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© Copyright 2015 ICOP Technology Inc., All rights reserved. ICOP Technology Inc., offers 3 month warranty for head and rest parts for 1 year,

#### Shipment of the 3D Printer

If for any reason you must ship your 3D printer, carefully package the printer to avoid any damage during transit. It is recommended that you save and use the original packaging.

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Please study this Quick Start Guide carefully before installation, and use the printer Accordingly to these instructions. Keep this guide handy and refer to it when necessary.

Please read this section carefully before using the printer.

The printer can only be used with the power adapters supplied by this company, or the product may be damaged, with a risk of fire. To avoid burning, or model deformation, do not touch the model, nozzle, or the platform by hand, or any other part of the body, while the printer is working or immediately after it has finished printing. Protective glasses should always be worn when removing support material, especially PLA. Please do not hold the extruder block with the gloves.

Operate in a well ventilated room but draught free. Do not use ABS plastic or its printed parts near any kind of heat source, flames, fireworks, candles, incense, light bulbs, rockets etc. PLA will catch fire and burn a thick black smoke. Always have adult supervision when children are present. Please keep all small printed parts away from young children, choking hazards! There are several safety issues, small tools, sharp tools and HOT objects and most parts used in connection with the 3D Printer. Tie back long hair and loose clothing. Keep fingers away from moving parts. Tools and parts should be stored at a suitable height away from small children. Tools should be used in conjunction with safety gloves and glasses.

## Specification

Dimension	240mm x 270mm x 330mm (W x L x H)
Weight	8.0 kg
Forming Process	FFF (Fused Filament Fabrication)
Build Volume	100mm x 100mm x 150mm (1,500 cm3)
Layer Resolution	0.1 mm
Nozzle Diameter	0.3 mm
Printing Material	PLA
Power	48 W
Power Requirement	24v DC@2A
AC Input	100-240v
Software	Repetier Host

#### **Chapter 1**

#### **Unpack Enjoy 3D Printer**

- 1. Carefully open the package for Enjoy 3D printer. Try to remove all zip tie And put the 3D printer on your flat table or desk.
- 2. Install the filament holder at the back of the printer: (screw in counter clockwise)

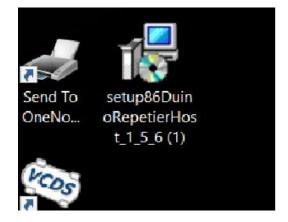


3. Put the filament on the holder ( Make sure the filament is free for rotation ! )



#### **Download and Install Software**

- Download the following to your computer: setup86DuinoRepetierHost\_1\_5\_6 (1) Link: http://www.icoptech.net/arduino/3d-printer/
- 2. Double click on the setup file icon:



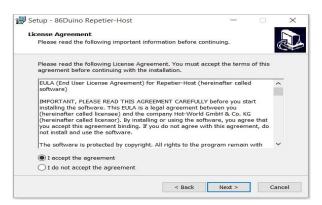
3. Select the language you prefer and click on "OK":



- 04
- 4. Click on "Next" on Repetier-Host Setup Wizard :



5. Select " I accept the agreement" and then click on " Next".



6. Click on "Next" if you like to put it under "Program Files" or You can put it your prefer location by click on "Browse...."

Where should 86Duino Repetier-Hos		lowing folder.	<sup>1</sup>
To continue, click Next. If you would		nt folder, click	
C:\Program Files\86Duino-Repetier	Host		Browse

7. Click Slicer and under two options and then click on "Next"

😽 Setup - 86Duino Repetier-Host	_		×
Select Components Which components should be installed?			
Select the components you want to install; dear the component install. Click Next when you are ready to continue.	ts you do not	want to	_
Repetier-Host     Use legacy 3D library (use only if new version does not wor     Repetier-Server - allows printing without host being open	rk)	6.2 MB	
		0.1 MB	
Verwrite existing CuraEngine configurations     Slic3r Slicer		0.1 MB	
CVerwrite existing Slic3r configurations		0.1 MB	
Current selection requires at least 22.6 MB of disk space.			
< Back	Next >	Cano	el

8. Click on "Next" if you like to put the shortcut on "86Duino Repetier-Host" or you can click on "Browse..." for others.

