VK4MIK has sent a few activity reports. Mike is located at Butchers Creek to the south of Cairns.

On the 24th of September, Mike advises that he was able to get as far as the Townsville 2 m repeater in the morning. In the evening he had a path to VK4RDC repeater at Hayman Island. This is a good 451 km for Mike. Gary VK4ABW was also able to get to this repeater from Townsville.

On the 26th, between 6.30 am and 8.00 am, Mike advises that he was able to get through to 2 m repeaters at Townsville at 250 km, Mackay at 535 km. Mike also rustled up some simplex contacts including John VK4FNQ at Charters Towers and also Snow VK4IFS at Townsville. Mike also mentions working the VK4RHR repeater at Hodgson Range. This works out at 644 km, not a bad effort.

Please remember to send through any 2 & 70 FM DX reports to Leigh VK2KRR at ...