Thank you for purchasing your Digital Sound Level Meter from RadioShack. Please read this user’s guide before installing, setting up, and using your new meter.
Setup

Package contents
- Digital Sound Level Meter
- User’s Guide
- Carry Case
- Quick Start

Features
- For home/hobbyist use: fine tune your stereo, PA system, or home theater
- Attaches to a tripod with ¼ inch connector
- Selectable weighting for noise level or musical sound
- Displays average or maximum sound level
- Integrated averaging from 1 to 199 seconds

1️⃣ Install battery
Your meter requires one 9V battery (not included) for power. When BATT displays or the meter stops operating properly, replace the battery.

1. Set RANGE to OFF.
2. Remove the battery compartment cover by pressing both side in and lifting the cover.
3. Install one 9V battery (not included) as indicated by the polarity symbols (+ and –).

Battery Notes:
- After using the meter, set RANGE to OFF to save power.
- Dispose of batteries promptly and properly. Do not burn or bury them.
- Use only fresh batteries of the required size and type.
• If you do not plan to use your meter for a long period, remove the battery. Batteries can leak chemicals that may damage electronic parts.

2 Mount and connect the meter (Optional)

1. Mount the meter on a (¼–inch) tripod to eliminate hand noise and minimize the effects of sound reflected from your body. This makes it easy to use the meter with auxiliary recording or test equipment.

2. Use an audio patch cord (not included) to connect the OUTPUT Jack to your stereo system or test equipment.

3 Set the sound range

Set RANGE to the desired sound range. If you cannot get a reading, try other ranges until you get a reading, refer to “Continuous Average Measurements” on Page 7.

4 Set the weighting

Press WEIGHTING to select A to determine the noise level of an area, or C to measure sound levels of musical material. Refer to “Setting the Weighting” on Page 5.

5 Set the response time

Press RESPONSE to set the response to FAST or SLOW. Refer to “Setting the Response Time” on Page 5.

6 Read the measurement

Point the microphone at the sound source. The meter displays the continuous average sound level. After the measurement, set RANGE to OFF.
Setting the Meter

Setting the Weighting

Press WEIGHTING to select A or C.

Weighting determines the meter’s frequency response curve.

A-weighting has A-curve frequency characteristics and causes the meter to respond mainly to frequencies ranging from 500 to 10,000 Hz. This is the human ear’s most sensitive range. Select A to determine the noise level of an area.

C-weighting has C-curve (flat) frequency characteristics and causes the meter to respond mainly to frequencies ranging from 32 to 10,000 Hz. Select C to measure sound levels of musical material.

Note: You can change the weighting setting only during a continuous average or maximum measurement.

Setting the Response Time

Press RESPONSE to select FAST or SLOW.

When set to FAST, the meter updates the bar graph every 0.2 seconds. When set to SLOW, the meter updates the bar graph every 0.5 seconds.

Note: You can change the response setting only during a continuous average or maximum measurement.
Understanding Indications

Level Indicator
The meter displays sound level using a number and a bar graph. The number shows the sound level in dB within ±10 dB of the selected range and is updated once a second.

The bar graph’s center point represents the midpoint of the selected range, for example, for Range 70, the center point represents 70 dB. The bar graph updates every 0.2 seconds or 0.5 seconds.

Overrange Indicator
When the sound level is higher than the highest number in the selected range, the bar graph goes to +10 dB and both the bar graph and the number that represents the next range flash.

For example, if the meter measures 91 dB in Range 80, then the number 90 and the bar graph flash. If the meter measures more than 126 dB in Range 120, the number 126 and the bar graph flash.

If you get the overrange indicator, try a higher range setting until you get a reading in the upper half of the range (0 to +10 dB).

Underrange Indicator
When the measured sound level is lower than the lowest sound level of the selected range, LO appears
and the bar graph disappears. If this happens, try the next lower range.

Notes:
• The overrange or underrange indicator can also appear when you recall a reading using the measurement holding function and the measurement is under or over the selected range.
• The meter can measure sound levels only from 50 to 126 dB.

Taking Measurements

Continuous Average Measurements

Follow these steps to measure the average sound level.

1. Set RANGE to the desired range setting. If the sound level is very high, start at the highest range setting (120) and reduce the setting until you get a reading.

There are seven ranges. Each covers 20 dB. The number of a range represents the center of the range. When the measured value is lower or higher than the set range, an underrange or overrange indicator appears. See “Underrange Indicator” and “Overrange Indicator” on Page 6. Take measurements at several different points in the area to get a good average.

Notes:
• If you set RANGE to 120, the meter measures sound levels from 110 to 126 dB.
• If you change the range setting during a measurement, you clear all the current data and a continuous average measurement resumes.
2. Set the weighting and response (see “Setting the Weighting” and “Setting the Response Time” on Page 5).

3. Point the meter’s microphone at the sound source. The meter displays the continuous average sound level during a one-second sampling period and updates the number on the display once a second.

4. After the measurement, set RANGE to OFF.

Taking Maximum Measurements

1. Follow Steps 1-3 in “Continuous Average Measurements”.

2. Press MAX; the word MAX appears.

   The meter displays only the loudest measured sound level during the one-second sampling period. The bar graph shows the maximum level every 0.2 or 0.5 seconds.

   The bar graph segment that corresponds to the peak reading stays on the display for 2 seconds or until the meter measures a higher maximum level.

