

GEEETECH 3D Printer

E180

—User Manual—



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Safety and Compliance

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, this equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

FCC ID: 2ANHN-E180



Safety alert symbols precede each safety message in this manual. These symbols indicate potential safety hazards that could harm you or others or cause product or property damage.



Warning: The Geeetech E180 generates high temperatures. Always allow the Geeetech E180 to cool down before you reach inside.



Warning: The Geeetech E180 includes moving parts that can cause injury. Never reach inside the Geeetech E180 while it is in operation.



Warning: There is a risk of shock. This product is not user serviceable.



Warning: Do not leave the Geeetech E180 unattended during operation.



Caution: Do not print using materials that have not been approved by GEEETECH for use with the Geeetech E180.



Caution: The socket outlet must be located near the equipment and must be easily accessible.



Caution: In case of emergency disconnect the Geeetech E180 from the wall socket.



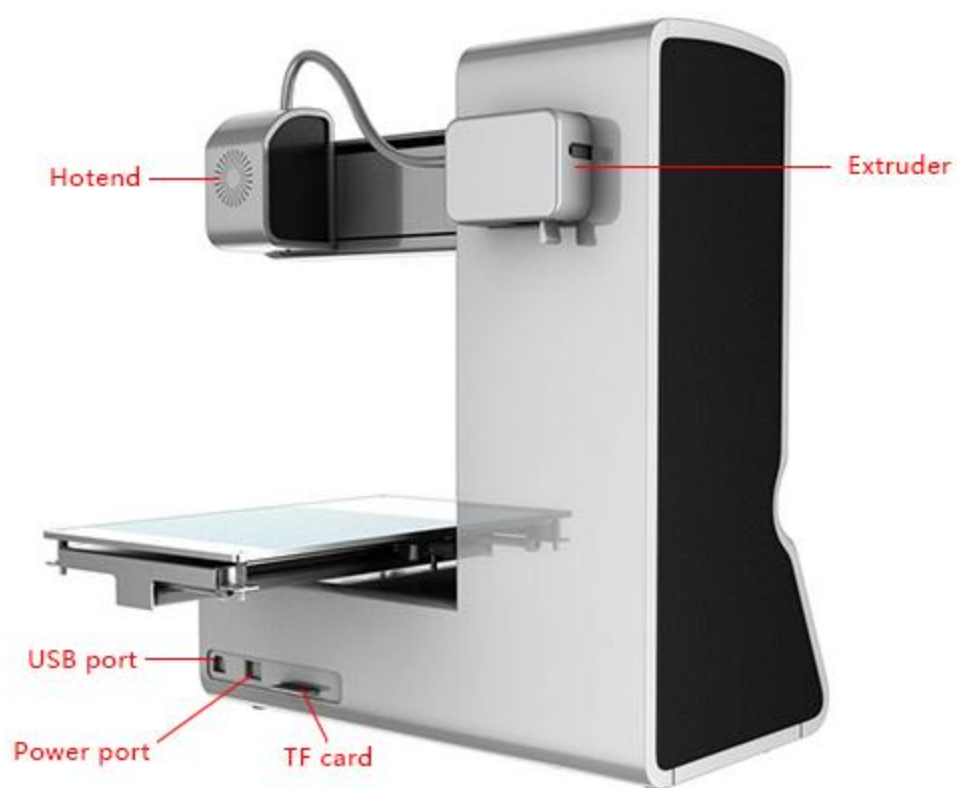
Caution: The Geeetech E180 melts plastic during printing. Plastic odors are emitted during this operation. Make sure to set up the Geeetech E180 in a well-ventilated area.

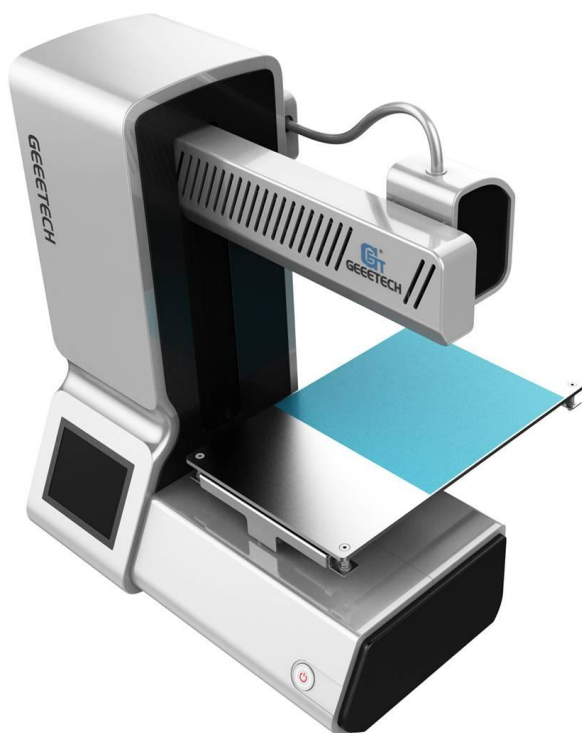
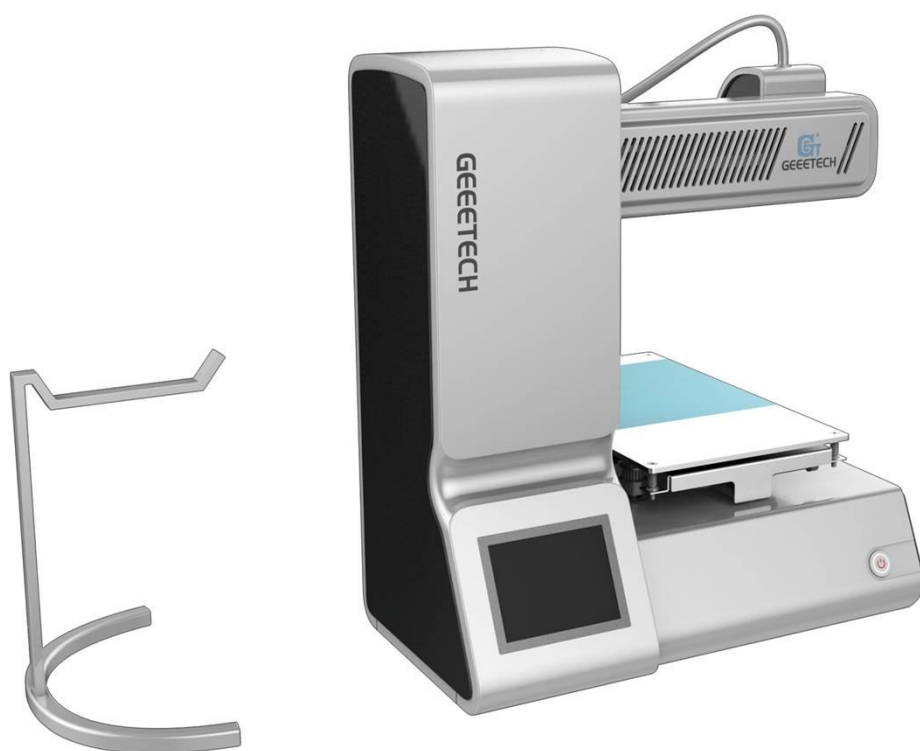
1. About E180

Geetech has launched its brand new cloud 3D printer --- E180, trying its hand at integrating 3D printing technology into education. Compact and easy-to-manage, E180 is geared toward helping students map their boundless imagination to real experiences and tangible creations through trial and error. Made from sheet metal and injection modeling, this new device looks tiny, simple, exquisite and elegant. With its cantilevered design comes light, fast and stable printing performance.

With its control board and power supply unit and other components enfolded by the mechanical enclosure, E180 could make efficient use of the outside space and further eliminate potential security loophole. Distinguished from other 3D printers, this new machine comes with an extended build volume of 300*180*180mm and high printing accuracy at 0.05mm and delivers excellent printing quality.

Besides, E180 stands alone with the following stellar features. Wi-Fi connectivity enables users to get access to cloud 3D printing solution via EasyPrint 3D App, where they could direct real-time control over the whole printing process and enjoy a large amount of free 3D models. The combination of a full-color touch screen and TF card supports stand-alone printing, greatly simplifying the overall operation flow. The employment of PLA not only meets students' various printing needs, but also makes sure that the whole printing process is safe and environment-friendly.





2. Software Resources

We use EasyPrint 3D as the printing and control software by default. Please click on [here](#) to download.

After your downloading, it is convenient to install this software by following the guidance.

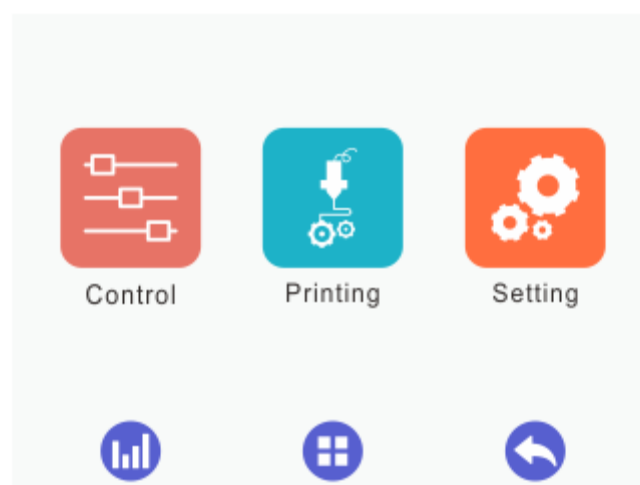
3. USB Driver

Connect the printer to your computer (Windows 7) with USB cable, the motherboard driver installer will automatically appear and your OS will complete the overall installation process. After the installation, please find the corresponding COM port in the Windows "Device Manager".

