MODEL CAL 250

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: $\frac{1}{8}$", $\frac{1}{4}$", $\frac{3}{8}$", $\frac{1}{2}$" 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 $\frac{1}{2}$" microphone adaptor is supplied with the CAL250. Adaptors for $\frac{1}{8}$", $\frac{1}{4}$", and $\frac{3}{8}$" 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.

larsondavis.com | 1 716 926 8243
CAL250 PRECISION ACOUSTIC CALIBRATOR

**Acoustic**
- Calibration Sound Pressure Level
  - Initial: 114.0 dB ± 0.1 dB re: 20 μPa
  - After 1 Year: 113.9 dB ± 0.1 dB re: 20 μPa
- Equivalent Free-field Level: 0.0 dB for 1/2" microphones
- Frequency: 251.2 Hz ± 2 Hz
- Harmonic Distortion: < 2 %
- Stability After Pressing On: ± 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: < 0.3 dB
- Temperature Range: -10 °C to +50 °C
- Frequency variation: < ± 2 Hz
- Humidity Range: 10 % to 90 % RH (non-condensing)
- SPL variation: < 0.4 dB
- Frequency variation: < ± 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 in³ (100 cm³)
- 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
  - 1/2" with ADP020 adaptor
  - 1/4" 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.

---

**Larson Davis**

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.

3425 Walden Avenue, Depew, NY 14043-2495 USA
Toll-Free in the USA: 888 258 3222
Phone: 1 716 926 8243 | Email: sales@larsondavis.com

© 2019 Larson Davis. In the interest of constant product improvement, specifications are subject to change without notice. PCB®, ICP®, Swivel®, Modally Tuned®, and IMI® with associated logo are registered trademarks of PCB Piezotronics, Inc. in the United States. ICP® is a registered trademark of PCB Piezotronics Europe GmbH in Germany and other countries. UHT-12™ is a trademark of PCB Piezotronics, Inc. SensorLine™ is a service mark of PCB Piezotronics, Inc. SWIFT® is a registered trademark of MTS Systems Corporation in the United States. All other trademarks are property of their respective owners.

MTS Sensors, a division of MTS Systems Corporation (NASDAQ: MTSC), vastly expanded its range of products and solutions after MTS acquired PCB Piezotronics, Inc. in July, 2016. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corp.; IMI Sensors and Larson Davis are divisions of PCB Piezotronics, Inc.; Accuremetrics, Inc. and The Modal Shop, Inc. are subsidiaries of PCB Piezotronics, Inc.

---