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Sper Scientific 850015

Sper Scientific 850015 Graphic Display Sound Meter User Manual

Model: 850015

1. INTRODUCTION

This manual provides comprehensive instructions for the operation and maintenance of the Sper Scientific 850015 Graphic Display Sound Meter. This precision instrument is designed for accurate sound level measurements and complies with industry standards ANSI S1.4 Type 2 and IEC 61672-1 Class 2. The device features a clear graphic display, selectable A and C decibel frequency weighting scales, minimum/maximum value tracking, and adjustable fast or slow response times. It also includes AC and DC output capabilities for external recording or analysis.



Figure 1: Sper Scientific 850015 Graphic Display Sound Meter. This image shows the front view of the sound meter, highlighting its display and control buttons.

2. PACKAGE CONTENTS

Upon opening the package, verify that all items listed below are present and in good condition:

- Sper Scientific 850015 Graphic Display Sound Meter
- Windscreen
- 9V Battery
- Instruction Manual (this document)
- Foam-lined Hard Shell Carrying Case



Figure 2: The Sper Scientific 850015 Sound Meter shown within its protective foam-lined hard shell carrying case, alongside the included 9V battery and instruction manual.

3. SETUP AND BATTERY INSTALLATION

The Sper Scientific 850015 comes with a 9V battery included. Follow these steps to install or replace the battery:

1. Locate the battery compartment cover on the back of the device.
2. Slide or unclip the cover to open the compartment.
3. Connect the 9V battery to the battery clip, ensuring correct polarity.
4. Place the battery into the compartment and replace the cover, securing it firmly.
5. Attach the windscreens to the microphone at the top of the meter. This helps reduce wind noise during measurements.

4. OPERATING INSTRUCTIONS

Familiarize yourself with the device's controls and display before operation.



Figure 3: The Sper Scientific 850015 Sound Meter being held, demonstrating its ergonomic design and ease of use.

4.1. Power On/Off

- Press the **Power** button (usually marked with "/" or a power symbol) to turn the meter on.
- Press and hold the **Power** button for a few seconds to turn the meter off.
- The meter features an auto-power-off function to conserve battery life.

4.2. A/C Weighting Selection

- Press the **A/C** button to toggle between A-weighting and C-weighting.
- **A-weighting** (dBA) is commonly used for environmental noise measurements and approximates the human ear's response.
- **C-weighting** (dBc) provides a flatter response, suitable for measuring peak sound levels or noise from machinery.

4.3. Fast/Slow Response Time

- Press the **FAST/SLOW** button to select the desired response time.
- **FAST** response (125 ms) is suitable for capturing rapidly changing noise levels.
- **SLOW** response (1 second) provides an averaged reading for more stable noise sources.

4.4. MIN/MAX Function

- Press the **MIN/MAX** button to activate the minimum/maximum hold function.
- The display will show the highest (MAX) or lowest (MIN) sound level recorded since the function was activated.
- Press the button again to cycle through MAX, MIN, and normal measurement modes.

4.5. AC/DC Output

The meter provides AC and DC output jacks for connecting to external devices such as chart recorders,

data loggers, or sound analysis equipment. Refer to the specifications section for output voltage details.

5. MAINTENANCE AND CALIBRATION

5.1. Cleaning

To ensure optimal performance and longevity, keep the meter clean. Wipe the exterior with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the microphone is free from dust and debris.

5.2. Battery Replacement

When the low battery indicator appears on the display, replace the 9V battery as described in the "Setup and Battery Installation" section. Always dispose of used batteries responsibly.

5.3. Calibration

For applications requiring high accuracy or regulatory compliance, periodic calibration is recommended. The Sper Scientific 850015 can be calibrated in compliance with OSHA standards using an optional Acoustical Calibrator (Model 850016). A N.I.S.T. traceable certificate of calibration is also available from Sper Scientific.

6. TROUBLESHOOTING

If you encounter issues with your Sper Scientific 850015, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	Dead or improperly installed battery.	Check battery installation; replace with a fresh 9V battery.
Inaccurate or fluctuating readings.	Microphone obstructed, strong wind, or meter needs calibration.	Ensure windscreen is properly installed and microphone is clear. Avoid strong air currents. Consider calibration if readings remain inconsistent.
Display shows "LO BAT".	Battery is low.	Replace the 9V battery immediately.
No response from buttons.	Device frozen or battery issue.	Remove and reinsert the battery to reset the device. If problem persists, replace battery.

