



## 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", ⅜" 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 ⅜" 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<sup>[1]</sup>, worn consumables replaced at no charge<sup>[2]</sup>, and more. Contact us for details.

SPECIFICATIONS		
<b>Acoustic</b>		
Calibration Sound Pressure Level	114.0 dB and 94.0 dB $\pm$ 0.3 dB SPL re: 20 $\mu$ 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	
<b>Environmental</b>		
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)	
<b>Physical</b>		
Effective Volume of Calibrator and Microphone (WS2P)	0.253 in <sup>3</sup> (4.15 cm <sup>3</sup> )	
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)	
<b>Power Supply</b>		
Battery	9 V NEDA 1604 A or IEC 6LR61	
Battery Voltage Operating Range	6.7 V to 10 V	
<b>Traceability</b>		
Traceability	Traceable to National Institute of Standards and Technology (NIST)	
<b>Supplied Accessories</b>		
9 V Alkaline Battery		
Adaptor ADP031 for 3/8" microphones		
Users Manual		
<b>Related Products</b>		
CAL250	Class 1 Precision Acoustic Calibrator (250 Hz)	
CAL200	Class 1 Precision Acoustic Calibrator (1000 Hz)	
ADP109	Adaptor for 1/4" microphones	

COMPLIANCE	
<b>Acoustic</b>	
ANSI S1.40-2006, Class 2	
IEC 60942-2003, Class 2	
IEC 60942:2017, Class 2	
<b>Safety</b>	
IEC 61010-1:2001	
<b>EMC</b>	
EU directive 2004/108/EC	
IEC 61326-1:2005	
<b>For Use with Microphones of Type</b>	
IEC 61094-4:1995	1/2" WS2P, WS2F and WS2D microphones; no adaptor required
	1/4" WS3P, WS3F and WS3D microphones with ADP109 adaptor
According to IEC 61094-1:2000	1/2" LS2P
Other Microphones	3/8" with ADP020 adaptor
<b>For Use with Sound Level Meters and Noise Dosimeters</b>	
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.



ADP109 for 1/4" Microphones



ADP031 for 3/8" Microphones

## Microphone Adaptors