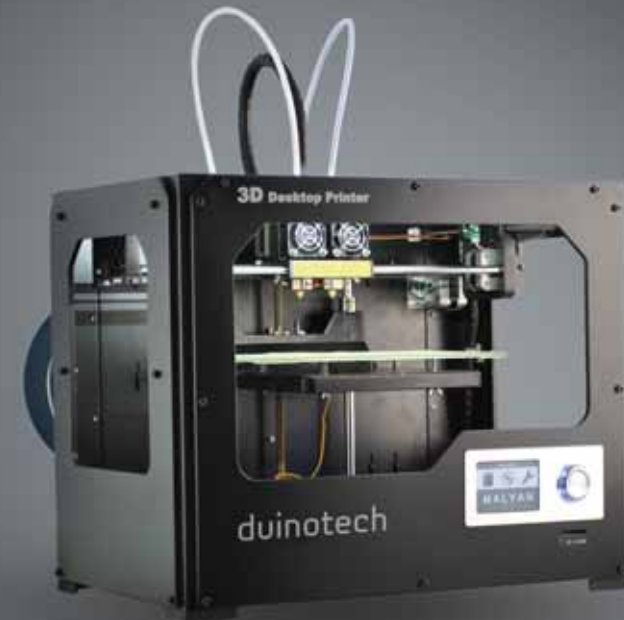


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USER MANUAL

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A PRECAUTIONS

1. Do not strip the yellow paper on the glass sheet, it is for anti-slip printing.
2. Do not strip the wrapper which wrap up the nozzles, it is for holding nozzle temperature.
3. Use this printer under right power and follow all local laws.
4. e ware of hot heat blocks, nozzles, extruded filament and heating plate.
5. Do not wear gloves when operating or repairing to avoid entanglement.
6. Do not leave the machine unattended when it is in operation.
7. Do not throw, disassemble, crush, burn your 3D printer or load unsupported filament.
8. Keep your 3D printer and all accessories out of children's reach.
9. When printing via USB, keep stable connection between the PC and the printer.
10. Do not move the dual extruder during printing.
11. Do not pull or twist the black cable any time.
12. Do not force or tear anything during unpacking and setup. This may damage the printer.
13. WARNING
 - a)Never reach inside while it is in operation. Always allow it to cool down before reaching inside.
 - b)If opening the printer for service, ensure that the power supply is turned off and the cord is disconnected.
14. CAUTION
 - a)The printer was built and packaged very carefully at the factory. We hope you'll take your time and be just as careful unpacking it and getting it set up.

B UNPACKING



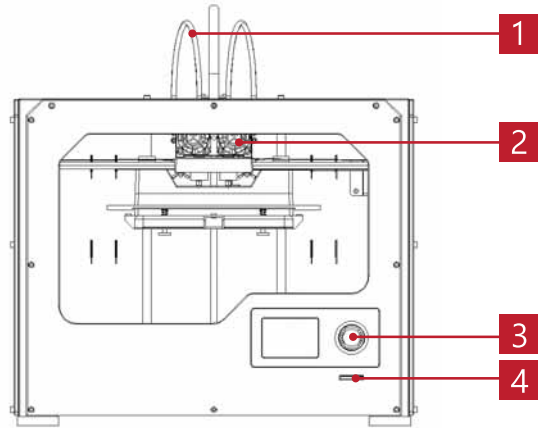
Take out everything from the carton and inner boxes carefully and place on stable table.



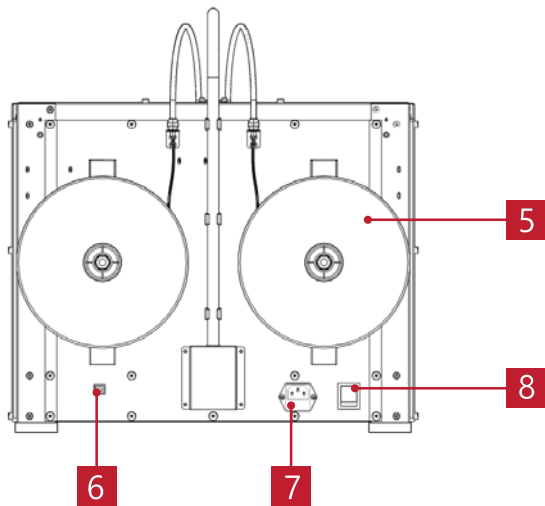
C CHECK LIST

3D printer	1
USB-A to USB -B cable	1
SD card	1
Power cable	2
5.5mm/ 7mm Wrench	1
Hex wrench	2
Diagonal pliers	1
Bolt	2
Nut	6
Gasket	4
Bearing	4
Soporte de carretel	2
Heating plate glass	2
Yellow tape sheets	2
Filament guide tube	2
Filament	1

