



MODEL CAL250

PRECISION ACOUSTIC CALIBRATOR

- Output level: 114 dB
- Output frequency: 251.2 Hz
- Standard: 1" microphone
- IEC 60942-1:2003 compliant
- Internal battery
- Output level independent of battery condition
- Adaptors: 1/8", 1/4", 3/8", 1/2" microphones
- Array adaptor for 8 microphones simultaneously

TYPICAL APPLICATIONS

Field or laboratory calibration of:

- Sound level meters
- Noise dosimeters
- Noise monitoring stations
- Microphone arrays

IEC 60942 CLASS 1 CALIBRATOR

The Larson Davis Model CAL250 is a battery operated precision microphone calibrator for 1" microphones used for the calibration of sound level meters and other sound measurement equipment. The CAL250 delivers a full 114.0 dB level output signal at 251.2 Hz. A 1/2" microphone adaptor is supplied with the CAL250. Adaptors for 1/8", 1/4", and 3/8" microphones are available as optional accessories.

It has been designed for both field and laboratory use and the accuracy has been calibrated to a reference traceable to the National Institute of Standards and Technology (NIST).

The Larson Davis CAL250 features a stable sound pressure independent of the battery condition. In addition, the CAL250 will turn off automatically to preserve battery and guarantee a stable output.

In addition to precision acoustic calibrators, factory calibration services for Larson Davis products are available through the CAL+ program. CAL+ service is provided with all Larson Davis calibrations and includes a complete multi-point factory test, free firmware upgrade to the latest version where applicable, labor warranty extended for one year⁽¹⁾, worn consumables replaced at no charge⁽²⁾, and more. Contact us for details.

CAL250 PRECISION ACOUSTIC CALIBRATOR

Acoustic		
Calibration Sound Pressure Level Initial After 1 Year	114.0 dB \pm 0.1 dB re: 20 μ Pa \pm 0.2 dB re: 20 μ Pa	
Equivalent Free-field Level	0.0 dB for 1/2" microphones	
Frequency	251.2 Hz \pm 0.7%	
Harmonic Distortion	< 2 %	
Stability After Pressing On	\pm 0.1 dB after 2 seconds	
Minimum Stabilizing Time	10 seconds after coupling microphone and calibrator	
Reference Conditions	101.3 kPa, 23 °C and 50 % RH	
Environmental		
Static Pressure Range	65 kPa to 108 kPa	SPL variation < \pm 0.25 dB
Temperature Range	-10 °C to +50 °C	SPL variation < \pm 0.4 dB Frequency variation < \pm 2 Hz
Humidity Range	10 % to 90 % RH non-condensing	SPL variation < \pm 0.4 dB Frequency variation < \pm 2 Hz
Storage Temperature	-40 °C to +60 °C	
Storage Humidity	0 % to 90 % RH (non-condensing)	
Physical		
Effective Volume of Calibrator and Microphone	> 6.1 in ³ (100 cm ³)	
Dimensions (L x D)	4.9 x 1.75 in (124 x 44.5 mm)	
Weight	8.8 oz (249 g)	
Power Supply		
Battery	9 V NEDA 1604A or IEC 6LR61	
Battery Voltage Operating Range	6.7 V to 10 V	
Traceability		
Traceability	Traceable to National Institute of Standards and Technology (NIST)	
Supplied Accessories		
ADP019 Adaptor for 1/2" Microphone		
CCS003 Storage Case		
9 V Alkaline Battery		
Users Manual		
Optional Accessories		
ADP020	Adaptor for 3/8" microphones	
ADP021	Adaptor for 1/4" microphones	
ADP023	Adaptor for 1/8" microphones	
079A31	Adaptor 8 1/4" microphone coupler	

COMPLIANCE

Acoustic	
ANSI S1.40-2006, Class 1	
IEC 60942-2003, Class 1	
IEC 60942:2017, Class 1	
Safety	
IEC 61010-1:2001	
EMC	
EU directive 2004/108/EC	
IEC 61326-1:2005	
For Use with Microphones of Type	
IEC 61094-4:1995	1" WS1P, WS1F and WS1D
	1/2" WS2P, WS2F and WS2D microphones; with ADP019 adaptor
	1/4" WS3P, WS3F and WS3D microphones with ADP021 adaptor
According to IEC 61094-1:2000	1" LS2P without adaptor
Other microphones	3/8" with ADP020 adaptor 1/8" with ADP023 adaptor
For use with Sound Level Meters and Noise Dosimeters	
ANSI S1.4 Type 1	
ANSI S1.25	
IEC 61672 Class 1	
IEC 61252	

[1] Requires regular annual factory calibration. Limited to seven (7) years.

[2] Windscreen, O-rings, desiccants, fuses, for example.



079A31
8 1/4" Microphone Coupler



ADP019
for 1/2" Microphones



ADP021
for 1/4" Microphones

Microphone Adaptors



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