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› [CHBMSS LM320D Digital Inclinometer Angle Meter User Manual](#)

## CHBMSS LM320D

# CHBMSS LM320D Digital Inclinometer Angle Meter User Manual

Model: LM320D

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## 1. PRODUCT OVERVIEW

The CHBMSS LM320D is a high-precision digital inclinometer and angle meter designed for accurate angle measurement in various professional and DIY applications. Its magnetic base allows for secure attachment to metallic surfaces, making it ideal for woodworking, automotive maintenance, HVAC installations, and precise cutting tasks. The device features a clear LCD display with reverse contrast for enhanced readability in diverse lighting conditions.



Figure 1: Front view of the CHBMSS LM320D Digital Inclinometer, showing the LCD display and control buttons.

## 2. SAFETY INFORMATION

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

- Do not expose the device to extreme temperatures, direct sunlight, or high humidity.
- Avoid dropping the device or subjecting it to strong impacts.
- Keep the device away from strong magnetic fields, which may affect its accuracy.
- Do not attempt to disassemble or modify the device. Repairs should only be performed by qualified personnel.
- Dispose of batteries according to local regulations.
- Clean the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.

## 3. PRODUCT FEATURES

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- **Pro-Grade Accuracy:** Precision-engineered for reliable angle measurements.
- **Magnetic Base:** Strong magnetic base for secure attachment to metallic surfaces.
- **Wide Application Range:** Suitable for precise cutting, woodworking, and automotive maintenance.
- **LCD Display:** High visibility reverse contrast LCD for clear readings, even in low light.
- **Durable Construction:** Rear shell sealed with screws for water and dust resistance.
- **Relative/Absolute Angle Measurement:** Switch between relative and absolute angle modes.
- **Angle Hold Function:** Freeze the current measurement on the display.
- **Screen Flip:** Automatically or manually flips the display for overhead measurements.
- **Auto Power Off:** Conserves battery life by automatically shutting down after 5 minutes of inactivity.

## 4. PARTS IDENTIFICATION

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Familiarize yourself with the components of your LM320D Digital Inclinometer.

# LM320D

Measuring Range: 4\*90°

Resolution:  $\pm 0.05^\circ$

Angular Accuracy:  $\pm 0.2^\circ$

Repeatability:  $\pm 0.2^\circ$

Laser Lines: **None**

Laser Accuracy: **None**

Magnetic Holder: 2 Sides

Relative/Absolute Angle : YES

Angle Hold Function: YES

Screen Flip: YES

Auto Power Off: 5 minutes

Material: Aluminum frame + ABS

Power Supply: 1000mAh li battery

Temperature: 0° C~+50° C

Endurance: 14h

Dimensions: 84.5\*70\*35.5mm



Figure 2: CHBMSS LM320D Digital Inclinometer showing key features and specifications.

1. **UNIT Button:** Used to switch between measurement units (e.g., degrees, mm/m, in/ft, %).
2. **REF/ABS Button:** Toggles between Relative (REF) and Absolute (ABS) angle measurement modes.
3. **LCD Display:** Shows angle readings, battery status, and measurement units.
4. **Power/HOLD Button:** Press and hold to power on/off. Short press to activate/deactivate the HOLD function.
5. **Magnetic Base:** Located on the bottom surface for secure attachment to ferrous materials.
6. **Battery Compartment:** (Typically on the rear, not visible in front image) Houses the 1000mAh li battery.

## 5. SETUP

### 5.1. Battery Installation/Charging

The LM320D is powered by a 1000mAh li battery. Ensure the battery is sufficiently charged before use. If the battery indicator on the LCD is low, charge the device using the appropriate charging cable (not specified, assuming standard USB). Refer to the battery compartment for specific instructions on battery access if replacement is needed.

### 5.2. Initial Power On

Press and hold the **Power/HOLD** button for approximately 2 seconds to turn on the device. The LCD display will illuminate and show the current angle reading.

## 6. OPERATING INSTRUCTIONS

## 6.1. Power On/Off

- **To Power On:** Press and hold the **Power/HOLD** button for 2 seconds.
- **To Power Off:** Press and hold the **Power/HOLD** button for 2 seconds. The device will also automatically power off after 5 minutes of inactivity.

## 6.2. Absolute and Relative Measurement

The LM320D offers two measurement modes:

- **Absolute (ABS) Mode:** Measures the angle relative to a true horizontal plane (0°). This is the default mode upon power-on.
- **Relative (REF) Mode:** Measures the angle relative to a user-defined zero point. To set a relative zero, place the inclinometer on the desired reference surface and short press the **REF/ABS** button. The display will show "0.00°" and the "REF" indicator will appear. Subsequent measurements will be relative to this new zero.
- **Switching Modes:** Short press the **REF/ABS** button to toggle between ABS and REF modes.

## 6.3. Unit Conversion

Short press the **UNIT** button to cycle through different measurement units: degrees (°), mm/m, in/ft, and percentage (%).

## 6.4. Hold Function

To freeze the current angle reading on the display, short press the **Power/HOLD** button while the device is on. The "HOLD" indicator will appear. Press the button again to release the hold and resume live measurement.

## 6.5. Screen Flip

The display automatically rotates 180° when the device is inverted, ensuring easy readability from any orientation. This feature is indicated by "Screen Flip: YES" in the specifications.

## 6.6. Using the Magnetic Base

The strong magnetic base allows the inclinometer to be securely attached to ferrous metal surfaces. This is particularly useful for hands-free operation on saw blades, metal pipes, or machinery. Ensure the surface is clean and free of debris for optimal magnetic adhesion.

# 7. MAINTENANCE

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- **Cleaning:** Wipe the device with a soft, dry, or slightly damp cloth. Do not use harsh chemicals, solvents, or abrasive cleaners.
- **Storage:** Store the inclinometer in a dry place, away from direct sunlight and extreme temperatures.
- **Battery Care:** If the device will not be used for an extended period, ensure the battery is partially charged (not fully depleted or fully charged) to prolong its lifespan.
- **Calibration:** While the device is factory calibrated, if you suspect accuracy issues, consult the manufacturer's support for potential re-calibration procedures (not detailed in provided data).

# 8. TROUBLESHOOTING

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Problem	Possible Cause	Solution
Device does not power on.	Low or depleted battery.	Charge the battery.
Inaccurate readings.	Device not on a stable surface; strong magnetic interference; device needs re-zeroing.	Ensure stable placement. Move away from strong magnets. Re-zero in Relative mode or check Absolute mode on a known level surface.
Display is dim or unreadable.	Low battery; extreme viewing angle.	Charge the battery. Adjust viewing angle or utilize the screen flip feature.
Buttons are unresponsive.	Temporary software glitch.	Power off the device and restart. If issue persists, ensure battery is charged.

## 9. SPECIFICATIONS

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Parameter	Value
Measuring Range	4 x 90°
Resolution	±0.05°
Angular Accuracy	±0.2°
Repeatability	±0.2°
Magnetic Holder	2 Sides
Relative/Absolute Angle	Yes
Angle Hold Function	Yes
Screen Flip	Yes
Auto Power Off	5 minutes
Material	Aluminum frame + ABS
Power Supply	1000mAh li battery
Temperature Range	0°C ~ +50°C
Endurance	14 hours
Dimensions	84.5 x 70 x 35.5 mm
Item Weight	7.1 ounces

## 10. WARRANTY AND SUPPORT

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For warranty information, technical support, or service inquiries, please contact the manufacturer or your point of purchase. Keep your purchase receipt as proof of purchase.

Manufacturer: CHBMSS

For the most up-to-date support information, please visit the official CHBMSS website or contact their customer service department.

