GOYOJO GT129 Series (Gauss Meter)

GOYOJO Digital Gauss Meter User Manual

Model: GT129 Series (Gauss Meter)

1. Introduction

The GOYOJO Digital Gauss Meter is a portable, multifunctional magnetic field measuring instrument. It utilizes high-sensitivity, low-drift Hall sensors and advanced digital signal processing technology to provide accurate measurements. This device is designed for measuring the surface magnetic field of permanent magnet materials, residual magnetism of mechanical parts, and magnetic fields in separators and iron removers. It serves as an essential tool for magnetic material manufacturers, mechanical engineering, and research institutions.

Image 1.1: The GOYOJO Digital Gauss Meter with its connected Hall probe, demonstrating magnetic field measurement.

2. Safety Information

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in injury or damage to the instrument.

- Do not attempt to disassemble or modify the instrument. Unauthorized modifications can lead to malfunction and void the warranty.
- Keep the device away from water and other liquids to prevent electrical shock or damage.
- Avoid exposing the instrument to extreme temperatures, direct sunlight, or high humidity.
- Handle the Hall probe with care. It is a sensitive component and can be damaged by excessive force or bending.
- Ensure the battery compartment is securely closed during operation.
- Dispose of batteries according to local regulations.

3. Package Contents

Verify that all items listed below are included in your package:

- GOYOJO Digital Gauss Meter x1
- Hall Sensor Probe x1
- 9V Battery x1
- User Manual x1

4. Product Overview

The GOYOJO Digital Gauss Meter features a clear display, intuitive controls, and a high-precision Hall sensor for reliable magnetic field measurements.

Image 4.1: Overview of the GOYOJO Digital Gauss Meter, showcasing its display and control buttons.

4.1 Device Components

- **Main Unit:** The primary device housing the display, control buttons, and internal electronics.
- **LCD Display:** Backlit screen showing measurement values, units, N/S pole indication, and battery status.
- **Control Buttons:**
  - **ON/OFF:** Powers the device on or off.
  - **PEAK:** Toggles between Peak Hold mode and Real-time mode.
  - **ZERO:** Performs a one-key zeroing operation.

    - **UNIT:** Switches between mT (millitesla) and Gs (Gauss) units.
    - **LIGHT:** Activates or deactivates the display backlight.
- **Hall Probe:** External sensor connected to the main unit for detecting magnetic fields.
- **Probe Connector:** Secure port on the main unit for attaching the Hall probe.

5. Setup

5.1 Battery Installation

The device is powered by a 9V battery.

1. Locate the battery compartment on the back of the main unit.
2. Open the battery compartment cover.
3. Connect the 9V battery to the battery clip, ensuring correct polarity.
4. Place the battery inside the compartment and close the cover securely.

5.2 Connecting the Hall Probe

The Hall probe is essential for magnetic field detection.

1. Identify the probe connector port on the top of the main unit.
2. Align the Hall probe connector with the port.
3. Gently push and twist the connector clockwise until it is securely fastened.
4. Ensure the connection is firm to prevent intermittent readings.