🔂 Setup - 86Duino Repetier-Host	1000		×
Select Start Menu Folder Where should Setup place the program's shortcuts?			
Setup will create the program's shortcuts in the follow	-		r.
To continue, click Next. If you would like to select a different f	older, click	Browse	
Don't create a Start Menu folder			
< Back	Next >	Ca	ncel

9. If you like to create a desktop icon, mark it and then click on "Next".

😽 Setup - 86Duino Repetier-Host	( <b></b> )		×
Select Additional Tasks			
Which additional tasks should be performed?			¢,
Select the additional tasks you would like Setup to perfo Repetier-Host, then click Next.	orm while install	ing 86Duir	0
Additional icons:			
Create a desktop icon			
< Back	Next >	C	ancel
			10

10. Click on "Install" to start the installation.

eady to Install			
Setup is now ready to begin insta computer.	alling 86Duino Repetier-Host	on your	Ċ
Click Install to continue with the i change any settings.	installation, or click Back if yo	u want to re	view or
Destination location:			^
C:\Program Files\86Duino-F	Repetier-Host		
Setup type:			
Typical installation			
Selected components:			
Repetier-Host			
	inting without host being ope	n	
Slicer CuraEngine Slicer			
Overwrite existing CuraEn	ngine configurations		
Slic3r Slicer			~
<			>

11. Click on "Next" on Repetier-Server Setup screen:

👸 Setup - 86Duino Repetier	-Host — 🗆 🗙
	Completing the 86Duino Repetier-Host Setup Wizard
	Finish

12. Click on "Extract" to install FTDI

FTDI CDM Drivers		×
	FTDI CDM Drivers	
~	Click 'Extract' to unpack version 2.12.00 of FTDI's Windows driver package and launch the installer.	
$\square$		
	A false and	
	www.ftdichip.com	
	< Back Extract Cancel	

#### 13. Click on "Next" to installation.

Device Driver Installation Wi	<sup>zard</sup> Welcome to the Device Driver Installation Wizard!
	This wizard helps you install the software drivers that some computers devices need in order to work.
	To continue, click Next
	To continue, click Next. <back next=""> Cancel</back>

14. Select "I accept this agreement" and then click on "Next"

Device Driver Installation Wizard
-----------------------------------

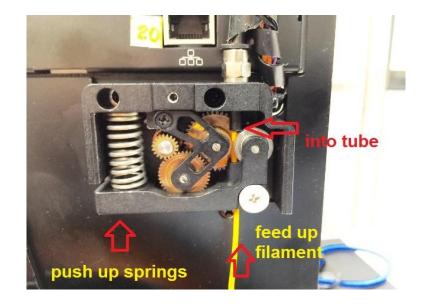
License Agre	ement				
Ń	To continue, accept the following lic agreement, use the scroll bar or pre			entire	
	IMPORTANT NOTICE: PLEASE READ CAREFULLY BEFORE INSTALLING THE RELEVANT SOFTWARE: This licence agreement (Licence) is a legal agreement between you (Licensee or you) and Future Technology Devices International Limited of 2 Seaward Place, Centurion Business Park, Glasgow G41 1HH, Scotland (UK Company Number SC136640) (Licensor or we) for use of driver software provided by the Licensor(Software). BY INSTALLING OR USING THIS SOFTWARE YOU AGREE TO THE				
	I accept this agreement     I don't accept this agreement		Save As	Print	]
		< Bac	:k Next>	Canc	el

15. After complete the installation, click on "Finish".

Device Driver Installation Wizar	-	e Device Driver 1	Installation
		ssfully installed on this comp ur device to this computer. If read them first.	
	Driver Name FTDI CDM Driver FTDI CDM Driver		
	<	Back Finish	Cancel

#### Loading the filament into Extruder

- 1. Cut off 2 inch of the beginning part of the filament to prevent use the harden part of filament.
- 2. Use left thumb to push up the spring on the left and use right hand to feed the filament up into the tube.
- **3.** Keep feed up the filament until you feel there is NO room for more filament, release the spring and your filament is ready.



#### **Connect Enjoy 3d Printer**

- 1. Connect the Power supply to a AC (100-240V) source and a USB cable to the computer.
- 2. Do NOT turn on the power switch yet.

