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# VHF/UHF – An Expanding World

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David Smith VK3HZ

## Weak Signal

David Smith - VK3HZ

An old friend of mine recently became active again after a long absence from amateur radio. He was first licensed in the mid 70's and became a keen VHF SSB operator when crystal-locked AM operation was in its last days. Then family and work took away any spare time and radio was pushed to one side. With recent semi-retirement, he has regained his old callsign, borrowed an old 2 m rig and set up a yagi.

When speaking to him recently he asked, "Where is everybody?" He had been calling and calling on the low end of 2 m without a great deal of response. He'd also tried the FM part of the band, but beat a hasty retreat when he heard some of the goings-on up that end. I told him that there are people around, but you need to pick your time – time of day, time of week and time of the year!

There's no doubt that now is a quiet time of year. A number of the more active stations have either taken holidays in warmer climes or pulled their towers down to work on antennas in preparation for next summer. It is also hard to be attracted to the dark depths of the cold shack when the option is to sit in front of the warm fire / central heating wasting brain cells on what little the TV offers or surfing the web. Hmm, it's a toss up really!

However, the pressure is on from commercial users of RF spectrum and there is a great risk of us losing out substantially here – as has already happened with the lowest 10 MHz of the 70 cm band. The authorities don't care that there's little activity right now due to the lack of extended propagation. If they monitor a valuable slab of spectrum like the 2 m or 70 cm bands and find virtually no activity, then they'll obviously be very receptive to applications for other uses of that spectrum.

So, we need to generate some activity. And activity begets activity. How many times have I previously heard people questioning the usefulness of a 2 m SSB rig / horizontal yagi, on the basis that there is no one there to work? But, there is!

So what regular activity is there currently? Well, the morning Aircraft Enhancement net would probably be one of the busiest times on 2 m at the moment – although even that can be fairly quiet. Most activity centres on 144.2 between 8 am and 9 am. It's relatively easy to work from Melbourne into Canberra and beyond if the aircraft do the right thing. Jim VK3II is a regular on this, and often reports contacts into the Sydney area.

In VK3, Rob VK3MQ assisted by Mike VK3KH conducts a weekly net on Wednesday nights at 8.30 pm on 144.150. The net regularly attracts up to a dozen stations from around the state, and further afield if the conditions are there.

Then to reach those sitting in the warmth surfing the net, there's always the VK Logger – [www.vklogger.com](http://www.vklogger.com) - which can be used to arrange contacts.

If you have a regular sked with another local station on say 80 m or 2 m FM, why not move down to the lower end of 2 m and liven up that end of the band a little. I hear there's a much nicer breed of amateur on the low end of the band (I'd add a "smiley" here, but I don't think it would survive the printing process).

Anyway, as they say, Use it or Lose it

## **Not Aircraft Enhancement**

Speaking of the Aircraft Enhancement net, Jim VK3II reports on conditions on Monday June 13th when there was almost no air traffic due to a volcanic ash cloud over Victoria and Tasmania: *There were some QSO's to be made, but signals from the Canberra area were substantially down from usual strength and very fluttery, probably just scatter propagation. VK1BG, VK1KW and VK2DO were contacted mostly at R3 to R4, S1.*

## **Microwave Blog**

Roy VK4ZQ has created a rather nice portable VHF / UHF / Microwave set-up covering all bands from 6 m to 10 GHz. A description of it, as well as the history of its development, is well worth reading and can be found at: <http://vk4zq.wordpress.com/2011/06/21/amateur-radio-in-the-field/>

Please send any Weak Signal reports to David VK3HZ

## **Digital DX Modes**

Rex Moncur – VK7MO

### **New Microwave National Digital Records**

Alan VK3XPD reports as follows that his trip north to VK4 and VK2 with Colin VK5DK has resulted in 2 new Digital Records:

*The first was for 24 GHz Digital Mode where no previous record existed. This record was initially set at circa 9 km, then 39 km, 59 km, 76 km, and finally 153 km. A subsequent attempt over a longer path later in the day failed due to poor propagation.*

*Using WSJT, our 153 km record distance on 24,048.1 MHz was set with "huge rock crushing" signals from McCarthy's Lookout near Maleny to Beachmont, inland SSW of the Gold Coast. Colin VK5DK with John Maudsley VK4YJV assisting were at the Beachmont site and Alan VK3XPD was at the McCarthy Lookout site.*

*The next Digital Record we extended was for the 3.4 GHz Band. This is now 162 km. Using WSJT, on 3400.1 MHz we had solid signals from Mt Coramba, NE of Coffs Harbour, NSW down to North Brother, a high point a few km south of Port Macquarie. Colin VK5DK and Alan VK3XPD with 2 full sets of Microwave gear covering 1296 MHz thru to 24 GHz operated from Mt Coramba. At the distant end of the path was Mark VK2AMS with his newly completed 3.4 GHz gear. Also on site was Neil VK2EI with his microwave transverters with Ross VK2DVZ assisting. This QSO attempt took about 40 minutes to complete. Mark being a newbie to both microwaves and WSJT had a few teething problems but with both Ross and Neil assisting with the finer points of WSJT operations, we were finally successful. After completing with Mark, Colin and I rapidly repeated this Digital QSO to Neil using his equipment.*

Congratulations to all who were involved.