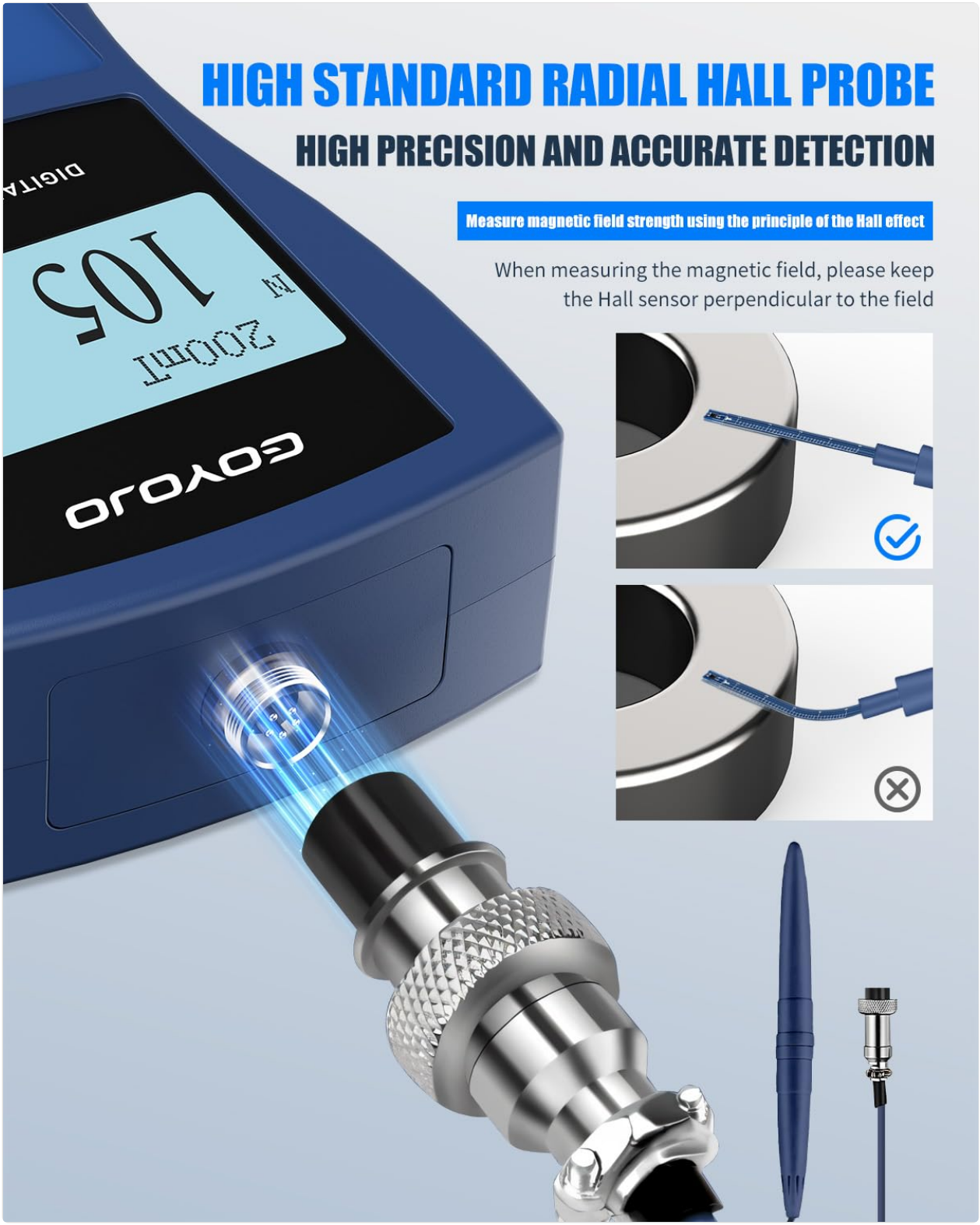


Image 5.1: Proper connection of the Hall probe to the main unit and the importance of perpendicular orientation for accurate measurement.

6. Operating Instructions

6.1 Power On/Off

- To power on the device, press the **ON/OFF** button.
- To power off the device, press and hold the **ON/OFF** button for a few seconds.
- The device features an automatic shutdown function after 5 minutes of inactivity to conserve battery life.

6.2 Measurement Modes

The Gauss Meter supports two primary measurement modes: Peak Hold and Real-time.

Image 6.1: Illustration of the Peak Hold and Real-time measurement modes on the device display.

- **Peak Hold Mode:** Press the **PEAK** button once to enter Peak Hold mode. In this mode, the display will show the maximum magnetic field value detected since entering the mode. This is useful for capturing transient or fluctuating magnetic fields.
- **Real-time Mode:** Press the **PEAK** button again to return to Real-time mode. The display will show the current magnetic field strength as it is being measured.

6.3 Zeroing

Before taking measurements, it is recommended to perform a zeroing operation to ensure accuracy.

- Ensure the Hall probe is away from any magnetic fields.
- Press the **ZERO** button. The display should show '000.00' or a value very close to zero.

6.4 Unit Switching

The device supports two units for magnetic field measurement: millitesla (mT) and Gauss (Gs).

- Press the **UNIT** button to toggle between mT and Gs.
- Note that 1 mT = 10 Gs.

6.5 Backlight Function

The display features a backlight for improved visibility in low-light conditions.

Image 6.2: The backlit display of the GOYOJO Digital Gauss Meter, enhancing readability in various lighting conditions.

- Press the **LIGHT** button to turn the backlight on or off.

6.6 N/S Pole Detection

The device can detect and display the North (N) or South (S) pole of a magnetic field.

