



ANNEX E1

CALIBRATION CERTIFICATES FOR NOISE  
MONITORING EQUIPMENT



# Certificate of Calibration

for

**Description:** *Sound Level Calibrator*  
**Manufacturer:** *Larson Davis*  
**Type No.:** *CAL200*  
**Serial No.:** *11333*

**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:** 24 July 2024

**Date of calibration:** 26 July 2024

**Date of NEXT calibration:** 25 July 2025

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

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

**Date of issue:** 26 July 2024



**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: 24.3 °C  
 Air Pressure: 1004 hPa  
 Relative Humidity: 57.9 %

**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	93.6

Note:

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





# Certificate of Calibration

for

**Description:** *Sound Level Meter*  
**Manufacturer:** *RION*  
**Type No.:** *NL-52 (Serial No.: 00331806)*  
**Microphone:** *UC-53A (Serial No.: 316987)*  
**Preamplifier:** *NH-25 (Serial No.:21571)*

### 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:** 19 November 2024

**Date of calibration:** 22 November 2024

**Date of NEXT calibration:** 21 November 2025

**Calibrated by:**   
*Calibration Technician*

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

**Date of issue:** 22 November 2024



Certificate No.: APJ24-100-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:	24.9 °C
Air Pressure:	1006 hPa
Relative Humidity:	44.0 %

**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		114.2	±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

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			
30-130	dB	SPL	Fast	94	31.5	94.1	+2.0
					63	94.1	±1.5
					125	94.0	±1.5
					250	94.0	±1.4
					500	94.0	±1.4
					1000	94.0	Ref
					2000	93.9	±1.6
					4000	93.6	±1.6
				8000	91.4	+2.1; -3.1	

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			
30-130	dBA	SPL	Fast	94	31.5	54.8	-39.4±2.0
					63	67.9	-26.2±1.5
					125	78.0	-16.1±1.5
					250	85.4	-8.6±1.4
					500	90.8	-3.2±1.4
					1000	94.0	Ref
					2000	95.1	+1.2±1.6
					4000	94.6	+1.0±1.6
				8000	90.4	-1.1+2.1; -3.1	

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			
30-130	dBC	SPL	Fast	94	31.5	91.1	-3.0±2.0
					63	93.3	-0.8±1.5
					125	93.9	-0.2±1.5
					250	94.0	-0.0±1.4
					500	94.0	-0.0±1.4
					1000	94.0	Ref
					2000	93.7	-0.2±1.6
					4000	92.9	-0.8±1.6
				8000	88.5	-3.0+2.1; -3.1	



### 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	± 0.05
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	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.

