EasyThreed®

K7 MINI 3D PRINTER

User's Manual

Please watch operation video in Website or YouTube Channel: EasyThreed 3D

www.easythreed.com

www.toy123d.com

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SAFETY WARNINGS AND GUIDELINES

Before installing and using this machine, make sure to read the following contents. Please do not use this machine with the methods not described in this user manual.

1. Take care to avoid touching hot parts, including heat blocks, extruder nozzle, filament and the heated print platform.
2. Keep the machine and all accessories out of reach of children.
3. Please use the power cord supplied with this machine.
4. This machine applies to 110 - 240V power supply.
5. Do not pull or twist the black cable at any time.
6. Do not reach inside the machine during operation.
7. Always allow the printer and extruded filament to cool before reaching inside.
8. Do not install the machine on an unstable surface where it could fall.
9. When printing with PLA filament, the plastics will create a light odor. Please place the machine in a ventilated, cool, dry area.
10. Do not expose the machine to water or moisture. If moisture does get in the machine, please unplug it from the power outlet and allow it to fully dry.
11. If the machine discharges smoke when printing, please unplug it from the power outlet immediately to stop use.

INTRODUCTION

Thanks for purchasing EasyThreed K7 mini 3D printer. It' s a 3D printer machine for beginners. Enjoy the happiness of creation.

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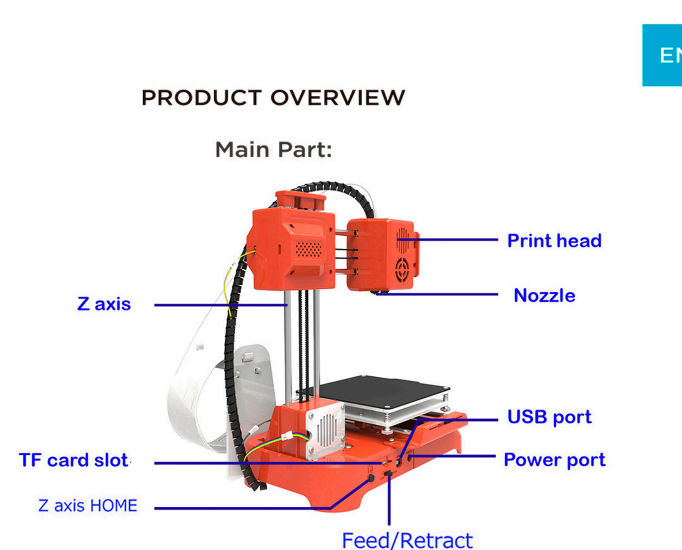
PRODUCT OVERVIEW

Main Part:



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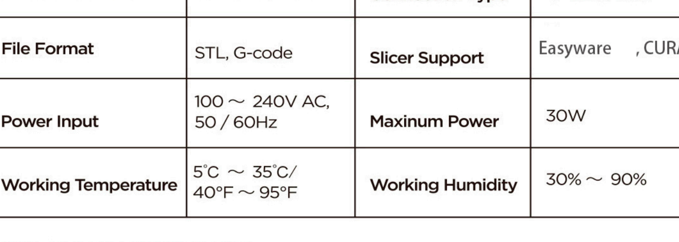
BASIC PARAMETER

Nozzle Diameter	0.4mm	Print Material	PLA
Extruder Temperature	180 - 230℃	Melt-down Temperature	PLA: 180℃
Print Speed	10-40MM/S	Layer Thickness	0.05 ~ 0.2mm
Building Size	100X100X100mm	Machine Size	175x235x270mm
Compatible Systems	Windows, Mac	Connection Type	TF card, USB
File Format	STL, G-code	Slicer Support	Easyware , CURA
Power Input	100 ~ 240V AC, 50 / 60Hz	Maxinum Power	30W
Working Temperature	5℃ ~ 35℃/ 40°F ~ 95°F	Working Humidity	30% ~ 90%

PACKAGE CONTENT



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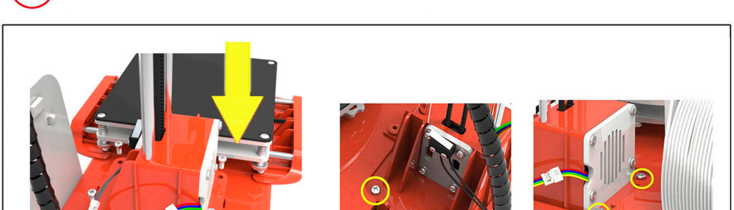
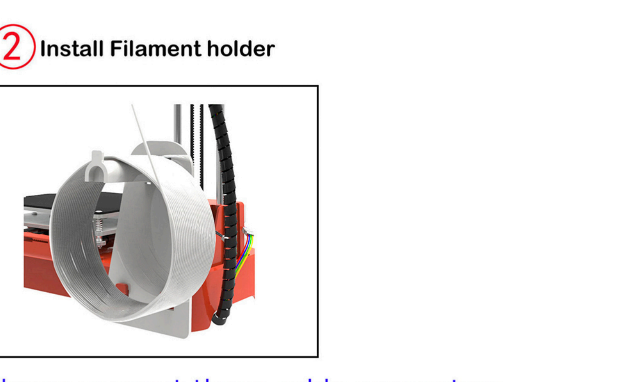
Installation

① Install the X.Z whole set to the base, fix with 4 screws.



