Thank you for your trust in our products, for a better experience of this equipment, please read this manual carefully before you start to use.

**Product function diagram**

- Filament input hole
- Temperature adjustment holes
- The power indicator LED
- LCD
- Temperature adjustment holes
- Speed controller
- Load filament button
- Integrated heating nozzle
- The power input hole
- Work indicator LED
- Unload filament button

**Warning!**

1. This equipment is suitable for children over 8-years-old and adult using. Children need to be used under the guardianship of adult.
2. The nib and its near part of this equipment is high temperature dangerous area, the highest temperature can reach 230 °C, therefore no any hand touching or touch other objects by the nib.
3. It is prohibited to use foreign body to insert into the feed hole.
4. Prohibited the use of non power adapter provided by the company.
5. Due to different physical properties of different supplies manufacturers, prohibited the use of the company to provide supplies.
6. The equipment for precision electronic instruments, do not pure water on it.
7. Keep it in a safe place after using, to prevent falling for the children touch.

**Main items**

- 3D pen
- Power adapter
- Filament
Operating instructions

1. Plug the AC adapter into the electrical outlet, the other end of the DC plug into the "power input hole" at the end of this drawing pen. The Yellow LED lights on, the equipment is power on and enter to standby mode.
2. The LCD screen will display words "ABS" or "PLA", choose the right material model "material selection, temperature adjusting" from the LCD screen. The selection must be same as the material attribute consistent, in order to avoid failure.
3. Keep on pressing the Load filament button, the red LED lights on, shows that the equipment is preheating. About 0.5-2 minutes later, when the red LED turn to blue, shows preheating finished and the equipment can start to work.
4. Insert the filament into the "Filament import hole", long pressing the "Load filament button", the filament is delivering by the inner motor. When there is material come out from the nozzle, the filament loading is success.
5. Start creating. (The step-less speed regulating function of this equipment can adjust the material amount according to the speed when you are creating. No need to use both hands.)
6. The same material filaments have different melting points because of different colors. Please fine tune the temperature according to the according to the spin silk. (the material melting point judgment and temperature adjustment Please refer to "temperature fine-tuning")
7. Do not touch the nozzle and heating part during using.
8. The equipment will switch to standby mode automatically when not use over 5 minutes. The working indicator LED will off. If need to use again, need to press the "Load filament button" to make it back to work.
9. When need to unload or replace the filament, please repeat step (2), then long press the "wire back button" ***
"*": The heating time affected by setting temperature and the environmental temperature
"**": Cut the filament ending flat before insert it into the pen.
"***": Advise to unload the filament when finish using.

Change filament

1. When the need to replace the same material but different colors of filament, can choose to continue loading and unloading filament. No matter which way, it requires to ensure the loading filament ending flat.
2. When change the material from PLA to ABS, unload the ABS filament, restart your equipment (unplugged), Then switch to ABS by press the "material selection / tempering" button, and then load the ABS filament.
3. When change the filament from ABS into PLA, due to melting point of ABS is much higher than the PLA, if used improperly, it may cause nozzle clogging or equipment damage. The correct way is: in the ABS mode, unload the filament, restart the pen,. switch to PLA mode by the "selection of materials / tempering button. Then load the PLA filament after heating finished quickly. (This step is very important!)
Temperature tuning

1. low speed working, if hear the nozzle has "crackling" sound, it means the temperature is too high, use "material selection / tempering "button to turn the temperature down, the adjustment range is 8-15 °C

2. When use, if come out lots bubbles, it means that the temperature is on high side, use "material selection / tempering "button to turn the temperature down, the adjustment range is 3-8 °C

3. Normally the filament output should be smooth without bubbles. (occasionally bubbles)

4. When the output filament surface color looks dim and dark, the motor sounds obvious difficulty, mean that the temperature is on low side, use "material selection / tempering "button to turn the temperature up, the adjustment range is 3-5 °C

Simple troubleshooting

In case of the following circumstances in the process of using, please list processing according to the table as below

<table>
<thead>
<tr>
<th>Fault phenomenon</th>
<th>Reason</th>
<th>Troubleshooting</th>
</tr>
</thead>
<tbody>
<tr>
<td>The power indicator light does not shine</td>
<td>The power adapter or plug line fault</td>
<td>Repair or replace the power adapter</td>
</tr>
<tr>
<td>Nozzles blocked</td>
<td>Nozzle blocked</td>
<td>Replace the nozzle parts</td>
</tr>
<tr>
<td>Temperature is not high enough</td>
<td>Temperature is not high enough</td>
<td>Replace the nozzle parts or adjust the temperature</td>
</tr>
<tr>
<td>No heat</td>
<td>No heating</td>
<td>Replace the nozzle parts or check the motherboard</td>
</tr>
<tr>
<td>Consumables slip</td>
<td>Gear mouth consumables slip</td>
<td>Unload filament, clean the gear, cut off the damaged supplies after reloading</td>
</tr>
<tr>
<td>Failed to load</td>
<td>Filament failed to load</td>
<td>Cut the filament to flat and reload</td>
</tr>
<tr>
<td>Badness of the motherboard</td>
<td>Motherboard fault</td>
<td>Repair or replace the motherboard</td>
</tr>
<tr>
<td>Heating not working</td>
<td>Heating coil damaged</td>
<td>Replace the nozzle parts</td>
</tr>
</tbody>
</table>

Specifications and parameters

Discharging mode: hot melt extrusion molding
Molding: three-dimensional molding
Print range: Unlimited
Spinning speed: adjustable
Temperature: 60 °C - 230 °C adjustable
Working voltage: 12V 3A equipment
The nozzle diameter: 0.7mm