D COMPONENT DIAGRAM



- 1.Filament Guide Tube
- 2.Extruder
- 3.LCD
- 4.SD Card



- 5.Material Support
- 6.USB
- 7.Power Interface
- 8.Power switch

E LCD MONITOR MENU

Print From SD	Off-line print x3g files from SD card
Monitor	
L Extruder	Preheat left extruder
R Extruder	Preheat right extruder
Platform	Preheat platform
Start Preheat	Preheat all the above
Manual	
X Axis	Rotate knob to move extruder along X axis
Y Axis	Rotate knob to move extruder along Y axis
Z Axis	Rotate knob to move extruder along Z axis
A Axis	Control right extruder motor
B Axis	Control left extruder motor
Home Axes	Reset positions of all axes
Statistics	
Filament Life	Historical printing
Filament Trip	Current printing
Lifetime	Used time
Last Print	The last print time
Reset	Clear all records

Setting	
Copy Printing	Repeat the last printing
Override GcTemp	Override Gcode temperature setting
Pause with Heat	Remain then temperature when pause
HBP Enabled	Enable heating platform
Platform Powersave	Stop platform heating since 5 th layer printing
Accelerate	Balance printing speed
Check SD Reads	Check SD card condition
Support WIFI SD card	Support WIFI SD auto printing
Ajustar torque	Adjust the torque of x,y,z axis and a,b extruder
Offset and calibration	
Home offset	Calibrate X/Y axis center point
Dual extruder calibrate	Calibrate Dual Extruder nozzle distance
Print calibration sample	Print sample of dual extruding
Languages	German/ French / English/ Chinese/ Russian
Restore Settings	Reset all to factory settings
About	To check the model and version

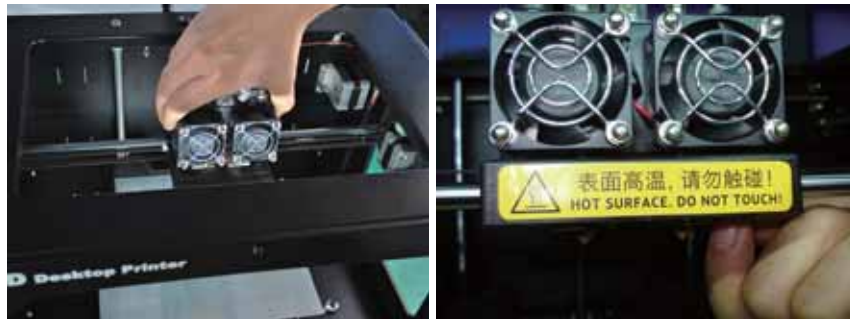
F TECHNICAL PARAMETERS

Product	FDM Desktop 3D Printer
Usage	Rapid Prototyping, print 3D models, samples, parts, toys...
Construction	ABS with power -coated steel reinforcement
Extruder	Dual
Nozzle diameter	0.35 mm (0.015 in)
Positioning Precision	XY 11 microns (0.0004 in), Z 2.5 micron (0.0001 in)
Layer Resolution	100 micron (0.0039 in)
Input Power	110-230V, 240W
Platform heating	85°C for printing ABS, N/A for PLA
Nozzle heating	220°C for printing ABS, 185 °C for PLA
Filaments	1.75mm diameter ABS or PLA
Interface	USB and SD
Build Surface	Glass with platform tape
Supported File	STL, GCODE, X3G
OS	Windows, Mac, Linux
Certificate	CE, ROHS, ISO 9001:2008
Warranty	12 months
Product Dimension	About 47.0x31.0x38.5 cm (18.5x 12.2x 15.1 in)
Build Volume	About 23.0x15.0x16.5 cm (9.1x 5.9 x7.1 in)
Shipping Box	About 52.0x39.5x44.5 cm (8.5 x15.4 x17.5 in)