② Install Filament holder

Please connect these cable connectors



INTRODUCTION OF STARTING UP

1. Power On

Insert power supply to power port of the printer . After powering up, the button will light up.

(Note: If printing is finished or no need to use for quite a long time, please unplug power supply to power off).

Precaution: Do not to move the X axis and Y axis with hand when the printer is powered on

2. Slicer Software Installation and Set Up

(1) This 3D printer has its independently developed slicing software named Easyware which is pre-installed in the TF card.

- Please copy Easyware file to your computer and no need installation. Or You can download software Easyware from EasyThreed official website directly. And you can watch Slicer operation video in EasyThreed 3D Youtube channel. Easyware slicer can recognize STL file format. (if you want better printing quality, you need to learn how to use CURA slicer, we supply teach manual)

- Convert STL file format to G-code format, and save it to TF card, and insert TF card to printer, then create the selected model.

(2) Create your own G-code file using other open source programs, such as Cura or Repetier-Host. These programs use the machine specific information to generate a G-code file.

To learn more about how to install and operate slicer software, please access to www.easythreed.com

Warm Notice: there is a gcode file inside the TF card when it come from factory

PRINTING

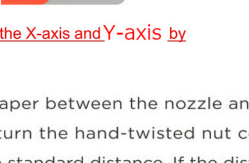
1. Platform Leveling

For the first time to use this printer, you need to level the build platform.

Please adjust the distance between the nozzle and the platform in ① ② ③ ④points.

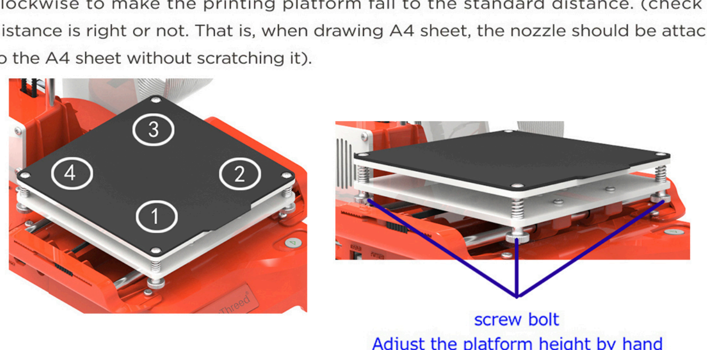
The nozzle height above the build platform should be 0.1mm, which is the thickness of a sheet of A4 paper.

(1) Press the button, the print head will drop to the lowest position



Please turn off the power when the Z-axis is down to zero position. After the power is turned off, you can move the X-axis and Y-axis by hand.

(2) Move the nozzle to point ①. Put a sheet of paper between the nozzle and the print platform. If the distance is too far, please turn the hand-twisted nut counter-clockwise to make the print platform rise to the standard distance. If the distance between the nozzle and the platform is too close, please turn the hand-twisted nut clockwise to make the printing platform fall to the standard distance. (check the distance is right or not. That is, when drawing A4 sheet, the nozzle should be attached to the A4 sheet without scratching it).



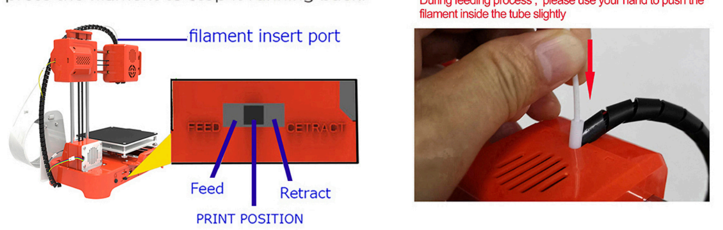
(3) Follow the same way to adjust another 3 points ② ③ ④.

(4) When the distance between the nozzle and the platform all is right distance in ① ② ③ ④ four points, leveling is finished and succeed.

Please turn on the power again after platform leveling

2. Load Filament & Feed

(1) Insert filament into the print head tube until it can not go further, and gently press the filament to stop it running back.



(2) Turn the gear to "FEED", the indicator light in front will flash rapidly, and the nozzle is heating (about one minute). When the filament come out of the nozzle evenly, the feeding is successful, and then turn the gear back to the "PRINT POSITION". Feeding finished.

Precaution: Make sure the distance between the nozzle and printing bed is 3cm at least. If no enough space, press the button for 3 seconds then release hand, Z axis will go up 1cm (when the machine stopped printing, press for 3 seconds then release, every time the nozzle will go up 1cm, users can decide the height).

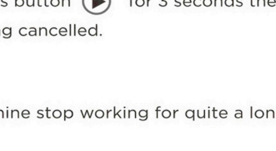
3. Print

Insert the TF card with gcode file inside

Click button, and the button light flashes regularly, printing starts Please be patient.

It will take a few minutes for the nozzle to warm up

(the Printer will choose the latest G-code file to print automatically).



