

Creator Start-up Guide

[Includes unpacking, setup, usage, and troubleshooting information]



FlashForge Technology Co., Ltd. <u>www.ff3dp.com</u>

Contents

Precautions	
What's in the box	
Unpacking	4
Hardware installation	8
Software installation	11
USB connection & setting temperature	
Feeding and withdrawing filament	
Setting parameters	
Initial print setup	
Dual-Extruder print	

Precautions

[Important: Read this user guide and heed all warnings]

- ! Because the Creator is sensitive to static electricity, make sure to release your own body's static electricity by touching a grounded object before any operation of the Creator. If you want to repair your Creator by yourself, the power source must be shut off and the power cord must be unplugged.
- ! Beware of high temperatures. After operating, do not move the unit until it has cooled to the touch. Before attempting to repair, the heating plate should be cool to the touch. The extrusion material is very hot as it comes out of the extruder—allows cooling before handling.
- ! Operate the Creator in a ventilated area. The machine may release a strong odor.
- ! Do not wear gloves when operating or repairing—entanglement may occur and cause injury.
- ! Do not leave the machine unattended when it is in operation.

What's in the box

Along with your Creator 3D printer, this package contains the following...

The accessory box on the top of the machine includes:

- --One or two extruder
- --1x or 2x filament holders
- --bolt tool plate
- --hex wrench tool box

Under the build platform in the Creator framework, there are:

--1kg primary color ABS filament

--1kg black ABS filament (only for dual extruders)

Under the Creator you'll find:

- --power supply
- --USB A to B cable
- --1x or 2x filament guide tubes

Unpacking

The Creator was carefully hand-packed by the staff at the FlashForge factory. Please follow the unpacking steps laid out below and heed all warnings.

- ! Handle with extra special care. Do not use any unnecessary force.
- ! Do not remove the thin yellow film from the heating plate. It is a heat-resistant adhesive tape intended to improve the adhesion of the materials to the plate.
- ! Do not remove the wrapping around the nozzle. It consists of ceramic fiber fabric and heat-resistant adhesive tape which helps the temperature remain constant in the heating zone and the filament is yielded uniformly.

First, put the box on the floor in a clean and flat work area. Remove the top carton, and then pull out the cardboard packing material that encases the Creator.



Now, you can see the top of the printer, as well as some cardboard boxes. The large box with the black wire is the **accessory box**, which includes **extruders** and other important components. Don't remove the accessory box or its contents, yet. <u>Note: The black cable is not a handle! Do not use it to lift the Creator.</u>

Now take the Creator out of the box by grasping the frame. Be sure to grasp only the frame. Gently lift and transfer the printer to your work surface.



With the Creator removed, you will find at the bottom of the box the **power supply and cable**, as well as a **USB A to B cable** and a **filament guide tube**. Take them out of the box and set them aside. We will now focus on the **accessory box**. Open the accessory box and remove the accessory sleeve.



You will find the extruder in protective packaging along the black cable. Handle it

with care as you take it from the box and place it on your work surface.



Remove the cardboard packing material and take the **accessory box** from the printer. Set the **accessory box** to the side for now.

The build platform should now be visible. It is an aluminium plate covered in a thin polyamide film. This is the platform that objects will print on. Remember: do not remove the film.

The next step is to raise the build platform. There are two ways to do this: 1) Turn the screw which is behind the rotating platform. 2) Grasp the printing platform with one hand on each side, and raise it slowly. Try to keep it level as you raise it up just shy of the black **nozzle**.



Under the build platform you'll find the filament -- either one or two rolls, depending on whether your Creator has one or two extruders. It's easiest to remove the filament by first removing all of the remaining packing material.



To do this, first take out the long box in the front, then the small box on the right, and finally the two wire trays.



You have now finished the unpacking job! Next: set up the hardware.



Initial hardware installation

Start by installing the extruder. You'll need two black screws from the bolt tool box found in the accessory box, and the appropriate hex wrench.

First, lower the build platform using one of the methods described above (either turning the screw or gently pushing down with both hands). Holding the extruder by its sides, take it out of the accessory sleeve and position it on the extruder seat with the fan facing forward. Align with the screw holes and fasten with the black screws.



Next is the installation of the filament bracket. If you have two brackets, install one on each side; if you have only one, install it on the left hand side (when viewing the Creator from the front).

The installation of the filament bracket is very simple -- just insert it into the circular opening and tighten the nut behind.

Then install the **filament guide tube** to the vacancy upon the extruder.

Put one end of the guide tube into the vacancy, buckle with the thumb and index finger to put in the vacancy on the top of the extruder.



The hardware installation is almost completed.

Next, with the power switch in the "OFF" position, confirm that the power cord is plugged in to the power outlet next to the power switch.