### **FSK Activity Sessions on 144 MHz**

Welcome to Arie VK3AMZ who puts out an excellent signal and is regularly working into VK4. David VK4SKY, Phil VK4CDI and Robert VK4LHD have been holding up the VK4 end in the absence of John VK4JMC. Rhett VK3VHF and Waldis VK1WJ are regularly working Bob ZL3TY and Rhett has copied Peter ZL4LV over the

mountains into Dunedin.

### **Arietids Meteor Shower**

Adrian VK4OX has been running tests during the Arietids meteor shower which peaked from around 6 to 10 June from about 0000utc to 0200utc. These have produced excellent results with very quick contacts to VK3HY, VK3II and VK3AMZ using FSK441 in 15-second periods. There was no evidence of enhanced pings as far south as VK7 which may be explained by the fact that the Arietids are well to the north. Adrian reports - The Arietids meteor shower has been very good since about the 6th of June. OH5IY Predictor program has been very good too, predicting the optimum time for VK4 to VK3. OH5IY also comments that this shower is full of small partials and from what I have observed that has been spot on ... hardly a 10 second burn in over a week but many, many 1-5 second burns which are no good for SSB but ideal for FSK441.

Please send any Digital DX Modes reports to Rex VK7MO

## **The Magic Band – 6 m DX**

Brian Cleland – VK5BC

June provided many good winter Sporadic 'E' openings, probably the best winter 'E' season for some years particular down the east coast.

1st June Rob VK1KW worked John VK4FNQ in Charters Towers and then on the 2nd Joe VK7JG and Frank VK7DX worked several VK4's. Then on the 4th band opened between ZL and VK2, 3 and 4.

The 5th June the band opened for some hours between VK2, 3, 4, 5 and 7. Phil VK4FIL in Brisbane reported working VK3DUT, VK3KH, VK2ADR, VK7DX, VK3FZ, VK5GF and David VK5AYD in Coober Pedy with most signals around 5/9. Again on the 6th the band opened all down the east coast and to VK5 and ZL. Garry VK5ZK reported working VK4FIL, VK4EK and Mark ZL2WHO. Also Andy VK6OX reported hearing the VK5RBV beacon but no contacts. On the 7th Garry VK5ZK again worked VK4FIL and Rod ZL3NW worked several VK2's.

On the 8th northern VK4's worked VK2 and 3 with Brian VK4EK in Sapphire working southern VK4's and VK5ZK, ZL2WHO and Garry VK5ZK again working ZL2WHO. 9th June a short opening Wayne VK4WTN work Rob VK1KW and Brian VK4DDC worked ZL50GH.

10th June band opened for several hours between ZL3/4 and VK2, 3 and 7. Ross ZL3ADT worked Steve VK3ZAZ, Frank VK7DX and Norm VK3DUT. Peter ZL4LV worked VK3DUT and Brian VK2BX with Norm VK7AC working ZL3AAU. A short opening on the 11th when Frank VK7DX worked Glen VK4BG and Wayne VK4WTN worked Norm VK3DUT.

The 12th June Frank VK7DX worked several VK4's including VK4EK, VK4BG and VK4WTN and Quentin VK4AQF worked Peter VK5PJ and Daryl VK3ADR. In the evening Gary VK4ABW/8 in Darwin reported hearing several JA beacons and working BA4SI.

On the 13th June Andrew VK3OE worked Keith VK5AKM and Rob VK1KW worked VK5ZPS during brief openings. 14th saw the band again open for several hours with many contacts being completed. Phil VK4FIL reports working VK2BX, VK1DJA,

VK1KW, VK2FAD and Mark VK2EMA (Short Skip 780 Kms). Same day Garry VK5ZK also worked VK1KW and Brian VK2BX. Band was quiet on the 15th but the VK5RBV beacon was reported by Andy VK6OX and John VK6JJ.

After a couple of quiet days the band came to life with good openings on the 18th June particularly from ZL to VK2 and 4. Scott VK4CZ worked several ZL's including ZL4DK, ZL4LV, ZL3MH and ZL3ADT. Kerry VK2BXT also reported working ZL3ADT and ZL3MH and hearing the FK8 beacon. The band again opened from ZL to VK2 and 4 on the 19th with John VK2BHO working several ZL's.

On the 20th during a short opening Jeff VK5GF worked Frank VK7DX and on the 21st another opening from VK4 to VK3 and 7 with Brian VK4EK working several stations and Phil VK4FIL working VK7DX and VK3YHT.

24th June a good opening from Far North VK4 to Southern VK4 with Dale VK4SIX in Atherton, Ross VK4RO in Ayr and Brian VK5BC/4 near Pt Douglas working several southern VK4's including VK4FIL, VK4WTN and VK4EK. On the 25th around the same time (0500 UTC) Brian VK5BC/4 again worked VK4WTN and Glen VK4BG with 5/9 signals from the car using a 2m 5/8 vertical.

In summary all states have had a good winter 'E' season with unfortunately only VK6 missing out

I apologise for any missed information but I am presently holidaying in far northern VK4 and have had limited time to gather and collate info.

Please send any 6 m information to Brian VK5BC