4. Introduction to the Menu of the Touch Screen

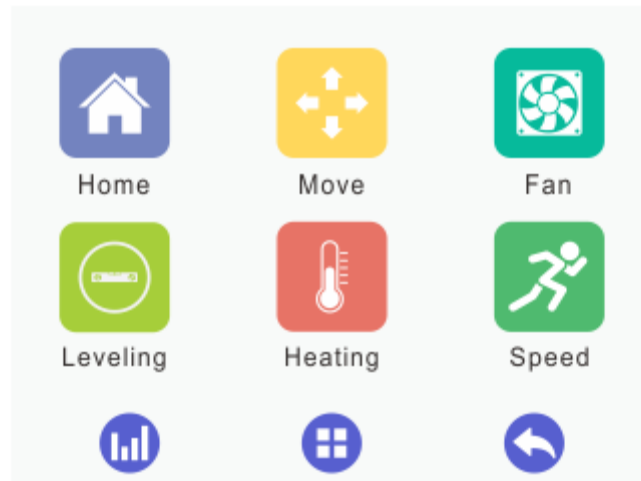
4.1 Home Page

After you start E180, on the touch screen will appear the home page, showing three main menu functions: control, printing and setting. Click on the three menus respectively to direct detailed operation over the overall printing process.

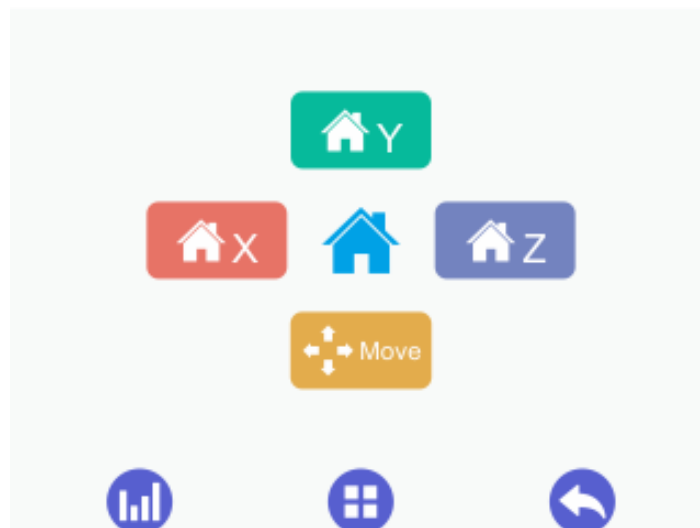


4.2 Control






Click the [Control] menu to enter the corresponding interface, where it is convenient to manually control the 3D printer by means of the following functions: home, move, fan, leveling, heating and speed, as shown by the picture below.



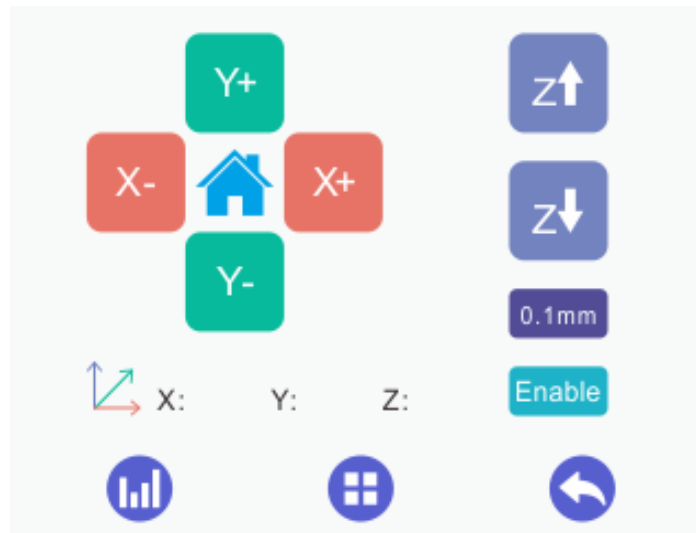
4.2.1 Home






- 1) When the printer is running with a TF card or connected with a computer, clicking on the [Home] menu is disabled. This situation also applies to the [Disable] status of the stepper motors.

- 2) When the printer is idle, you can click    to home X/Y/Z axis respectively. Besides, it is efficient to click  to home the three axes simultaneously.
- 3) Choose the  button to get to the [Move] interface.

4.2.2 Move



- 1) When the printer is running with a TF card or connected with a computer, clicking on the [Move] menu is disabled. This situation also applies to the [Disable] status of the stepper motors.
- 2) When the printer is idle,
 - X-: X axis moves away from the end stop;
 - X+: X axis moves towards the end stop;
 - Y-: Y axis moves away from the end stop;
 - Y+: Y axis moves towards the end stop.
 - : The motor of Z axis moves upward;
 - : The motor of Z axis moves downward;
 - : Click to return to the [home] interface.

Moving distance: Choose one of the values to adjust the moving distance of motors,

before you move each axis. If you fail to choose the corresponding moving distance, the motor will move according to the current one by default.

There are five values available. It is convenient to switch the five moving distances by each click.

Choose 0.05mm and click the moving button, and the motor will move 0.05mm per time. It is the same with the 0.1mm, 1mm, 10mm and 50mm moving distance.



: To disable/ enable the stepper motors.

Click this button to switch the [Disable] and [Enable] status of the stepper motors. When you start the printer, the default status is [Enable]. The motors will autonomously turn into the [Enable] status with the following three operations: 1) start to print; 2) leveling; 3) loading filament.

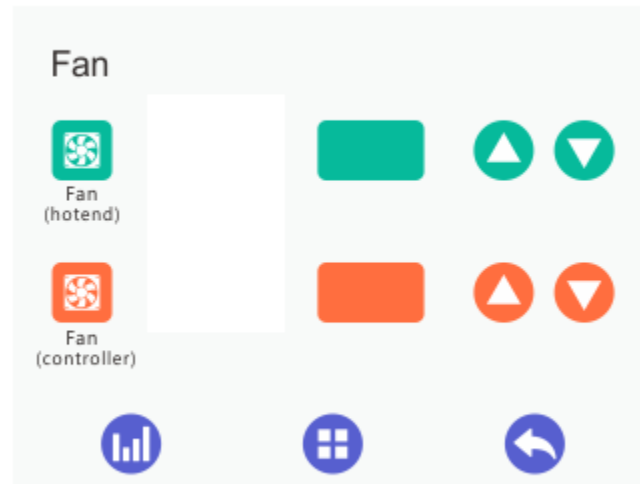
- 1) When the printer is running with a TF card or connected with a computer, the status of the motors is not switchable.
- 2) When the printer does not print or stops temporarily,
 - a. Switch the button to [Enable] to disable the motors. Under this condition, you can't manually adjust the position of X/Y/Z axis.
 - b. Switch the button to [Disable] to enable the motors. Under this condition, you can manually adjust the position of X/Y/Z axis and home the printer.



Coordinates of the X/Y/Z axis

- 1) When the motors are disabled, the 888.8 icon indicates that the coordinates are unknown.
- 2) When the motors are enabled, the real-time coordinates of the X/Y/Z axis will appear.

4.2.3 Fan








On this interface you can observe and modify the status of the fans for the extruder and the control board.

- 1) The two fan switches are closed by default, when you start the printer. It will autonomously open upon printing. During the printing process, it is convenient to switch on or off the fans by clicking the buttons.

When the switches are on, you can adjust the speed of the fans;

When the switches are off, the speed of the fans can't be modified.











- 2)  : The real-time speed of the fans.
- 3)     Adjusting the fan speed: the speed increases/ reduces by 5 at every click.

4.2.4 Leveling



- 1) When the printer is running with a TF card or connected with a computer, the leveling function is unavailable. This situation also applies to the [Disable] status of the stepper motors.
- 2) When the printer is idle, please enter the leveling interface. Meanwhile, home the printer and lower the Z axis to Z=10 mm to prepare for the leveling.

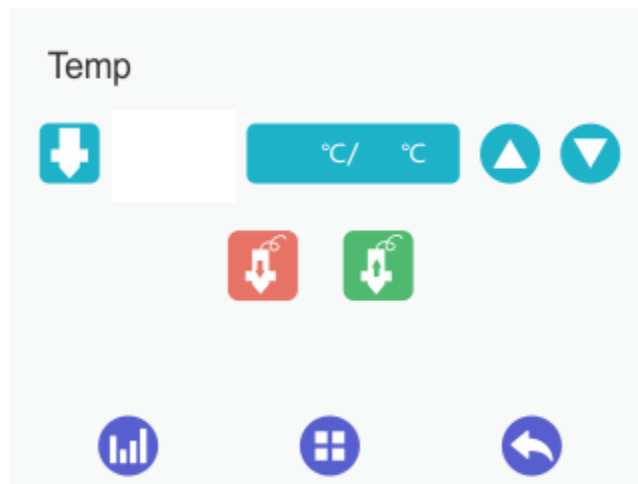
Move the printing head to the five points randomly, as numbered 1, 2, 3, 4, 5 in the picture. Use a piece of A4 paper to complete the auxiliary leveling process.

- a. Choose 1: raise the printing head to Z=10mm and move it to point 1. At the same time, lower the printing head to Z=0mm. The icon  will turn into .
- b. Choose 2: raise the printing head to Z=10mm and move it to point 2. At the same time, lower the printing head to Z=0mm. The icon  will turn into .
- c. Choose 3: raise the printing head to Z=10mm and move it to point 3. At the same time, lower the printing head to Z=0mm. The icon  will turn into .
- d. Choose 4: raise the printing head to Z=10mm and move it to point 4. At the same time, lower the printing head to Z=0mm. The icon  will turn into .
- e. Choose 5: raise the printing head to Z=10mm and move it to point 5. At the same time, lower the printing head to Z=0mm. The icon  will turn into .

