

JGAURORA 3D Printer Model:Z-603S

Operation Instruction



www.jgaurora3d.com Read it carefully before printing and keep it properly.

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INTRODUCTION

Z- 603S model is designed FDM 3d printer by Shenzhen Aurora Technology Co., Ltd, which could print the plastic models that you drawn.

characteristics: CNC laser cutting Metal body, transmit by belt and screw rod ,linear bear in X-Y-Z axis,which construction make printing much more table and high precision with less shake.

Special note:

1. All content in this manual is strictly checked, if any printing errors

or misunderstandings on the content, Shenzhen Aurora reserves

the rights of interpretation.

2. Any update information, will not notify.

A, Security Considerations

Please read below items, in case of damage and danger.

Do not touch the extruder and hot bed, when machine working, temp. of extruder will be about 200 centigrade, hot bed could be 110 centigrade.

Do not put your hand into machine when printing, in case of crushing.

The power supply use 110V-220V~50HZ alternating current, the tripod socket must be grounded, don't add another power, in case of fire or electric shock.

We suggest you wear safety goggles when tear off supports of models.

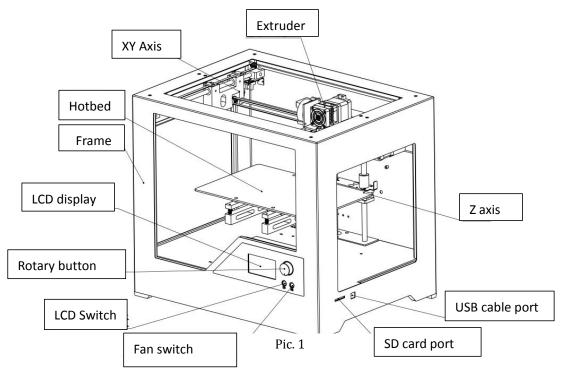
Put the machine at a drafty room, some smells from the material may let you uncomfortable, especially ABS material.

B.PRODUCT DETAILS

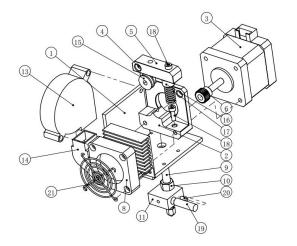
1.Specifications

Model: Z-603S	Nozzle diameter: 0.4mm
Layer thickness: 0.1-0.3mm	Machine size: 480*365*410mm
Printing speed: 10-300mm/s	Machine weight: 17KG
XY axis position accuracy: 0.05mm	Packing size: 580*460*510mm
Z axis position accuracy: 0.015mm	Gross weight: 20KG
Printing material: ABS,PLA,TPU,PA	Build size: 280*180*180mm
Material tendency: PLA	LCD screen: Yes
Filament diameter : 1.75mm	Offline printing: USB
Software language: Multi-Language	File format: STL、G-Code、OBJ
Function of support : automatically	OS : windows(linux、mac)
Software: Cura	Working condition: 10-30°C, Humidity 20-50%

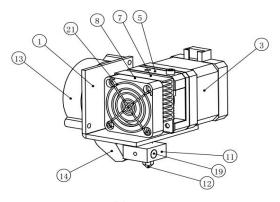
2.Name of machine parts



3.Extruder drawing



Pic. 2



Item No.	Name	Quantity
1	Extruder installation board	1
2	Extruder motor base	1
3	Stepper motor 40	1
4	Spindle	1
5	Extruder pressing block	1
6	Extruder gear 26*0.4mm	1
7	Heatsink	1
8	Fan 24v	1
9	M6*30 venturi with teflon	1
10	C grade M6 hexagon nuts	1
11	Heating block	1
12	Brass nozzle	1
13	Blower fan 24V	1
14	Tuyere	1
15	U shape bearing 604UU	1
16	M6*10 hexagon socket cap screws	1
17	Φ8*Φ1*31 spring	1
18	Hexagon socket cap srews M6*10	2
19	K galvanic couple	1
20	Themistor	1
21	Fan casing	1

Pic.3

4.Tool list

Photo	Name	Quantity	Unit
	Filament holder	1	рс
\bigcirc	testing filament	1	рс
	Nozzle cleaning needle	1	рс
	Hexagon wrench	1	рс
2 C	8'and 10'wrench	1	рс
<	Micro diagonal nippers	1	рс
0	USB cable	1	рс
0	Power supply cable	1	рс
-	8G SD card	1	pc
Sold a set	some screws	some	рс
	Card reader	1	рс



Pic. 4

C.CURA SOFTWARE

1、Cura14.07 installation

a.Where can I find the software?

1).SD card with shipment ; 2).download from internet;

b.installation process

1).From SD card with shipment

Insert SD card and open the file

nstructions Video		
-8 Packing List		
	Pic. 5	
cura14.07	2015-08-06 17:27	文件夹
Driver genius	2015-08-06 17:27	文件夹
Driver procedure	2015-08-06 17:27	文件夹
	Pic. 6	
Cura.mo		
Cura_14.07		
myramops1.4		

Pic. 7

2).Download from internet

Official website: https://ultimaker.com/en/cura-software/list

Select the right version as per your company system

ersion: 15.06.01	Release date: 7/2/15
/ersion: 15.06.00	Release date: 7/1/15
/ersion: 15.04	Release date: 4/15/15
/ersion: 15.02.1	Release date: 2/19/15
/ersion: 15.01	Release date: 1/30/15
/ersion: 14.12	Release date: 12/15/14
/ersion: 14.09	Release date: 9/19/14
/ersion: 14.07	Release date: 7/3/14
/ersion: 14.06	Release date: 6/16/14
/ersion: 14.03	Release date: 3/17/14
/ersion: 14.01	Release date: 1/10/14
/ersion: 13.12	Release date: 12/23/13
/ersion: 13.11	Release date: 11/22/13

b.Software installation process

Double click $\mathbb{C}_{\text{Cura_14.0'}}$ and follow the steps to install it

Cura 14.07 Setup	
Choose Install Location	
Choose the folder in which to install Cura 14.07.	
Setup will install Cura 14.07 in the following folder. To and select another folder. Click Next to continue.	install in a different folder, dick Browse
Destination Folder	Browne
C:\Program Files (x86)\Cura_14.07	Browse
Space required: 86.2MB	
Space available: 12.2GB	
indexify Textual Systems (2) 46	
Nullsoft Install System v2.46	
	Next > Cancel
	Conter Conter



C Cura 14.07 Setup		
Choose Components Choose which features of Cura 1	4.07 you want to install.	
Check the components you want install. Click Install to start the install	to install and uncheck the components you stallation.	don't want to
	 Cura 14.07 Install Arduino Drivers Open STL files with Cura Open OBJ files with Cura Open AMF files with Cura Uninstall other Cura versions 	
Space required: 86.2MB		
L Nullsoft Install System v2.46 ———	4. < <u>B</u> ack Install	Cancel

Pic.10

Cura 14.07 Setup			
Installing			
Please wait while Cura 14.07 is being	installed.		
Extract: publisher.py			
Show details		_	25
Summer and Statement and			
ullsoft Install System v2,46	<u></u>		-
	< <u>B</u> ack	Next >	Cancel
	Pic.11		

.