3. Press MAX again to cancel the continuous maximum measurement. A continuous average measurement resumes.

Integrated Average Measurements

Follow these steps to monitor the sound level and average the measurement over a period of 1 to 199 seconds. The meter stores the average, maximum, and minimum sound levels during the set time.
1. Press and hold DH for about 2 seconds during a continuous average or maximum measurement. The digit 1 appears.

2. Press (or press and hold) MAX or MIN to set a period from 1 to 199 seconds; position the meter for the measurement.

3. Press RESET to start the monitoring. The meter updates the current integrated average display once a second. MIN and MAX flash until the set time is up. When the set time is up, DH appears, and MIN and MAX go on flashing. The meter displays the total integrated average sound level.

4. Press MAX to display the maximum sound level for the set time, press again to return to the total integrated average sound level.

   Press MIN to display the minimum sound level for the set time, press again to return to the total integrated average sound level.

5. Press RESET after you check the average, maximum, and minimum sound levels. A continuous average or maximum measurement resumes.

Notes:
• If you change the RANGE setting during an integrated average measurement, you clear any stored data and a continuous average or maximum measurement resumes.
• You must repeat the procedure for taking an integrated average measurement.
Taking Maximum and Minimum Measurements during an Undetermined Time Period

1. Press **RESET** during a continuous average or maximum measurement. At the end of the desired time period, press **DH**. **DH** displays.

2. Press **MAX** and **MIN** respectively to check the average, maximum (**MAX** stops flashing), and minimum (**MIN** stops flashing) sound levels during the time period.

3. Press **RESET** to resume a continuous average or maximum measurement.

Checking Stereo System Acoustics

To check the sound of a stereo system, use an audio sample that produces pure tones, one at a time, at intervals that span the entire audio spectrum. Use C-weighting with either slow or fast response.

Make a graph or table to show the sound level each tone produces. This gives you a clear idea of the frequency response of the total audio system, including the room. To smooth out the response, adjust the tone control, change speaker placements, and use a frequency equalizer.

Holding Measurements

You can store the current measurements in memory and freeze measurements on the display. The meter stores the average, maximum, and minimum sound levels for the last one second.
1. Press **DH** during a continuous average or maximum measurement. **DH** displays and the last average or maximum measurement is frozen.

2. For an average measurement, what is frozen is the last average reading. Press **MAX** to check the last maximum measurement. **MAX** displays. Press **MAX** again to return to the average measurement.

   For a maximum measurement, what is frozen is the last maximum reading.

3. Press **MIN** to check the last minimum measurement. **MIN** displays. Press **MIN** again to return to the average or maximum measurement.

4. Press **RESET** to return to the continuous average or maximum measurement.

   ![Note:](image) *When you set **RANGE** to a different range during measurement holding, you disable the holding function and return to a continuous measurement.*

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### Care and Service

- Keep your meter dry and clean. If it gets wet or dirty, wipe it dry or clean immediately. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the meter.

- Use and store the meter in normal temperature environments only. Temperature extremes can shorten the life of electronic devices and distort or melt plastic parts.

- Handle the meter gently and carefully. Dropping it can damage the circuit boards and cause the meter to work improperly.

- Modifying or tampering the meter’s internal components can cause malfunction and might invalidate its warranty. If your meter is not performing as it should, take it to your local **RadioShack** store for assistance.
Specifications

Battery.................................................................................. 9V Alkaline
Microphone............................................................ Electret Condenser
Range.................................................................................. 50 to 126 dB
Accuracy .............................................................................. ±2 dB at 114 dB SPL
Reference ................................................................. 0dB = 0.0002 Micro Bar
Weighting............................................................................. A and C
Display Response .................................................................. Fast and Slow

Signal Output:

Voltage................................................................. 1 Volt Peak-Peak Min.
(Open Circuit, Full Scale at 1 kHz)
Impedance .................................................................... 10 Kohm Min. Load
Distortion................................................... Less than 2% at 1 kHz, 0.5 V p-p Output
(Input: Mic Out, Output: 10 Kohm)

Operating Temperature................................. 32 to 122 °F (0 to 50 °C)
Storage Temperature............................... -40 to 149 °F (-40 to 65 °C)
Dimensions (HWD)......................... 6¼ × 2½ × 1¾ inch (159 × 64 × 44 mm)
Weight (including battery) ....................... 6.7 oz (190 g)

Specifications are subject to change and improvement without notice. Actual product may vary from the images found in this document.
Limited Warranty

RadioShack warrants this product against defects in materials and workmanship under normal use by the original purchaser for ninety (90) days after the date of purchase from a RadioShack-owned store or an authorized RadioShack franchisee or dealer. RADIOSHACK MAKES NO OTHER EXPRESS WARRANTIES.

This warranty does not cover: (a) damage or failure caused by or attributable to abuse, misuse, failure to follow instructions, improper installation or maintenance, alteration, accident, Acts of God (such as floods or lightning), or excess voltage or current; (b) improper or incorrectly performed repairs by persons who are not a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) ordinary wear and tear or cosmetic damage; (e) transportation, shipping or insurance costs; (f) costs of product removal, installation, set-up service, adjustment or reinstallation; and (g) claims by persons other than the original purchaser.

Should a problem occur that is covered by this warranty, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store in the U.S. RadioShack will, at its option, unless otherwise provided by law: (a) repair the product without charge for parts and labor; (b) replace the product with the same or a comparable product; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

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Protect the environment by recycling used electronics. Go to E-CyclingCentral.com to find an electronic recycling center near you.