P802Serial LEVELING INSTRUCTION

Note:

1. You should level the print platform at the first time before printing.
2. Please clean the nozzle before leveling , ensure that no other residual material.
3. For the convenience of adjusting the gap between extruder head and print platform, Please try to use an A4 paper to drag between them if moving smoothly ***(Fig 1).***

Step 1. The preparation before leveling

1. Please confirm the correct main board wiring. (Refer to the “Control board wiring diagram” in the assemble guide)
2. Power on , ensure that LCD display & keypad (or Rotary knob) operating properly.
3. Ensure the motors and the limit switch work normally ***(Fig 2)***
4. Before adjusting , please be familiar with using LCD operating menu and keypad (or Rotary Knob)

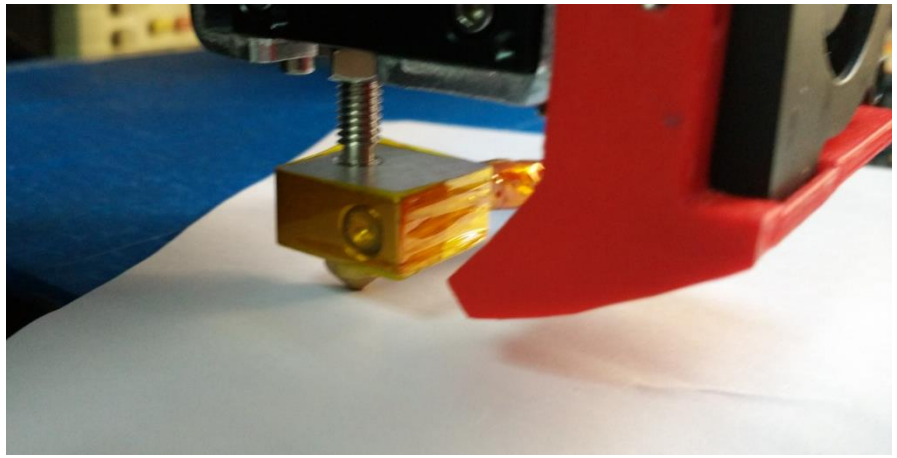


Fig1: check height between extruder head and bed

Fig 2: Check end stops state

Step 2. Initial adjustment

1. Turn off the power. Move the Z-axis limit switch to the lowest position, do not tension the limit switch screws.
2. Adjust the 4pcs thumb nuts under the heat-bed, let the bottom of the screw and the thumb nuts are level.***(fig3)***
3. Measure the height between desktop and X-slide on left and right side, to ensure the same height both side. ***(fig4)***, if the height is differ more (>1mm), please rotate the lower side coupling manually to make the same height .
4. Move the extruder to the middle , and then rotate the 2pcs Z-motor coupling until the nozzle is about 0.5mm away to the aluminum plate. ***(fig5)***
5. Move the extruder left and right, pay attention to the gap between extruder and print platform. If you find that one side is lower , just adjust the coupling to make the same gaps of both side.
6. And then rotate both of the couplings ,move down the extruder about 0.2mm away to the plate. Then move up the Z-axis limit switch . Lock the screws after the limit switch touch the X-motor mount. ***(fig6)***
7. Down adjust the screw behind the X-motor mount***(fig7)*** , Stop adjusting when you hear the sound from the limit switch is touched.

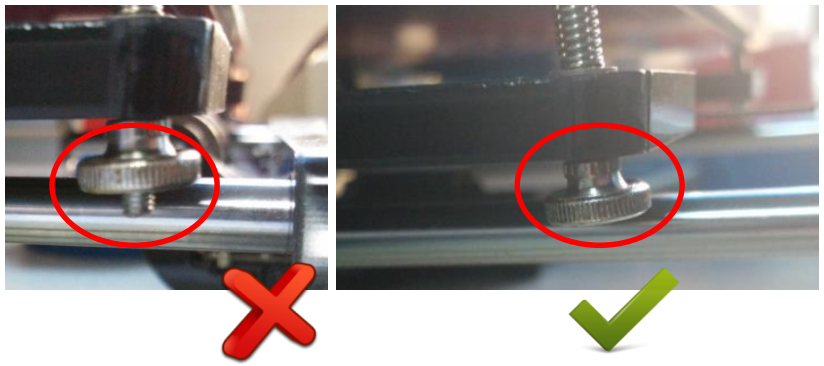


Fig 3: set nut height

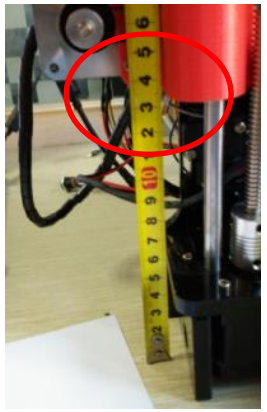


Fig 4: measure height of X-slide

Fig 5:Adjust X-slide height

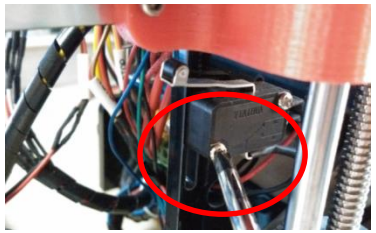


Fig 6: **Tighten up Z-axis limit switch**

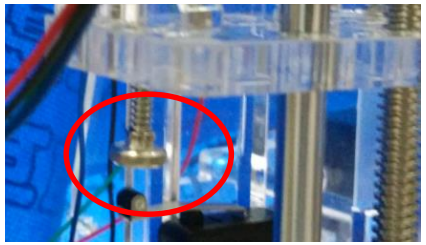


Fig 7: **Adjust screw of Z offset**

Step 3. Fine adjustment

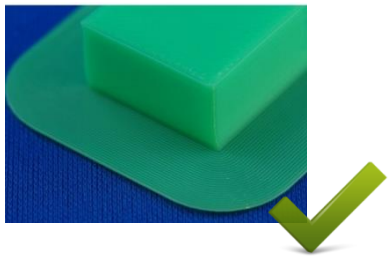
1. Turn on the power.
2. See the LCD display , enter to the menu and then select “**Position**” using keypad(or Rotary knob). Press DOWN key (or rotate the Rotary knob) to point to “**Home Z**” ***(fig8)***
3. Right click (or click the rotary knob) to execute, Pay attention to the gap between nozzle and plate, adjust the screw if the gap is too big or too small ***(fig 7) .***
4. Repeat previous step, Stop adjusting when the gap is about 0.2mm after “**Home Z**”.

Fig 8: Home Z Menu

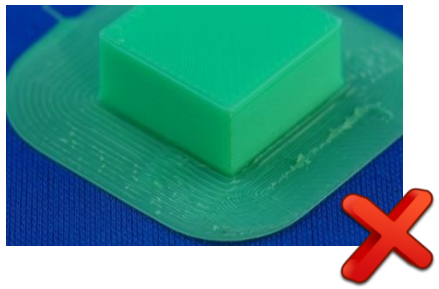
Fig 9: Adjust Print Platform Height

Step 4. Confirmation

1. Turn off the power, insert the micro SD card to the control board, then turn on the power.
2. Select the test file (P802_level_test.gcode) in micro SD card to start **simulated print.** Pay attention to the gap between nozzle and plate when working , please adjust carefully the thumb nuts under the plate to make the same distance around the plate(0.2mm~0.3mm). ***(Fig 9)***
3. After leveling please restart the printer, then you can start to print your models .



Perfect Z offset



Z offset is too low

Z offset is too high