



CHIRON

User Manual



Think big, make bigger.

Shenzhen Anycubic Technology Co., Ltd.

Dear Customer,

Thank you for choosing **ANYCUBIC** products.

Maybe you are familiar with 3D printing technology or have purchased **ANYCUBIC** printers before, we still highly recommend that you read this manual carefully. The installation techniques and precautions in this manual can help you avoid any unnecessary damage or frustration.

More information please refer to :

1. <http://www.anycubic3d.com/>

ANYCUBIC website provides software, videos, models, **after-sale service**, etc.

Please visit our website for technical support and we are likely to answer or solve all the questions for you!

2. Facebook page and Youtube channel links are shown below.



ANYCUBIC Website



Facebook page



Youtube channel

Team **ANYCUBIC**

Safety instruction

Always follow the safety instructions during assembly and usage, to avoid any unnecessary damage to the 3d printer or individual injury.



Please contact our customer service first if you have any issue after receiving the products.



Be cautious when using the scraper. Never direct the scraper towards your hand.



In case of emergency, please immediately cut off the power of **ANYCUBIC** 3D printer and contact the technical support.



ANYCUBIC 3D printer includes moving parts that can cause injury.



It is recommended to use protection glasses when cleaning/sanding the printed models to avoid small particles contacting eyes.



Keep the **ANYCUBIC** 3D printer and its accessories out of the reach of children.



Vapors or fumes may be irritating at operating temperature. Always use the **ANYCUBIC** 3D printer in an open and well ventilated area.



ANYCUBIC 3D printer must not be exposed to water or rain.



ANYCUBIC 3D printer is designed to be used within ambient temperature ranging 8°C-40°C, and humidity ranging 20%-50%. Working outside those limits may result in low quality printing.



Do not disassemble **ANYCUBIC** 3D printer, please contact technical support if you have any question.

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Technical Specification

Printing

Technology:	FDM (Fused Deposition Modeling)
Build Size:	400mm * 400mm * 450 mm
Print accuracy:	0.05-0.3 mm
Positioning Accuracy:	X/Y 0.0125mm , Z 0.0020mm
Extruder Quantity:	Single
Nozzle Diameter:	0.4 mm
Print Speed:	20~100mm/s
Travel Speed:	60mm/s
Machine power:	~600W
Supported Materials:	PLA, ABS, HIPS, Wood, TPU

Temperature

Ambient Operating Temperature:	8°C - 40°C
Operational Extruder Temperature:	max 260°C
Operational Print Bed Temperature:	100°C

Software

Slicer Software:	Cura, Smplify3D, Repetier-HOST
Software Input Formats:	.STL, .OBJ, .JPG, PNG
Software Output Formats:	GCode
Connectivity:	Memory card; Data cable

Electrical

Input rating:	110V/220V AC, 50/60Hz
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Physical Dimensions

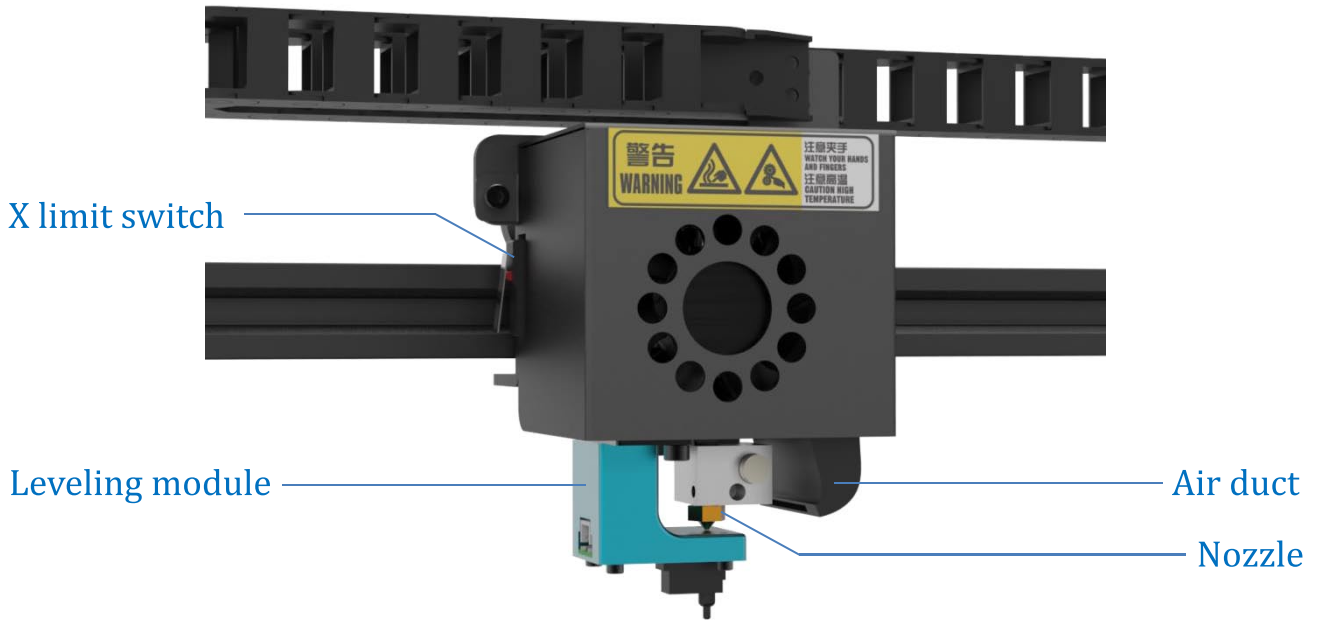
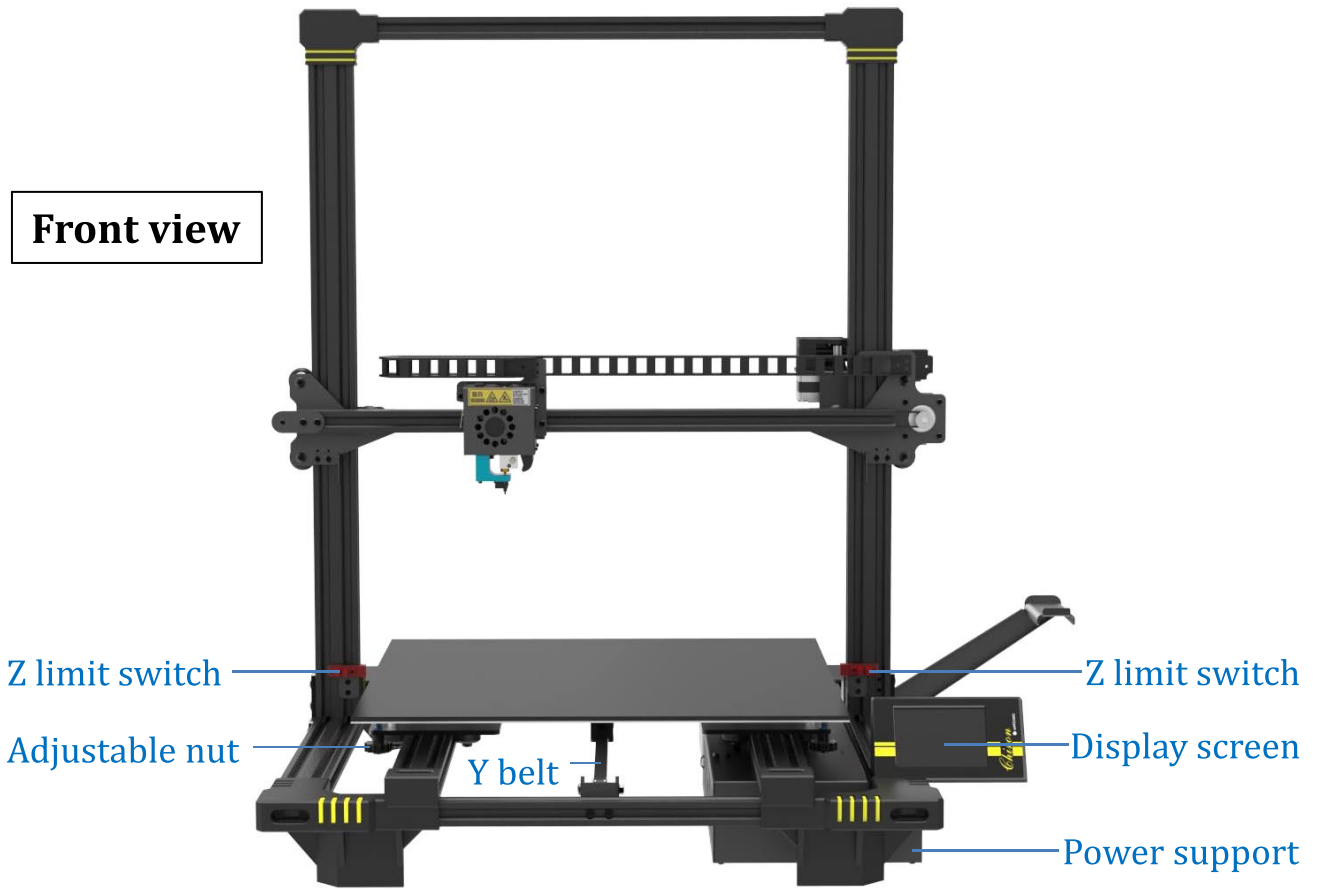
Printer Dimensions:	651mm * 612mm *720mm
Net Weight:	~20Kg

Packing list

		
	<p>M5*25 screw/washer 6PCS</p>	<p>Filament holder 1 Unit M3*5, M4*8, T-nuts, 2PCS each</p>
		
<p>ANYCUBIC CHIRON</p>	<p>T plate kit 2PCS</p>	<p>Plier 1PCS</p>
		
<p>Filament 1PCS</p>	<p>User manual 1PCS</p>	<p>Leveling sensor kit 1PCS</p>
		
<p>Power cord 1PCS</p>	<p>Data cable 1PCS</p>	<p>After sale service card 1PCS</p>
		
<p>Gloves 2PCS</p>	<p>Memory card & Card reader 1PCS</p>	<p>Tool kit 1 unit</p>
		
<p>Extra print head 1PCS</p>	<p>Tweezers 1PCS</p>	<p>Spatula 1PCS</p>

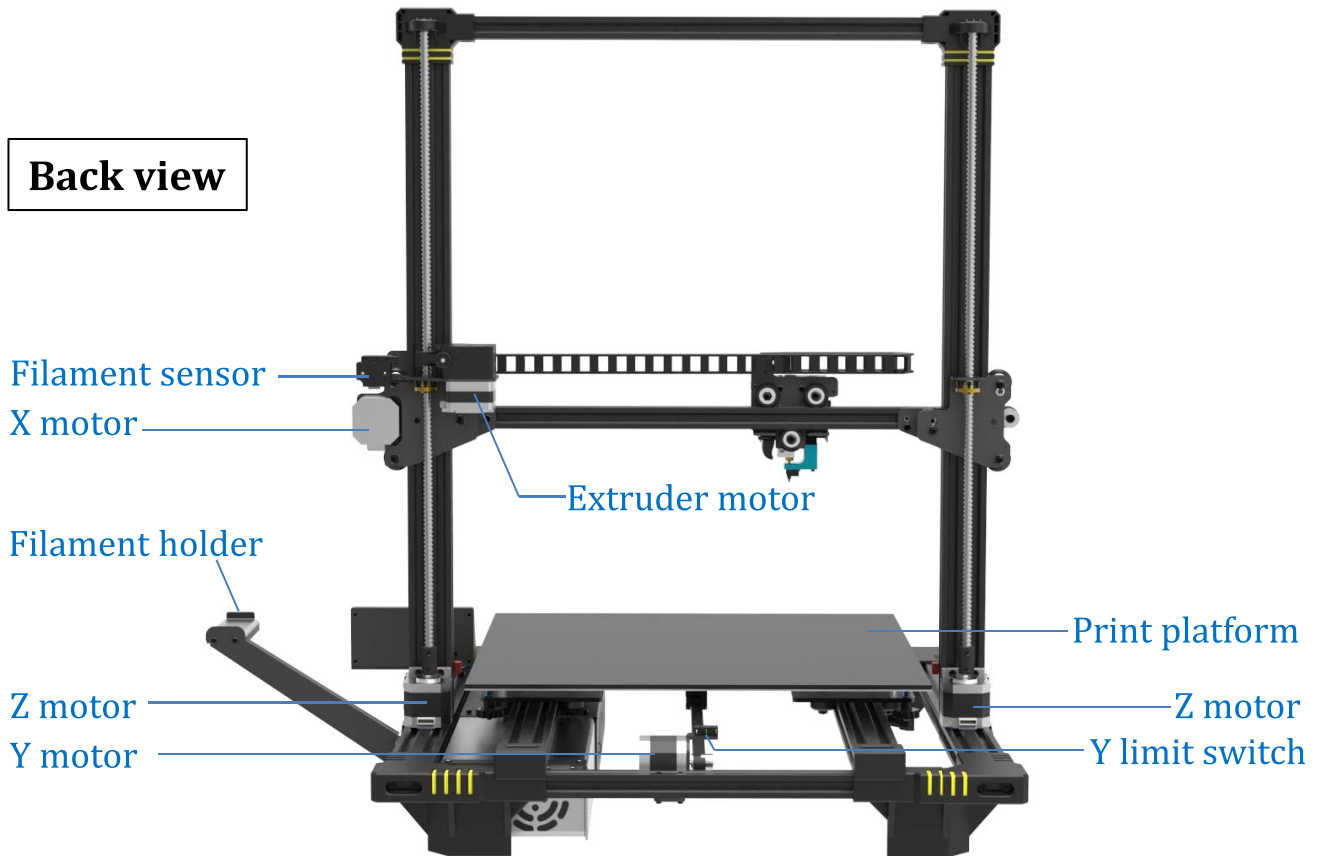
Product Overview

Front view



Product Overview

Back view

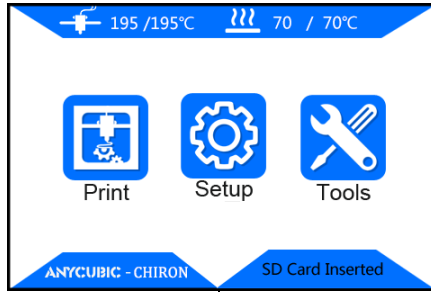


Please note: every units of the printer have been inspected and tested for printing. Therefore, in some cases, there might be very small marks left on the print head or on the heated bed. Those will not affect the printing quality and those means the printer has been tested for the quality. Meanwhile, we provide an extra hot end in case you need to replace it in the future. Thank you very much for your kind understanding.

