



## **K1 plus USER'S MANUAL**

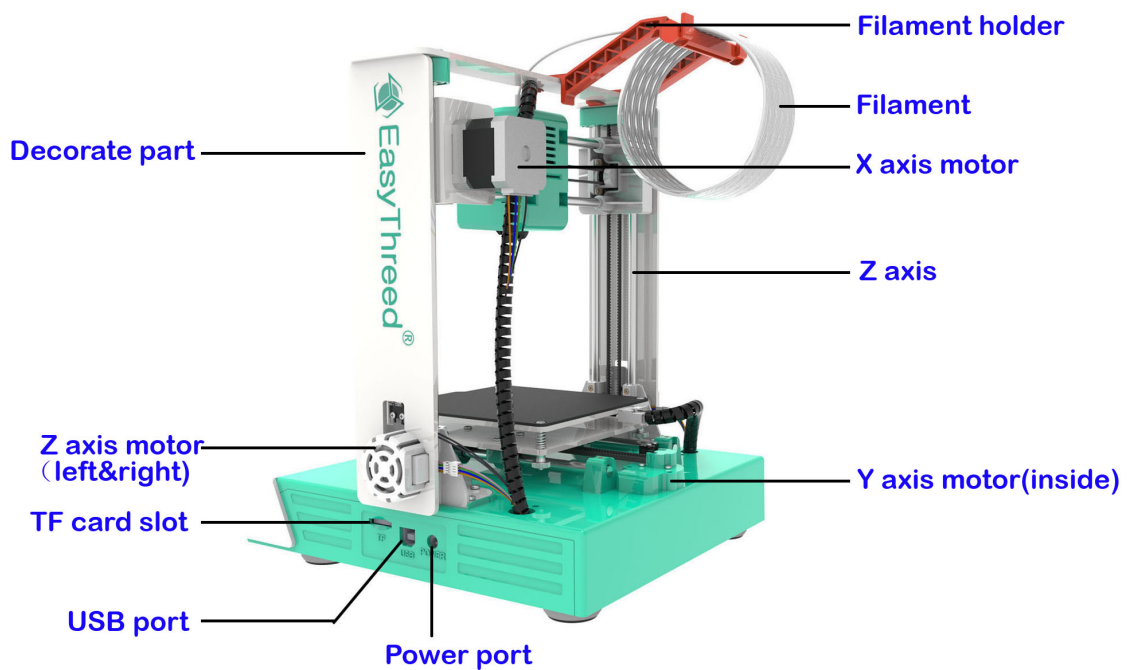
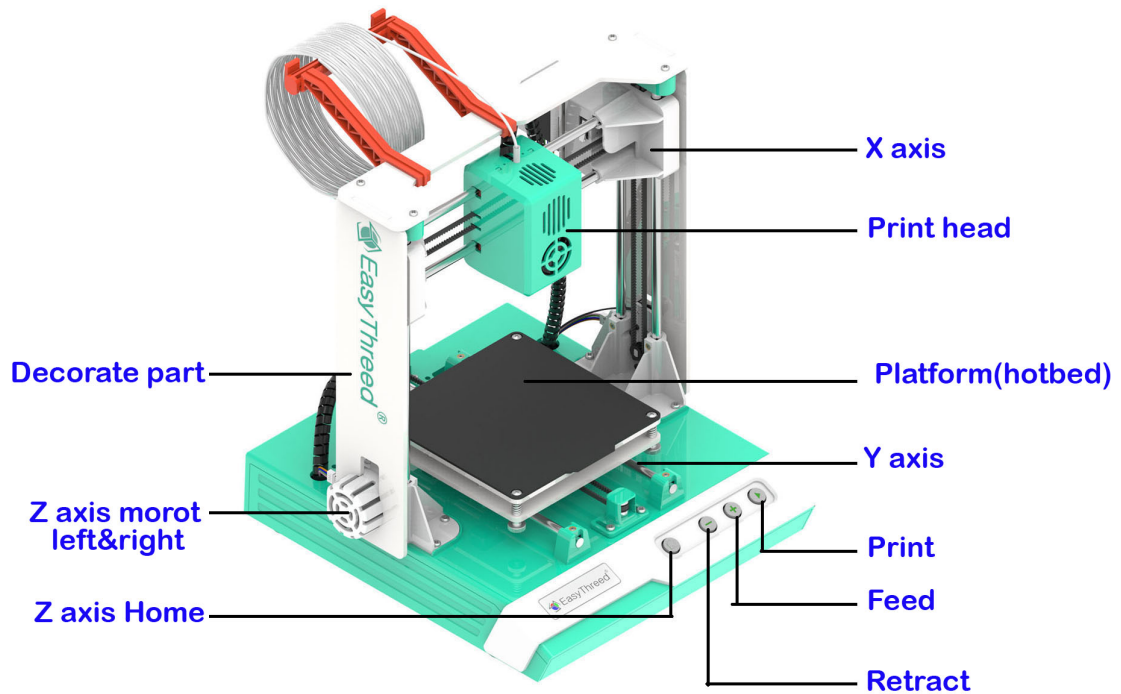
Please watch K1 plus operation video in Website or YouTube

Channel:Easythreed3D

Thanks for purchasing EasyThread K1 plus 3d printer, it's a 3d printer machine for beginners, enjoy the happiness of creation.