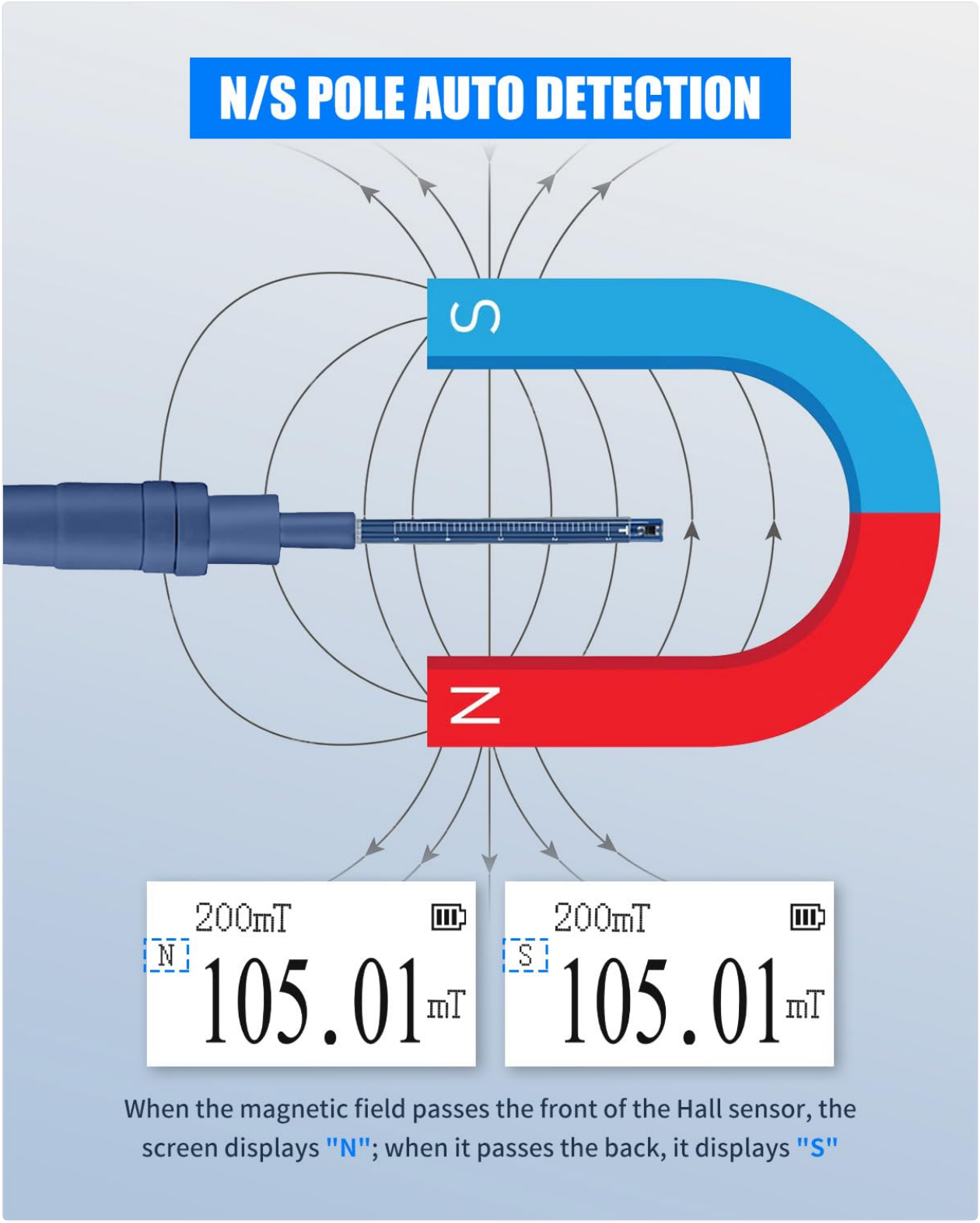


Image 6.3: Visual representation of how the Hall sensor detects and indicates North (N) and South (S) poles on the display.

- When the magnetic field passes the front of the Hall sensor, the screen displays "N".
- When it passes the back of the Hall sensor, the screen displays "S".

7. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents.
- **Storage:** When not in use for extended periods, remove the 9V battery to prevent leakage. Store the device and probe in a cool, dry place, away from strong magnetic fields and direct sunlight.

- **Probe Care:** The Hall probe is delicate. Avoid bending or applying excessive pressure to the probe tip. Always store it safely to prevent damage.

8. Troubleshooting

- **Device does not power on:** Check if the 9V battery is correctly installed and has sufficient charge. Replace the battery if necessary.
- **Inaccurate or fluctuating readings:**
  - Ensure the Hall probe is positioned perpendicular to the magnetic field being measured.
  - Perform a zeroing operation in an area free of magnetic fields.
  - Check for any external magnetic interference in the measurement environment.
- **Display is dim or unreadable:** Press the **LIGHT** button to activate the backlight. If the issue persists, the battery may be low.
- **Probe not detected:** Ensure the Hall probe is securely connected to the main unit's connector port.