Now plug the USB A TO B cable into the USB B-type port -- do not plug the other end in yet.

Finally, take the filament out of the box, install it on the bracket, and screw the retaining nut. The nut should not be over-tightened.







Congratulations, you have completed the initial hardware installation! If you're ready to get started printing, proceed to the next step: software installation!

Software installation

ReplicatorG0040 is the ideal software to drive your dual extruder Creator. It can be

downloaded from our official website:

http://www.sz3dp.com/% E9% A9% B1% E5% 8A% A8% E4% B8% 8B%

E8% BD% BD /

Click Data Download, open creator Series driver, and then you can see the download link



Download the 3 extracting packages in the red box and decompress them one by one. Then install the python installation file and python acceleration components. Then click replicatorg-0040 which is the decompressed file of replicator G.

0040 Flashforge in the red box is the run the motion software, and you will see it by double-clicking

名称	修改日期	类型	7
🍌 docs	2013/4/10 10:01	文件夹	
🌗 drivers	2013/4/10 10:01	文件夹	
퉬 examples	2013/4/10 10:01	文件夹	
🌗 java	2013/4/10 10:01	文件夹	
🐌 lib	2013/4/10 10:01	文件夹	
🌗 machines	2013/4/10 10:01	文件夹	
🌗 scripts	2013/4/10 10:01	文件夹	
🌗 skein_engines	2013/4/10 10:01	文件夹	
퉬 tools	2013/4/10 10:02	文件夹	
📄 contributors	2012/11/9 23:46	文本文档	
🚳 cygiconv-2.dll	2012/11/9 23:46	应用程序扩展	
🚳 cygwin1.dll	2012/11/9 23:46	应用程序扩展	
🚳 ICE_JNIRegistry.dll	2012/11/9 23:46	应用程序扩展	
🚳 j3dcore-d3d.dll	2012/11/9 23:46	应用程序扩展	
🚳 j3dcore-ogl.dll	2012/11/9 23:46	应用程序扩展	
🚳 j3dcore-ogl-cg.dll	2012/11/9 23:46	应用程序扩展	
🚳 j3dcore-ogl-chk.dll	2012/11/9 23:46	应用程序扩展	
🚳 libusb0.dll	2012/11/9 23:46	应用程序扩展	
📄 license	2012/11/9 23:46	文本文档	
📋 readme	2012/11/9 23:46	文本文档	
🌲 ReplicatorG	2012/11/9 23:46	应用程序	
🚳 rxtxSerial.dll	2012/11/9 23:46	应用程序扩展	



(the text and green code on the above image can not be seen)

Then we will give a detailed introduction on how to import files and generate G-code.

Click on the **open** option in **file** 文件 编辑 G代码 打印机 网络 帮助, click the file you want to print (STL format), and import it by double-clicking. Then the work piece of the drawing design will appear in the interface.



After the image is imported, there may be some problems, such as the diagram is unseen or the position is wrong. In that case, the following function keys can be used:

Preview	
Default	XY
XZ J	۲Z
	/
Drag to rotate	
Mouse wheel to zoom	
Vi	ew 📕
Mor	ve 🔺
Rote	ate 🔺
Miri	or
Sca	le
Generat	e GCode 🛛 🛶 🛶

When the position is in the center, which is the ideal printing position. The next step is to generate G-code.

A ReplicatorG - 0040	
File Edit GCode Machine Thingiverse Help	
	() 2 2
Not Connected	
20mm_Calibration_Box model*	
	Preview
	Default
	XZ XZ
	Drag to rotate Mouse wheel to soom View
	Move
	Rotate
	Mirror
	Scale
	Generate GCode
[10:03:57] Could not load machine 'Creator双头' no mu	chineNode found

You can get the G-code by clicking the button in the red box.

A Not Connected - Replicato	rG - 0040		100 - 10	
File Edit GCode Machine T	hingiverse Help			-
	🛕 Generate GCode	ATA	×	
	Slicing Profile: Rep	licator 2 slicing	defaults 👻	
Not Connected	Vse Right 💌 ext	truder	в	he Replicator Dual Not Connected
20mm_Calibration_Box mode	🔽 Use Raft/Support		t	
	Use support material	I None	•	Preview
	🔽 Use default start	/end gcode		Default XY
\leq	Vuse Print-0-Matic	(stepper extrude	ers only)	XZ TZ
	Plastic Extrudy	er Defaults		
	Settin	gs	D	
	Object infill (%)	10	E	Drag to rotate
	Layer Height (mm)	. 27		Nouse wheel to zoom View
	Number of shells:	1	F	Move
	Feedrate (mm/s)	40	•	Rotate
	Iravel Feedrate	55	▶ 0 ₽	Mirror
	Print temperature	220		Scale
	I			Generate GCode
[10:23:28] Loading driver: r		Generate Gcode	Cancel	•
[10:23:28] Couldn't find a no	art to use!			
[10:23:29] goode sourcereplic	atorg.app.gcode.Mutabl	eGCodeSource@f9a	042	

