GOYOJO GT129A - Gauss Meter

GOYOJO Digital Gauss/Tesla Meter

Model: GT129A - User Manual

Introduction

The GOYOJO Digital Gauss/Tesla Meter is a high-precision instrument designed for accurate measurement of magnetic fields. It is ideal for various applications including testing permanent magnets, DC motors, magnetic separators, and industrial components with residual magnetism. This manual provides essential information for setting up, operating, and maintaining your device.

The GOYOJO Digital Gauss/Tesla Meter, showing the main unit and the connected Hall probe interacting with a magnet.

What's in the Box

- Gauss meter x1
- Hall sensor x1
- 9V Dry Battery x1
- User Manual x1
- Warranty card x1

Product Features

- **Multifunctional Magnetic Field Tester:** Specifically designed for precise measurement of magnetic fields in permanent magnets, DC motors, magnetic separators, and industrial components with residual magnetism. Delivers accurate readings up to 2000mT (20000Gs).
- **High Precision with Multi-Level Accuracy:** Offers three accuracy levels (Class 1, 2, and 5) for flexible use. Basic error is ±2% for measurements up to 1000mT and ±5% for those above 1000mT.
- **Auto Range Switching & Multi-Unit Display:** Features automatic range switching, adjusting to 2000mT

when readings exceed 200mT. Supports measurements in millitesla (mT) and gauss (Gs), with easy conversion (1mT = 10Gs).

- **User-Friendly Design for Easy Operation:** Equipped with one-key zeroing, maximum value hold, a clear 4-digit backlit display, and automatic shutdown after 5 minutes of inactivity. Lightweight and portable.
- **Versatile Hall Probes & Low Power Consumption:** Choose from a variety of Hall probes for specific applications. Powered by a 9V battery (included), offering energy efficiency.

An overview of the GOYOJO Digital Tesla Meter, emphasizing its core features such as the high-precision Hall sensor, availability of different models, built-in backlight for visibility, and GOYOJO's quality assurance.

Setup

1. Battery Installation

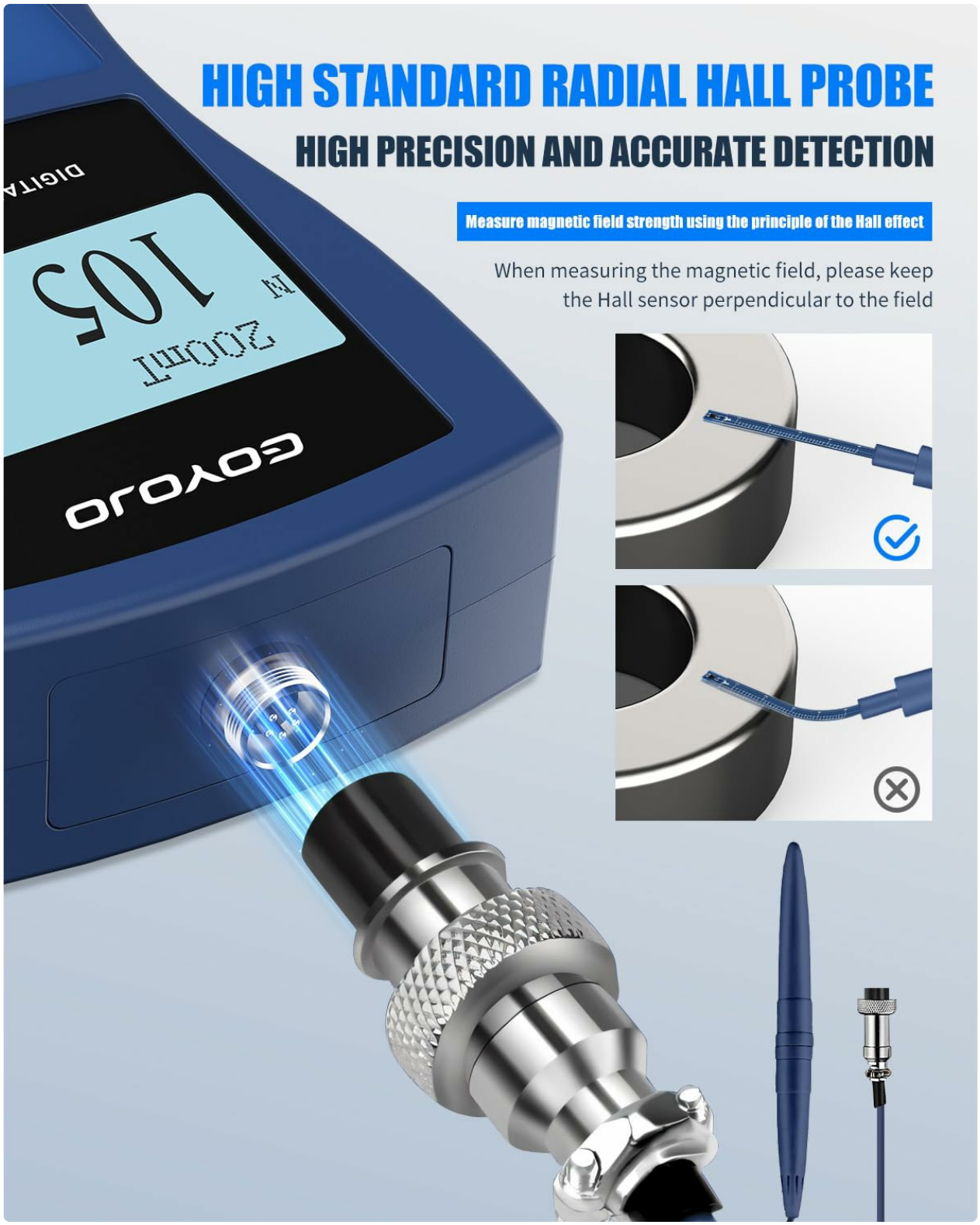
The instrument is powered by a 9V dry battery. Ensure correct polarity when inserting the battery. If the instrument will not be used for a long period, remove the battery to prevent damage from leakage.

