
VHF/UHF – An Expanding World

David Smith VK3HZ

Weak Signal

David Smith - VK3HZ

After all the activity over the last few months, the latter part of February and early March has been very quiet.

The bushfire disaster in Victoria has also seen many people diverted from Amateur Radio activities to much more important tasks. Most of us in this region have been touched in some way by this disaster and it is hoped that we learn some important lessons from this to avoid such a thing happening again.

So to reports of propagation conditions. The last reported contact from VK to ZL occurred on the evening of February 8th, from Gary VK2KYP to Bob ZL3TY on 2 m. After the frantic times of December and January, Bob is probably enjoying the rest!

In the middle of February, tropo conditions opened across the Bight between Adelaide and VK6. On the evening of the 14th, Phil VK5AKK worked Wally VK6WG on 2 m and 70 cm. The following morning, Bill VK5ACY and Brian VK5BC also worked Wally on 2 and 70. That evening, Brian again worked Wally on 2 m, 70 cm and 23 cm (5x1 report). A little later, on the evening of February 21st, Colin VK5DK in Mt Gambier worked Bob VK6BE in Albany on 2 m. However, the season's first Melbourne to VK6 tropo contact is still proving elusive.

One area where significant DX sometimes gets overlooked by us "southerners" is within VK4 itself. Good tropo conditions often occur up along the coast, and when you consider that the distance from the VK2/4 border to the tip of VK4 is about 2300 km, then some quite substantial intrastate contacts can occur. John VK4JMC reports on just such an opening:

On March 3rd and 4th, tropo openings occurred from Brisbane extending to Far North Queensland. The first reports posted on the logger were of the VK4RTT beacon being heard in FNQ at 1900Z. On both days I was able to work VK4ZDP (1310 km), VK4FLR (510 km), VK4BEG (1340 km), VK4BKP (795 km) and VK4FNQ (1045 km) with signal reports ranging from 5x1 to 5x9. Nth Queensland stations were also worked by VK4BG and VK4XRA.

Colin VK5DK in Mt Gambier reports on the activities in his part of the country over the summer period:

Conditions have been very good during January & early part of February in the S.E. of South Australia.

On January 7th from 2315Z, there were some very good backscatter signals on 50MHz indicating that there was a possibility of Es on 144MHz so a close watch was kept on 144.100MHz. At 2340Z, VK4DD (5/9) was worked and over the next hour the following stations were worked VK4APG (5/9), VK4TJ (5/9), VK4DH (5/9), VK4ACE (5/9), VK4AFL (5/9), VK4EME (5/9), VK4ADM (5/7), VK2JHN (5/7), VK4ZO (5/1), VK4ZJ (5/7), VK4ZBH (5/9) and VK4ALH (5/9). Signals were generally very strong over the entire hour.

The South East Radio Group went portable for the Summer VHF/UHF Field Day (17th & 18th January) to our usual hilltop & entered the 24hr multi-operator section under the Club Callsign VK5SR. Conditions were extremely good for all bands and a total of 325 contacts were made over the 24 hrs on bands from 50 MHz to 10 GHz. Contact tallies were as follows: 50 MHz (31), 144 MHz (119), 432 MHz (84), 1296 MHz (45) 2.4 GHz (12), 3.4 GHz (9), 5.7 GHz (9) & 10 GHz (16).

The most memorable contacts were the seven VK6 stations worked on 144MHz on a Tropospheric opening to Perth on the Sunday morning. Stations worked were VK6ZWZ, VK6HK, VK6KXW (Beverley) (worked on 70 cm as well), VK6ZKO, VK6OX, VK6KY and VK6WG (Albany). The other good contacts were on the Microwave bands to VK3WRE and VK3ZYC portable on Mt Tassie in Gippsland - a distance of 530 km with contacts on 2.4 GHz, 3.4 GHz, 5.7 GHz & 10 GHz with very good signals on all bands.

On the morning of the 27th January, signals were very good in the NW direction with Graham VK5KGP and Geoff VK5GF, both in the Victor Harbour area being worked on 1296 MHz with S9 signals on SSB. Also Alan VK3XPD in Melbourne was 5/5 on 1296 MHz.

There was another Es opening to VK4 on the 30th January on 144 MHz at 0010 UTC with John VK4FNQ (5/5), followed by Ray VK4BLK (5/3) and VK4LMB (5/8) before a Fire Call took me away from the opening. Tony VK5ZAI at Kingston S.E. also worked several stations in the VK4 call area on 144 MHz.

