

## Calibration document

Instrument: Acer tablet with Beyerdynamic DT770 earphones (PVC ear cups)

Date: 7<sup>th</sup> May 2013

Location: Southampton Solent University (SSU) Anechoic Chamber

Calibrated to BS 60645-1:2001, using RETSPLs from BS EN 389-8:2004

### Frequency Accuracy (Hz).

Test Equipment: Sound Level Meter & IEC Artificial Ear (69318).

Frequency	250	500	1000	1500	2000	3000	4000	6000	8000
Tolerance @ 2% (Hz)	±5	±10	±15	±30	±40	±60	±80	±120	±160
Value	250.00	500.00	1000.02	1500.01	2000.02	3000.04	6000.06	4000.07	8000.08

### Linearity Checks @ 1 kHz, measured acoustically.

Test Equipment: Sound Level Meter & IEC Artificial Ear (69318).

Hearing Level	15	20	25	30	35	40	45	50	55	60
Uncertainty	±0.7	±0.7	±0.7	±0.7	±0.7	±0.7	±0.7	±0.7	±0.7	±0.7
Left	21.3	25.6	30.3	35.1	40.3	45.5	50.5	55.5	60.4	65.6
Right	20.7	25.5	30.4	35.2	40.7	45.8	50.8	55.8	60.6	65.9

Hearing Level	65	70	75	80	85	90
Uncertainty	±0.7	±0.7	±0.7	±0.7	±0.7	±0.7
Left	70.4	75.5	80.5	85.2	90.5	95.5
Right	70.8	75.8	80.8	85.5	90.8	95.8

### Earphone SPLs: RETSPL + 50dB

Test equipment: Sound Level Meter & IEC Artificial Ear (69318).

Frequency	250	500	1000	1500	2000	3000	4000	6000	8000
Target	68	61	55.5	55.5	54.5	52.5	59.5	67	67.5
Left	68	60.6	55.5	55.1	54.5	52.3	59.5	67.2	67.5
Right	67.7	60.9	55.8	54.8	54.2	51.5	58.5	68.5	67.5

### Harmonic Distortion: Limit 2.5%

Test Equipment: Sound Level Meter & IEC Artificial Ear (69318).

Frequency	250	500	1000	2000	4000
Hearing Level	65	85	85	85	85
Left	2.1	1.1	1	0.8	1.1
Right	1.9	1	1	0.9	0.9

