ANYCUBIC

KOSSEL

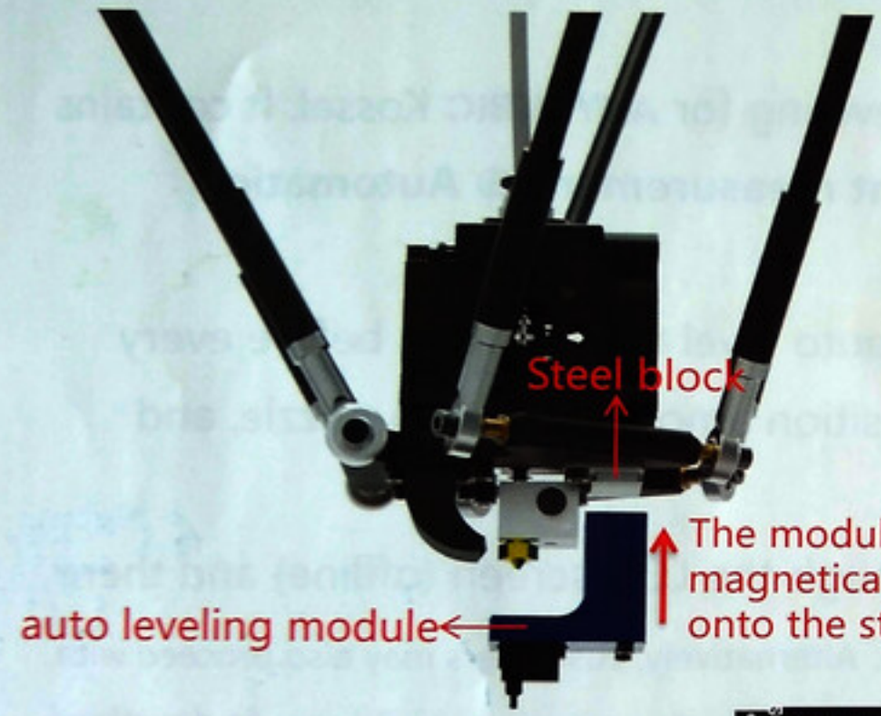
User Manual

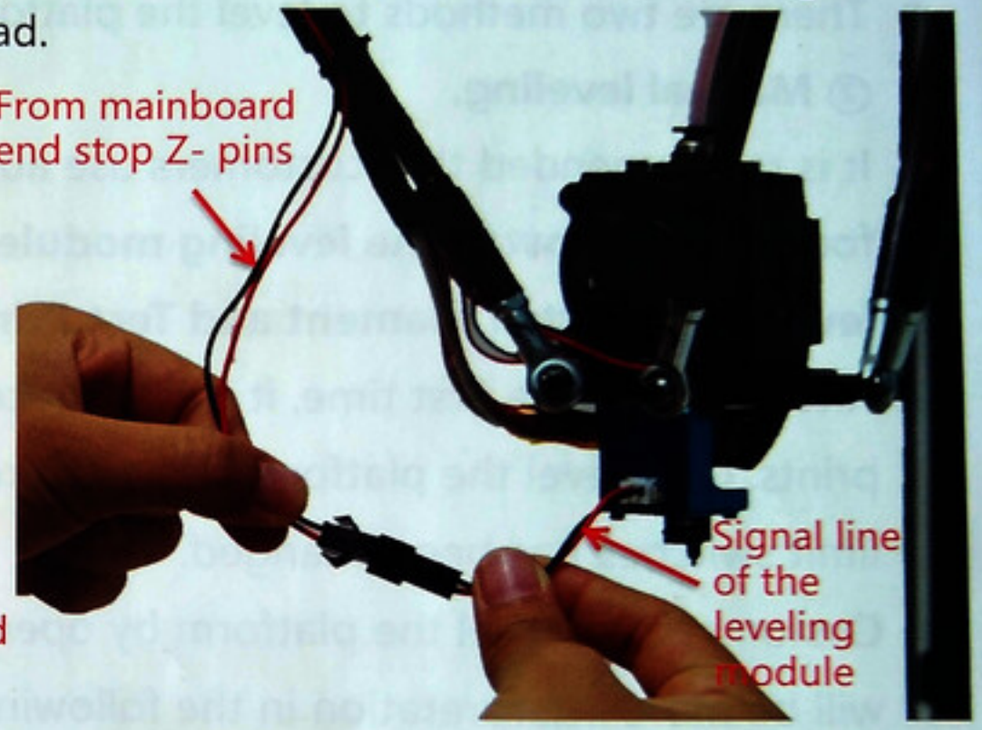
Leveling

- There are two methods to level the platform of Kossel 3D printer ① **Automatic leveling** ② **Manual leveling.**
- It is recommended that customers use automatic leveling for ANYCUBIC Kossel. It contains four steps: ① **Install the leveling module** ② **Height measurement** ③ **Automatic leveling** ④ **Install filament and Test Print**.
- After level for the first time, it is NOT necessary to auto level the platform before every prints. Only level the platform when the relative position among platform, nozzle, and limit switches has been changed.
- Customers can level the platform by operating through the LCD screen (offline) and there will be more interpretation in the following section. Alternatively, customers may also proceed with automatic leveling through *Cura (ANYCUBIC Edition)*. Please visit our website www.anycubic3d.com to download this software (*Beta version*).
