

BGS 2197

BGS 2197 Paint Thickness Gauge Instruction Manual

For Ferrous and Non-Ferrous Metals

1. INTRODUCTION

The BGS 2197 Paint Thickness Gauge is a precision instrument designed for accurately measuring the thickness of paint and other coatings on various metal surfaces. This device is capable of measuring on both ferrous (iron-based) and non-ferrous (e.g., aluminum, copper, brass) metals. Its digital display, one-hand operation, and automatic functions make it a reliable tool for professionals and enthusiasts alike. This manual provides detailed instructions for the proper use, calibration, and maintenance of your BGS 2197 gauge.

2. SAFETY INFORMATION

- Read this manual thoroughly before operating the device.
- Do not attempt to disassemble or modify the gauge. This may void the warranty and cause damage.
- Keep the device away from strong magnetic fields, extreme temperatures, and high humidity.
- Use only the specified 9V battery. Remove the battery if the device will not be used for an extended period.
- Handle calibration discs with care to avoid damage, which can affect measurement accuracy.

3. PACKAGE CONTENTS

Upon opening your BGS 2197 package, please verify that all the following items are included:

- BGS 2197 Paint Thickness Gauge
- Carrying Case
- 9V Battery
- Calibration Discs (for ferrous and non-ferrous surfaces)
- Instruction Manual (this document)



Image 3.1: The BGS 2197 Paint Thickness Gauge with its protective carrying case.



Image 3.2: The BGS 2197 gauge, carrying case, and included calibration discs.

4. PRODUCT OVERVIEW

4.1 Key Features

- Measures paint thickness on ferrous and non-ferrous metals.
- Digital display with backlight for clear readability in various lighting conditions.
- Ergonomic design for comfortable one-hand operation.
- Auto-Hold function to freeze the measurement on the display.
- Automatic shutdown to conserve battery life.
- Measurement range: 0 - 40 mils / 0 - 1000 µm.
- High resolution: 0.1 mils / 0.1 µm.

4.2 Controls and Display

The BGS 2197 features an intuitive button layout and a clear digital display.



Image 4.1: Close-up view of the control buttons on the BGS 2197 gauge.

- **CAL Button:** Used for calibration procedures.
- **Zero Button:** Used for zero-point calibration.
- **MAX/MIN Button:** Toggles between maximum and minimum recorded measurements.
- **mils/μm Button:** Switches between imperial (mils) and metric (micrometers) units.
- **Backlight Button:** Activates or deactivates the display backlight.



Image 4.2: The digital display of the BGS 2197 gauge, showing measurement readings.

5. SETUP

5.1 Battery Installation

1. Locate the battery compartment cover on the back of the gauge.
2. Slide or unclip the cover to open the compartment.
3. Insert the included 9V battery, ensuring correct polarity (+/-).
4. Close the battery compartment cover securely.

5.2 Powering On/Off

- To power on, press any button. The device will perform a brief self-test.
- The device features an automatic shutdown function to save battery power after a period of inactivity.

6. OPERATING INSTRUCTIONS

6.1 Taking a Measurement

1. Ensure the gauge is powered on and calibrated (refer to Section 7).
2. Place the probe of the gauge firmly and perpendicularly onto the coated surface you wish to measure.
3. Hold the gauge steady until the reading stabilizes on the digital display.
4. The measurement will be displayed. If Auto-Hold is active, the reading will remain on the screen after lifting the probe.
5. Lift the gauge from the surface to prepare for the next measurement.

6.2 Changing Measurement Units

Press the **mils/μm** button to toggle between imperial units (mils) and metric units (micrometers).

6.3 Using Auto-Hold

The Auto-Hold function automatically freezes the measurement on the display once a stable reading is obtained. This allows you to view the reading comfortably after removing the gauge from the surface. Refer to the device's display for an indicator of Auto-Hold status.

6.4 Max/Min Measurement Display

Press the **MAX/MIN** button to cycle through the maximum and minimum measurements recorded during a session. This can be useful for identifying variations in coating thickness across a surface.

7. CALIBRATION

Accurate calibration is crucial for precise measurements. The BGS 2197 comes with calibration discs for both ferrous and non-ferrous metals. It is recommended to calibrate the device before each use or if you suspect inaccurate readings.

7.1 Zero-Point Calibration

1. Place the gauge probe directly onto a clean, uncoated metal surface (e.g., the bare metal calibration disc).
2. Press the **Zero** button. The display should show '0.0' or a value very close to zero.
3. If the reading is not zero, repeat the process.

7.2 Multi-Point Calibration (Using Calibration Discs)

1. Perform a zero-point calibration as described above.
2. Place one of the provided calibration discs (with a known thickness) onto a clean, uncoated metal surface.

3. Place the gauge probe firmly onto the center of the calibration disc.
4. Press the **CAL** button. The display will show the current measured value.
5. Use the up/down arrow buttons (often integrated with MAX/MIN or other buttons, refer to specific device markings) to adjust the displayed value to match the known thickness of the calibration disc.
6. Press **CAL** again to confirm and save the calibration.
7. Repeat this process for other calibration discs if higher accuracy across the measurement range is desired.

Note: Some users have reported needing to recalibrate the device frequently. Ensure that calibration steps are followed precisely and that calibration discs are clean and undamaged for optimal performance.

8. MAINTENANCE

8.1 Cleaning

- Wipe the device with a soft, dry cloth.
- Do not use abrasive cleaners or solvents, as these can damage the casing or display.
- Keep the probe tip clean and free of debris to ensure accurate contact with surfaces.

8.2 Battery Replacement

When the battery indicator appears on the display, replace the 9V battery as described in Section 5.1. Always dispose of used batteries responsibly.

8.3 Storage

Store the BGS 2197 in its protective carrying case in a cool, dry place when not in use. Remove the battery if storing for extended periods to prevent leakage.

9. TROUBLESHOOTING

- **Inaccurate Readings:** Ensure the device is properly calibrated (Section 7). Check that the probe tip and the measurement surface are clean and free of dust or debris. Verify that the battery level is sufficient.
- **Device Not Powering On:** Check if the 9V battery is correctly installed and has sufficient charge. Replace the battery if necessary.
- **Display Not Visible/Flickering:** Replace the battery. If the issue persists, contact customer support.
- **Difficulty with Initial Setup/Calibration:** Carefully re-read the setup and calibration sections (Sections 5 and 7) and follow each step precisely. Ensure you are using the correct calibration discs for the metal type.

10. SPECIFICATIONS

- **Model:** BGS 2197
- **Measurement Range:** 0 - 40 mils / 0 - 1000 μm
- **Resolution:** 0.1 mils / 0.1 μm
- **Accuracy:** +/- 4 dgts (0 - 7.8 mils) / +/- 10 dgts (0 - 199 μm)
- **Response Time:** 1 second
- **Power Supply:** 1 x 9V battery (included)
- **Product Dimensions:** 18.5 x 9.5 x 6 cm

- **Product Weight:** 270 g
- **Measurable Materials:** Ferrous metals (e.g., steel) and non-ferrous metals (e.g., aluminum, copper, brass)
- **Automatic Functions:** Auto-Hold, Automatic Shutdown

11. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation provided with your purchase or visit the official BGS website. Keep your proof of purchase for any warranty claims.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question