- A: Slicing profile. Select replicator slicing defaults
- B: Left and right extruder print selecting. Left means printing with the left extruder, while right means printing with the right extruder.
- C: If your sample is in dangling structure, print support is needed. None means no support. Exterior means surface support. Full support means all support.
- D: Object infill. 100% is a solid print. We usually choose 10% fill in order to save filament.
- E: Layer Height. Layer thickness is related to precision. Generally, the minimum print thickness is 0.18mm. 0.27mm is most commonly used.
- F: Number of shells is the wall thickness -- usually set at 1
- G: Feedrate is generally in the range of 70-30
- O: Travel feedrate is generally in the range of 70-30
- P: Print temperature is 220 degrees

Click G code Generation, a progress bar will appear

A Not Connected - ReplicatorG - 0040	
File Edit GCode Machine Thingiverse Help	
Not Connected	The Replicator Dual Not Connected
20mm_Calibration_Box model Generating toolpath for 20mm_Ca	libration_Box
1.	Cancel
	Rotate
	Mirror
	Scale
	Generate GCode
Layer (layers): : '1.0', 'Infill Solidity (ratio): : : '0.1'}

And there is another possibility:

Users who do not choose the default installation path in the installation of python, can click "G-code generation" button in Replicator G, and a dialog box will pop up alerting that the executable file python can not be found.

	Nouse wheel to zoom	
	View	
	Move	
	Rotate	
	Mirror	
	Scale	
	Generate GCode	
	*	
Missing or incorrect	Python interpreter detected	-X-
Generating Would you	g gcode requires that a Python inter I like to visit the Python download p 是() 否(N)	preter be installed. age now?

First click "N" button in the above dialog box to close the dialog box. To solve this problem, we need to configure the corresponding menu.

File	Edit GCode Machine	Thingiverse He
	New	Ctrl+N
	Open	Ctrl+O
	Save	Ctrl+S
	Save As	Ctrl+Shift+S
	Recent	÷
	Examples	•
	Scripts	+
	Preferences	Ctrl+Comma
	Reset all preferences	1
	Quit	Ctrl+Q

Select the "parameter setting" option in the "File".

Click the button "select Python interpreter".



Find the Python installation directory in the dialog box, select python.exe and click "Open".

Choose model color	Choose b	ackground color	
firmware update URL: ht	tp://firmw	are.makerbot.com/firm	ware.xml
Arc resolution (in mm):	1	Skeinforge timeout:	-1
Log to file Log file	name:	t: 75 Toolhead Left	: 75 Platform: 75
Select Python interpro	eter		
			_

After clicking the "Close" button, the settings are done!

The machine will work normally by clicking the "G-code generation" button. Next we will start a preliminary test on the machine's connections and we will heat the platform and extruder.

USB connection & setting the extruder and platform temperature

First, connect the machine and computer with the provided USB cable.





This is the USB port on the machine. After connecting the cable, open the software -- we are going to connect the computer and printer.

\land Not Co	nnected	I - Replica	torG - 0040		
File Edit	GCode	Machine	Thingiverse	Help	
	1000				

Click the Machine,

🔺 Not Connected -	ReplicatorG - 0040		
File Edit GCode	1achine Thingiverse Help		
	Machine Type (Driver)	•	an mar
	Connection (Serial Port)	•	COM3
Not Connected	Control Panel Upload new firmware	Ctrl+J	Rescan serial ports ^{5 Not}
20mm_Calibration	Preheat Machine		Preview
			Default
			XZ

Choose the second option (Serial Port) on the menu, and we will find no port connected. Click rescan serial port, and the port will appear.



The software driver has not been installed if no port appears; let's install the driver. Click My Computer; right click select properties, then the basic system parameters appear. Then select Device Manager.