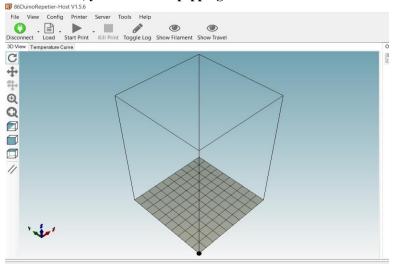




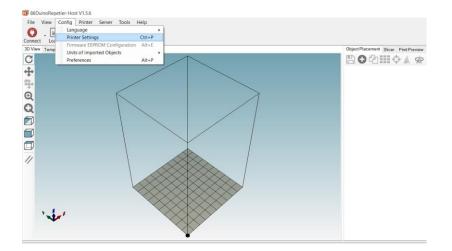
3. Start the RH by double click on the desktop icon:



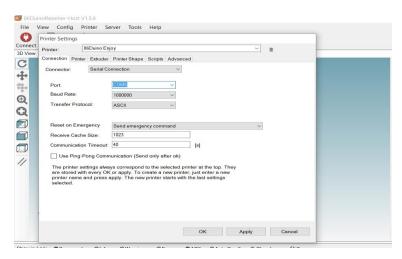
4.Turn on the power switch on back of the Enjoy 3D Printer, and click on the red "Connect" on the top left , after 2 seconds, you will hear a pepping sound on the Printer and the red "Connect" become green .



4. If you can not connect the 3D printer and your computer.( The connect bottom still in red). Click "Config" top and select "Printer Settings".

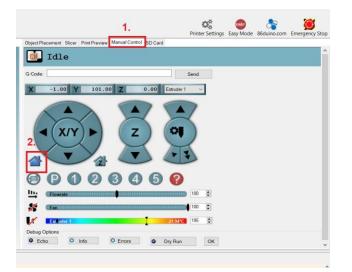


- 5. Select correct COM port for the 3D printer. The default setting is "Auto". Only select manually if you can NOT connect 3D printer and your computer.( Check your computer's Device Manager if you are not sure what is your com part for the 3D printer)
- 6. Try to connect the 3D printer and computer again by click the red bottom on the top left.



#### Leveling the Platform

1. Click on "Manual Control" on the right side of RH and then click on #2 (Home)



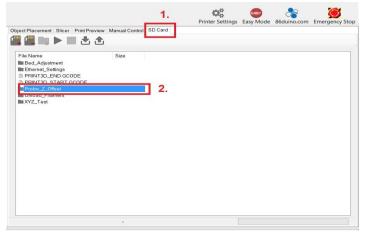
2. The head will move and stop, the X and Y LED lights up green, but NOT the Z.



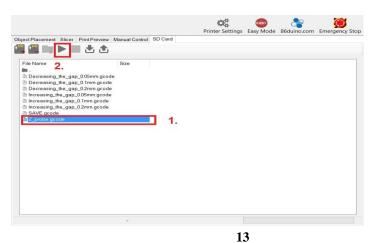
3. Use a Philips screw driver, turn the screw counter clockwise and until the green LED lights up on Z led, and then turn screw back (Clockwise) for half turn, notice the Z led will be off again:



4. Click on "SD Card" and then double click on "Prove Z offset"

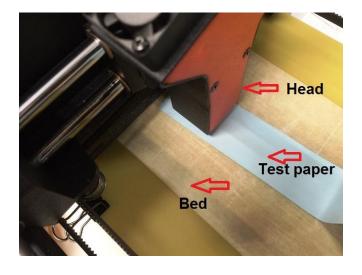


5. Click on "Z Probe gcode and then "start" on the top.

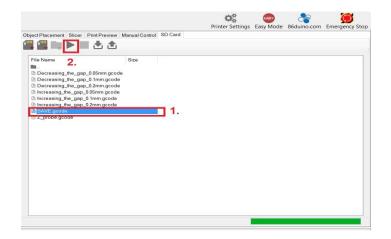


6. The head will move around and stop at center, use a test paper( use a regular A4 paper, cut it become 1"x 8") and try to insert the test paper between the head and bed:

- a. if you can insert the test paper between head and bed, also feel test paper move around too freely (no resistant at all) remove the test paper and then click on Decreasing\_the\_gap\_0.1mm gcode or Decreasing\_the\_gap\_0.05mm and then click "Start" on the top. The head and bed will re-calibrate again and stop.
- b. If you can NOT even insert the test paper between the head and bed, you will need to click on "Increasing\_the\_gap\_0.1mm or Increasing\_the\_gap\_0.05mm" and click on the "Start" on the top. The head and bed will re-calibrate again and stop.
- c. Repeat above two step until you can insert the test paper between the head and bed, and also feel a resistant when you move around the test paper between the head and bed.