- If you choose manual leveling, please also visit our website for more information.

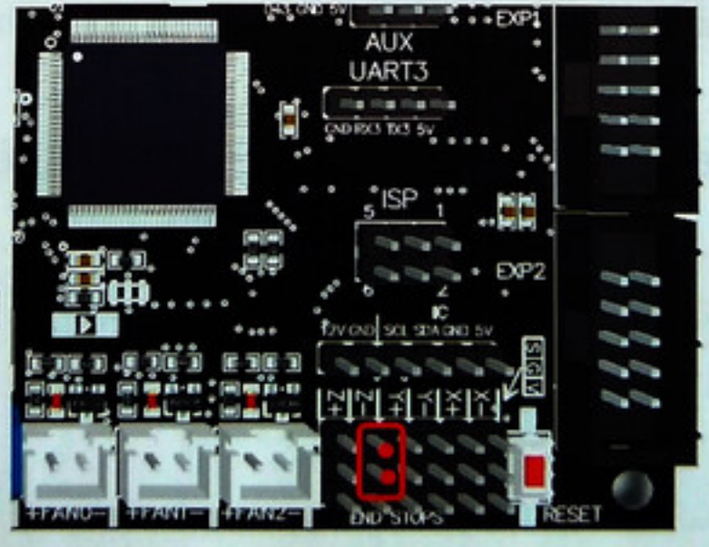
1、Install the leveling module

Install the auto leveling module on the print head, and connect the terminals on the leveling module with the terminals tied above the print head.



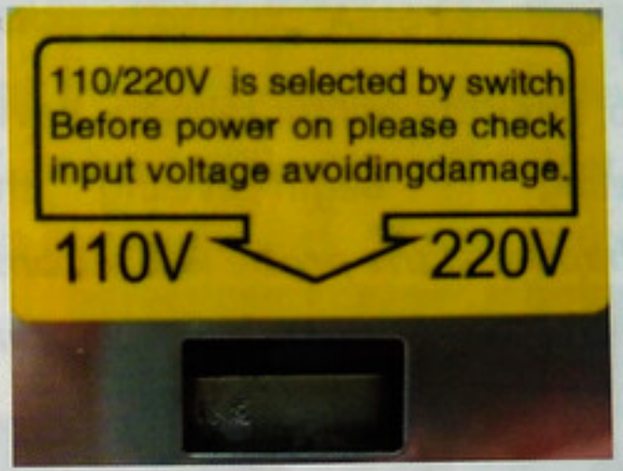


TriGorilla mianboard



2、 Height measurement

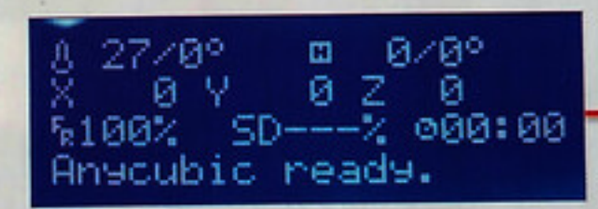
Make sure all the wires are connected correctly; Select the correct voltage mode according to your local voltage ratings (**110V/220V**). The switch is inside the power supply and 220V is default, as shown in Figure(1). Hex keys can be used to move the switch inside. After that, plug in the power cord and switch on the printer, as shown in Figure(2).