控制面板主页 2 设备管理器 2 远程设置 2 新统保护 2 高级系统设置	查看有关计算机的基 Windows 版本 Windows 7 鐵硯版 版权所有 © 2009 Mid	基本信息 crosoft Corporation。保留所有权利。	
	系统 分级: 处理器: 安装内存(RAM): 系统类型: 笔和触摸:	LO 要求局新 Windows 体验指数 Intel(R) Celeron(R) CPU G550 @ 2.60GHz 2.00 GB 32 位操作系统 没有可用于此显示器的笔或触控输入	2.60 GHz
カ東季内 攝作中心 Windows Update 性能信息和工具	计算机名称、域和工作组设 计算机名: 计算机全名: 计算机描述:	2査 ff-PC ff-PC	●更改设置 、
 ▲ 新 f-PC ● ▲ Android Phone ● ● DVD/CD-ROM 驱动 ● □ 使携设备 ● □ 使携设备 ● ● 处理器 ● ● 计算机 ● ● 並視器))윩 비행		
 ○ 建建 ○ 建建 ○ 其他设备 ○ CDC Serial ○ PCI 简易通讯控制 ○ SM 总线控制器 ○ The Replicator ○ 公司人法序控制器 ○ 公司人法学输入设备 			
 ✓ 声音、视频和游戏控 2) 鼠标和其他指针设备 ● 通用串行总线控制器 ● 2 网络适配器 ● 2 网络适配器 ● 3 显示适配器 	街山		

This software driver in the red box is not installed. Right click the Replicator, and

select Update Driver Software.



取消

Select browse my computer to search for driver software.

	×
更新驱动程序软件 - CDC Serial	
浏览计算机上的驱动程序文件	
在以下位置搜索驱动程序软件:	1
②包括子文件夹(I)	
→ 从计算机的设备驱动程序列表中选择(L) 此列表将显示与该设备兼容的已安装的驱动程序软件,以及与该设备处于同一类别下 所有驱动程序软件。	τθύ
下一步(N)	取消

Click Browse to find the location of software 0040.

则览计算机上的驱动程序文件	浏览文件夹
E以下位置搜索驱动程序软件:	选择包含您的硬件的驱动程序的文件夹。
C:\Users\ff\Desktop\工具\replicatorg-0034\drivers\FT	
团包括子文件夹(I)	Arduino Mega 2560 usbser Driver
 从计算机的设备驱动程序列表中选择(L) 此列表将显示与该设备兼容的已安装的驱动程序软件 所有驱动程序软件。 	文件夹 (F): FTDI USB Drivers

Click FTDI USB Drivers in the driver folder before confirmation, and finally click next. The driver is now installed.

Next is to connect to the printer. The steps are the same. Click printer; select the second connection (serial port).

ie zan ocode [i	1achine Thingiverse Help	-		
10 P-10 -	Machine Type (Driver)	× 6	man and	-
	Connection (Serial Port)	• •	COM3	
lot Connected	Control Panel Ctrl- Upload new firmware	+J	Rescan serial ports	5 Not Connec
Omm_Calibration	Machine information Preheat Machine			
			Preview	
			Default	XY
			XZ	YZ
			Drag to rotate	
			Mouse wheel to zoom	
			Mouse wheel to zoom Vi	ew
			Mouse wheel to zoom Vi Mo	ew ve
			Mouse wheel to soom Vi Mo Rot	ew ve ate
			Mouse wheel to zoom Vi Mo Rot Mir:	ew ve ate ror
			Mouse wheel to zoom Vi Mo Rot Mir Sce	ew ve ate ror ile

The port COM3 (this is the port for our test machine, it is different in each machine) appears. Click COM3.

	Machine Type (Driver)	· an lord
21 1-2 -	Connection (Serial Port)	COM3
lot Connected	Control Panel Ctr Upload new firmware	rl+J Rescan serial ports ^{5 Not Conne}
Omm_Calibration	Machine information Preheat Machine	
		Preview
		Default XY
		XZ YZ
		Drag to rotate Mouse wheel to room
		View
		ATEM .
		Move
		Move Rotate
		Move Rotate Mirror
		Move Rotate Mirror Scale

Next, we can connect the machine.

A Not Connected - ReplicatorG - 0040	-		
File Edit GCode Machine Thingiverse He	р	-	
		P.	2
Not Connected	Thingomati	w/ HBP and B	Extruder MK5 Not Connected

Click the function keys in the red box.

A Thingomatic w/ HBP and Extruder MK5 - ReplicatorG - 0	0040	
File Edit GCode Machine Thingiverse Help		
	(D) P P	
Machine Thingomatic w/ HBP and Extruder MK5 ready	hingomatic w/ HBP and Extrude	er MK5 on COM3
	Plastruder MK5: 30.0°C	Platform: 20.0°C
20mm_Lalibration_box model gcode		
	Preview	10
	Default	XY
	[xz]	ΥZ
	Drag to rotate Mouse wheel to zoom	
	View	
	Move	
	Rotat	e
	Mirro	r
	Scale	۱ <u>ــــــــــــــــــــــــــــــــــــ</u>
	Generate	GCode
[13:41:17] Couldn't find a port to use!		-

If red turns to green, the machine is connected with the computer. The next step is to heat the extruder and build platform.