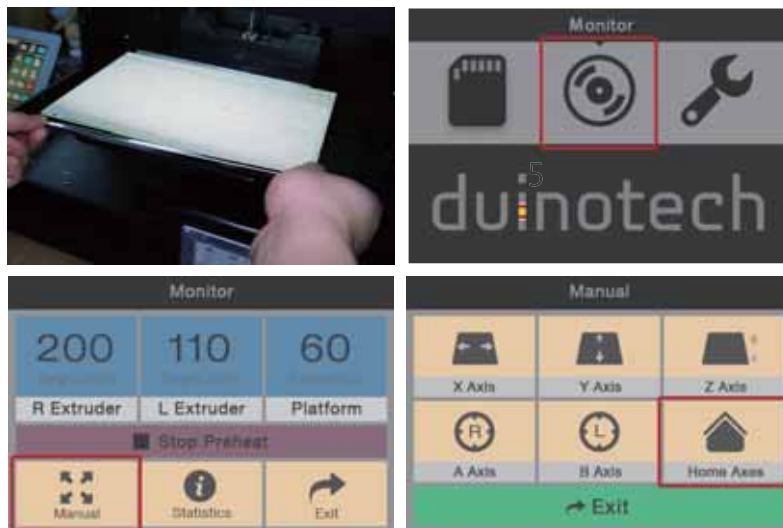
G INSTALLATION

HARDWARE INSTALLATION ON PRINTER

1 Put extruder onto carriage with the fan side facing forward and tighten two flare nuts below.



2 Cover / install the glass sheet onto aluminum plate properly, make sure it won't fall. Select "monitor-manual-Home Axes" on LCD and click to raise the platform automatically.



3 Move extruder around four corners and the center of platform manually, insert A4 paper each time to test, the nozzle should touch the paper but not too tight, this is the proper gap for fusing material and sticking on the plate. To adjust the gaps, please tighten the flare nuts/springs below to pull the plate lower, or loosen to push the plate higher instead.



Why need to adjust the platform!

- If the heating plate and nozzle spacing too far, or no leveling, which leads the base plate and nozzle to a wrong distance, the status of the non-stick plate will happen easily when printing.
- If the heating plate is too close to the nozzle, it will directly affect the nozzle spinning, this could cause damage to the heating plate.
- Leveling the base plate before printing helps to ensure the print objects gummed heating plate

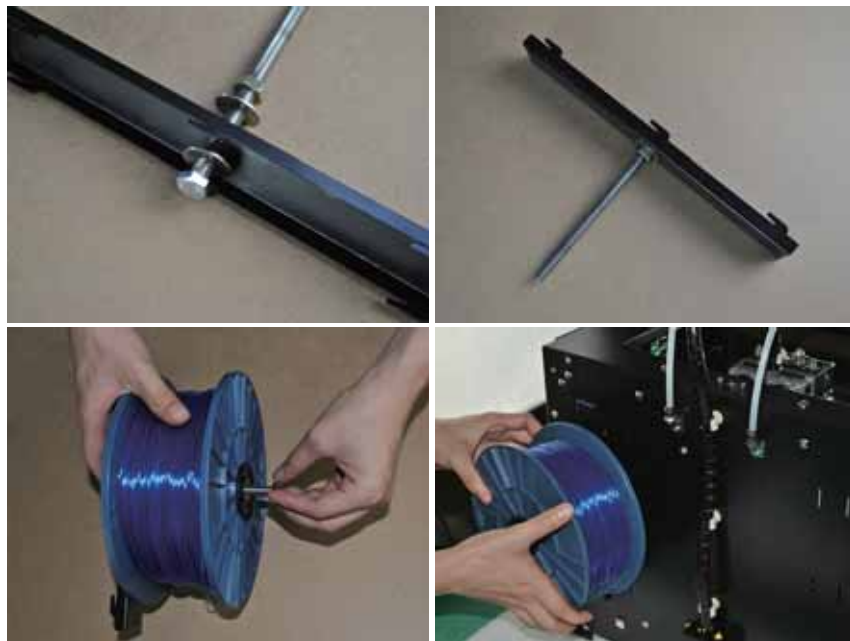
wrong		Nozzle and platform too far, will lead to material out of the base plate in the printing process
correct		Correct distance
wrong		Nozzle and platform too close, will damage the nozzle and the base plate

DUINOTECH™ Desktop 3D Printer

4 Now you can preheat the platform and nozzles by selecting “monitor” on LCD then set the target temperatures (Extruder 220°C for ABS, 185°C for PLA; Platform 85°C for ABS, N/A for PLA).