(Note: The sequence of leveling the five points is random.)

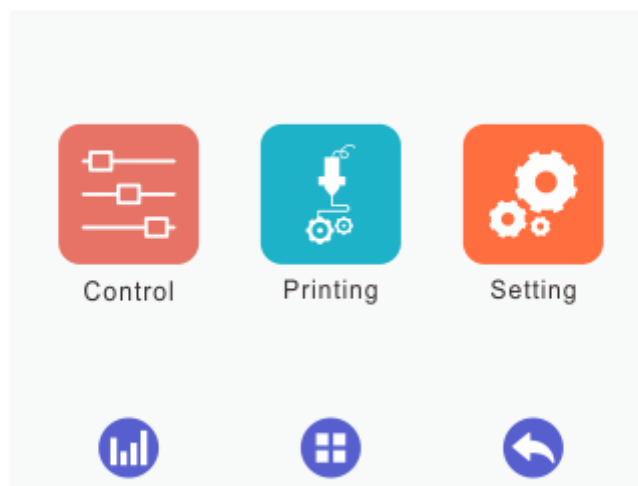
4.2.5 Heating

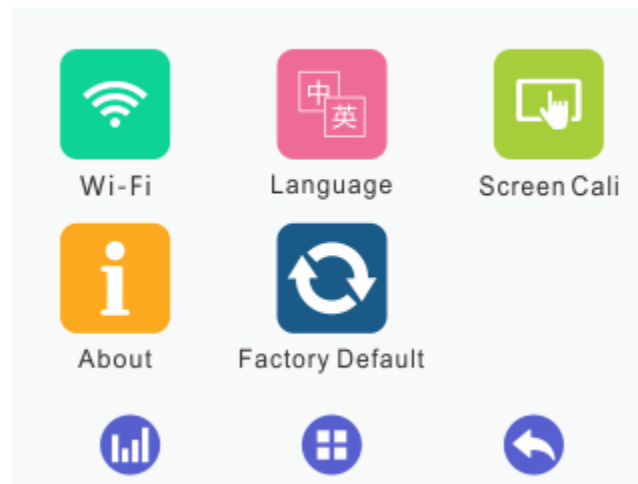
The heating interface consists of a switch for extruder temperature, the real-time and target temperature of the extruder and the buttons for temperature adjustment and loading/unloading filament.



4.3 Setting

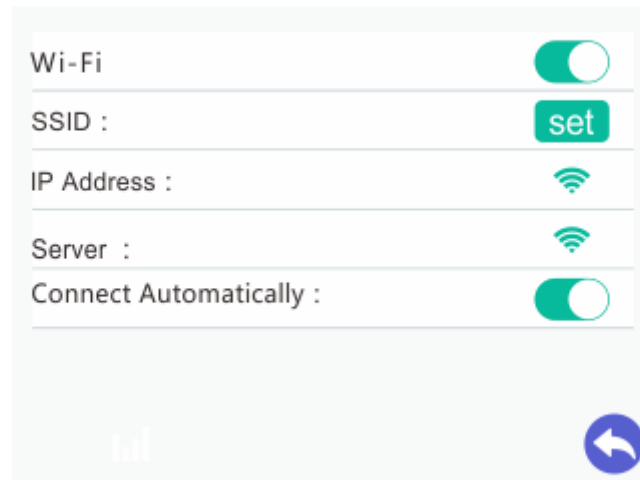
Choose [Setting] on the home page to visit the following interface, composed of the relevant settings for Wi-Fi connectivity, language, screen calibration, about E180, factory default, etc.



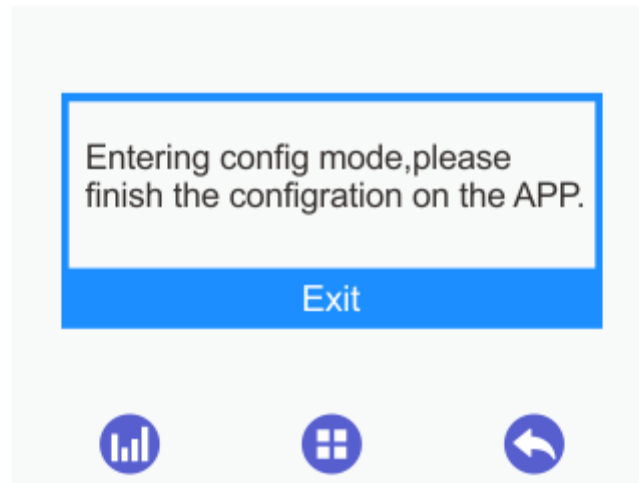



4.3.1 Wi-Fi Connectivity

This sub-interface shows the Wi-Fi switch, SSID, IP address, the IP of the server and the button for autonomous Wi-Fi connectivity upon starting the printer [Connect Autonomously].



Switch on the Wi-Fi button and click the [Set] to visit the interface for Wi-Fi configuration, as shown by the picture below.



The remaining settings shall be completed on the EasyPrint 3D App. Upon finishing all the configurations, the Wi-Fi connectivity interface will display the relevant information. When all the configurations are successful, the Wi-Fi icon will turn into green .

4.3.2 Language


E180 is compatible with two languages: Chinese and English. You could switch to the corresponding language for your need.



4.3.3 Calibrating the Touch Screen

The touch screen may have errors in terms of its displaying effects, for the reason of long-time usage. But no worries! It is effective to calibrate the screen via the calibration function.



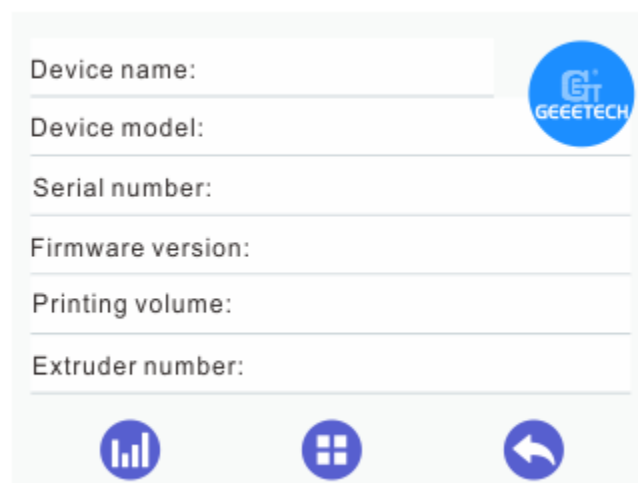
Click  to enter the [screen calibration] mode. Click the “+” on the screen, according to the prompts. If the calibration is successful, a prompt box will pop up, as shown by the picture below.

Choose [Yes] to recalibrate the screen.

Choose [No] to return to the [settings] screen.

4.3.4 About


Choose [About] to visit the [Info] interface, where you could check the relevant information about E180, as shown by the picture below.



The screenshot shows a light gray interface with a blue circular logo in the top right corner containing the letters 'GT' and the text 'GEEETECH' below it. On the left, there are six text labels, each followed by a white input field: 'Device name:', 'Device model:', 'Serial number:', 'Firmware version:', 'Printing volume:', and 'Extruder number:'. At the bottom, there are three blue circular icons: a bar chart, a 2x2 grid, and a curved arrow pointing left.

4.3.5 Factory Default

- 1) [Factory Default] is disabled, when the printer is running with a TF card or connected with a computer, or it stops working temporarily.
- 2) [Factory Default] is enabled, when the printer stops running temporarily, with a TF card or connected with a computer.

Click the [Factory Default] button , and a prompt box will appear, as shown by the picture below.

Choose [Yes]: restore factory and restart the printer.

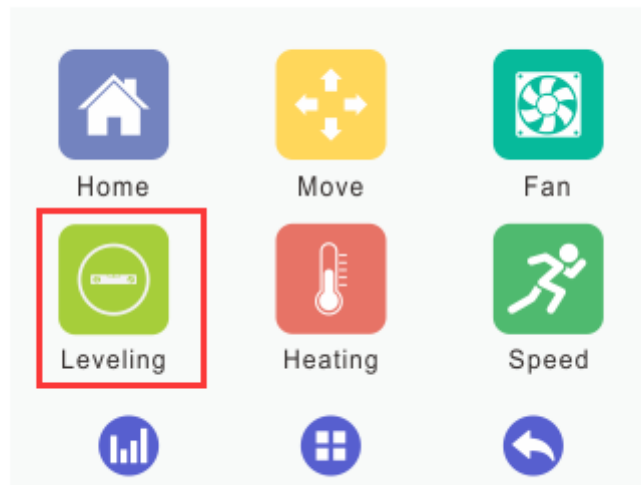


Choose [No]: return to the [settings] interface.



5. Leveling the Build Platform

Step1. Choose [Leveling] icon to enter the interface to start to level the build platform. Meanwhile the motors will be homed and Z axis will rise to 10mm.



Step 2. Click the leveling point 1, the extruder will move to the first point. Put a piece of A4 paper between the nozzle and build platform. Slide the paper back and forth. Stop when you feel the nozzle just start to grab a little bit.

