

# *Certificate of Calibration*

*for*

*Description:* **Sound Level Meter**  
*Manufacturer:* **SVANTEK**  
*Type No.:* **971 (Serial No.: C119577)**  
*Microphone:* **ACO 7052E (Serial No.: 93026)**  
*Preamplifier:* **SV 18 (Serial No.:103880)**

***Submitted by:***

*Customer:* **Aurecon Hong Kong Limited**  
*Address:* **Unit 1608, 16/F, Tower B, Manulife Financial Centre,  
223-231 Wai Yip Street,  
Kwun Tong, Kowloon, Hong Kong**

**Upon receipt for calibration, the instrument was found to be:**

- ☒ **Within (31.5Hz – 4kHz)**  
☐ **Outside**

**the allowable tolerance.**

The test equipment used for calibration are traceable to National Standards via:

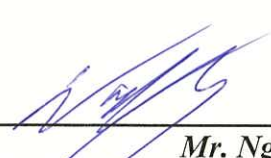
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

**Date of receipt: 23 October 2024**

**Date of calibration: 24 October 2024**

**Date of NEXT calibration: 23 October 2025**

*Calibrated by:*   
**Calibration Technician**

*Certified by:*   
**Mr. Ng Yan Wa  
Laboratory Manager**

**Date of issue: 24 October 2024**

**Certificate No.: APJ23-155-CC004**



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**1. Calibration Precaution:**

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

**2. Calibration Conditions:**

Air Temperature: 25.6 °C  
Air Pressure: 1006 hPa  
Relative Humidity: 51.8 %

**3. Calibration Equipment:**

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

**4. Calibration Results**

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
25-125.2	dBA SPL	Fast		94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
25-125.2	dBA SPL	Fast		94	1000	94.0	Ref
				104		104.0	±0.3
				114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
25-125.2	dBA SPL	Fast		94	1000	94.0	Ref
		Slow				94.0	±0.3

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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
25-125.2	dB	SPL	94	31.5	94.3	±2.0
				63	94.2	±1.5
				125	94.1	±1.5
				250	94.1	±1.4
				500	94.1	±1.4
				1000	94.0	Ref
				2000	93.7	±1.6
				4000	93.2	±1.6

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
25-125.2	dBA	SPL	94	31.5	55.0	-39.4±2.0
				63	68.1	-26.2±1.5
				125	78.1	-16.1±1.5
				250	85.5	-8.6±1.4
				500	90.8	-3.2±1.4
				1000	94.0	Ref
				2000	94.9	+1.2±1.6
				4000	94.3	+1.0±1.6

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
25-125.2	dBC	SPL	94	31.5	91.4	-3.0±2.0
				63	93.4	-0.8±1.5
				125	94.0	-0.2±1.5
				250	94.1	-0.0±1.4
				500	94.1	-0.0±1.4
				1000	94.0	Ref
				2000	93.6	-0.2±1.6
				4000	92.5	-0.8±1.6



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## 5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.10
	63 Hz	± 0.05
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)\*L shall not be liable for any loss or damage resulting from the use of the equipment.

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**RION CO., LTD.**

3-20-41 Higashimotomachi Kokubunji Tokyo 185-8533  
Phone:042(359)7888, Facsimile:042(359)7442

# **Certificate of Calibration**

**Name** : **Class 1 Sound Level Meter**  
**Model** : **NL-53**      **S/No.** : **01130785**  
**Date of Calibration** : **March, 04, 2024**

We hereby certify that the above product was tested and calibrated according to the prescribed Rion procedures, and that it fulfills specification requirements.

The measuring equipment and reference devices used for testing and calibrating this unit are managed under the Rion traceability system and are traceable according to official Japanese standards and official standards of countries belonging to the International Committee of Weights and Measures.

**RION CO., LTD.**

Manager, Quality Control Department

# Certificate of Calibration

for

Description: Sound Level Calibrator

Manufacturer: RION

Type No.: NC-75

Serial No.: 34724245

Submitted by:

Customer: Aurecon Hong Kong Limited

Address: Unit 1608, 16/F, Tower B, Manulife Financial Centre,  
223-231 Wai Yip Street, Kwun Tong,  
Kowloon, Hong Kong

Upon receipt for calibration, the instrument was found to be:

☒ Within

☐ Outside

the allowable tolerance.

The test equipments used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 22 July 2024

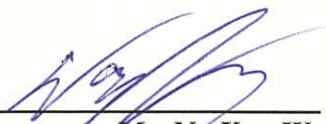
Date of calibration: 24 July 2024

Date of NEXT calibration: 23 July 2025

Calibrated by:

  
Calibration Technician

Certified by:

  
Mr. Ng Yan Wa  
Laboratory Manager

Date of issue: 24 July 2024



Certificate No.: APJ23-154-CC003

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**1. Calibration Precautions:**

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

**2. Calibration Specifications:**

Calibration check

**3. Calibration Conditions:**

Air Temperature: 23.4 °C  
Air Pressure: 1005 hPa  
Relative Humidity: 56.7 %

**4. Calibration Equipment:**

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV230128	HOKLAS

**5. Calibration Results****5.1 Sound Pressure Level**

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	94.0

Note:

The values given in this certification only related to the values measured at the time of the calibration.