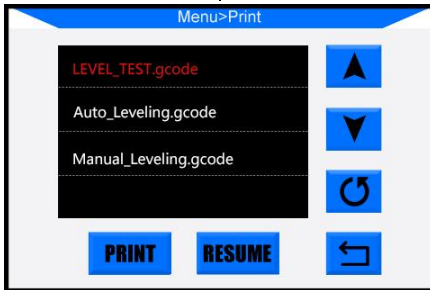
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Menu Directory

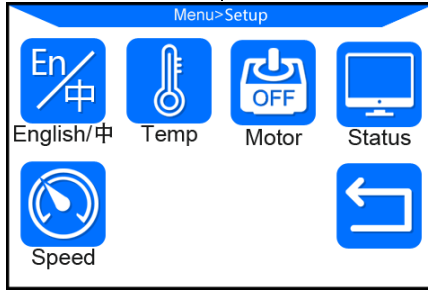
Home menu



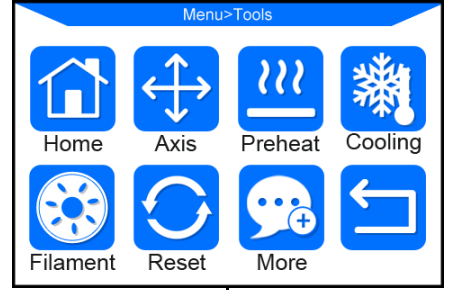
Print



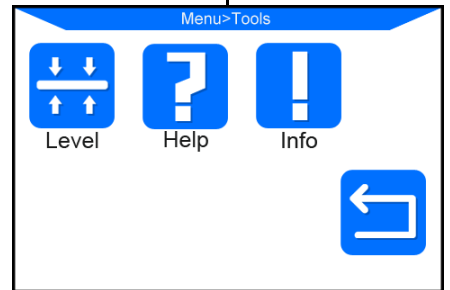
Setup



Tools



More



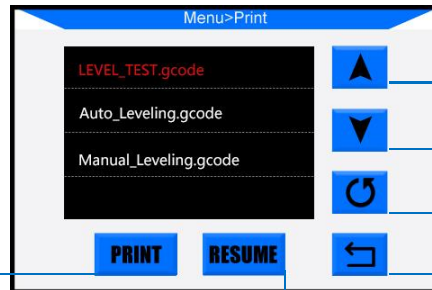
Home menu

Nozzle Temp /Target Temp		Heated bed Temp/Target Temp
Enter the print list		Enter the tools list
Enter the setup list		
Machine name		Printer status

Menu Directory

Print

Print the selected files
in memory card



Page up

Page down

Refresh the list

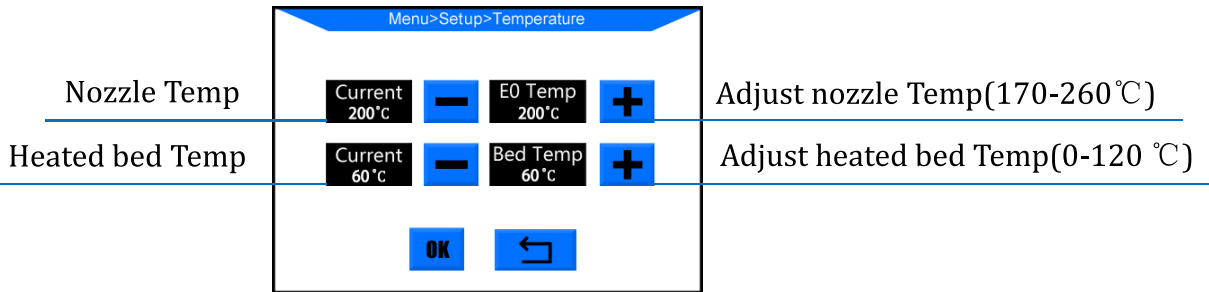
Return to the home menu

Resume form outage (only valid for
offline print via memory card)

Setup

English/中: Change language (English/Chinese)

Temp:



Nozzle Temp

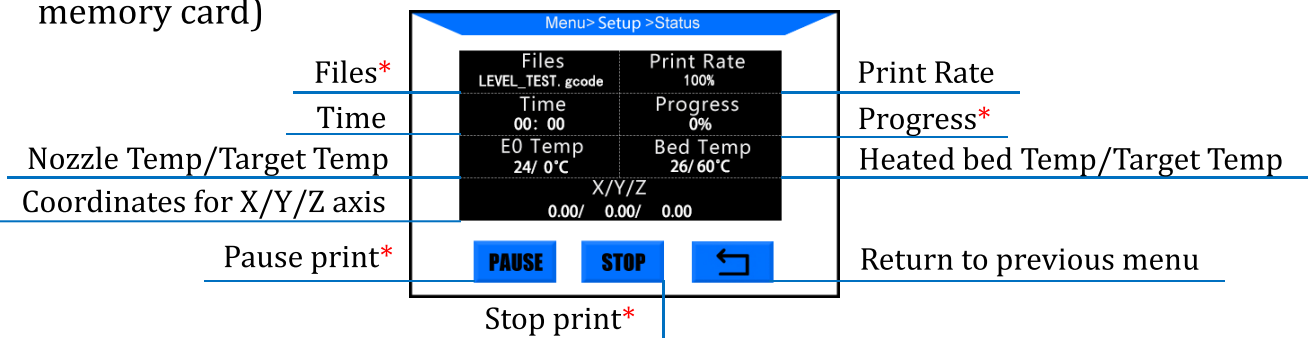
Adjust nozzle Temp(170-260°C)

Heated bed Temp

Adjust heated bed Temp(0-120 °C)

Motor: Disable all motors (only valid when machine is not printing)

Status: (the following with * is valid only for offline printing , i.e. print from memory card)



Files*

Print Rate

Time

Progress*

Nozzle Temp/Target Temp

Heated bed Temp/Target Temp

Coordinates for X/Y/Z axis

Pause print*

Return to previous menu

Stop print*

Menu Directory

Speed:

Menu> Setup >Speed		
Fan speed	Current 0% - Fan Speed 0% +	Adjust fan speed(0-100%)
Print rate	Current 100% - Print Rate 100% +	Adjust print rate(50-999%)
OK ↩		

Return: Return to Home menu

Tools

Home: (only valid when machine is not printing)

Menu>Tools>Auto Home		
Click to home X	Home X	Click to home Y
Click to home Z	Home Z	Click to home All
↩		Return

Axis: (only valid when machine is not printing)

Menu>Tools>Move Axis		
-X (mm) 0.1 1.0 10 10 1.0 0.1 +X (mm)	Move left/right X axis by 0.1/1.0/10mm	
-Y (mm) 0.1 1.0 10 10 1.0 0.1 +Y (mm)	Move backward/forward Y axis by 0.1/1.0/10mm	
-Z (mm) 0.1 1.0 10 10 1.0 0.1 +Z (mm)	Move down/up Z axis by 0.1/1.0/10mm	
Speed L M H Home ↩	Return	
Speed mode for axis move Low/Medium/High		

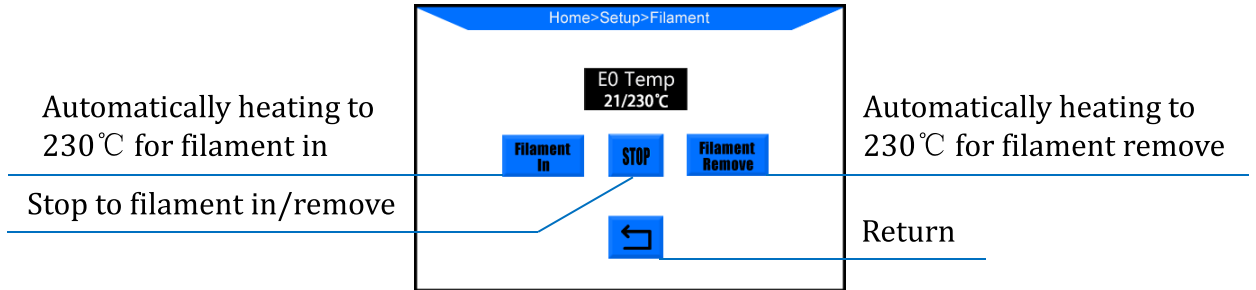
Preheat: (only valid when machine is not printing)

Menu>Tools>Preheat		
Nozzle Temp/Target Temp	E0 Temp 53/190°C Bed Temp 28/ 50°C	Heated bed Temp/Target Temp
Click to preheat PLA	Preheat PLA	Click to preheat ABS
↩		Return

Menu memory

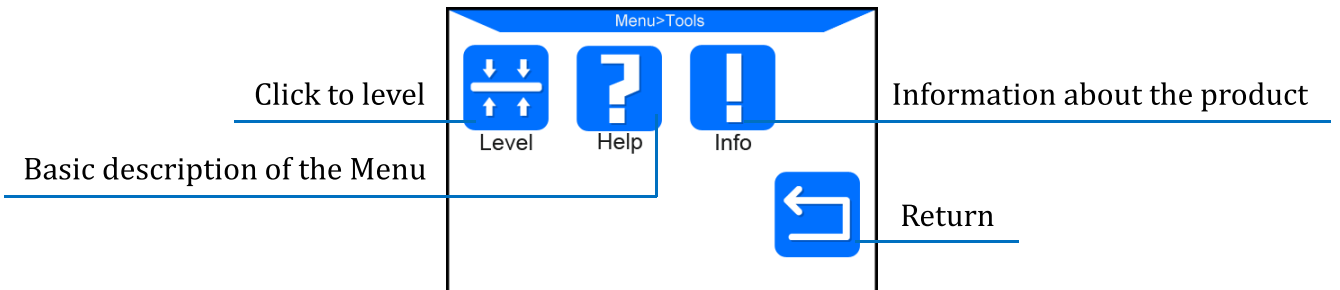
Cooling: Cut off the power to hot-end and heated bed (only valid when machine is not printing)

Filament: (only valid for offline print)



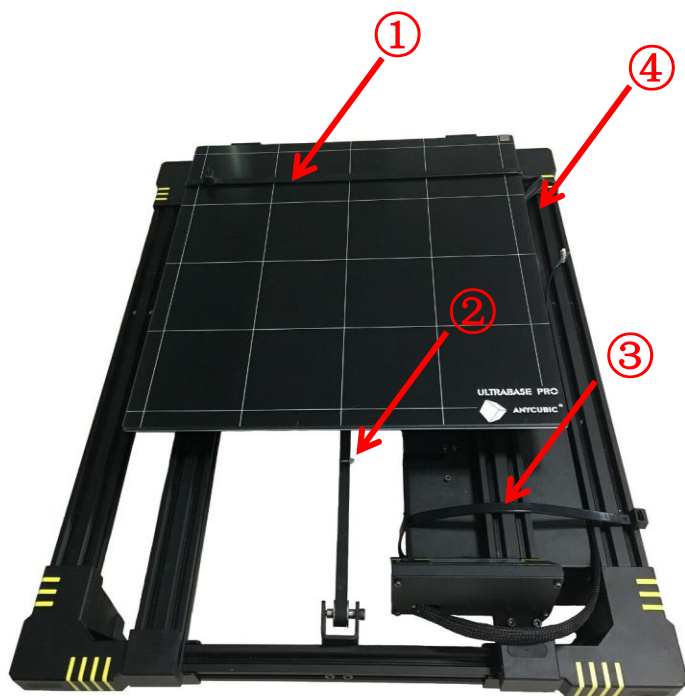
Reset: Popup window to decide if reboot the mainboard

More:



Installation section

1. Installation section contains: ①Install the frame ②Install the display ③ Wiring ④Install the filament holder and filament
2. Be cautions during assembly as some parts may have sharp edges.
3. It is suggested to use a flat desktop and place the parts in an orderly manner for quick assembly.
4. The color of some parts may be different from what in the manual, but the assembly is the same.
5. Firmware has been pre-uploaded to the motherboard. After completing the assembly, please load the filament and level the platform then you could start the first test print.



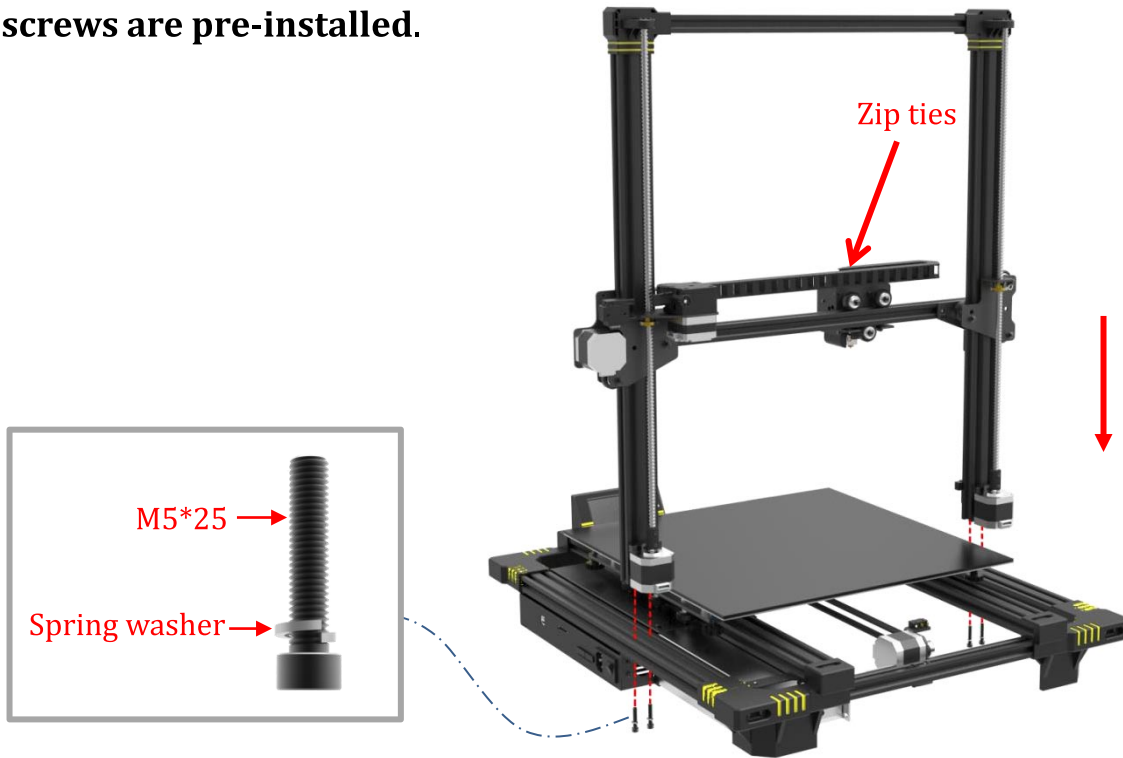
Note: before assembly please use pliers and other tools to remove those zip ties and wrapping materials.

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Installation section

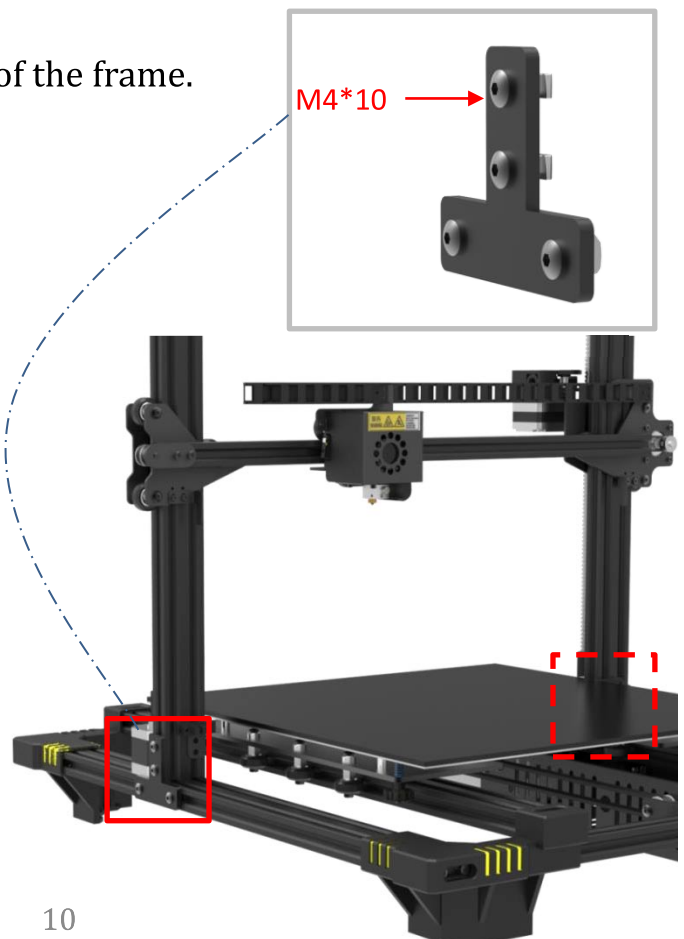
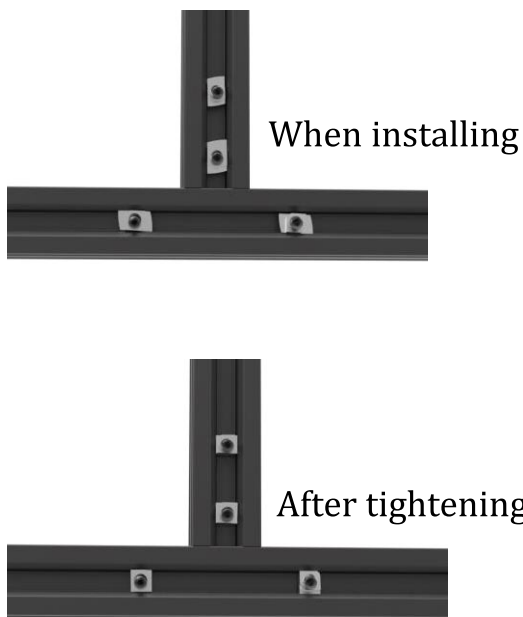
1. Install frame

(1) Please use pliers to cut the zip ties before assembly. Fix the frame to the base by 4 pieces of M5*25 screws and spring washers. Fasten the screws **after all the screws are pre-installed**.



