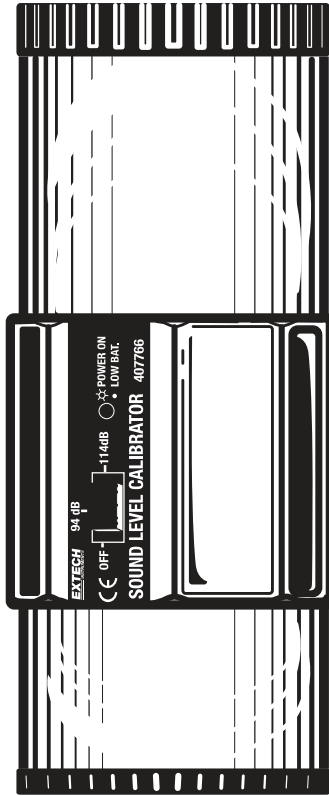


Model 407744 and 407766  
Sound Level Calibrators



## Introduction

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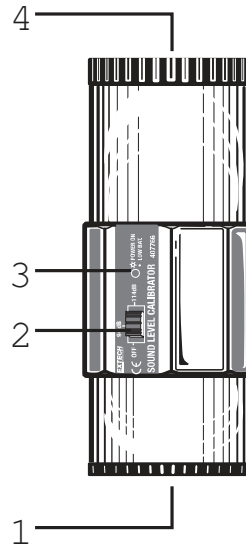
Congratulations on your purchase of Extech's Sound Level Calibrator. Extech Calibrators accommodate Sound Level Meters with a 0.5" microphone. The Calibrator's die-cast aluminum housing is built for ruggedness and durability. The 407744 provides a 94dB calibration output signal while the 407766 provides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

## Description

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Note that only the 407766 is pictured.

1. 1/2" 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

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## 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 1/2" microphone adaptor (supplied attached to the calibrator) for 1/2" 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

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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.



You, as the end user, are legally bound (EU Battery ordinance) to return all used batteries, disposal in the household garbage is prohibited! You can hand over your used batteries / accumulators at collection points in your community or wherever batteries / accumulators are sold!

Disposal: Follow the valid legal stipulations in respect of the disposal of the device at the end of its lifecycle

## Specifications

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Output signals	407744: 94dB 407766: 94dB and 114dB
Output signal accuracy	407744: $\pm 0.5\text{dB}$ ; 407766: $\pm 0.5\text{dB}$ (94dB), $\pm 1.0\text{dB}$ (114dB)
Output signal frequency	1 KHz sine wave
Accuracy of output signal frequency	$\pm 5\%$
Compatible microphones size	0.5" microphones
Total Harmonic Distortion (THD)	$<2\%$ @94dB (407744 and 407766) $<5\%$ @114dB (407766)
Operating temperature	32 to 122°F (0 to 50°C)
Power supply	Two (2) 9V batteries
Power consumption	Approx. 10mA DC
Battery check	Status LED
Dimensions	2.2" diameter x 5.6" length (50 x 127mm)
Weight	0.75 lbs. (340g)
Standards meets	IEC 60942 1997-11 class 2
Standards	Meets IEC 60942 1997-11 class 2

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