R8050

REED INSTRUMENTS

Sound Level Meter



WARRANTY 1 YEAR WARRANTY

Instruction Manual

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Introduction

Thank you for purchasing your REED R8050 Sound Level Meter. Please read the following instructions carefully before using your instrument. By following the steps outlined in this manual your meter will provide years of reliable service.

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Product Quality

This product has been manufactured in an ISO 9001 facility and has been calibrated during the manufacturing process to meet stated product specifications. If a certificate of calibration is required please contact the nearest authorized REED distributor or authorized Service Center. Please note an additional fee for this service will apply.

Safety

Never attempt to repair or modify your instrument. Dismantling your product, other than for the purpose of replacing batteries, may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.

Features

- High accuracy of ±1.4dB meets Type 2 standards
- Dual range measurement (High and Low)
- A & C frequency weighting
- Fast & Slow time weighting
- Easy-to-read backlit LCD display
- Data hold and Max hold functions
- Tripod mount for long-term monitoring
- Low battery indicator and auto shut off

Included

- Microphone Windshield Ball
- Battery
- Screwdriver
- Carrying Case

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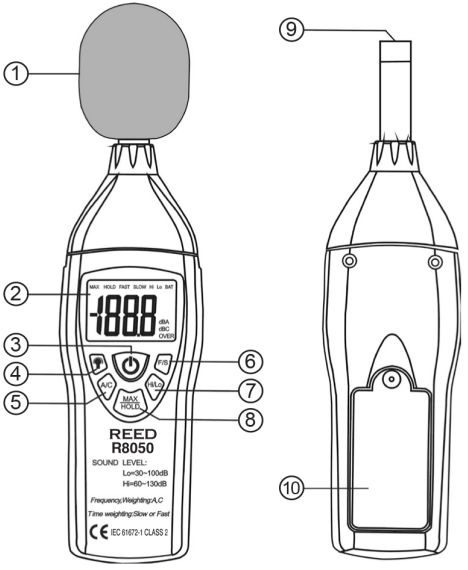
Specifications

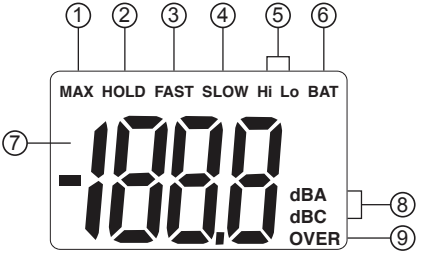
Measuring Ranges:	30 to 130dB Low: 30 to 100dB High: 60 to 130dB
Dynamic Range:	70dB (In Each Range)
Accuracy:	±1.4dB
Resolution:	0.1dB
Response Time:	500mS
Frequency Range:	31.5Hz to 8kHz
Frequency Weighting:	A, C
Time Weighting:	Fast/Slow (125ms and 1s)
Microphone:	0.5" (12.7mm) Electret Condenser
Display:	4-Digit LCD
Backlit Display:	Yes
Data Hold:	Yes
Max:	Yes
Alarm Indicators:	Over (Visual On-Screen)
Auto Shut-off:	Yes (After 15 minutes)
Tripod Mountable:	Yes
Low Battery Indicator:	Yes
Power Supply:	1 x 9V Battery
Battery Life:	Approximately 50 hours
Product Certifications:	CE, IEC 61672-1 Class 2, ANSI S1.4-1983
Operating Temperature:	32 to 104°F (0 to 40°C)
Storage Temperature:	14 to 140°F (-10 to 60°C)
Operating Humidity:	10 to 90%
Dimensions:	8.3 x 2.2 x 1.3" (210 x 55 x 32mm)
Weight:	8.1oz (230g)

Instrument Description



1. Windscreen
2. Display
3. Power Button
4. Backlight Button
5. Frequency Weighting Button
6. Time Weighting Button
7. Level Range Button
8. MAX/HOLD Button
9. Microphone
10. Battery Cover

Display Description



1. MAX Value Indicator
2. Data Hold Indicator
3. Fast Weighting Indicator
4. Slow Weighting Indicator
5. Hi/Lo Range Indicator
6. Low Battery Indicator
7. Measured dB Value
8. Frequency Weighting Indicator
9. Over Range Indicator

Measurement Considerations

- Direct contact with strong winds or blowing air on the microphone may cause measurement errors. These effects can be reduced by using the included windscreen.
- Calibrate the instrument before operation if the instrument has not been in use for a long period of time or was last operated under extreme conditions.
- Do not store or operate the instrument in high temperature and high humidity environments.
- Keep microphone dry and avoid severe vibrations.
- When not in use, remove the battery and store the instrument in a low humidity environment.