d. Now you can click on "SAVE gcode" and click on "Start" on the top

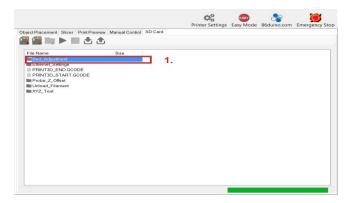


14

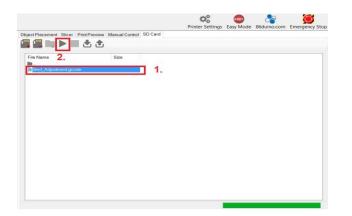
7. Now double click on the folder #1 to go back to the previous manual.

			Printer Settings	Easy Mode	86duino.com	Emergency Stop
ojectPlacement Slicer PrintPreview M	anual Control	SD Card				
Laukinne Dercasing, he, gap, 0.0finm goode Decrasing, he, gap, 0.1mm good Mercasing, he, gap, 0.2mm good Increasing, he, gap, 0.2mm good Increasing, he, gap, 0.1mm good Streasing, he, gap, 0.1mm good Streasing, he, gap, 0.2mm good Streasing, he,	Size					

8. Double click on "Bed Adjustment" on #1 folder.



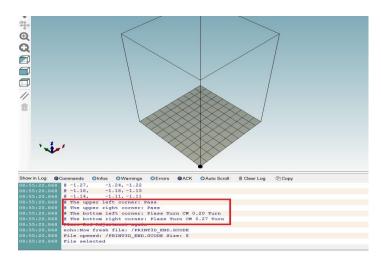
9. Click on "Bed\_Adjustment gcode" and then click on "Start" on the top. Now the head will do a 9 point test, wait until the head has stop totally:



15

a. Look at the log windows on left bottom:

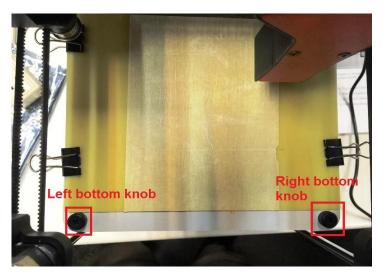
@ The upper left corner:	Pass
@The upper right corner:	Pass
@The bottom left corner:	Please turn CW 0.20 Turn
@The bottom right corner:	Please turn CW 0.27 Turn



**b.** Follow the above instruction:

For upper left and right corner does not need any adjustment. For bottom left corner: Please turn the adjust knob Clockwise 0.20 Turn.

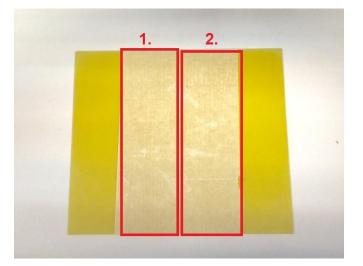
For bottom right corner: Please turn the adjust knob Clockwise 0.27 Turn



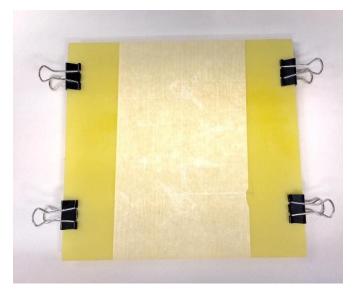
**10.** Go back to Step 10 again and repeat the step until you see all four corner are Pass. Now you have completed the leveling platform !

### Printing

1. Please apply two sheet of masking tap on the printing board:



2. Use 4 small clip fix the printing board on top of the bed:



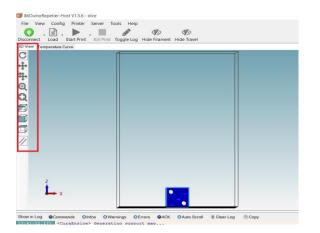
3. Click on "File" on the top and then select "Load" :

Load Ctrl+O Save Screenshot Show Work Directory Alt+W	rint Toggle Log Hide Filament Hide Travel	
composition.gcode dice.stl		
Quit		
	+	
Z		
x 🚽		
0		