# 1, Printer Specifications

## 1.1 Main Part



## 1.2 Basic Parameter

### Print Basic Parameter

#### Operation Environment

Working Temperature:

5°C~35°C

Relative Humidity: 30%~

90%

#### Electrical Parameter

Power Input :100~240V

AC, 50/60Hz;

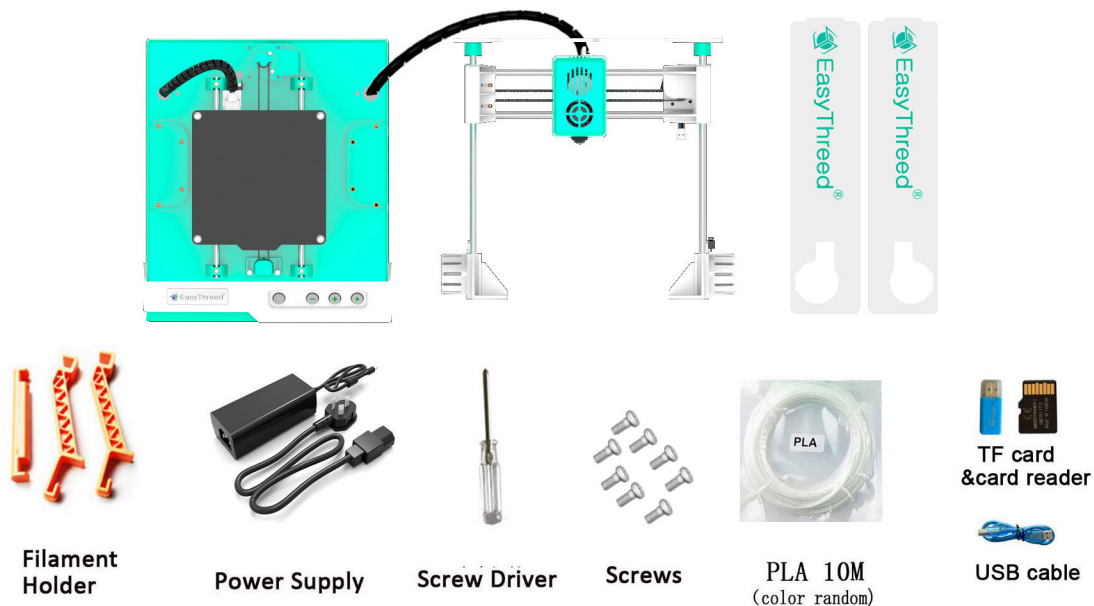
Power Output:12V/DC,5A

Maximum Power :60W

Nozzle Diameter	0.4mm	Print material	PLA
Extrude temperature	180-230°C	Recommend Temperature	PLA: 180°C
Print speed	10~120MM/S	Layer thickness	0.05~0.3mm
Building size	100X100X100mm	Machine size	280(h)*265(w)*250(l)mm
Compatible systems	Windows,Mac	Connection	TF card, USB
file input	STL	Slicer support	Easyware KS , CURA, S3D
File output	Gcode	N.W	2Kg

## 2, Un-Boxing and Install.


2.1 Take out The K1 plus Printer from it packaging box..Inside is an 3d printer and accessories box with manual, 10M filament, power adaptor, TF card, card reader, screw driver. Filament holder, screw.



## 2.2 Install the Printer, Please read install demo or watch K1 plus operation

video

## 3 , Power on

Insert our K1 plus provided power cable to power port at the side of the printer control box, electricity connected successfully when the light inside button  is on。 (Precaution: the USB port is preserved by our technical person for firmware updated , please do not use it ; If printing finished or no need to use for quite a long time, take off the power cable to power off)

## 4, Slicer software application (STL format 3D file need be sliced to gcode format that printer can recognize).

- (1).This 3d printer runs with it's own developed slicing software named Easyware KS , it is in the TF card included in the accessories box , please copy it to your computer and no need installation ,you can also download Easyware KS from official website, and you can watch Slicer operation video in Youtube channel. Easyware KS slicer can recognize STL format 3D file.
- (2). STL format 3D file need be sliced to .gcode format, and save to TF card, and Insert TF card to printer, then can print 3D file. (3D Printer can recognize gcode format file only)

