

Test Report

Issued by University of Salford (Acoustics Calibration Laboratory)

Date of Issue: 29 April 2013

Certificate Number: 01248/Supplement to 01248/1

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APPROVED SIGNATORIES

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Supplementary information supplied in support of measurement of sound power levels of a noise source

FOR ATTENTION OF: Phil Gillat

DESCRIPTION: Air Conditioning Unit (no refrigerant unit connected)

DIMENSIONS: 29 cm high x 80 cm wide x 61 cm long

MODEL: Serenity 7 (SS7)

SERIAL NUMBER: -

MODE OF OPERATION: Test Pressures: 150 Pa, 70 Pa, 10 Pa
Fan Settings: Low, Medium and High

YEAR OF MANUFACTURE: 2013

DATE OF TEST: 25 to 28 March 2013

Test Engineer (initial):

Name: Claire Lomax

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1 OVERVIEW

The data in this report is supplied in support of the standard tests carried out in Test Report 01248/1. All details of the measurement procedure are contained in 01248/1.

2 NOISE REDUCTION INDEX

The Sound Power data from 01248/1 has been used to calculate the sound pressure levels at 1m, 2m and 5m from the source. These calculations represent an estimate of the levels that would be obtained in free field conditions, and should not be assumed to be valid for any specific building environments where the characteristics of the room should be accounted for.

Figure Number	Pressure Setting	Fan Setting
1	10 Pa	Low
2	10 Pa	Medium
3	10 Pa	High
4	70 Pa	Low
5	70 Pa	Medium
6	70 Pa	High
7	150 Pa	Low
8	150 Pa	Medium
9	150 Pa	High

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Figure 1 - 10 Pa, Low Fan Setting

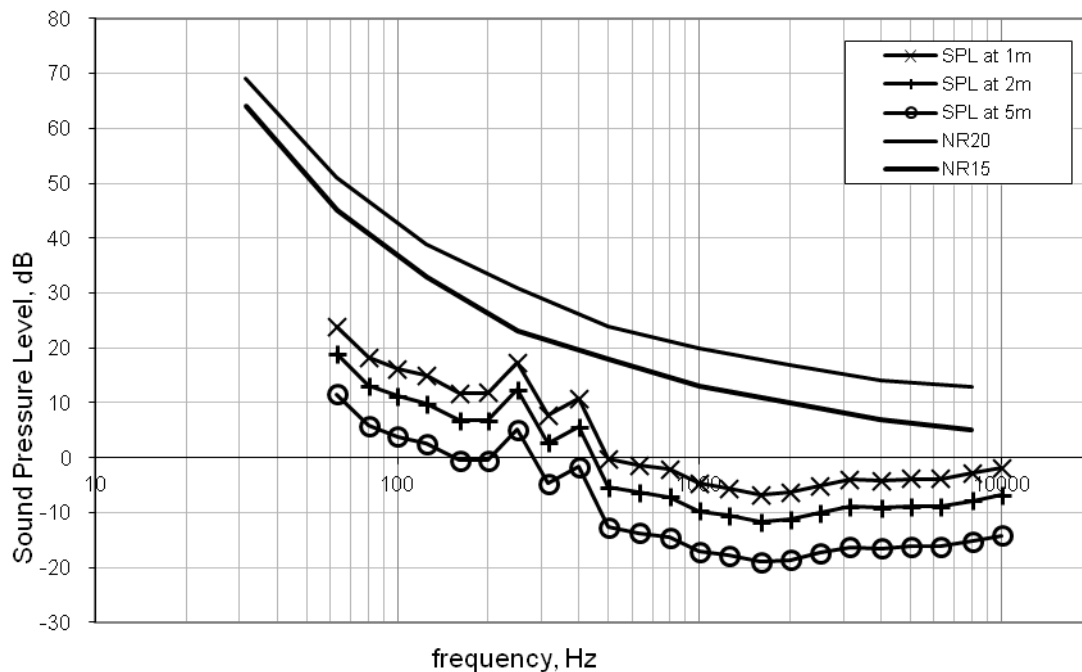
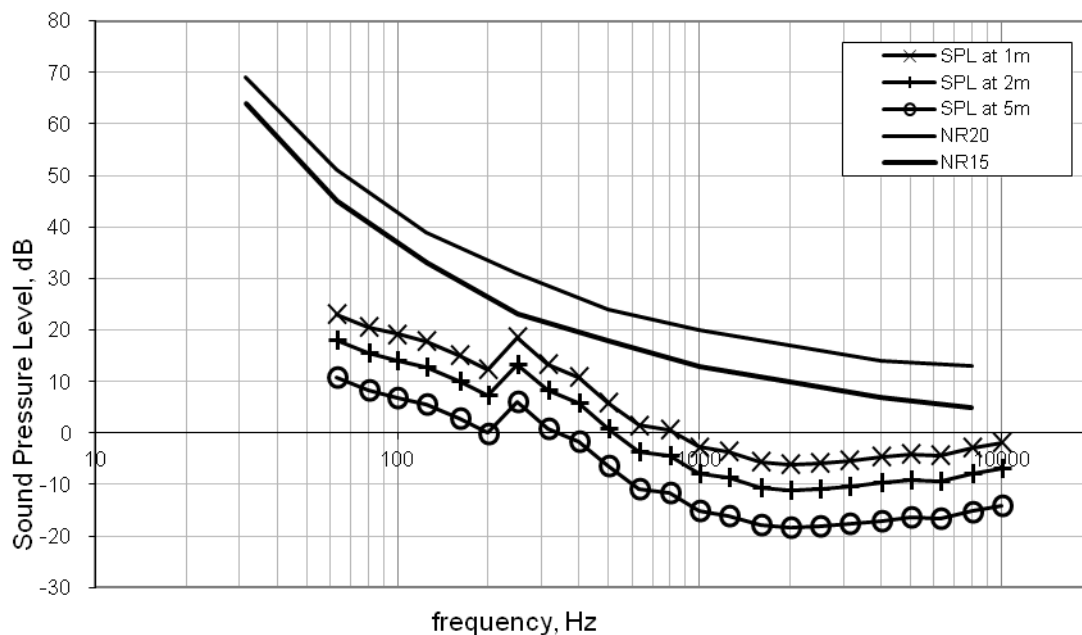


