
VHF/UHF – An Expanding World

David Smith VK3HZ
Leigh Rainbird VK2KRR

Weak Signal

David Smith - VK3HZ

Not a great deal of news this month on unusual propagation conditions. Hopefully the next few months will bring a flood of openings.

On the morning of October 4th, a high-pressure cell centred over the Vic/SA border produced some good conditions between the Adelaide region and central NSW. Brian VK5UBC at Corny Point, running 40 W into a 5-element yagi managed to work Leigh VK2KRR on 70 cm with S9+ signals – a distance of 914 km. Brian then turned his yagi further north and was able to work Mark VK2EMA at Tottenham – a distance of 1004 km. For such a setup, these are excellent contacts, particularly over an inland path.

With the reshuffling of licensing now complete, it's good to see a number of Standard Class licensees now making the most of their newly authorised access to the weak signal ends of the VHF/UHF bands.

Chris VK3VSW near Geelong has been putting out a good signal on 2 m. and is working on his antenna for 70 cm. Chris has made regular appearances on the morning Aircraft-Enhancement (AE) net, working stations in the Canberra area and up as far as Leigh VK2KRR near Wagga Wagga.

Rhett VK3HAP, north of Bairnsdale, has set up a portable station in his front paddock, operational on both 2 m and 70 cm.



Rhett has also had a lot of success with the AE net, working many stations in the Canberra region. Rhett has also been quite active on the Wednesday evening 144.150 MHz Net run by his near neighbour Rob VK3EK.

As we move into summer and the band conditions improved, hopefully we'll see many more of these new and enthusiastic stations on the low ends of the bands.

Spring VHF/UHF Field Day

The Spring VHF/UHF Field Day was held over the weekend of November 11/12. In VK3, the weather was reasonable (one might say “for a change”) and there was a good turnout of field stations.

The Geelong ARC (VK3ATL) once again located themselves in the Barrabool Hills west of Geelong and provided big signals on all bands from 6 m to 10 GHz. The SERG / Mt Gambier (VK5SR) set up late on Saturday afternoon, managing to work the GARC on all bands from 6 m to 10 GHz. Rod VK2TWR and friends headed to Kings Cross (no, not THAT Kings Cross) in the Snowy Mountains. Jim VK5OM was back at his old haunt in VK3, north of Nhill. Gavin VK3HY on Mt Terrible was putting good signals into Melbourne, once he'd fixed the dodgy connector on the 23 cm coax. VK3III (Geoff VK3FIQ and others) went out to Corn Hill, south of Ararat. Ken VK3DQW was located north of Geelong somewhere, with a good outlook across the water. Barry VK3BJM headed up to QF13 on Saturday afternoon, intending to enter the 6 hour section, but was having so much fun that he remained there until the end of the contest on Sunday. Ken VK3AKK went out on Sunday morning into QF23 to provide some numbers. VK3HZ even managed to get out to John's Lookout in the Dandenongs to work the GARC on 2.4 GHz and 10 GHz – the first “real” contact (i.e. further than across the backyard) for the 10 GHz setup.

Thanks to all who took the effort to go out onto a hilltop (and apologies to those I have not mentioned), and also to those home stations who came on air to give them numbers.

VK/ZL VHF-UHF Propagation Logger

Adam VK4CP has been doing quite a lot of work on the logger software, adding some very useful features, including a personalised weather report. With the good propagation season rapidly approaching (we hope), I'd advise people to visit the site, enter/update their operator information, and then keep an eye out for any reports of openings. The logger may be found at www.vklogger.com

Also associated with the logger is the VHF/UHF Discussion Forum - . www.vklogger.com/forum/ If you have a question on a VHF/UHF matter, join the forum and ask away!

Wednesday Evening “150” Net

Rob VK3EK reports on recent activity during his 144.150 MHz (plus) Activity Net. On Wednesday 26th October, we welcomed three new Standard Class stations to the Net. It was fantastic to see that some of the new stations that had just got their new privileges to be able to operate on 144 MHz SSB had been building antennas and getting themselves set up. The night was very active on 144.150 MHz with a call in list as follows: John VK3ACA, Craig VK3CMC, David VK3HZ, George VK3HV, Peter VK3NPI, Rhett VK3HAP, Steve VK3NF, Joe VK7JG, Ken VK3DMW, Jim VK3ZYC, Brian VK3NAY, Ian VK3AXH, Ken VK3YDK and Bob VK3AJN.