(2) Install the T plates on both sides of the frame.

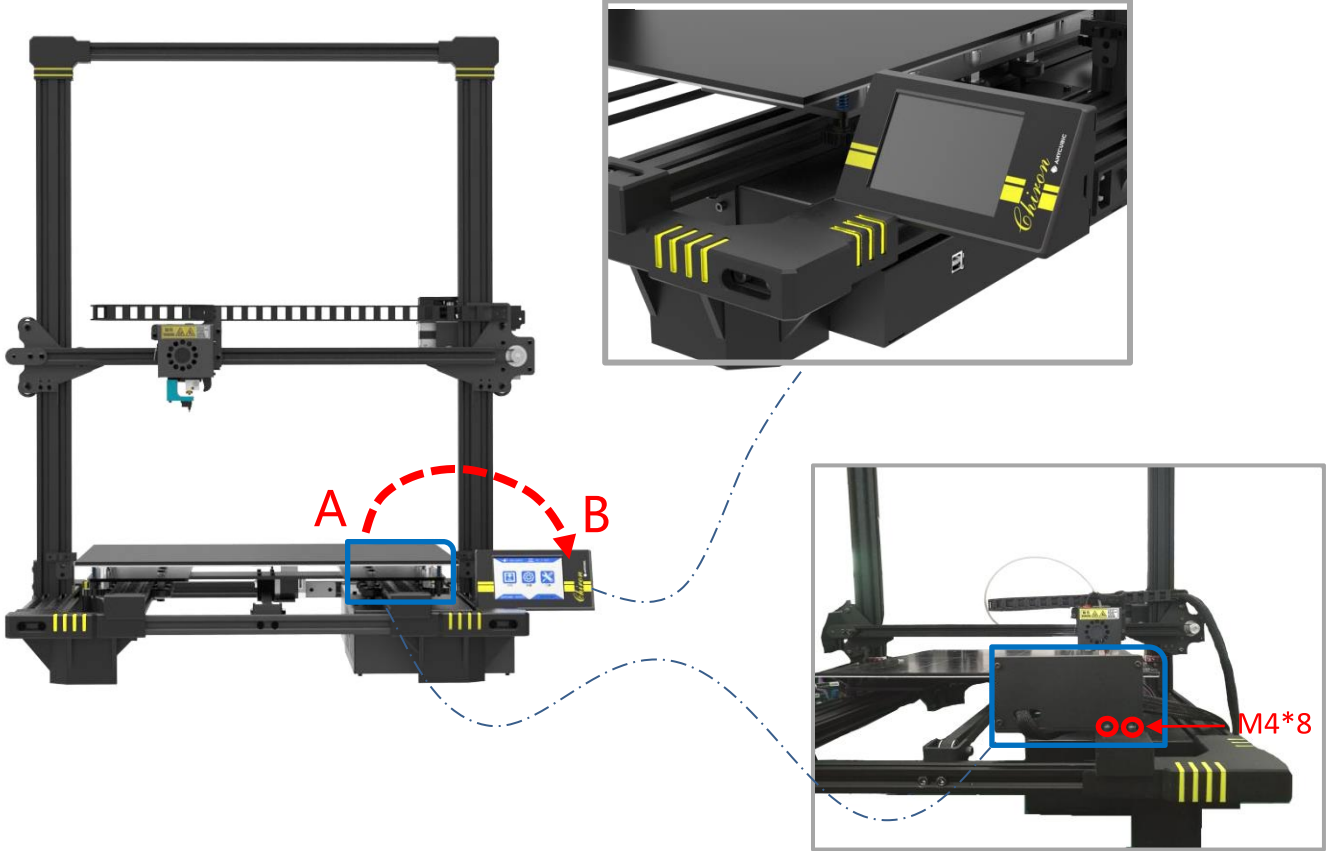
Note the direction of the T nut in Aluminum profile



Installation section

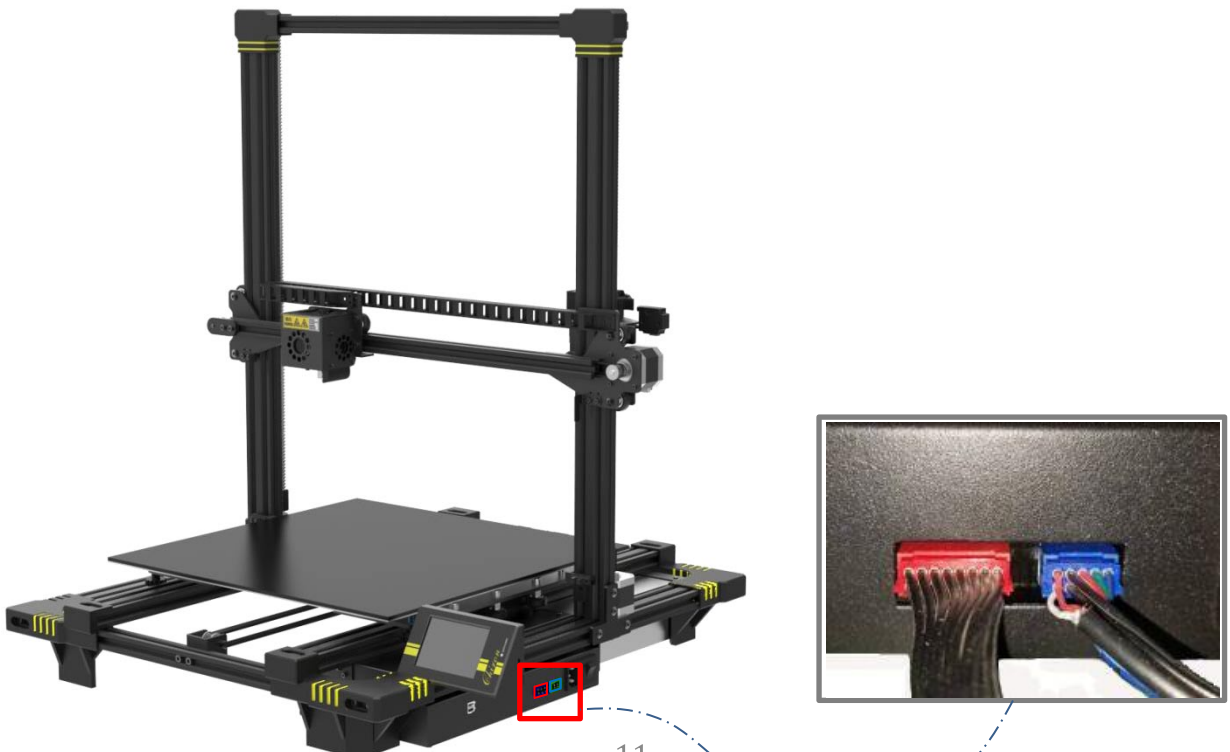
2. Install display

Remove the M4*8 screws that holding the display to the base, move the display from A (Front) to B (Side) and secure it using the same screws and nuts.



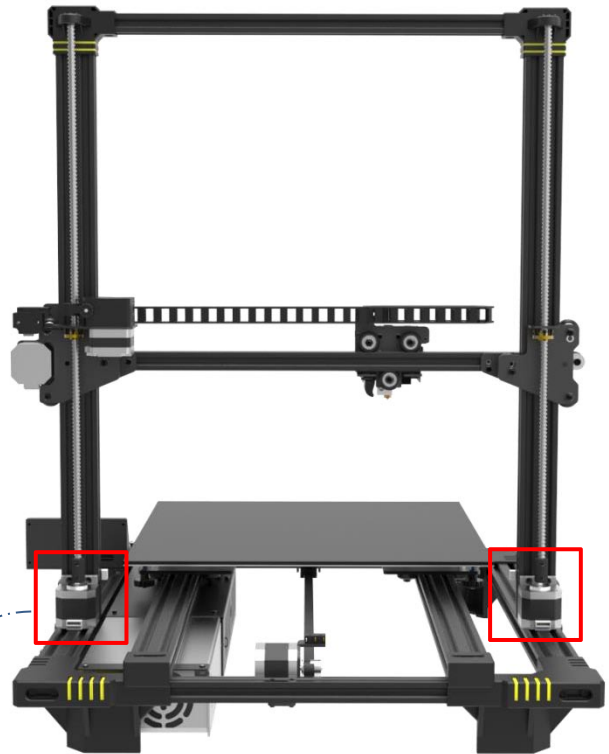
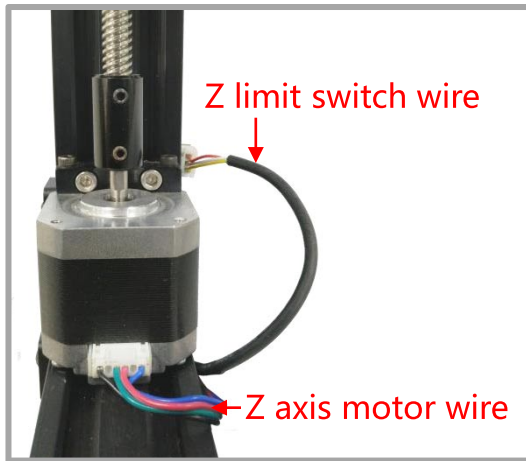
3. Wiring

(1) Insert the cables to the corresponding ports by the color code.



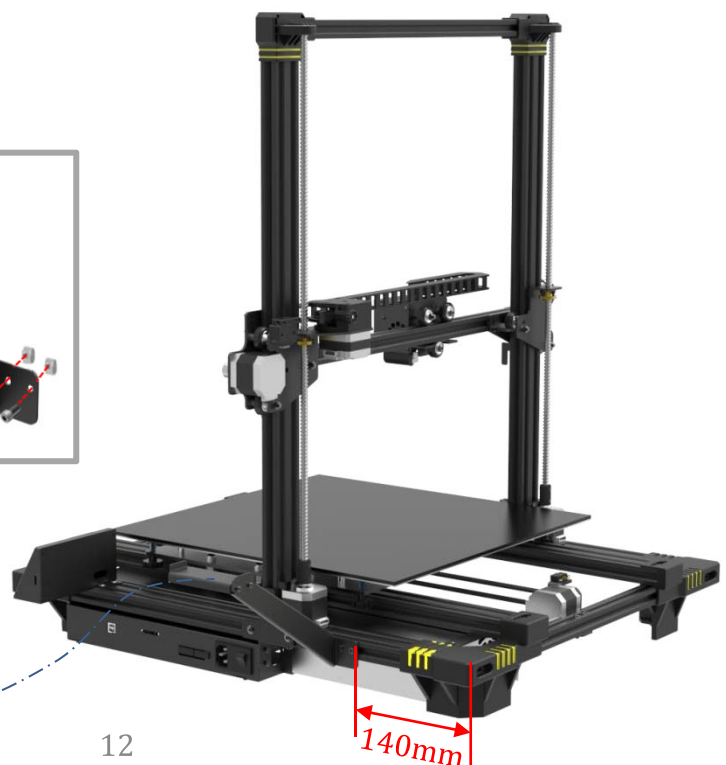
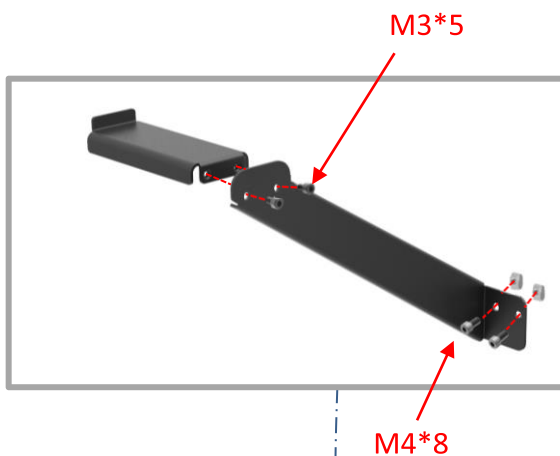
Installation section

(2) Move the platform to the front, and then insert the Z limit switch wires and the Z axis motor wires into the corresponding ports on **both sides** of the machine. Keep the wires in place well by zip ties and do not let them interfere with the bed movement.



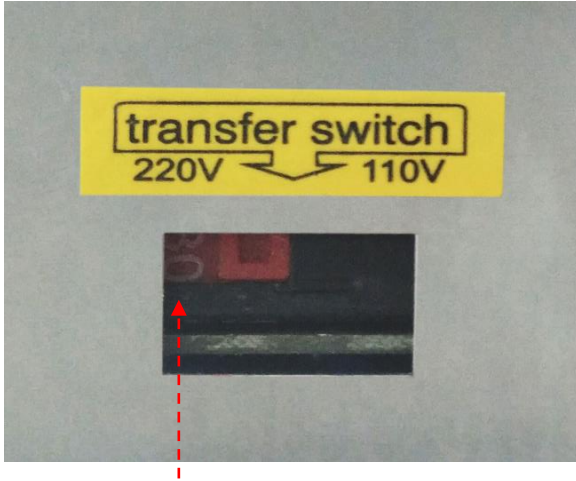
4. Install filament holder and filament

(1) Use two M3*5 screws to install the filament holder, then use two pairs of M4*8 screws and T nuts to install the filament holder to the base about 140mm from the rear.



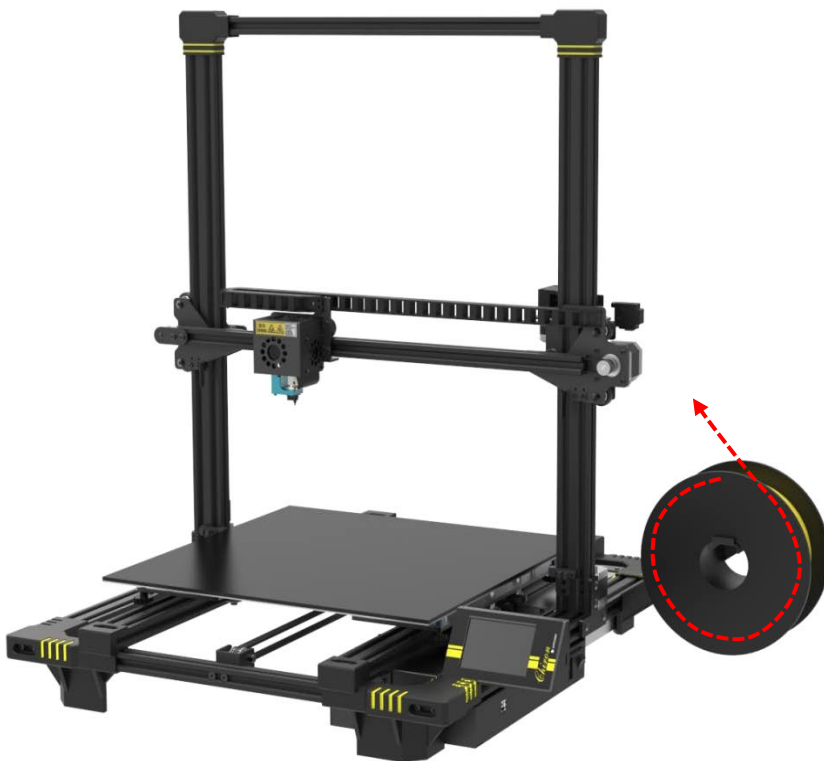
Installation section

(2) Select the correct voltage mode according to your local voltage ratings (~110V or ~220V). The switch is inside the power supply and **220V is default**. Hex keys can be used to move the switch inside. Finally, double check the wirings and plug in the power cord and switch on the printer.



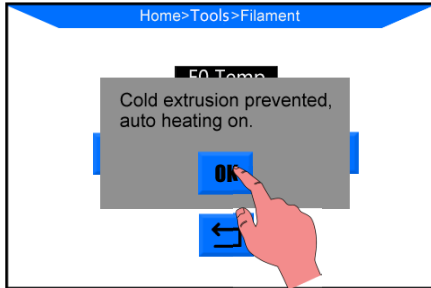
**In some cases, 220V labeled as "230",
110V labeled as "115"**

(3) Place the filament on filament holder, note the feeding direction of the spool.

