Digital Sound Level Meters

Provides precision accuracy measurements at the low cost of traditional analog meters

The CEL-240 series is a completely new range of Type 2 sound level meters that combine the power of digital signal processing (DSP) technology with the simplicity and low cost of a traditional analog instrument. These meters have a low and high measurement range that covers a full 70 dB on each setting; and include A and C frequency scales and slow, fast, and impulse time responses. A nondecaying maximum hold feature on every display captures and displays the highest sound pressure level of any noise until reset by the user. Optional software package is ideal for data logging in spreadsheet format file for later analysis.

- Simple two-button operation
- Wide range from 30 to 130 dB
- A or C frequency weighting
- Slow, Fast and Impulse time weightings
- Current, highest and average noise level shown in display
- Time history trend graphically displayed
- USB output port to for simple data logging with PC or download of stored data
- Auto calibration at selected decibel level
- Scrolling sound level display
- ¼" threaded socket for tripod mounting applications

Model CEL-242
- Offers simple data logging of noise level readings for download to a computer

Model CEL-244
- Adds the time-averaging functions for Leq and Lavg for OSHA measurements

Model CEL-246
- Features enhanced averaging version with imple data logging memory

Applications
- Industrial hygiene measurements of noise in the workplace
- Machinery noise surveys
- Assessing hearing protectors using the NRR method
- Transportation noise measurements
- Building acoustic monitoring

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SPECIFICATIONS

Range	30 to 130 dB low: 30 to 100 dB; high: 60 to 130 dB
Resolution	0.1 (numeric); 1 (graphical)
Accuracy	±1.5 dB
Noise floor (A weighted dB)	<33
Dynamic span on single range	70 dB
Frequency weightings	A and C
Time weightings	Slow, fast, and impluse
Display type	Digital LCD (128 x 128 dot matrix) including real-time analog bar graph scale
Display update rate	0.5 seconds
Displayed parameters	Instantaneous level – Lp Maximum level – Lmx Time avg. value – Leq, Lavg (244 & 246 models)
Reset of maximum and average level by user	Yes, with nondecaying max hold
Displayed time span for time history chart	Last 1 or 5 minutes
Calibration method	Automatically recognized by meter

Signal detected when calibrator placed over microphone at 1 kHz frequency	Calibration level set to 114.0 or 94.0 dB without the need for user adjustment
Analog outputs	AC (and optional DC) via 2.5 mm jack socket
AC output characteristics (provided for DAT tape / PC wav file recording or headphone applications)	Approx 0.85 V RMS FSD output on selected sound level measurement range. Minimum load impedance 22 kΩ.
DC output characteristics (provided at time of order as option for connection to chart recorder or PC data logging system)	0 to 1.3 VDC for FSD on selected range. Output corresponds to selected frequency and time weighting. 2 kΩ output impedance.
Digital output	USB 2.0 format of instantaneous sound level via mini A USB socket (also powers meter)
Digital output characteristics (value output once per second)	Instantaneous SPL output (software required) as per selected frequency and time weightings
Dimensions (W x H x D)	2⅖" x 8³⁄₁₀" x 1⅕" (71.5 x 212 x 31 mm)
Power	Three AA batteries

What's included: Acoustic calibrator, foam windscreen, carrying case, three AA batteries, and calibration document supplied by the manufacturer.

Cataolg No.	Model No.	Description
TS-50547-00	CEL-240/K1	Digital Type 2 sound level meter kit
TS-50547-01	CEL-242/K1	Digital data logging Type 2 sound level meter kit
TS-50547-02	CEL-244/K1	Digital integrating Type 2 sound level meter kit
TS-50547-03	CEL-246/K1	Digital data logging, integrating Type 2 sound level meter kit
Accessories		
TS-50547-04	CEL-6842	Software for sound level meters
TS-50547-05	CMC51	USB cable, type A, 6 feet
TS-09386-01	—	Replacement batteries, AA. 4/pk
TS-17111-53	**—**	**NIST-traceable recalibration with data**