
VHF/UHF – An Expanding World

David Smith VK3HZ

Weak Signal

David Smith - VK3HZ

The Winter VHF/UHF Field Day was held over the weekend of the 23rd and 24th June and was, predictably, a rather cold experience for many. In VK3, rain threatened for much of the time, reducing the numbers out on the hilltops. Activity further north seemed somewhat subdued also, judging by reports received. As at the end of June, the following had submitted logs for the day:

VK1 MT
VK2 HZ MB XN ACL BOZ WFD
VK3 GL HY KH WT ZHQ FASW FEZZ
VK4 CZ ADC AMG KLC TGL VDX
VK5 KC MK OQ ZD GRC FDCA FMLB

Geoff VK2MIA reports:

The Manly Warringah Radio Society (VK2MB) activated QF56OH for around 4 hours on Saturday afternoon from the corner of a sports oval on top of a hill. We had contacts on 6 m, 2 m, 70 cm, 23 cm and a great day - even suffering a little sunburn (not bad for the 3rd shortest day of the year!). As soon as it got dark, we packed up as we weren't keen enough to try and operate overnight.



The crew from VK2MB enjoying the winter sun

Justin VK2CU managed to activate seven gridsquares:

Sunday morning was rather cold. The Falcon's thermometer said it was -10, and everything was covered in ice. This was 30km east of Guyra, NSW. Ford Australia's new injected LPG system started with no problems, though it took me a bit fire up.

Once the sun came up, things warmed up nicely. Went to the hill south of Guyra to try SW QLD - not much happening though. A LSD and traction control was required to climb this icy grassed hill, complete with lots of sump smashing boulders (who needs a 4WD?)

Then it was off to Ben Lomond QG50 - a truck rest area along the new England Highway.



VK2CU's Microwave Setup

Matt VK2DAG reports:

Did someone say cold! Holy snapping duck poo it was COLD!! Woke up 5:30am Sunday morning sitting in the drivers seats with 5 layers on, inside a -5° sleeping bag with my Russian hat on and it was still cold enough to wake me up. Brrrrrr.... I need a better sleeping bag. I haven't suffered that bad from the cold since I was wearing green stuff. Never again without better/warmer gear.

Big setup at QF48 near the entrance of Coolah Tops NP. The farmer whose land I was on came over for a chat. He asked how I made out the night before because it was so brutally cold! That's saying something coming from a local....

There weren't many on, that's for sure. And the very small tropo and AE openings made it hard when I hear guys chatting about the weather and stuff and then the opening's gone ... Overnight in QF47 I could hear the Dural beacon all night at 579 and not a voice to be heard. Sitting in the ute tray with frost settling on me would be a bit more interesting if there was someone to talk to.



VK2DAG Warming Up

Please send any Weak Signal reports to David VK3HZ.

Digital DX Modes

Rex Moncur – VK7MO

24 GHz Tests

On 13 June Rex VK7MO (see Fig 1) assisted by Ian VK3AXH climbed the fire tower at Mt Buninyong near Ballarat to check out Rex's 24 GHz system with David VK3HZ and Alan VK3XPD operating from their home stations. After David sorted out some problems with his GPS locking, signals reached 5-9 plus both ways over a 106 km path. Alan could see Rex's signal on SpecJT but was blocked by trees and was unable to complete a two way contact.



Fig 1: Rex VK7MO with 24 GHz set-up on Mt Buninyong fire tower. Photo by Ian VK3AXH

24 GHz Aircraft Scatter

On 17 June, Rex VK7MO (portable at the QTH of Chris VK1DO) worked David VK3HZ on 24 GHz via aircraft scatter using JT65c over a distance of 462 km, establishing a new 24 GHz Digital Mode distance record. Many aircraft did not produce useful decodes and it took some 5 hours and around 30 aircraft to complete the QSO. A detailed report is at:

<http://www.vk3hz.net/microwave/462km-24GHz-Aircraft-Scatter-QSO.pdf>

24 GHz Tropo-Scatter

Between 26 and 29 June, Rex VK7MO and David VK3HZ conducted a series of tests over non-line of sight paths to gauge the usefulness of tropo-scatter on 24 GHz. The best distance achieved was 176 km on SSB and 268 km on JT65c. A detailed report is at

<http://www.vk3hz.net/microwave/24GHz-Troposcatter.pdf>

Please send any Digital DX Modes reports to Rex VK7MO

The Magic Band – 6 m DX

Brian Cleland – VK5BC

Scott VK4CZ summed up June as follows “With the movement of the sun to the northern hemisphere, and the associated demise of the F2 and TEP propagation we'd experienced from January through to May, the doldrums of winter E's are now firmly installed! The last of the Northern Hemisphere TV video was received via TEP on June 12, 2012.” After a quiet May winter E's began in the 1st week of June. Most openings were down the eastern seaboard with an occasional opening from VK2, 4 and 7 to VK5 and ZL. Unfortunately southern VK6 missed out with no openings/contacts recorded to the east.

1st June Frank VK7DX reported ZL beacons and worked Peter ZL4LV and again on the 3rd June Frank reported ZL2WHO/b and ZL3SIX/b and this time worked Neil ZL3ADC. Norm VK3DUT reported ZL beacons on the 4th June but no contacts.

5th June band livened up with good openings from VK4 to VK3, 5 and 7. Brian VK5BC and Rob VK3XQ worked Scott VK4CZ and Les VK4ALH, Rob also completing with Brian VK4EK in Sapphire while Jack VK2XQ reported hearing ZL beacons.

Frank VK7DX was back in the action again on the 6th June working several VK4's while John VK4TL near Cairns reported evening TEP into JA and completing with JA2DDN and JA2OGB.

VK4's between Hervey Bay and Brisbane were again in the action on the 7th June working into VK3, 5 and 7 while later in the day VK4FP and VK4FNQ from far north VK4 worked into southern VK2 and VK3. Leigh VK2KRR also reported Derek VK6DZ on WSPR.

Again on the 8th June, VK4's again worked into the southern states but the band also opened from VK2 to VK5 and western VK3 with strong backscatter signals between Brian VK5BC and Steve VK3ZAZ.

10th June saw more E's down the eastern seaboard but of interest was the reporting of the VK6RSX beacon from NW VK6 by Frank VK7DX, Steve VK3ZAZ and Brian VK5BC. Frank and Steve completed with Rod VK6KP in Karratha.

Frank VK7DX completed with Peter ZL4LV on the 12th June and Ken ZL3OZ on the 13th. Scott VK4CZ also reported ZL beacons on the 13th and worked ZL4AX/m and heard ZL1NX while Colin VK2BCC worked ZL2, 3 and 4.

Frank continued to work in to ZL again on the 14th and the 19th this time ZL3OZ and ZL3JT. Good opening between VK4 and VK5 on the 18th with Jeff VK5GF and Brian VK5BC working several VK4 with S9+ signals.

25th June good openings again around midday down eastern seaboard with Scott VK4CZ and Mike VK2ZQ working Bob ZL1RS. Later the band opened from VK2 Wollongong area to VK5 with Brian VK5BC working John VK2FAD, John VK2BHO, Mike VK2ZQ with conditions then moving to VK7 with good contacts completed with Dave VK7DD and Frank VK7DX.

27th June more E's down the eastern seaboard with Scott VK4CZ working Dave VK7DD and Frank VK7DX. Frank as usual worked into ZL and along with Norm VK3DUT worked Peter ZL4LV. 29th Scott VK4CZ worked Ross ZL3ADT.

Hopefully July provides further E's to keep the shacks warm in winter and allow some experimenting with rigs/antennas etc. to be ready for the next equinox period when hopefully there is a little more activity on the sun and we see some improvement in the solar numbers.

Please send any 6 m information to Brian VK5BC