聲智科技股份有限公司
AI-Acoustics Technology Co., Ltd.
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AC600 Anechoic Chamber

Introduction:

This chamber provides a reliable and stable acoustic test environment for speakers and microphones components, earphones, Mobile-phone, tablet, smart speaker box, etc.

Chamber Features:

- High isolation against background noise.
- Uniform sound field across the measurement plane.

Specification：

Outside Dimension: (Without wheels)	D:910 mm * W:974 mm * H:1800 mm
Inside Dimension:	D:560 mm * W:640 mm * H:560 mm
Background Noise:	≦**20 dBA** re. 20uPa, (A-weighting). (when outside noise≦65dB)
Sound Isolation Ability:	Frequency above 315Hz Leq≧**40 dBSPL** ref. 20u Pa. Frequency above 630Hz Leq≧**45 dBSPL** ref. 20u Pa.

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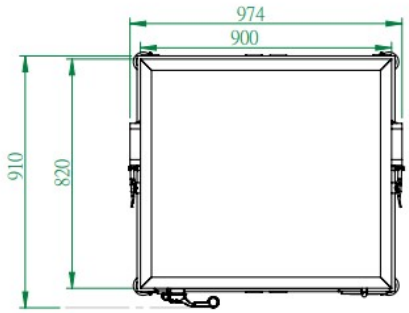
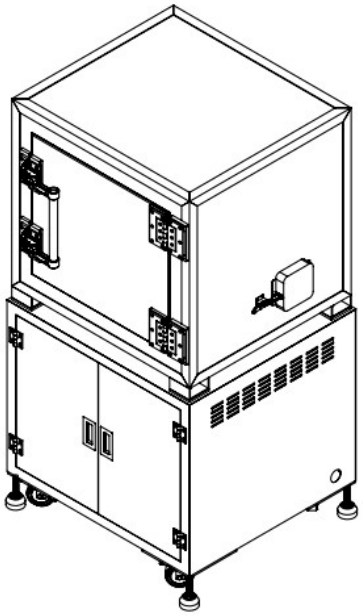
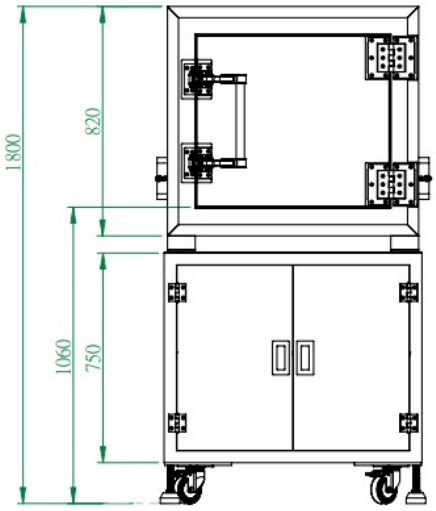
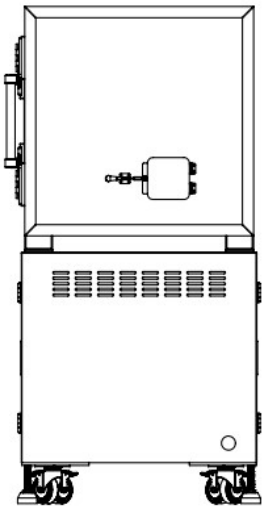
Dimension：









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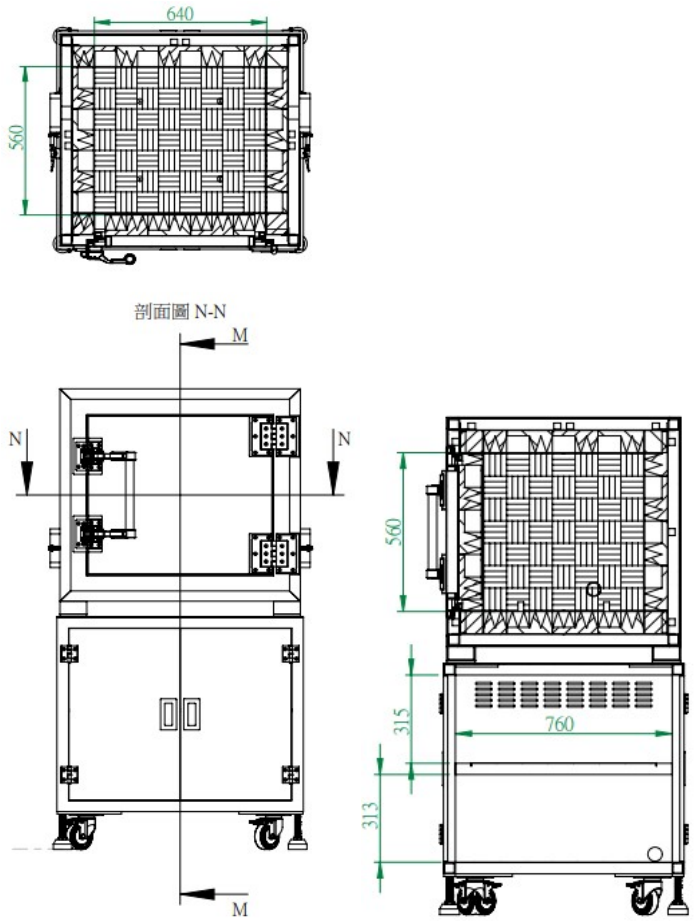