7. SPECIFICATIONS

The following table details the technical specifications for the Sper Scientific 850015 Graphic Display Sound Meter:

Parameter	Value
Measurement Range	30 to 130 dB (A & C scales)
Resolution	0.1 dB

Parameter	Value
Accuracy	± 1.4 dB (ref 94 dB @ 1KHz)
Frequency Weighting	A and C
Response Time	Fast (125 ms) / Slow (1 sec)
Output	AC and DC
Auto Power Off	Yes
Low Battery Indicator	Yes
Standards Compliance	ANSI S1.4 Type 2, IEC 61672-1 Class 2
Dimensions	10 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ " x 1" (258 x 55 x 25 mm)
Weight	6.5 oz (185 g)
Power Source	1 x 9V battery (included)

Specifications

Range	Resolution	Accuracy
30 to 130 dB	0.1 dB	± 1.4 dB (ref 94 dB @1 KHz)

Figure 4: A visual representation of key specifications for the Sper Scientific 850015, including range, resolution, and accuracy.

8. WARRANTY AND SUPPORT

For information regarding product warranty, technical support, or service, please contact Sper Scientific directly. Their official website or the contact information provided with your purchase documentation will have the most up-to-date details.

Manufacturer: Sper Scientific

Website: [Sper Scientific Store on Amazon](#) (for general product information)

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Related Documents - 850015

<p>Digital Type 2 Sound Meter 840029 Instruction Manual</p> 	<p>Sper Scientific 840029 Digital Type 2 Sound Meter Instruction Manual Instruction manual for the Sper Scientific 840029 Digital Type 2 Sound Meter, covering specifications, operating instructions, calibration, precautions, and warranty information.</p>
<p>Advanced Datalogging Sound Meter 850013 Instruction Manual</p> 	<p>Sper Scientific 850013 Advanced Datalogging Sound Meter Instruction Manual Instruction manual for the Sper Scientific 850013 Advanced Datalogging Sound Meter, covering features, operation, calibration, troubleshooting, PC connection, and specifications.</p>
<p>UVAB LIGHT METER 850032 Instruction Manual</p> 	<p>UVAB Light Meter 850032 Instruction Manual Instruction manual for the Sper Scientific 850032 UVAB Light Meter, detailing its features, operation, specifications, and safety precautions for measuring UVA and UVB irradiance in industrial, scientific, and safety applications.</p>
<p>Dissolved Oxygen Pen 850045</p> 	<p>Sper Scientific 850045 Dissolved Oxygen Pen User Manual and Specifications User manual and specifications for the Sper Scientific 850045 Dissolved Oxygen Pen. Learn about its features, how to calibrate and measure dissolved oxygen and temperature, probe maintenance, battery replacement, technical specifications, and warranty information.</p>

<p>DATALOGGING UVAB / UVC METER</p> <p>850031</p> <p>Instruction Manual</p> <p></p>	<p>Sper Scientific 850031 Datalogging UVAB/UVC Meter Instruction Manual</p> <p>Instruction manual for the Sper Scientific Model 850031 Datalogging UVAB/UVC Meter, detailing its features, measurement procedures for UVA, UVC, and temperature, datalogging functions, advanced settings, specifications, and warranty. Designed for industrial, scientific, and safety applications.</p>
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Documents - Sper Scientific – 850015

<p>Graphic Display Sound Meter</p> <p>850015</p> <p>Instruction Manual</p> <p></p>	<p>[pdf] User Manual Specifications Warranty</p> <p>Provided by ManualsAndMore Download User Manual Sper scientific 850015 Instruction manualsandmore </p> <p>Graphic Display Sound Meter 850015 Instruction Manual 1 Graphic Display Sound Meter 850015 Copyright 2015 by Sper Scientific ALL RIGHTS RESERVED Printed in the USA The contents of this manual may not be reproduced or transmitted in any form or by any means electronic, mechanical, or other means th...</p> <p>lang:en score:67 filesize: 418.57 K page_count: 16 document date: 2019-07-24</p>
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Graphic Display Sound Meter