Figure 2 - 10 Pa, Med Fan Setting



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Figure 3 - 10 Pa, High Fan Setting

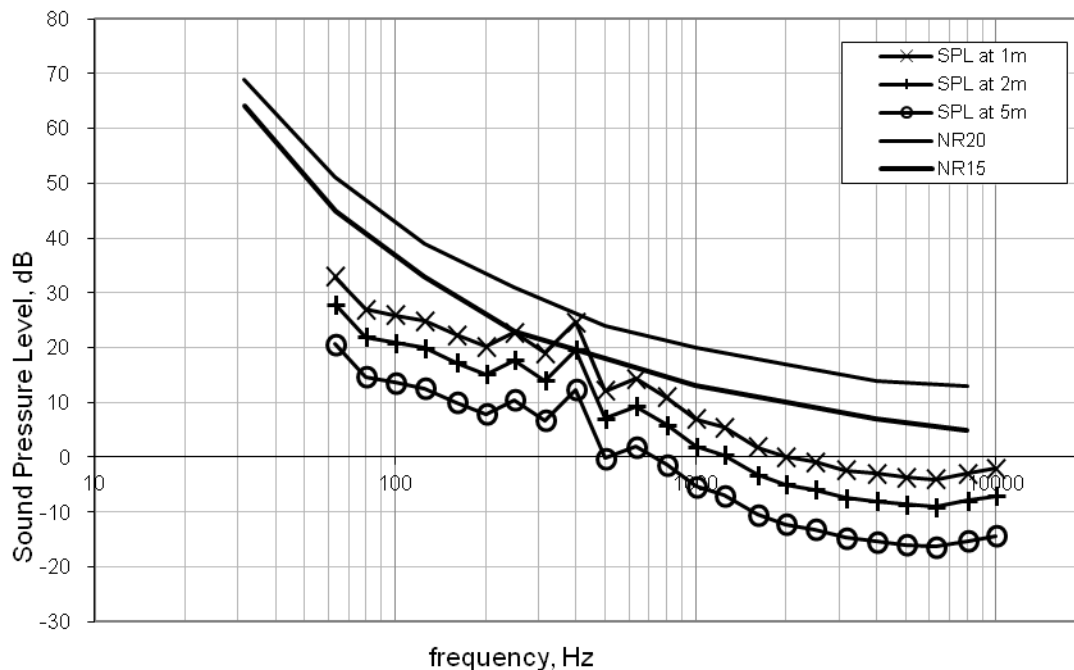
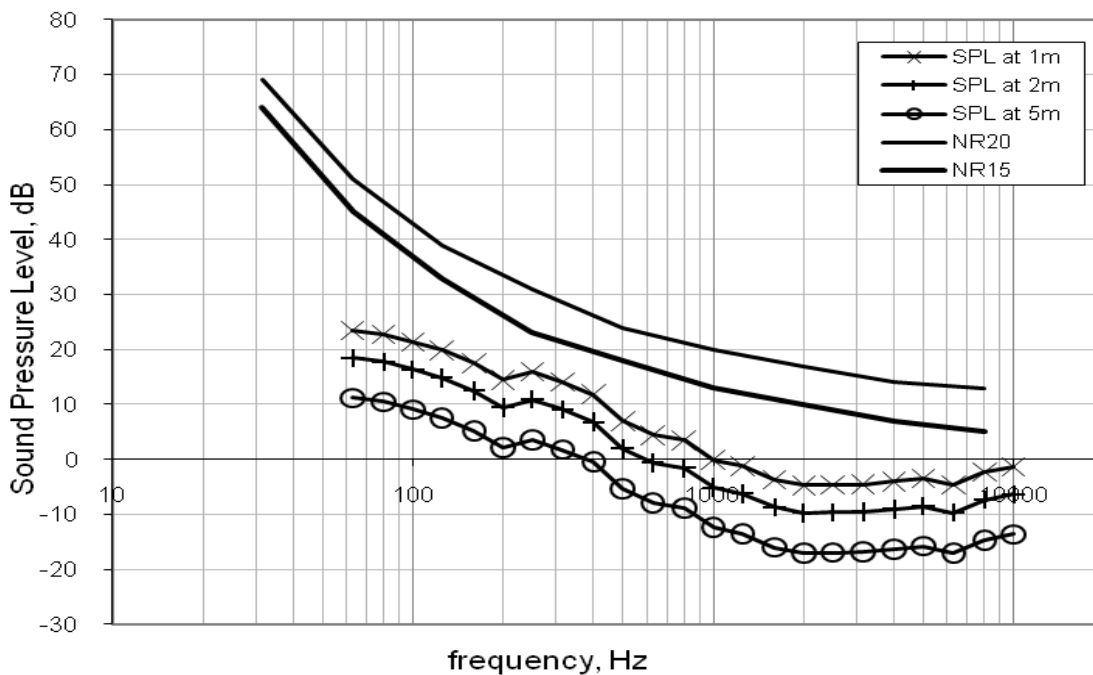


Figure 4 - 70 Pa, Low Fan Setting



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Figure 5 - 70 Pa, Med Fan Setting

