



MODEL CAL150

PRECISION ACOUSTIC CALIBRATOR

- Output level: 94 or 114 dB
- Output frequency: 1 kHz
- ½" microphone opening
- IEC 60942-1:2003 compliant
- Internal battery
- Output level independent of battery condition
- Adaptors: ¼", ⅝" microphones

TYPICAL APPLICATIONS

Field or laboratory calibration of:

- Sound level meters
- Noise dosimeters
- Noise monitoring stations

IEC 60942 CLASS 2 CALIBRATOR

The Larson Davis CAL150 Sound Level Calibrator is a battery operated precision microphone calibrator used for the calibration of sound level meters and other sound measurement equipment. It can provide an output level of either 94.0 or 114.0 dB (switch-selectable) at a frequency of 1 kHz. CAL150 includes an adaptor for ⅝" microphones. A ¼" adaptor is also available as an optional accessory.

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 CAL150 features a stable sound pressure independent of the battery condition. In addition, the Larson Davis CAL150 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.

SPECIFICATIONS		
Acoustic		
Calibration Sound Pressure Level	114.0 dB and 94.0 dB \pm 0.3 dB SPL re: 20 μ Pa (114.0 dB is the principal sound pressure level)	
Equivalent Free-field Level	-0.12 dB for 1/2" microphones	
Frequency	1 kHz \pm 1%	
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 0.4 dB
Temperature Range	-10 °C to +50 °C	SPL variation < \pm 0.6 dB Frequency variation < \pm 7 Hz
Humidity Range	10 % to 90 % RH non-condensing	SPL variation < \pm 0.5 dB Frequency variation < \pm 7 Hz
Storage Temperature	-40 °C to +60 °C	
Storage Humidity	0 % to 90 % RH (non-condensing)	
Physical		
Effective Volume of Calibrator and Microphone (WS2P)	0.253 in ³ (4.15 cm ³)	
Dimensions (L x W x H)	4.18 x 2.5 x 1.02 in (106.1 x 63.4 x 25.9 mm)	
Weight	5.5 oz (156 g)	
Power Supply		
Battery	9 V NEDA 1604 A 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		
9 V Alkaline Battery		
Adaptor ADP031 for 3/8" microphones		
Users Manual		
Related Products		
CAL250	Class 1 Precision Acoustic Calibrator (250 Hz)	
CAL200	Class 1 Precision Acoustic Calibrator (1000 Hz)	
ADP024	Adaptor for 1/4" microphones	

COMPLIANCE	
Acoustic	
ANSI S1.40-2006, Class 2	
IEC 60942-2003, Class 2	
IEC 60942:2017, Class 2	
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	1/2" WS2P, WS2F and WS2D microphones; no adaptor required 1/4" WS3P, WS3F and WS3D microphones with ADP024 adaptor
According to IEC 61094-1:2000	1/2" LS2P
Other Microphones	3/8" with ADP020 adaptor
For Use with Sound Level Meters and Noise Dosimeters	
ANSI S1.4 Type 2	
ANSI S1.25	
IEC 61672 Class 2	
IEC 61252	

[1] Requires regular annual factory calibration. Limited to seven (7) years.
 [2] Windscreen, O-rings, desiccants, fuses, for example.



ADP024 for 1/4" Microphones



ADP031 for 3/8" Microphones

Microphone Adaptors



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Larson Davis offers a full line of noise and vibration measurement instrumentation such as Class 1 and 2 sound level meters, outdoor noise monitoring systems, personal noise dosimeters, human vibration meters, audiometric calibration systems, microphones and preamplifiers, and data analysis software. Instrumentation is used in community and environmental noise monitoring, measurement of building acoustics, managing worker exposure to noise and vibration, and various automotive, aerospace, and industrial applications. Larson Davis is a division of PCB Piezotronics, Inc., a wholly owned subsidiary of MTS Systems Corporations.

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