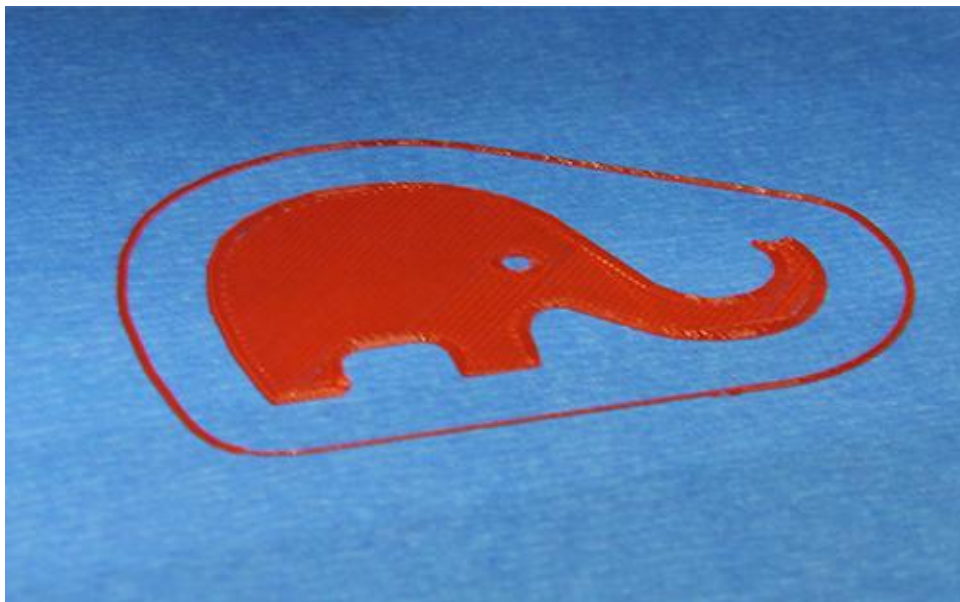
If you cannot feel a little bit friction at all, it means the distance between the nozzle and build platform is too far and the adhesion of filament to the platform will be not guaranteed. You need to anticlockwise rotate the nut in the bottom of the platform which is corresponding

to leveling point 1 and make the build platform raise up to reduce the distance between the nozzle and the build platform.

If you can feel a big amount of friction, it means the distance between the nozzle and build platform is too close. The filament can't be extruded out or can even be jammed. You need to clockwise rotate the nut in the bottom of the platform which is corresponding to leveling point 1 and make the build platform drop off to increase the distance between the nozzle and the build platform.

Step3. Move the extruder to the other 4 points and adjust the corresponding screws until you get the same amount of friction as you felt with the first one. Once you have adjusted each of the four screws, go back and check each one again, since adjusting one screw can affect another. There is no need to go around the build platform more than twice.

After leveling, the filament should be fully extruded with smooth lines and closely stick to the platform, as shown in the picture below.



Notes:

- i. When you finish leveling job, we recommend you test the build platform again to ensure the satisfying leveling.
- ii. When the printer is violently shaken during shipping and moving, the height of

the build platform may be affected. You need readjust the leveling.

- iii. When there is the wrapping, curling or after you dismount the extruder, please readjust the leveling.

After restoring factory settings, we suggest you check the height of the nozzle and platform.

6. Start to Print

6.1 Connect E180

Connect E180 with your computer with a USB cable. Turn on the power switch.

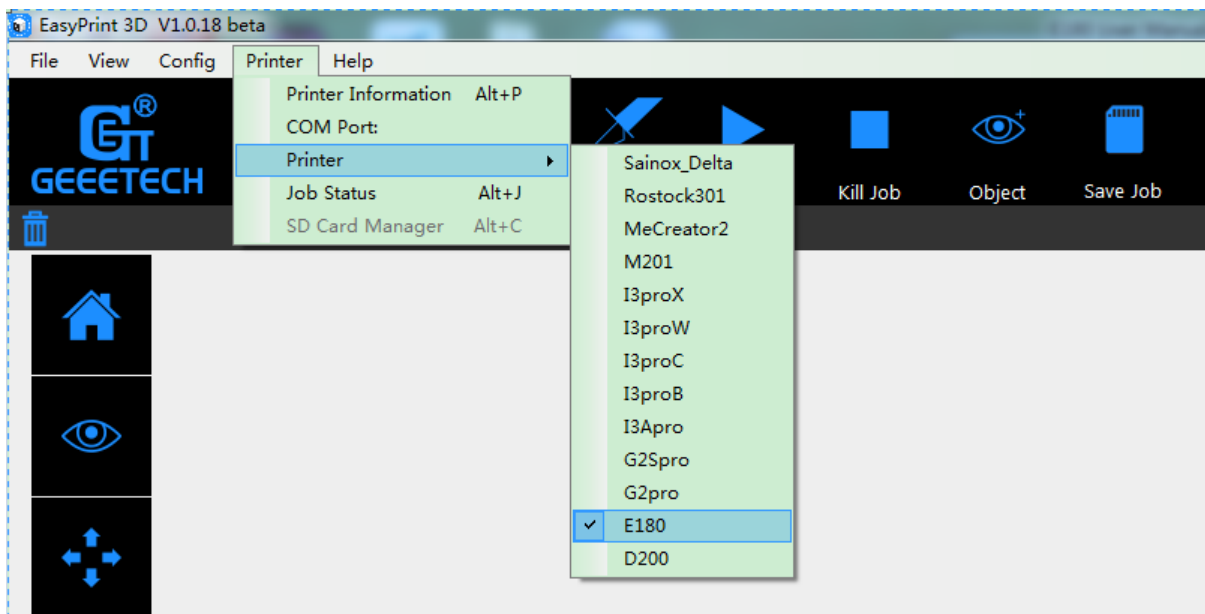
1. Start EasyPrint 3D (your first time to use EasyPrint 3D).



2. Click the [printer] menu on the top left to choose the corresponding COM port. The COM refers to the serial port between your printer and computer, the same with the COM in the device manager. If you can't find the COM, please check if the power switch is turned on or the USB cable is well connected.

3. Select your printer.

Click the [printer] menu on the top left and choose the printer type as E180.



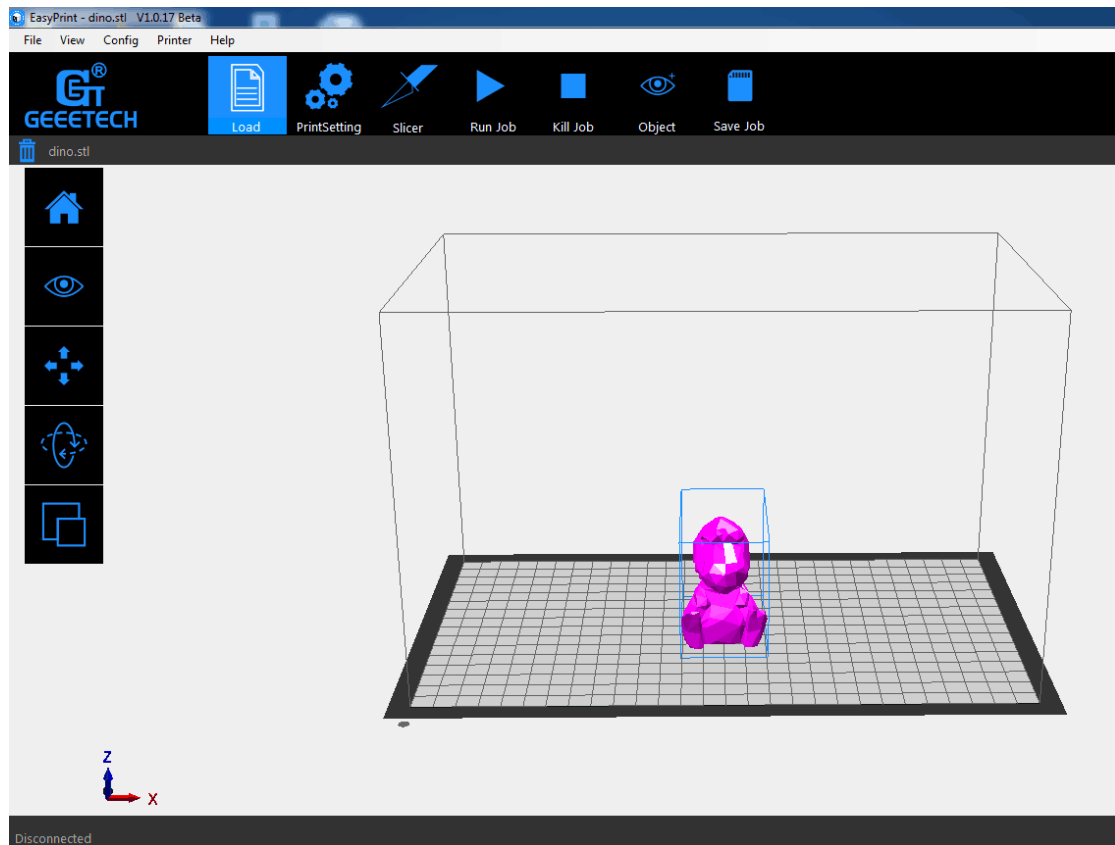
4. Click the [connect] button on the top right to connect E180 with your computer. At this time, you could observe the real-time status of the E180 on the bottom of EasyPrint 3D.

Now we've completed the preparatory job before printing. In the next part, we will load and slice a 3D model and begin to print.