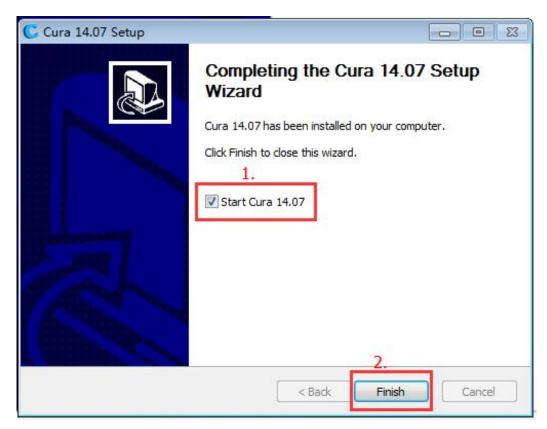
Pic.12

Completing the Installation Wiz	
The drivers were successf	fully installed on this computer.
You can now connect you came with instructions, ple	ar device to this computer. If your device ase read them first.
Driver Name	Status
Driver Name	

Pic.13

C Cura 14.07 Setup	
Installation Complete Setup was completed successfully.	
Completed	
Show <u>d</u> etails	
Nullsoft Install System v2.46	< Back

Pic.14



Pic.15

	First time run wizard
Service of the servic	inks for trying Cura! p you in setting up Cura for your machine.
	1. < Back Next > Cancel Pic.16
onfiguration Wiza	
	Select your machine
This does NOT sub Submit anonymous	nine do you have: al 1.

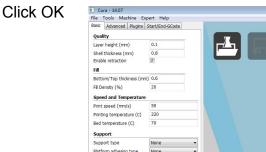
Pic.17

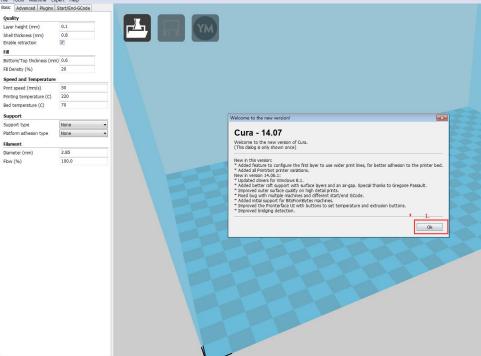
	X
Other machine	e information
The following pre-defined machine profiles are av	ailable
Note that these profiles are not guaranteed to g or work at all. Extra tweaks might be required. If you find issues with the predefined profiles, or want an extra profile. Please report it at the github issue tracker.	ive good results,
🗇 BFB	
🔿 DeltaBot	
🗇 MakerBotReplicator	
🗇 Mendel	
🗇 Prusa Mendel i3	
🗇 punchtec Connect XL	
	2.

	tom repr	ap information	· · · ·
		re you can set your own settings.	
Be sure to review the def			
f you like a default profile then make an issue on gitl		aed,	
ou will have to manually i	install Marlin or Sprin	er firmware.	
Machine name	RepRap		10.
Machine width (mm)	280		
Machine depth (mm)	180		
Machine height (mm)	180		
Jozzle size (mm)	0.4		
leated bed	V		
	A. 8 1991		
Bed center is 0,0,0 (RoSto	ock)		
Bed center is 0,0,0 (RoSto	DCK)		
3ed center is 0,0,0 (RoSto	ock) ()		
ed center is 0,0,0 (RoSto	ock)		
ed center is 0,0,0 (RoSto	ock) 🗔		
ed center is 0,0,0 (RoSto	ock) [_]		
led center is 0,0,0 (RoSto	ock)		
led center is 0,0,0 (RoSto	ock)		
ed center is 0,0,0 (RoSto	ock)		
ed center is 0,0,0 (RoSto	ock)		
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ed center is 0,0,0 (RoSto	ock)		
led center is 0,0,0 (RoSto	ock)		

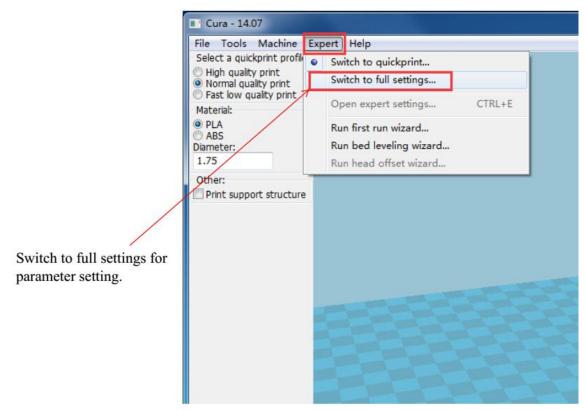
Max build size

Pic.19





Pic. 20



. C	ura - 14.07		
Eile	Tools Machine E	xpert Help	
1.	Load model file Save model Reload platform	CTRL+L CTRL+S F5	
	Clear platform Print Save GCode Show slice engine log	CTRL+P	
	Open Profile 2.		Open configuration file
	Save Profile Load Profile from GC	Code	
	Reset Profile to defa	ult	
	Preferences Machine settings	CTRL+,	
	Recent Model Files Recent Profile Files		
	Quit		
Dia	meter (mm)	2.85	
Flo	w (%)	100.0	

Configurations loading as per below 1->2 step



Position of configuration file: Computer/SD card)/Software/installation file/myamps1.4.ini (suggestion :keep this file copy to your computer)

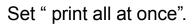
Select profile file to loa		次件 ▶ 安装软件(电脉	§上使用)	1.		- 49	搜索 安装软件	(电脑上使用	×
组织▼ 新建文件	SD card w						8	· •	0
篇 库	-		修改日期		类型	大小	- 2		
一根類	myramps1.4.ini		2014/7/1	14 10:00	配置设置	6 K	в 2.		
 ■ 图片 ■ 文档 → 音乐 									
 Ⅰ Ⅰ ↓ ↓	E								
☐ 本地磁盘 (D:) ☐ 本地磁盘 (E:) ☐ 本地磁盘 (F:)									
■ CD 驱动器 (G:) ■ 可移动磁盘 (H:)									
Autodesk 360	T								
2	之件名(N): myramps1.4.ini					3.	ini files (*.ini) 打开(O)	取消	•

After Loading, the basic and advanced configuration will be changed to the

Z-603S regular printing configuration.

Basic	Advanced	Plugins	Start/End-GCode	
Quali	ty		· · · · · · · · · · · · · · · · · · ·	
Layer	height (mm)	0.1	
Shell thickness (mm)		1.2		
Enable retraction				
Fill				
Botto	m/Top thick	ness (mr	n) 1.2	
Fill Density (%)		20		
Spee	d and Tem	perature	AL	
Print	speed (mm/	s)	30	
Printir	ng temperat	ure (C)	180	
Bed temperature (C)		65		
Supp	ort			
Supp	ort type		None	Ŧ
Platfo	rm adhesion	type	None	¥
Filam	ent			
Diame	eter (mm)		1.75	
	(%)		100	

