



ANNEX F

NOISE



ANNEX F1

CALIBRATION CERTIFICATES FOR NOISE

# *Certificate of Calibration*

*for*

*Description:* **Sound Level Calibrator**

*Manufacturer:* **Larson Davis**

*Type No.:* **CAL 200**

*Serial No.:* **15678**

***Submitted by:***

*Customer:* **Envirotech Services Co.**

*Address:* **Rm. 712, 7/F., My Loft, 9 Hoi Wing Road,**

**Tuen Mun, 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:

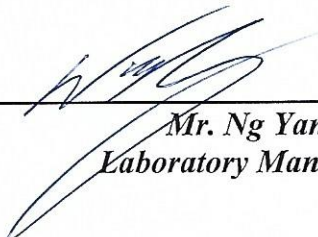
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

**Date of receipt: 03 January 2025**

**Date of calibration: 06 January 2025**

**Date of NEXT calibration: 05 January 2026**

**Calibrated by:**   
**Calibration Technician**

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

**Date of issue: 06 January 2025**

**Certificate No.: APJ24-124-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: 22.9°C  
Air Pressure: 1019 hPa  
Relative Humidity: 33.2 %

**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	AV240109	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	94.1
114.0	113.6	114.4	114.1

**6. Calibration Results Applied**

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 60942 Class 1.

Note:

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

Certificate No.: APJ24-124-CC003



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# *Certificate of Calibration*

*for*

*Description:* **Sound Level Meter**  
*Manufacturer:* **RION**  
*Type No.:* **NL-52 (Serial No.: 00542913)**  
*Microphone:* **UC-53A (Serial No.: 99995)**  
*Preamplifier:* **NH-25 (Serial No.:43068)**

***Submitted by:***

*Customer:* **Envirotech Services Co.**  
*Address:* **Rm.712, 7/F., My Loft, 9 Hoi Wing Road,  
Tuen Mun, Hong Kong**

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

- ☒ **Within (31.5Hz – 8kHz)**  
☐ **Outside**

**the allowable tolerance.**

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

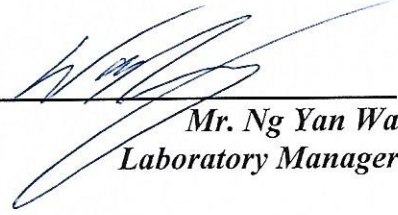
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

**Date of receipt: 28 August 2024**

**Date of calibration: 29 August 2024**

**Date of NEXT calibration: 28 August 2025**

**Calibrated by:**   
**Calibration Technician**

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

**Date of issue: 29 August 2024**



**Certificate No.: APJ24-058-CC001**

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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: 24.6 °C  
 Air Pressure: 1004 hPa  
 Relative Humidity: 53.9 %

**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
30-130	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
30-130	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
30-130	dBA SPL	Fast		94	1000	94.0	Ref
		Slow				94.0	±0.3



Certificate No.: APJ24-058-CC001

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Frequency Response

Linear Response

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
30-130	dB	SPL	94	31.5	92.7	$\pm 2.0$
				63	93.7	$\pm 1.5$
				125	93.9	$\pm 1.5$
				250	94.0	$\pm 1.4$
				500	94.0	$\pm 1.4$
				1000	94.0	Ref
				2000	93.9	$\pm 1.6$
				4000	94.3	$\pm 1.6$
				8000	92.4	+2.1; -3.1

A-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
30-130	dBA	SPL	94	31.5	53.5	$-39.4 \pm 2.0$
				63	67.5	$-26.2 \pm 1.5$
				125	77.8	$-16.1 \pm 1.5$
				250	85.3	$-8.6 \pm 1.4$
				500	90.8	$-3.2 \pm 1.4$
				1000	94.0	Ref
				2000	95.2	$+1.2 \pm 1.6$
				4000	95.3	$+1.0 \pm 1.6$
				8000	91.3	$-1.1 \pm 2.1$ ; -3.1

