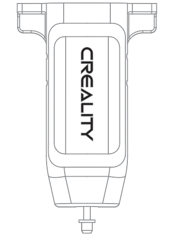
CREALITY

# CR Touch Manual

AUTO BED LEVELING SENSOR FOR 3D PRINTER

Apply to 32-bit motherboards



SHENZHEN CREALITY 3D TECHNOLOGY CO.,LTD.

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## Packing List

Note: During CR Touch installation,remember to pull out the Z endstop switch for auto leveling. Otherwise it won't work.

CR Touch *1Pcs

Connectors *1Pcs

Tie *3Pcs

Application:
Ender-3 | Ender-3s | CR-10
Ender-3Pro | Ender-5/5S/5Pro

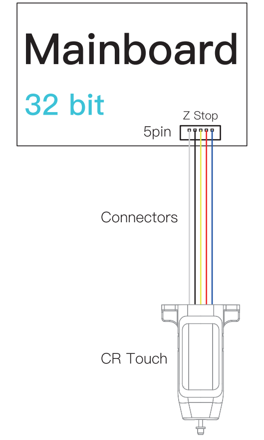
Application:
Ender-3 MAX

Application:
Ender-3 V2

M3*8 2Pcs

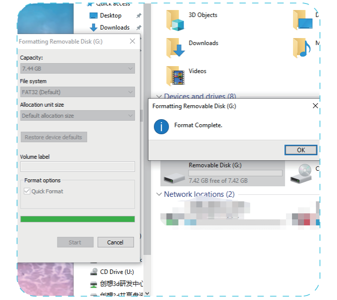
M3*6 2Pcs

## Circuit Principle



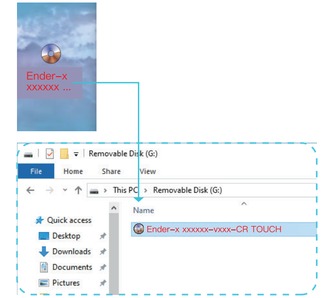
Application:
Ender-3 Series
Ender-5/5S/5Pro | CR-10

## Update Firmware



1. Right-click the mouse to format SD card. (To make sure the firmware can be flashed successfully, please format the SD card before flashing the firmware)

2.Firmware download (before downloading firmware, please confirm your printer model, motherboard version, and hardware configuration-whether it comes with filament sensor or not).



Firmware File download website: https://www.creality.com/download (Accessory Firmware → CR Touch Firmware for 32-bit Motherboard

(Please refer to the file "CR Touch Firmware Version for 32-bit Motherboard" to find corresponding firmware. If you cannot find it, please contact us.)

3. Copy the firmware to the SD card. Note: the SD card can only hold one firmware file.

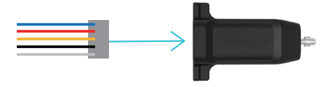
4. Insert SD card.

5. Insert the power cord and press the switch.

Note: Every machine has its own operation interface.

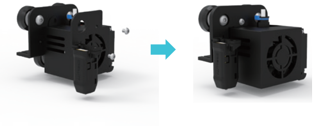
6. Wait for the firmware to complete upgrade (about 10 seconds).

## Install CR Touch

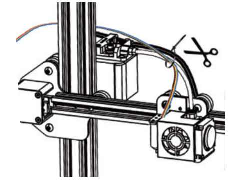


1. Insert connectors into 5 Pin Port.

2. Install CR Touch on the rack with 2pcs M3*6 screws.

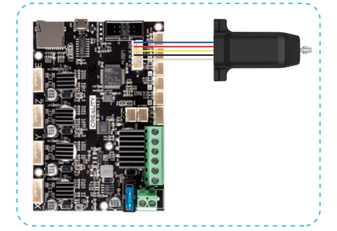


3. Loosen all fan cover screws, install the CR Touch rack on the corresponding position with 2pcs M3*8 screws.



4. Tie the CR Touch cable together with other printer cables like the above picture shown.

## Circuit Wiring



To connect CR Touch and 32-bit motherboard by 5 pin cable.

Note: Unplug the cable from Z endstop/limit switch.

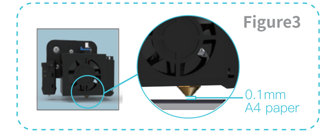
Cautions:
1. It is recommended that hotbed be in a cooling state when leveling;
2. Z-axis movement and compensation settings need to be fully completed before proceeding to next step.

## Ender-3 V2 Auto-leveling steps

Note: Afte firmware updated, you need to restore factory settings.

1. To get the Z offset Value

Operation: Prepare→Auto Home→ Move Axis→ Move Z→Please stop to move Z axis when the distance between the nozzle and the printer bed is about 0.1mm (the height of a sheet of A4 paper). This value shows Z offset value.