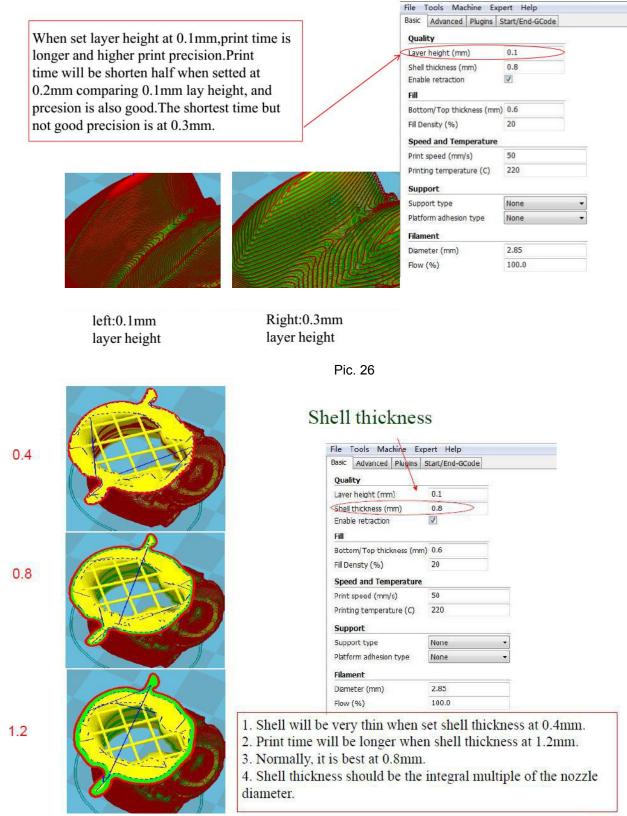
asic Advar	iced p	lugins	Start/End-GCode
Machine			
Nozzle size (i	nm)		0.4
Retraction			
Speed (mm/	's)		40.0
Distance (mr	n)		4.5
Quality			dir.
Initial layer t	hickness	; (mm)	0.3
Initial layer lir	ne widtl	h (%)	100
Cut off object bottom (mm)) 0.0	
Dual extrusion overlap (mm)) 0.15	
Speed			
Travel speed	l (mm/s)	50
Bottom layer speed (mm/s)		20	
Infill speed (mm/s)		0.0	
Outer shell s	peed (r	nm/s)	0.0
Inner shell sj	beed (m	nm/s)	0.0
Cool			
Minimal layer	time (s	ec)	5
Enable coolir	ng fan		



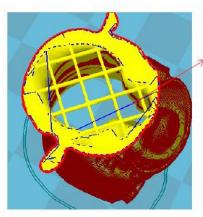
File T	ools Machine Expert	Help	
Basic	Copy profile to clipboar	d Co	de
Ma	Print all at once		
No:	Print one at a time]
Retra	iction		202
Speed	d (mm/s)	40.0	
Distan	ice (mm)	4.5	1
Qualit	ty		
Initial	layer thickness (mm)	0.3	
Initial	layer line width (%)	100	
Cut of	ff object bottom (mm)	0.0	
Dual e	extrusion overlap (mm) Pic.25	0.15	

2.Cura software setting

Layer height setting



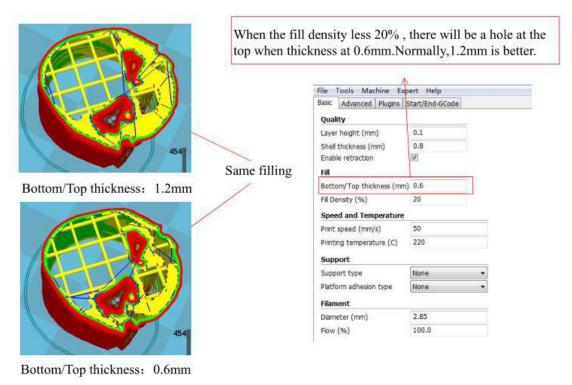
Enable retraction function: not to let the fused filament leak off under force of gravity during printing moving. Otherwise, the apperance of printed sample will be effected.

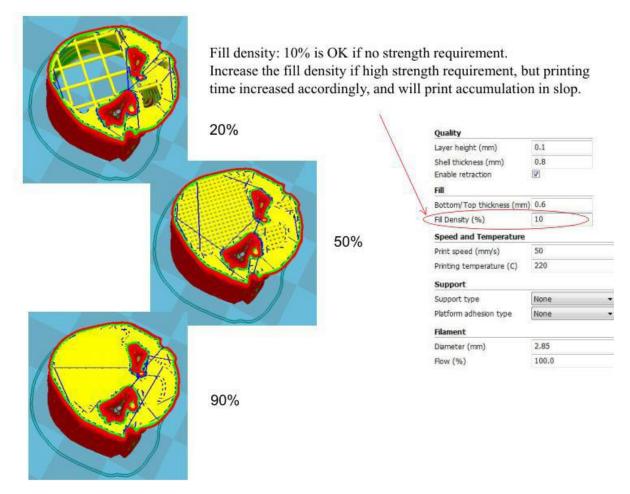


Blue stand for the thread leaked out.

asic Advanced Plugins	Start/End-GCode	
Qualitγ		
ayer height (mm)	0.1	
hell thickness (mm)	0.8	
nable retraction		
ill		
ottom/Top thickness (m	m) 0.6	
ill Densty (%)	20	
peed and Temperature	a	
rint speed (mm/s)	50	
rinting temperature (C)	220	
Support		
upport type	None	•
latform adhesion type	None	+
ilament		
iameter (mm)	2.85	
Marriecer (mini)		

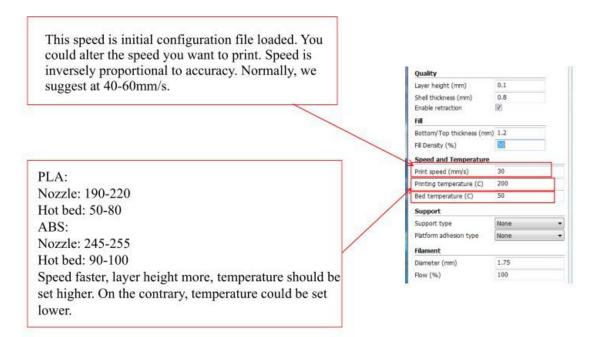
pic. 28





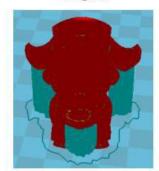
Pic. 30

Speed and temperature setting

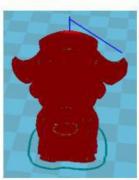




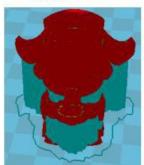
Original



Touching buildplate



None



Everywhere

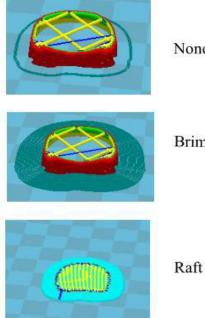
Pic.32

Support setting

Support type: None, Touching	ng
buildplate and Everywhere.	
Quality	
Layer height (mm)	0.2
Shell thickness (mm)	0.8
Enable retraction	1
Fill	
Bottom/Top thickness (mm)	1
Fill Density (%)	10
Speed and Temperature	
Print speed (mm/s)	50
Printing temperature (C)	220
Support	
Support type	Everywhere 🗸 🗸
	None Touching buildplate
Filament	Everywhere
Diameter (mm)	2.85
Flow (%)	100.0

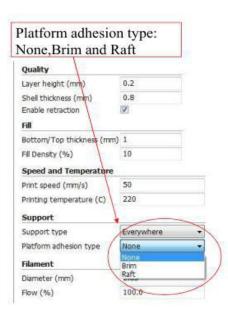
Normally support is needed for complicated structure and hangling model, Everywhere type may touch the model and not good looking apperance, To avoid support, model need to be rotated to a right position.





None

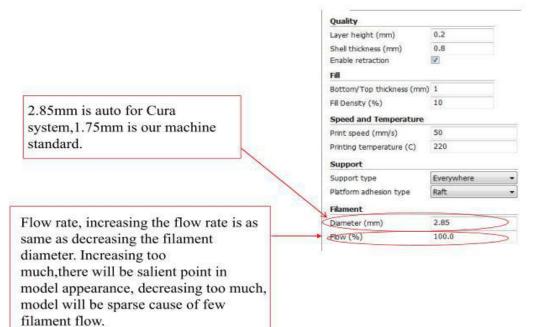
Brim



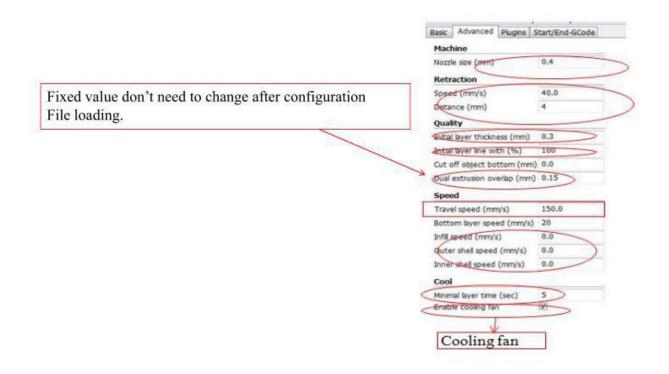
For normal models, select "None" is OK if hot bed adjustment done and good blue masking tap. Or, slect Raft, but hard to seperate raft from model.