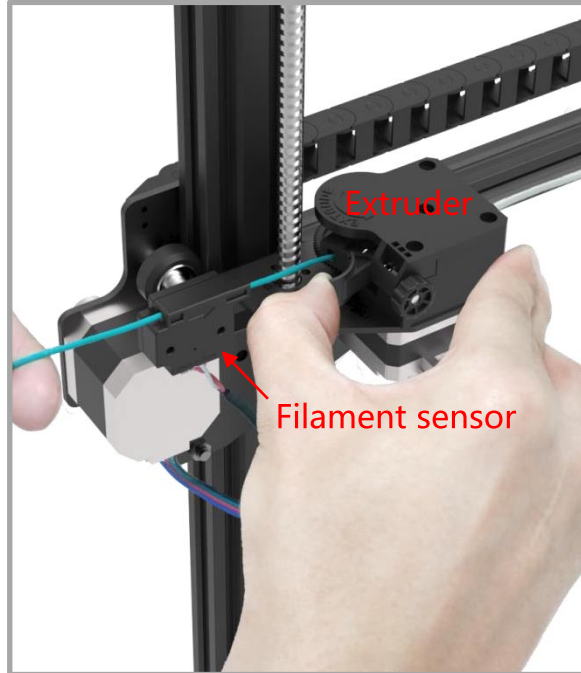


Installation section

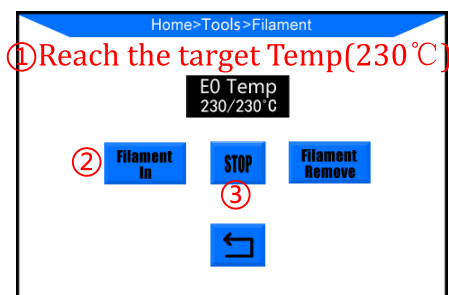
(4) **Install filament:** click “Tools”→ “Filament”→ “Filament in”, and there will be pop-up window as shown below, click “OK”. Straighten the end of filament, pass the filament through filament sensor, and then press the handle on the extruder and push the filament in until it just reach in the white Teflon tubing.



Note: When click “Filament in”, the feeding speed maybe much faster than the normal speed. Sometimes it may be stuck in the Teflon tubing due to too much pushing. That is OK, indicating the filament has been reached in the Teflon tubing and you can stop feeding .



(5) During waiting, manually slide the print head to the left. When reaching to the target temperature (i.e. 230°C), click “Filament in” **again**, the extruder will automatically feed the filament in and the filament would be melted through the nozzle. Now, click “Stop” on the screen, you may use tweezers to clean the filament residue on the nozzle.



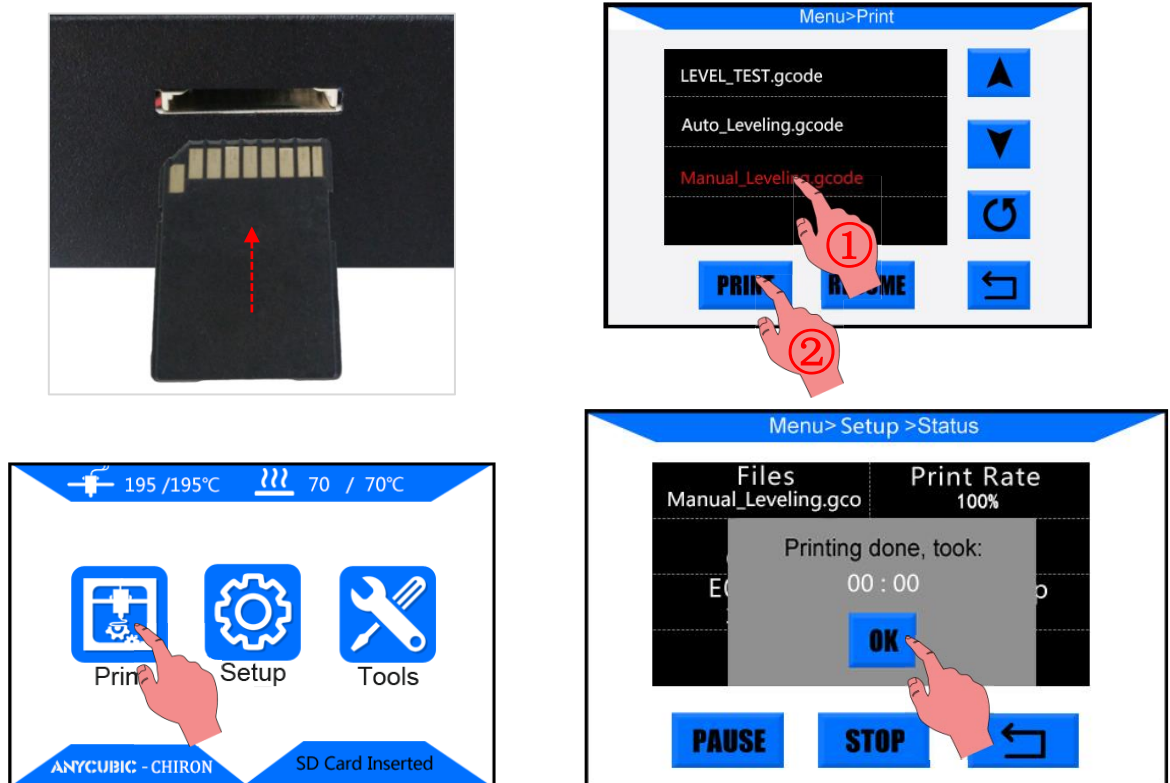
Use tweezers to clean filament residue

Leveling

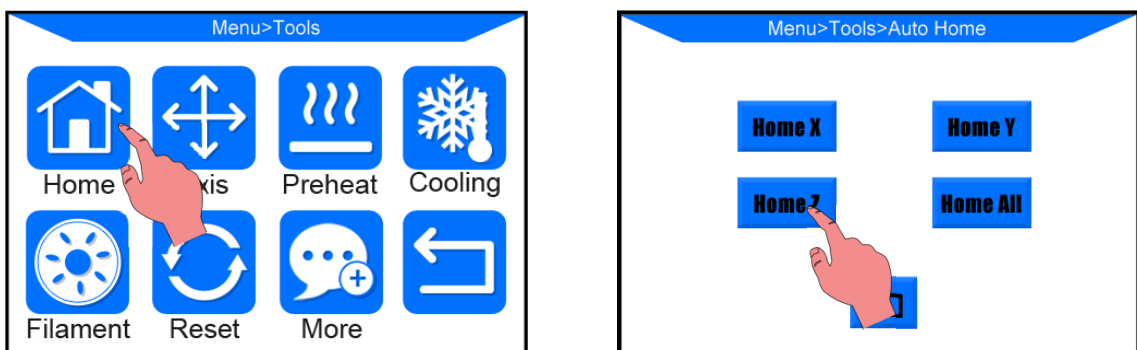
It is essential to level the platform of a 3D printer. There are two ways to level the Chiron, ① Manual Leveling (Default) & ② Assisted Auto Leveling. We suggest to use simple Manual Leveling first if you could get good results.

1、 Manual Leveling

Step 1. Insert memory card into the slot at the bottom right side of the printer. On the Home Menu of the touch screen, click “Print”, then choose the file “Manual_Leveling.gcode” and **print it** to set the machine to manual leveling mode. When printing done in seconds, click “OK” and return to the Home Menu.



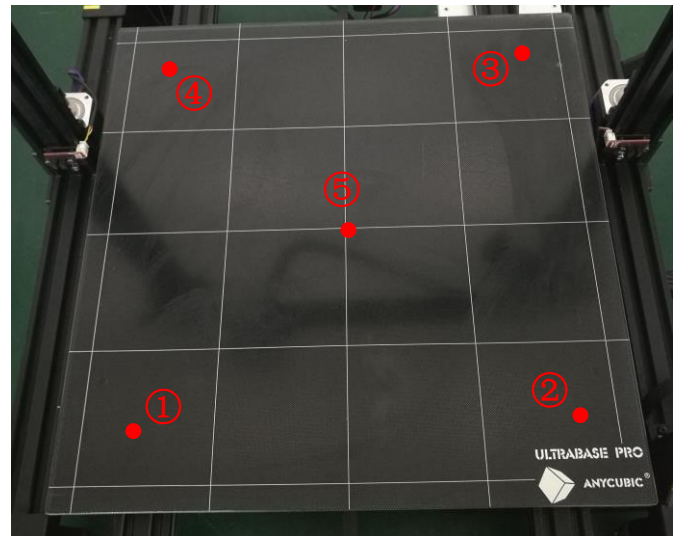
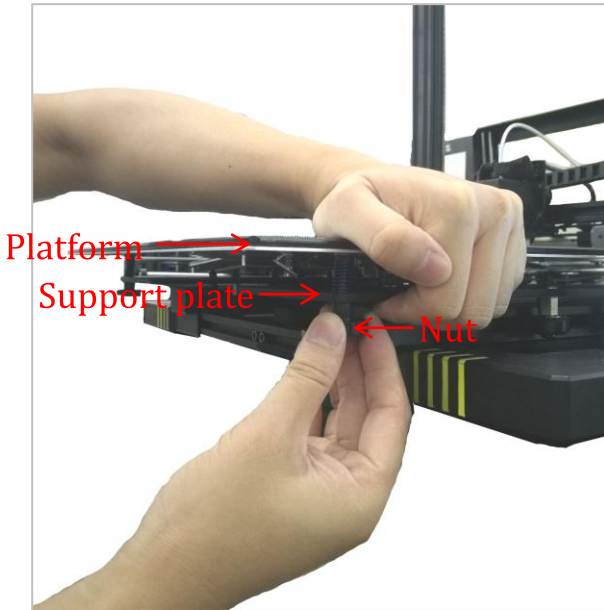
Step 2. Manually move the print head to the far left side until touch the X limit switch. Click “Tools” → “Home” → “Home Z” .



Leveling

Step 3. (If the printer has been printed before leveling, please use tweezers to clean the residue on the nozzle, otherwise it would affect the leveling results.)

Put a piece of paper onto the print platform, and then manually move the print head and platform back and forth to let the print head travel to the 4 points and center spot one by one (①→②→③→④→⑤), as shown below. **(Avoid nozzle rub against the platform directly without the paper in-between)**



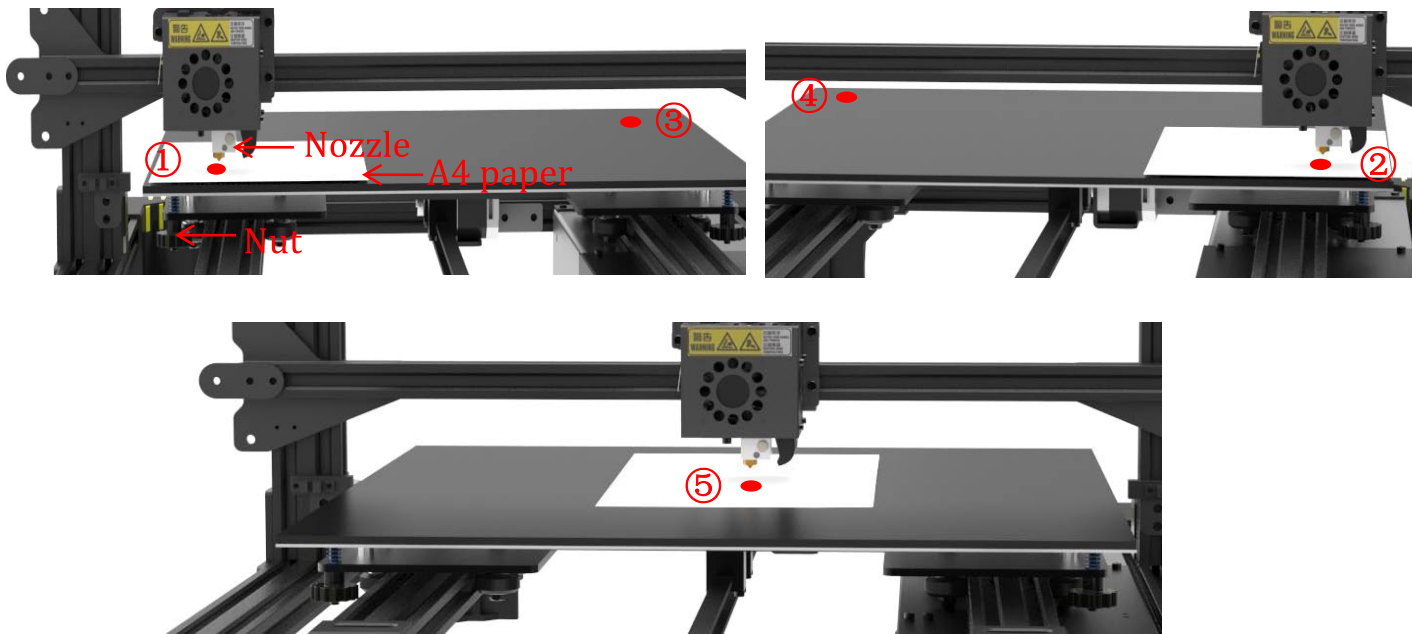
Step 4. When nozzle has been moved to point ①, press the platform and support plate, then manually adjust the corresponding nut underneath the print platform. **Loosen the nut clockwise, the platform rises. Tightened the nut counterclockwise, the platform descends.**

The purpose is to adjust the distance between nozzle and print platform to about a piece of paper thin (~0.1-0.2mm). Therefore, when just feel the drag resistance as pulling the paper around, it means good leveling for this particular point.

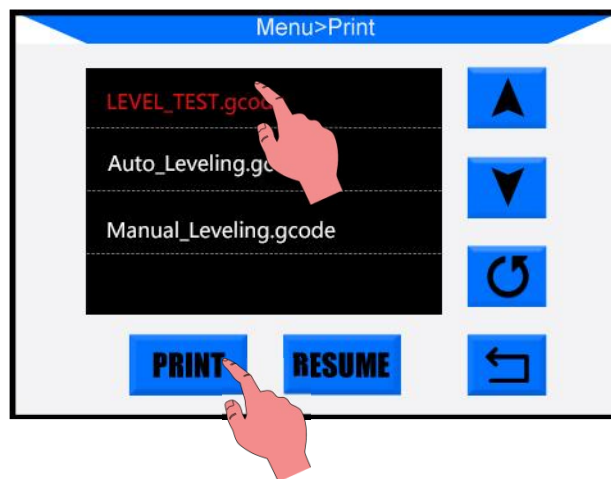
(Note: “just feel the drag resistance” means the paper can be moved, but with resistance)

Please do so to the rest points and center spot. Perform double check to ensure the results, and check the points in diagonal order: ①→③, ②→④.

Note: ANYCUBIC promise the nature levelness of the Ultrabase Pro is within 0.25mm because it is HUGE.



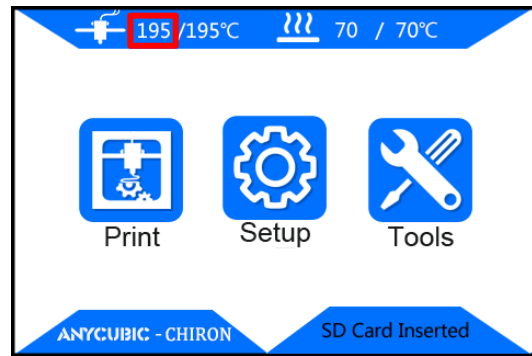
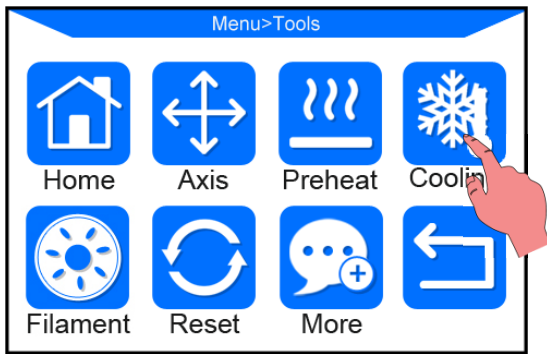
Step 5. Test print: On the Home Menu, click “Print”, select "LEVEL_TEST.gcode" and then click "PRINT" to verify the leveling results. Refer to Page20&21 for more details, and it may need fine adjustment few times to achieve the best results.



