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 ½” microphone adaptor is supplied with the CAL250. Adaptors for ¼”, ⅛”, and ⅜” 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: 114.0 dB ± 0.1 dB re: 20 μPa
  - After 1 Year: ± 0.2 dB re: 20 μPa
- **Equivalent Free-field Level**: 0.0 dB for 1/2" microphones
- **Frequency**: 251.2 Hz ± 0.7%
- **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 ºC and 50 % RH

#### Environmental
- **Static Pressure Range**: 65 kPa to 108 kPa
- **Temperature Range**: -10 ºC to +50 ºC
- **Humidity Range**: 10 % to 90 % RH
- **Storage Temperature**: -40 ºC to +60 ºC
- **Storage Humidity**: 0 % to 90 % RH

#### 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
  - ½” WS2P, WS2F and WS2D microphones; with ADP019 adaptor
  - ¼” WS3P, WS3F and WS3D microphones with ADP021 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.

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**Microphone Adaptors**