

## Let's Beat the Winter VHF/UHF Doldrums

Well, it's been a remarkably good summer, at least here in VK3. We've had a succession of slow moving Highs across the Bight, which have produced some long-lasting openings across to VK6. Bill VK6AS in Esperance was at times besieged by a veritable dogpile of VK3 stations on 2m for extended periods.

The recent Field Days have also seen plenty of activity with many stations also venturing to mountaintops to work those near and far. Three groups – let's call them Gippsland, Melbourne and Western District – have been giving the microwave bands up to 10 GHz a good workout with much success.

All this activity shows that there are many stations out there capable of putting out a good signal on all bands from 6m to 3cm. However, with winter approaching, the VHF/UHF bands are quietening down to the point where regular CQ's on 2m of an evening often go totally unanswered. As for the call frequencies on 70cm and 23cm, does anyone monitor these bands or are they only used following a hookup on say 2m?

The pressure is on for RF space and there is a great risk of us losing out substantially here – as is already about to happen with the lowest 10MHz of the 70cm 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 70cm band 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 heard people questioning the usefulness of a 2m 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 the busiest time on 2m at the moment – although even that can be fairly quiet. Most activity seems to centre on 144.1 between 8 am and 9 am during the week and 144.2 on weekends. Gordon VK2ZAB is one of the regulars in this Net and reports a total of 484 contacts with 53 stations for the month of March – not all of them aircraft-enhanced however. Furthest distances are 790 km to the north to VK4DFE and 740 km to the south to VK3II.

In VK3, Robbie VK3EK conducts a weekly net on Wednesday nights at 8.30 pm on 144.150. The net regularly attracts at least a dozen stations from around the state. If demand is there, this net sometimes QSY's to 70cm and 23cm.

I'd like to hear of other regular activity and any other nets being conducted around the country.

How do we generate more activity? Well, there seems to be a peak of activity on Sunday mornings. Is there a need for a Sunday morning 10 am net that would also relieve the TVI issues that some country stations cannot avoid? Is anyone keen to re-introduce the Scrambles that used to run many years ago? What other ideas do people have?

As they say, Use it or Lose it

## 120 GHz World Record Claim Pushed to 30 km

This information from Brian, WA1ZMS:

How do you say this?... but again....we took the efforts of Will, W0EOM and Bob KF6KVG with their latest world record of 24.6 km as a challenge to try and better our East Coast efforts on 120GHz. At the same time Will & Bob were doing 24 km on the band, I was working in the shack trying an active bias circuit to improve my RX mixers at 120 GHz.

The results were that W4WWQ, WA4RTS and myself took to the local hills of the Blue Ridge Mountains yet again and managed a few more QSOs on 120 GHz with our best DX being 30.0 km.

Date: April 2, 2003

Time: 05:18z <--- it was a late night.

WA1ZMS/4 37-31-19.3 79-30-14.4 FM07fm

W4WWQ 37-21-09.7 79-14-20.3 FM07ji

Distance 30.056 km

Another interesting point to note is that as Will and I each take our turns at bettering the other's DX, the oxygen losses will become the limiting factor in all of our efforts. While the loss due to water vapour on this band may be around 0.24 dB/km, the loss due to oxygen is around 1 dB/km. So for someone to improve a DX record of say 30 km by another 10 km, they will need an improvement of 14.89 dB! (2.49 for free-space loss, 2.4dB for water loss, and 10dB for oxygen loss) The above values assume a typical semi-dry atmosphere. We'll need real QRO power for DX over 60 km.

So...when Will takes the record back by a km or two (and he may already have) it might seem like splitting hairs but the loss per km from oxygen is a major obstacle to overcome and the efforts are not trivial.

Photos and audio files can be found at [http://www.mgef.org/zms\\_120.htm](http://www.mgef.org/zms_120.htm).