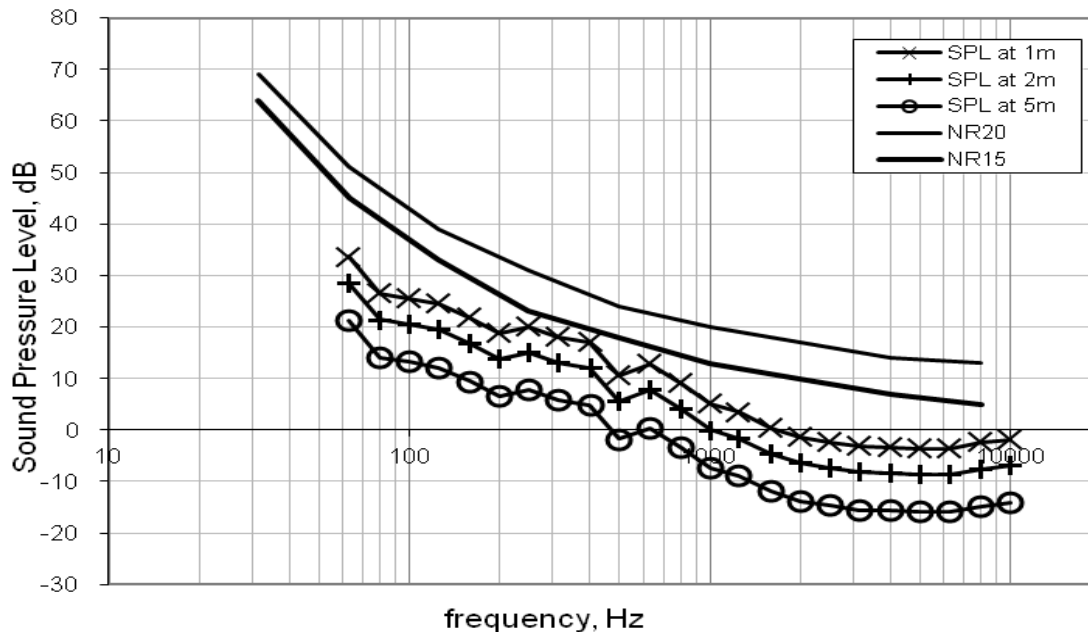
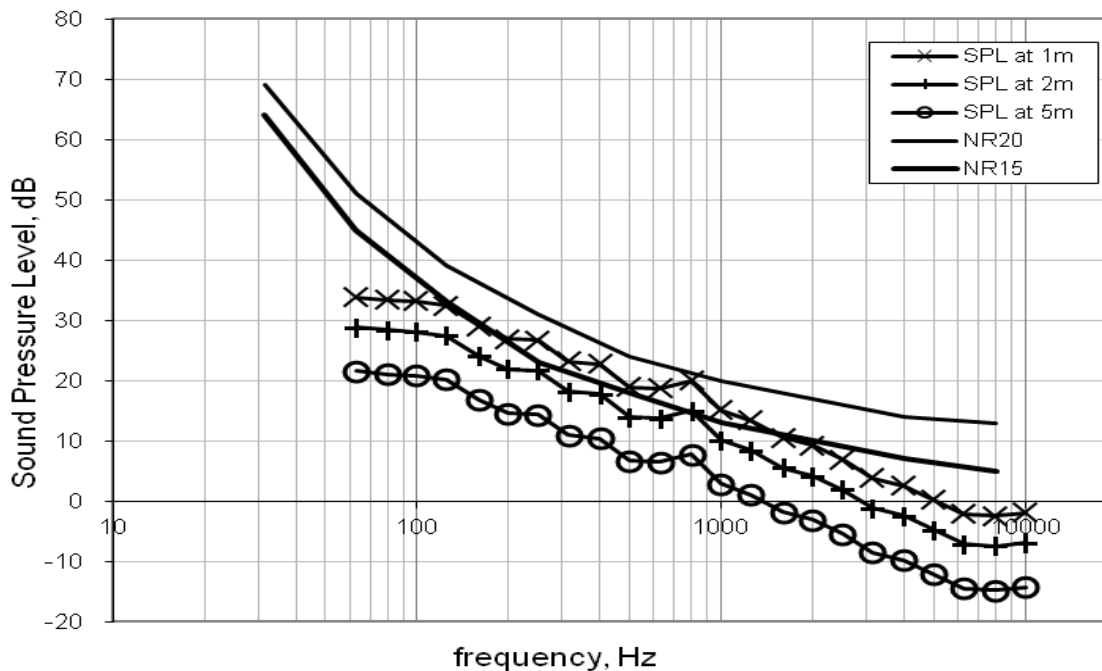


