KIMISS KIMISSu8fz43bxrv

Smart Sensor AS840 Digital Ultra Thickness Gauge and Metal Depth Tester User Manual

Model: KIMISSu8fz43bxrv | Brand: KIMISS

Introduction

The KIMISS Smart Sensor AS840 Digital Ultra Thickness Gauge is a precision instrument designed for accurate measurement of material thickness and metal depth. Utilizing advanced ultrasonic technology, this device provides reliable readings for various industrial and scientific applications. Its user-friendly interface and robust features make it an essential tool for quality control, material inspection, and maintenance tasks.

Key Features

- **Auto Calibration:** Enhances measurement accuracy through an automatic calibration process.
- **Auto Linear Compensation:** Rectifies non-linear accuracy of the transducer for improved precision.
- **Convenient Key Adjustments:** Dedicated keys for easy adjustment of sound velocity or thickness, and quick recall of stored data.
- **Coupling Status Indicator:** Provides visual feedback on the completion of the coupling process, ensuring proper contact for accurate readings.
- **Memory Function:** Stores and recalls up to 10 thickness measurements for convenient data management.

Package Contents

Upon opening the package, please verify that all components are present and in good condition.

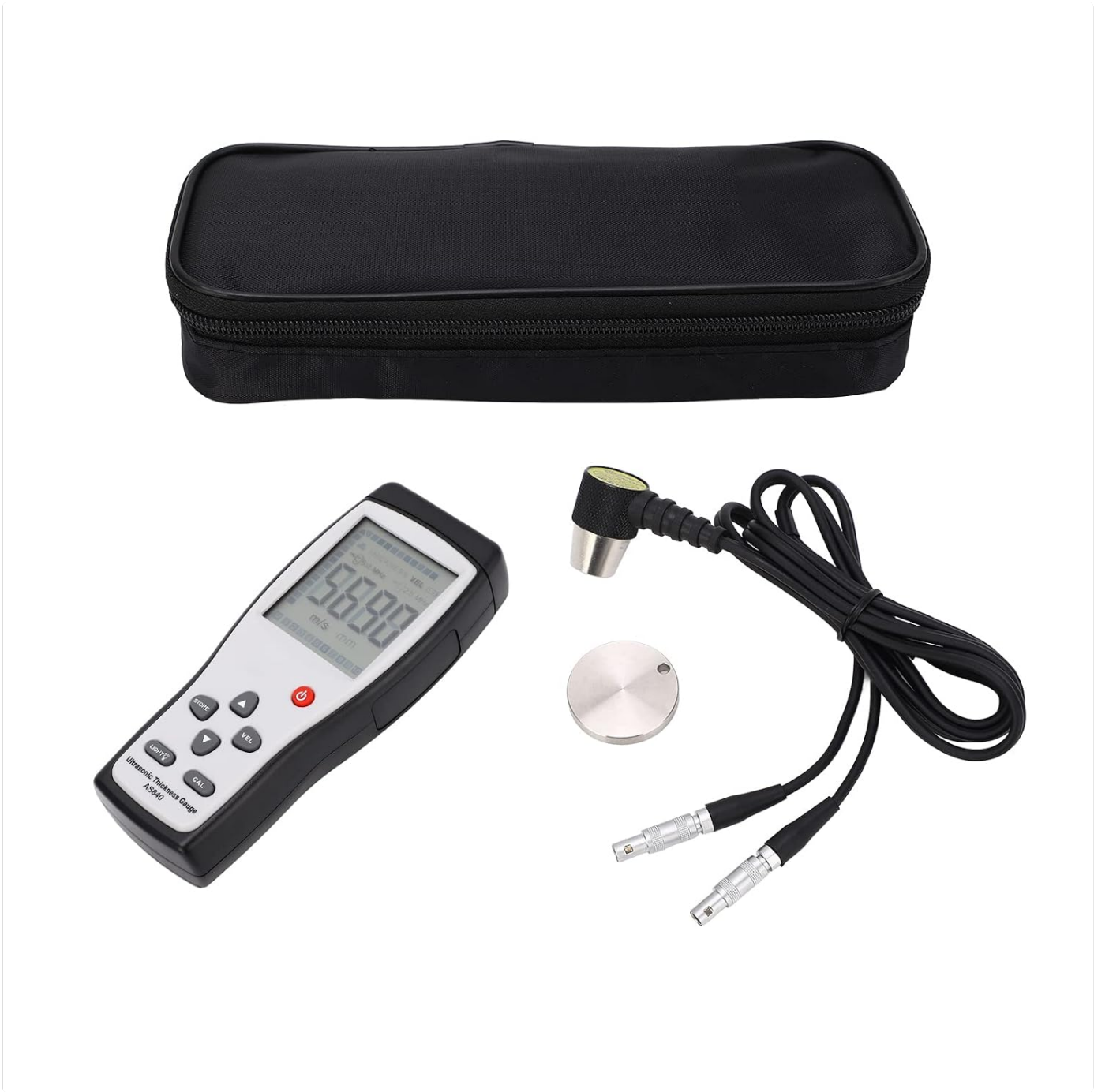


Image: All components of the AS840 Thickness Gauge, including the main unit, transducer, coupling agent, and carrying case.

- Smart Sensor AS840 Main Unit
- Ultrasonic Transducer with Cable
- Coupling Agent (small bottle/tube)
- Carrying Case
- User Manual (this document)

Setup

1. Battery Installation

The AS840 gauge operates on 3x 1.5V AA batteries (not included). To install the batteries:

1. Locate the battery compartment on the back of the device.
2. Slide open the battery cover.

3. Insert three AA batteries, ensuring correct polarity (+/-).
4. Close the battery cover securely.

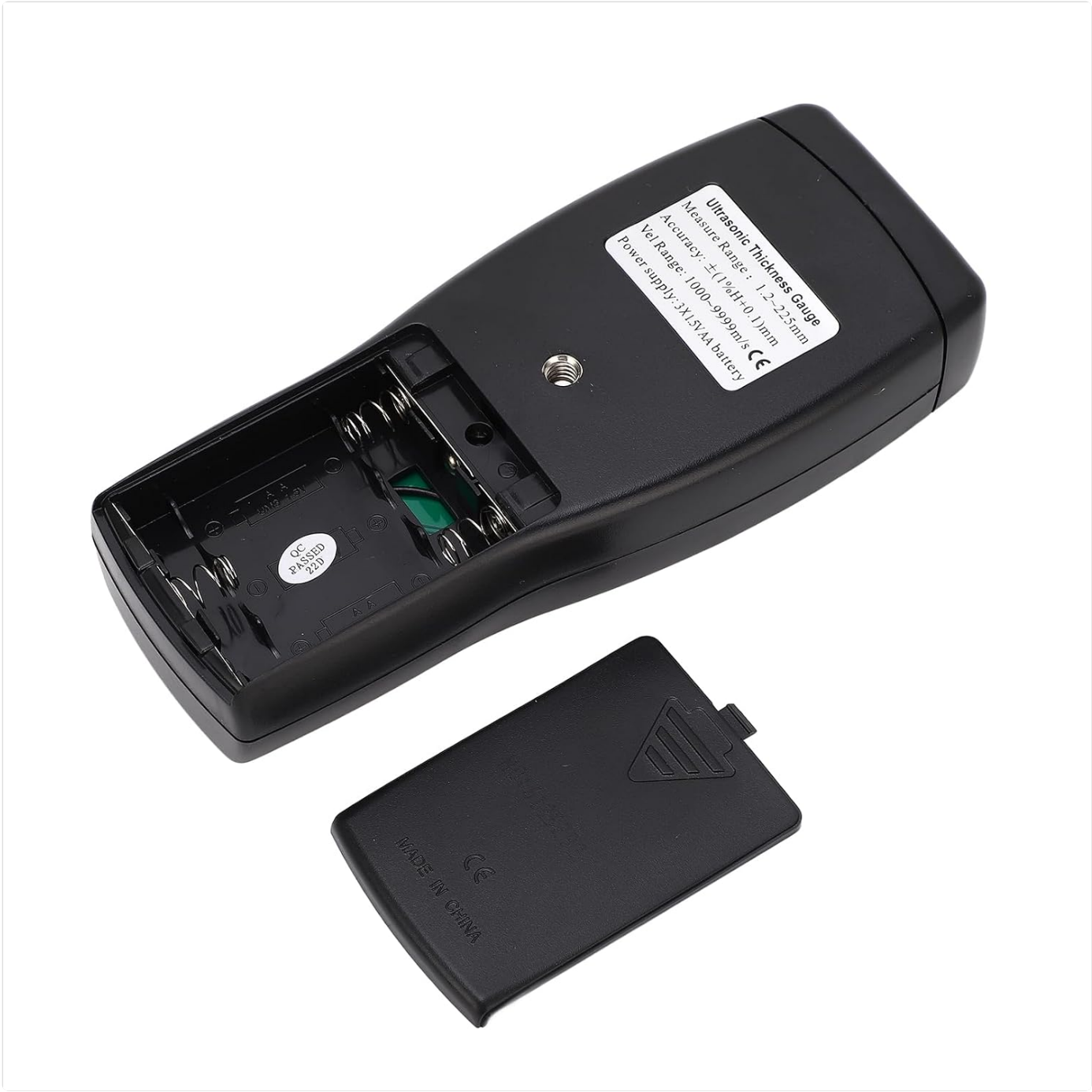


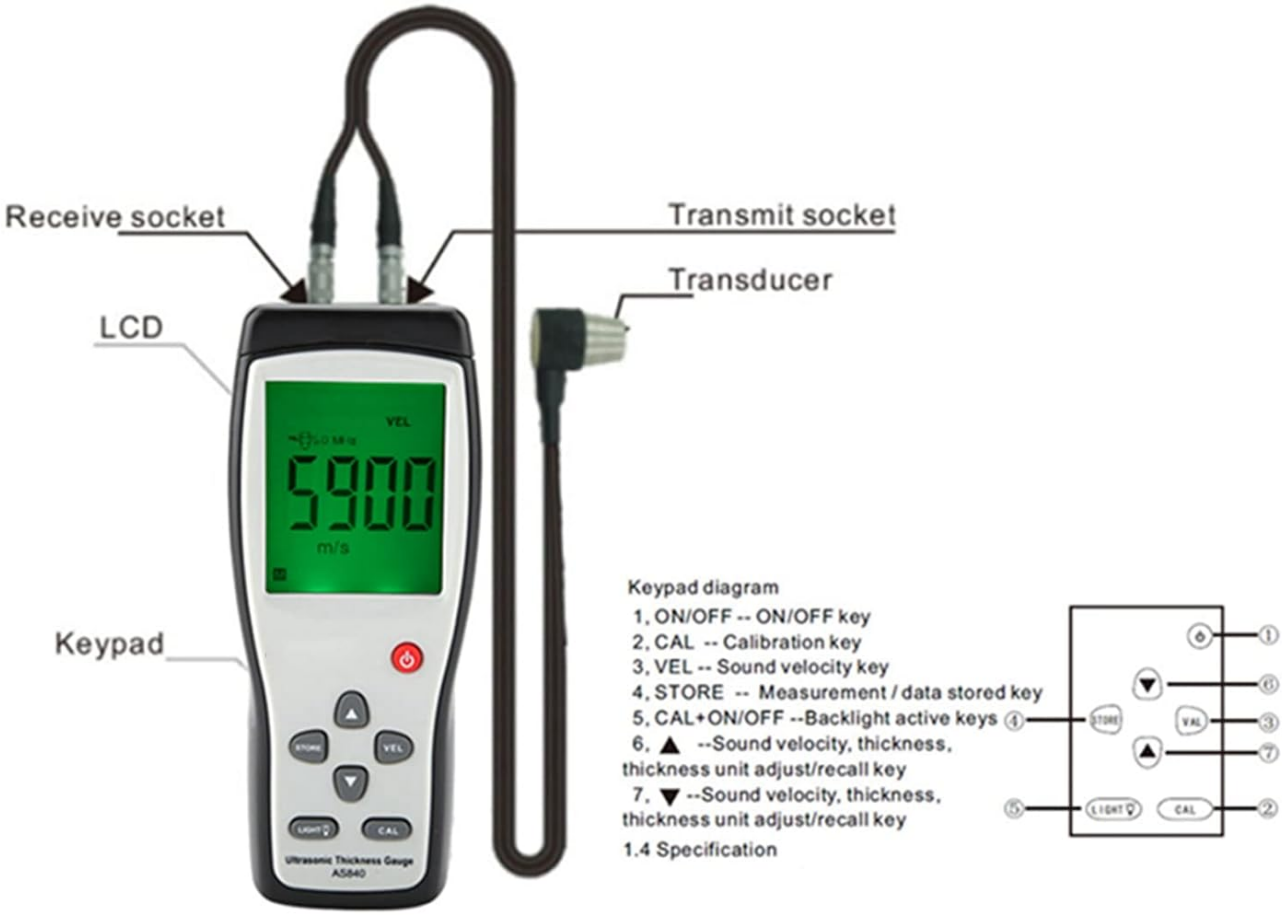
Image: Rear view of the AS840 unit showing the battery compartment with the cover removed.