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		

The back of the GOYOJO Digital Tesla Meter, revealing the compartment for the 9V battery.

2. Connecting the Hall Probe

Connect the Hall probe to the host unit. Remove the plastic cover on the Hall probe before use.



Detailed view of the high-standard radial Hall probe, illustrating the importance of positioning the Hall sensor perpendicular to the magnetic field for accurate measurements.

Operating Instructions

1. Power On/Off

Press the 'ON/OFF' button to power on the device. The display will show 'Welcome' briefly before entering measurement mode. Press and hold the 'ON/OFF' button to power off.

2. Basic Measurement Steps

When measuring a permanent magnet, the Hall sensor should be as close to the sample surface as possible. The farther away from the sample, the greater the magnetic field attenuation and the smaller the measured value. When measuring the magnetic field, ensure the Hall sensor is perpendicular to the field. If the magnetic field is not perpendicular at all times, measurement errors will be introduced.

3. Zeroing the Meter

If the display is not 0.00mT, press the 'ZERO' key to clear it. This ensures accurate readings by removing any residual magnetic field influence.

4. Measurement Modes

The meter supports two measurement modes:

- **Real-time Mode:** Displays the current magnetic field strength.
- **Peak Mode:** Press the 'PEAK' button to enter peak mode. The instrument will display and hold the maximum measurement value detected. Press 'PEAK' again to return to real-time mode.

The meter's display illustrating its two measurement modes: Peak Mode, which holds the maximum value, and Real Mode for live readings. It also shows the one-touch zeroing function.

5. Unit Switching

The meter supports measurements in both millitesla (mT) and gauss (Gs). Press the 'UNIT' button to switch between these units. (1mT = 10Gs).