6.2 Slice and Print

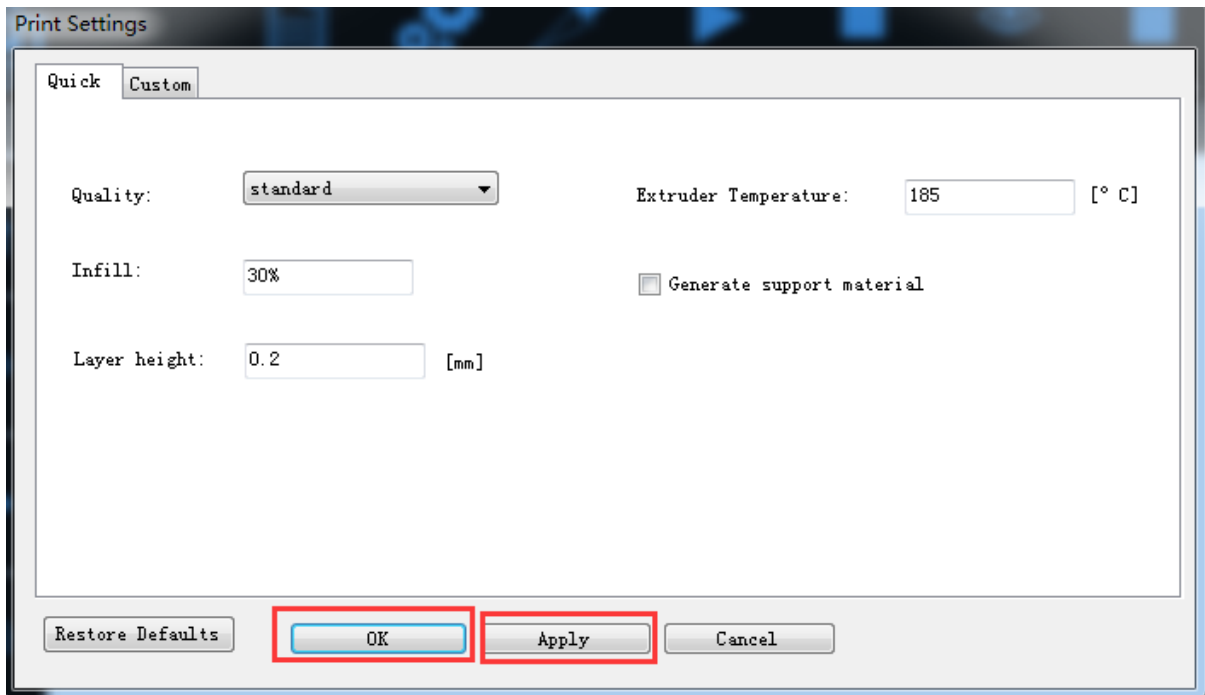
The file format of the model file for 3D printer is usually .stl. E180 supports the following file format: **STL, G-code**. You can download models on the internet for printing. Of course you can also design some creative models by yourselves. Here we print a small dragon.

1) First, start the EasyPrint 3D and long-press the left mouse button to drag the .stl file to the virtual build platform. When the file is placed in the build volume and closely attached to the platform, the model is red. The model turns green in reverse.

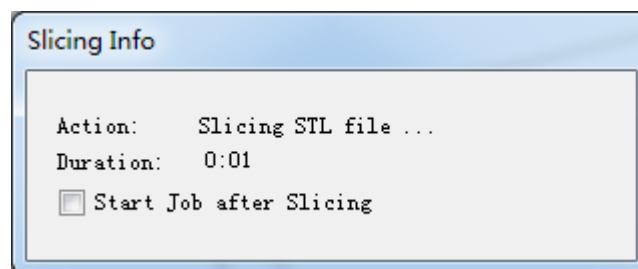


2) Print settings: click the [print settings] menu and modify the relevant parameters. Here we take the [Quick] mode as an example.

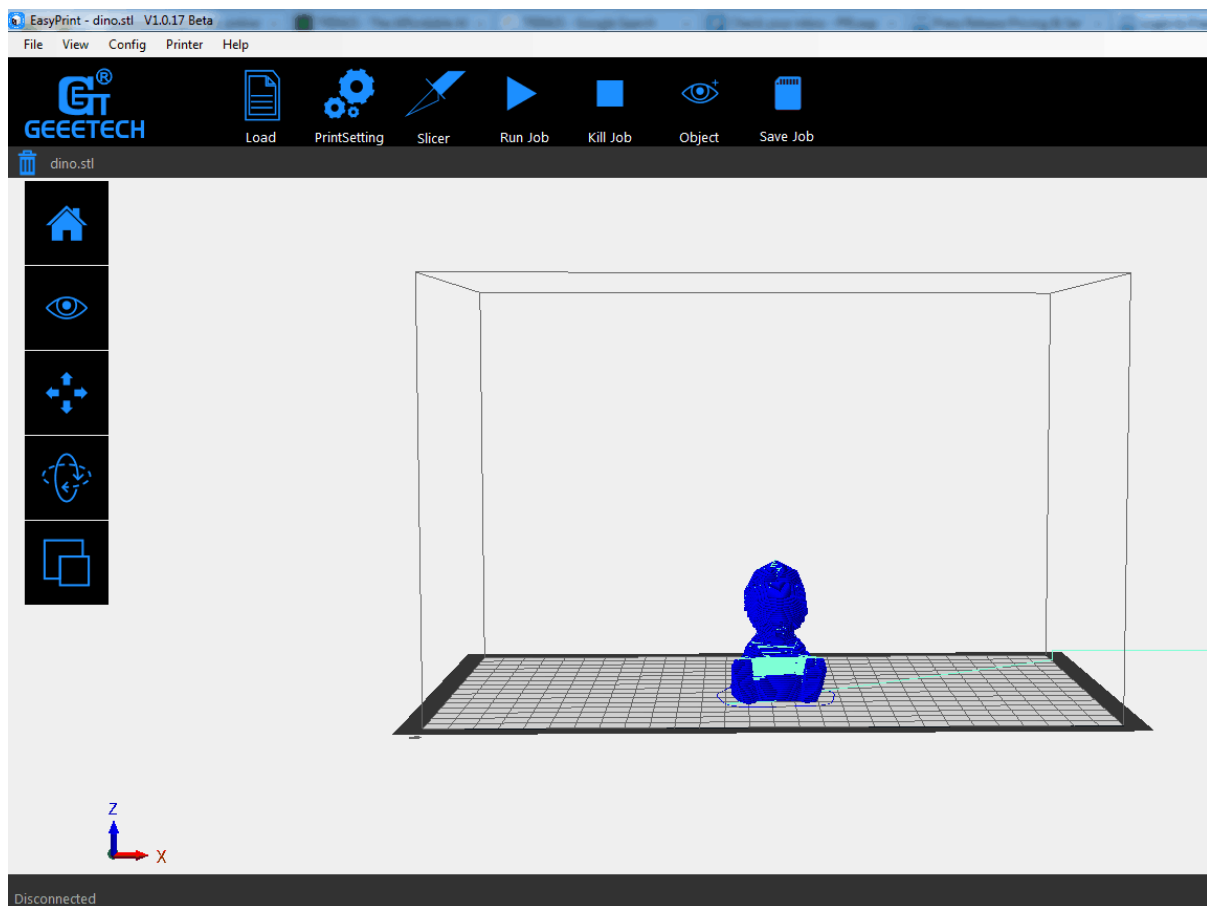
Choose the [Quick] mode, set the printing quality as [Standard] and take the parameters like [Infill], [Extruder temperature] and [Layer height] by default. Select the [Support] button, according to your printing need. Finally, click [Apply] and [OK].



3) Click [slicer] in the menu to slice the .stl file. You can observe the slicing time in the following picture.



Upon slicing, you get the .gcode file.



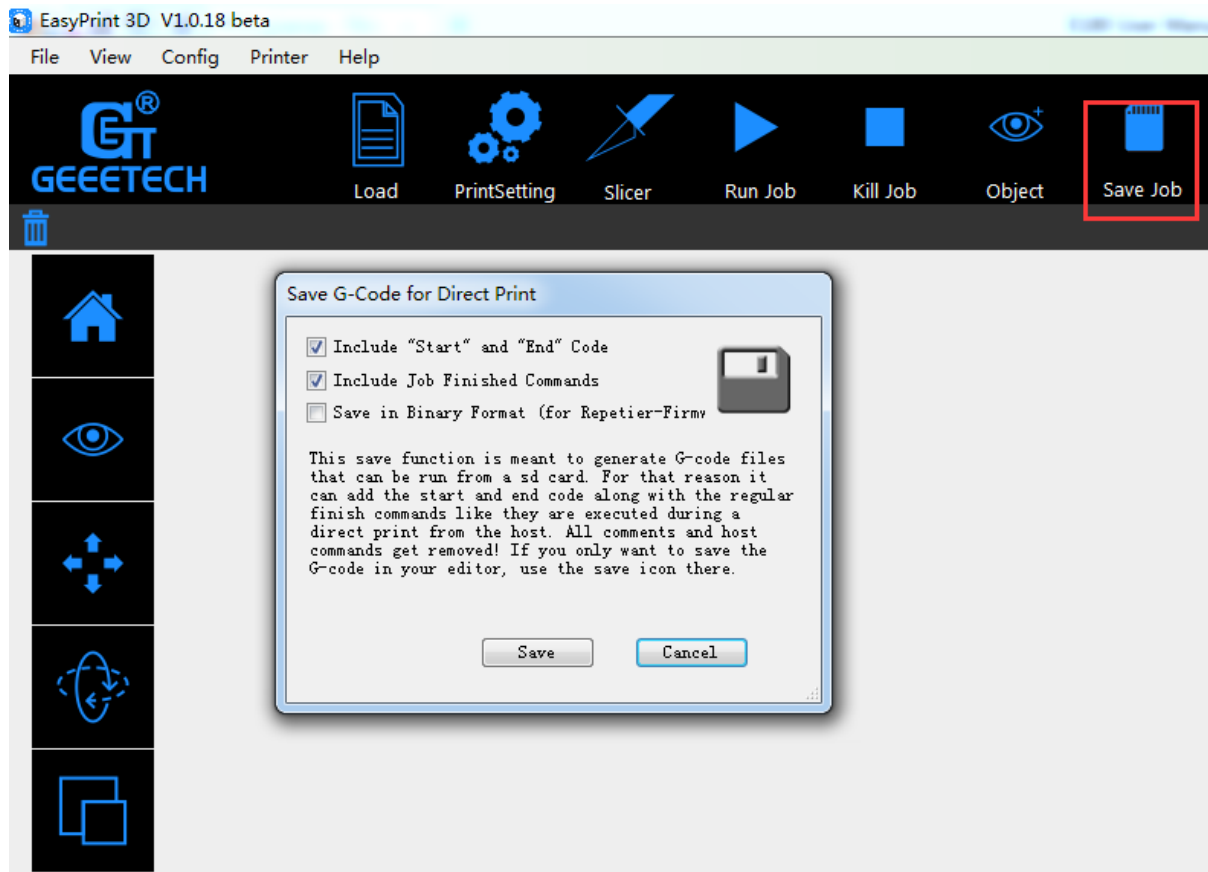
4) The last step is to click [Run job] to start your printing journey.