2. Transducer Connection

Connect the ultrasonic transducer to the main unit:

1. Identify the "Receive socket" and "Transmit socket" on the top of the AS840 main unit.
2. Connect the two plugs from the transducer cable into the corresponding sockets. Ensure a firm connection.

PRODUCT FUNCTION DISPLAY



Keypad diagram

1, ON/OFF -- ON/OFF key
2, CAL -- Calibration key
3, VEL -- Sound velocity key
4, STORE -- Measurement / data stored key
5, CAL+ON/OFF --Backlight active keys
6, ▲ --Sound velocity, thickness, thickness unit adjust/recall key
7, ▼ --Sound velocity, thickness, thickness unit adjust/recall key

1.4 Specification

Image: Diagram illustrating the main unit's display, keypad, and the connection points for the transducer.

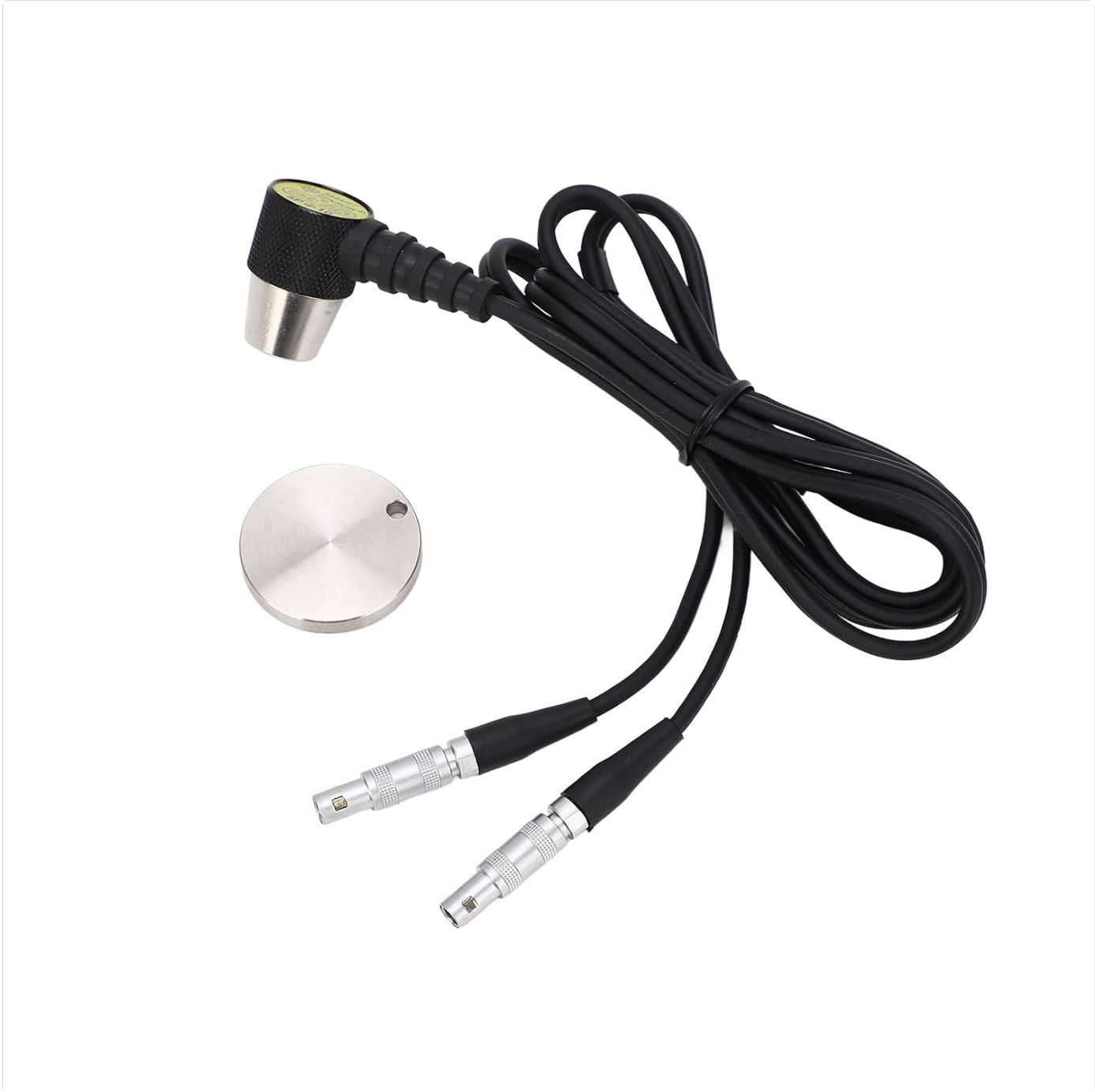


Image: The ultrasonic transducer and its connecting cable, along with a small metal calibration disc.

Operating Instructions

1. Power On/Off

Press the **ON/OFF** button (power symbol) to turn the device on or off.