(the printer only prints the latest gcode file in the TF card)

4. Pause/Restore

During printing, Click , the button light stops flashing, then printing paused.

If need to continue print, Click to restore, the button light flashes again, the printer goes back to print.

5. Stop Print

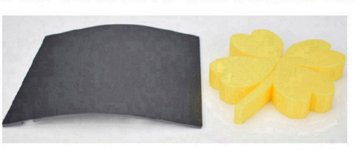
If you want to stop print during printing, long press button for 3 seconds then release, the machine will stop printing, then printing cancelled.

6. Unload Filament, Retract

If users want to change filament or keep the machine stop working for quite a long time, then need to unload the filament,

Turn the gear to "RETRACT", the indicator light in front will flash rapidly, the nozzle is heating (about one minute), the filament will automatically withdraw from the nozzle, and the return is successful. Pull filament out of the print head, and then turn the gear back to the "PRINT POSITION". filament unload completed.

After print, remove the platform, and easy to take off the object.



High quality filament which is preferred to be used.

Various of filament are available on the market, and quality is much different too. poor quality filament may cause broken or nozzle jam, Please choose high quality filament.

Safety Warning

Burning, keep your fingers away from the NOZZLE and BLACK INSULATOR when the printer is working as temperature in this area reaches over 200 Celsius degree. Always be sure to keep your hands away from moving parts when it is working.

MAINTENANCE

1 Do not use the methods that are not mentioned in this manual to disassemble or modify this machine, to avoid damage to this printer or may cause other serious accident.

2 When the power is off , regularly clean the machine with a piece of cloth to wipe off dust and residue, if the cloth is wet , do not use inflammable liquid to contact the inner circuit to avoid fire or electronic shock.

3 When printing finished, clean the residue in nozzle and extruder , to avoid nozzle choking for next printing.

4 Recommended temperature for working environment is 5℃-35℃. Please do not air the machine body with a fan when the printer is working .

5 Recommended humidity for the working environment is 30%-90% .

FAQ

Q1: Why is the printing model not adhesive to the printing bed?

A1: The nozzle is too far away from the bed, the proper distance between the nozzle and bed is the thickness of a piece of A4 paper.

Q2: Why the filament do not come out from the nozzle?

A1: Check the filament feeder. If it' s external gearfeeder, then to observe whether gear rotates or not. If it' s built-in stepper motor feeder, then to observe if the motor is working with a little sound. Otherwise, check if filament feeder is connected to it's main board well.

A2: Check temperature. Printing nozzle temperature of PLA material range s from 180-230℃.

A3: Check if the nozzle is blocked.

Heat the nozzle to 230℃ for PLA, push the filament gently, if there is still no filament come out, then need to disassemble the nozzle, clean or replace it.

A4, Check if nozzle is too close to platform, if so, the filament can not come out, so adjust the distance between nozzle and platform with a piece of A4 paper.

Q3, The problem of print model misplaced

A1, The model did not slice properly, need to re-slice or change the model position to generate new Gcode file.

A2,The model file problem, if the model is still misplaced after re-slicing, it' s the original file problem.

A3, the nozzle is forced to stop printing Path:

First, make sure you have not touched the nozzle when the machine is printing.

Second, if there is filament residue on the top layer, the residue area will become larger gradually, when it' s accumulate to a certain amount and become stiffer enough, the nozzle will be forced to move abnormally.

A4, Power supply is not stable

Check if large power electrical equipment is working while the machine is printing, dislocation happens when some equipment turns off such as air conditioner, if so, you need to connect a voltage stabilizer to the printer power supply. Otherwise, observe if the nozzle is blocked at a certain position, if so, the power supply on X,Y,Z axles are not even, then need to adjust the X,Y, Z electric current on the main board.

A5, If the above solution can not solve the misplace problem, the dislocation mostly happen at the same height for various models, then need to change the mother board.

Q4, Why the printing accuracy is quite different from the real model

A1, There is a lot of filament piled up on the model surface

A1.1, Nozzle temperature is too high, filament melt too fast and caused overflowing.

A1.2, The filament flow is too large, there is filament flow setting in slice software , change the default value 100% to be 80%.

A1.3, Filament diameter setting problem, it' s in slice software, the default settings are different, there are both 1.75mm and 3mm filament on the market, for 1.75mm, the diameter should be 1.75, but for 3mm, the diameter should be 2.85 or 2.95.

A2, Poor surface after removing the support for FDM technology.

A2.1, The support density should be as lower as possible, 10% is proper, it' s easy to remove.

A2.2, Trim the model with a grinding tool, rub gently with a towel and dip a little acetone, make sure to ware gloves before hand, and do not wipe too long to caused the appearance effected or dimension changed.

A3, The inappropriate distance between the platform and nozzle.

A3.1, The first layer is not formed, or the models are without edges or corners if distance is too large.

A3.2, The nozzle will scratch the platform and no filament come out of the nozzle if distance is too close, the proper distance is the thickness of an A4 paper.

A4, The inappropriate printing filament

With the maturity of 3d printing, various of filaments are available on the market, but the compatibility for filament and printers are particularly important.