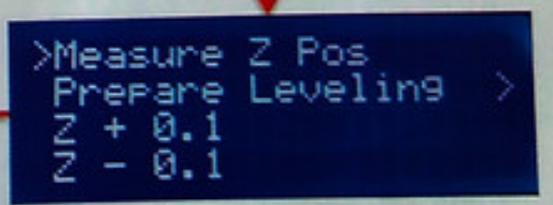
(1)

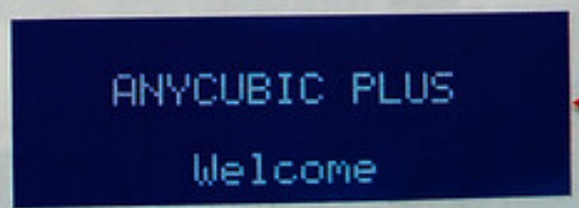
(2)

After install the auto leveling module, press the knob on the LCD screen to enter the main menu, navigate and press the knob : "Auto Leveling Bed" → " Measure Z Pos" , then the printer will start the height measuring (***what happens: the auto level probe will detect 69 points on the platform and then the print head will be auto homing and then reboot, please wait until this finished***).



Main menu



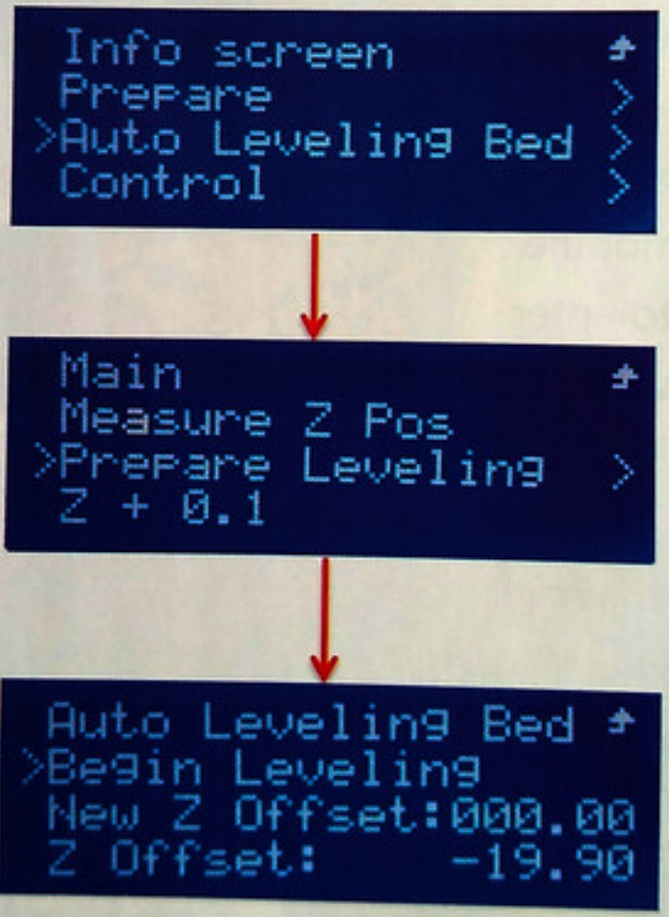


Reboot

3、Automatic leveling

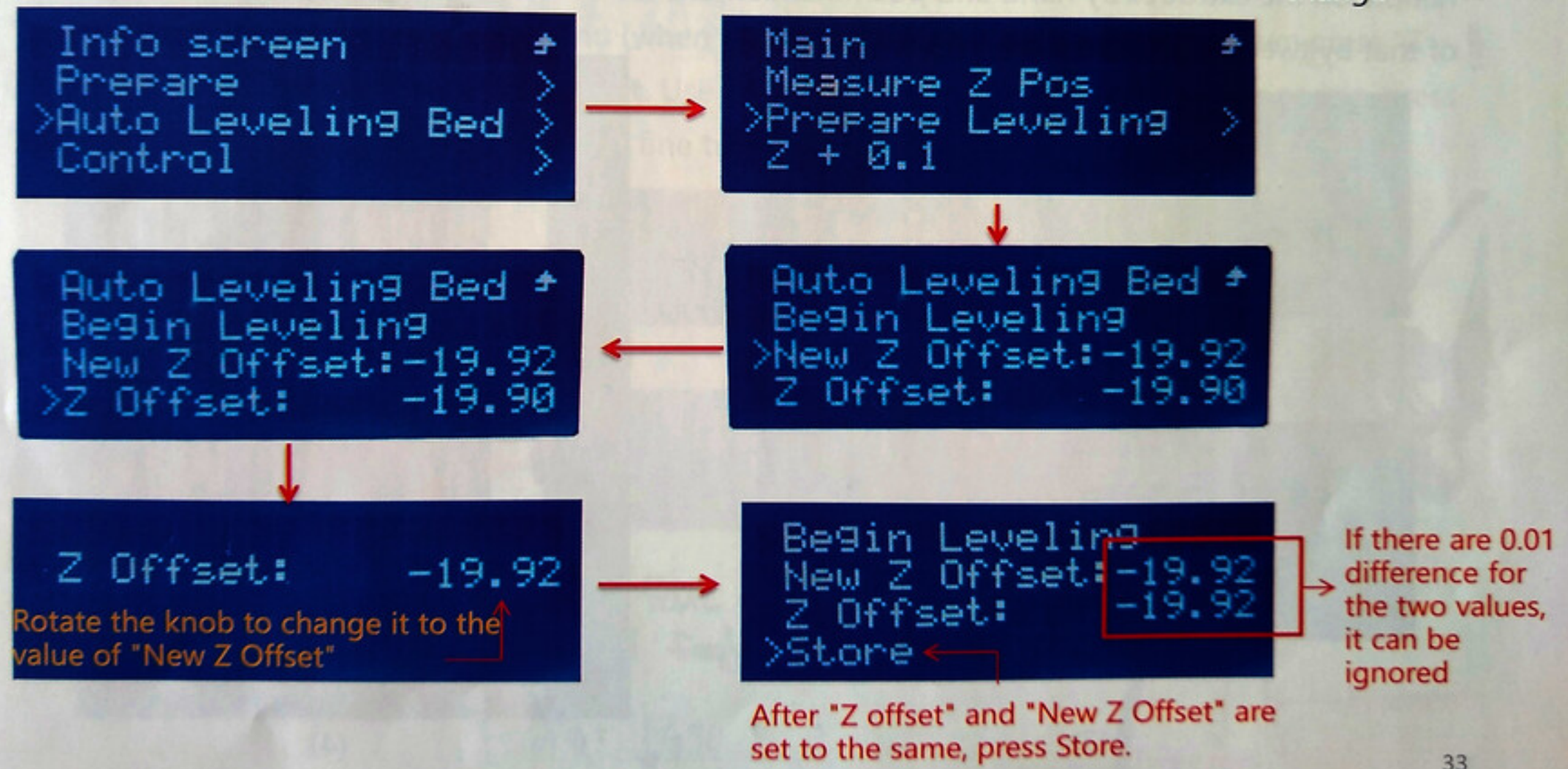
(1) Automatic leveling