Pic .33

Filament setting



Pic 34



Pic. 35

		Cut off object bottom se	etting.
		Machine	
	Cut off: 0mm	Nozzle size (mm)	0.4
		Retraction	
		Speed (mm/s)	40.0
AND SHARE		Distance (mm)	4
		Quality	
		Initial layer thickness (mm)	0.3
		Initial layer line with (%)	100
		Cut off object bottom (mm)	0
	Cut off: 3mm	Dual extrusion overlap (mm)	0.15
	Cuton: Shim	Speed	
		Travel speed (mm/s)	150.0
		Bottom layer speed (mm/s)	20
		Infil speed (mm/s)	0.0
CO. 100 100		Outer shell speed (mm/s)	0.0
		Inner shell speed (mm/s)	0.0
		Cool	
	Cut off: 8mm	Minimal layer time (sec)	5
	Cucon, onim	Enable cooling fan	1
13			

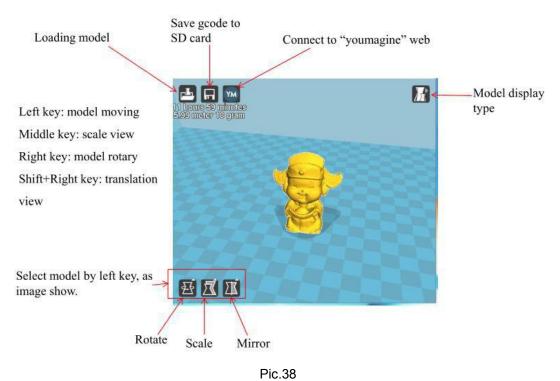
Pic. 36

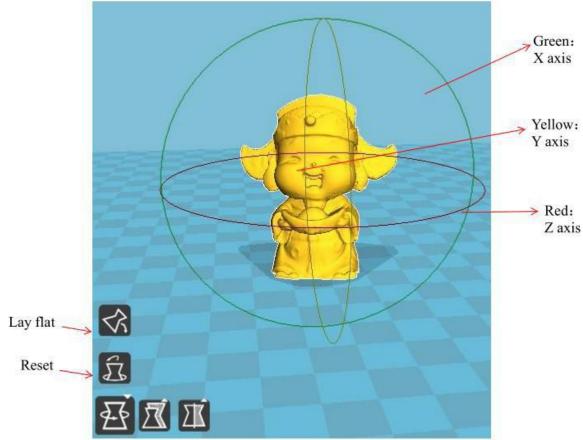
Cura - 14.07		File	Tools Machi	ne E
and a second	Expert Help	Basic	Advanced	Dive
Basic Advanced Plugin	Start/End-GCode		- I	Piug
Plugins:	?	start.g		
Pause at height Tweak At Z 3.1.2				
	v			
Enabled plugins	_			



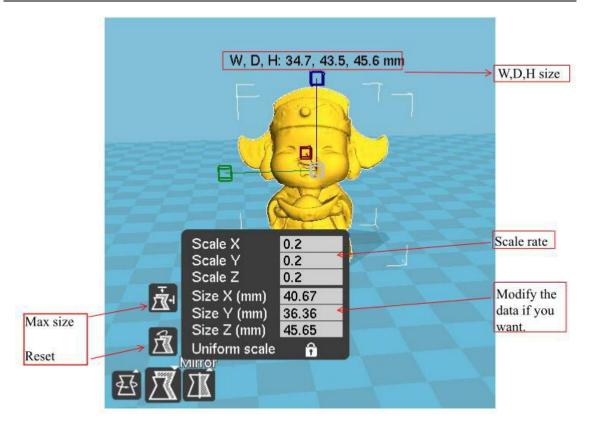
Different firmware have its own customized order, normally, don't change for these two items.

Basic setting of model in the software

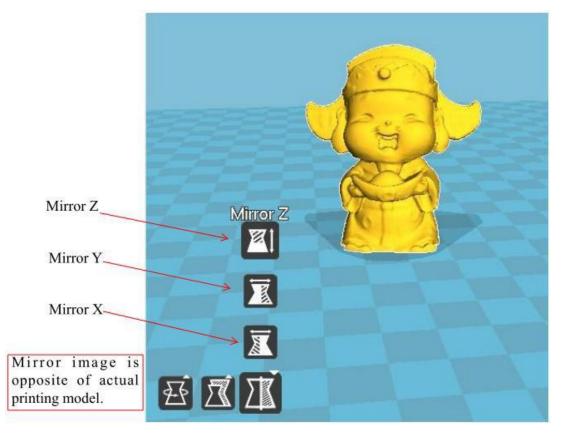




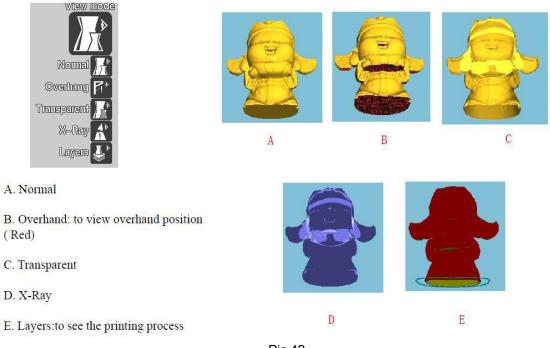




Pic.40

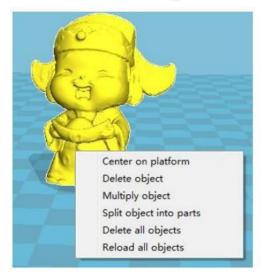


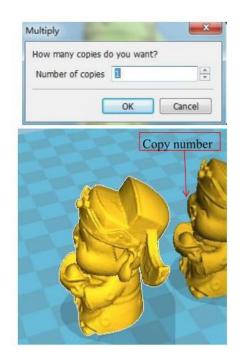
Pic.41



Pic.42

Select model and right click





Pic.43

1,Software expert mode

Mode A

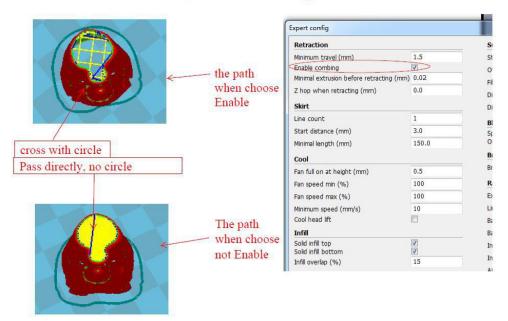
	Switch to quickprint
•	Switch to full settings
<	Open expert settings CTRL+
	Run first run wizard
	Run bed leveling wizard
	Run head offset wizard

Expert config	10.15.15.16		
Retraction		Support	
Minimum travel (mm)	1.5	Structure type	Lines) •
Enable combing	V	Overhang angle for support (deg)	60
Minimal extrusion before retracting	(mm) 0.02	Fill amount (%)	15
Z hop when retracting (mm)	0.0	Distance X/Y (mm)	0.7
Skirt		Distance Z (mm)	0.15
Line count	1	Black Magic	
Start distance (mm)	3.0	Spiralize the outer contour	E.
Minimal length (mm)	150.0	Only follow mesh surface	
Cool		Brim	
Fan full on at height (mm)	0.5	Brim line amount	20
Fan speed min (%)	100	Raft	
Fan speed max (%)	100	Extra margin (mm)	5.0
Minimum speed (mm/s)	10	Line spacing (mm)	3.0
Cool head lift	E	Base thickness (mm)	0.3
Infil		Base line width (mm)	1.0
Sold infil top	V V	Interface thickness (mm)	0.27
Sold infil bottom Infil overlap (%)	15	Interface line width (mm)	0.4
The overap (in)		Airgap	0.22
		Surface layers	2
		Fix horrible	
		Ok	

A minimum travel at small distance, must avoid frequent retraction.