On the evening of February 3rd, conditions were again very good both in the Adelaide and Melbourne directions with several contacts being made on 432 MHz and 1296 MHz. Of note were the contacts on 1296MHz with Peter VK5PJ (5/4) Michael VK3KH (5/9) Charlie VK3NX (5/9), Brian VK5BC (5/1) Garry VK5ZK (5/4) & Ross VK3MY (5/9). Ross VK3MY was also copying my signal on 2403.100MHz (40watts), but I was unable to copy the 1 watt signal from Ross. The following morning 4th February, conditions were extremely good on 144 MHz, 432 MHz, 1296 MHz and 2.4 GHz with the following stations worked: VK7JG (5/9 on 144MHz), VK3DUT (5/9 on 144MHz), VK3ZRT (5/9 on 144MHz), VK3AXH (5/9 on 144MHz, 5/9 on 432MHz, 5/9 on 1296MHz & 5/9 on 2.4GHz), VK3YNB (5/9 on 1296MHz), VK3XPD (5/9 on 144MHz, 5/9 on 1296MHz & 5/8 on 2.4GHz), VK5ZK (5/9 on 144MHz & 1296MHz), VK7AC, VK3ESE, VK3XQ, VK3DMW, VK3TPR, VK5GF, VK5ATW all (5/9 on 144MHz).

The contacts on 2.4 GHz are my first contacts from my home QTH into Ballarat and Melbourne. Power run from this QTH on 2.4GHz is 40 watts into a 25-element yagi mounted up 16 m on the tower and fed with LDF550 heliax cable.

Summer VHF/UHF Field Day

The Summer VHF/UHF Field Day has been run and won (results elsewhere in this issue, I am guessing) with a very high level of participation in this (VK3) area of the country and excellent conditions to match.

Tim VK5ZT (First in Section A – Single Op 24 Hours) threw himself headfirst into the contest:

When the contest results are released I am sure there will be great discussion concerning my score and how it was achieved. This time last year I had never heard of maidenhead locators - I was away from the AR scene for around 10 years.

I spent 2 weeks building the equipment I needed, whilst on annual leave. I dare not tell my wife what was spent overall. I commandeered her black 2001 Falcon sedan for the event - that caused enough angst. I spent 2 days equipping the car for the event - luckily she was away and could not see what I did. The car was equipped with transceiving equipment for ALL BANDS FROM 6 m TO 3 cm. Waveguide and other antennas were taped to windows, bolted to the towbar or on a Magnabase. An equipment rack was installed over the passenger side seats. An inverter supplied mains power. A laptop took care of the scores and 2 GPS systems helped navigate and locate grid boundaries. An Engel fridge ran in the boot to supply cold drinks and

pre-prepared food. Spares and a full toolkit were also in the boot, including a 100 Meg oscilloscope! I drove and operated the entire contest alone in the car - there really wasn't much room for anyone else anyway.

I operated with a local radio club team who were similarly equipped. We covered over 1000 km. While the resulting score was spectacular (11 gridsquares activated and 13421 points total), we will not be doing it again! I stopped at a garage 50 km from home (Snowtown, SA) and stripped the car so my wife would not have a heart attack when I got home!

Sure, we won't be doing it again - but that doesn't mean we won't make a determined effort to win again.

EME activity at VK5MC

Chris VK5MC near Millicent has been working for a few years on construction of a large EME dish. The dish project was taken over from Eric VK5LP – a long-time author of this column. Chris writes:

On January 3, 2009, Eric VK5LP saw the EME antenna that he started to build in early 1980 become a reality. Now living in a nursing home at Meningie, he was given the medical okay to make the 300-kilometre trip to the QTH of Chris VK5MC. He is the patron of the South East Radio Group and some of the members were also present to welcome him.

The antenna that Chris VK5MC has finally finished is a 9.8 metre (32 feet) parabolic dish with an F/D of 0.45, computer tracked by a VK5DJ beam controller. Some of the techniques used by Chris in the construction of the antenna will be given in a discussion paper this year at GippsTech.



Chris VK5MC and Eric VK5LP in front of the 10m Dish

Equipment on 1296 is a Minikits transverter and sequencer to a 2C39 water cooled N6CA amplifier giving 65 watts out, preamplifier used at the W2IMU dual mode feed is a G4DDK 23 cm preamp.

Doug VK3UM was on 1296 MHz for the occasion and was contacted on EME firstly on CW receiving a report of 549 from Doug and hearing him 559. Contact was then made on SSB with reports of R5 S3 and R5 S5 respectively.

Later in the afternoon VK2JDS was decoded calling CQ using JT65C, and signals from our sched with VE7BBG in Vancouver, Canada were heard and seen on the waterfall display but no decodes could be made.



L-R: Chris VK5MC, Ian VK3NBL, Eric VK5LP and John VK5JA

VK3UM EME

Doug VK3UM was right in the middle of the worst area of bushfires in the state. By some miracle, and a lot of hard work, he managed to come through relatively unscathed, even though the fires were licking at the outer edges of his property.