On 432.150 MHz, the call in list was: David VK3HZ, Jim VK3ZYC, Geoge VK3HV, Rhett VK3HAP, Ken VK3YDK, Steve VK3NF and Peter VK3NPI.

On 1296.150 MHz, the numbers dropped off and the only call in was George VK3HV. There were no takers for 2403.150 MHz as conditions on the higher frequencies were not favourable on the night.

The net is on every Wednesday night at 2030 local time. If you need a reminder, check the VHF Logger as Adam has got it on the Calendar. We are now getting into

the warmer weather so will hopefully get some good propagation and also more comfort in those out door shacks. Till next time on the band, Rob VK3EK

Rob has been running the 150 net for many years, and is well on the way to its 400th happening. Perhaps others in the other states should think about starting such a net to encourage local activity. I would be happy to publicise it in this column.

EME

The ARRL EME contest sees a large turnout of stations around the world. This year, it was held over two weekends – October 22/23 and November 12/13.

Doug VK3UM reports on his results for the first weekend. On the Saturday polarization was either dispersed or 45 degrees offset from rise to set (quite unusual). Sunday was back to 'normal'. Little to no Libration was seen during both days. Sun noise measured on Saturday approximated 75 sfu. Activity out of NA not good, excellent from Europe (on Saturday). High declination weekends are fine if you live in the Northern Hemisphere, but we hand walkers see the Moon skating along the horizon for longer periods of consequent ground noise. Apogee did not help either but you can't have everything ... its always a lot of fun.

22/08/2005

N9AB, JA6AHB, JA2JRJ, K5GW, K0RZ, JL1ZCG, JJ1NNJ, K3MF (Did not complete), K1FO, 7M2PDT, OH2PO, OK1CA, DJ6MB, OZ4MM, OZ6OL, SV1BTR, SM3JQU, SP6JLW, UT2EG, FR5DN, UA3PTW, SM2CEW, RW3PX, EA3DXU, I5CTE, G3LQR, S52CW, DL7APV, G3LTF, HB9Q

23/10/2005

KL6M, SM2ILF, SM3AKW, S51ZO, G4RGK, DL9JY, DL0SHF

36 x 24 so far ... there are a huge number of regulars not in the above log!

You can only work those that are present! Thanks also to several 'smaller stations' (1 yagi) that reported hearing me, so conditions could not have been as bad as some believed. Persistence required! A special thanks to DL9JY who stuck around after I changed tubes and got going again after 6 minutes and also to FR5DN, when I also had a time out following an arc over. A new feed will be installed in the dish by next contest period and also (hopefully) a better final bottle will bring me back my current lacking of '3 dB transmit sensitivity!' (if I can find one in time). Can't rely on anything these days ... failing as a 'pull out' after 18 years faithful service!

73, Doug VK3UM

Guy VK2KU was also active for the contest and reports the following. A very enjoyable weekend at VK2KU on 144MHz, on this occasion only using assisted JT65B. Since I am not intending to submit a formal contest entry, I chose to work my EU window in the first weekend, and my NA window in the second, since the local times were more congenial to me.

24 stations worked on the 2 days, including 8 new initials, 6 new grids, and 2 new US States.

11/11/2005 (not in the contest, but noteworthy):

AA1YN, XE2AT (thanks to both of these).

12/11/2005

K7MAC, KD3UY, N9LR, KB8RQ, W3SZ, W7EME, K9MRI, AA7A, AA9MY, N1KI, WA8CLT, JM1GSH, K1JT, K2AXX, WD6DBM, KE7NR, W5UWB, RA0FCA, JH2COZ.

Called but not complete: AA1YN.