After clicking [Run job], E180 will enter printing mode. The printer begins to work as soon the heating process is over.

6.3 Stand-alone Printing with a TF Card

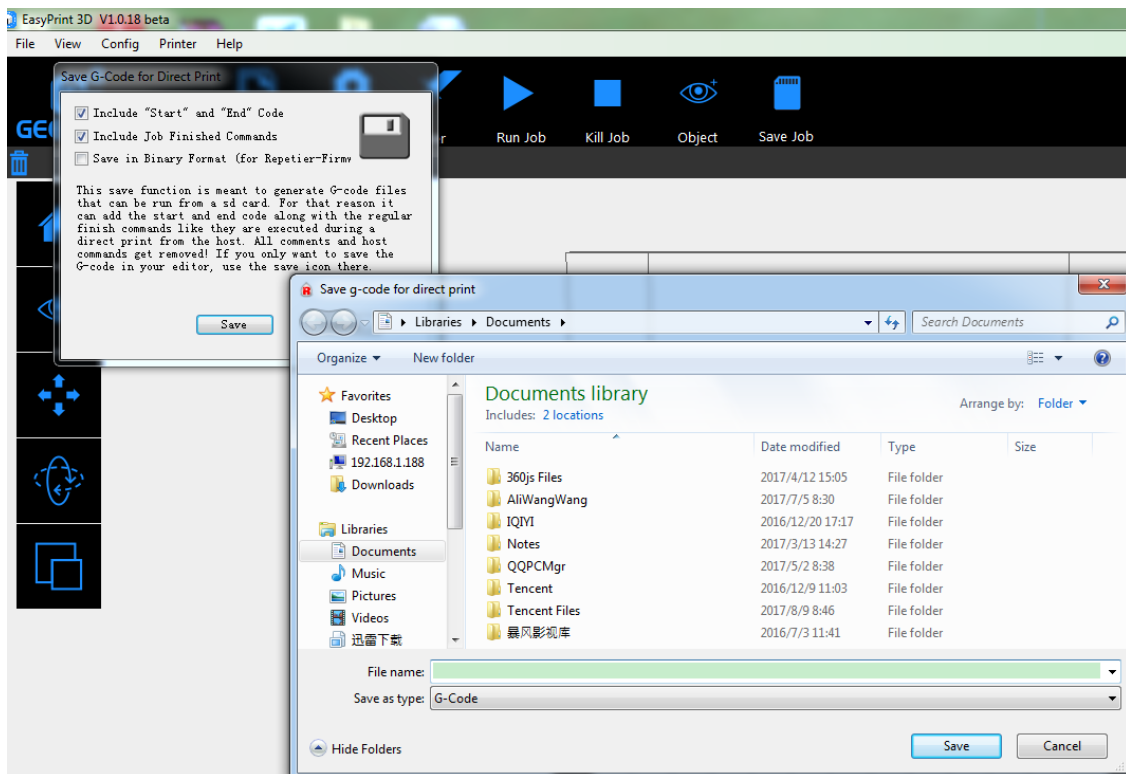
E180 can run stand-alone with a TF card, untethered to your computer. All you need to do is save 3D models in the TF card for printing. Here are the detailed procedures.

1) After slicing, please click “Save job” to save the file for direct printing



2) Click the [Save] button to save the .Gcode file in TF card, as shown in the picture below.

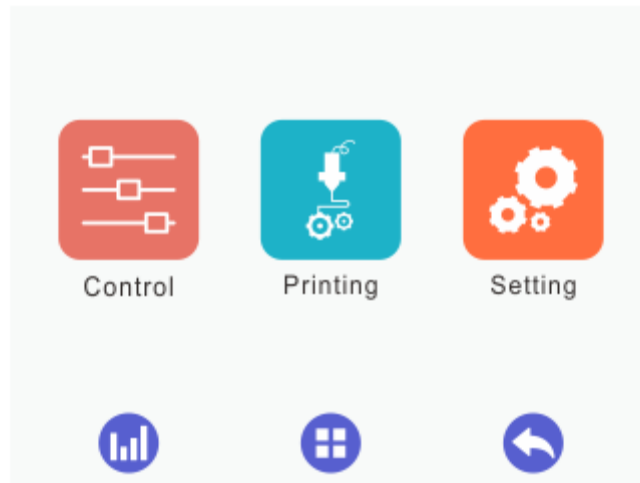
Note: The .Gcode file shall be kept in the root file of TF card, or the printer can't recognize the file.



3) Insert the TF card into the slot on the back of E180.



4) Click the [Printing] button on the home page of the touch screen.



5) Choose your 3D model file from the file list and click [Print].



(换图)

7. Printing via Wi-Fi

E180 Cloud 3D printing solution conveniently provides users EasyPrint 3D App to enjoy free 3D models, just slightly pressing to start your printing journey. Even if you are not keeping company with your printer, you can control the printer via EasyPrint 3D APP.

EasyPrint 3D App offers the simple, intuitive user interface, full-featured and easy-to-manage. Paired with built-in Wi-Fi of the printer, you can select the 3D model from cloud library via App, adjust the printing setting in real time, monitor the printing process and save the relevant files.

EasyPrint 3D App only supports Android system so far. IOS system is under developing. Please stay tuned.

7.1 Install EasyPrint 3D APP

Download the EasyPrint 3D APP here and install the EasyPrint 3D APP.

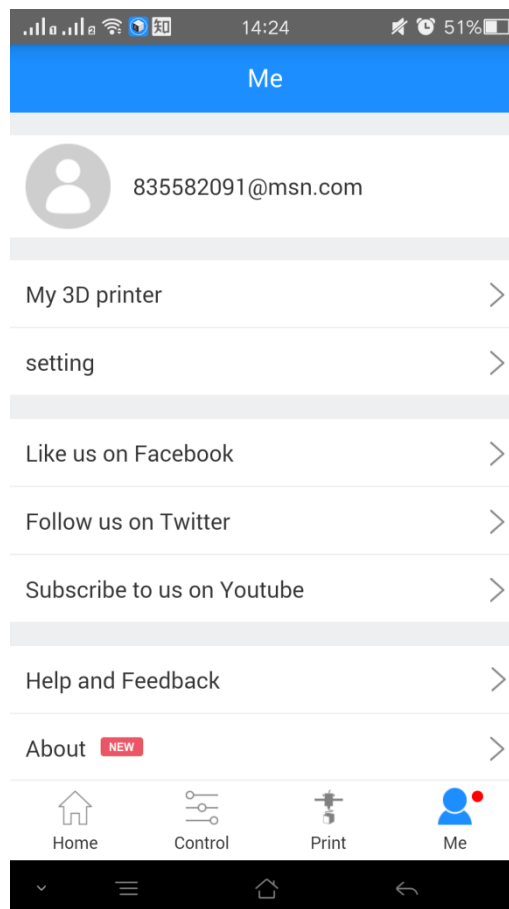
www.geeetech.com/firmware/EasyPrint3D_Android.apk

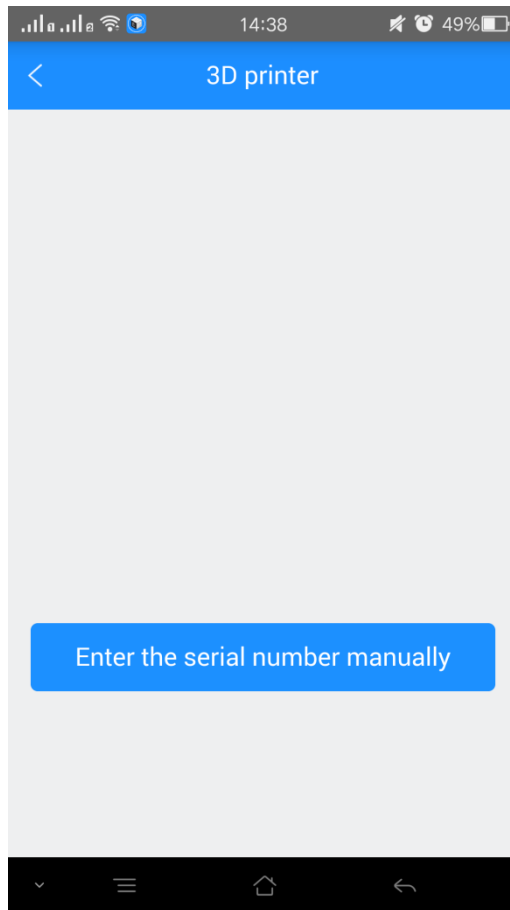
Once finishing installation, enter *My Center* to register and log in.