4. Select the file you are going to print and then click on "Open":

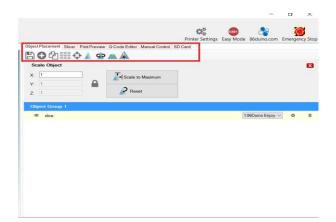
	emperature Curve					
	Import G-Code					
	← → ~ ↑ 📕 « 3	D_Printer > standard-19mm-dice-die-by-frostyapp	oles v O	Search standard-19r	nm-dice	ş
	Organize • New fold	ler		10	•	•
	Zip ^	Name	Date modified	Туре	Size	
	CneDrive	n dice	10/27/2015 5:47 PM	3D Object	494	8)
]	Inis PC	1.				
]	E Desktop					
1	Documents					
	Documents Downloads					
	<ul> <li>Downloads</li> <li>Music</li> <li>Pictures</li> </ul>					
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	Downloads     Music     Pictures     Videos     Local Disk (C:)					
	Downloads Music Pictures Videos Local Disk (C:) Local Disk (D:)	4				
x	Downloads Music Pictures Videos Local Disk (C) Local Disk (D)	۲ مر	~	All files 2.		

5. You can view it with some options on the left:



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6. You can also edit the image file on the right:



7. Click on "Slice" and select the option you prefer and then click on "Slice with CuraEngine":

►	Slice with Cur	aEng	ine	3.		Kill Sli	cing
Slicer: CuraEn	gine				~	0° Manager	r)
					@ Cor	figuration	
Print Settings:							
Print Configuration:	86Duino						~
Adhesion Type:	None	~					
Quality:	0.2 mm	~					
Support Type:	Everywhere	~					
2. Speed							
opens.	Slow					Fast	
	Print Speed: Outer Perimeter Speed: Infill Speed:		40 mm/s 40 mm/s 40 mm/s				
Infill Density							15%
Enable Cooling							
Tel chaple coomig							

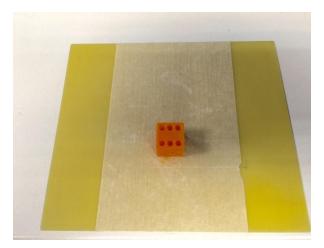
- 8. You can see the following information:
  - 1. Printing Statistics: Printing time and other information
  - 2. Visualization: Select prefer options
  - 3. Save the file to a SD print
  - 4. Save the file to the computer
  - 5. Start Printing

Print	Edit G-Code
Save to File	Save for SD Print
4.	3.
Printing Statistics	
Estimated Printing Time: 46m:56s	
Layer Count: 95	1.
Total Lines: 82056	
Filament needed: 1487 mm	
Visualization	
Show Travel Moves	
Show complete Code	2.
O Show Single Layer	
O Show Layer Range	
First Layer: 0	
Last Layer: 0	

9. The 3D printer will start printing your loading file, during the printing for whatever reason you need to stop the printing, Please click on "Emergency Stop" on the top right.

#### **Model Removal**

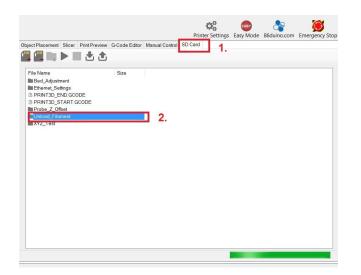
- 1. After printing is complete. ( 3D printer will make a short music). Remove the 4 clips on each corner and remove the printing board from the bed.
- 2. Carefully remove the model from the printing board. Try to bend the printing board if needed. (Note: do NOT bend the printing board too much, it will break the printing board)



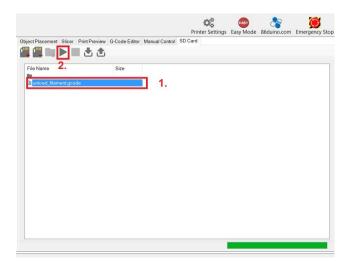
- 3. After remove all the material on the printing board, put it back to top of the bed and use 4 small clip fix the printing board on top of the bed.
- 4. Now it ready for another 3D printing !!

#### Unload filament from the Extruder

- 1. After you done with 3D printing, we recommend unload the filament from the extruder.
- 2. Click on the "SD Card" on the top and then double click "Unload Filament".



3. Now click on "Unload Filament" and then click on "Start" on the top:



4. It will take about one minute to complete the process, the filament will unload automatic. Just push the spring up to pull down the filament completely from the feeding hole.