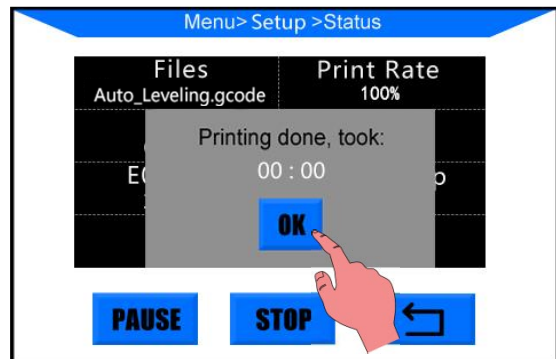
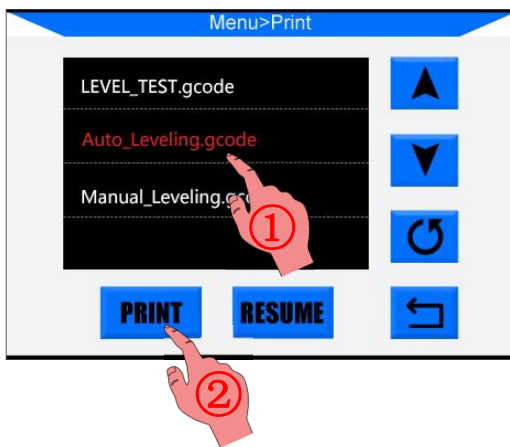
2、 Assisted Auto Leveling [**Please read before action**]

Step 1. Before leveling, if the nozzle is hot and in order to **avoid burns** when installing the leveling sensor, it is highly recommended to **cool it down first**. Click “Tools” → “Cooling” on the screen, wait until the temperature in the highlighted box drops down to below 60°C before proceed with the leveling.

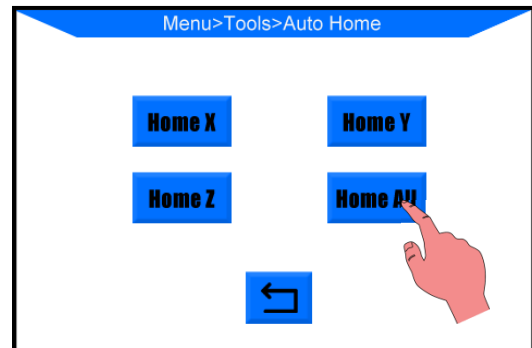
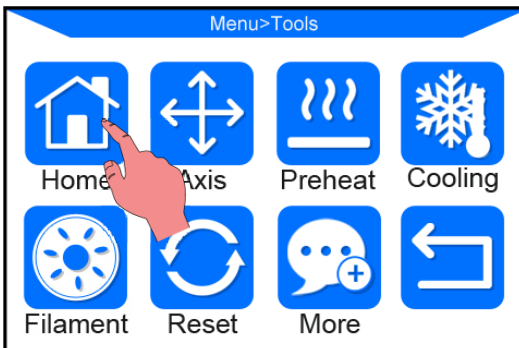
Leveling



Step 2. Click “Print” on Home menu, then choose and print the “Auto_Leveling.gcode” to set the machine to Assisted Auto Leveling mode. Click “OK” after printing done in second and return to the Home Menu.

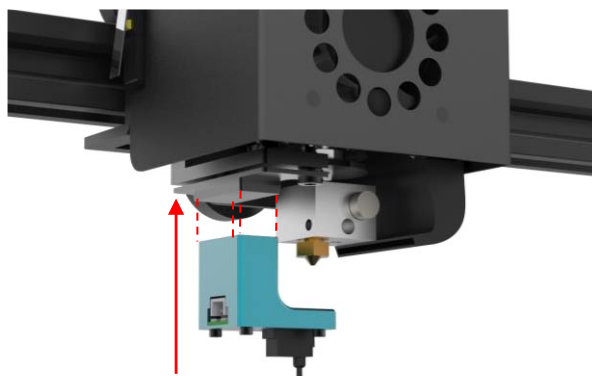
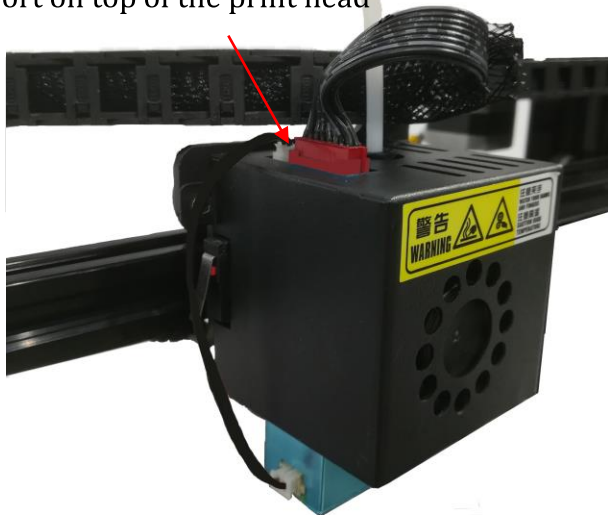


Step 3. Click “Tools” → “Home” → “Home All”, then install the leveling module as shown below.



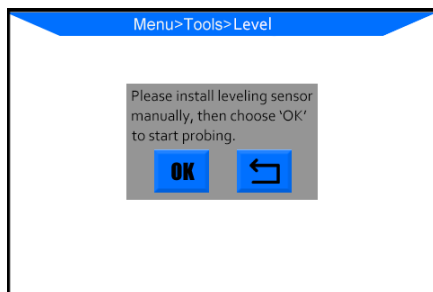
Leveling

The signal line is connected to the port on top of the print head

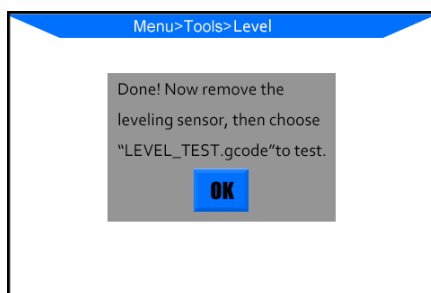


The sensor is magnetically attached onto this steel block.

Step 4. Return to the Home Menu, click “Tools” → “More” → “Level” → “PROBE” and the screen will pop up messages as shown below. **Ensure the leveling sensor is installed firm and properly before click “OK”.**



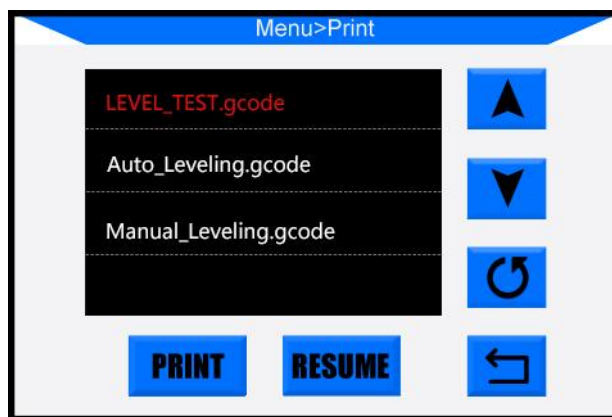
Step 5. After click “OK”, the machine will home all axis and probe 25 spots on the platform indicated by red spots below. The actually probe spots maybe slightly shifted due to installation differences but it would not affect the result. After probing and **before click ‘OK’**, **remove the leveling sensor** (otherwise it maybe damaged during test printing)



Leveling

Due to the vibration from shipping or installation differences, factory nozzle height might be changed unpredictable. To avoid unnecessary first time frustration of nozzle rubbing against the Ultrabase Pro, the default nozzle offset of the test print has been purposely set a few millimeters (2~4mm) higher. Please follow the steps below to fine tune it.

Step 6. Test print : [**Do not do test print until read to Page23**] Remove the leveling sensor first, then click 'OK' to enter the "Print" interface. Choose and print the "LEVEL_TEST.gcode". The printer will automatically home and start printing when reaching to target temperature.



3. Fine adjustment

There might be 3 kinds of results for the first layer of the test prints : A-nozzle too high, B-nozzle too close, and C-proper nozzle height.

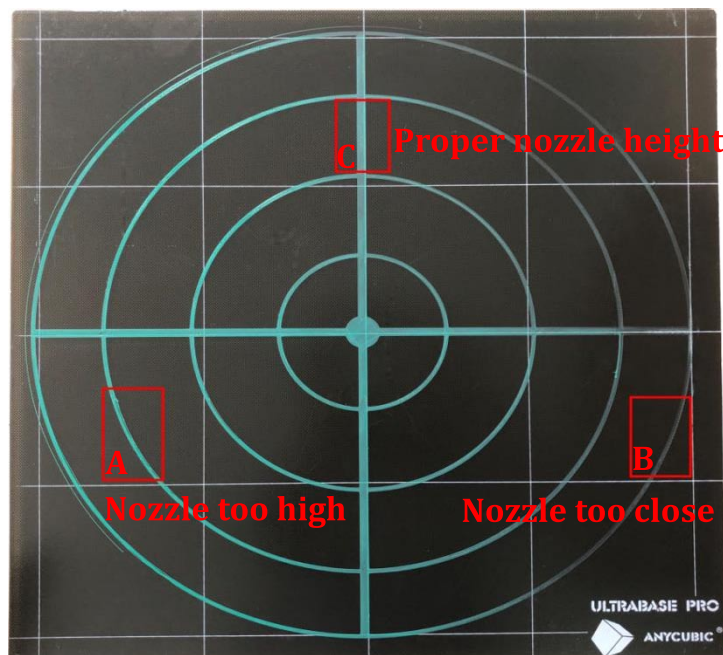
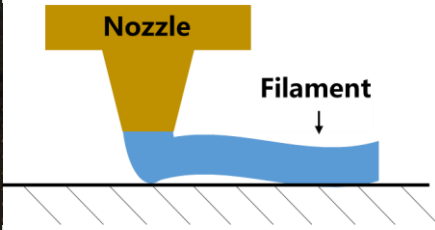


Figure.(1)

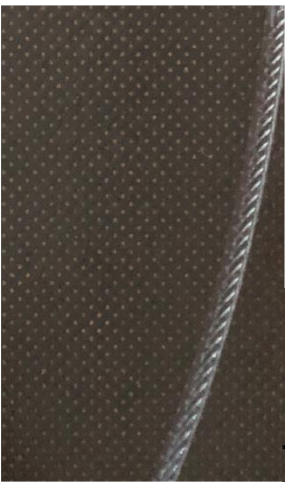
Leveling



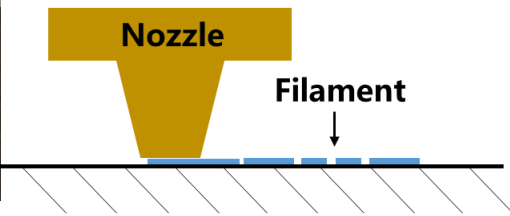
Nozzle too high



A: large gaps, filaments could not adhere to the platform



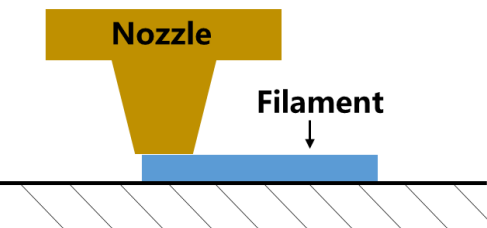
Nozzle too close



B: Lack of extrusion, the nozzle rub against the platform.



Proper nozzle height



C: Good extrusion and adhesion

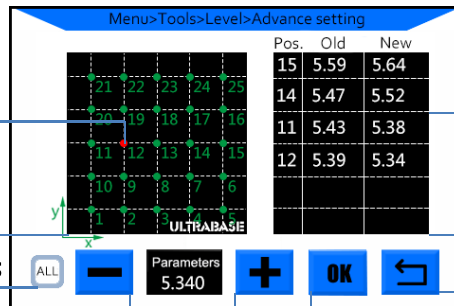
When the nozzle is too high (close) from (to) the platform, it can be adjusted during or after the test print. It is suggested to adjust it during test print. **During test print, please return to Home Menu, click: "Tools" → "More" → "Level" → "ADVANCE SETTING".**

Leveling

Red dot(s) means the selected spot(s)

Corresponds to the position on the platform

Click to tick/untick all spots



Selected spot/ Previous parameters /Modified new parameters

Maximum six modified parameters can be displayed here

Return

Click '-' when nozzle is too high (0.05mm/click, **do not press continuously**)

Click OK to confirm the modification, otherwise the modified parameters are invalid

Click '+' when nozzle is too close (0.05mm/click, **do not press continuously**)

Nozzle Too high:

- ① for all spots: Click "ALL" and then click "-".
- ② for particular spots: Select **those** too-high-spots and click "-". As shown in **Figure(1)** Page20, you can simultaneously select the spots No.1, 10, 11, 20, 21 and click "-".

Nozzle Too close:

- ① for all spots: click "ALL" and then click "+".
- ② for particular spots: select those too close spots and click "+". As shown in figure(1) Page20, you can select the No. 5, 6, 15, 16 and 25 and click "+".

It is required to click "OK" after modification, otherwise the change will be invalid. You can click 'OK' after change all the parameters.

[VERY IMPORTANT]

- ① It is strongly suggested to use "LEVEL_TEST.gcode" testing the leveling results.
- ② Click "-" or "+" only once every time, do not press continuously to avoid nozzle hit the print platform.
- ③ After clicking "-" or "+", the modified command will not be run until the current buffer commands finished. The time for finishing the buffer commands would be vary due to different moving paths, so **please wait and allow** the buffer to finish.
- ④ Because the default nozzle offset has been set 2-4mm higher, **so initially it is OK to click "-" a few more times without unnecessary waiting.** You can always turn off the printer if pressing too much letting the nozzle hit the platform, then you can do the Assisted Auto Leveling again from Page 17. (**continue...**)

【VERY IMPORTANT】**...continue**

⑤ If the nozzle directly hit and rub against the platform at the start of the test print, please just turn off and then turn on the power, go to the “ADVANCED SETTING” to increase the parameters 2-4mm for all spots, and then do the test print again to verify until nozzle no long hit platform.

⑥ Under “Assisted Auto Leveling” mode, the “ADVANCE SETTING” is functional both during printing and idle, but it is more interactive to adjust during test print. **But under "Manual Leveling" mode, the "ADVANCE SETTING" is disabled.**

It may need adjustment a few times before achieve satisfying results as shown in **Figure(2)** below.

