

CEL-110 Acoustic Calibrators

Introduction

The CEL-110 units are compact and ergonomically designed with simplicity and ease of use being the main priority. A simple keypad is provided for logical control of the unit's functions. Two versions are available fulfilling the accuracy requirements of ANSI and IEC in the new Class 1 and Class 2 categories.

A feedback microphone incorporated into the design ensures a stable tone for precise setting up of sound level meters and noise dosimeters. The standard display provides clear and concise status information at all times.



Key benefits

- ❑ Complies with ANSI S1.40 – 1984 (R1997) and IEC 60942: 2003
- ❑ Class 1 & 2 units available
- ❑ Frequency of 1 kHz
- ❑ Single 114 dB and dual 114 & 94 dB level outputs (depending on model)
- ❑ LCD display for user feedback
- ❑ Simple keypad operation
- ❑ Automatic power off to conserve battery life
- ❑ ½" and ¼" calibration facility with included coupler
- ❑ Powered from a single 9V radio battery
- ❑ Lightweight and compact
- ❑ 25% smaller and 20% lighter than previous calibrators

Applications

The field calibration of sound level meters is an essential procedure when carrying out any type of noise survey. Calibration with an approved acoustic calibrator, both before and after each measurement, ensures that the meters are providing consistently accurate readings. This is necessary for monitoring according to relevant noise exposure standards such as OSHA, NIOSH, ISO etc.

Recent changes to the third edition of the international standard for acoustic calibrators under the publication IEC 60942: 2003 have tightened the performance requirements for these devices. The new CEL-110 has been designed to comply with these new standards to ensure accurate calibration over a wide range of temperature, humidity and pressure conditions, typical of fieldwork.

A high quality microphone and feedback loop maintains the selected acoustic pressure in the cavity at the required level by compensating for any changes. The innovative display gives the user status on the level, frequency and battery condition of the device. The units detect when the microphone is removed from the calibrator and switch off the tone thereby extending useful battery life for up to 3 years.

Ordering information

CEL-110/1: Dual level, single frequency Class 1 calibrator with CEL-4726 coupler, 9V battery and manual

CEL-110/2: Single level, single frequency Class 2C calibrator with CEL-4726 coupler, 9V battery and manual

Technical Specifications

Types available:

CEL-110/1: Calibrator to EN (IEC) 60942:2003 Class 1
CEL-110/2: Calibrator to EN (IEC) 60942:2003 Class 2C
Both calibrators conform to ANSI S1.40 1984 (R1997)

Calibration level produced (over environmental range):

CEL-110/1: 114.0 ± 0.4 dB & 94.0 ± 0.4 dB

CEL-110/2C: 114.0 ± 0.6 dB

Calibration frequency: 1 kHz ± 2 Hz

Harmonic distortion: less than 1%

Calibration cavity: ½" direct plus ¼" with included coupler CEL-4726

Battery and batt life: 9V radio (LR6 alkaline recommended) 3 years

Dimensions: 2.8 x 1.6 x 4.0 in (71 x 41 x 100 mm)

Weight: 6.4 oz (180 g) including battery