CRY3016
Sound Calibrator

Features

- **Key Specifications**

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

- **Applications**

  Sound Level Meter Calibration
  Microphone Sensitivity Testing
  Acoustic Measurement System Calibration

- **Compliant With**

  IEC 60942:2017 Class 1

Introduction

The CRY3016 is a portable, high-precision acoustic calibrator compliant with IEC 60942:2017 Class 1. It supports a single frequency of 1000 Hz and dual sound pressure levels of 94 dB and 114 dB. Built around an SPL feedback loop, it integrates temperature, humidity, and barometric pressure sensing to support environmental monitoring and compensation control, helping maintain a stable and consistent calibration output. It supports USB-C charging with pass-through operation, quick top-up charging, and long runtime, and features automatic power-off. With a monochrome OLED display, a carbon-fiber housing, and four top-mounted status LEDs, it is suitable for calibration and verification of sound level meters, measurement microphones, and acoustic measurement systems.

Highlights

- **Single-Frequency Calibration**

  This calibrator provides calibration at one frequency: 1000 Hz.

- **Standard 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 an SPL feedback loop for real-time sound pressure monitoring and closed-loop regulation. It also integrates temperature, humidity, and barometric pressure sensing to support environmental monitoring and compensation control, helping maintain a stable and consistent calibration output.

- **Intelligent Power Management**

  The calibrator supports USB-C 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 over 1,000 calibrations. The unit features automatic power-off to reduce unnecessary battery drain.

- **Dynamic Display**

  The calibrator features a lightweight, high-strength carbon-fiber housing that offers an ergonomic and comfortable grip while being resistant to impact and scratches. A monochrome OLED display ensures clear readability even under strong ambient lighting. Four top-mounted status LEDs provide quick visual indication of device condition.

Technical Specifications

Specifications

Frequency	1000 Hz
Frequency Accuracy	< 0.5 Hz
Sound Pressure Levels (SPL)	94 dB / 114dB
SPL Accuracy	< 0.2 dB
Short-term stability	< 0.05 dB
THD+N	< 2%
Supported Microphones	1" (with 1/2", 1/4", 1/8" adaptor rings)
Operating Temperature	-10 °C to +50 °C (14 °F to 122 °F)
Operating Pressure	65 kPa ~ 108 kPa
Operating Humidity	0 to 90%RH, non-condensing
Storage Temperature	-10 °C to +50 °C (14 °F to 122 °F)
Power Supply	Built-in Li-ion Battery, USB-C (5V, 1A)
Compliance	IEC 60942:2017 Class 1

Dimensions

Length	75 mm
Width	75 mm
Height	30 mm

CRY3016 Sound Calibrator Operating Instructions

Figure 1: CRY3016 Sound Calibrator Main Unit Diagram

- **Power-On Method**
  - Manual Power-On: Short-press the “Power” or “dB” button to power on.
- **Operation & Parameter Adjustment**
  - SPL Adjustment: Short-press “dB” to cycle through SPL levels.
  - Secondary Menu Switching: Long-press “Power” and “dB” simultaneously.
- **Status Indicator Lights**
  - When Powered On (Operating):
    White steady on: SPL is being adjusted.
    Green steady on: Sound pressure output is stable.
  - When Powered Off (Charging):
    White steady on: Charging in progress.
    Green steady on: Charging complete.
- **Power-Off Methods**
  - Automatic Power-Off: Remove the microphone from the sound cavity. The unit powers off automatically.
  - Manual Power-Off: Long-press the “Power” button to power off.

Ordering Information

Kit Contents

Main Unit	CRY3016 Sound Calibrator (with 1" to 1/2" Adapter TA0307 installed)
Adapters	1/2" to 1/4" Adapter TA0308
Cables	USB-C to USB-C charging cable, 1.2 m

Related Products

CRY3018	Sound Calibrator, IEC 60942 Class 1 1000 Hz / 250 Hz, 94 dB / 114 dB
TA0309	1/2" to 1/8" Adapter

Optional Accessories

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