



CRY3018

Sound Calibrator

Features

- **Key Specifications**

Calibrated Sound Pressure	94 dB / 114 dB
Calibration Frequency	250 Hz / 1000 Hz
Microphone Cartridge	1", 1/2", 1/4", 1/8"

- **Applications**

Sound Level Meter Calibration
Microphone Sensitivity Testing
Acoustic Measurement System Calibration

- **Standards**

IEC 60942:2017 Class 1

Introduction

The CRY3018 is a portable, high-precision acoustic calibrator compliant with IEC 60942:2017 Class 1. It supports dual frequencies of 250 Hz and 1000 Hz, as well as dual sound pressure levels of 94 dB and 114 dB, with the option to switch to higher SPLs to overcome ambient interference. It features an internal acoustic feedback compensation loop and integrates temperature, humidity, and barometric sensors for adaptive environmental compensation, ensuring linear response and consistent microphone measurements. Additional features include USB-C fast charging, a carbon-fiber housing, and a high-brightness OLED display—making it ideal for on-site calibration of sound level meters, measurement microphones, and acoustic systems.

Highlights

- **Dual-Frequency Calibration**

This calibrator offers calibration at two frequencies: 250 Hz and 1000 Hz.

- **Dual Sound Pressure Level Calibration**

The calibrator provides calibration at two sound pressure levels: 94 dB and 114 dB.

- **SPL Feedback System**

The calibrator is built around a sound pressure feedback system and integrates high-precision temperature, humidity, and barometric pressure sensors for real-time environmental monitoring. By combining intelligent algorithms with the feedback loop, the unit maintains a stable output signal even when temperature, humidity, or atmospheric pressure fluctuate. This design effectively suppresses environment-induced systematic errors and significantly enhances measurement accuracy and reliability.

- **Intelligent Power Management**

The product supports USB-C fast charging and allows pass-through operation (use while charging). A 5-minute quick charge provides about 1 hour of runtime, and a full charge supports nearly one thousand calibrations. Built-in protection circuitry provides over-charge, over-discharge, and short-circuit protection. The unit also features low-battery warning and automatic power on/off. Together, these functions significantly enhance on-site reliability and operational endurance.

- **Dynamic Display**

The product features a lightweight, high-strength composite housing that offers an ergonomic and comfortable grip while being resistant to both impact and scratches. A high-brightness OLED display ensures clear readability even under strong ambient lighting, and an integrated gyroscope enables automatic screen rotation. A top-mounted status LED provides quick visual indication of device condition in laboratory or field settings, significantly enhancing ease of use.

Technical Specifications

Specifications

Frequencies	1000 Hz, 250 Hz
Frequency Accuracy	< 0.5 Hz
Sound Pressure Levels (SPL)	94 dB / 114 dB
SPL Accuracy	< 0.2 dB
Short-term Level Variation	< 0.05 dB
THD+N	< 1%
Supported Microphones	1" (1/2", 1/4" and 1/8" with adaptor)
Operating Temperature	-10 °C to +50 °C (14 °F to 122 °F)
Operating Pressure	65 kPa ~ 108 kPa
Operating Humidity Range	0 to 90%RH no condensation
Storage Temperature	-20 °C to +60 °C (-4 °F to 140 °F)
Power	Built-in Lithium Battery, USB-C (5V, 1A)
Compliance Standard	IEC 60942:2017 Class 1

Dimensions

Length	75 mm
Width	75 mm
Height	30 mm

Ordering Information

Kit Contents

Main Unit	CRY3018 Sound Calibrator main unit (with 1" to 1/2" Adapter TA0307 installed)
Adapters	1/2" to 1/4" Adapter TA0308 1/2" to 1/8" Adapter TA0309
Cables	USB-C to USB-C / USB-C to USB-A charging cable, 1 m

CRY3018 Sound Calibrator Operating Instructions



Figure 1: CRY3018 Sound Calibrator Main Unit Diagram

● Power-On Methods

- Automatic Power-On: Connect the microphone (supports 1-inch or 1/2-inch) to the device's sound cavity.
- Manual Power-On: Short-press the "Hz" or "dB" button on the panel.

● Operation & Parameter Adjustment

- Frequency Switching: Press the "Hz" button to cycle through frequencies.
- SPL Adjustment: Press the "dB" button to cycle through levels.
- Secondary Menu Switching: Long-press both "Hz" and "dB" buttons simultaneously.

● Status Indicator Lights

- When Powered On (Operating):
 - White flashing: SPL being adjusted.
 - Green steady: Sound pressure stable.
 - Red steady: Low battery, device will shut down soon.
- When Powered Off (Charging):
 - Yellow flashing: Charging in progress.
 - Green steady: Charging complete.

● Power-Off Methods

- Automatic Power-Off: Remove the microphone from the sound cavity.
- Manual Power-Off: Long-press the "Hz" or "dB" button.

Related Products

CRY3015	1" Sound Calibrator, IEC 60942 Class 2 1000Hz, 94dB/114dB
CRY3016	1" Sound Calibrator, IEC 60942 Class 1 1000Hz, 94dB/114dB

Optional Accessories

Supported Microphone Types	1" Measurement Microphones 1/2" Measurement Microphones 1/4" Measurement Microphones 1/8" Measurement Microphones
Sound Level Meter	CRY2851 Sound Level Meter