Figure 6 - 70 Pa, High Fan Setting



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Figure 7 - 150 Pa, Low Fan Setting

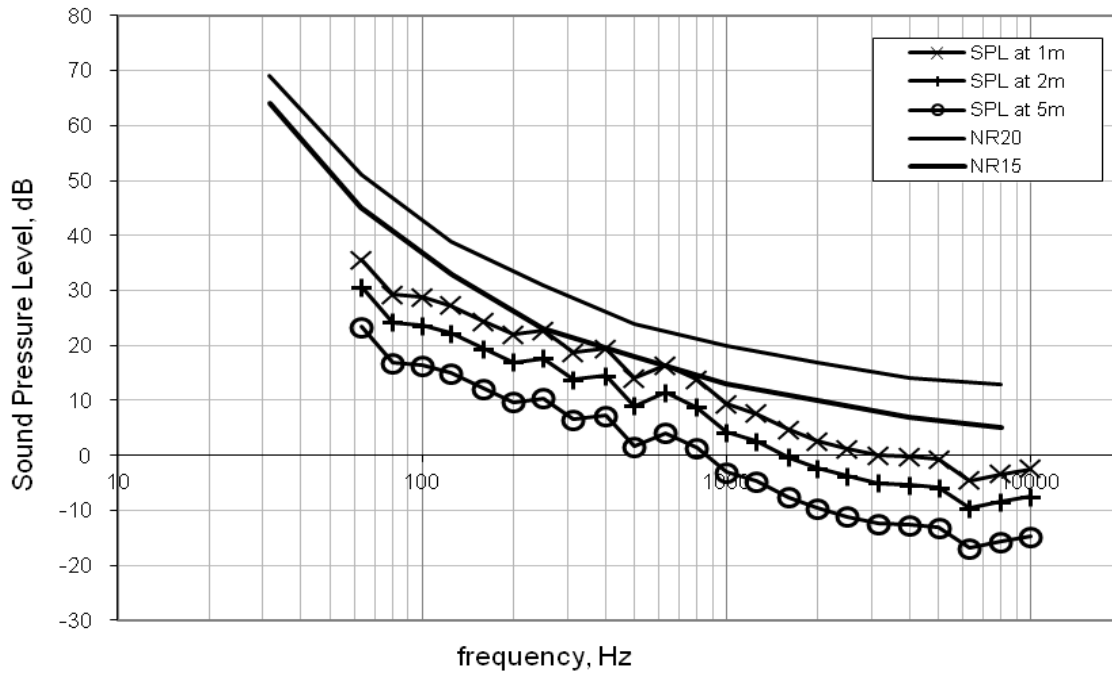
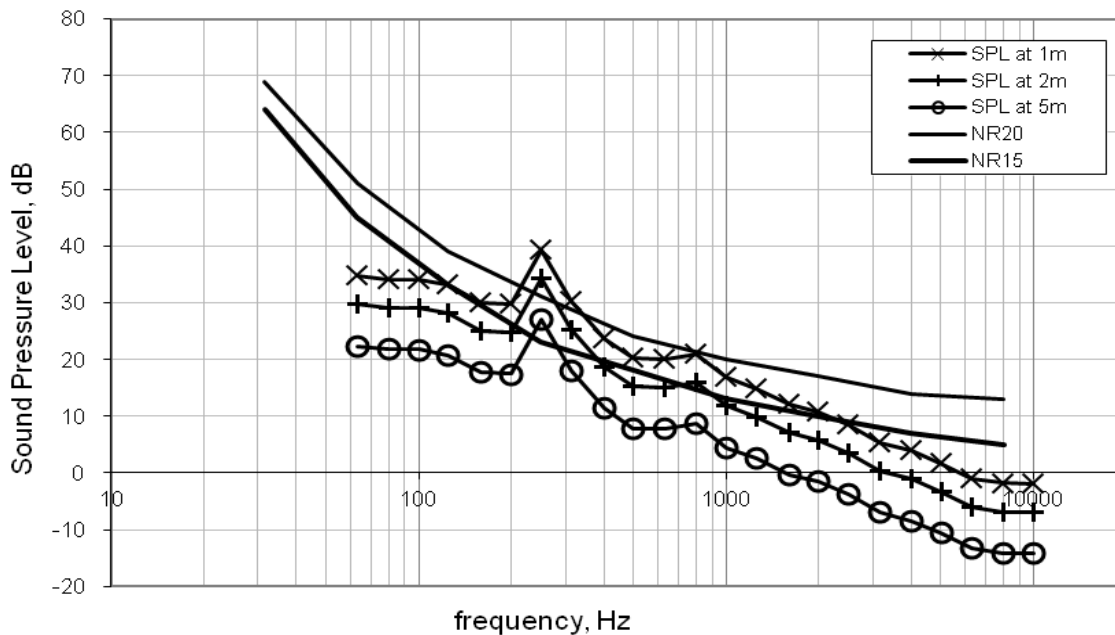


