

User manual

Pressure / Temperature / Humidity / Air velocity / Airflow / Sound level

CAL 300 ACOUSTIC CALIBRATOR

Kimo CAL 300 Sound Level Meter Acoustic Calibrator

The acoustic calibrator is the key accessory to calibrate measurement system.

The acoustic source is defined in pressure level and in transmitting reference, it corresponds to the current **class 1** standards : NF EN 60942 : 2003 and CEI 60942 : 2003.

It delivers two acoustic pressure levels according to your selection : 94dB or 114dB with a 1000 Hz frequency.

This calibrator is designed to remain compatible with microphones of different diameters. See *technical specifications*.

Calibration of a sound level meter is done in pressure in the cavity of the calibrator. The sound level meter being generally used in free field, please observe the free field correction term indicated in its user manual. It is the same in case of diffuse field using.

DESCRIPTIONS

Flashing green or orange light : wait

Stabilized green or orange light : calibration is ready

Red light : change batteries

Button : select the acoustic pressure level : 94 or 114dB and launch calibration



Microphone and adapter ring coupler

CALIBRATION

➤ Insert the adapter ring according to the microphone diameter of the device to calibrate. Ensure that the ring is correctly positioned, it has to come to a stop down of the calibrator housing.



➤ Put the calibrator on the microphone, until the microphone comes to a stop down of the ring. Perform this move slowly and smoothly so as not to damage the microphone. Prefer to put vertically the sound level meter and the microphone.

• Turned-off calibrator :

Nominal acoustic pressure level : 94 dB

- Press **ONCE** on the button of the front face. The light turns green and flashes.
- Wait for a while the stabilization of the green light that means the proper value of the acoustic pressure level of the calibrator : 94.0 dB.



Nominal acoustic pressure level : 114 dB

- Press **TWICE** on the button of the front face. The light turns orange and flashes.
- Wait for a while the stabilization of the orange light that means the proper value of the acoustic pressure level of the calibrator : 114.0 dB.



Note : select the level 94 or 114dB pressing the button when the calibrator is turned on.

- Start the calibration process of the instrument as described in its user manual.
- The calibrator stops automatically the emission of acoustic pressure level after about one minute.

During calibration :

If the light flashes, environmental conditions are not respected :

- Ambient noise is too important
- Shocks given involuntarily

Wait for the stabilization of the green or orange light before resume the calibration process. It is possible to launch again pressing the button.

If the light turns red, batteries are defective and shall be replaced.

Stop the calibrator :

- The calibrator stops automatically the emission of acoustic pressure level after about one minute et turns off.
- To stop deliberately the calibrator during a calibration, press the button more than 5 seconds.
- The calibrators stops automatically if the stabilization of the acoustic pressure level of 94 dB or 114 dB is not reached after 7 or 8 seconds.

CHANGE BATTERIES

Batteries must be changed when :

- The light turns red.
- The light does not turn on at all.

To change batteries :

- Remove the front part at the back of the device pressing strongly the rubber button. Front part is released slightly. Fold it up completely.
- Remove the two old batteries. Insert new **1.5 V AAA – LR03** type batteries respecting proper polarity.
- Put correctly the front part in its slot and close pressing strongly on it.



RECOMMENDATIONS

This calibrator is an accurate device that requires care when handling and storing it. Do not expose it to shock or to extreme and repeated environmental constraints (temperature – hygrometry).

Store it in its storage and remove batteries in case of long period of inactivity.

Despite these recommendations, the calibrator stays an extremely reliable device, easy-to-use and with few maintenance : simple replace batteries when they are worm and make a regular checking.

MAINTENANCE

CAL300 calibrator is linked to national standards. As part of quality insurance standards, we recommend performing an annual checking.

SUPPLIED WITH...

CAL300 is supplied with its user manual, two alkaline batteries and an adapter ring for ½ inch microphone.

TECHNICAL FEATURES

Main level of acoustic pressure	94 dB ± 0.25 dB
Additional acoustic pressure level	114dB ± 0.25 dB
Main frequency	1000 Hz ± 2 Hz
Distortion	DHT < 2 %
Authorization for calibration	94dB : stabilized green light – 114dB : stabilized orange light
Transmission time	> 1 minute
Standards	NF EN 60942 : 2003 – CEI 60942 : 2003
Accuracy	Class 1
CE marking	As per European Directive 2004/108/CEE and Standard product
Compatible microphone	1 inch microphone without adapter (as per CEI 61094-4 standard) ½ inch microphone with BC12 ring 10 mm microphone with BC10 ring 3/8 inch microphone with BC38 ring Other microphones with suitable rings
Standard ambient conditions	23 °C – 50% HR – 1013 hPa
Operating conditions	-10 °C to +50 °C / 25% to 90% HR / 650 hPa to 1080 hPa
Power supply	2 alkaline batteries – 1.5 V type CEI : AAA – LR03
Autonomy at 20 °C	More than 1500 calibrations
Storage	From 0°C to +60 °C
Overall dimensions	Length : 185 mm – Width : 35 mm – Thickness : 31 mm
Weight	118 g (with batteries)