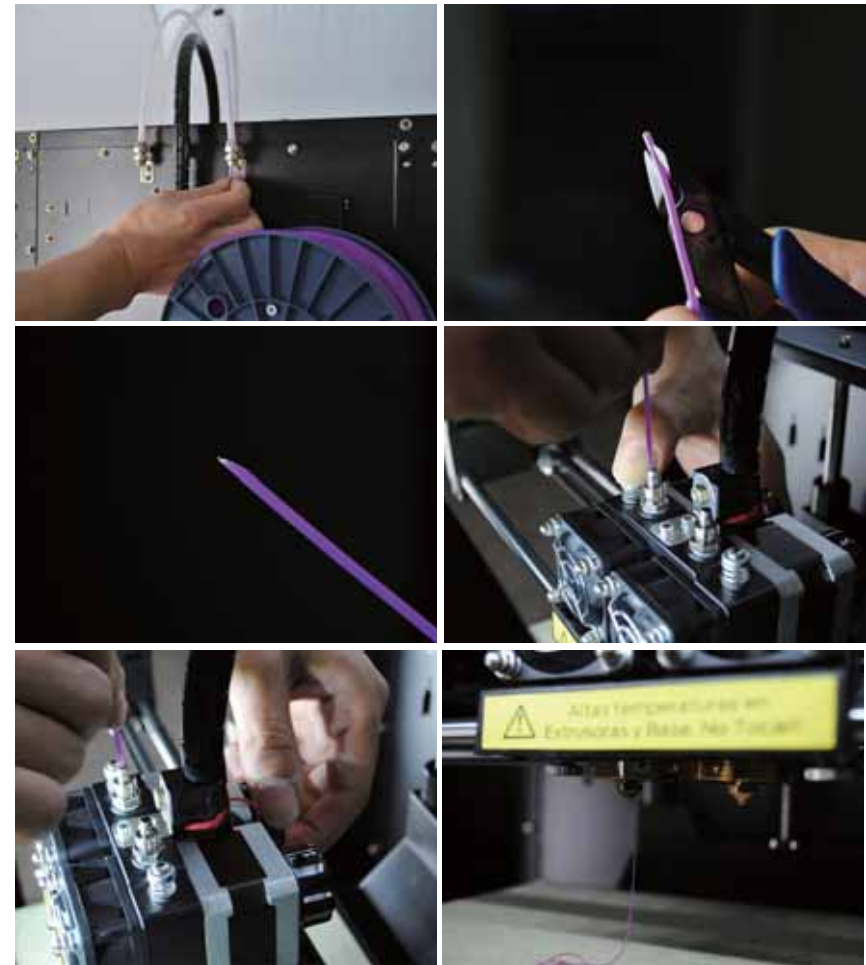


5 While preheating you can install the filament rack following to the photos below: fix spool to bar then hang onto the printer back.



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6 When the temperatures are ready, thread filament through plastic guiding tube, cut the top to sharp, press down the spring and vertically insert to steel loading path till the bottom, release the spring to click it, rotate the extruder knob toward the middle of dual extruders till fuse coming out of nozzle.



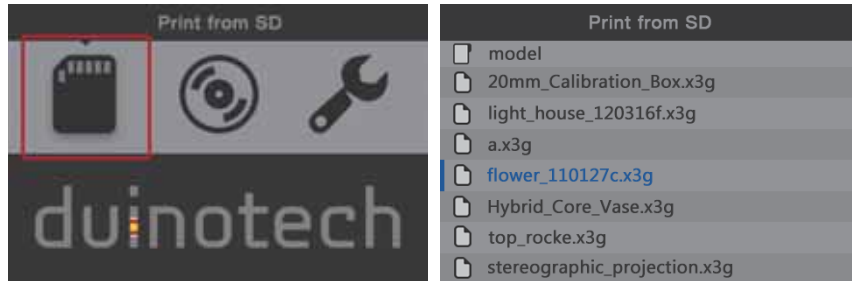
SOFTWARE INSTALLATION ON PC

Install the right version modified Replicator G and Python from our supplied SD card.