Figure 8 - 150 Pa, Med Fan Setting



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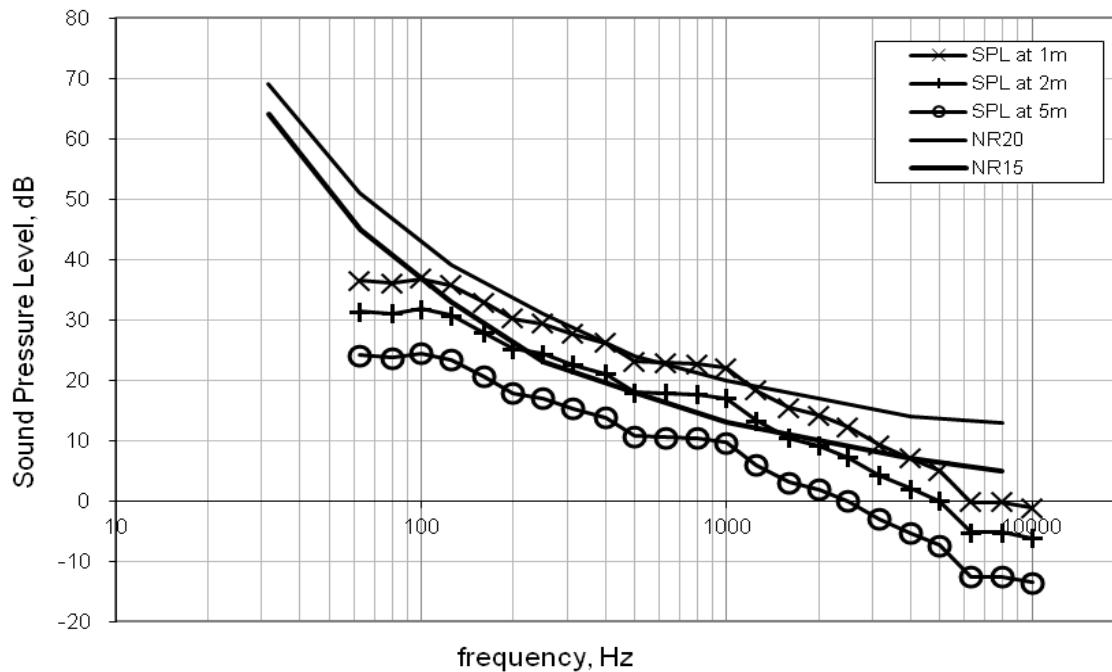
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Figure 9 - 150 Pa, High Fan Setting



