

# **2 Pt. Acoustical Calibrator**

**850016**

Instruction Manual

SPER  
SCIENTIFIC

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Environmental Measurement Instruments

## **2 Pt. Acoustical Calibrator 850016**

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### **1. INTRODUCTION**

Calibration is suggested by OSHA to ensure good sampling practices. The 850016 Sper Scientific 2-Point Acoustical Calibrator is designed to calibrate Sper Scientific digital sound meters, or any other sound meter that is user-calibrated and has a ½" or 1" microphone. Features 2-point calibration at 94 dB and 114 dB, and a low battery indicator. Comes with instructions, 9V battery and a carrying case.

## 2. INSTRUMENT DESCRIPTION OPERATING

1 - 1" Microphone Insertion Socket

2 - 1/2" Microphone Adapter

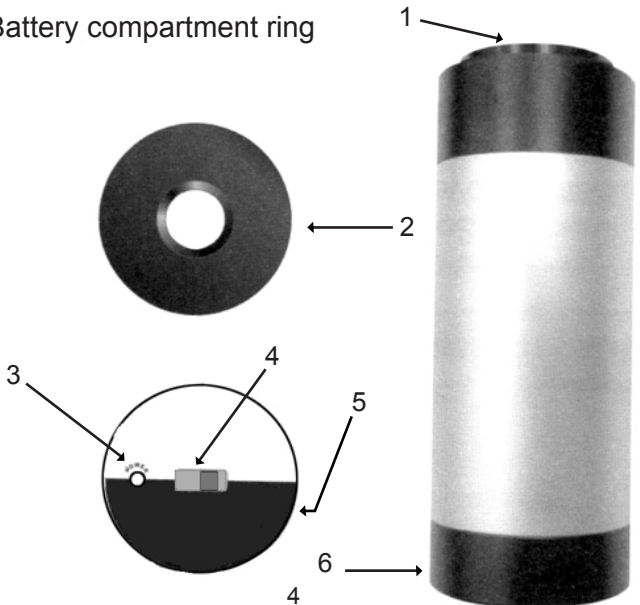
3 - Power Indicator

4 - 94dB/114dB/Off

Slide Switch

5 - Battery compartment (lift out for access)

6 - Battery compartment ring



### 3. OPERATING PROCEDURE

Note: For accurate calibration, background noise should be less than 10 dB.

- Determine the sound meter's microphone size.
  - Use the 1/2" Microphone Adapter (2) when calibrating a 1/2" diameter microphone.
  - When calibrating a sound meter with a 1" microphone, pull off the 1/2" Microphone Adapter (2) to use the 1" Microphone Insertion Socket (1).
- Fully insert the sound meter's microphone into the insertion socket.
- Use the 94dB/114dB/Off Slide Switch (4) to turn the calibrator on and select either 94 dB or 114 dB.
- Be sure the sound meter is set to an appropriate scale to measure a matching sound of 94 dB or 114 db.
- Adjust the sound meter according to it's calibration instructions.

## 4. BATTERY INSTALLATION AND REPLACEMENT

- Replace the battery if the Power Indicator (3) does NOT light when 94dB/114dB/Off Slide Switch (4) is in the 94 dB or 114 dB position and/or when there is no audible tone.
- Unscrew the Battery Compartment Ring (5).
- There are wires connected to the Battery Compartment (6), so SLOWLY lift the center to access the battery.
- Insert a fresh 9V Alkaline battery.
- Replace the Battery Compartment (6) and tighten the Battery Compartment Ring (5).
- A fresh Alkaline battery should power your calibrator for approximately 20 hours of use.
- Remove the battery if the calibrator will not be in use for a long period of time.
- Tampering with the internal circuitry will void your warranty.

## 5. SPECIFICATIONS

Standard:	ANSI S1.40-1984 and IEC942 1988 Class 2
Output Sound Level:	94 dB and 114 dB re 20 uPA under reference
Output Frequency:	1kHz $\pm$ 4%
Accuracy:	$\pm$ 0.5 dB
Operating Environment:	32~104°F (0~40°C)
	Altitude up to 2000 meters
	10~70% RH
Storage Environment:	14~140°F (-10~60°C)
	10~90% RH
Test Conditions	20°C
	65% RH
Atmospheric Pressure:	1013 mbar
Dimensions:	1 7/8" x 5" (48 x 125 mm)
Weight:	10 oz (285g)

## 6. WARRANTY

Sper Scientific warrants this product against defects in materials and workmanship for **five (5) years** from the date of purchase, and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted if available. This warranty does not cover damage resulting from accident, misuse, or abuse of the product.

To obtain warranty service, ship  
the unit postage prepaid to:

SPER SCIENTIFIC LTD.  
8281 East Evans Road, Suite #103  
Scottsdale, AZ 85260

The defective unit must be accompanied by a description of the problem and your return address. Register your product online at [www.sperwarranty.com](http://www.sperwarranty.com) within 10 days of purchase.