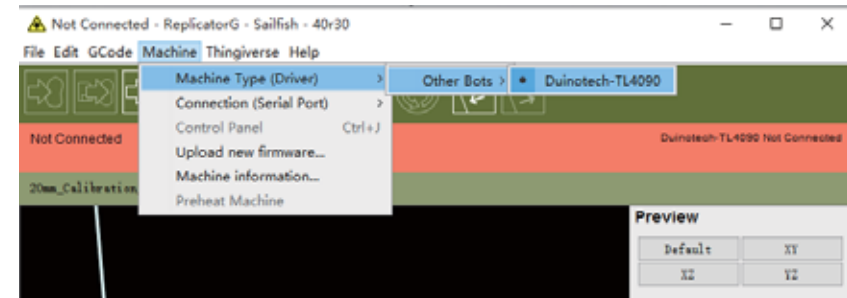
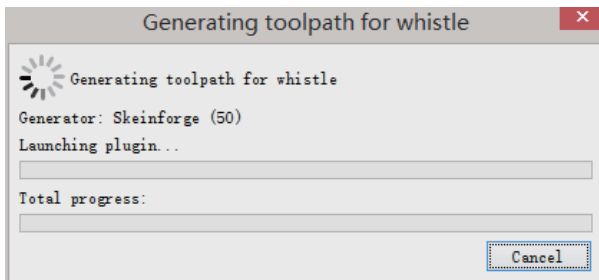
H PRINTING

SD PRINTING (RECOMMENDED)

We uploaded sample x3g files in our supplied SD card, you can insert it to printer, click "Print from SD" on LCD, choose the file and print.

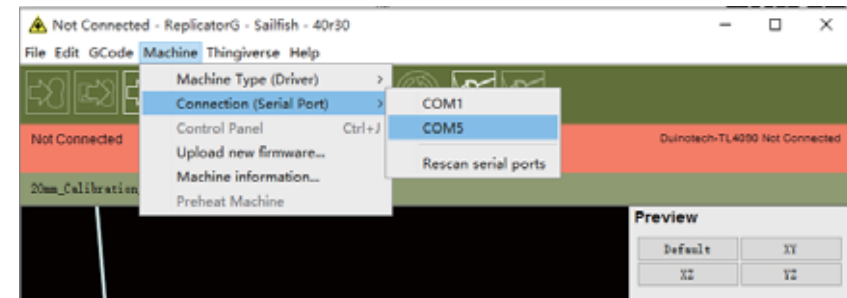


You can also download (from www.thingiverse.com etc) or create 3D STL files, enable our Replicator G, generate to Gcode then x3g and save to SD card and print.

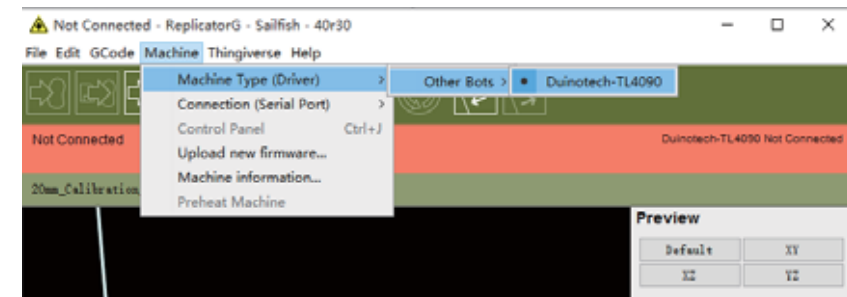


USB PRINTING

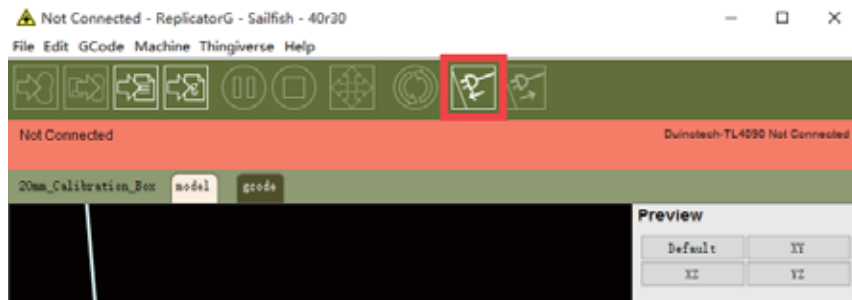
Use USB cable to Connect 3D printer with PC
Open Replicator G, click>Machine>Connection(Serial Port)>choose the detected port shown on device manager.



Click >Machine>Machine Type(Driver)>choose **Duinotech-TL4090**



Click the icon below to connect.

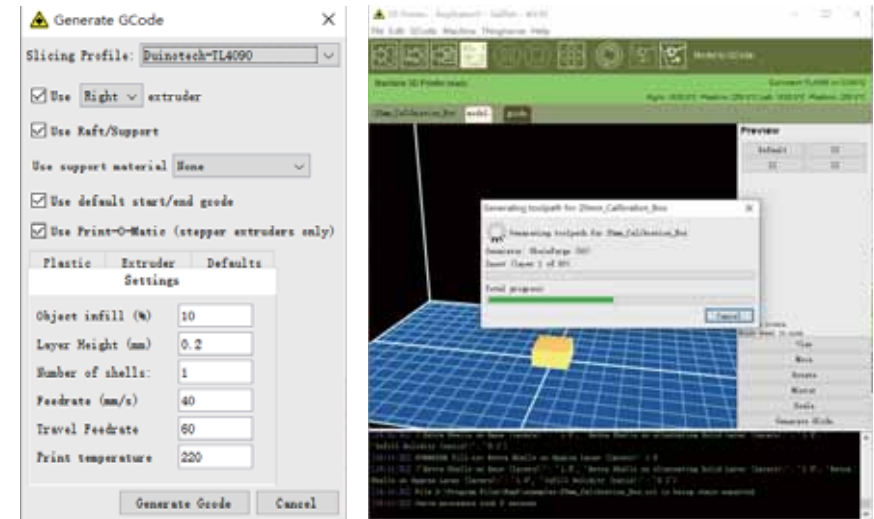


Preheat 3D printer: click control center button, input target temperatures (Extruders 220°C for ABS, 185°C for PLA; Platform 85°C for ABS, N/A for PLA) and wait till they are ready then load filament.

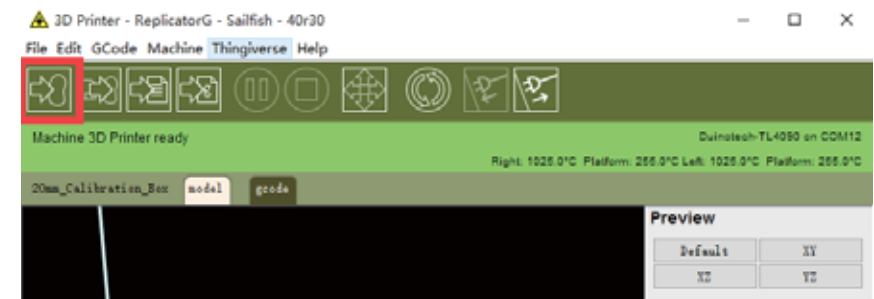


Click "File-Open" ,input STL model,click to generate Gcode.

Slicing required



After slicing,click top left button and start printing.



