# **TG-21** Intelligent 3D Pen



3D printing pen User Manual

# Safety tips

- 1.Do not use this product in the bathroom, sink or other places where have water, otherwise it may cause electric shock! Please unplug the power supply in time after use.
- 2.To avoid burns, please do not touch the ceramic nozzle during use.
- 3. This product is suitable for adult and children over 5 years old, children can use it under adult supervision..

# Precautions

- 1. The pen tip of this product is detachable and can be replaced after it is damaged.
- 2.Do not drop or hit other hard objects with the nib. Do not insert foreign objects into the loading hole or nib.

  3.The product uses PCL, PLA, ABS filaments with the diameter of 1.75mm.
- 4.During the first use, if the nozzle produces a little smoke, normal and does not affect the use.
- 5.In order to ensure the quality, each pen is tested in the factory before delivery. As a result, there may be residue in the nozzle, but it should not affect normal use.
- 6. This product is a precision product. In order to ensure the continuous use of the product, after continuous use for 1 hour, it is recommended to turn off the power and stop using it for 15 minutes.
- 7.The product will automatically pause and enter the protection state every 8 minutes of work. If you need to continue using it, press "load filament" button again.
- 8. When using filaments that are not our company's brand, please set the heating temperature of the printing pen according to the use temperature of the purchased filaments, otherwise it will cause the pen tip to block.

# Instructions for use

- 1.Turn on the power
- Please connect the printing pen to the power adapter correctly, when there are characters on the display, the device enters the standby state.
- 2.Select Filament/preheating
  Press the "Select Filament", the LCD screen will display "PCL", "PLA" or "ABS" Press the "load filament" button, the red LED light is on, and the device enters the preheating mode, when the red LED light turns from red to green,
- the preheating ends. 3.Loading filaments After preheating, insert the filaments into the loading/unloading hole at the end of the printing pen and press "load filament" button. The motor starts to load filament into pen. When filament is extruded from the nozzle, it indicates
- that the loading is successful. 4.Printing temperature/Speed
- During use, press "Temperature +/-", "Speed+/-" to adjust the printing temperature and printing speed.
- Temperature adjustment: The same filament will have different melting points due to different colors. (Please refer to "Temperature Adjustment Instructions") Speed adjustment: This product has 8 speed gears, the first gear is the slowest, and the eighth gear is the fastest.
- 5. Replace/Unload filament
- When the LED light is green, press "Unload filament" button for 3 seconds, the filaments will be unloaded automatically. Press "Unload filament" button again and the unloading will stop.
- When finishing printing, you must clear all filaments, and then disconnect the power. Otherwise it will affect the normal use of this product next time

# Filament end Tip



#### Specifications

Filaments	PCL/PLA/ABS 1.75±0.02mm	
Delation	PCL 60°C~100°C	
Printing temperature	PLA 160°C~210°C	
temperature	ABS 180°C~210°C	
Power supply	5V/2A	
Working conditions	10°C~35°C/RH: ≤85%	
Size	175(L)×27(W)×33.5(H)mm	
Net weight	60g	

#### Instructions for replacing filaments

Contents	ABS to PLA		PLA to PCL	ABS to PCL	
1	Unload the ABS first		Unload the PLA first	Unload the ABS first	
2	Insert "PLA" filaments into the loading/unloading hole at the end of the pen, press "Extrude" again, product start to clean the nozzle. The cleaning time is 1 minute.		Insert " PCL " filaments into the loading/unloading hole at the end of the pen, press "Extrude" again, product start to clean the nozzle. The cleaning time is 1 minute		
3	Unplug the DC5V power cord and cool down the nozzle for 3 to 5 minutes.				
4	Restart,press " Select Filament " ,elect "PLA" filaments.	Restart,press " Select Filament " , elect "PCL" filaments.			
5	press "Extured" ,red LED light is on,the device ents the preheating state When the red LED turns form red to green,the perheating is over,and the replaced filaments can be used.				

# Temperature adjustment instructions

- 1. When using ABS, PLA filaments, you hear abnormal noise at the nozzle end, indicating that the temperature is too high. Press "Select Filament/Temperature-" to lower the temperature, and the adjustment range is 8~15°C.

  2. When using ABS and PLA filaments, if there are a lot of bubbles, it indicates that the temperature is too high. Press "Select Filament/Temperature-" to lower the temperature,
- and the adjustment range is 3~8°C.

  3. When using ABS and PLA filaments, when it is found that the surface of the extruded
- filaments is dim, motor makes abnormal noise, it indicates that the temperature is too low, press " Select Filament/Temperature+" to increase the temperature, and the adjustment
- 4. When using PLA filaments, the extruded filaments are too thin, causing dripping, it indicates that the temperature is too high. Press "Select Filament/Temperature-" to lower the temperature, and the adjustment range is 10~15°C.

  When using PCL filaments, the extruded filament is too dry or the extrusion is slow, it indicates that the temperature is too low, press "Select Filament/Temperature+" to
- ncrease the temperature, and the adjustment range is 5-10°C
- 6. Normal extrusion should be smooth and round without bubbles. (Occasional bubbles)

## Frequently Asked Questions

If you encounter the above phenomenon during use, please do a simple treatment according to the table. If it still cannot be solved, please contact after-sales personne.

Trouble	Reason	Methods		
	Power adapter failure	Replace the power adapter		
The LCD screen does not light up	The DC5V power cord interface is damaged"PCL"	Replace the DC5V power cord		
	The pen tip is damaged	Replace the pen tip		
Red light flashes, LCD displays "ERR"	Pen tip sensor short circuit	Replace the pen tip		
	Extrude filament insufficiently	Increase extrusion speed		
	Temperature is too low	increase temperature		
Nozzle cannot extrude filament	Motor skidded	Unload, reload		
	Reload unsuccessfully	Unload, Flatten the top of the filaments		
	Poor contact of heating nozzle	Unplug the heating nozzle and reinstall		
	Extruded filaments have bubbles	Lower the temperature		
	The nozzle is clogged	Increase the temperature and speed, clean the nozzle		
	PLA filaments remain in the pipeline	Turn on the power again to switch "PCL" to "PLA", and select "PLA" to set the temperature to the highest limit , And then clean the nozzle with PCL filaments.		
PCL function failure	Unsmooth extrusion			
	Extrude no filament	Turn on the power again, switch to the		
	Extrude irregular shape filament	"ABS" menu, set the temperature to the		
	The nozzle is clogged	highest limit. And then clean the nozzle with PCL filaments.		
	ABS filaments remain in the pipeline	Turn on the power again to switch " PLA " to " ABS ", and select " ABS " to		
PLA function failure		set the temperature to the highest lim		
	The nozzle is clogged	, And then clean the nozzle with PLA filaments.		

# Packing list (Packing list may be different in some countries/regions)

3D printing pen	Power Adapter	Filament	DC5V power cord	User manual	Finger cot
1	1	PLAX1	1	1	2

### After-sales service

Warranty: In the case of non-human damage, one year warranty
Using non-original brand filaments or operating without referring to User Manual may cause damage, it will not be covered by the warranty.

For more services and support, please scan the QR code

