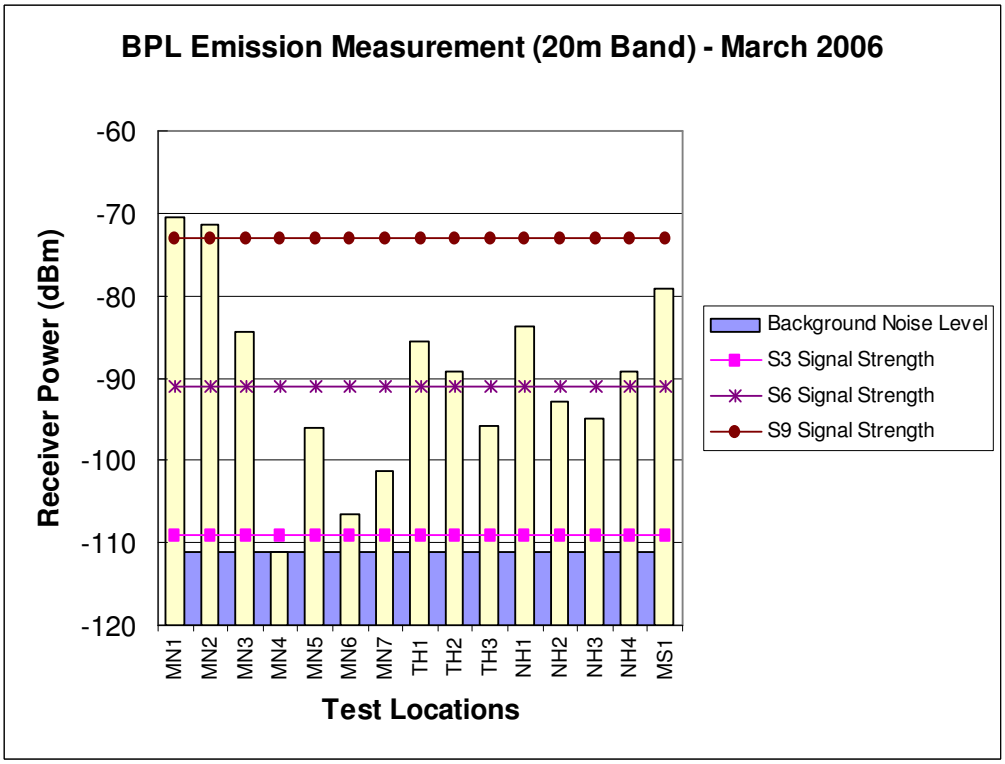
Tasmanian BPL Trial Emissions Measurement

Version: 20060326

Measured Emissions



Notes:

- Key approach was to measure ambient noise level outside of trial area which proved to be the same as forecast by ITU-R P.372-8 median galactic noise level, then compare this to measurements taken within the trial areas to demonstrate the degradation of the noise floor;
- Measurements were taken between 10-20 metres from powerlines using FSM Software Version 1.10, Yaesu FT7 Tranceiver, MobileOne Hamtennae M20-1 Vertical Helical antenna mounted on the towbar;
- Measurements were made throughout March 2006;
- S meter scale is based on S9 = 50uV and the scale is presented for comparison purposes only;
- The signal strengths shown in the chart are for a mobile station with a shortened antenna. Fixed stations with a larger antenna at similar distance from the power lines would expect to receive signals 6 to 20dB higher than shown in the chart.
- Test locations key:
    - MN = Mount Nelson (At MN4 BPL system appears to be off, MN5, 6 & 7 are within a notched area)
    - MS = Mount Stuart
    - TH = Tolmans Hill
    - NH = North Hobart

Conclusion:

Measurements show that there is a degradation of the noise floor in the trial areas. In the un-notched areas this is caused by emission levels ranging from **15dB** (32 times greater) to **41dB** (12,600 times greater) above the measured ambient noise floor (level). In the notched areas this is caused by emission levels ranging from **5dB** (3 times greater) to **15dB** (32 times greater) above the measured ambient noise floor (level). As such, these emissions would be likely to cause interference to almost all radiocommunications services that were limited by ambient noise.