C-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
30-130	dBC	SPL	94	31.5	89.7	$-3.0 \pm 2.0$
				63	92.9	$-0.8 \pm 1.5$
				125	93.8	$-0.2 \pm 1.5$
				250	94.0	$-0.0 \pm 1.4$
				500	94.0	$-0.0 \pm 1.4$
				1000	94.0	Ref
				2000	93.8	$-0.2 \pm 1.6$
				4000	93.5	$-0.8 \pm 1.6$
				8000	89.4	$-3.0 \pm 2.1$ ; -3.1



Certificate No.: APJ24-058-CC001

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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	± 0.10
	125 Hz	± 0.10
	250 Hz	± 0.10
	500 Hz	± 0.10
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.10
	8000 Hz	± 0.10
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.





ANNEX F2

MONITORING SCHEDULE FOR NOISE

**Tung Chung New Town Extension (East)**  
**Noise Monitoring Schedule (June 2025)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Jun	2-Jun	3-Jun	4-Jun	5-Jun	6-Jun	7-Jun
	Noise Monitoring					Noise Monitoring
8-Jun	9-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun
					Noise Monitoring	
15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun	21-Jun
				Noise Monitoring		
22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun	28-Jun
			Noise Monitoring			
29-Jun	30-Jun					
	Noise Monitoring					