Pic.44

Enable Combing is very important to the quality of surface, this is why cura is better than slic3r, choose enable combing will be better.



Pic.45

Mode B

Skirt is to avoid the unfilling of extruder when the " adhesion type" is none, then we type 1, but when the model you want to print is to the limit size, while you should type 0, otherwise the skirt will make the printing size to large.





Mode C

In order to increase the adhesive force to platform, usually open the fan at the 0.5mm height.

If the max and min fan speed is not same, the slicing software will choose a suitable one.

This is the limit min speed when you slow down the printing speed.

If yes, when finished printing, the extruder will delay the time to move to home, thus model will have spillage.

Retraction	
Minimum travel (mm)	1.5
Enable combing	
Minimal extrusion before retracting (mm)	0.02
Z hop when retracting (mm)	0.0
Skirt	
Line count	3
Start distance (mm)	6.0
Minimal length (mm)	150.0
Cool	
Ean full on at height (mm)	0.5
Fan speed min (%)	100
Fan speed max (%)	100
Minimum speed (mm/s)	10
Cool head lift	
Infill	
	7
Solid infill top	V
Solid infill top Solid infill bottom Infill overlap (%)	15

\$

ę

¢

E

E

Pic.47

Mode D		
	no solid infill top	solid infill top
	Solid infill top Solid infill bottom Infill overlap (%)	V V 15
pe selid infill bettern		Infill and shell overlapping contrast
no solid infill bottom	solid infill bottom Left pic: infill overlap15% Right pic: infill overlap 30%	

Pic.48

Ty Fi X
T <u>y</u> Fi X/
T

Type:lines
Fill amount:15%
X/Y distance:0.7mm

Type:lines Fill amount:30% X/Y distance:0.7mm

Ty Fil X/

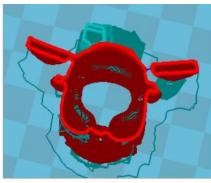
Type:grids
Fill amount:15%
X/Y distance:0.7mm

Structure type	Lines
Overhang angle for support (deg)	60
Fill amount (%)	15
Distance X/Y (mm)	0.7
Distance Z (mm)	0.15
Black Magic	
Spiraize the outer contour Only folow mesh surface Brim	Ē
Brim line amount	20
Raft	
Extra margin (mm)	5.0
Line spacing (mm)	3.0
Base thickness (mm)	0.3
Base line width (mm)	1.0
Interface thickness (mm)	0.27
Interface line width (mm)	0.4
Airgap	0.22
Surface layers	2
Fix horrible	
Combine everything (Type-A) Combine everything (Type-B) Keep open faces Extensive stitching	
Ok	

The main advantage of Cura is the support type, lines is easy to strip.

60 Overhang angle for support (deg) 60 The distance Fil amount (%) 15 Distance 2/ (mm) 0.15 Distance 2/ (mm) 0.15 Distance 2/ (mm) 0.16 Distance 2/ (mm) 0.16 Distance 2/ (mm) 0.22 Distance 2/ (mm) 0.22 Distance 2/ (mm) 0.22 Distance 2/ (mm) 0.22 Distance 2/ (mm) 0.22 Distance 2/ (mm) 0.22 Distance 2/ (mm) 0.22 Distance 2/ (mm) 0.22 <t< th=""><th></th><th></th><th></th><th></th><th></th></t<>					
The distance between support and model cannot be close or too far. Bitch Magic Spraze the outer contour Only follow mesh surface Bitm Brim line amount 20 Raft Extra margin (mm) 3.0 Base thickness (mm) 0.32 Surface the width (mm) 1.0 Interface line width (mm) 0.22 Surface line width (mm) 0.4 Argap 0.227 Interface line width (mm) 0.4 Argap 0.22 Surface layers 2 Extensive stricting Extensive stricting				Structure type	Lines 🔻
45 Fill amount (%) 15 Bitch Magic Distance 2 (nm) 0.15 Black Magic Spiralize the outer contour 0 Spiralize the outer contour 0 0 Brim Brim Brim Brim line amount 20 Brim Brim line amount 20 Brim Brim line amount 20 Brim Brim line amount 3.0 Base thickness (nm) 0.3 Base line width (nm) 1.0 Interface thickness (nm) 0.27 Interface line width (nm) 0.4 Aligap 0.22 Surface layers 2 Extormine everything (Type-A) Combine everything (Type-A) Combine everything (Type-B) Brim everything (Type-B) Brim everything (Type-B)		60			
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45 The distance between support and model cannot be close or too far. Black Magic Bind Magic 87 The distance between support and model cannot be close or too far. Brim line amount 20 88 Raft Extra margin (mm) 5.0 100 The fact between support and model cannot be close or too far. Brim line amount 20 88 Market between support and model cannot be close or too far. Brim line amount 20 88 Market between support and model cannot be close or too far. Brim line amount 20 80 Market between support and model cannot be close or too far. State the outer contour only follow mesh surface Brim line amount 20 80 Market between support and model cannot be close or too far. State the outer contour only follow mesh surface Brim line amount 20 80 Market between support and model cannot be close or too far. State follow mesh surface Brim line amount 20 81 Market between support and model cannot be close or too far. State follow mesh surface Brim line amount 20 82 Market between support and model cannot be close or too far. State follow mesh surface Brim line amount 20 83				Distance X/Y (mm)	0.7
45 between support and model cannot be close or too far. Spraize the outer contour Only follow mesh surface 8rm Brim line amount 20 Raft Extra margin (mm) 5.0 Line spacing (mm) 3.0 Base thickness (rmm) 0.3 Base line width (rmm) 1.0 Interface thickness (mm) 0.27 Interface thickness (mm) 0.27 Interface law width (rmm) 0.4 Argap 0.22 Surface layers 2 Extensive stitching Image of the outer contour only for the outer contour only follow mesh surface				Distance Z (mm)	0.15
45 and model cannot be close or too far. Brm Brm <td></td> <td></td> <th></th> <td>Black Magic</td> <td></td>				Black Magic	
45 and model cannot be close or too far. Brm ine amount 20 8r Brm ine amount 20 Raft Extra margin (mm) 5.0 Line spacing (mm) 3.0 Base thickness (mm) 0.3 Base line width (mm) 1.0 Interface thickness (mm) 0.27 Interface line width (mm) 0.4 Argap 0.22 Surface layers 2 Fix horrible Combine everything (Type-A) Combine everything (Type-B) Combine everything (Type-B) Kee poen face Extensive stitching					[F] (1951
45 be close or too far. Brim line amount 20 Raft Extra margin (mm) 5.0 Line spacing (mm) 3.0 Base thickness (mm) 0.3 Base line width (mm) 1.0 Interface thickness (mm) 0.27 Interface line width (mm) 0.4 Airgap 0.22 Surface layers 2 Extensive stricting Image of the everything (Type-A) Combine everything (Type-B) Image of the everything (Type-B) Kee poen faces Image of the everything (Type-B) Kee poen faces Image of the everything (Type-B)			and model cannot		<u>E1</u>
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45 Extra margin (mm) 5.0 Line spacing (mm) 3.0 Base thickness (mm) 0.3 Base line width (mm) 1.0 Interface thickness (mm) 0.27 Interface line width (mm) 0.4 Airgab 0.22 Surface layers 2 Fix horrible Combine everything (Type-A) Combine everything (Type-B) Combine everything (Type-B) Keep open faces Extensive stitching				Brim line amount	20
Line spacing (mm) 3.0 Base thickness (mm) 0.3 Base line width (mm) 1.0 Interface thickness (mm) 0.27 Interface ine width (mm) 0.4 Airgap 0.22 Surface layers 2 Fix homible 2 Combine everything (Type-A) Combine everything (Type-B) Keep open faces Extensive stitching			141.	Raft	
Base thickness (mm) 0.3 Base line width (mm) 1.0 Interface thickness (mm) 0.27 Interface line width (mm) 0.4 Airgap 0.22 Surface layers 2 Surface layers 2 Fix homible Combine everything (Type-A) Combine everything (Type-B) Keep open faces Extensive stitching		45		Extra margin (mm)	5.0
Base line width (mm) 1.0 Interface thickness (mm) 0.27 Interface ine width (mm) 0.4 Airgap 0.22 Surface layers 2 Fix hornible Interfaces Combine everything (Type-A) Image: Combine everything (Type-B) Keep open faces Extensive stitching				Line spacing (mm)	3.0
30 Interface thickness (mm) 0.27 Interface ine width (mm) 0.4 Airgap 0.22 Surface layers 2 Fix homible Combine everything (Type-A) Combine everything (Type-B) Extensive stitching				Base thickness (mm)	0.3
30 Interface ine width (rm) Interface ine widt				Base line width (mm)	1.0
30 Airgap 0.22 Surface layers 2 Fix horrible Combine everything (Type-A) Combine everything (Type-B) Combine everything (Type-B) Extensive stitching Extensive stitching				Interface thickness (mm)	0.27
30 Surface layers 2 Fix hornble Combine everything (Type-A) Combine everything (Type-B) Extensive stitching				Interface line width (mm)	0.4
30 Fix horrible Combine everything (Type-A) ♥ Combine everything (Type-B) ♥ Keep open faces Extensive stitching				Airgap	0.22
30 Combine everything (Type-A) Combine everything (Type-B) Keep open faces Extensive stitching				Surface layers	2
30 Combine everything (Type-B)	and the second second			Fix horrible	
Keep open faces		30			V
		50			
Ck					
				Ok	