13/11/2005:

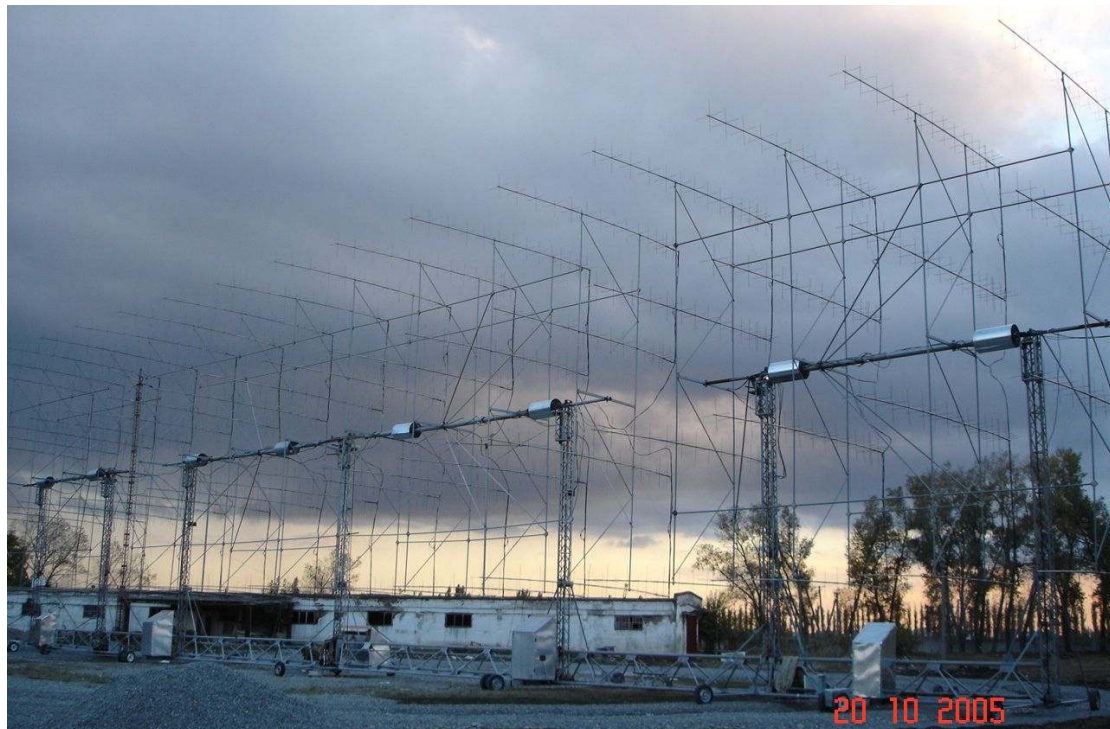
N0AKC, KL7UW, KN4SM, W5UN, K5GW.

Called but not complete: NQ2O, K5DNL, ZL1BT

Thanks to all those I worked in the contest, and apologies to those I missed.

73, Guy VK2KU

One of the “big guns” of EME has become even bigger. Sam RN6BN has one of the biggest signals on 2 m, running an array of 32 x 15 element cross-polarised yagis. He recently added extensions to each side of the array, taking it to 64 yagis. That’s a stunning total of 1,920 elements. This may well be the world’s largest 2 m array – I’m not aware of any bigger.



The array not only turns and elevates, but the whole system can be raised and lowered, presumably to help with maintenance. Visit Sam’s web site (www.73.ru) where you’ll find a short video showing the array performing all its moves.

Finally, I hope everyone has a happy and healthy Christmas and New Year. May you be in the shack with the rig turned on and the antenna pointing in the right direction when that big opening to the exotic DX location occurs.

Oh, and Santa, I’d like an antenna just like RN6BN, please. I’ve been very good this year, really.

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

Digital DX Modes

Rex Moncur – VK7MO

Ian, VK3AXH; Des, VK3CY; Jim, VK3II; Dave, VK2AWD and Rex, VK7MO have been checking out the new beta version of WSJT and providing feedback to Joe Taylor, K1JT. On FSK441 we have found that the waterfalls do not always provide a reliable manual decode. This is due to a bug that causes the point of decode to vary from the point where the meteor shows on the waterfall. There is also timing problem such that the DT is out by one second, which shows up as a difference of two seconds between two computers. Essentially this means that if both computers are on time they will both show a DT of plus one second. Both of these problems, as well as others discovered elsewhere, should be corrected in the next version, 5.8.7 that should be available by the time you read this.

Peter, VK5ZPG, at Quorn near Pt Augusta is active, transmitting first period, in the hour before the normal weekend FSK441 activity session on 144.230 MHz and has made a number of contacts to the Eastern States. He says that he is having lots of fun and has rejuvenated his interest in Amateur Radio. His experience is a good demonstration of how the digital modes can allow operators in remote areas to remain active on 2 metres. On one occasion he detected part of a burn that ran for 42 seconds and took the opportunity to inject some Australian context into meteor scatter nomenclature by coining the name “bushfire” for long burns, which we will define as more than 15 seconds.

