

[Manuals.plus](#) /

› [MRCFBLKR](#) /

› MRCFBLKR CR Touch Auto Bed Leveling Sensor Kit User Manual for Creality 32-bit V4.2.2/V4.2.7 Mainboard 3D Printers

MRCFBLKR CR Touch Auto Bed Leveling Sensor Kit

MRCFBLKR CR Touch Auto Bed Leveling Sensor Kit User Manual

For Creality 32-bit V4.2.2/V4.2.7 Mainboard 3D Printers

1. INTRODUCTION

The MRCFBLKR CR Touch Auto Bed Leveling Sensor Kit is designed to enhance the precision and ease of 3D printing by providing automatic bed leveling capabilities. This sensor is specifically compatible with Creality 3D printers equipped with 32-bit V4.2.2 and V4.2.7 mainboards. It replaces manual bed leveling, ensuring consistent first layers and improved print quality.

The CR Touch sensor features a durable metal probe and offers high precision measurements, simplifying the calibration process for users of all skill levels. This manual provides detailed instructions for installation, operation, and maintenance of your CR Touch sensor kit.

2. PACKAGE CONTENTS

Before proceeding with installation, please verify that all components are present in your kit:

- CR Touch Sensor Unit
- Mounting Brackets (various types for compatibility)
- Connection Cables
- Mounting Screws
- Zip Ties

CR Touch Auto Leveling Kit



Figure 2.1: Kit Contents. This image displays the components included in the MRCFBLKR CR Touch Auto Bed Leveling Sensor Kit, which typically includes the CR Touch sensor, various mounting brackets, connection cables, mounting screws, and zip ties for cable management.

3. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance of your CR Touch sensor. Follow these steps carefully:

3.1. Firmware Update

Before physical installation, ensure your 3D printer's firmware supports the CR Touch sensor. Visit the official Creality website or your printer manufacturer's support page to download the appropriate firmware for your specific 32-bit V4.2.2 or V4.2.7 mainboard model. Follow the manufacturer's instructions for flashing the new firmware to your printer.

3.2. Physical Installation

1. **Power Off:** Disconnect your 3D printer from the power supply before beginning any installation.
2. **Mounting Bracket Selection:** Identify the correct mounting bracket for your specific 3D printer model (e.g., Ender 3 Max, Ender 3 V2, Ender 3/5/5 Pro/CR-10).

WIDE APPLICATION

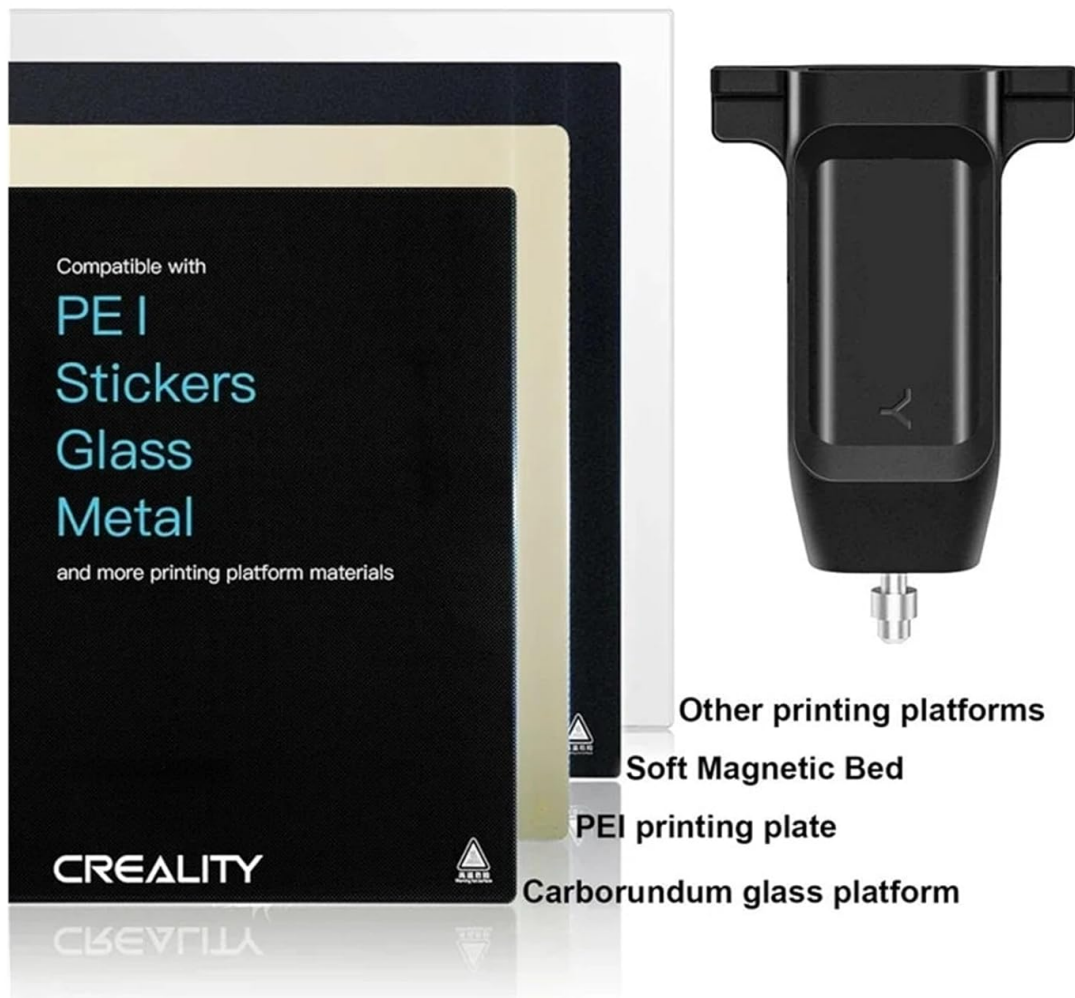


Figure 3.1: Compatibility Brackets. This image illustrates different mounting brackets provided with the CR Touch kit, designed to ensure compatibility with various Creality 3D printer models such as Ender 3 Max, Ender 3 V2, Ender 3, Ender 5, Ender 5 Pro, and CR-10.

- 3. Attach Sensor to Bracket:** Secure the CR Touch sensor to the chosen mounting bracket using the provided screws.
- 4. Attach Bracket to Printer:** Mount the bracket assembly to the designated location on your printer's print head carriage. Refer to your printer's specific instructions or diagrams for the exact mounting point.

DURABLE METAL PROBE

Creality CR-Touch is equipped with an upgraded metal probe, which is stabler and has longer service life than the bltouch with the plastic probe. It can be reused for more than 100,000 times.

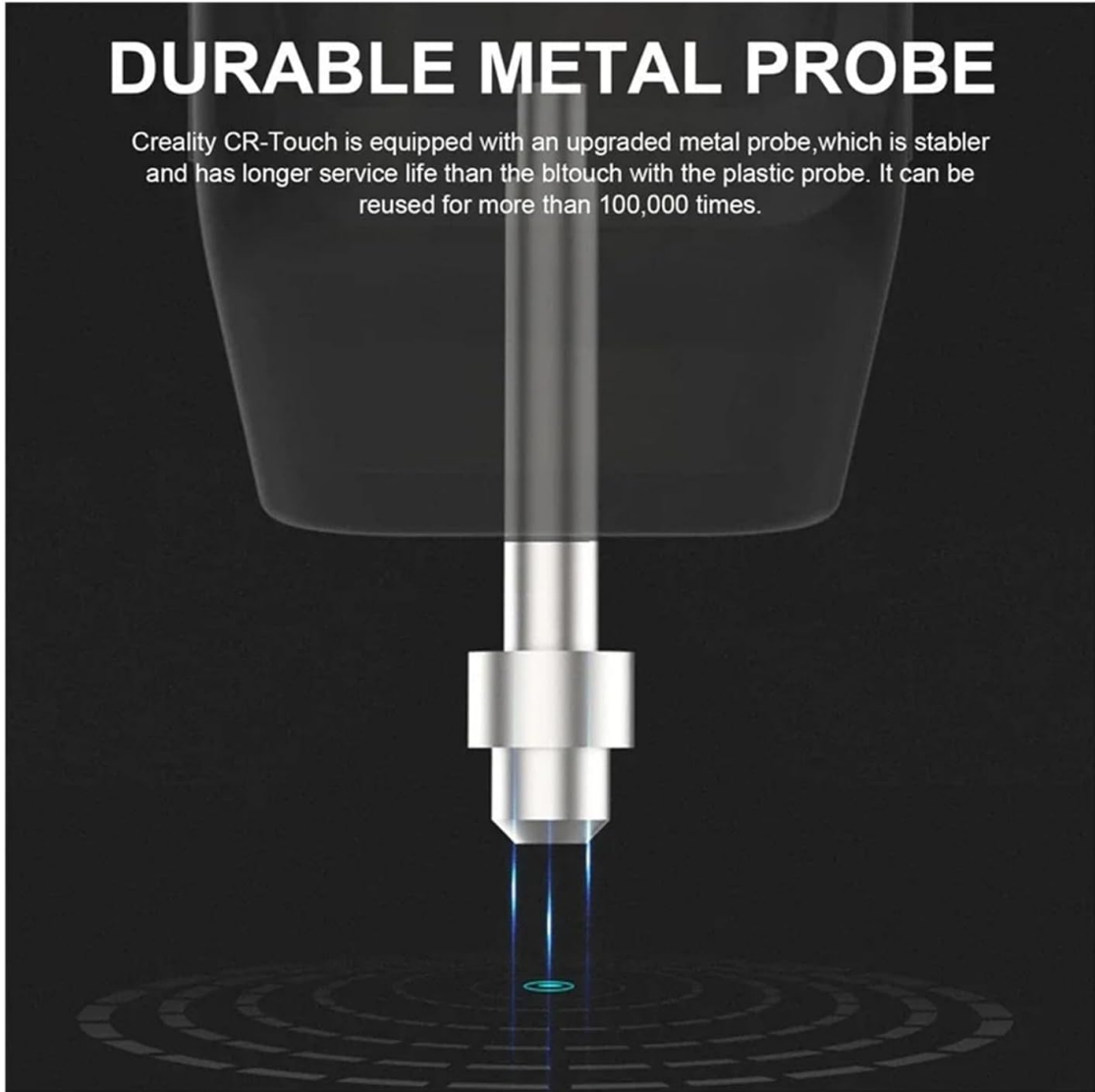


Figure 3.2: Installation Diagram. This diagram shows the CR Touch sensor mounted on an Ender-3 V2 print head, highlighting its position relative to the nozzle and the bed. It also indicates the sensor's extension length (0-6mm) and positioning accuracy (0.04mm).

5. **Connect Cables:** Connect the CR Touch sensor cable to the dedicated 5-pin port on your printer's 32-bit V4.2.2 or V4.2.7 mainboard. Ensure the connector is oriented correctly.
6. **Cable Management:** Use the provided zip ties to neatly secure the sensor cable, preventing it from interfering with printer movement.

4. OPERATING INSTRUCTIONS

Once installed and the firmware updated, the CR Touch sensor automates the bed leveling process. Here's how to utilize its features:

4.1. Automatic Bed Leveling

The CR Touch sensor performs multi-point detection across the print bed to create a mesh map, compensating for any unevenness. This process is typically initiated through your printer's control panel or slicing software.

- **Initiate Leveling:** Navigate to the "Leveling" or "Auto-Level" option in your printer's menu.
- **Observation:** The print head will move to various points on the print bed, and the CR Touch probe will

extend to measure the distance to the bed surface.

- **Completion:** Once all points are measured, the printer will store the bed mesh data, which will be used during printing to adjust the Z-axis in real-time.



Figure 4.1: CR Touch Features. This image highlights key features of the CR Touch Auto Leveling Kit, including multi-point detection for smart compensation, high precision with low power consumption, ease of installation, and stable performance due to independent research and development.

4.2. Z-Offset Adjustment

After automatic bed leveling, a crucial step is to set the Z-offset. This value determines the exact distance between the nozzle and the print surface after the sensor has detected the bed. A correct Z-offset ensures optimal first layer adhesion.

1. **Home All Axes:** Use your printer's menu to "Auto Home" or "Home All" the printer.
2. **Move Nozzle to Center:** Manually move the nozzle to the center of the print bed.
3. **Adjust Z-Offset:** Access the "Z-Offset" setting in your printer's menu. Slowly decrease the Z-offset value (move the nozzle closer to the bed) until a piece of paper can slide with slight resistance between the nozzle and the print bed.
4. **Save Settings:** Save the Z-offset to the printer's EEPROM to ensure it is retained after power cycles.

5. MAINTENANCE

The CR Touch sensor is designed for durability and requires minimal maintenance. Its metal probe ensures a long service life.



Figure 5.1: Durable Metal Probe. The CR Touch sensor features an upgraded metal probe, designed for enhanced stability and a service life exceeding 100,000 uses, offering superior durability compared to plastic probes.

- **Keep Clean:** Periodically inspect the probe tip for any debris or filament residue. Gently clean it with a soft, dry cloth if necessary. Avoid using harsh chemicals.
- **Check Connections:** Ensure all cable connections remain secure.
- **Avoid Impact:** While durable, avoid subjecting the sensor to unnecessary physical impact.

6. TROUBLESHOOTING

If you encounter issues with your CR Touch sensor, consider the following troubleshooting steps:

- **Sensor Not Deploying/Retracting:**
 - Check cable connections to the mainboard and sensor.

- Verify that the correct firmware for CR Touch is installed.
- Ensure the sensor is not physically obstructed.
- **Inaccurate Leveling:**
 - Re-check Z-offset calibration.
 - Ensure the print bed is clean and free of debris.
 - Verify the sensor is securely mounted and not loose.
 - Confirm the print surface material is compatible (e.g., PEI, glass, metal, soft magnetic bed, carborundum glass).



Figure 6.1: Wide Application. The CR Touch sensor is compatible with a variety of printing platform materials, including PEI stickers, glass, metal, soft magnetic beds, and carborundum glass platforms, ensuring broad usability.

- **Printer Not Recognizing Sensor:**
 - Double-check firmware installation.
 - Ensure the sensor cable is plugged into the correct port on the mainboard.
 - Restart the printer.

For persistent issues, consult online communities or the manufacturer's support resources.

7. SPECIFICATIONS

| Feature | Specification |
|----------------------|---|
| Model Number | CR Touch Auto Bed Leveling |
| Item Type | Auto Self-Leveling Sensor |
| Compatibility | Creality 3D Printers with 32-bit V4.2.2/V4.2.7 Mainboards |
| Probe Material | Metal |
| Service Life | > 100,000 times |
| Positioning Accuracy | 0.04mm |
| Extension Length | 0-6mm |
| Package Dimensions | 0.39 x 0.39 x 0.39 inches |
| Item Weight | 1.76 ounces |

8. WARRANTY AND SUPPORT

For specific warranty information, please refer to the documentation provided with your purchase or contact the retailer. For technical support, please reach out to the manufacturer, MRCFBLKR, or consult their official website for resources and contact details.