

---

# VHF/UHF – An Expanding World

---

David Smith VK3HZ

## Weak Signal

David Smith - VK3HZ

Propagation conditions are tailing off as the season cools. However, the remote installation set up by Rob VK6LD in Albany is continuing to produce results. On the evening of March 1<sup>st</sup>, he worked across to Brian VK5BC with 5x5 reports over a distance of 1900 km.

Unfortunately, many people mothball their VHF/UHF systems once the summer is over. However, ducts still occur throughout the year, although not with the intensity of the summer. On the VK Logger, there are still frequently reports of beacons being heard across the south – VK3 to VK6 – and from VK4 to ZL. Most don't result in contacts because there's nobody on at the other end. So, rather than bemoaning the lack of propagation, keep an eye on the Hepburn Tropo Ducting predictions and the VK Logger and an ear on the beacons and you might be surprised what you discover.

## VK3 Microwave Activity Day

Mike VK3KH reports on the recent VK3 Microwave Activity Day:

*Monday 10th March was Labour Day holiday here in Victoria, so it was planned as a Microwave Activity Day.*

*The day proved to be a pearler, both weather wise and activity wise. With an early start, most stations were set up and operational by 8.30 am local time. The idea was to make as many contacts as possible above 1 GHz, with 144.150 being used for liaison. I set up on Arthurs Seat on the Mornington Peninsula with spectacular views over the Bay, and it was not long before I was rewarded with contacts. Some signals were noticed on 1.2 GHz, and I quickly worked VK3XL (at home), VK3RR (at home), VK3AXH on Mt Buninyong, and VK3XPD at home.*

*Over the next three hours I worked stations on 1.2 GHz, 2.4 GHz, 5.7 GHz and 10 GHz. In total, I worked 12 callsigns including the stations above plus VK5DK, VK3ACG, VK3AIG, VK3ALB, VK3PY, VK3KQ, VK3MQ and VK3HY. In all approximately 18 operators were active that morning.*

*I also know that Rex, VK7MO on Mt Wellington near Hobart, completed an SSB contact with VK3PY, and digi contacts with VK3HY and 3MQ. Unfortunately, I had chosen the wrong side of the hill to operate from :-( . Great work Rex et al.*

*It is encouraging to see Microwaves alive and well in Victoria and South Australia. Thanks to all who took part!*

## GippsTech 2014

If you haven't already, it's time to plan your attendance at GippsTech 2014, scheduled for the weekend of July 12<sup>th</sup> and 13<sup>th</sup>. Refer to the VK3BEZ web site for more details: <http://www.vk3bez.org/gippstech.html>

GippsTech is the premier conference for VHF/UHF/Microwave enthusiasts. However, presentations are not limited to that, covering a wide range of interests for all radio amateurs. It's also a great opportunity to catch up face to face with fellow enthusiasts at the informal Friday night get-together, the Saturday dinner and during

breaks in the conferences. Hope to see you there.

Please send any Weak Signal reports to David VK3HZ

## Digital DX Modes

Rex Moncur – VK7MO

### New 24 GHz EME World Record

On 5 March 2014 Rex, VK7MO and Charlie, G3WDG extended the 24 GHz EME record to 17405 km using JT4f. Both stations ran 10 watts and Rex used a 1.14 metre dish in a portable operation from Mt Wellington while Charlie operated from home with a 3 metre dish. Rex and Charlie had made some four unsuccessful attempts on earlier occasions when the degradation and spreading were at a minimum. For the successful attempt they adopted a different strategy and looked for a time when the lunar declination gave higher elevations at each end to reduce atmospheric losses and also a longer common window to give more time for averaging the very weak signals. By Rex operating from Mt Wellington at 1270 metres this reduced the amount of atmosphere at his end giving an estimated improvement of 2 dB over operating at sea level. Even so signals were marginal and with cloud cover much of the time it took over an hour to complete the QSO. The URL below is a video of a talk which Rex gave on how this QSO was achieved.

<https://www.youtube.com/watch?v=XfReoQOWqUo>

Please send any Digital DX Modes reports to Rex VK7MO

## Meteor Scatter

Dr Kevin Johnston – VK4UH

Only a short report this month. The general level of activity of 144MHz Meteor Scatter activity (MS) was low throughout March, with no significant meteor showers occurring. Conditions for “random” meteor scatter activity during the routine activity sessions (07:00-08:00 EST) on Saturdays and Sundays were reported by most active stations as being only average or poor, even for this season of the year. Return rates were low through most of the sessions with pings being reported as short and faint for the most part. This was certainly the experience of most operators up here in VK4. The number of stations on-air from the southern states has also been low.

Normally towards the end of summer, at least for northern stations, the shortening of the days and the later sunrise brings the activity sessions closer to the pre-dawn peak when useful meteor returns are more frequent. During summer itself the angle of the terminator, the line dividing day and night on the earth's surface, and the lack of Daylight Saving here in VK4 usually means that we are already well into daylight and past the optimum pre-dawn peak of meteor activity before the normal activity sessions start at 07:00 EST. The end of Daylight Saving in the eastern states (6 April) will have occurred before this gets to print which will place the VK4 stations an hour further into daylight at the start of the activity sessions.

Hopefully also there will have been some enhanced activity to report from the Lyrid Meteor Shower (22nd April) next month.

As mentioned in previous columns there is still great interest from active MS stations

in SE VK4 and northern VK2 to participate in skeds with stations in the North and Far North of VK4. No stations have yet come forward and I would like to extend the invitation again for anyone with even a modest 2m station with digital capability to get in contact with me to arrange some trials. There has been a suggestion for a portable station from Brisbane travelling to the Cairns or Port Douglas area to do some MS tests.

Mention was made last month of the new release of WSJT version 9.7. One anomaly has come to light here while running FSK441 in the new version, that being attempts to force a decode on pings received during the last few seconds of a period result in a decode of the outgoing message from WSJT not the received signal. This is really confusing to see on the screen. It is not clear if this peculiarity is only in the system here (IC9100, Signalink-USB interface and laptop) or whether this is a general problem to be aware of. I wonder if anyone else has noticed or can reproduce this anomaly.

Please send any reports, questions or enquiries about Meteor Scatter in general or the digital modes used to Kevin VK4UH