Follow the last step, after the printer reboots, navigate the knob and go to the "Auto Leveling Bed" → "Prepare Leveling" → "Begin Leveling", the printer will start bed leveling automatically ***(What happens: the probe will automatically detect 69 points on the platform and then the print head will be automatically homing, and finally will stay just above the platform center)***.



(2) Modify Z Offset

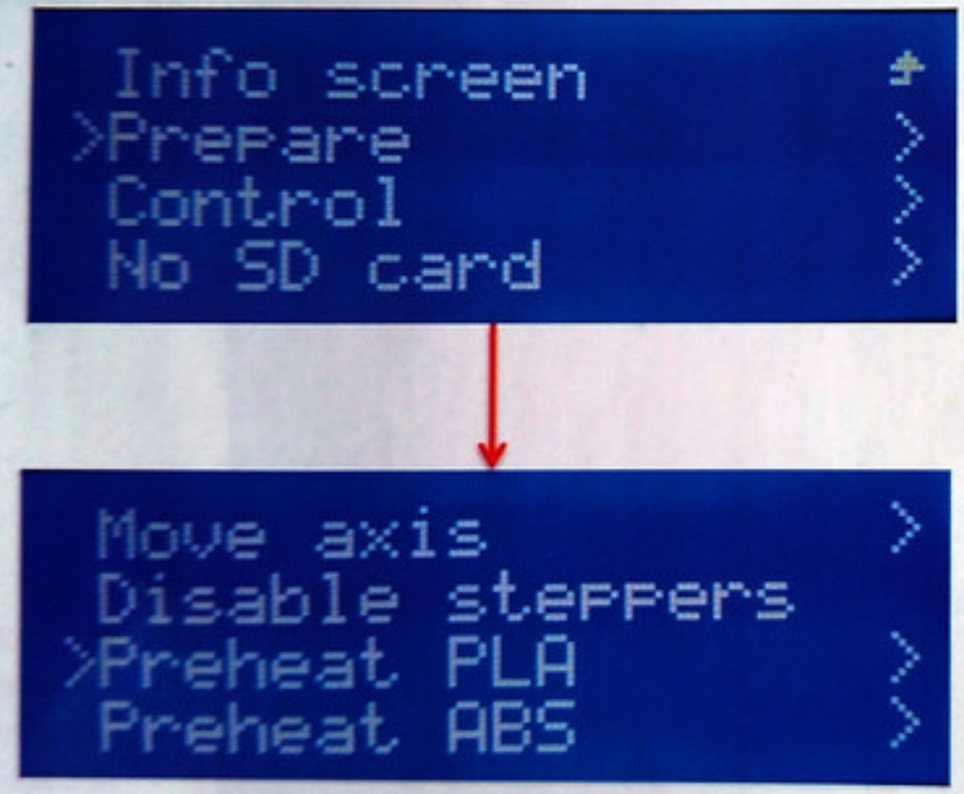
After automatic leveling, navigate the knob and go to: "Auto Leveling Bed" → "Prepare Leveling". At this time, on "Prepare Leveling" interface, there is a value for the "New Z Offset ". Now, click the " Z offset" , and **change the "Z offset" value to the "New Z Offset " value.** After changing, press the knob to confirm and go back to last menu and click "Store" to confirm the change.



