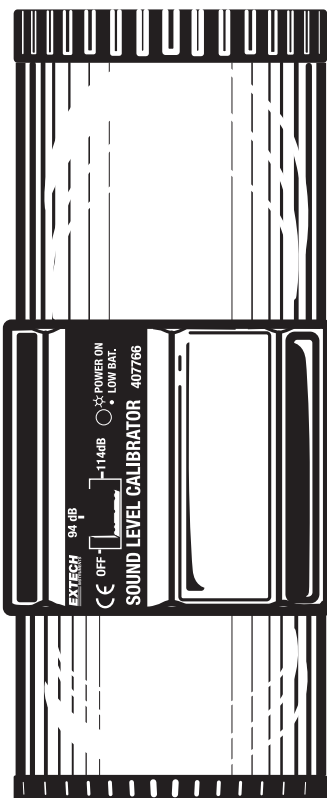


User's Manual

[Extech 407766 94 / 114 dB Professional Sound Calibrator 1kHz](#)

[Extech 407766-NIST 94 / 114 dB Professional Sound Calibrator 1kHz](#)

Model 407744 and 407766 Sound Level Calibrators



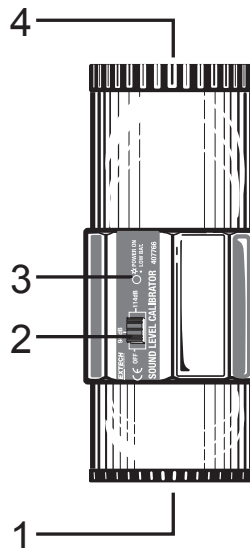
Introduction

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. 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

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.



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

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

Warranty

FLIR Systems, Inc. warrants this Extech Instruments brand device to be free of defects in parts and workmanship for **one year** from date of shipment (a six month limited warranty applies to sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department for authorization. Visit the website for contact information. A Return Authorization (RA) number must be issued before any product is returned. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. FLIR Systems, Inc. specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. FLIR's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

Calibration, Repair, and Customer Care Services

FLIR Systems, Inc. offers repair and calibration services for the Extech Instruments products we sell. NIST certification for most products is also provided. Call the Customer Service Department for information on calibration services available for this product. Annual calibrations should be performed to verify meter performance and accuracy. Technical support and general customer service is also provided, refer to the contact information provided below.

Garantie

FLIR Systems, Inc. garantit que cet appareil Extech Instruments est exempt de défauts matériaux et de fabrication pendant un an à partir de la date d'envoi (une garantie limitée de six mois s'applique aux capteurs et aux câbles). Si le renvoi de l'appareil pour réparation devient nécessaire durant ou après la période de garantie, contactez le service client pour autorisation. Pour obtenir les coordonnées, visitez le site Web suivant. Un numéro d'autorisation de retour (AR) doit être délivré avant tout retour de produit. L'expéditeur prend à sa charge les frais d'expédition, le fret, l'assurance et l'emballage correct de l'appareil afin de prévenir toute détérioration durant le transport. Cette garantie ne s'applique pas aux dommages imputables à l'utilisateur, tels que l'usage impropre ou abusif, un mauvais câblage, une utilisation non conforme aux spécifications, un entretien ou une réparation incorrecte, ou toute modification non autorisée. FLIR Systems, Inc. déclinera spécifiquement toute garantie ou qualité marchande ou aptitude à l'emploi prévu, et ne sera en aucun cas tenu responsable pour tout dommage conséquent, direct, indirect ou accidentel. La responsabilité totale de FLIR est limitée à la réparation ou au remplacement du produit. La garantie définie ci-dessus est inclusive et aucune autre garantie, écrite ou orale, n'est exprimée ou implicite.

Calibrage, réparation et services après-vente

FLIR Systems, Inc. offre des services de calibrage et de réparation pour les produits Extech Instruments que nous commercialisons. Nous fournissons également une certification NIST pour la plupart des produits. Contactez notre service client pour toute information sur les services de calibrage disponibles pour ce produit. Un calibrage doit être effectué chaque année pour vérifier les performances et la précision du mètre. Nous offrons également une assistance technique et un service à la clientèle. Veuillez vous reporter aux coordonnées fournies ci-dessous.

Garantía

FLIR Systems, Inc., garantiza este dispositivo marca Extech Instruments para estar libre de defectos en partes o mano de obra durante un año a partir de la fecha de embarque (se aplica una garantía limitada de seis meses para cables y sensores). Si fuera necesario regresar el instrumento para servicio durante o después del periodo de garantía, llame al Departamento de Servicio a Clientes para obtener autorización. Se debe expedir un número de Autorización de Devolución (AD) antes de regresar cualquier producto. El remitente es responsable de los gastos de embarque, flete, seguro y empaque apropiado para prevenir daños en tránsito. Esta garantía no se aplica a defectos resultantes de las acciones del usuario como el mal uso, alambrado equivocado, operación fuera de las especificaciones, mantenimiento o reparación inadecuada o modificación no autorizada. FLIR Systems, Inc., rechaza específicamente cualesquier garantías implícitas o factibilidad de comercialización o idoneidad para cualquier propósito determinado y no será responsable por cualesquier daños directos, indirectos, incidentales o consecuentes. La responsabilidad total de FLIR está limitada a la reparación o reemplazo del producto. La garantía precedente es inclusiva y no hay otra garantía ya sea escrita u oral, expresa o implícita.

Servicios de calibración, reparación y atención a clientes

FLIR Systems, Inc., ofrece servicios de reparación y calibración para los productos que vendemos de Extech Instruments. Además ofrecemos certificación NIST para la mayoría de los productos. Llame al Departamento de Servicio al Cliente para solicitar información de calibración para este producto. Para verificar el funcionamiento y precisión se debe realizar la calibración anual. Además se provee Soporte Técnico y servicios generales al cliente, consulte la información de contacto en seguida.