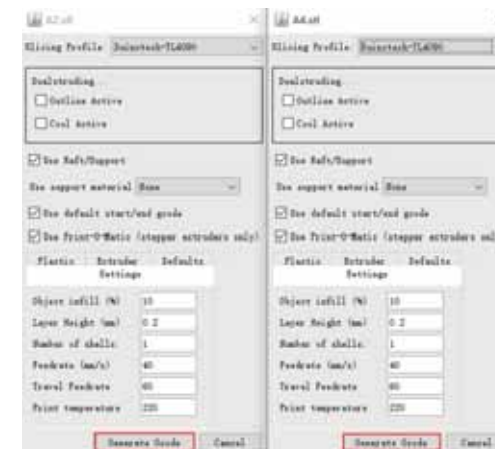
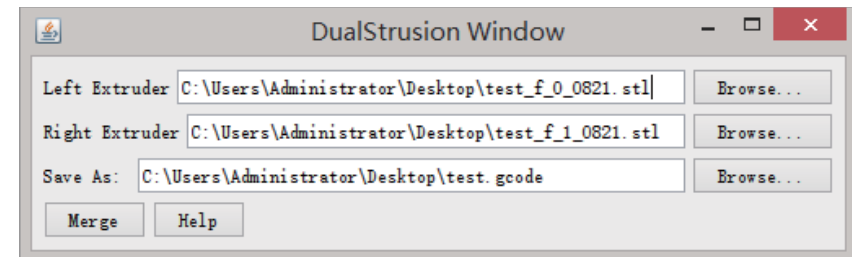
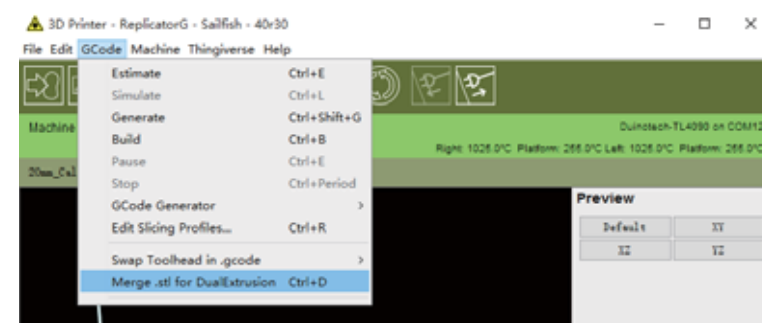
DUAL EXTRUDER CALIBRATION

(skip this step unless you got problem with 8.4 dual head printing)
Please follow below procedure to calibrate dual-extruder alignment :

- 1 Print calibration script (Open Replicator G, File->Scripts->Calibration->Replicator 1&2->Dual Nozzle Calibration.gcode), or choose from LCD- setting- Offset and calibration - print calibration sample.
- 2 When it does start, you will see it print a series of straight lines parallel to the front of the build platform, starting at the front left corner of the platform and extending back. The second series of lines will be perpendicular to these, and will start at the center of the platform and extend left. Then the second nozzle will print a set of lines alongside each of the first two sets. All four sets will have 13 lines, with the first line being longer than the others.
- 3 If you look closely at the paired sets of lines, you will see that the first lines in the second set are a tiny bit in front of those in the first set, while the last lines are a tiny bit behind. Somewhere you will find a line from the first set and a line from the second set that match up almost perfectly; that is what you are looking for.
- 4 The longer first line is line 1. The middle one is line 7, which is the default. So if say you are looking at the set of lines on the left side of the platform and you decide that the line just before the middle one is the best. Input the best line number into "Setting->14. Calibrate X / 15. Calibrate Y" in machine control panel. In simple word, print the calibrate file, count which line is aligned and input the number to setting menu. We will integrate this file/script into our system, to help users easier to calibrate.

DUAL HEAD PRINTING

Firstly, load filament to both left and right extruder. Open ReplicatorG, click "Gcode" - " Merge.stl for DualExtrusion" ,browse two STL files,- click" merge" - click both " generate Gcode" - slice two STL files into one Gcode.



When slicing is finished you can start printing the Gcode.

I TROUBLESHOOTING

1 Nozzle seems blocked:

Please clean the nozzle carefully with tools, check and make sure the extruder motor is rotating and pulling filament and that temperatures are right.

2 Software prompts timeout, no response while operating:

Please close software, restart the printer, then reconnect to PC printing.

3 Extruder jam with filament:

Please turn off the printer, remove the four nuts on the extruder fan and open it, then restart the printer and heat up the extruder to the melting point of filament, use tweezers to remove the residual plastic filament.

4 X/Y/Z axis have irregular stripes on the object while printing finished:

Please check whether the belt of printer is tight, the moving situation of X/Y motor and the limit switch is normal and the slicing setting of file.

5 Occasionally glitches when inserting the SD card:

Power off and restart the 3D printer.

6 Objects are warping or non-sticking to the platform while printing:

Check whether the distance between the nozzle and platform is too big, or change the tape on the glass.

J MAINTENANCE

1. Clean extruder and nozzle frequently
2. Oil the X/Y/Z axis occasionally.
3. Preheat extruder properly before loading filament.
4. Calibrate extruder and platform every time before printing.
5. Keep platform clean and empty when idle.
6. Keep printer away from dust and grime.
7. Keep printer clean and dry.
8. Keep printer in comfortable room temperature.