850015 Instruction Manual

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Graphic Display Sound Meter

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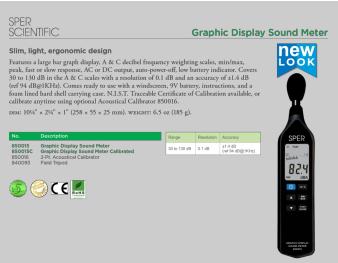
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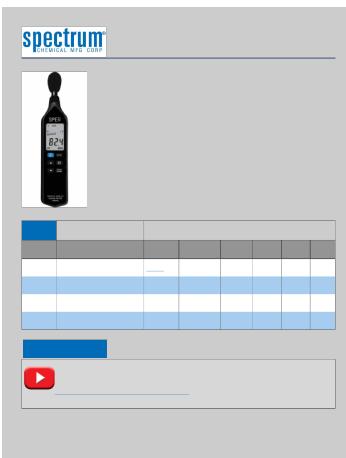


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Graphic Display Sound Meter Slim, light, ergonomic design Features a large bar graph display, A C ... ional Acoustical Calibrator 850016. dim: 10 2 1 258 55 25 mm . weight: 6.5 oz 185 g . No. **850015** **850015C** 850016 840093 Description Graphic Display Sound Meter Graphic Display Sound Meter Ca...

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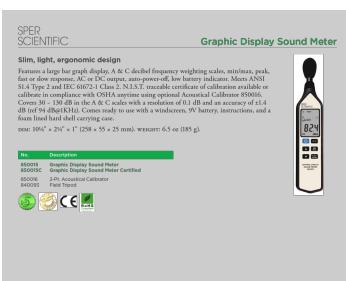


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Sper Scientific Graphic Display Sound Meters 1 day ago — Description Features a large bar graph display A C decibel frequency weighting scales min max peak fast filename* UTF 8 Met spectrumchemical details index productSku 345310 |||

Product Details [WWW.SPECTRUMCHEMICAL.COM](#) Sper Scientific Graphic Display Sound Meters Description Fe Part # List Price Your Price Unit Graphic Display Sound Meter - 1 ea Sign In Sper Scientific **850015** 225.00 EA Graphic Display Sound Meter - 1 ea Calibrated Graphic Display Sound Meter - 1 e...

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Graphic Display Sound Meter Slim, light, ergonomic design Features a large bar graph display, A & C decibel frequency weighting scales, minimum, peak, fast, and slow response times. Includes a large color liquid crystal display, two battery alkaline Manganese AAA SL4 Type 2 and IEC 60721 Class 2, NLS3.1, insurable certificate of calibration available or calibration in compliance with OSP A series using optional Acoustical Calibrator 850016. Comes with a carrying case, a 9V battery, a power adapter, a probe, a probe cover, a probe of 13.4 dB (ref 94 dB ref 1 kHz). Comes ready to use with a windscreen, 9V battery, instructions, and a foam lined hard shell carrying case. size: 102 x 258 x 55 mm. weight: 6.5 oz (185 g).

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2023 Sper Scientific Catalog Direct 03 30 v21 AAG SPER WEB cdn shopify s files 1 0356 8248 4360 ||| 2023 Environmental Measurement Instruments [sperdirect.com](#) Digital Turbidity Meter Page 18 Digital ... ional Acoustical Calibrator 850016. dim: 10 2 1 258 55 25 mm . weight: 6.5 oz 185 g . No. **850015 850015C** 850016 840093 Description Graphic Display Sound Meter Graphic Display Sound Meter Ce...

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Comparisons - Sound Meters											
Product	103 Pen	850018	139 Mini	850014	160 Graphic Display	850015	209 Digital Environmental Detachable Type 2 Quality Meter Probe	840029 with Sound	840012	850069	289 292 314 Type 1
Retail	\$15.99	\$15.99	\$15.99	\$14.99	\$10.99	\$15.99	\$10.99	\$10.99	\$10.99	\$10.99	\$10.99
Accuracy	2	2	2	2	2	2	2	2	2	2	2
Auto/Type	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
dB Scale	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peak	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Frequency Weighting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Memory	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Auto Range	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
AC/DC Input	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DC Output	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Backlight	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Detachable Probe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Detachable Probe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internal Calibration	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Detachable Probe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Interpolated	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bluetooth	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Audio Recording	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Comparisons - Sound Meters Product: Retail: Accuracy: Bluetooth Sound Meter 850019 103 Pen 840018 139 Mini 850014 160 Graphic Display **850015** 209 Digital Environmental Detachable Type 2 Quality Meter Probe 840029 with Sound 840012 850069 289 292 314 Type 1 840015 Advanced Sound In...

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