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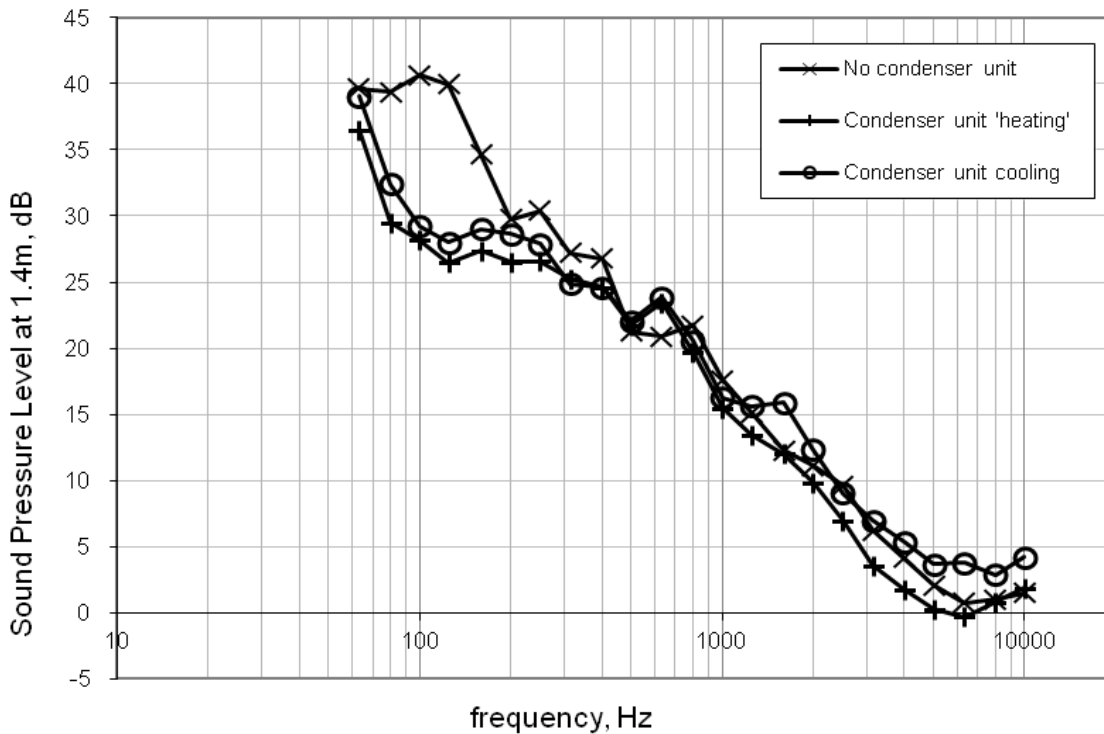
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3 MEASUREMENTS WITH CONDENSER UNIT ATTACHED

For comparison, measurements were carried out at one microphone position with the condenser unit attached to the main unit. These measurements were carried out at microphone position 4, with the unit set to the test pressure of 70 Pa, fan setting high.

The results of this comparison are shown in figure 10 which provides the un-weighted sound pressure levels measured at 1.4m from the unit.

Figure 10 – Comparison between measurements made with and without the condenser unit attached



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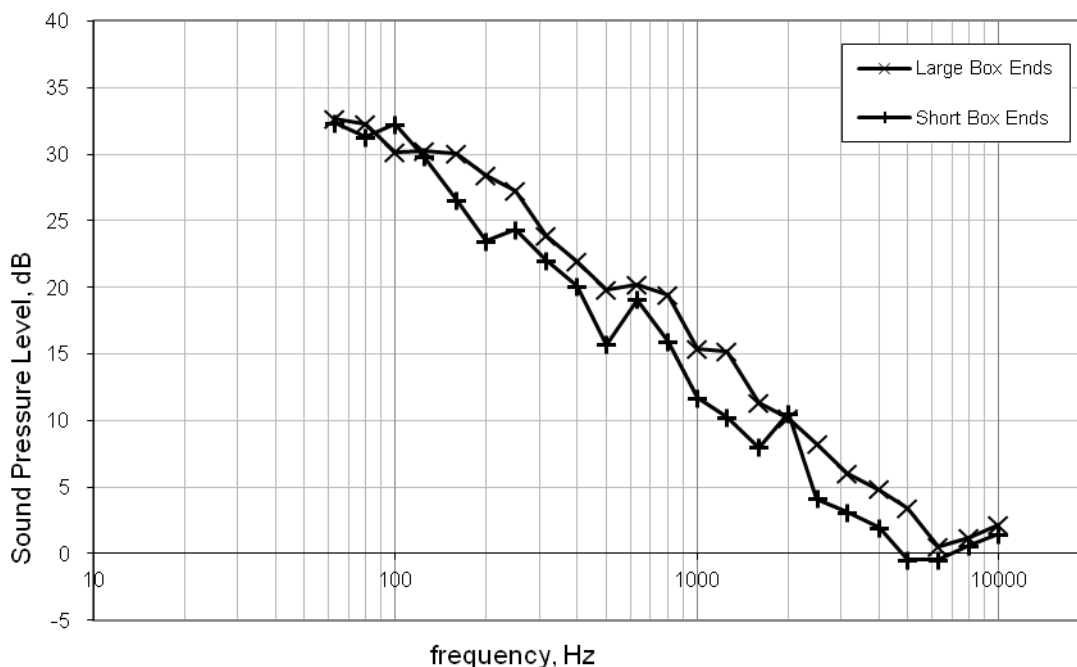
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4 MEASUREMENTS COMPARING LONG AND SHORT BOX-END UNITS