The path has a outer contour outside the model.

Structure type

Fill amount (%)

Distance Z (mm)

Black Magic

Brim Brim line amount

Raft

Distance X/Y (mm)

Extra margin (mm)

Line spacing (mm)

Base thickness (mm)

Base line width (mm)

Interface thickness (mm) Interface line width (mm)

Spiralize the outer contour Only follow mesh surface

Overhang angle for support (deg) 60

Grid

15

0.7

0.15

R

20

5.0

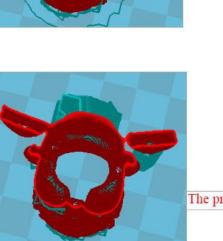
3.0

0.3

1.0

0.27

0.4



The printing path only follow the surface.

Pic.51

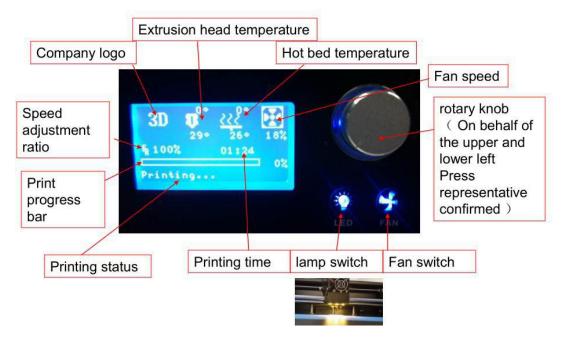
	Raft	
	Extra margin (mm)	5
	Line spacing (mm)	1.0
	Base thickness (mm)	0.3
1	Base line width (mm)	0.7
	Interface thickness (mm)	0.2
	Interface line width (mm)	0.2
	Airgap	0.22
	Surface layers	2
	Fix horrible	
	Combine everything (Type-A) Combine everything (Type-B) Keep open faces Extensive stitching	

Pic.52

We set this settings as default. Then click ok.

C Printer Operating

1. LCD display interface



2、Platform leveling:

A, press rotation button choice"Prepare"-"Auto", let all axis go to home point;

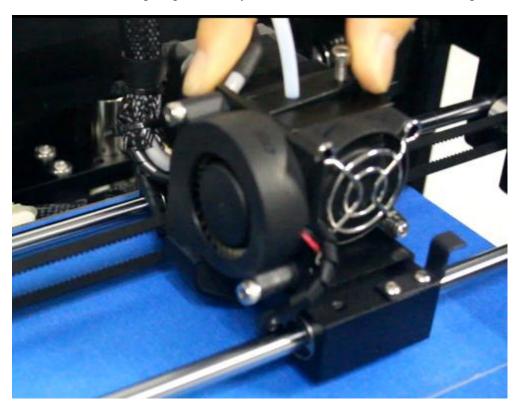


ĴMain	Ĵ
Disable steppers	
Auto home	
Preheat PLA	
Preheat ABS	

B, when motor stop, twist rotation button choice"Prepare"-"Disable steppers"



Main		1
Disable	steppers	
Auto hor	ne	
Preheat	PLA	
Preheat	ABS	



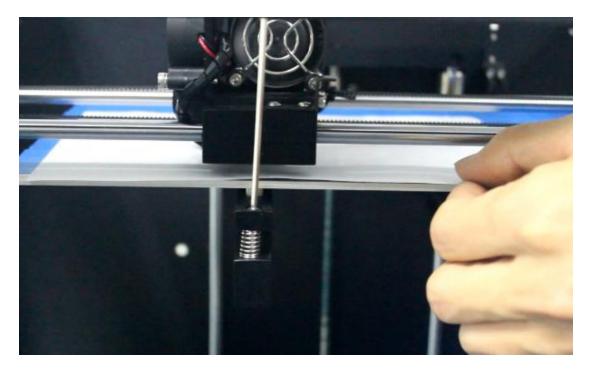
C, move extruder on top of platform by hand, check the distance between platform and nozzle;

D, put one A4 paper on printing area and let it under nozzle, when move A4 paper should have little friction force.:

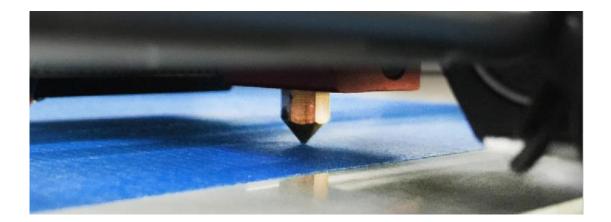
If too loose, mean too far, twist screw anti clockwise direction;

If too tight, mean too close, twist screw clockwise direction;

Check four corners of the distance.



E, after adjust, A4 can be withdrawn with little friction force. The distance between nozzle and platform is about 0.15mm, move extruder will not scratch platform.

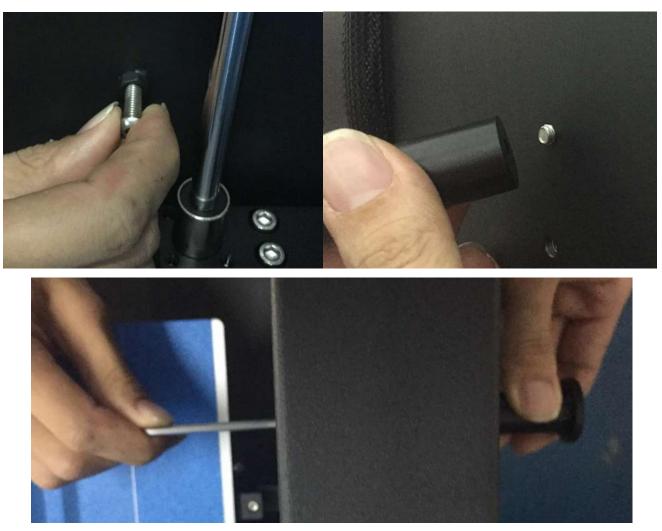


3. Filament Feeding

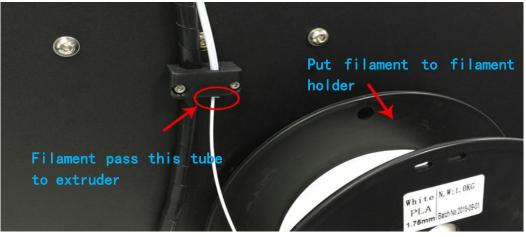
Press button-->Prepare-->Preheat PLA



After the extruder temp. reach 180 °C. Operate as below. Pic.54



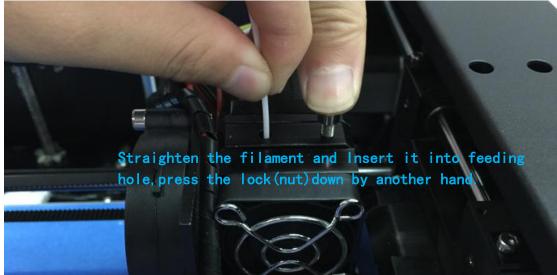
Pic.55



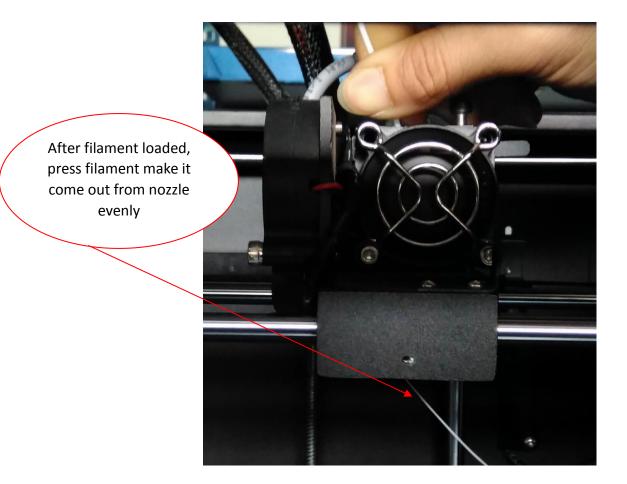
Pic.56



Pic. 57



PIC .30



Pic.60

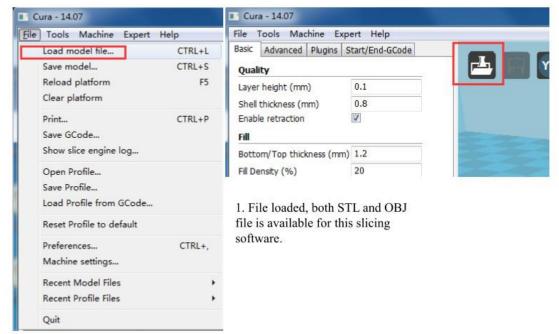
Filament changed notice:

1.To avoid filament replacement problem, please dont feed the all filament to the feeding mouth when one roll of filament is going to finished .New filament should be changed in time.

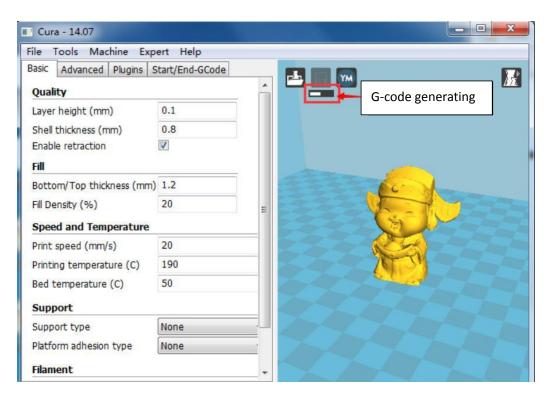
2. When new filament replacement, pls preheat the printer first, and then press down tight spring by hand, and feeding the filament for a moment and then pull out quickly .Remember that not to pull out hard or cold to avoid nozzle irreparable damage.

4.Printing

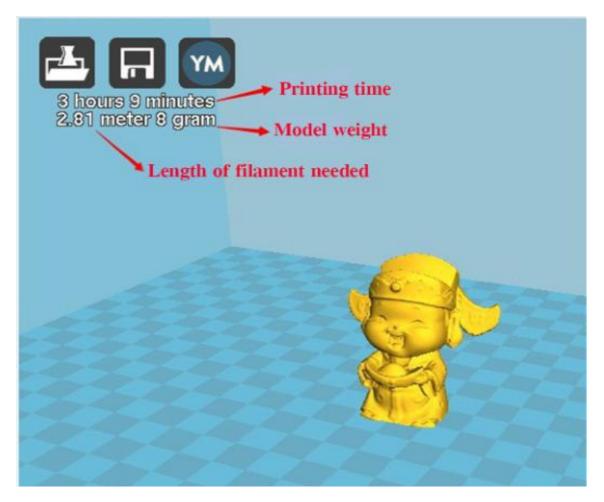
(1) Offline printing by SD card



Pic. 66

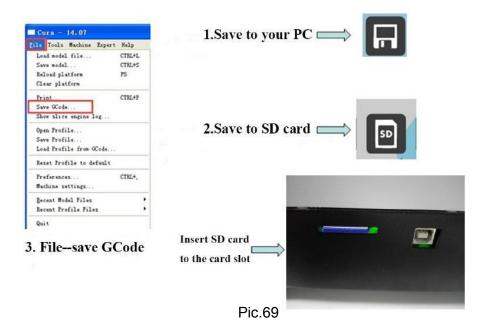


Pic.67



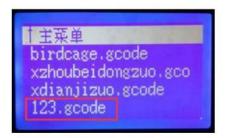
Pic.68

G-Code save to computer or SD card.



Printing:

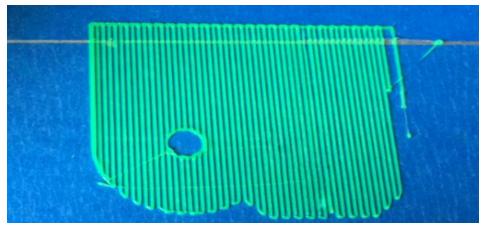






Select "Print from SD" from LCD display---Select the gcode you want to print (such as : 123.gcode). then press the rotary button, the printer will automatically work up. It will heat up to the temp. which been setted in the slice software, Remark: The distance between nozzle and platform is one of the most important factor that effects printing result.

