Contents

HB-DRT User Manual

1　Install drivers

Please copy the files in the SD cards to the computer for back-ups. Then could delete the files, SD card would speciallized for off-line printing.

After successful connecting, computer will let us install the new hardware, cancel please.

If your computer system is XP, please follows the below steps:

STEP1- please install the DOTNETFX35 first, shut off the internet, the speed could be faster.

（PS: Win 7 or aboved version has that software）

STEP2- Find the automatically-installment program, double click to install the driver according to the wizard

PS: If the automatically-installment program don't work under Win 7 or above version, please install the driver manually! The methods are all the same.

Check whether the driver is installed successfully.

Take the USB out of the computer, and put it in again, the system will let install

the new hardware again,

A: If you install the driver automatically, click next, system will install automatically, click OK at last.

B: If you do it manually, choose" Install from the list or specific location", then choose the catalogue of the driver, click install at last. (The same method as common driver manual installment).

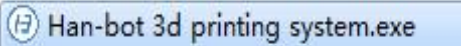Right click "My Computer", choose "Management", click "Device Management", and refer to below pictures"

Find "Port", you install the driver successfully. Please kindly keep your PORT number （Every computer might have different port number）.
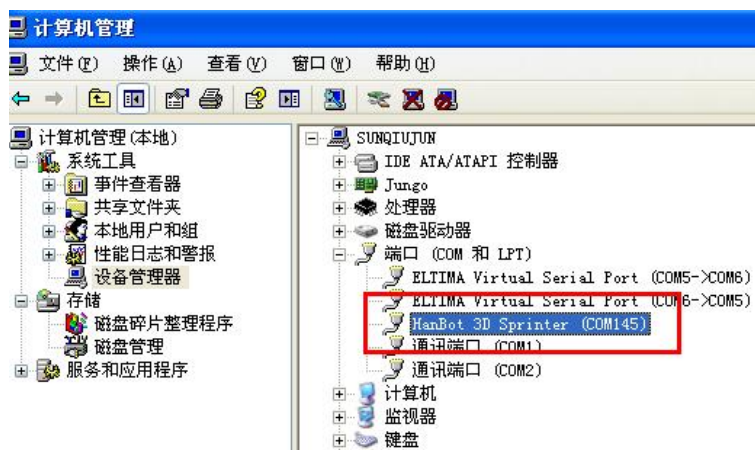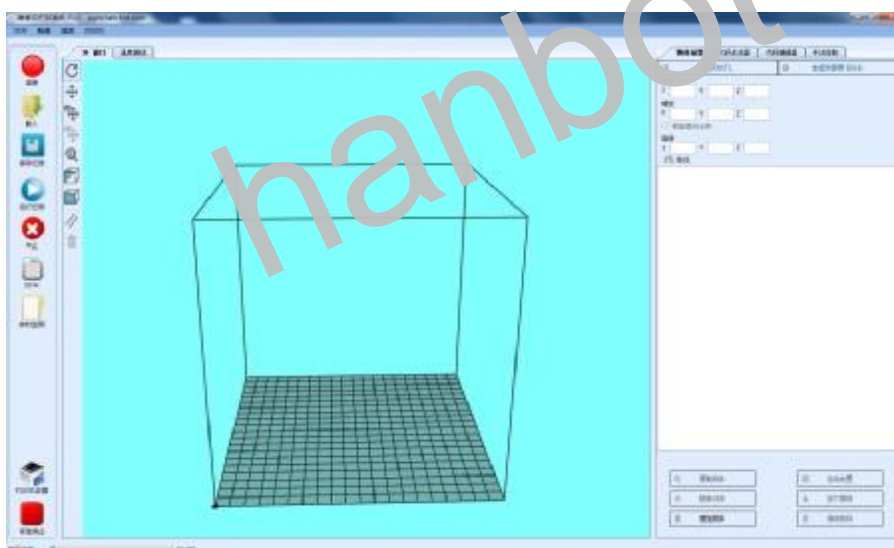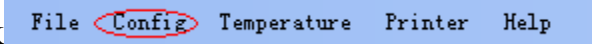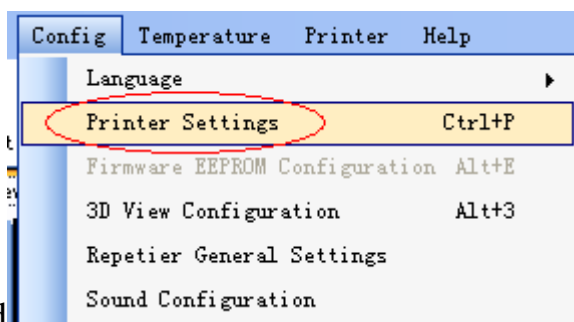
2   Pre-configure the software and test

In the SD card, there are not only our company's own software, we also supply the CURA.