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Operating Instructions

1. Turn the meter on or off by pressing the Power Button.
2. Press the Time Weighting Button to select the desired Response Time. If the sound source consists of short bursts, set the response to FAST (125ms). To measure average sound level, select SLOW (1s).
3. Press the Frequency Weighting Button to select the Frequency. Select "A" Weighting for a general noise sound level, or "C" Weighting for measuring high level noise. "C" Weighting is a standard weighting of the audible frequencies commonly used for the measurement of Peak Sound Pressure Level. If the "C" Weighted level is much higher than the "A" Weighted level, then there will be a large amount of low-frequency noise.
4. Press the **Hi/Lo** button to select the appropriate range. If the noise environment under test is between 30 to 100dB, use the 'Lo' range. If the noise environment under test is between 65 and 130dB, use the 'Hi' range. For a noise environment under test that is between 65 and 100dB, either range can be used. If the display flashes the "OVER" icon, press the range button to adjust the range.
5. Hold the instrument comfortably in one hand (away from your body) or position it on a tripod for long-term monitoring. Point the microphone in the direction of the noise to take a measurement.

MAX Hold

Press the **MAX/HOLD** button to display the Maximum sound level values recorded during the measurement process. While in this mode, the meter will only refresh the reading when a higher measurement than the one currently displayed is detected. Press the **MAX/HOLD** button again to exit and resume normal operation.

Data Hold

To freeze a displayed reading during the measurement process, press and hold the **MAX/HOLD** button until both the MAX and HOLD icons appear on the display. To resume normal operation, press and hold the **MAX/HOLD** button until the MAX and HOLD icons disappear.

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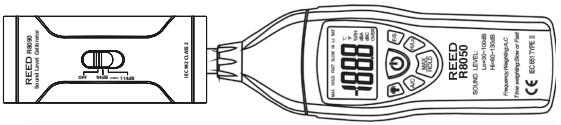
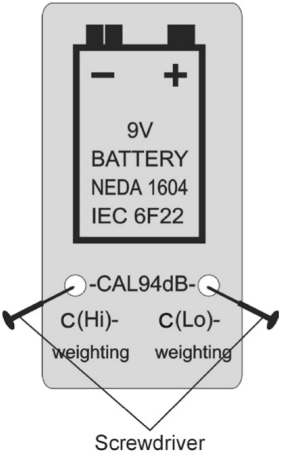
Calibration Procedure

To calibrate the REED R8050, an external calibrator that can provide a 94.0dB signal at 1kHz (REED R8090) and the included screwdriver are required. Follow the steps below to calibrate the instrument.



WARNING: Potentiometers are extremely sensitive. A gentle twist is sufficient to adjust the dB level. Applying excessive force or attempting to spin the screw may cause physical damage (not covered under warranty).

1. Open the battery compartment and locate the two calibration potentiometers behind the 9V battery (see diagram).
2. Turn the meter ON.
3. Select 'C' weighting mode.
4. Select 'FAST' response mode.
5. Place the REED R8050 microphone into the calibrator. Set the calibrator to output 94dB.
6. Select the LOW range.
7. Adjust the 'C (Lo)' potentiometer for a display of 94.0dB.
8. Select the HIGH range.
9. Adjust the 'C (HI)' potentiometer for a display of 94.0dB.



Battery Replacement

When the "BAT" icon appears on the LCD, the battery should be replaced.

1. Remove the screw with a phillips screwdriver and open the battery cover.
2. Replace the 9V battery.
3. Place the battery cover back and tighten the screw.

Accessories and Replacement Parts

- **REED-WB** Replacement Windshield Ball
- **R8090** Sound Level Calibrator
- **R1500** Tripod
- **CA-05A** Soft Carrying Case
- **R8888** Deluxe Hard Carrying Case

Don't see your part listed here? For a complete list of all accessories and replacement parts visit your product page on www.reedinstruments.com.

Applications

- Preventative Maintenance
- Industrial Machinery/Equipment
- Construction Sites
- Ensuring Safe Working Conditions
- Public Venues / Concerts
- Code Enforcement
- Traffic
- Appliance Noise Testing

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Product Care

To keep your instrument in good working order we recommend the following:

- Store your product in a clean, dry place.
- Change the battery as needed.
- If your instrument isn't being used for a period of one month or longer please remove the battery.
- Clean your product and accessories with biodegradable cleaner. Do not spray the cleaner directly on the instrument. Use on external parts only.

Product Warranty

REED Instruments guarantees this instrument to be free of defects in material or workmanship for a period of one (1) year from date of shipment. During the warranty period, REED Instruments will repair or replace, at no charge, products or parts of a product that proves to be defective because of improper material or workmanship, under normal use and maintenance. REED Instruments total liability is limited to repair or replacement of the product. REED Instruments shall not be liable for damages to goods, property, or persons due to improper use or through attempts to utilize the instrument under conditions which exceed the designed capabilities. In order to begin the warranty service process, please contact us by phone at 1-877-849-2127 or by email at info@reedinstruments.com to discuss the claim and determine the appropriate steps to process the warranty.

Product Disposal and Recycling



Please follow local laws and regulations when disposing or recycling your instrument. Your product contains electronic components and must be disposed of separately from standard waste products.

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Product Support

If you have any questions on your product, please contact your authorized REED distributor or REED Instruments Customer Service by phone at 1-877-849-2127 or by email at info@reedinstruments.com.

Please visit **www.REEDInstruments.com** for the most up-to-date manuals, datasheets, product guides and software.

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