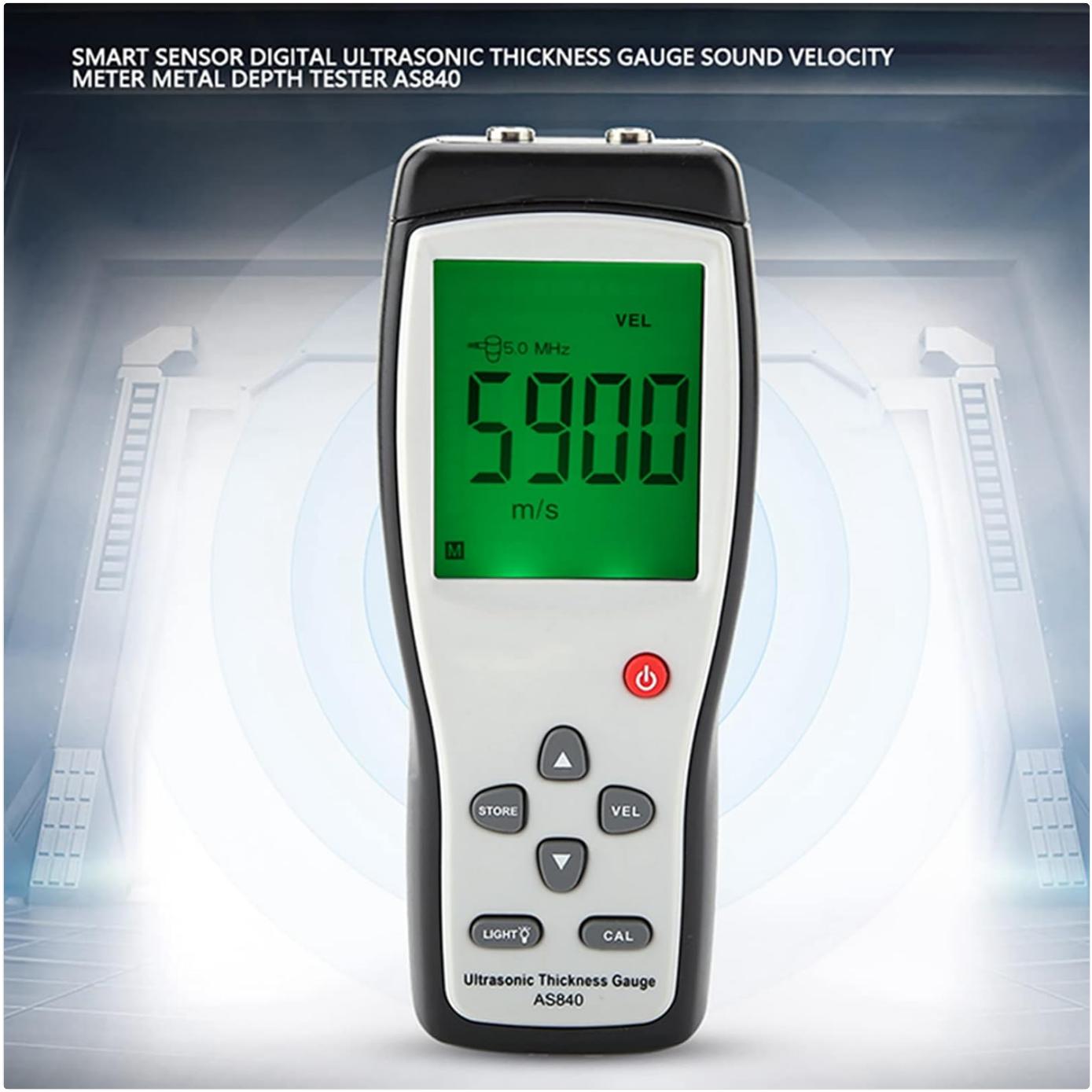


Image: The AS840 unit displaying a measurement, highlighting the screen and control buttons.

2. Calibration

For accurate measurements, perform auto calibration:

1. Apply a small amount of coupling agent to the surface of the calibration block (or a known thickness sample).
2. Press the **CAL** button.
3. Place the transducer firmly onto the prepared surface. The device will automatically calibrate.
4. Wait for the "Coupling status indicator" to confirm successful coupling.

3. Taking a Measurement

1. Ensure the surface of the material to be measured is clean and free of debris.
2. Apply a small amount of coupling agent to the measurement point on the material.
3. Place the transducer firmly and flatly onto the prepared surface.
4. The thickness reading will be displayed on the LCD screen.

5. Observe the "Coupling status indicator" to ensure good contact. If the indicator is unstable, adjust the transducer position or reapply coupling agent.

