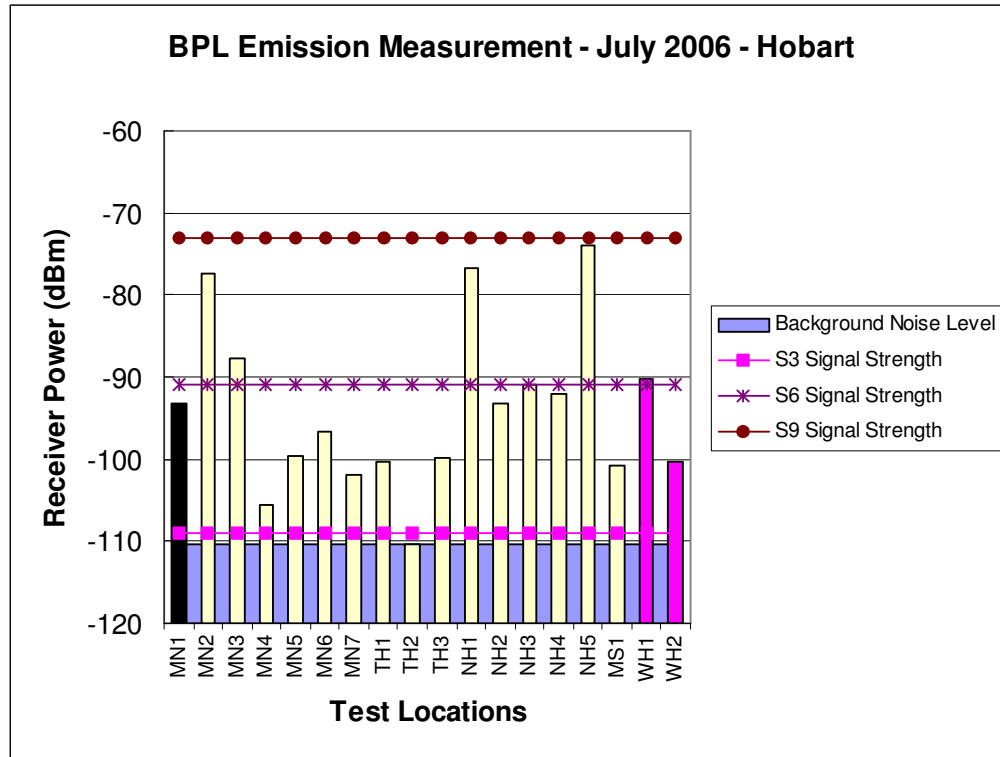


# Tasmanian BPL Trial Emissions Measurement

Version: 20060719

## Measured Emissions



### Notes:

- Key approach was to measure ambient noise level outside of trial area which proved to be just above (-110.4dBm) that forecast by ITU-R P.372-8 median galactic noise level (-112.2dBm), 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 1.11, Yaesu FT7 Transceiver, MobileOne Hamtennae M20-1 Vertical Helical antenna mounted on the towbar;
- Black column = 40m band, purple columns = 80m band and remaining = 20m band;
- Measurements were made throughout July 2006;
- S meter scale is based on S9 = 50uV and 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 (MN5, 6 & 7 are within a notched area)
  - MS = Mount Stuart
  - TH = Tolmans Hill (At TH2 BPL system appears to be off)
  - NH = North Hobart
  - WH = West 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 **5dB** (3 times greater) to **37dB** (5,000 times greater) above the measured ambient noise floor (level). In the notched areas this is caused by emission levels ranging from **9dB** (8 times greater) to **14dB** (25 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.