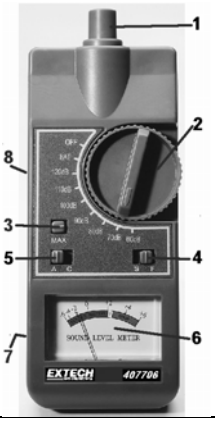
User's Manual

EXTECH INSTRUMENTS

Model 407706
Analog Sound Level Meter



Introduction

Congratulations on your selection of the Extech Analog Sound Level Meter, a versatile device that measures sound pressure level in any acoustic environment. Sound/Noise Levels that are high or low volume, high or low-pitched, broadband, intermittent, or continuous can easily be measured in factories, schools, offices, airports, sound studios, theaters, auditoriums, automobiles, and in the home. This precisely calibrated meter features a large, easy-to-read analog indicator and is battery powered for portable use.

Specifications

Ranges	54 to 126dB in 7 ranges (referenced to 0.00002 bar)
Resolution	Analog Continuous
Accuracy	±2 dB @1kHz at 94 dB sound level
Microphone type	Condenser Electret
Analog output	AC: 0.707Vrms (full scale)
Meter power	9V battery (120-hour battery life)
Dimensions/Weight	2.7 x 7.1 x 1.4" (68 x 180 x 36mm) / 5.1 oz. (160g)

Front Panel Description

1 Microphone
2 Range switch
3 MAX HOLD button
4 SLOW/FAST switch
5 A/C weighting switch
6 Analog display
7 Battery compartment
8 AC analog output jack

Operation

Weighting A / C

Slide the Weighting switch to select A or C weighting Use 'A' weighting to have the meter respond as the human ear would with regard to frequency response (the human ear boosts and cuts amplitude over the frequency spectrum therefore it is not 'flat' responding). 'A' weighting is used for environmental measurements, OSHA regulatory testing, law enforcement, and workplace design. Select 'C' weighting for a flat response (especially at lower frequencies). 'C' weighting is suitable for the sound level analysis of machines, engines, etc.

Fast (F) and Slow (S) Response

Slide the Fast or Slow switch to select the response. Selection of Fast or Slow is determined by the application and any directives or standards related to that application. For example, most hearing conservation or OSHA related testing is done using SLOW and A weighting.

Setting the Range

Start with the highest range setting (120 dB) and work downward in range using the Rotary Switch until there is significant deflection of the meter's pointing needle. For greatest accuracy, always use the lower of any two possible settings. For example: If the RANGE is set to 80 dB and meter reads approx. -5, reset the RANGE to 70 dB and the meter will read +3, for actual sound level of 73 dB.

Max Hold

Maximum Hold permits the user to freeze the maximum reading by locking the needle indicator at the sound level peak. Press and hold the MAX button to use Max Hold.

Low Battery Indication

Place the Rotary Select switch to the 'BAT' position and observe the analog pointer for status of the battery voltage. Replace the battery when the pointer indicates a weak battery. Remove power to the meter whenever it is not being used to preserve battery life.

Analog Output

A phono jack is provided on the meter for connection to external test equipment. An AC rms voltage is provided (0.707V maximum) which is a linearized representation of the analog pointer reading. Connect this output to a datalogger, chart recorder, etc. for logging purposes.

Tripod Mount

A threaded insert on the rear of the meter permits attachment to a tripod stand for increased stability and accuracy (eliminates hand noise and minimizes the effects of sound reflected from the user's body).

Battery replacement

Remove the battery compartment cover on the rear of the meter by removing the cover screw. Replace 9V battery and compartment cover.

Calibration and Repair Services

Extech offers complete repair and calibration services for all of the products we sell. For periodic calibration, NIST certification or repair of any Extech product, call customer service for details on services available. Extech recommends that calibration be performed on an annual basis to ensure calibration integrity.

Warranty

EXTECH INSTRUMENTS CORPORATION warrants this instrument to be free of defects in parts and workmanship for one year from date of shipment (a six month limited warranty applies on 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 at (781) 890-7440 ext. 210 for authorization or visit our website at www.extech.com (click on 'Contact Extech' and go to 'Service Department' to request an RA number). A Return Authorization (RA) number must be issued before any product is returned to Extech. 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. Extech 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. Extech'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.

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