The long box end units were replaced with short box end units to compare any change to the noise emitted from the unit. Measurements were carried at one microphone position (position 10) and at a test pressure 70 Pa. High, Medium and Low fan settings were compared in this test and the results are shown in figures 11, 12 and 13 respectively.

Figure 11 - Test Pressure 70 Pa, Fan setting High



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Figure 12 - Test Pressure 70 Pa, Fan setting Medium

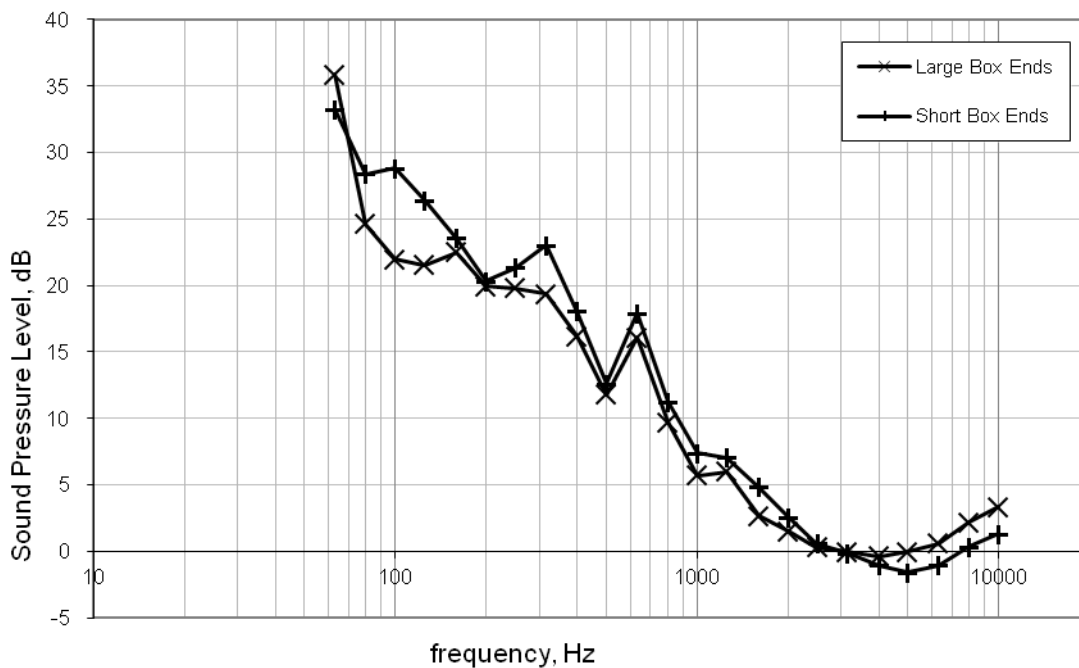


Figure 13 - Test Pressure 70 Pa, Fan setting Low