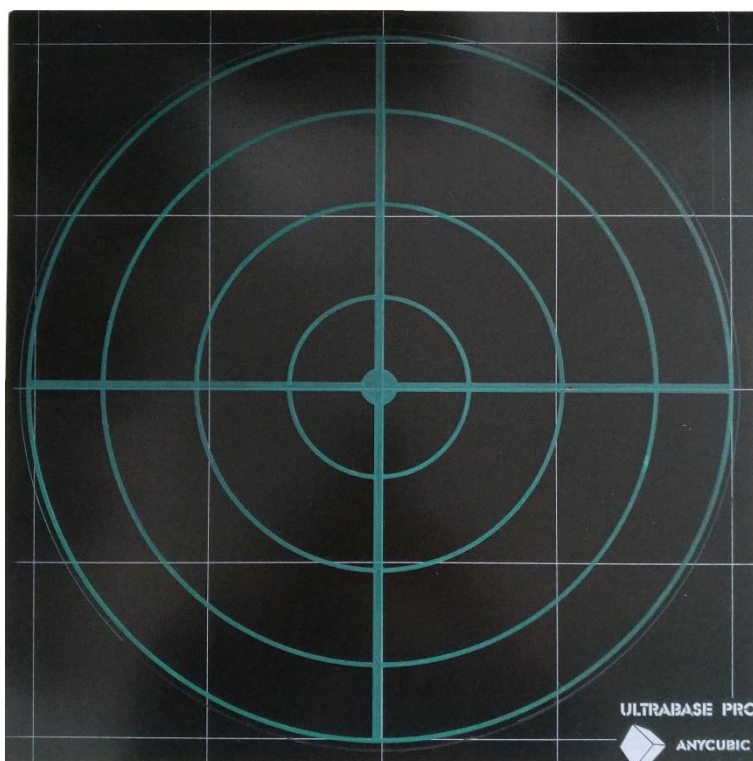


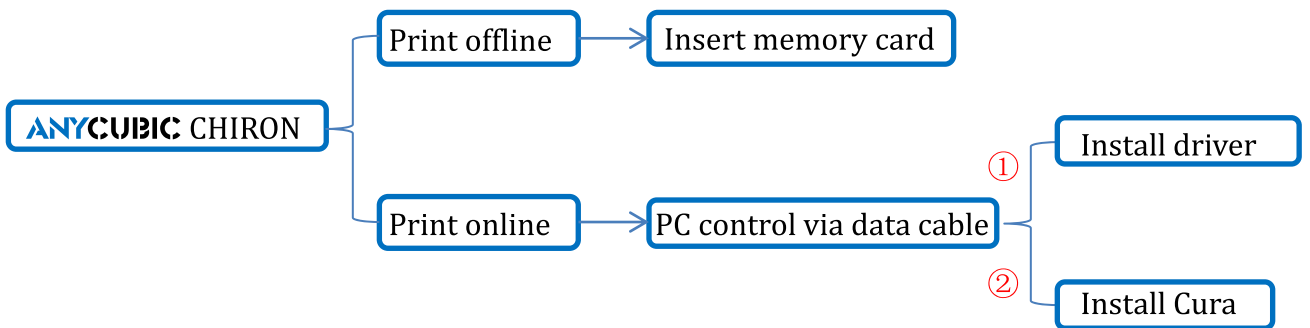
Figure (2)

Driver installation

There are two operational mode for **ANYCUBIC** CHIRON : print offline and print online.

Print offline: As shown previously, after insert memory card, platform leveled, click “Print” on the display and print a selected file (GCode files ONLY).

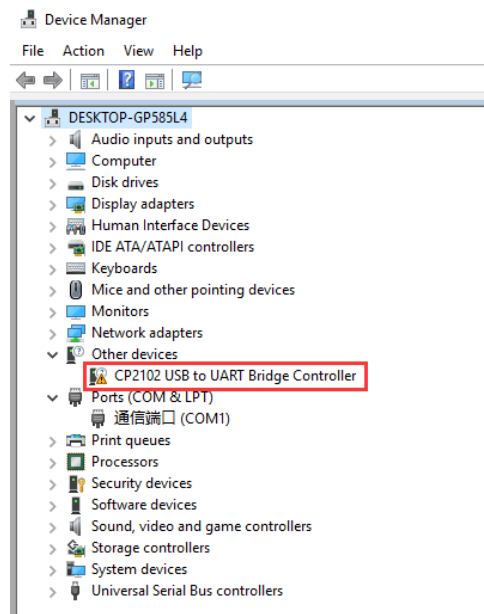
Print online: Install CP2102 driver to bridging PC and machine, and install Cura for slicing and control the machine to print via data cable.



It is suggested to use **Print Offline** mode to minimize the noisy signal via data cable.

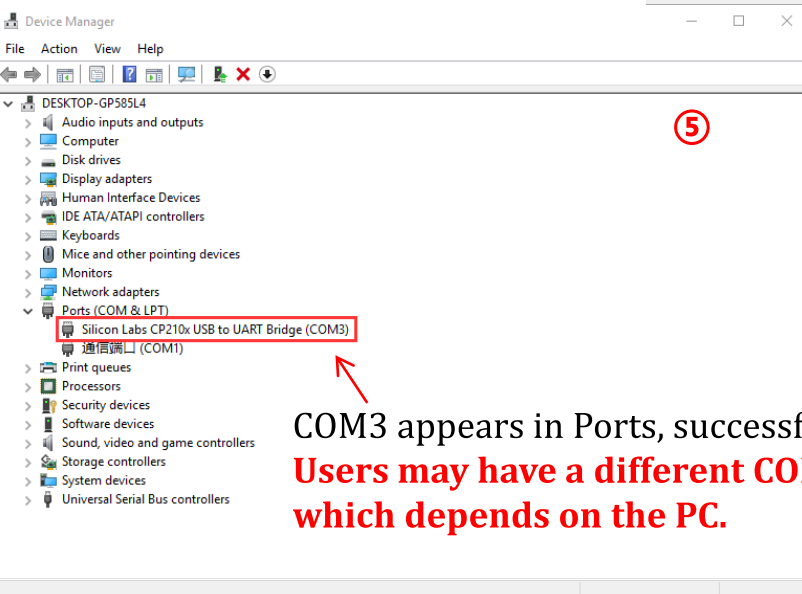
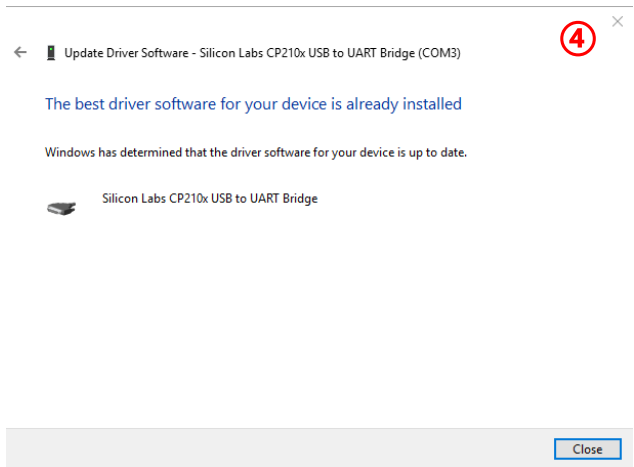
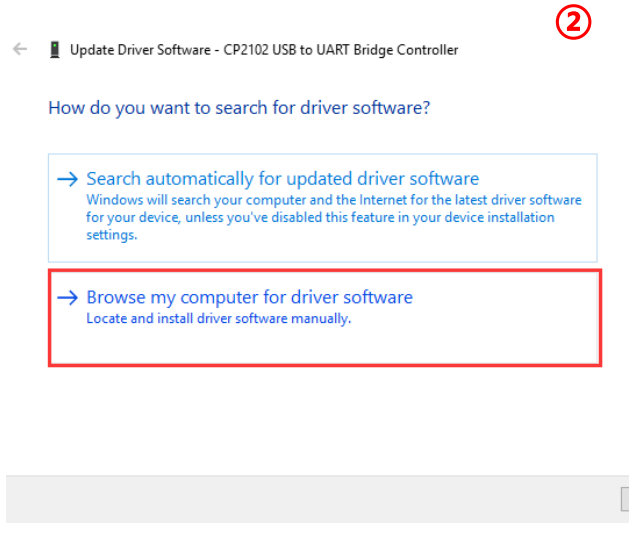
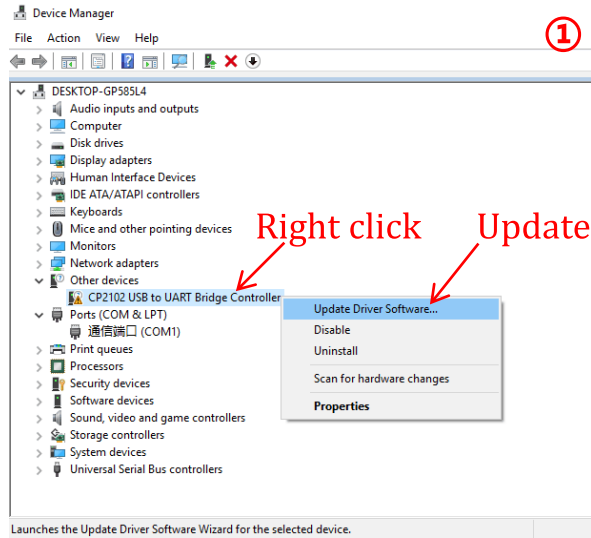
How to install the software to enable PC control (print online).

First, turn on the machine, connect the printer (data cable port) and your PC via data cable. **ANYCUBIC** CHIRON uses CP2102 chip for communication. The CP2102 driver may not be installed automatically, so it is required to check that. Right click “This PC” → “Properties” → “Device manager”, if there is an exclamation mark as shown below, then it needs to be installed manually.



Driver installation

CP2102 driver files are located in the memory card (or visit our website to download). “Files_English_CHIRON”→“Driver_CP2102”→“Windows” (“CP210xVCPInstaller_x64” is for 64 bit system and “CP210xVCPInstaller_x86” is for 32 bit system). Here Windows 7 64 bit PC is taken for example:

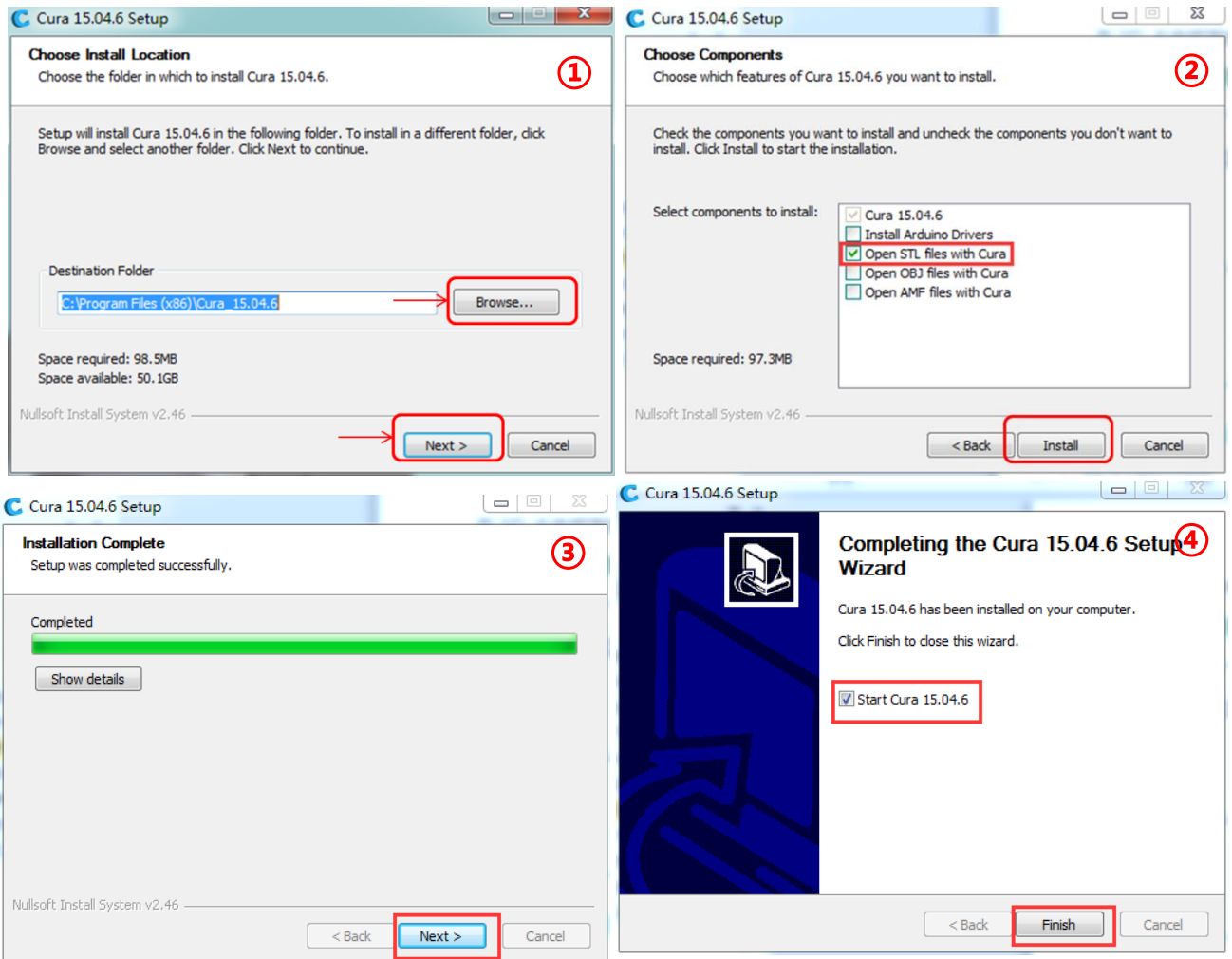


Introduction to slicing software

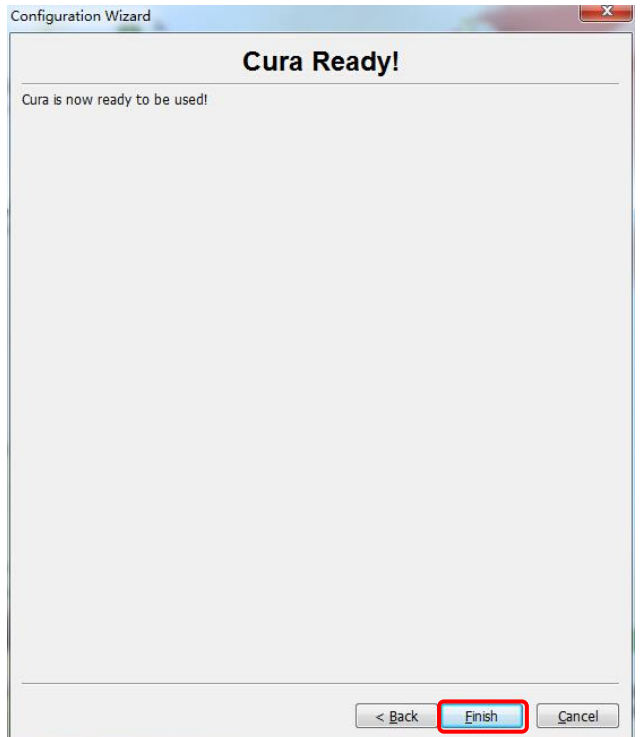
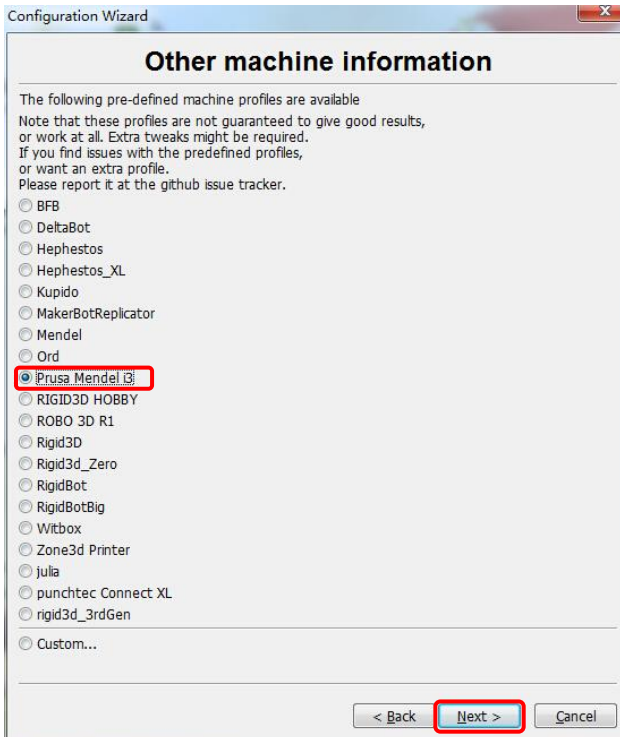
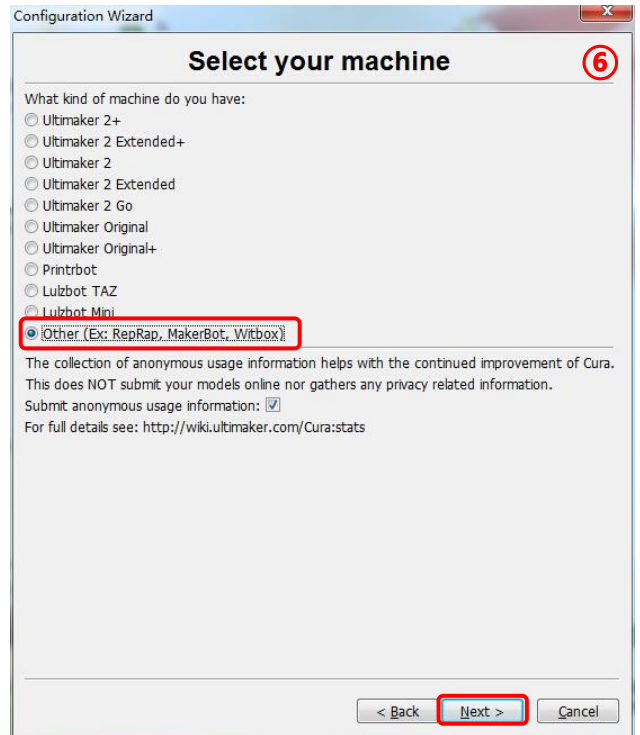
Introduction of slicing software: ①Cura installation, ②Manipulate 3D model in Cura, ③Cura settings, ④Print online, ⑤ Print offline

1. Cura installation

Cura15.04.6 is used for example here (Users may use their own slicer software). It is located in memory card→“ Files_English_CHIRON”→ “ Cura”→ “ Windows”. Double click “Cura_15.04.6”, and follow the steps as shown below.