A Thingomatic w/ HBP and Extruder MK5 - ReplicatorG - 0040		
File Edit GCode Machine Thingiverse Help		
	2 2	
Machine Thingomatic w/ HBP and Extruder MK5 ready Thingoma P	atic w/ HBP and Extrud lastruder MK5: 30.0°C	er MK5 on COM3 Platform: 20.0°C
20mm_Calibration_Box model gcode		
	Preview	
	Default	XY
	XZ (۲Z
	Drag to rotate Mouse wheel to zoom	
	View	*
	Mov	9
	Rota	te
	Mirr	or
	Scal	e
	Generate	GCode
[13:47:30] Motherboard Firmware V6.2 ()		

An interface will appear by clicking the cross-shaped function key.

oming		
Jog Controls	Jog Mode Imm I O Cente	Extruder Motor Control Motor Speed (FMM) Motor Control Oreverse Ostop Oforward
	T 0 Cente Z 0 Cente Make current position z	r I Extruder Temperature Controls r Z Plastruder MKS Target (° C) Plastruder MKS Current (° C) ero Plastform Target (° C) Plastform Current (° C)
XY Speed	480 m	/min. Jopperature Chart
Z Speed []	480 m	/min. 250
		200 -
		150 -
		100 -
		50
tepper Motor Controls		

Input the target values. 220 degrees for the extruder (maximum 230 degrees); 115 degrees for the heating platform (maximum 120 degrees). After input, the platform will start to warm up. When the extruder temperature reaches 50 degrees, the cooling fan will activate and the current temperature value will display to the right, as shown below.

🔦 Control Panel	
Homing	
Jog Controls Jog Mode Imm X 0 Center X	Extruder Motor Control Motor Speed (PWM) Motor Control © reverse © stop @ <u>Forward</u>
Y 0 Center Y Z 0 Center Z Make current position zero Make current position zero	Extruder Iemperature Controls Plastruder MK5 Target (° C) 220 Plastruder MK5 Current (° C) 48 Platform Target (° C) 110 Platform Current (° C) 33 Iemperature Chart 300
Z Speed 480 mm/min.	250 - 200 - 150 - 100 -
Stepper Motor Controls Enable Disable	50

It shows that the heating of the sprinkler and bottom plate is normal.

Feeding and withdrawing filament

Some users report that it's easy to feed filament, while others report that it's hard -what would explain this? Sometimes, if the location is wrong (trying to operate at different angles), the filament feeding wheel is not secure and the material cannot be fed. To prevent this, please do the following:

After putting the filament into the feeding hole, do not push it further until the extruder temperature reaches 200 degrees or more, and not until you can feel that the filament is being drawn in.

Withdrawing of filament is the same; the material cannot be withdrawn until the temperature reaches 200 degrees or more. Put your hands on the filament near the feeding hole and withdraw it only once you feel that the material is being discharged.

How to set the filament

First, remove the filament Guide Tube by pulling out.



When the guide sleeve is disengaged, you can keep pulling the material from the guide sleeve behind the device until the thread passes through from the front.

To avoid blocking in print, please ensure that two threads are loaded from the middle. There are two wire trays -- one runs clockwise and the other one runs counter-clockwise, as shown below:



After the materials are inserted into the extruder, do not insert the guide wire tube into the extruder before the machine has started. There are two ways of feeding: one is to feed by using the LCD screen, the other is to feed using the control panel of the Print software.

Feeding the material by LCD option

1. When you start your machine, the display indicates:

Build from SD Preheat Utilities

2. Click the button board on the right, and then click the page down key to advance to the second page. The display indicates:

Preheat Utilities Info and Settings

3. Select Utilities; click the M key in the middle of the button board. The display indicates:

Monitor Mode Change filament Level Build Plate Home Axes Feed operation with LCD screen

4. Select Change filament. Click the M key in the middle of the button board. The display indicates:

Load Right Unload Right Load Left Unload Left

5. Select Load right. Click the M key on the button board. The display indicates: I'm heating up my extruder! At this time, the temperature of the right nozzle is being heated up. When the temperature reaches 220 degrees, click the M key on the button board. The nozzle should spit material. If it does not, keep clicking the M key until it is done.

Feed operation using Replicator G control panel

This operation cannot be done until your machine has been connected to your computer.