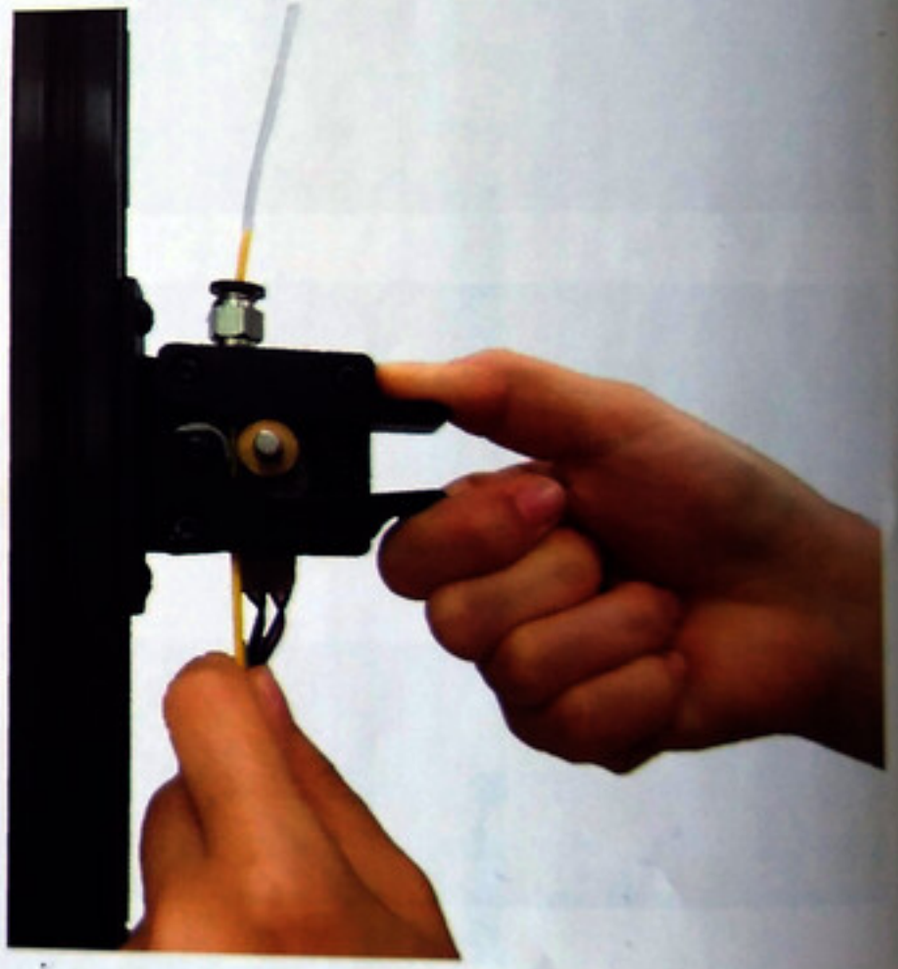
4、Install filament、Print test

(1) Install filament

Remove the print module and preheat the nozzle, choose "Prepare" → "Preheat PLA" on screen menu, as shown in Figure(3). When it reaches the target temperature, press down the handle on the extruder by hand and push the filament until it melt through the nozzle tip (get rid of that by tweezers), as shown in Figure(4).