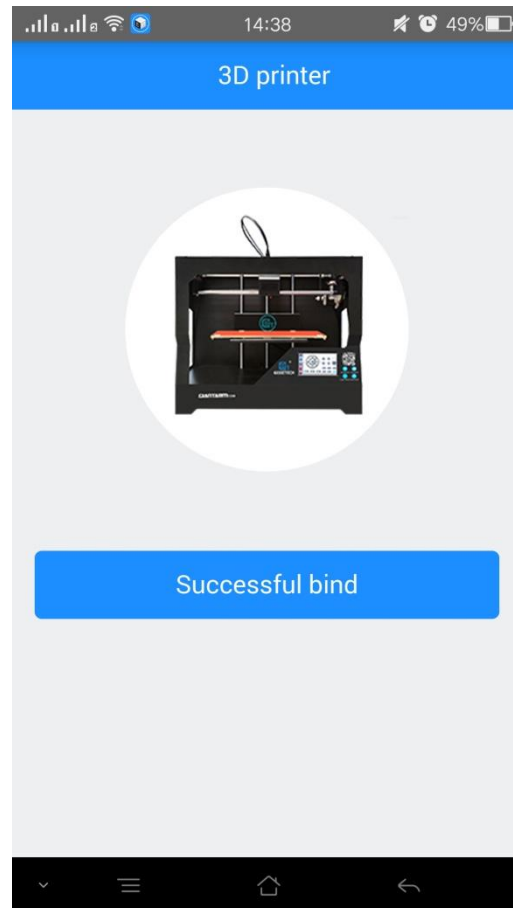
Note: As the EasyPrint 3D APP is continuously upgraded, some UI and workflow may be different, please follow the APP.

7.2 Bind printer to EasyPrint 3D App

Log in and bind the printer. In *My Center—My 3D Printer*, finish the binding process following the instructions on App.







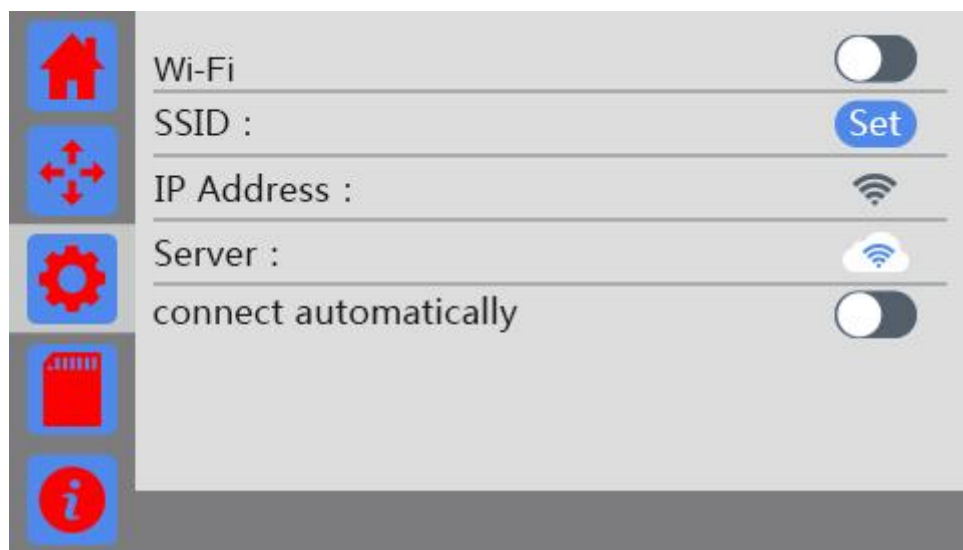
(换图)

Detailed configuration procedures are as follows:

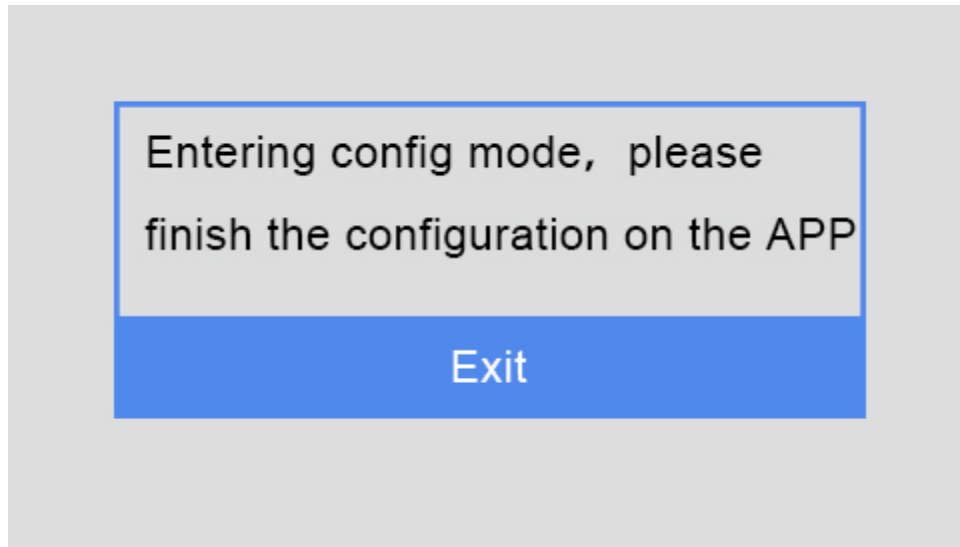
- ① .In Wi-Fi setting interface on the control panel, choose Wi-Fi button



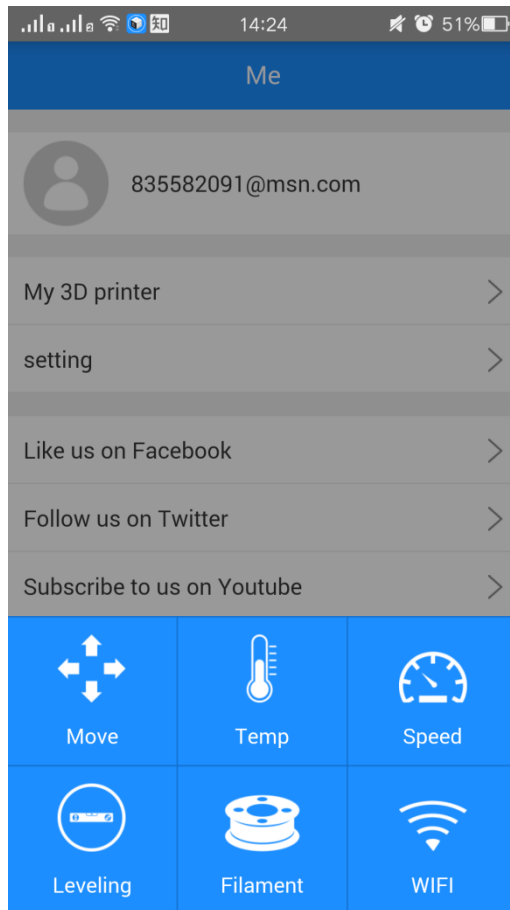
to enter Wi-Fi interface, as shown in the picture below.

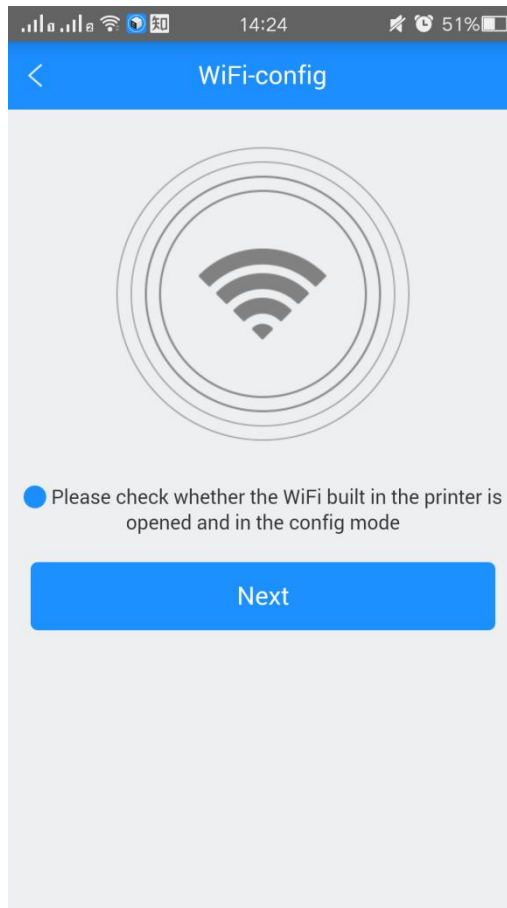


②. Turn on Wi-Fi and click the button “Set ” to enter the Config mode, as shown in the picture below.

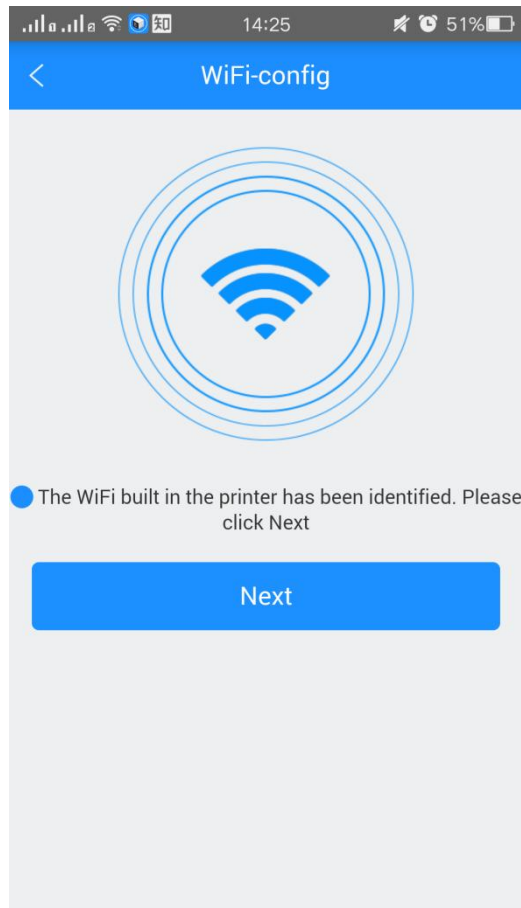


③. Choose Wi-Fi at the control panel on APP. At the page of pop-up, click the button “Wi-Fi” to enter Wi-Fi configuration, as shown in the picture below.