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


The TF card insert with right direction



## 5, Print

( 1 ) **Platform Leveling**, The first time to use this printer, you need leveling the platform

Please adjust the distance between the nozzle and the platform in ① ② ③ ④ points, the distance should be just the thickness of a sheet of paper.( [Please do this leveling with the help of adults.](#))

a), Click the button , Z axis will go home position. After Z axis come to home position, [please turn off the power, after turn off the power ,then you can move the X axis and Y axis by hand](#)

( **Attention: when the hot bed is heating up, the home function will not react until the temperature of the hot bed reaches the set temperature** )

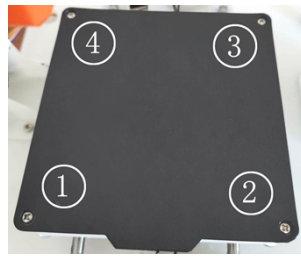
b), Move the nozzle to ① point, And put a sheet of paper between the nozzle and the platform, if the distance is too far , turn the hand-twisted nut counter-clockwise to make the printing platform rise to the standard distance. If the distance between the nozzle and the platform is too close, turn the 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).

c), do the same way to adjust another ② ③ ④ 3 points。

d), When the distance between the nozzle and the platform all is right distance in ① ② ③ ④ four

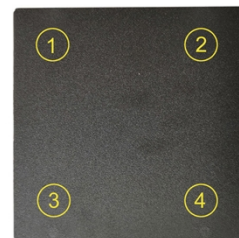
points, leveling finished and succeed.

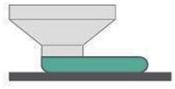
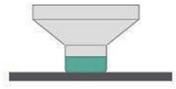

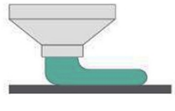
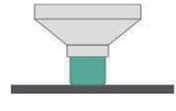

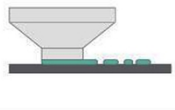
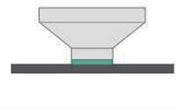




**Please turn on the power again after platform leveling**



**Leveling Diagram**


Four points ① ② ③ ④ on the platform corners  
 The distance between the nozzle and platform be the thickness of a piece of paper





A	Distance between the nozzle and platform is good			
B	Distance between the nozzle and platform is too far (the model can't stick)			
C	Distance between the nozzle and platform is too close			
D	There is no gap between the nozzle and platform The nozzle will be damaged			

**(2) Load Filament , feed**


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

(b),Click  button,the button light turn on and flash, the nozzle is heating , **Please be patient and wait about 2 minutes**, the machine begin to feed, when there is regular


silk come out of the nozzle, feed succeed, Then you can press  button to finish feed.


**Note:** Make sure the distance between the nozzle and printing bed is 3cm at least . If no enough space, press the button  hold for 3 seconds then release , Z axis will go up 1cm ( when the printer power on ,press  for 3 seconds then release , every time the nozzle will raise 1cm)

### (3) Print


Insert the TF card to the printer, Click  button, and the button light will flash, **Please be patient and wait about 5 minutes**, for the nozzle and hotbed to heat up, the **printer starts printing when the temperature rises to set value** ( the Printer will choose the latest gcode file to print automatically) .

### (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 .

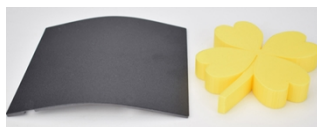
### (5) Stop Print

If you want to stop print during printing , 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 , Click  button,the light inside will flash, **Please be patient and wait about 2 minutes**, the motor inside the head will work and draw out the filament , after that, take out the filament from the print head.

**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, Pls choose Easythreed 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 Mercury is working .

## 6. Maintenance

- 6.1 Do not use the methods that is not mentioned in this manual to disassemble or modify this machine , to avoid damage to this printer or may cause other serious accident .
- 6.2 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 .
- 6.3 When printing finished, clean the residue in nozzle and extrude , to avoid nozzle choke for next printing , it is also basic maintenance.
- 6.4 Recommended temperature for working environment is 5°C-35°C , do not air the machine body with a fan when the printer is working .
- 6.5 Recommended humidity for the working environment is 30%-90% .

## 7. 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 200-230°C.

A3, Check if the nozzle is blocked.

Heat the nozzle to 230°C 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 accumulates to a certain amount and becomes 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 axes 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 happens 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 melts too fast and causes 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 low 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 wear gloves before hand, and do not wipe too long to cause the appearance affected 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 comes 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 filaments are available on the market, but the compatibility for filament and printers are particularly important.

**Thanks for choosing Easythreed, we will try our best to serve you**

**ShenZhen Easythreed technology CO.,LTD**

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