Congratulations to Bob, ZL3TY, on extending his own World 2 metre EME Record to 19434 km with a contact to EA2AGZ and to Nick, ZL1IU, who a few days later worked EA5SE and extended the record to 19451 km.

With Nick, ZL1IU, up and running on the digital modes, he accepted a proposal for a meteor scatter test to Hobart over a distance of 2431 km. This is around the theoretical maximum for meteor scatter and requires the meteor to be very close to the centre of the path and to ionise a little higher than the average. As such it is a real long shot, but not impossible as some recent contacts have been made between Europe and Russia up to a little over 2500 km. In two hours testing only one signal was detected but it was a good short burn of 1.5 seconds with both calls being repeated three times, which at least suggests it is possible. We will try again during the Geminids. With Nick, operational on FSK441, it should be possible to work to the North Island of New Zealand from much of the East Coast of Australia.

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

The Magic Band – 6 m DX

Brian Cleland – VK5UBC

Although some have been of short duration several openings occurred during October and on several occasions beacons were heard without contacts being made.

A good opening occurred on the 3rd October over much of the country. From my portable QTH at Corny Point (PF85mc) the band was open to VK1, 2, 4 & 6, the opening to VK6 lasting several hours but with only John VK6JJ & Wayne VK6JR available to contact. On the same day Norm VK3DUT reported hearing the Alice Springs beacon and had an interesting contact with VK2YVG Broken Hill 5x9+ on his 10 W.

On the 12th October Norm worked Roy VK4ZQ, Wayne VK4WS both 5x9 and on the 17th October heard the Gold Coast beacon VK4RGG/b 529. Then on the 18th October he worked VK4's WS, ADM, BIT, ARS, YRP, NW, SJ, BLK and Brian VK5UBC.

On the 22nd October a surprise opening to JA from VK3 when Norm V3DUT heard JA7/b then worked 25 JA stations in the 1, 2, 6, 9 and 0 areas with many signals over S9, not a bad opening for bottom of cycle. Rob VK3EK, who alerted Norm to the opening also, worked a good number of JA's.

To complete a good month for Norm he also reports hearing the FK8 beacon on the 29th October and ZL TV on the 30th.

A lot of activity occurred on the 17th & 18th October with Neville VK2YO from Northern NSW working VK5UBC and VK7ZIF. Brian VK5UBC also reports working John VK2HO and Brisbane stations on these days. Wayne VK4WS worked several JA stations on the 17th with Trevor VK4AFL heard working JA1RGU using 30 W and a dipole with 5/9 reports.

The Alice Springs beacon was also heard in Adelaide on the 17th & 20th October.

On the 22nd October Ray VK4BLK from Yeppoon worked several VK3's as well as VK5UBC.

Another big JA opening from the Brisbane area on the 5th November with Wayne VK4WS working many JA's on both CW & SSB. On the same day the band opened from VK2 (Sydney area) to VK5.

The Barossa Club is in the process of establishing a new 6 m beacon from the Barossa Valley area. It will be located at the same location as the Barossa 2 m & 70 cm repeaters, Mt Kitchener in the Barossa Valley, which is 580 m above sea level and 80 km north of Adelaide. The beacon will be running CW with the callsign VK5RBV on the frequency of 50.315 MHz. It will be running approx. 20 W and using a Halo antenna. At the time of writing it is in test mode and should be fully operation by December. The club would welcome any reports to vk5brc@gmail.com.

.By the time the December magazine is printed the 6 m summer DX season should be in full swing. Historically the bottom of the sunspot cycle produces good sporadic 'E' seasons. I'd like to thank all those who have forwarded me information for the column throughout the year and wish everyone a Merry Xmas and Happy New Year.

Please remember to send any 6 m information to Brian VK5UBC at ...

2 m & 70 cm FM DX

Leigh Rainbird - VK2KRR

Welcome to the October report. Conditions down south were poor for most of the month except for the first few days. But, tropospheric conditions in Queensland were, as they say, on the boil, with a few international tropo contacts thrown in to boot.