Thingomatic w/ HBP and Extruder MK5 - ReplicatorG - 00	040	
ile Edit GCode Machine Thingiverse Help		
	D 2 2	
Machine Thingomatic w/ HBP and Extruder MK5 ready Thi	ngomatic w/ HBP and Extrud	ler MK5 on C
	Plastruder MK5: 46.0°C	Platform: 48
Comm_Calibration_Box model gcode		
	Preview	
	Default	XY
	XZ	۲Z
	Drag to rotate Mouse wheel to zoom	
	Vie	
		•
	Mov	e
	Mov Rota	e te
	Mov Rota Mirr	e te or
	Mov Rota Mirr Scal	e te or

If the print software is successfully connected, a dialog box will pop up:

Click the icon in the red box -- this is the Control Panel icon. The dialog box shown below will then pop up.

Homing	
Jog Controls Jog Mode Imm I 0 2 0 KHake current Z Speed Stepper Motor Controls	Extruder Motor Control Motor Speed (PHM) Center X Center X Center Z Basition zero BO mm/nin. BO

To heat the right extruder and feed material: click the right extruder in red box on the upper right corner of the control panel -- manually modify the temperature in the right target of extruder temperature control -- and change the temperature to 220 degrees. A rose red line will move around in the temperature map. When the actual temperature reaches 220 degrees, you can pull out the filament out.

How to withdraw the filament

1. When you start your machine, the display indicates:

Build from SD Preheat Utilities

2. Click the button board on the right, and click the page down key to advance to the second page. The display indicates: Preheat

Utilities Info and Settings

3. Select Utilities. Click the M key in the middle of the button board. The display indicates: Monitor Mode

Change filament Level Build Plate Home Axes

4. Select Change filament. Click the M key in the middle of the button board. The display indicates:

Load Right Unload Right Load Left Unload Left

5. Select Unload right. Click the M key on the button board. The display indicates: I'm heating up, my extruder! At this time, the temperature of the right nozzle is being heated. When the temperature reaches 220 degrees, click the M key on the button board. The nozzle will discharge material. If it does not discharge, continue to click the M key until it is done.

Setting parameters

3D printer parameters include fill ratio, layer thickness, wall thickness, wiring speed and idling speed. The parameters are shown below.

	n co. n .			
	g frotile: Kepl	licator 2 slicing	defaults 👻	7
achine Thingomati	e Raft/Support			Extruder
Dmm_Calibration_Bc Use s	upport material	None	•	
Vs	e default start,	/end gcode		
💟 Vs.	e Print-O-Matic	(stepper extruder	s only)	
Plas	stic Extrude Setting	r Defaults gs		
Objec	ct infill (%)	10		
Layer	r Height (mm)	0.18		
Numbe	er of shells:	þ		zeem
Feed	rate (mm/s)	40		View
Irave	el Feedrate	55		Move
Print	t temperature	220		Mirror
		Generate Gcode	Cancel	Scale

Filling ratio: the rate to fill the object -- 100% percent is solid.

Layer thickness: the wiring thickness of each layer.

Wall thickness: the outer thickness of the printed article.

Wiring speed: the extruder speed in print.

Idling speed: the nozzle operation speed when in nonprinting state.

These parameters affect the printing quality. The default settings are relatively stable. You can also find your own parameters, as shown below.

licing Profile: Rep	licator 2 slicing des	faults
🖉 Use Raft/Support		
Jse support material	L None 👻	
🖉 Use default start	/end gcode	
✓ Use Print-0-Matic	: (stepper extruders	only)
Plastic Extrude	er Defaults	
Plastic Extrude Settin	er Defaults igs	
Plastic Extrud Settin Object infill (%)	er Defaults ngs 10	
Plastic Extrud Settin Object infill (%) Layer Height (mm)	er Defaults ugs 10 0.18	-
Plastic Extrud Settin Object infill (%) Layer Height (mm) Number of shells:	er Defaults ags 10 0.18 1	-
Plastic Extrud Settin Object infill (%) Layer Height (mm) Number of shells: Feedrate (mm/s)	er Defaults ags 10 0.18 1 40	
Plastic Extrud Settin Object infill (%) Layer Height (mm) Number of shells: Feedrate (mm/s) Iravel Feedrate	er Defaults egs 10 0.18 1 40 55	

Initial print

First click file column to select example, print a small cubic of 20mm and check the finished product, then this picture pops up.

le Edit GCode Machin	e Thingiverse H	Help	
New Open Save Save As	Ctrl+N Ctrl+O Ctrl+S Ctrl+Shift+S	K5 ready	Thingomatic w/ HBP and Extrud Plastruder MK5; 38.0°C
Kecent	,		Broview
Examples	•	20mm_Calibration_Box.s	tl
Scripts	•	3D_Knot.stl	Default
Preferences Reset all preference	Ctrl+Comma s	Snake.stl whistle.stl dual	× xz
Quit	Ctrl+Q	single	•
		upgrades	Drag to rotate Mouse wheel to zoom
		No. of Concession, Name	View
	A		Move
	\neq		Rotat
	HHH	, 	Mirro
			Scal
			Concepto

When this interface appears, click Move, click Center and Placing Platform button, so that the sample will be printed in the center.