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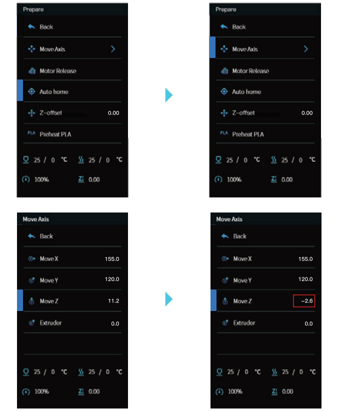
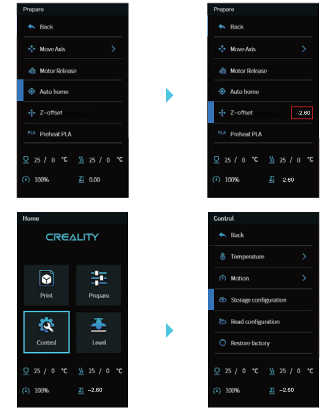


2.Input the Z-axis compensation value (Z-offset Value) and save it. Record the Z offset value ,then follow below steps and save settings:

Prepare → Auto home → Z-offset (Enter the Z-axis compensation value confirmed in the previous step) Crotrol → Storage configuration.

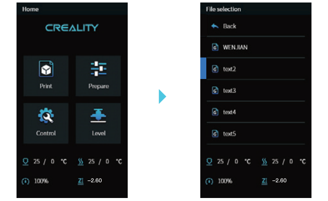


3.Select level, the printer will start auto leveling.

4. Model Printing

After the automatic leveling, user can do a trial print to verify the leveling.

Operation: Print from SD Card→Model Test (Name and file of the testing model shall be prepared by user.)



Test passed: leveling is completed and you can print now;

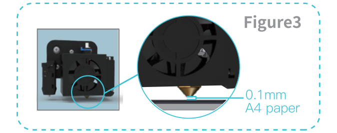
Test failed: If model printing fails, please fine-tune Probe Z Offset again and save settings until the printing effect is good.

* If leveling fails, please reset Z-offset value as "0" and restart leveling. Otherwise, the nozzle may hit printing platform.

## Leveling steps for other models

1. To get the Z offset Value

Operation: Prepare→Auto Home→ Move Axis→ Move Z→Please stop to move Z axis when the distance between the nozzle and the printer bed is about 0.1mm (the height of a sheet of A4 paper). This value shows Z offset value.

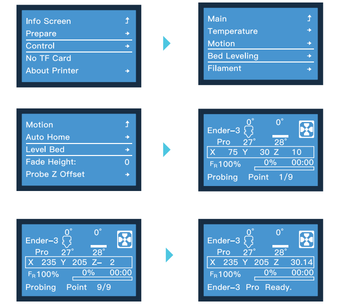


2. Input the Z-axis compensation value (Z offset value)

Record the Z offset value, then follow below steps and save settings:
Prepare → Auto home → Control → Bed Leveling→ Probe Z offset → Input the Z offset value → Store Settings

3. Select Bed Leveling, then choose Level Bed.

Operation: Control→Bed Leveling→ Level Bed. (Different 3D printers may have different numbers of touching points for automatic leveling. The picture here shows that Ender-3 has 9 points for leveling.)

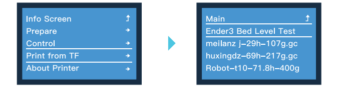


4. Model Printing

After the automatic leveling, user can do a trial print to verify the leveling.

Operation: Print from SD Card→Model Test (Name and file of the testing model shall be prepared by user.)

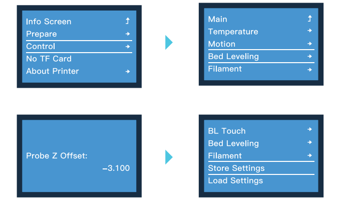
Example:



Test passed: leveling is completed and you can print now;

Test failed: If model printing fails, please fine-tune Probe Z Offset again and save settings until the printing effect is good.

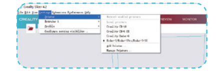
* If leveling fails, please reset Z-offset value as "0" and restart leveling. Otherwise, the nozzle may hit printing platform.



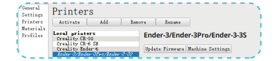
Note: Every machine has its own operation interface.

## Software Settings

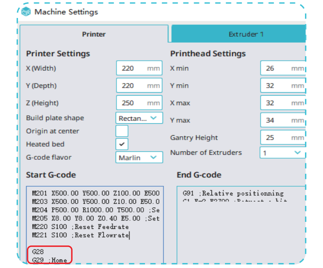
1. Open Slicer.



2. Settings → Printer → Manage Printers.



3. Machine Settings.



Printer Settings
X (Width) 220 mm
Y (Depth) 220 mm
Z (Height) 250 mm
Build plate shape Rectan...
Origin at center ☐
Heated bed ☑
G-code flavor Marlin

Printhead Settings
X min 26 mm
Y min 32 mm
X max 32 mm
Y max 34 mm
Gantry Height 25 mm
Number of Extruders 1

Start G-code

```
M201 X500.00 Y500.00 Z100.00 E500
M203 X500.00 Y500.00 Z10.00 E50.0
M204 P500.00 R1000.00 T500.00 ;Se
M205 X8.00 Y8.00 Z0.40 E5.00 ;Set
M220 S100 ;Reset Feedrate
M221 S100 ;Reset Flowrate

G28
G29 ;Home
```

End G-code

```
G91 ;Relative positionning
```

4. Change "G28" to "G28G29" .