Course: MSc in Environmental and Architectural Acoustics
Unit: Measurement and Behaviour of Sound
Subject: Use of Sound Level Meter (SLM)

Aim

- To obtain a practical knowledge on the use of a simple SLM.
- To look at the effects of placing measurement microphones near to and away from reflecting surfaces ands at different distances from the source.

Instrumentation:

- SLM B&K 2231
- Calibrator
- Tripod
- Sound Sources (loudspeaker)
- Random noise generator
- Power amplifier

Procedure (to be carried out separately in the anechoic and reverberation chamber)

1. Load the software module for the SLM and calibrate the SLM
2. Connect generator to the loudspeaker or use an active loudspeaker/generator.
3. Place the SLM on the tripod 1m from the loudspeaker at a height about 1.2m
4. Measure sound pressure levels ("A", "C" and "Linear" weighted) at points every 0.5m from 1m to 4m from the source

If time allows, in the anechoic chamber only:

I) Install a reflective surface behind the microphone
II) With the fixed loudspeaker position investigate the change in sound pressure levels (SPL) as the meter is moved towards the surface. Investigate:
III) Position 1. Away from the surface
IV) Position 2. Near the surface (0.5m)

Notes and Questions

1. Do not change the output level of the generator/amplifier during the experiment.
2. Plot the SPL as a function of distance away from the source. DO you observe the exponential law of decay?
3. Compare the results in the anechoic chamber and the reverberation room.
4. Compare results for "A", "C", "L" weightings in each room.