A Not Connected - ReplicatorG - 0040	of Paring Par	climp: feat		
File Edit GCode Machine Thingiverse Help				
	\$) P	P-	
Not Connected	Thingomatic	w/ HBP and	Extruder MK5 N	ot Connected
20mm_Calibration_Box model gcode				
		Move	Object	
			Center	
			Put on plat:	form
		X -	10	X+
		Y -	10	Y+
		[Z-	10	[Z+]
		Loc	k height	
		Left drag Right dra Mouse who	to move object to rotate vi- tel to zoom	t **
	-		View	
			Move	
			Rotate	
			Mirror	
			Scale]

After clicking the two buttons, click G Code Generation button, a Generation G Code dialog box pops up. Parameters will be set according to the data setting in the picture, as shown in Figure

A Not Connected - Re	plicatorG - 0040			
File Edit GCode Mac	hine Thingiverse Help			
	Generate GCode	LAR MAN	×	1
Not Connected	Slicing Profile: Rep	licator 2 slicing	defaults 💌	bruder MK5 Not Connected
20mm_Calibration_Box	Vse Raft/Support			
	Use support materia	L None	•]	bject
	🔽 Use default start	/end gcode		Center
	Vise Print-0-Matic	(stepper extrude	rs only)	N.t on platform
	Plastic Futurd	n Defender		x+
	Settir	igs		<u>Y</u> +
	Object infill (%)	10		Z+
	Layer Height (mm)	0.18		height
	Number of shells:	1		pomove object potate view
	Feedrate (mm/s)	40		o zoom View
	Iravel Feedrate	55		Move
	Print temperature	220		Rotate
EA		·		Mirror
HT		Generate Gcode	Cancel	Scale
				Generate GCode
stl				-
Listorious Got name Det	PAULT.			

Click G Code Generation, the following picture appears

A Not Connected - ReplicatorG - 00	40	-		
File Edit GCode Machine Thingive	rse Help			
	$) \bigcirc $	0	P.	
Not Connected		The	Replicator Dual	Not Connecte
20mm_Calibration_Box model		Manatoria		
Generating toolpath Generating to Generator: Skeinfor Inset Clayer 55 of	olpath for 20mm_Calibrati elpath for 20mm_Cal ge (50) 93)	on_Box libration_Box		17
Total progress:				
			Cancel	
	<u> </u>		AUTELO	
			Mirror	
			Scale	
			Generate G	Code
Layer (layers): : 1.0, Infill So	lidity (ratio): ::	0.11		

After G code is generated, the temperature of the bottom plate should be changed, please check the following picture for modification. First click G code in red box, and then change M109 S110 T1 to M109 S115.





After modifying, click the File button to save this sample, and click button to build the sample.

This concludes the initial print instructions.

Dual-Extruder print

First try the two-color printing coming with our software

Open operating software replicator g, and then click the G code option in red box. Select the last column to Merge .stl for Dual Extrusion

ode Mach	ine Thingiverse He				
Estimate		Ctrl+E	20	1	
Simulate		Ctrl+L	14 13		
Generate	9	Ctrl+Shift+G	The F	Replicator Dual N	Not Conne
Build		Ctrl+B			
Pause		Ctrl+E Ctrl+Devied			
GCode G	enerator	Ctrl+Period	Mov	e Object	
Edit Slici	na Profiles	Ctrl+R		Center	
				Put on plat	tform
Swap Io	olhead in .gcode	·	X -	10	
Merge .s	ti for DualExtrusion	Ctrl+D	Y -	10	
			Z-	10	6
444		1	Right o Mouse a	irag to rotate v wheel to goom	iew
444	-		Mouse a	wheel to soom	
	ALC: N	Annual		View	
44	1		++	View Move	
44			Ħ	View Move Rotate	
#				View Move Rotate Mirror	
4				View Move Rotate Mirror Scale	
ode source			R1148565	View Move Rotate Mirror Scale Generate G	Code
	replicator appreciation of the machine	Thingiverse He	P148567	View Move Rotate Mirror Scale Generate G	Code
	ade Machine Estimate	e Wateblescove@ource Dio 0040 Thingiverse He	e1148605	View Move Rotate Mirror Scale Generate G	Code
	ade Machine Estimate Simulate	Thingiverse He	elit48663 elip Ctrl+E Ctrl+L	View Move Rotate Mirror Scale Generate G	Code
	ade Machine Estimate Simulate Generate	Thingiverse He	eritesco dip Ctrl+E Ctrl+L Ctrl+Shif	View Move Rotate Mirror Scale Generate G	Code
	ade Machine Estimate Generate Build	Thingiverse He	erritescos dp Ctrl+E Ctrl+L Ctrl+Shif Ctrl+B	View Move Rotate Mirror Scale Generate G	Code
	ade Machine Estimate Generate Build Pause	Thingiverse He	errites Ctrl+E Ctrl+L Ctrl+Shift Ctrl+B Ctrl+E	View Move Rotate Mirror Scale Generate G	Code
	Addentition approximation Estimate Simulate Generate Build Pause Stop	Thingiverse He	Ctrl+E Ctrl+B Ctrl+B Ctrl+E Ctrl+Per	View Move Rotate Mirror Scale Generate G	Code
	ode) Machine Estimate Simulate Generate Build Pause Stop GCode Gener	Thingiverse He	All All All All All All All All All All	View Move Rotate Mirror Scale Generate G	Code
	de Machine Estimate Simulate Generate Build Pause Stop GCode Gener Edit Slicing Pr	Thingiverse He	errest Ctrl+E Ctrl+L Ctrl+Shift Ctrl+B Ctrl+E Ctrl+Perr Ctrl+R	View Move Rotate Mirror Scale Generate G	Code
	Deliteator appreciation policitor appreciation polic	Thingiverse He	PIL48603 Ctrl+E Ctrl+L Ctrl+Shift Ctrl+B Ctrl+E Ctrl+Peri Ctrl+R	View Move Rotate Mirror Scale Generate G	Code