ANNEX F3

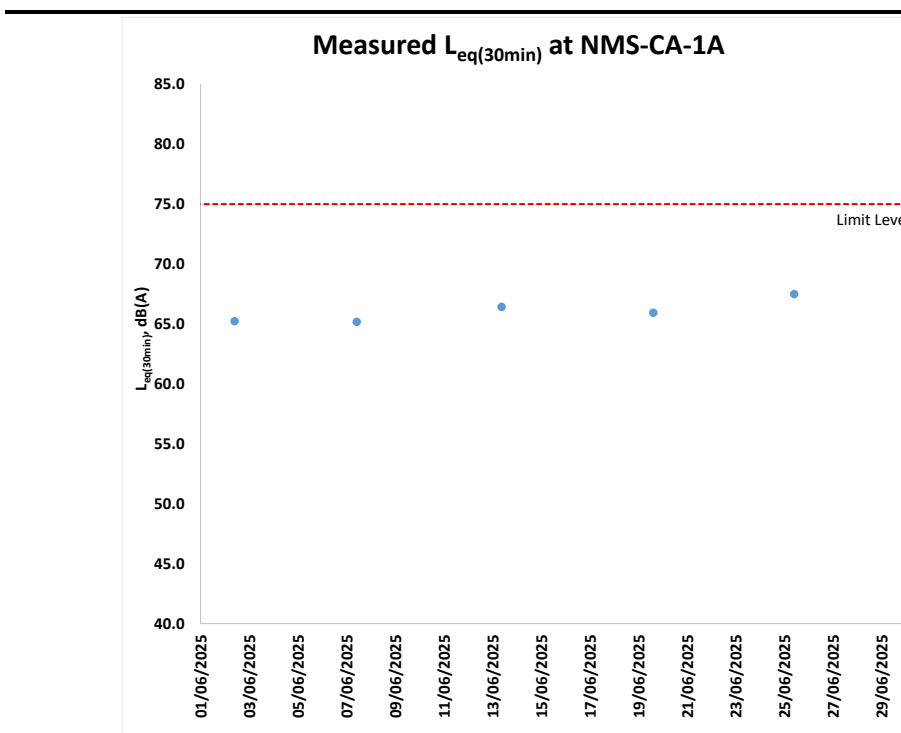
MONITORING RESULTS FOR NOISE



**Table F3.1 Data for Noise Monitoring at Station NMS-CA-1A during Normal Working Hours (0700-1900 hours)**

Date & Time	L <sub>eq</sub> (5min)	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub> (30min)
6/2/2025 9:39	65.8	69.3	60.0	65.2
6/2/2025 9:44	65.7	68.3	59.5	
6/2/2025 9:49	64.0	65.3	59.2	
6/2/2025 9:54	64.2	66.8	59.2	
6/2/2025 9:59	65.0	67.3	60.2	
6/2/2025 10:04	66.2	68.8	61.5	65.2
6/7/2025 10:10	64.6	67.1	58.3	
6/7/2025 10:15	63.8	66.0	58.7	
6/7/2025 10:20	65.8	69.1	58.9	
6/7/2025 10:25	65.5	67.9	58.0	
6/7/2025 10:30	66.4	68.3	60.1	66.4
6/7/2025 10:35	64.4	67.2	60.0	
6/13/2025 9:05	65.9	68.9	61.5	
6/13/2025 9:10	65.1	68.4	60.4	
6/13/2025 9:15	67.2	70.3	59.8	
6/13/2025 9:20	65.2	69.2	58.4	65.9
6/13/2025 9:25	66.8	70.7	59.7	
6/13/2025 9:30	67.7	71.1	60.5	
6/19/2025 14:47	64.6	67.4	60.0	
6/19/2025 14:52	64.9	67.0	60.2	
6/19/2025 14:57	65.2	67.7	60.6	67.5
6/19/2025 15:02	65.7	66.6	60.3	
6/19/2025 15:07	66.5	68.8	59.6	
6/19/2025 15:12	67.8	70.9	62.0	
6/25/2025 9:42	67.2	69.5	63.3	
6/25/2025 9:47	67.2	69.3	63.4	65.6
6/25/2025 9:52	67.6	71.0	63.2	
6/25/2025 9:57	67.7	70.7	63.2	
6/25/2025 10:02	68.5	72.4	62.1	
6/25/2025 10:07	66.5	69.8	61.5	
6/30/2025 9:08	63.9	66.0	60.0	65.6
6/30/2025 9:13	66.0	68.3	60.6	
6/30/2025 9:18	66.9	69.2	61.2	
6/30/2025 9:23	64.7	67.1	60.8	
6/30/2025 9:28	64.4	66.9	60.9	
6/30/2025 9:33	66.7	69.1	61.5	

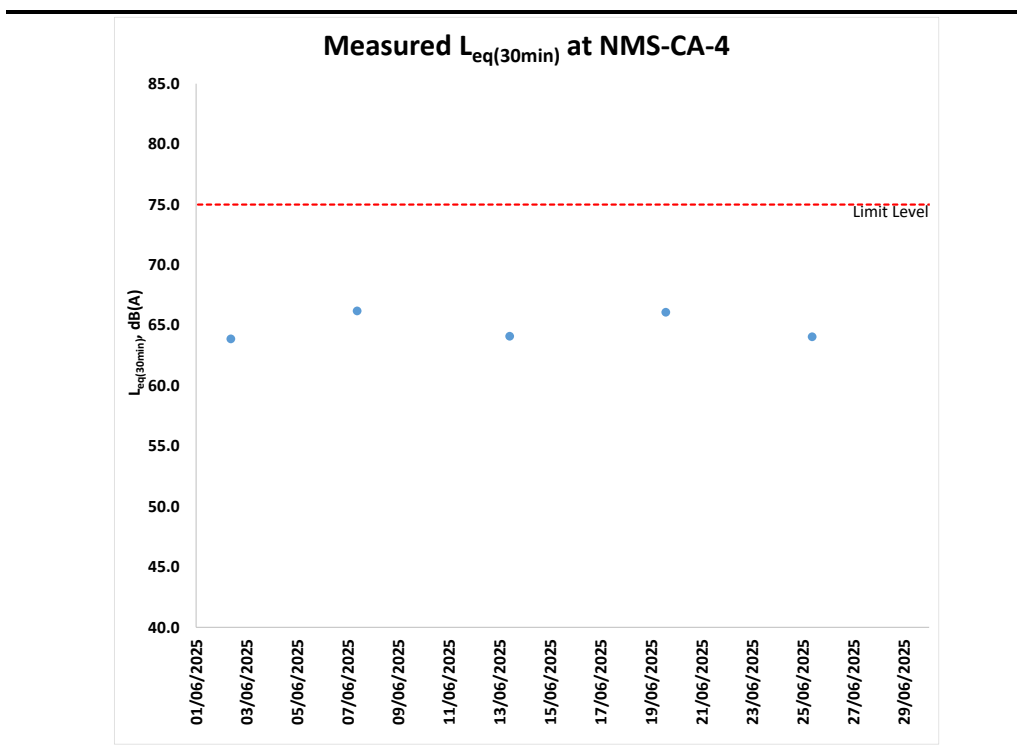
**Figure F3.1 Graphical Presentation for Noise Monitoring at Station NMS-CA-1A**