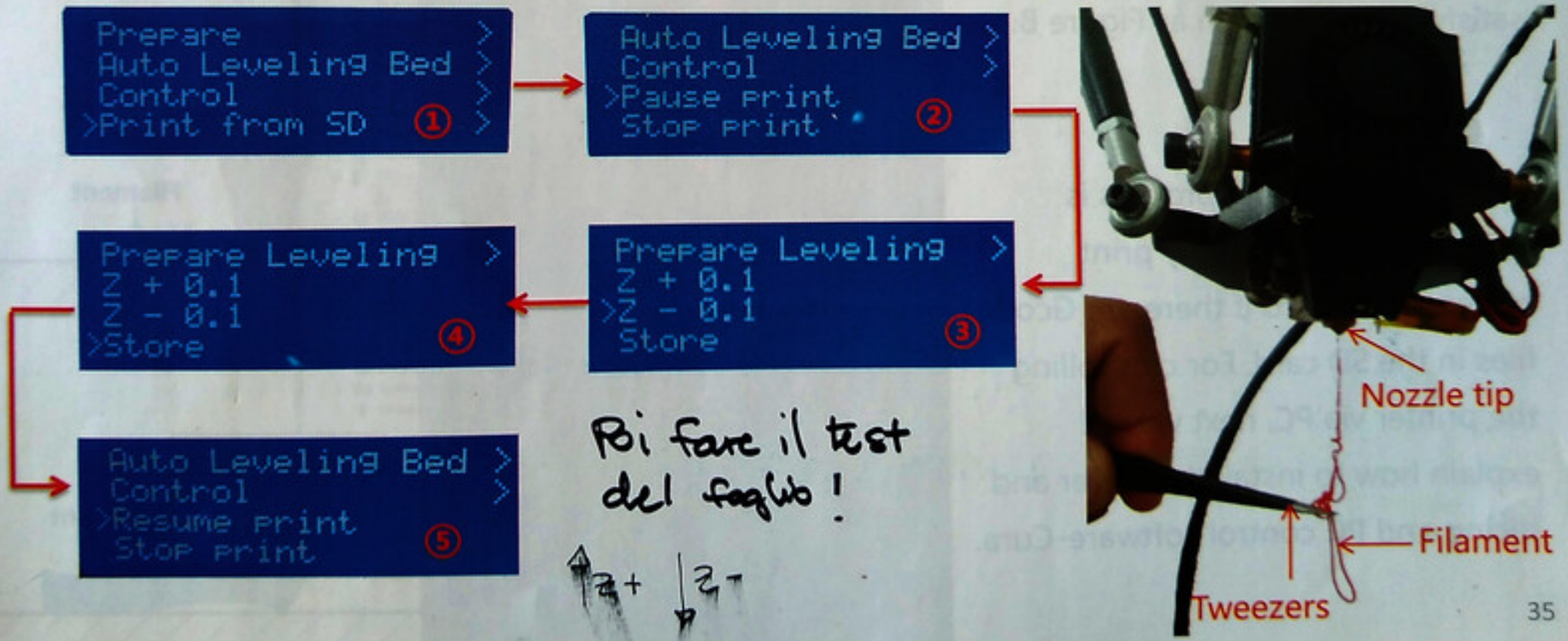
(3)



(4)

(2) Test Print (**Remove the auto level module before test print!! Otherwise it will be damaged!!**)

Through the LCD knob : "Print from SD" , select the "Testing" file on the SD card for printing. If the extruded material does not stick well on the platform (nozzle too high) or insufficient (nozzle too close), Press "Pause print" and **please wait for the printer to pause, because the printer will finish the last command before pause. When pause, the print head will raise by 1cm**. After pause, press "Z-0.1" in the "Auto Leveling Bed" menu (when nozzle is too close to the platform, then press "Z + 0.1") . After that, **press "Store" to save it.** Use tweezers to clean the filament on the nozzle, press "Resume print" to verify. You may have to fine tune this few time until satisfying results.



Leveling

Observe the print results, if extruded material still could not stick well to the platform (nozzle too high) or insufficiently squeezed (nozzle too close), pause printing again. Adjust the Z offset value and store it and then resume, it may need adjustment for few times until satisfying results such as Figure B.

Till now, the leveling process is finished. Customers may print offline via SD card if there are Gcode files in the SD card. For controlling the printer via PC, next we will explain how to install the driver and slicing and PC control software-Cura.