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Test and Measurements Report
測量報告

Report No.
報告編號 : **AC-230301A**

1. Integrated Specification:

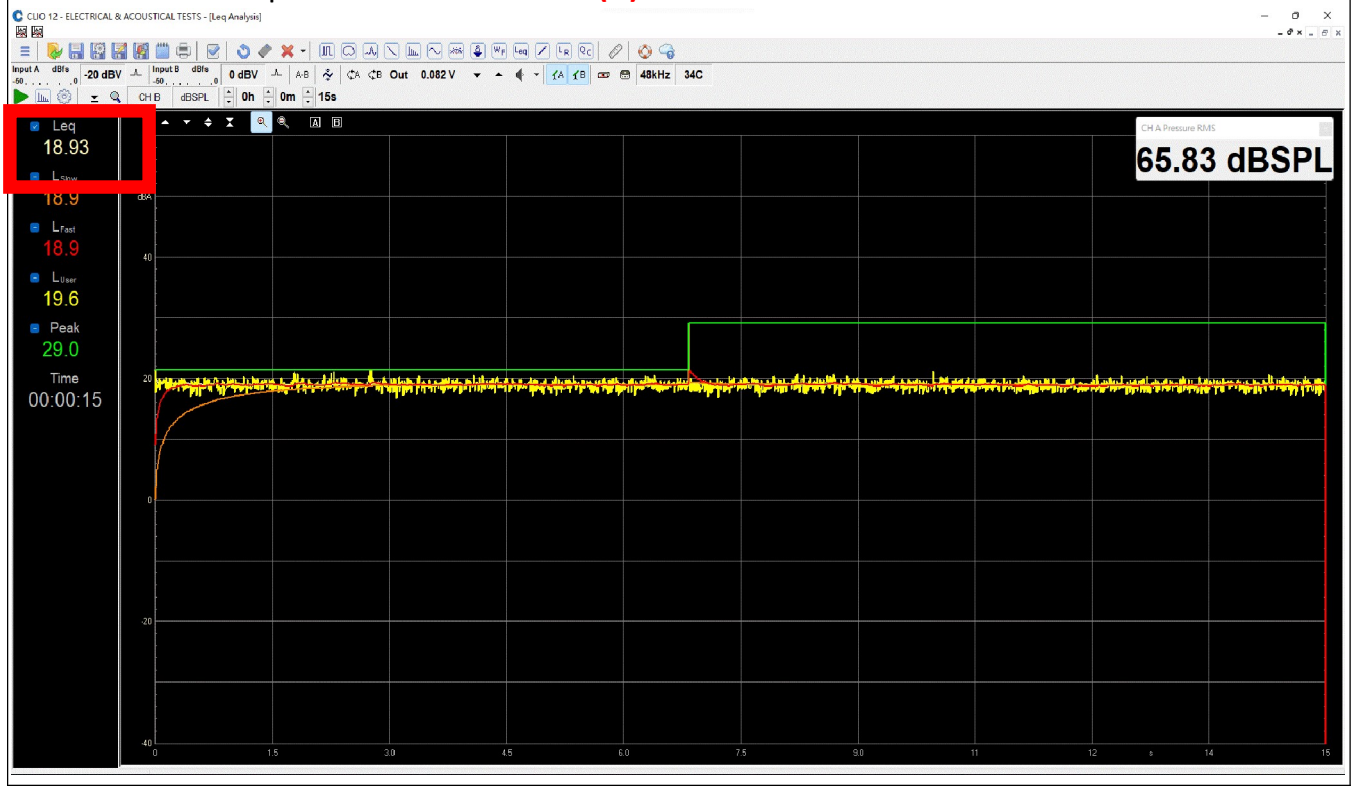
1.1 Basic Request:

1.1.1 Inner Size(L*W*H)	560*640*560mm
1.1.2 Outside Size(L*W*H)	910*974*1800mm (With Wheels)
1.1.3 Satisfy to inverse square range	1KHz Above
1.1.4 Integrated Isolation Ability	Frequency above 315Hz Leq≧40dBSPL Frequency above 630Hz Leq≧45dBSPL Use the GRAS 246AE Free-field Standard Microphone
1.1.5 Internal Noise (when outside noise≦65dB)	≦20dB(A) Use the GRAS 246AE Free-field Standard Microphone

2. Test Item:

2.1 Indoor background noise≦20 dBA

The value of Leq in chamber is **18.93dB(A)** when outside noise is 65.83dB



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Test and Measurements Report

測量報告

2.2 Acoustical Isolation Ability

Frequency above 315Hz Leq≧40dBSPL

Frequency above 630Hz Leq≧45dBSPL

2.2.1 1/3 Octave pure tone isolation ability

FREQ[Hz]	Outside noise (dBSPL)	Inside noise (dBSPL)	Isolation (dBSPL)
100	70.77	36.17	34.6
125	66.44	29.4	37.04
160	66.26	34.88	31.38
200	71.8	29.87	41.93
250	71.19	33.06	38.13
315	67.83	30.15	37.68
400	68.54	31.37	37.17
500	68.25	25.44	42.81
630	67.84	20.23	47.61
800	66.56	19.01	47.55
1000	66.37	16.78	49.59
1250	64.37	12.74	51.63
1600	65.42	12.79	52.63
2000	62.54	6.85	55.69
2500	58.78	7.44	51.34
3150	65.44	7.13	58.31
4000	65.14	7.46	57.68
5000	65.5	8.22	57.28
6300	62.11	12.08	50.03
8000	61.26	8.74	52.52
10000	64.79	9.16	55.63
12500	62	9.63	52.37
16000	62.45	10.36	52.09
20000	63.98	10.83	53.15

$$L_{eq} = 10\log_{10}\left[\sum_{i=1}^{n} f_i 10^{\frac{L_{fi}}{10}}\right]$$

315Hz~20KHz

Outside Leq = 78.1dB

Inside Leq = 34.9dB

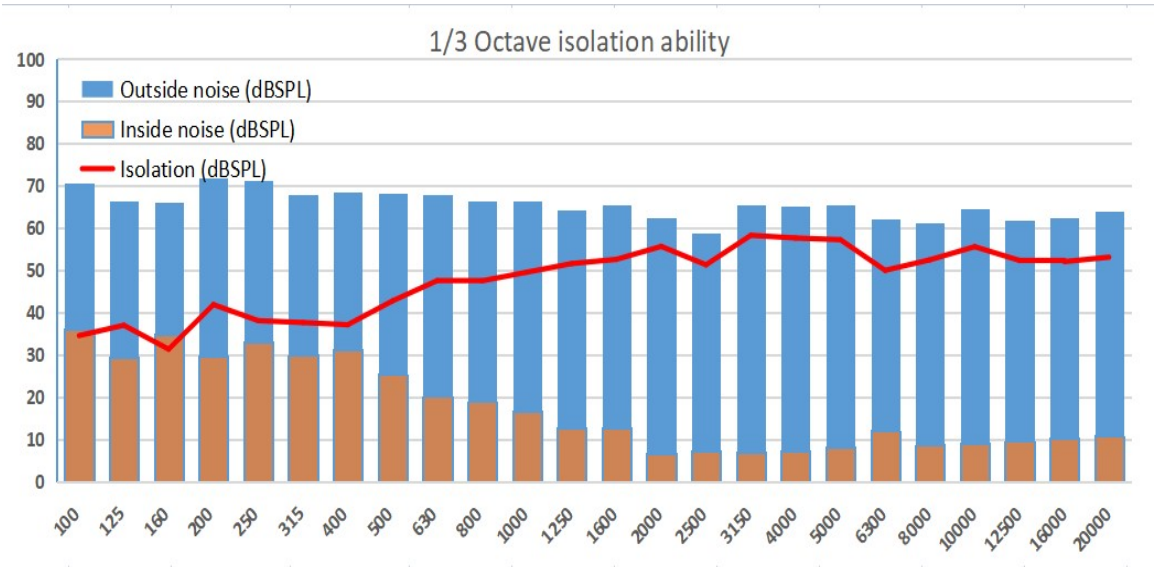
Isolation = 43.2dB

630Hz~20KHz

Outside Leq = 76.6dB

Inside Leq = 25.6dB

Isolation = 51dB



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Schematic diagram of the measurement condition.