On the 01/10, conditions in the morning began very well down the VK4 coast. Many good contacts were available for those in the know. Some of the better contacts were; from Mike VK4MIK near Cairns, who worked to VK4RGA Monto repeater at 951 km, VK4RBU Bundaberg repeater at 1000+ km, VK4RGY Gympie at 1227 km, VK4RHY at Hervey Bay and VK4RGT at Gladstone. Mike also worked simplex with Noel VK4VJ, Wayne VK4ZRT and Mike VK4JOO all at Gladstone. Mike VK4JOO is 1160 km distant from VK4MIK and was VK4MIK's first simplex contact over 1000 km.

Along with Mike, Felix VK4FUQ was also working a number of DX repeaters such as Mackay, Hayman Island and Monto from Felix's QTH at Ingham.

On 03/10, conditions were again good in VK4. VK4MIK worked down the coast about 550 km distance to around Mackay. Mike also made simplex contacts on 146.500 MHz with Wal VK4AIV and Rick VK4AIM. Mike also worked to the Townsville 70 cm repeater a number of times.

Mike also reports that Gary VK4ABW at Townsville was able to work across to the FK8ZHA 146.800 MHz repeater on Mt Doo at New Caledonia. Garry worked FK8AH and FK8GX. This is a good 2000 km for Gary.

On 04/10, down in the south east corner some good contacts were had. From my QTH I could access most of the VK5 repeaters, which included Port Lincoln on 146.750 MHz, which was a 5/9 signal at 1019 km. Murray Bridge and Lobethal were 5/9+40. VK5UBC at Corny Point was able to get to some VK3 repeaters and I worked Brian on 146.500 MHz for a nice 914 km contact, though the signal was only 5/3.

On 05/10, Mike VK4JOO at Gladstone was able to access the FK8ZHA repeater at New Caledonia - a distance of around 1560 km for Mike. Disappointingly for Mike, at that stage there were no operators about to answer his calls.

Also on this date, some very good tropo occurred from inland southern NSW up to the north toward Brisbane. Alan VK2KAW in Wagga mentions being able to work up to 24 repeaters to his north. One good example is the Tamworth repeater on 146.750 MHz. Meanwhile John VK2YW mobile in Wagga was able to access many repeaters such as 146.900 MHz from Condobolin and 146.775 MHz from Young.

On 06/10, some fairly selective conditions from my QTH at The Rock. I had Renmark TV on 143.760 MHz running full scale at 600 km. Also had access to Port Pirie at 867 km and Port Augusta at 913 km.

On this date Felix VK4FUQ also reports being able to weakly hear the New Caledonian repeater on 146.800 MHz FK8ZHA.

On 07/10, a breakthrough for Mike VK4JOO, who this morning made it back into the FK8ZHA repeater and finally found some stations to make contact with. These were FK8AH and FK8GX. Mike signal from the repeater was 5/9+40. Mike then worked FK8GX on simplex and reports a 5/4 signal.

On 08/10, Burnie VK4KAC, who I think is in the Brisbane area, reports that he was able to get to repeaters at Bundaberg, Glen Innes, Coffs Harbour and Lismore. Burnie also got way out to New Caledonia but reports no one was awake.

Today, Felix VK4FUQ was able to hear the Gympie repeater on 146.625 MHz, but was very frustrated when he was unable to break into the stations talking on the repeater due to lack of time left between overs.

Felix also made it to the Mackay repeater where he worked with Rick VK4AIM in Mackay and John VK4FNQ from Charters Towers. Felix was able to work Rick on simplex to top the day off.

Between the 18th and the 22nd of October, Tony VK3TLA was maritime mobile in the Bass Strait with some 2 m & 70 cm equipment. Tony mentions that while in transit from Westernport to Deal Island, he was able to work some VK7s on 2 & 70 FM. The best contact was from a station at Penguin (VK7BBW?) using the VK7RWC repeater, this was around 320 km and others on the east coast were in the order of around 250 km.

Finally on the 25/10, Russ VK4BEG near Cairns was able to work to the Townsville repeaters on both 2 & 70. The 2 M repeater was peaking 5/9+40. Russ worked John VK4FNQ on the Townsville 70 Cm repeater and the on 70 Cm simplex.

Hope you all have a Merry Christmas and New Year and are able to catch some good DX over the summer season. Good luck.

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