**Table F3.2 Data for Noise Monitoring at Station NMS-CA-4 during Normal Working Hours (0700-1900 hours)**

Date & Time	L <sub>eq</sub> (5min)	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub> (30min)
6/2/2025 9:04	64.2	66.4	61.7	63.9
6/2/2025 9:09	62.4	63.6	60.7	
6/2/2025 9:14	63.2	65.2	60.7	
6/2/2025 9:19	64.2	66.8	61.5	
6/2/2025 9:24	63.7	65.4	61.9	
6/2/2025 9:29	65.1	67.0	62.5	66.2
6/7/2025 9:04	65.8	67.8	63.3	
6/7/2025 9:09	65.1	67.0	62.6	
6/7/2025 9:14	66.2	67.9	63.9	
6/7/2025 9:19	66.1	68.0	64.0	
6/7/2025 9:24	65.6	67.4	63.5	
6/7/2025 9:29	67.8	68.9	64.0	64.1
6/13/2025 9:51	63.1	64.5	61.6	
6/13/2025 9:56	65.2	67.2	61.6	
6/13/2025 10:01	64.5	67.2	61.5	
6/13/2025 10:06	64.5	67.2	61.6	
6/13/2025 10:11	63.3	65.6	61.0	66.1
6/13/2025 10:16	63.6	65.2	61.6	
6/19/2025 14:07	66.4	67.7	63.4	
6/19/2025 14:12	65.5	67.2	63.9	
6/19/2025 14:17	65.2	66.7	63.0	
6/19/2025 14:22	65.9	67.7	64.1	64.1
6/19/2025 14:27	66.0	68.2	63.9	
6/19/2025 14:32	67.2	68.2	63.5	
6/25/2025 9:00	65.2	66.8	63.1	
6/25/2025 9:05	64.0	65.0	62.0	
6/25/2025 9:10	63.0	64.3	61.5	64.9
6/25/2025 9:15	63.5	65.0	61.6	
6/25/2025 9:20	64.3	65.5	62.3	
6/25/2025 9:25	64.0	65.5	62.2	
6/30/2025 9:47	63.8	65.3	62.3	
6/30/2025 9:52	63.3	64.9	61.9	64.9
6/30/2025 9:57	63.7	65.1	62.4	
6/30/2025 10:02	64.7	66.3	63.2	
6/30/2025 10:07	66.6	68.8	63.7	
6/30/2025 10:12	66.1	68.3	63.5	

**Figure F3.2 Graphical Presentation for Noise Monitoring at Station NMS-CA-4**





ANNEX F4

EVENT AND ACTION PLAN FOR NOISE



**Annex F4**      **Event and Action Plan for Construction Noise**

Event	Action			
	ET	IEC	ER	Contractor
Action Level Exceedance	<ol style="list-style-type: none"> <li>1. Notify IEC, ER and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures;</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analysed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures are properly implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC and ER;</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level Exceedance	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD and Contractor;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures properly implemented;</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control;</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>