Next, before start Cura for the first time, there will be more settings about the language and machine types, as shown below:

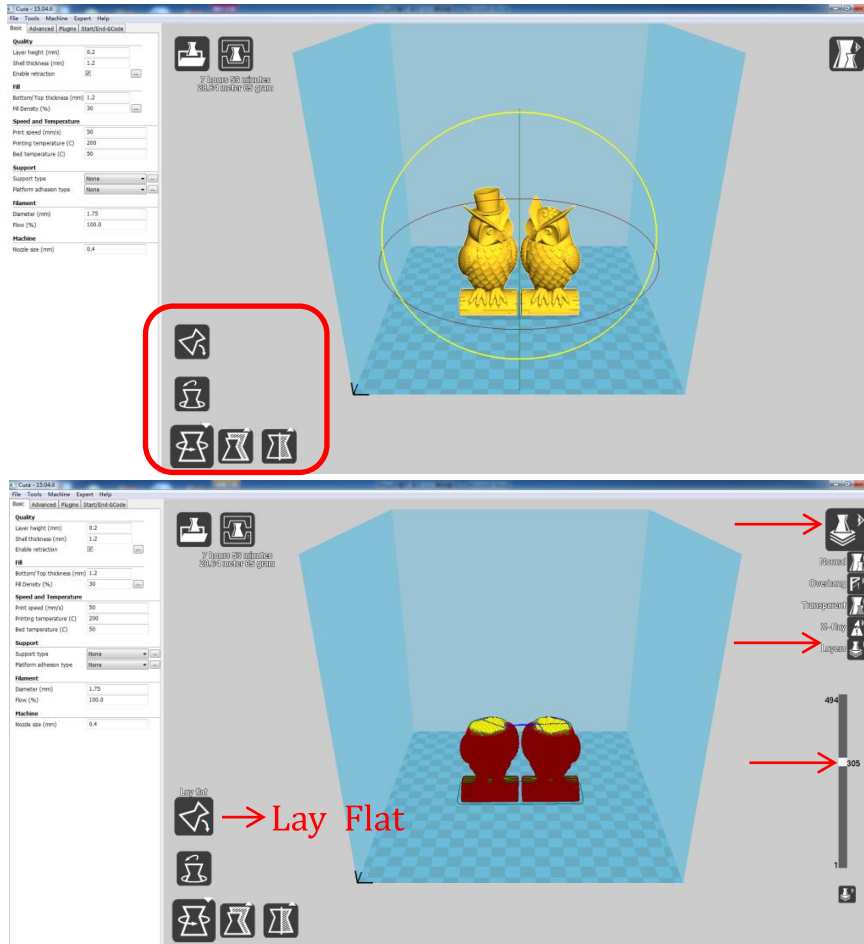


Upon finishing, open Cura for the first time, there might be a default robot model, customers may click “File”→ “Clear platform” to delete it.

Introduction to slicing software

2. Manipulate 3D model in Cura

In the Cura software interface, click on the “File” → “Load model file” to import your own three-dimensional format model (such as .stl file). Users can “Rotate” “Scale” “Mirror” the model. As shown below:

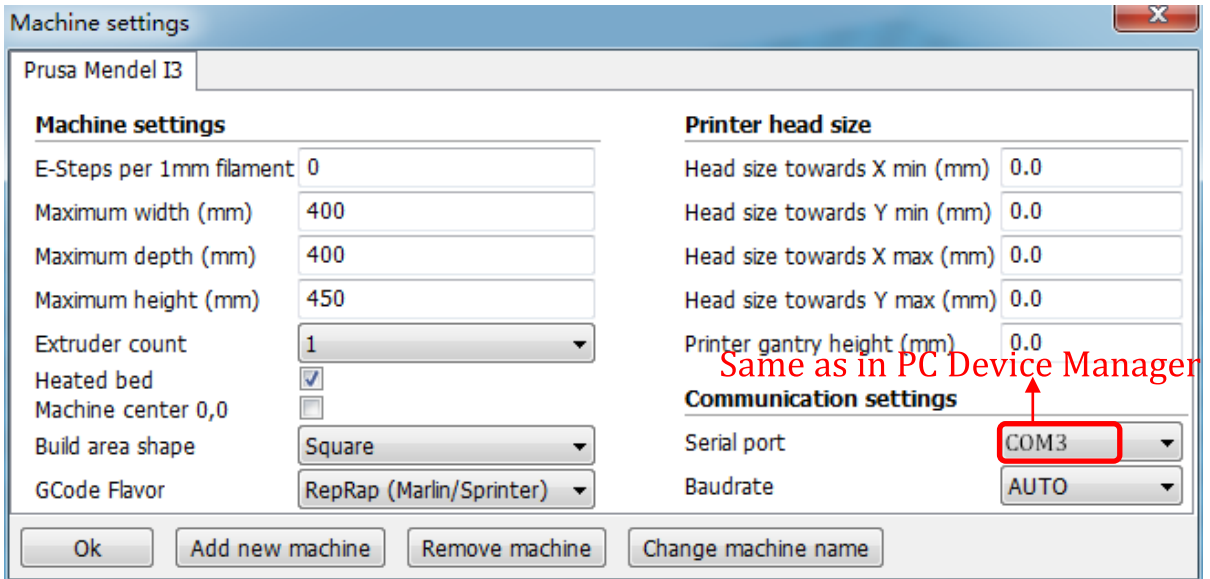


Other operations:

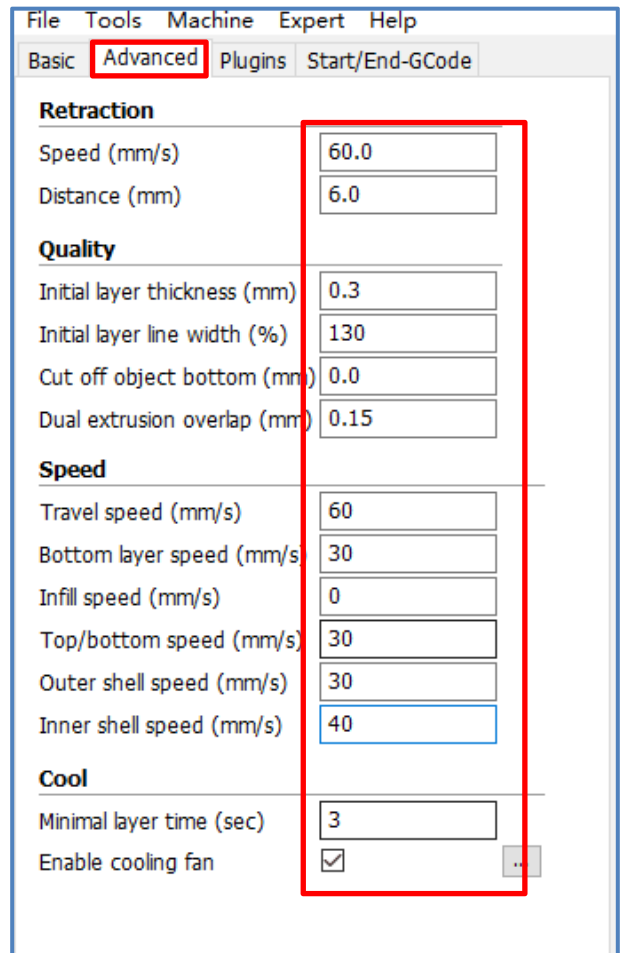
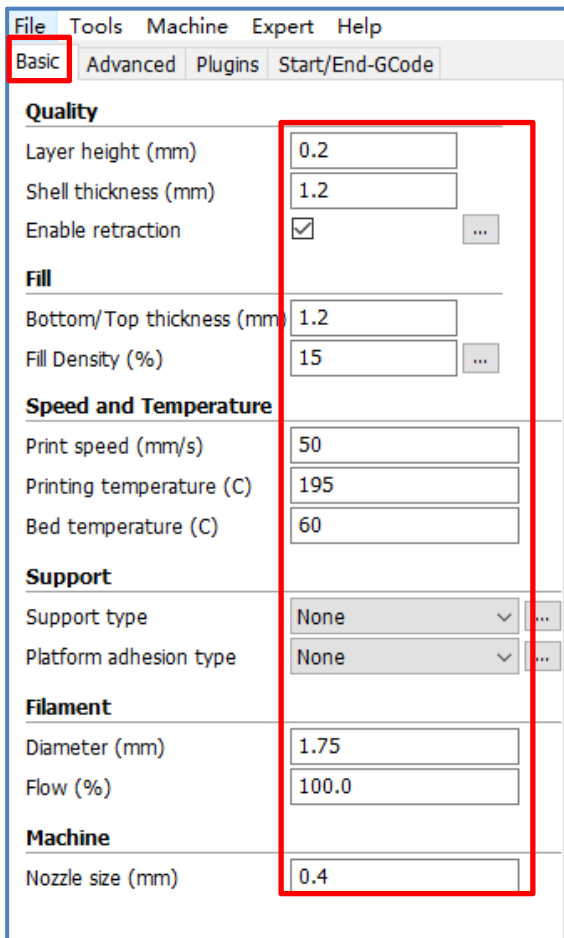
- (1) Change viewing angle : right click the model, hold on and move the mouse.
- (2) Zoom in/out : scroll the mouse wheel.
- (3) Position change : left click on the model, hold on and drag the model to move.
- (4) After rotating the model, it is strongly recommended to click on the 'Lay Flat' icon to ensure that flat portion of the model is well attached to the platform.

3. Cura settings

(1) In the menu bar, select “Machine” → “Machine settings”. Please choose the same Serial (COM) Port as shown in your PC → Device Manager → Port (customers may have a different COMx other than the example COM3 below).



(2) Click “OK” for the settings to return to the main interface, and then set the “Basic” and “Advanced” parameters separately, as shown below:



Introduction to slicing software

(3) In the menu bar, select “Expert” → “Open expert settings ” , and then set the parameters separately, as shown below:

Those parameters are just for example and reference, users may have to fine tune those parameters to gain the best printing results.

The screenshot shows the Cura 15.04.6 interface. The 'Expert' menu is open, showing options like 'Switch to quickprint...', 'Switch to full settings...', 'Open expert settings...', 'Run bed leveling wizard...', and 'Run head offset wizard...'. The 'Open expert settings...' option is highlighted. Below the menu, the settings panel is visible, showing various parameters for Retraction, Quality, Speed, and Cool.

Section	Parameter	Value
Retraction	Speed (mm/s)	
	Distance (mm)	
Quality	Initial layer thickness (mm)	0
	Initial layer line width (%)	140
	Cut off object bottom (mm)	0.0
	Dual extrusion overlap (mm)	0.15
Speed	Travel speed (mm/s)	60
	Bottom layer speed (mm/s)	15
	Infill speed (mm/s)	0
	Top/bottom speed (mm/s)	30
	Outer shell speed (mm/s)	30
	Inner shell speed (mm/s)	40
Cool	Minimal layer time (sec)	5
	Enable cooling fan	<input checked="" type="checkbox"/>

The screenshot shows the Cura 15.04.6 settings panel for Retraction, Skirt, and Infill. The Retraction and Infill sections are highlighted with a red border.

Section	Parameter	Value
Retraction	Minimum travel (mm)	1.5
	Enable combing	No Skin
	Minimal extrusion before retracting (mm)	0.02
	Z hop when retracting (mm)	0.075
Skirt	Line count	1
	Start distance (mm)	3.0
	Minimal length (mm)	150.0
Cool	Fan full on at height (mm)	0.5
	Fan speed min (%)	100
	Fan speed max (%)	100
	Minimum speed (mm/s)	10
	Cool head lift	<input type="checkbox"/>
Infill	Solid infill top	<input checked="" type="checkbox"/>
	Solid infill bottom	<input checked="" type="checkbox"/>
	Infill overlap (%)	1
	Infill prints after perimeters	<input checked="" type="checkbox"/>

Introduction to slicing software

CHIRON is compatible with flexible filament, and we provide the settings as shown below if using **ANYCUBIC** flexible filaments (**users may have to fine-tune the settings based on the actual printing conditions, and type of filaments, etc.**).

Machine settings X

Prusa Mendel I3

Machine settings

E-Steps per 1mm filament

Maximum width (mm)

Maximum depth (mm)

Maximum height (mm)

Extruder count

Heated bed

Machine center 0,0

Build area shape

GCode Flavor

Printer head size

Head size towards X min (mm)

Head size towards Y min (mm)

Head size towards X max (mm)

Head size towards Y max (mm)

Printer gantry height (mm)

Communication settings

Serial port

Baudrate

Basic
Advanced
Plugins
Start/End-GCode

Quality

Layer height (mm)

Shell thickness (mm)

Enable retraction ...

Fill

Bottom/Top thickness (mm)

Fill Density (%) ...

Speed and Temperature

Print speed (mm/s)

Printing temperature (C)

Bed temperature (C)

Support

Support type ...

Platform adhesion type ...

Filament

Diameter (mm)

Flow (%)

Machine

Nozzle size (mm)

Basic
Advanced
Plugins
Start/End-GCode

Retraction

Speed (mm/s)

Distance (mm)

Quality

Initial layer thickness (mm)

Initial layer line width (%)

Cut off object bottom (mm)

Dual extrusion overlap (mm)

Speed

Travel speed (mm/s)

Bottom layer speed (mm/s)

Infill speed (mm/s)

Top/bottom speed (mm/s)

Outer shell speed (mm/s)

Inner shell speed (mm/s)

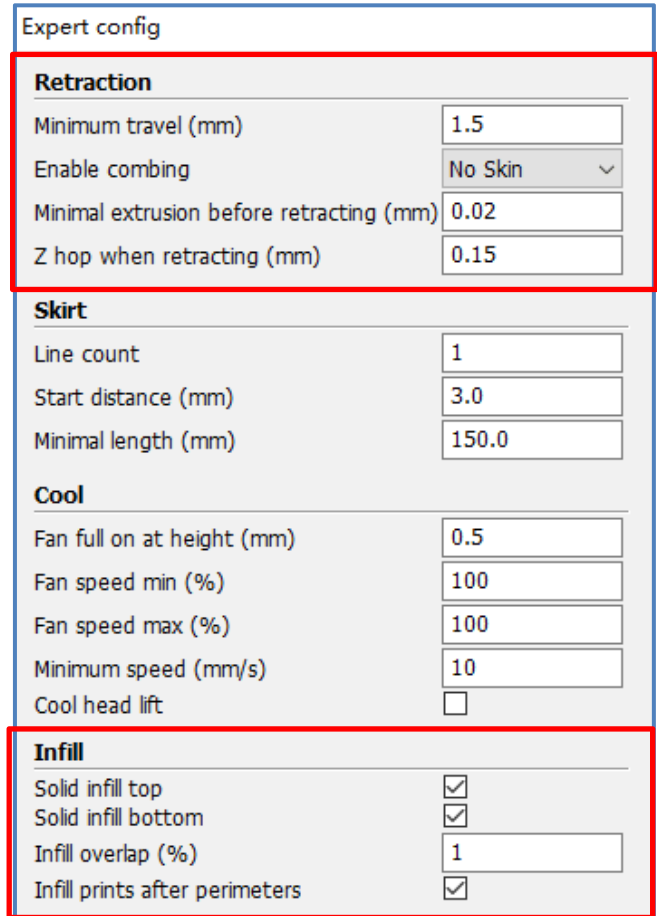
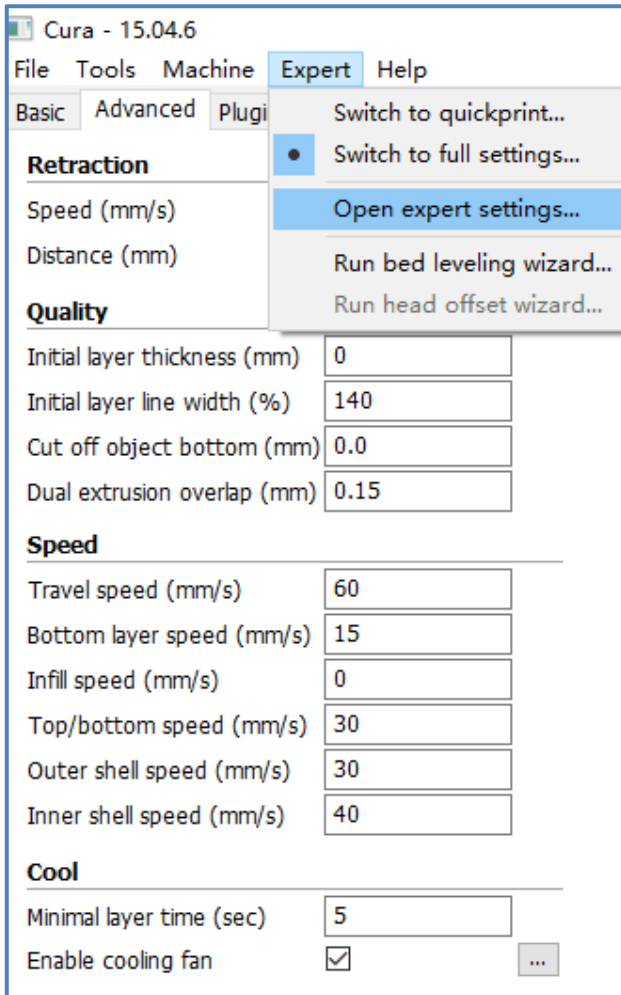
Cool

Minimal layer time (sec)

Enable cooling fan ...

Introduction to slicing software

(3) In the menu bar, select “Expert” → “Open expert settings ” , and then set the parameters separately, as shown below:



Explanation:

Layer height: determine the important parameters for print quality, usually set to 0.1-0.3.

Shell thickness: usually set to a multiple of the nozzle diameter.

Fill density: The larger the parameter, the more solid the model is.

Print speed: printing too fast may make printer shaky, 50mm/s is suggested.

Printing temperature: PLA should be 190-210 °C, ABS should be 230-240 °C, and TPU should be 190-220 °C .

Filament diameter: 1.75mm.

Nozzle size: 0.4mm.

Retraction speed: Increasing the retraction speed and distance can reduce the stringing problem, but set it too high may cause clogging.

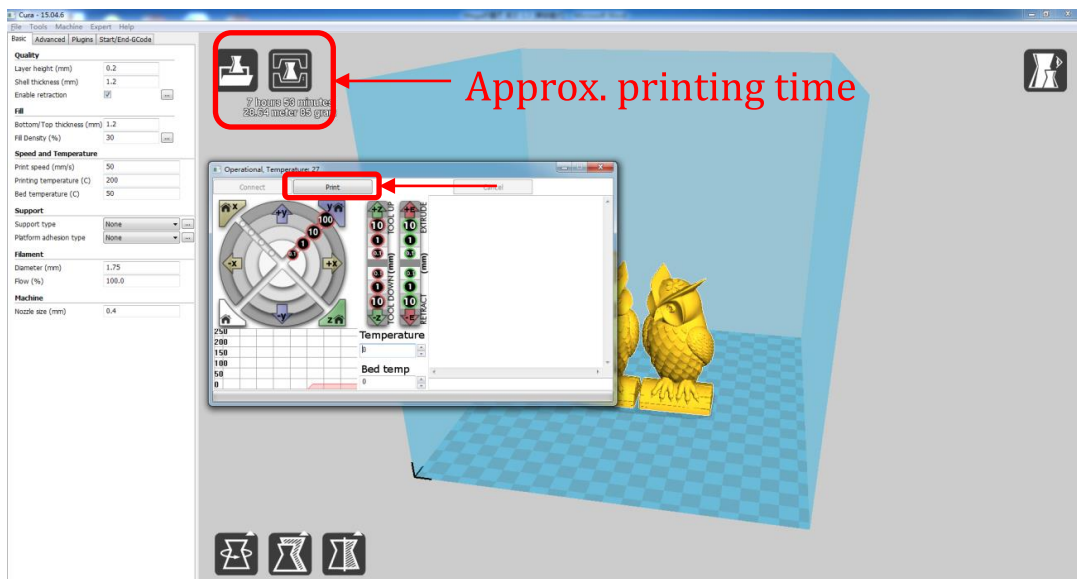
Travel speed: 60mm/s is suggested, the printing accuracy would be affected if it is too fast.

Outer shell speed: Reducing the outer shell print speed would create a more smooth model surface.

4. Print online

After the parameters have been set up, you can print online via Cura.

As shown below, click on the upper left corner “File” → “Print”, Cura will automatically connect to the printer. The user can click “Print” icon when it is available. Then the temperature would rise and it will start to print when reaching to the target temperature. Use tweezers to carefully get rid of the pre-extruded filament at the nozzle tip.

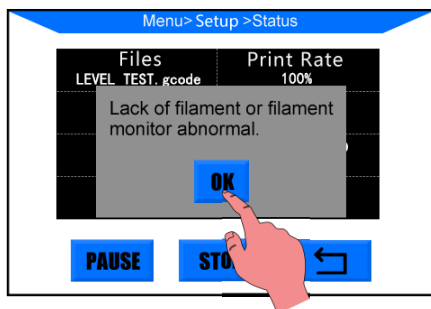


5. Print offline

After completing all the parameter settings, click on the Cura software main interface "File" → "Save GCode". Save the model GCode file to the **memory card**, and then insert the memory card to the printer and control via the touch screen for offline printing.

Note: the file name should only contain English letters, underscore and space. File name contains special characters could not be recognized by the printer.

1. **ANYCUBIC** CHIRON alarms when filament break during an ongoing print, the interface shown below will be popped up.

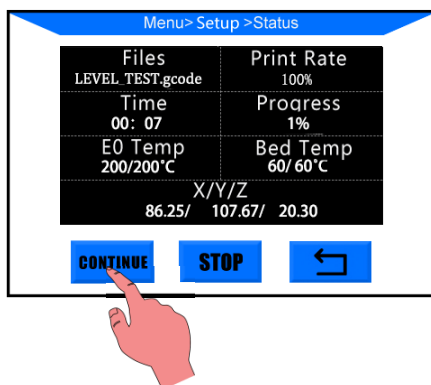


2. Click "OK", remove the remaining filaments and re-installing new filaments.

Remove the remaining filaments: press the handle on the extruder and firstly push the filament in until the filament is just melted through the nozzle, then pull it out quickly.

Re-install new filaments: see page 14 "Install filament".

3. After the filaments re-installed, use tweezers to clean the filament residue on nozzle tip. Then click "CONTINUE", the print will start again from the last position.



Resume from outage

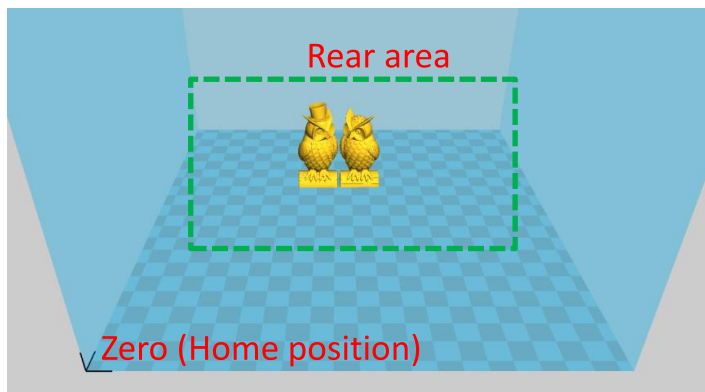
ANYCUBIC CHIRON allows resume print after accidentally power outage (**This function only valid when print offline, via memory card only**).

1. As shown in Fig.(3)(4) , in slicing software (i.e. Cura), it is required to place the model at the rear of the platform. Because during “RESUME”, machine will home first and could touch/interfere with the unfinished object if the model was placed in the front area.

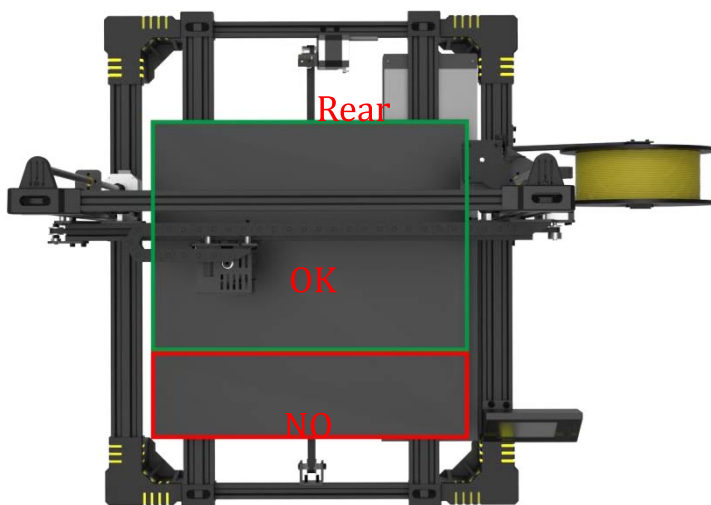
2. For the first time of using this function, users are required to add “G5” to the start.gcode, as shown in Fig. (5). Then, save the model as GCode file to the memory card by “File” → “Save GCode”.

Note: ① “Resume from outage” is valid only for offline printing;

② Just type the “G5” when you use it for the first time, G5 will be automatically added later, without having to manually type it again.

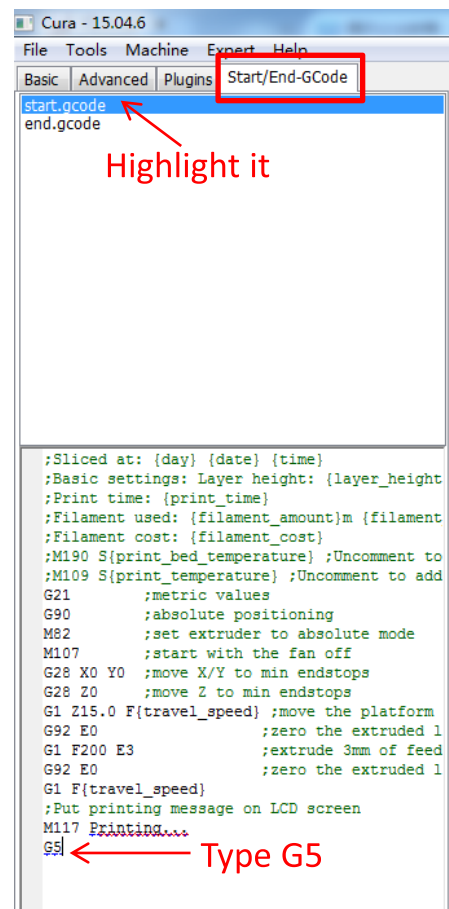


(3)



Front

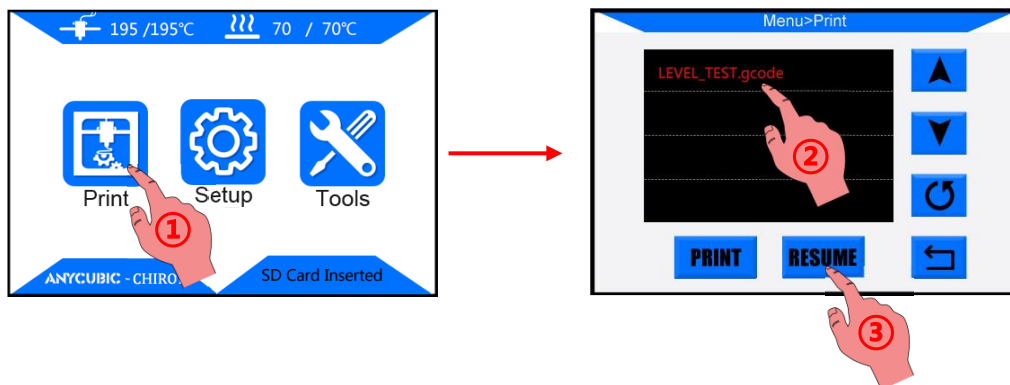
(4)



(5)

Resume from outage

3. During printing, if there is an accident power loss, the print will stop immediately. But after power comes back, customers could choose “Print” → select the unfinished file → “RESUME”, machine will home first and continuing on the unfinished object.



Note:

- ① In order to get smooth surface, use tweezers to carefully remove the excessive filament at nozzle before continuing print upon the last point.
- ② Do not move Z axis after power off otherwise resume will be invalid.
- ③ **ANYCUBIC** CHIRON supports resume from outage only when print offline
- ④ This function is developed based on Cura. We could not guarantee this function compatible with other slicing software.
- ⑤ Due to the differences of models, filaments, temperature, extrusion settings, etc...we could not always guarantee a perfect surface finish at the point of “RESUME”, especially for small objects.

Troubleshooting

1. Motor shaking or abnormal sound

- ① The corresponding end stop could not be triggered when Home, check the wirings, and inspect any obstacles by manually moving the corresponding axis
- ② The motor cable are not connected properly, check each connection and then inspect the cable routing for any faults

2. File not printing or memory card failure

- ① Remove the memory card and insert into PC. Open the GCode files using text editor (eg. Notepad), and inspect if GCode is readable or not. If files contains of multiple “ÿ ” symbol, then file has been corrupted. Try reformatting the memory card to FAT32 format and reloading the GCode file
- ② Memory card is not readable, ensure file name does not contain special characters or Change memory card
- ③ Touch screen freeze, reboot the machine and try again

3. No extrusion or extrusion motor knocking

- ① Ensure that the nozzle temperature has been set to match the filament
- ② Filament tangled on spool
- ③ Not enough cooling for the hotend
- ④ Nozzle clogged please try to replace it or clean it
- ⑤ Teflon tubing has been tangled, squeezed or bent

4. Filament leaking

Nozzle or throat tube is tightened properly, try to fix/change it after cooling

5. No sticking to the bed

- ① Print too fast at the bottom layer speed, reduce it to ~20mm/s
- ② Ensure that the print platform is clean (use alcohol if necessary)
- ③ Check if the bed is proper leveled
- ④ Add a brim or raft to the model in slicing software
- ⑤ Check the bed temperature matches the filament

6. Warping/curling of the printed object

- ① Check the bed temperature matches the filament
- ② Check the infill % of the GCode. The higher the infill, the more likely to warp
- ③ add a brim or raft to the model in slicing software.

7. Layer shifting

- ① Print head moving too fast, slow down the print speed.
- ② Check X/Y belt and the driving wheel and ensure they are properly installed.
- ③ Grease the rods and check all nuts and bolts remain tightened.

8. Freezing screen

- ① Inspect if the touch screen has been pressed by the metal frame at the edge
- ② Check if screen has cracks, if so, please contact our after sale service via official website www.anycubic3d.com

9. T0 sensor abnormal

- ① Check the wiring of the hotend and ensure a good connection
- ② Check if there is any pins bent inside the connector

10. Print head move abnormal

- ① Check if choosing the right machine type in slicing software
- ② Check if any plugins in the slicing software

11. Print stopped halfway

- ① Check if the GCode file is corrupted
- ② Delete plugins in the GCode file
- ③ Use print offline mode (memory card) instead of print online via data cable

Thank you for purchasing **ANYCUBIC** products! Under normal usage and service, the products and its parts have a warranty period up to one year. Please visit **ANYCUBIC** official website (www.anycubic3d.com) for more details and report any issues with **ANYCUBIC** products. Our professional after-sale service team would response within 24 hours and help you to solve the issue.



CPA008