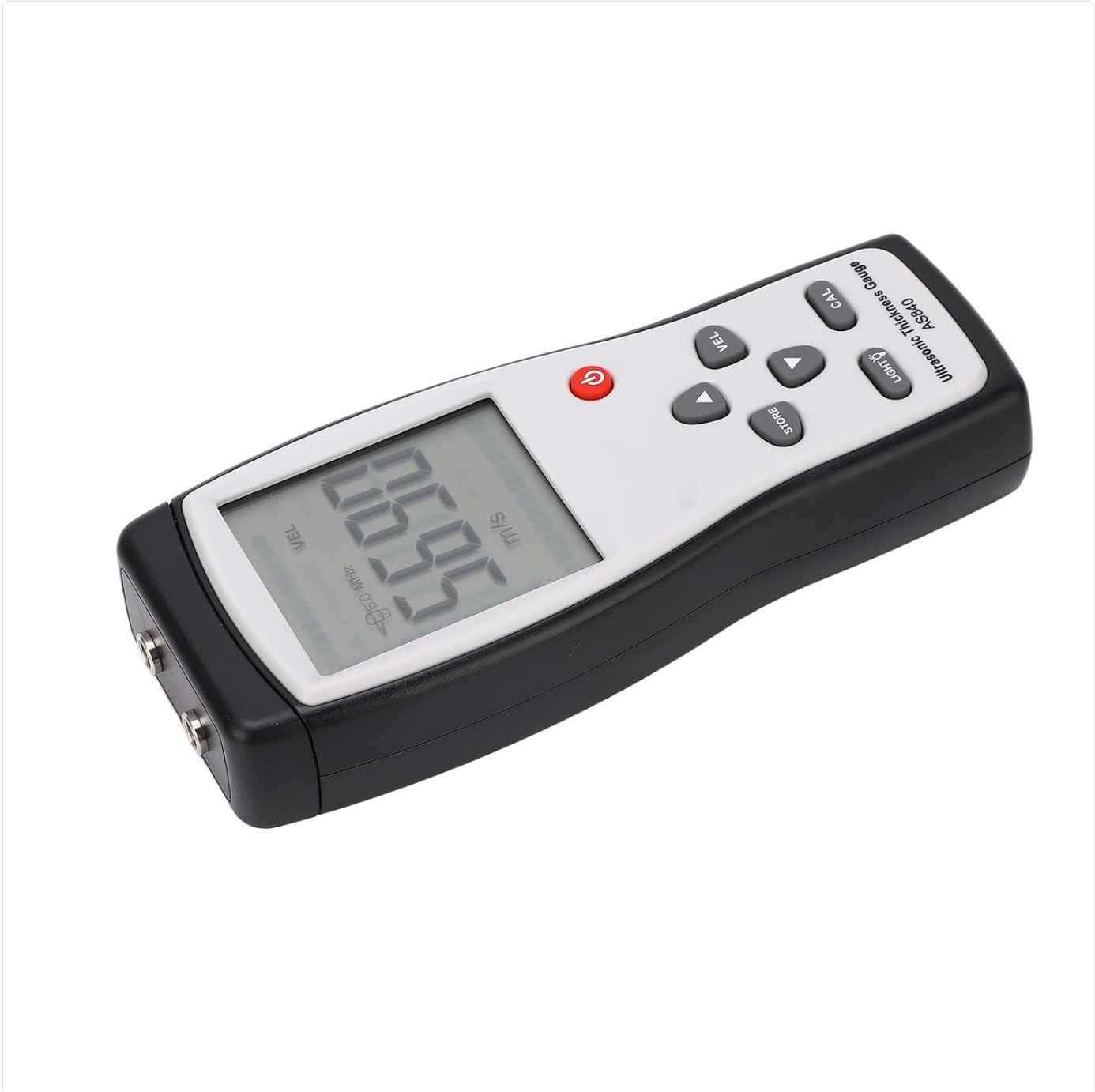


Image: Detailed view of the AS840's LCD screen, showing a thickness measurement and the unit's buttons.

4. Adjusting Sound Velocity / Thickness Unit

Use the **VEL** button to adjust sound velocity or the ▲ and ▼ keys to change the thickness unit or value.

5. Storing and Recalling Data

The device can store up to 10 thickness measurements:

- To store a measurement, press the **STORE** button after a stable reading is obtained.
- To recall stored data, press the **STORE** button repeatedly to cycle through the stored measurements.

Maintenance

- **Cleaning:** After each use, wipe the transducer and the main unit with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the device and its accessories in the provided carrying case () in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Battery Replacement:** Replace batteries when the low battery indicator appears on the display to ensure optimal performance. Remove batteries if the device will not be used for an extended period.
- **Transducer Care:** Handle the transducer with care. Avoid dropping it or exposing it to harsh impacts.

Troubleshooting

Problem	Possible Cause	Solution
No display / Device won't turn on	Dead or incorrectly installed batteries	Check battery polarity; replace with new batteries.
Unstable or incorrect readings	Poor coupling; insufficient coupling agent; incorrect calibration; surface irregularities	Ensure sufficient coupling agent; re-calibrate the device; ensure transducer is flat on surface; clean the measurement surface.
"Coupling status indicator" is off or flickering	Poor contact between transducer and material; no coupling agent	Apply more coupling agent; press transducer firmly and evenly against the surface.
Device not responding to button presses	Device frozen; low battery	Turn off and on again; replace batteries.

Specifications

Parameter	Value
Model Number	KIMISSu8fz43bxrv
Measure Range	1.2 ~ 225mm
Accuracy	±(1%H+0.1)mm
Sound Velocity Range	1000~9999m/s
Power Supply	3x 1.5V AA batteries
Package Dimensions	9.84 x 3.94 x 1.97 inches
Item Weight	11.99 ounces
Manufacturer	KIMISS
Country of Origin	China

Warranty and Support

For warranty information or technical support, please refer to the contact details provided with your purchase or visit the

official KIMISS website. Keep your purchase receipt as proof of purchase for any warranty claims.
For further assistance, you may contact the seller directly through the platform where the product was purchased.