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- › [RIEMRITEMRE](#) /
- › [HW-400 Coating Thickness Gauge User Manual](#)

## RIEMRITEMRE HW-400

# HW-400 Coating Thickness Gauge User Manual

MODEL: HW-400

Brand: RIEMRITEMRE

## 1. INTRODUCTION

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The RIEMRITEMRE HW-400 Coating Thickness Gauge is a high-precision instrument designed for non-destructive measurement of coating thickness on various substrates. This device is ideal for applications in industrial, automotive, and household settings, providing accurate and reliable readings for paint film, protective coatings, and more. Its user-friendly design ensures ease of installation and operation.

This manual provides essential information for the proper setup, operation, maintenance, and troubleshooting of your HW-400 Coating Thickness Gauge. Please read it thoroughly before using the device to ensure optimal performance and safety.



Figure 1: HW-400 Coating Thickness Gauge (White and Black Models)

This image shows both the white and black versions of the HW-400 Coating Thickness Gauge. Each gauge features a clear digital display showing measurement values, mode indicators (AUTO NFE, SNG CNT), and battery status. Buttons for power, light, auto-off, and zero calibration are visible below the display. A wrist strap is attached to each device.

## 2. SAFETY INFORMATION

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To ensure safe operation and prolong the life of your HW-400 Coating Thickness Gauge, please observe the following safety precautions:

- Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- Avoid dropping the device or subjecting it to strong impacts.
- Do not attempt to disassemble or modify the device. Repairs should only be performed by qualified personnel.
- Keep the device away from strong magnetic fields.
- Ensure the measurement surface is clean and free of debris before taking readings.
- Dispose of batteries according to local regulations.

## 3. PACKAGE CONTENTS

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

- HW-400 Coating Thickness Gauge
- Calibration Films (typically 50µm, 100µm, 250µm, 500µm, 1000µm)
- Substrate Block (Ferrous and Non-Ferrous)
- User Manual
- Carrying Pouch (if included)
- Batteries (if included)

If any items are missing or damaged, please contact customer support immediately.



## 4. SETUP

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### 4.1 Battery Installation

1. Locate the battery compartment cover on the back of the device.
2. Slide or unclip the cover to open the compartment.
3. Insert the required batteries (e.g., 2 x AAA batteries) according to the polarity indicators (+/-) inside the compartment.
4. Close the battery compartment cover securely.

### 4.2 Initial Power-On

Press and hold the **Power** button (usually marked with  or ) for a few seconds until the display illuminates. The device will perform a self-test and then enter measurement mode.

### 4.3 Calibration

For accurate measurements, it is crucial to calibrate the gauge before first use and periodically thereafter, especially when measuring different materials or after significant temperature changes. The HW-400 supports zero calibration.

1. Ensure the gauge is powered on.
2. Place the probe firmly on the bare, uncoated metal substrate block (ferrous or non-ferrous, depending on your measurement).
3. Press the **ZERO CAL** button. The display should show "0.00" or a value very close to zero, indicating successful calibration.
4. For multi-point calibration (if supported), refer to the specific instructions for using the provided calibration films.

## 5. OPERATING INSTRUCTIONS

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### 5.1 Taking a Measurement

1. Ensure the measurement surface is clean, dry, and smooth.
2. Gently place the probe of the gauge perpendicular to the coated surface.
3. Apply slight, steady pressure. The measurement will typically be displayed instantly.
4. Lift the gauge from the surface to prepare for the next measurement.

### 5.2 Understanding Display Modes and Readings

The HW-400 display provides various indicators and measurement units:

- **AUTO NFE:** Automatic detection of substrate type (Ferrous or Non-Ferrous).
- **SNG CNT:** Single measurement count.
- **um / mils:** Measurement units. Press the **UNIT** button to switch between micrometers (um) and thousandths of an inch (mils).
- **MAX / MIN / AVG / DIF:** Maximum, Minimum, Average, and Difference readings from a series of measurements. These statistics are typically displayed below the current measurement.
- **NUM:** Number of measurements taken in the current series.
- **ZERO CAL:** Indicates the zero calibration status.
- **Battery Indicator:** Shows the current battery level.

## 5.3 Button Functions

- **Power Button ( / ):**  Press and hold to turn the device ON/OFF.
- **LIGHT Button ( ):** Toggles backlight ON/OFF.
- **AUTO OFF Button:** Activates or deactivates the automatic power-off feature to conserve battery life.
- **UNIT Button:** Switches between measurement units (um/mils).
- **ZERO CAL Button:** Initiates zero calibration.

## 6. MAINTENANCE

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### 6.1 Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the probe tip is clean and free of debris for accurate readings.

### 6.2 Storage

When not in use for extended periods, remove the batteries to prevent leakage. Store the gauge in its protective pouch or case in a cool, dry place, away from direct sunlight and extreme temperatures.

### 6.3 Battery Replacement

When the battery indicator shows low power, replace the batteries promptly to ensure consistent performance. Refer to Section 4.1 for battery installation instructions.

## 7. TROUBLESHOOTING

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If you encounter issues with your HW-400 Coating Thickness Gauge, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Check battery polarity; replace batteries.
Inaccurate readings.	Gauge not calibrated; dirty probe tip; unstable surface.	Perform zero calibration; clean probe tip; ensure stable measurement.
Display shows "Err" or similar.	Measurement out of range; sensor error.	Ensure measurement is within specified range; restart device. If error persists, contact support.
Buttons are unresponsive.	Device frozen; low battery.	Remove and reinsert batteries; replace batteries.

If the problem persists after attempting these solutions, please contact RIEMRITEMRE customer support.

## 8. SPECIFICATIONS

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The following are general specifications for the HW-400 Coating Thickness Gauge. Detailed technical specifications such as measurement range and accuracy are typically provided in the product packaging or on the manufacturer's official product page.

- **Model:** HW-400
- **Manufacturer:** RIEMRITEMRE
- **ASIN:** B0F3WTCZDX
- **Date First Available:** April 7, 2025
- **Measurement Units:** Micrometers (um), Mils
- **Display:** Digital LCD with backlight
- **Power Source:** Typically 2 x AAA batteries (not explicitly stated, but common for such devices)
- **Operating Environment:** Refer to product packaging for specific temperature and humidity ranges.



Figure 2: Example of High-Quality Electronic Components

This image illustrates a variety of electronic components, such as integrated circuits (chips), resistors, capacitors, and light-emitting diodes (LEDs). These components are fundamental to the reliable and long-lasting performance of electronic devices like the HW-400 Coating Thickness Gauge.

## 9. WARRANTY AND CUSTOMER SUPPORT

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RIEMRITEMRE is committed to providing high-quality products and exceptional customer support. While specific warranty terms are not detailed in this manual, please refer to the product packaging or the official RIEMRITEMRE website for comprehensive warranty information.

If you have any questions, require technical assistance, or need to report an issue with your HW-400 Coating Thickness Gauge, please contact our dedicated customer support team. Our knowledgeable team is ready to assist you.

For support inquiries, please visit the RIEMRITEMRE official website or refer to the contact information provided with your purchase.