



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 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 | 5 A/C weighting switch |
| 2 Range switch | 6 Analog display |
| 3 MAX HOLD button | 7 Battery compartment |
| 4 SLOW/FAST switch | 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.



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