Click Merge .stl for Dual Extrusion, dialog box will pop up as below:

Left Extruder	Browse
Right Extruder	Browse
Save As:	Browse

Click Browse for left Extruder, find folder Flashforge finished version replicatorg-0040, click it, find examples and select double-head choice Two_color_World_a.stl, as shown:

Left Extruder	eplicatorg-0040\examples\dual\Two_Color_World_a.stl	Browse
Right Extruder		Browse
Save As:		Browse

Click Browse for right Extruder, find folder Flashforge finished version replicatorg-0040, click it, find examples and select Dual-Extruder choice

Two_color_World _b.stl, as shown in figure:

🎒 DualStrusio	on Window	- D X
Left Extruder	eplicatorg-0040\examples\dual\Two_Color_World_a.stl	Browse
Right Extrude	r plicatorg-0040\examples\dual\Two_Color_World_b.stl	Browse
Save As:		Browse
Merge	Help	

It is saved on the desktop with suffix name. G-code.

保存:	1 我的文档		- [
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我的文档				
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	文件名: 🔤	itled.gcode		保存
M4 2	www.club.ale.stril			Hn 244

The suffix name must be. G-code

Save it to the desktop.

Then click Right G-code Generation button, two G-code Generation dialog boxes pop up. As shown below:

🗐 Two_Color_World_a.stl	📓 Two_Color_World_b.sti
Slicing Profile: Replicator 2 slicing defaults	Slicing Profile: Replicator 2 slicing defaults
Dualstruding	Dualstruding
🔲 Outline Active	🕅 Outline Active
Cool Active	Cool Active
Vse Raft/Support	Vse Raft/Support
Use support material None 💌	Use support material None 💌
✓ Use default start/end gcode	✓ Use default start/end gcode
✓ Use Print-0-Matic (stepper extruders only)	Vse Print-O-Matic (stepper extruders only)
Plastic Extruder Defaults Settings	Plastic Extruder Defaults Settings
Object infill (%) 10	Object infill (%) 10
Layer Height (mm) 0.18	Layer Height (mm) 0.18
Number of shells: 1	Number of shells: 1

After G-code dialog boxes pop up, remove $\sqrt{}$ before use base / support in the front, and then generate G-code one by one to.

Slicing Profile: Rep	<u>licator 2 slicir</u> truder	ng defaults 👻	Hicator Du	4
▼ Use Raft/Support			ve Obj	e
Use support material	L None		C	e
💟 Use default start	/end gcode		Put or	2
💟 Use Print-O-Matic	(stepper extru	ders only)	- 10	
Plastic Extrud	er Defaults	1	- 10	
Settin	ıgs]	- 10	
Object infill (%)	10		Lock her	i e
Layer Height (mm)	0.18		drag to m	01
Number of shells:	1		wheel to	1
Feedrate (mm/s)	40			V
Iravel Feedrate	55		-	M
Print temperature	220		R	0
	()		M	13
		7.000	5	2 6



After G-code is generated, click the G-code in red box and modify the temperature of the bottom plate



Then modify M109 S110 in red box TO (set HBP temperature) M109 S115 (set HBP temperature)

As shown below:

After modification, save the file, click Build button for two-color printing. Shown as below:

