

NoiseMeters

CEL24x Sound Level Meter Quick User Guide



Full User Manual from:
support.noisemeters.com



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Meter Controls

1. Microphone
2. Power On/Off Key
3. Display
4. Left Soft Key
5. Right Soft Key
6. USB Port
7. Auxiliary socket (2.5mm stereo)

Power

Observe polarity when fitting batteries

Do not mix battery types

Fitting Batteries

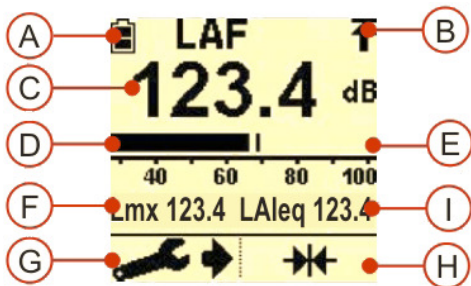
1. Open the Battery Cover
2. Check the compartment is clean and dry
3. Fit three new AA Alkaline or NiMH
4. Close the battery cover

Switching On and Off

Press the red On/Off button to switch the meter on.

During power up the data logging models will show the current time and memory settings.



Display

- A. Battery Indicator
- B. Over Range Indicator
- C. Sound Level
- D. Analog Display Bar
- E. Measurement Scale
- F. Maximum Sound Level
- G. Left Key - Instrument Settings
- H. Right Key - Reset Measurement
- I. Average Level (CEL244 and CEL246)

Settings

The settings can be accessed from the Measurement Screen. Press the settings key (Left Key) repeatedly to cycle through the settings screens.



Press the Right key to make changes to the settings shown.

Recording (CEL242 and CEL246 Only)

The symbol **REC ●** will be shown. The meter will start to store the sound level every second, or at a selectable logging interval for the CEL246. Pressing the Right Key again will stop the measurement storage. A maximum of 100 runs can be stored.

Display Type - The main display can be set to Bargraph (default) and Time History, showing the max sound levels over the last 1 minute or 5 minutes.

Measurement Range - The ranges available are 30-100dB or 60-130dB.

Time Weighting - Set to Fast, Slow or Impulse. Check regulations if unsure.

Settings

Frequency Weightings - Select either "A" or "C" weighting. Check your regulations, but most measurements are "A" weighted.

Average Setting (CEL242 and CEL246)

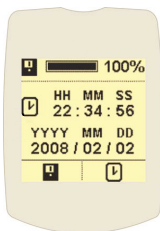
Either Leq (for Q=3) or Lavg (Q=5) depending on regulations.

Logging Interval (CEL246) - Setting the logging interval for between 1 and 10s average value. The CEL242 logs the level every second, with no option for interval.

Memory and Time/Date (CEL242, CEL246)

When the data logging meter is switched on the memory screen is displayed. This example shows the memory full (100%).

Press the Left Key to clear the memory and the Right Key to set the meter's time and date.



Calibration

Calibration should be performed using a CEL120/2 or similar Calibrator before making any important measurements.

1. Select 60-130dB range.
2. Switch Calibrator on to 114dB setting.
3. Fit Calibrator over the microphone.



The meter automatically detects the Calibrator tone and enters Calibration Mode.

Downloading Measurements (CEL242/246)

Connect the meter to the computer's USB port. The connection on the meter is found at the base behind a cover.

Use the CasellaDrive software to download the measurements.

Please visit support.noisemeters.com for more details and to download the software.

Specifications

Standards	IEC61672-1 Class 2 ANSI S1.4 Type 2 CEL244/246: IEC60804 Type 2 and ANSI S1.43 Type 2
Range	30-100dB and 60-130dB
Freq Wtg	"A" and "C" weightings
Noise Floor	Typically <33 dB(A)
Time Wtg	Fast, Slow and Impulse

Operating Conditions

Humidity	5 to 90% RH non-condensing
Temp	0°C - 40°C
Pressure	65 to 108 kPa

Calibration	Auto calibration by 1kHz @ 114dB or 94dB (e.g. CEL120/2)
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Power

External	5VDC (via USB mini B)
Batteries	3 x AA Alkaline or NiMH rechargeable
Battery Life	Typically 35 hours
Power	Approx 65mA

Connectivity

Computer	USB 2.0 via mini B socket.
AUX	AC out, 0.5V RMS FSD. "A" weighted

Storage (CEL242 and CEL246)

Memory	419,000 data points 100 measurements 65515 points per measurement
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