Just prior to the bushfire disaster, Doug managed to get in some EME operation, although not without some trials. Doug reports:

After 6 days of over 43 deg heat, I will gladly swap for the overcoats in the northern parts of the world. I had a sked with VE2ZAZ. I tipped the dish over and went Auto track. It found the Moon then at 1 deg and I sat back and waited for sked time. Then I noticed the up indicator was illuminated but the hydraulics were not operating. Gosh I said and drove out to the control system and confirmed the slave up relay was not pulling in. I moved the relay board and it started working. I left an artificial finger (screwdriver) in situ and resumed operation. After working Bert on 70 cm, I switched to 23 and ZL1WN returned with a good signal. We did not complete however, then VE7BBG called and we had an excellent QSO, the first with Cor in decades! I went back into the searing heat to find the problem with the elevation drive relay board. It turned out to be a crack in a track on the vero board I used for the relay drivers. (I hate the stuff but it is quick and easy to use). The track was the one on the very edge of the board and had "horsed shoed" up from the board as the end of the board had warped in the heat. This caused the track to crack. This relay board was firmly fixed in 4 places (with screws) so it could not move, but the edge did and it bent! I came on briefly during the start of the European window and worked UA3PTW on 70 with a huge signal as always. I called CQ for half an hour on both bands with no response and gave up.

Then the fires broke out ...

Beacon News

Mark VK2XOF reports that the VK2RSY 2 m beacon at Dural is back on air on

144.420 MHz CW. The transmitter is running 20 W and is locked to an ovened crystal oscillator so the frequency stability should be a few Hz. The antenna is a pair of crossed dipoles on the roof of the Dural transmitter building. In the future when other building works are completed, the intention is to move the beacons to the top of one of the 20 m poles.

The beacon on 6 m (50.289 MHz) has also been upgraded with a new transmitter now running 20 W and also locked to a crystal oven.

The 70 cm and 10 m beacons are the next projects starting shortly.

Any reports would be welcome.

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

The Magic Band – 6 m DX

Brian Cleland – VK5BC

Good openings continued in first half of February but many 6 m operators had returned to work and activity wasn't as great as in December/January. The second half though saw conditions just about completely disappeared with only the odd report of a beacon being heard.

On the 1st Feb Paul A35RK worked several VK4's and reported hearing the FK8 beacon and the Hobart VK7RST beacon.

The 2nd Feb saw Brian VK4EK in Sapphire Central Qld work several VK5's including Col VK5DK in Mt Gambier, Alex VK5ALX in Whyalla & Brian VK5BC/p Corny Point.

Rod ZL3NW in Christchurch worked Brad VK2GWB and Brian VK2AH on the 4th February while Norm P29NB worked into northern VK4 and Brian VK4EK worked ZL2ASF.

The 5th Feb was a very good day with the band opening between all of the eastern states plus VK5. Early in the day it was mainly VK4 to VK5 then moving down to VK2 with VK7 & VK3 getting in the act later in the day. Kerry ZL2TPY was hearing several VK beacons plus the FK8 beacon throughout the day. Norm VK7AC in Launceston worked several VK2, 4 & 5 stations.

On the 7th Feb Rod ZL3NW Christchurch work John VK2BHO and Peter VK2ZTV while Scott VK4CZ Brisbane worked Peter ZL4LV Dunedin. Ivan VK5HS Renmark reported hearing the keyer that David VK5AYD Coober Pedy was running.

A brief opening on the 8th Feb from VK5 to VK4 with Brian VK5BC working Wade VK4ACB Hervey Bay and Ray VK4BLK Yeppoon. The Hunter Valley beacon VK2RHV was also reported from ZL2 & 3.

On the 10th Feb Rod ZL3NW in Christchurch worked Mike VK2ZQ and Mike VK2BZE both in the Wollongong area. Brian VK5BC Gawler worked Les VK4ALH Sunshine Coast and Mick VK4ZAA Brisbane whilst Brian VK4QB Rockhampton worked Brad VK2GWB, Brian VK3CCR Altona and Dave VK7ZKO. Wade VK4ACB Hervey Bay worked Col VK5DK Mt Gambier and the Alice Springs beacon was audible in VK3 & 5.

On the 11th Feb Brian VK5BC worked Tony VK2BTS and Mike VK2OT from the Grafton area and Col VK5DK in Mt Gambier worked Peter VK4EA in the Brisbane area. Brian VK4QB in Rockhampton reported hearing the VK7 beacons and working Peter VK3TPR in Melbourne. Rod ZL3NW also reported hearing the VK7RAE

beacon.

Late in the afternoon of the 12th Feb there was an opening from Far North VK4 to VK5 with Dale VK4SIX working Brian VK5BC.

The band was open on Feb 13th from VK4 to VK3, 5 & 7 on and off throughout the day. Joe VK7JG Launceston worked Brian VK4EK and Lloyd VK4ERQ whilst Colin VK5DK Mt Gambier and Brian VK5BC worked several stations including VK4's AHW, ERQ, BLK, WTN, ACB, QB & ID as well as VK2's YO & BHO. The Alice Springs beacon VK8RAS was also reported in VK2 & 5.

On the 15th Feb David VK4ZDP near Innisfail worked Les VK4ALH Sunshine Coast and Neville VK2YO at Kingscliff.

That sums it up for February, the remainder of the month being extremely quiet. It seems that another very good summer 'E' season has come to an end and unfortunately to date there hasn't been any reports of northern openings to JA etc. – come on the next sunspot cycle.

On a sad note I'm sure all 6m operators will miss Jim VK9NS who passed away on the 10th February, RIP Jim.

Please send any 6 m information to Brian VK5BC at ...