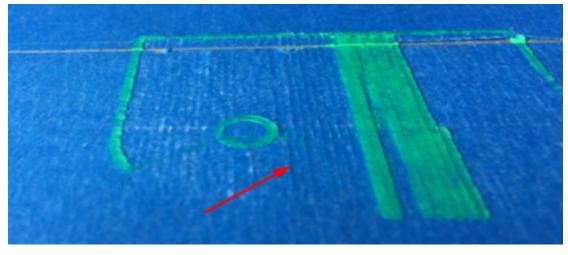
a. Far distance: Fine round , uneven, gap and tilt . In this case, printed model will be not good and uneasy to move.shown as picture:



Pic. 71

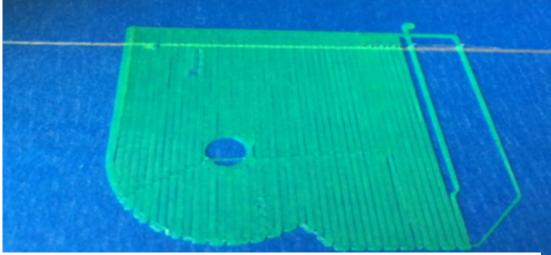
b,**Close distance:** the path is too flat and the side of path is upwrap,

what's more, it will damage the nozzle, shown as pic 72.



Pic. 72

c,Right distance : Flat skinning, gapless, shown as picture 73



Pic. 73

(2) Online printing by USB cable

A. Machine settings:

Cura - 14.07	Eile Tools Machine Expert Help
File Tools Machine Expert Help	Load model file CTRL+L Save model CTRL+S
Basic Advai 🛛 Reprap	Reload platform F5
Quality Machine settings	Clear platform
Layer height	Print CTRL+P
Chall thickey	Save GCode
Enable retra	Show slice engine log
	Open Profile
Connect printer and computer by	Save Profile
USB line.	Load Profile from GCode
	Reset Profile to default
	Preferences CTRL+,
	Machine settings
	Recent Model Files
	Recent Profile Files

Quit

Pic.7	4
-------	---

prap			
lachine settings		Printer head size	
-Steps per 1mm filament	0	Head size towards X min (mm)	0
laximum width (mm)	280	Head size towards Y min (mm)	0
laximum depth (mm)	180	Head size towards X max (mm	0
laximum height (mm)	180	Head size towards Y max (mm)	0
xtruder count	1 🔹	Printer gantry height (mm)	0
leated bed lachine center 0,0		Communication settings	
uild area shape	Square 🔹	Serial port	AUTO
Code Flavor	RepRap (Marlin/Sprinter) -	Baudrate	AUTO



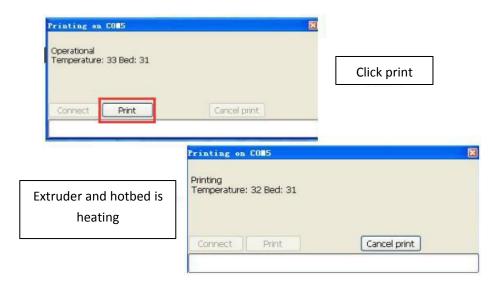
Modifying Serial port Number (Serial port is according to computer)

and Baudrate setting(115200).

B,Online printing



Pic. 76



Printing on COM5	X
Printing Temperature: 209 Bed: 50	
Printing	The progress of printing
Connect Print	Cancel print

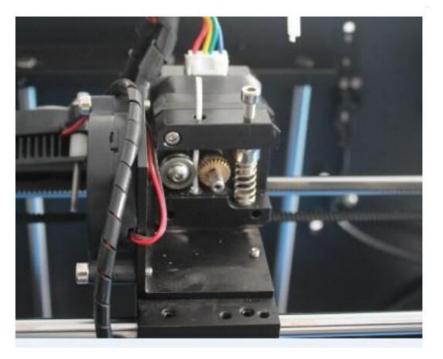
Pic. 78

E,**FAQ** and **Solutions**

Extruder Plugged

Tip: Electric fan should be took off before doing maintenance as picture shown

Situation A: only little filament leave down and cannot pull out

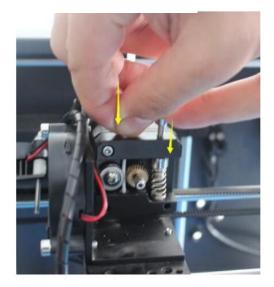


Pic.79

Main		t
Disable	steppers	
Auto hor		
Preheat	PLA	
Preheat	ABS	

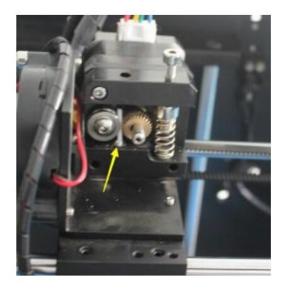
Select preheat PLA (it depends on ABS/PLA) Till temp. up to set temp. (below steps are proceed during heating)

Push filament by hand for a little bit, then press the lock(nut) down by another hand, and pull it out rapidly



Pic. 80

Situation B: filament do not feed into feeding mouth



Keep heating, use allen wrench to dismantle fan and heat sank part,and use smallest hexagon wrech in tool box(as picture) to press the remain filament till it out from nozzle competely

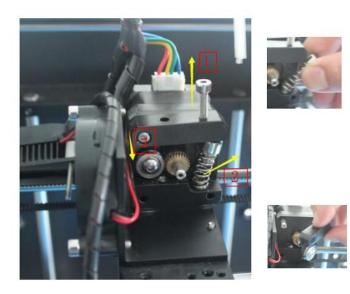


Pic.81

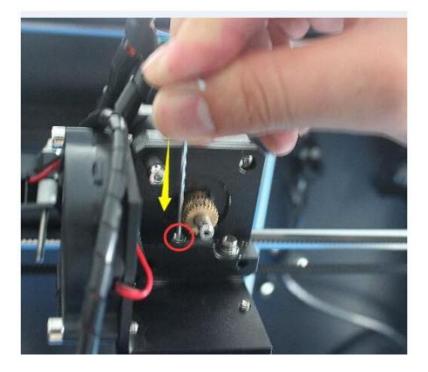
Situation C: When whole filament feed into the feeding mouth.



- 1. Loose the M4 screw
- 2. Take out the spring
- 3. Pull down Clamping piece







Use the smallest hexagon wrech and press the remain filament continuely till filament flow out completely. then, assemble all accessories again.

Pic.83

- 45 -

	Problems description	Reason	Solution
2	slip	Filament is too thin	Cut the thin filament
3	Temp. Is unusual	Broken temp.sensor	Change the sensor
4	Different shape as STL	Motor Pulley Screw loose	Check and Lock the screws
5	The model is warped	The hot bed is not at a level	Adjust hot bed level
6	G-code gerating failed	Wrong setting or	Choose the right machine type
		wrong save path	and change the right path
7	Software Installation failed	Different OS	Reset OS

F,MAITENANCE

Important maintenance tips:

- a. maintenance of X,Y,Z axis: Add some lubricants on the rods to reduce friction when the machine works noisy and a little bit shake
- b. Please refer to the USER MANUAL before printing, do preparation of hot bed adjustment first.
- c. When finished printing, the filament should keep sealing, avoid moisture.
- d. Preheat the extruder at the beginning of 2nd time printing, let extruder auto-push filament for a while.
- e. Machine should do some regular maintenance, drop some lubricating oil on thread rod, polished rod and bearings to avoid fatigue wear.
- f. Do not let the fan and air-condition blow to the hot bed when printing.
- g. Keep the working condition at "Temp:10-30°C, Humidity:20-70%".

G,AFTER SALES SERVICE

Shenzhen Aurora Technology Co.,Ltd.

Add:5F,No.17th.Chiling Rd Chiling County,Gaofeng community,Dalang street,Longhua District,Shenzhen, China 518109 Website: www.jgaurora3d.com