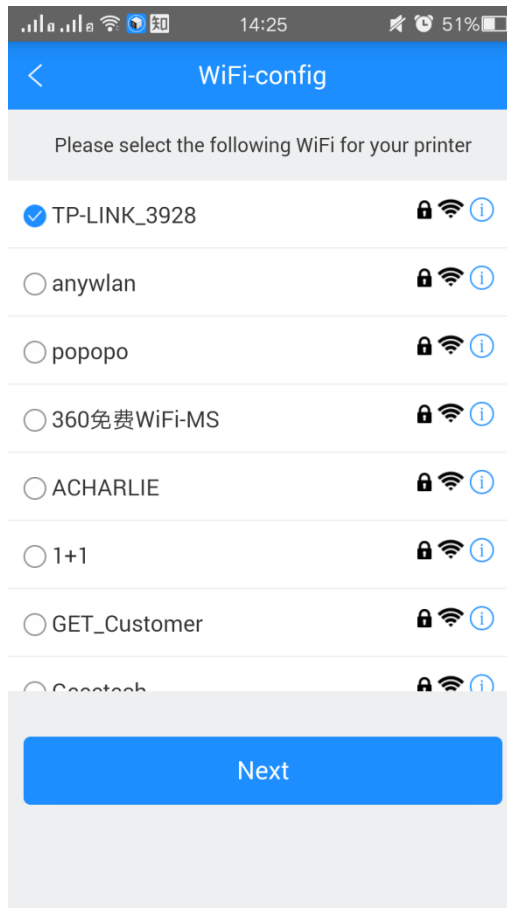




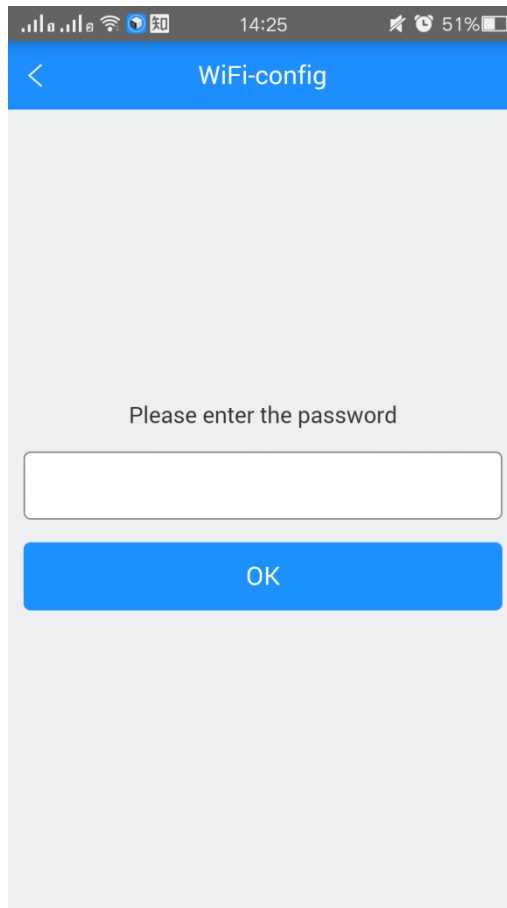
④. Click [Next] to start to detect Wi-Fi built in the printer. If not detected, it will pop up a prompt “Printer Wi-Fi is not detected”. Click [OK] and again click [Next] to redetect. If the Wi-Fi is detected, you could see the following picture.



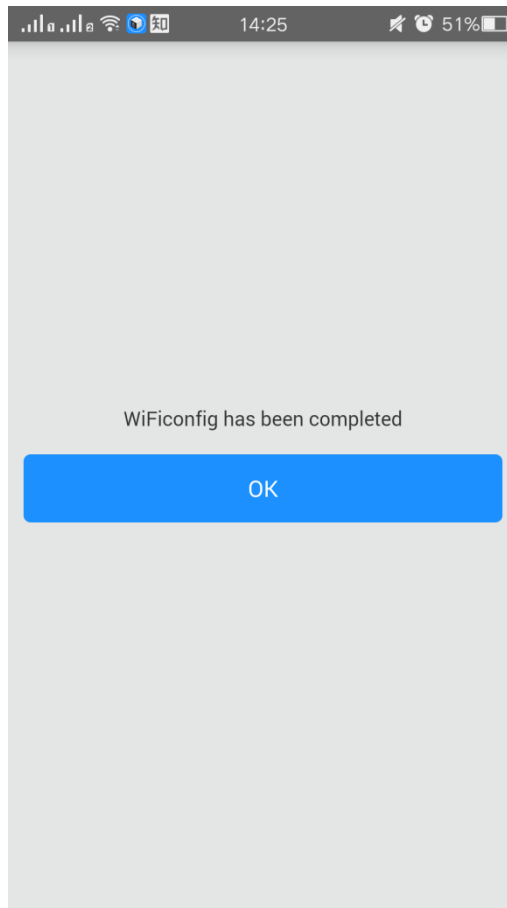
⑤ Click [Next] after Wi-Fi hotspot is detected, as shown in the picture below.



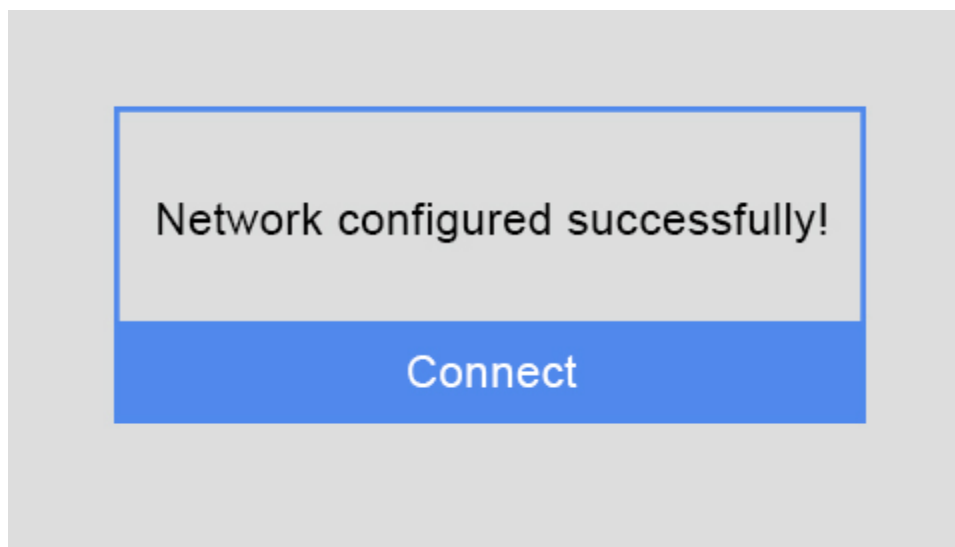
⑥ Choose one of the available Wi-Fi hotspots. Click [Next], and, if the Wi-Fi needs the password, the interface will show the Wi-Fi password input box. Just input the correct password, and then click “[OK]” , as shown in the picture below.



⑦. When you succeed in connecting the Wi-Fi, the interface will show that the configuration is finished, as shown in the picture below.



Then the interface returns back to the control panel of the printer. You can see the prompt, as shown in the picture below.



Click the button “Connect” on control panel, the interface will skip to Wi-Fi interface to connect with Network. The icon and status bar of Wi-Fi become blue on Wi-Fi interface. Meanwhile, SSID, IP Address and Server on this interface will display the relevant information, as shown in the picture below.



Go back to App, click “[OK]” to enter the home page. The status on the homepage displays that the printer is on-line. Till here, the configuration between App and the printer is finished. Now you can print and control the printing via App.

⑧. If you choose a Wi-Fi hotspot without password, click “Next” and continue your setting from step ⑦.

8. Specifications of E180

Printing parameters

Print technology: FDM

Build volume: 180x130x130mm

Printing precision: 0.05mm

Positioning precision: X/Y: 0.11mm. Z: 0.0025mm

Print Speed: 80-110mm/s recommended

Filament diameter: 1.75mm

Nozzle diameter: 0.4mm

Filament supported: PLA

Belts:

Operating system: Windows

Control software: EasyPrint 3D

File format: .stl, G-code

Temperature:

Max heated bed temp: About 110 °C

Max extruder temp: About 240°C

Electrical:

Power supply:

Input: 110V-220V

Output: DC24V/15A 360W

Connectivity: Wi-Fi, USB, TF card (support stand-alone printing)

Display screen: 3.2 Full color touch screen

Mechanical:

Chassis: Metal plate + injection molding (a portable cantilever type 3D printer)

Build Platform: Aluminum alloy plate

XYZ Rods: Wear-resistant, stainless steel and lead screw (Z axis)

Stepper Motors: 1.8°step angle with 1/16 micro-stepping

Physical Dimensions & Weight

Machine Dimension: 284x130x320 mm

Shipping box Dimension: 320x300x200mm

Machine Net weight: 5kg

Machine shipping weight: 6.5kg

9. Contact us

Technical support	<p>1. There are lots of documents and troubleshooting for MeCreator 2 on our website. They are good resources if you would like to quickly solve problems by yourself.</p> <p>2.If you still can not solve problems yourself even with the help of above files, you can send e-mail to technical@geeetech.com,we will reply to you within 24 hours.</p>
Sales	<p>For more products of Geeetech, please visit www.geeetech.com or send e-mail to sales@geeetech.com</p>
Feedback	<p>In order to improve our products to provide better user experience, please send your comments and suggestions to Rita.xiang@geeetech.cn. We will appreciate to hear your valuable suggestions.</p>