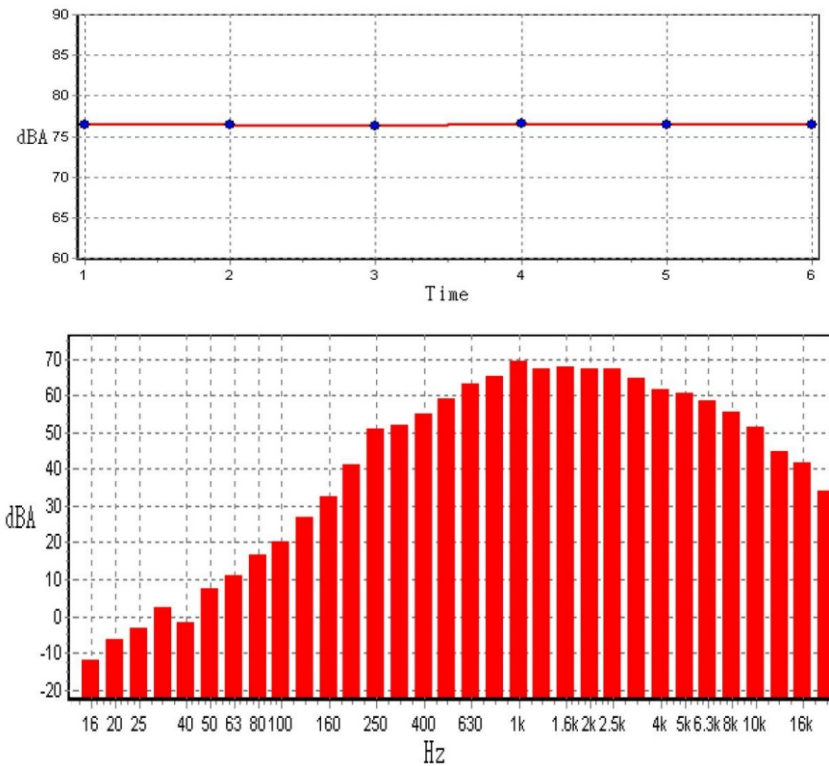


Noise Level Measurement

Fan noise level is measured in accordance with CNS 8753 standard (which is similar to DIN 45635) ISO 3744 in a semi-anechoic room where the background sound level is no more than 15dBA (The background noise level in Shyuan Ya's semi-anechoic room is below 10 dBA). Fastened vertically at all four corners using strings, a microphone is then placed one meter away from the center of the fan from the air intake side. The decibel readings taken from the sound level meter are plotted as Sound Power Level against the octave frequency bands.



Calculations of Sound pressure level (SPL) and sound power level (PWL) have been shown as below.

$$SPL = 20 \log_{10} P / Pref$$

$$SWL = 10 \log_{10} W / Wref$$

Where:

SPL: sound pressure level

SWL: sound power level

P: pressure

Pref: a reference pressure

Wref: an acoustic reference power



Semi-Anechoic Room