9. Specifications

The following table details the technical specifications of the GOYOJO Digital Gauss Meter (GT129 Series):

Model	GT129 A	GT129 B	GT129 C
Accuracy	±1.0%	±2.0%	±2.0%(0-1000mT) ±5.0%(1000mT-2000mT)
Measuring Range	0-2000mT(20000Gs)	0-2000mT(20000Gs)	0-2000mT(20000Gs)
Resolution	200MT resolution:0.01MT(0.1G)/2000mT resolution:0.1MT(1G)		
Range	200mT(2000Gs) / 2000mT(20000Gs)		
Auto Range Switch	For measurements below 200MT,the range will display 200MT. Formeasurements above 200IT, the range will automatically switch to 2000IT		
Probe Sensor	High-precision Hall sensor,approximately 1 meter in length		
Unit Switching	Two umits canbe switched:MT andGS,1MT=10GS		
Backlight Mode	With backlight		
Peak Hold Function	PEAK mode can hold the maximum measurement value		
Automatic OFF	5 min		
Power Supply	9v batteryk1		
Usage Environment	0°C～50°C, 20%～85%R・H, Non-condensing		
Storage Environment	-20°C～70°C, <85%R・H, Won-condensin1g		
Size	160mm × 75mm × 34mm		
Weight	About 260G		

Image 9.1: Detailed specifications for the GT129A, GT129B, and GT129C models of the GOYOJO Digital Gauss Meter.

Feature	GT129 A	GT129 B	GT129 C
Accuracy	±1.0%	±2.0%	±2.0% (0-1000mT) ±5.0% (1000mT-2000mT)
Measuring Range	0-2000mT (20000Gs)		

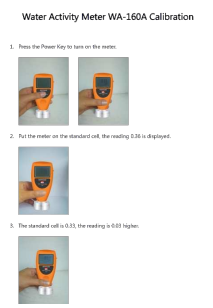
Feature	GT129 A	GT129 B	GT129 C
Resolution	200mT resolution: 0.01mT (0.1G)	2000mT resolution: 0.1mT (1G)	
Range	200mT (2000Gs) / 2000mT (20000Gs)		
Auto Range Switch	For measurements below 200mT, the range will display 200mT. For measurements above 200mT, the range will automatically switch to 2000mT.		
Probe Sensor	High-precision Hall sensor, approximately 1 meter in length		
Unit Switching	Two units can be switched: mT and Gs, 1mT = 10Gs		
Backlight Mode	With backlight		
Peak Hold Function	PEAK mode can hold the maximum measurement value		
Automatic OFF	5 min		
Power Supply	9V battery x1		
Usage Environment	0°C ~ 50°C, 20% ~ 85% RH, Non-condensing		
Storage Environment	-20°C ~ 70°C, <85% RH, Non-condensing		
Size	160mm × 75mm × 34mm		
Weight	About 260g		

10. Warranty and Support

GOYOJO provides dedicated customer support for this Digital Gauss Meter.

- **Warranty:** A 2-month replacement guarantee is provided from the date of purchase.
- **Technical Support:** Lifetime technical support is available to ensure a reliable and worry-free experience with your device.
- For any inquiries or assistance, please contact GOYOJO customer service. Refer to the product packaging or official website for contact details.

Related Documents - GT129 Series (Gauss Meter)

	[Water Activity Meter WA-160A Calibration Guide] Step-by-step instructions for calibrating the GOYOJO Water Activity Meter WA-160A, ensuring accurate moisture readings.
	[GOYOJO GR Series Thermal Imaging Monocular Instruction Manual] Comprehensive instruction manual for GOYOJO GR225, GR235, GR325, GR335, and GR335L thermal imaging monoculars. Covers product operation, safety, maintenance, and features for outdoor thermal imaging applications.
	[GOYOJO Thermal Imaging Monocular User Manual] Comprehensive user manual for the GOYOJO Thermal Imaging Monocular, detailing safety instructions, product overview, performance specifications, operating instructions, maintenance, and device information.
	[GOYOJO C10/C15 Infrared Thermal Imaging Telescope User Manual] User manual for the GOYOJO C10/C15 Infrared Thermal Imaging Telescope, covering important instructions, product specifications, button functions, settings, connectivity via the IR-TRACKER V app, charging, and warranty information.
	[GOYOJO GRL Series Thermal Imaging Scope User Manual - GRL325, GRL335] Comprehensive user manual for the GOYOJO GRL Series thermal imaging scopes, detailing product description, specifications, operation, maintenance, and troubleshooting for models like GRL325 and GRL335.
	[GOYOJO GRL Series Thermal Scope User Manual] This user manual provides comprehensive instructions for the GOYOJO GRL Series thermal scopes, detailing product features, specifications, installation, operation, maintenance, and troubleshooting for models like the GRL325 and GRL335.