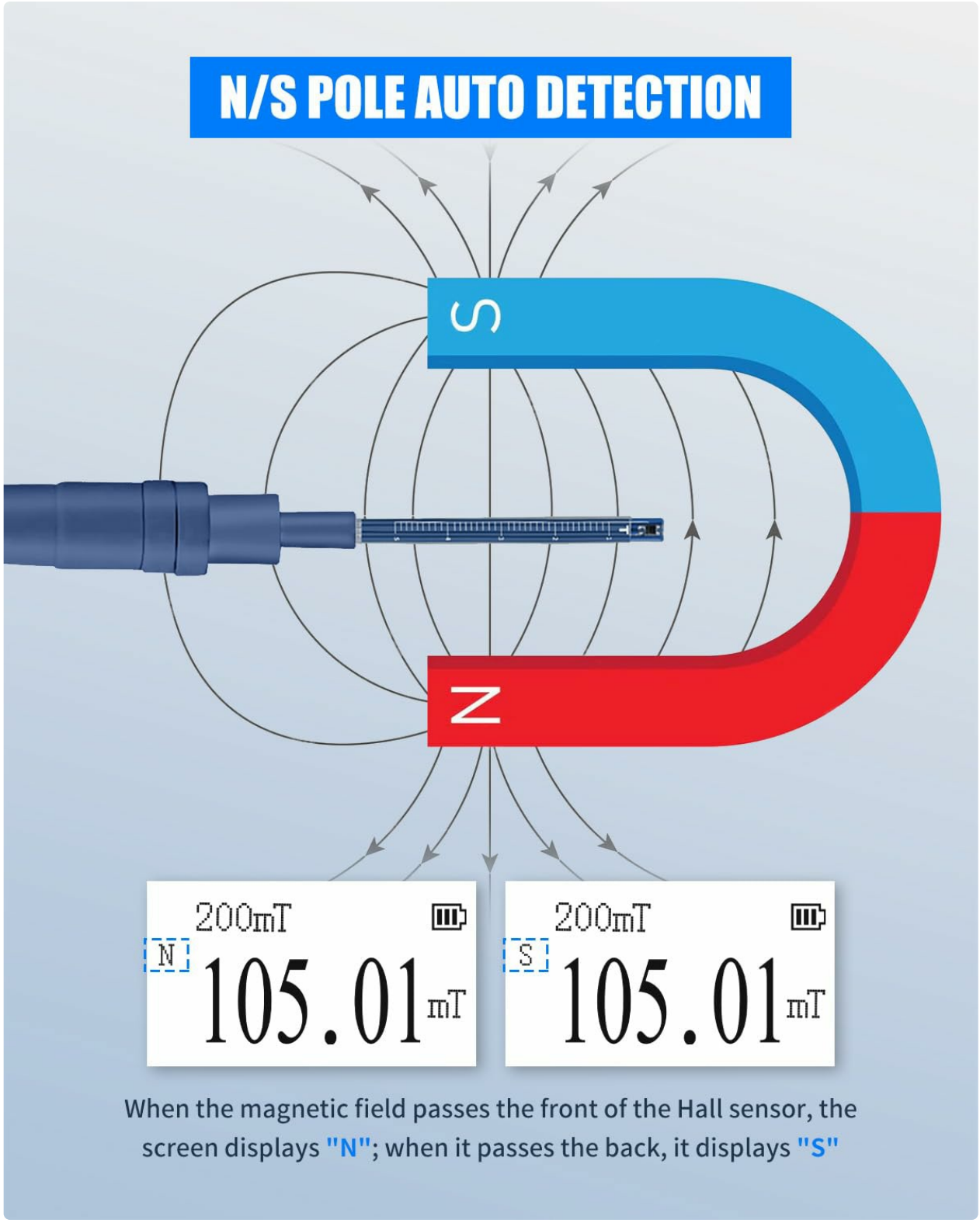
6. Backlight Function

Press the 'LIGHT' button to turn the display backlight on or off. This feature enhances visibility in dim areas.

The backlit display of the GOYOJO Digital Tesla Meter, demonstrating its visibility in low-light environments and the 'LIGHT' button for activation.

7. N/S Pole Auto Detection

The meter can automatically identify the North (N) and South (S) poles of a magnetic field. When the magnetic field passes the front of the Hall sensor, the screen displays 'N'; when it passes the back, it displays 'S'.



A visual representation of the N/S pole auto-detection feature, indicating how the meter identifies North ('N') and South ('S') poles based on the magnetic field's interaction with the Hall sensor.

Applications

The GOYOJO Digital Gauss/Tesla Meter is a versatile tool suitable for various applications, including:

- Measuring magnetic fields in permanent magnets.
- Testing DC motors and magnetic separators.
- Assessing residual magnetism in industrial components.
- Use in laboratory, manufacturing, and research environments.
- Checking magnetic fields in guitar pickups and speakers.

Examples of scenarios where the GOYOJO Digital Tesla Meter can be used, such as measuring magnetic fields in guitar pickups, permanent magnets, speakers, magnetic separators, demagnetizers, and DC motors.

Maintenance

- Keep the product surface clean and dry.
- If the instrument is not used for a long time, remove the battery to prevent battery leakage and damage.
- Only qualified maintenance personnel should stop using and repair it.
- Ensure that any issues affecting the instrument's performance are resolved before further use.

Troubleshooting

General Failure Analysis

- **Unable to turn on:** Check whether there are batteries in the battery compartment and whether the battery is low. If there are no problems, please contact the manufacturer's customer service.
- **Automatic shutdown after a while of use:** If the instrument is not operated for 5 minutes, it will automatically shut down. If it shuts down in less than 5 minutes, it is likely that the battery is low. Please replace with a new battery.
- **Numbers displayed on the screen jump irregularly:** Please check whether the waterproof aviation plug interface is tightened.

Specifications

Parameter	Value
Product Dimensions	6.69 x 2.95 x 1.38 inches
Item Weight	1.23 Pounds
Item Model Number	GT129A - Gauss Meter
Manufacturer	GOYOJO
Power Supply	One 9V battery
Measurement Range	0-2000mT (20000Gs)
Accuracy	±1% (GT129A)
Resolution	0.01mT (0.1G) / 0.1mT (1G)
Auto Range Switch	Yes (adjusts to 2000mT when readings exceed 200mT)
Probe Sensor	High-precision Hall sensor, approx. 1 meter in length
Unit Switching	mT and Gs (1mT = 10Gs)
Backlight Mode	With backlight
Peak Hold Function	Yes

Parameter	Value
Automatic OFF	5 min
Usage Environment	0°C~50°C, 20%~85%RH, Non-condensing
Storage Environment	-20°C~70°C, <85%RH, Non-condensing

Warranty and Support

GOYOJO provides a 2-month replacement guarantee and lifetime technical support for this Magnetic Field Tester. For any technical assistance or inquiries, please refer to the contact information provided in your warranty card or user manual.