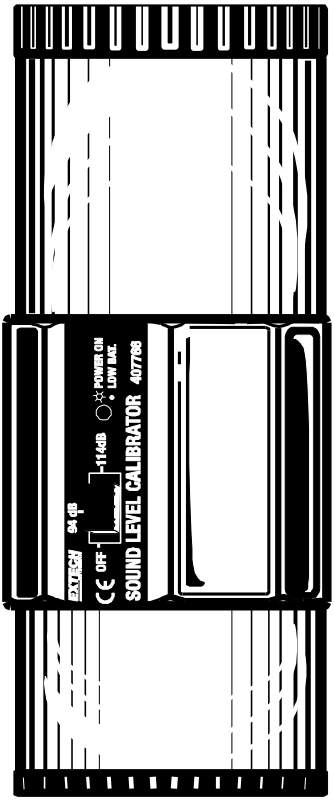
EXTECH INSTRUMENTS

User Manual

Model 407744 and 407766
Sound Level Calibrators



Additional User Manual Translations available at www.extech.com

Introduction

Congratulations on your purchase of Extech's Sound Level Calibrator. Extech Calibrators accommodate Sound Level Meters with a 0.5" microphone. The Calibrator's die-cast aluminum housing is built for ruggedness and durability. The 407744 provides a 94dB calibration output signal while the 407766 provides both 94dB and 114dB outputs. This professional calibrator, with proper care, will provide years of safe reliable service.

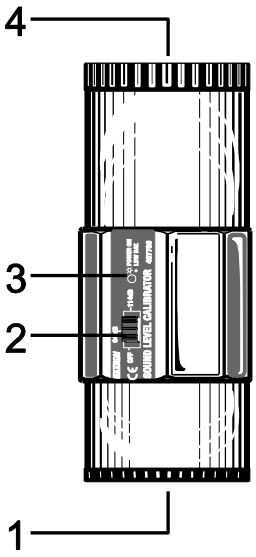
Description

Note that only the 407766 is pictured.

1. ½" Microphone adaptor
2. 407766: OFF-94dB-114dB switch

   407744: OFF-BATTERY TEST-94dB switch
3. 407766: POWER-ON / LOW-BATTERY status LED

   407744: BATTERY OK LED
4. Battery compartment cap



Operation

Theory of Operation

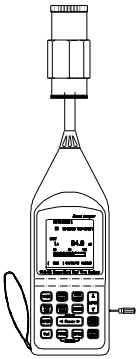
The 407744 sound level calibrator generates a 94dB sine wave at 1 KHz. The 407766 generates a 94dB and a 114dB sine wave at 1kHz. When a microphone from a sound level meter is inserted into the calibrator, the sound level meter picks up the signal and displays the signal in dB (decibel) units. The sound level meter should be adjusted (if necessary) to match the calibrator's output signal as closely as possible (see diagram).

Procedure

1. Insert the microphone into the calibrator's microphone cavity as shown; ensure that it is fully inserted. Use the ½" microphone adaptor (supplied attached to the calibrator) for ½" microphones.

2. On the 407744, slide the function switch to the 'I' (Power On) position. As soon as the unit is powered, the calibration tone is generated. On the 407766, slide the function switch to the 94dB or the 114dB position as desired. The calibrator generates its signal as soon as the switch is set.

3. Read the sound level meter's display. The sound level meter should read 94dB or 114dB depending on the calibrator's setting. If the sound level meter does not match the calibrator's signal (within specification), adjust it as explained in the Operation section (typically a front or side-panel pot adjustment). Refer to diagram at right.



4. Slide function switch to the OFF position, and remove the microphone.

Battery Check

On the 407744, check the condition of the battery by moving the function switch to the 'Battery test' position. The Battery status LED should illuminate if the battery is OK. If it does not light, replace the 9V battery. On the 407766, the POWER-ON / LOW-BATTERY LED glows brightly when the battery is fresh and dimly when the battery is weak.

Battery Replacement

Lift off battery compartment cap (shown in the Description section) to access the two (2) 9V batteries. Remove the batteries and replace with new alkaline 9V batteries. Replace the cap.

Never dispose of used batteries or rechargeable batteries in household waste. As consumers, users are legally required to take used batteries to appropriate collection sites, the retail store where the batteries were purchased, or wherever batteries are sold.

Disposal: Do not dispose of this instrument in household waste. The user is obligated to take end-of-life devices to a designated collection point for the disposal of electrical and electronic equipment.

Specifications

Output signals	407744: 94dB 407766: 94dB and 114dB
Output signal accuracy	407744: ± 0.5dB;
(@ 23±5°C)	407766: ± 0.5dB (94dB), ±0.8dB (114dB)
Output signal frequency	1 KHz sine wave
Accuracy of output signal frequency	± 5%
Compatible microphones size	0.5” microphones
Total Harmonic Distortion (THD)	<2%@94dB (407744 and 407766)
	<5%@114dB (407766)
Operating temperature	0 to 50°C (32 to 122°F)
Power supply	Two (2) 9V batteries
Power consumption	Approx. 10mA DC
Battery check	Status LED
Dimensions	50 x 145mm (2.0” diameter x 5.7” length)
Weight	340g (0.75 lbs.)
Standards meets	IEC 60942 1997-11 class 2
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