1)、Connect the software
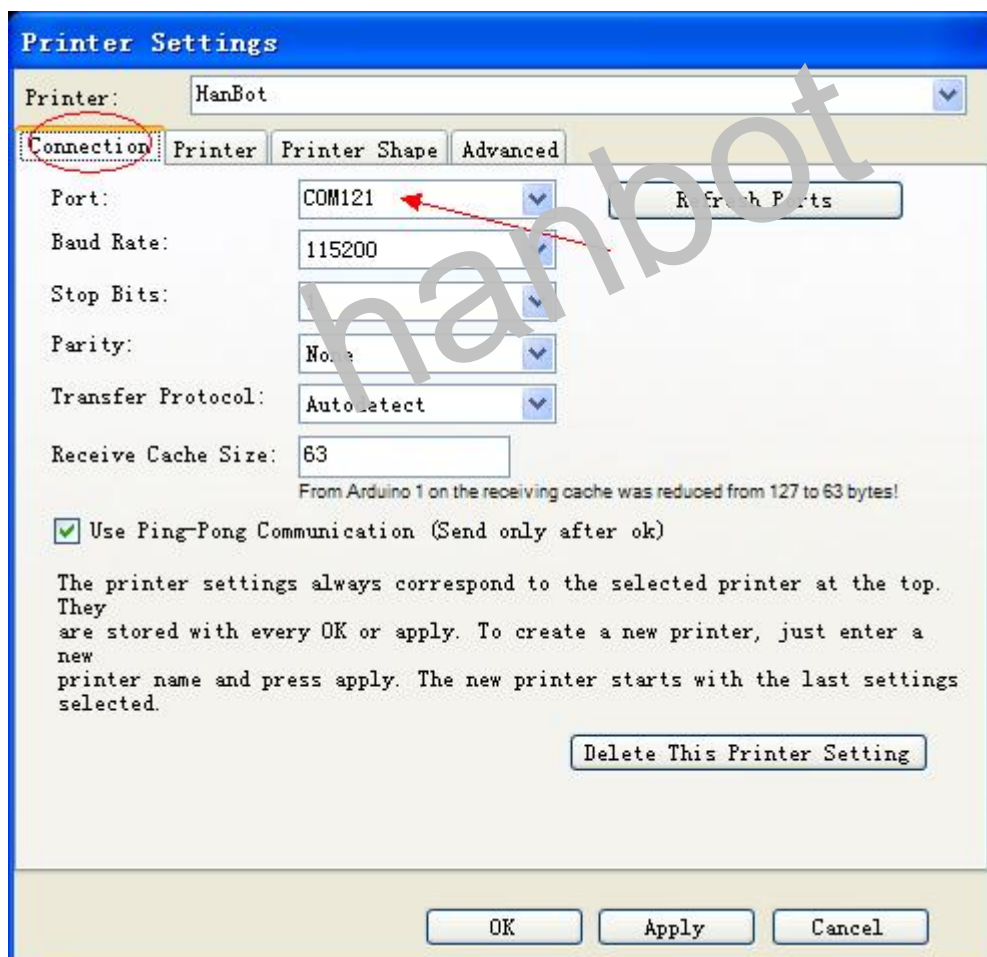
Double click , Our printing system will come out.:

Click ,

find ,

Click it, you will see the window below,

Setting the CONNECTING first, still remember your port? Use yours. Suggested that set other parameter as the picture below, especially the Baud Rate must be *115200*.

Setting the PRINTER, Attention please, the temperature is important, ABS, please set 230°C and 110°C, if you print PLA, please set 185°C and 55°C to 80°C,(We use
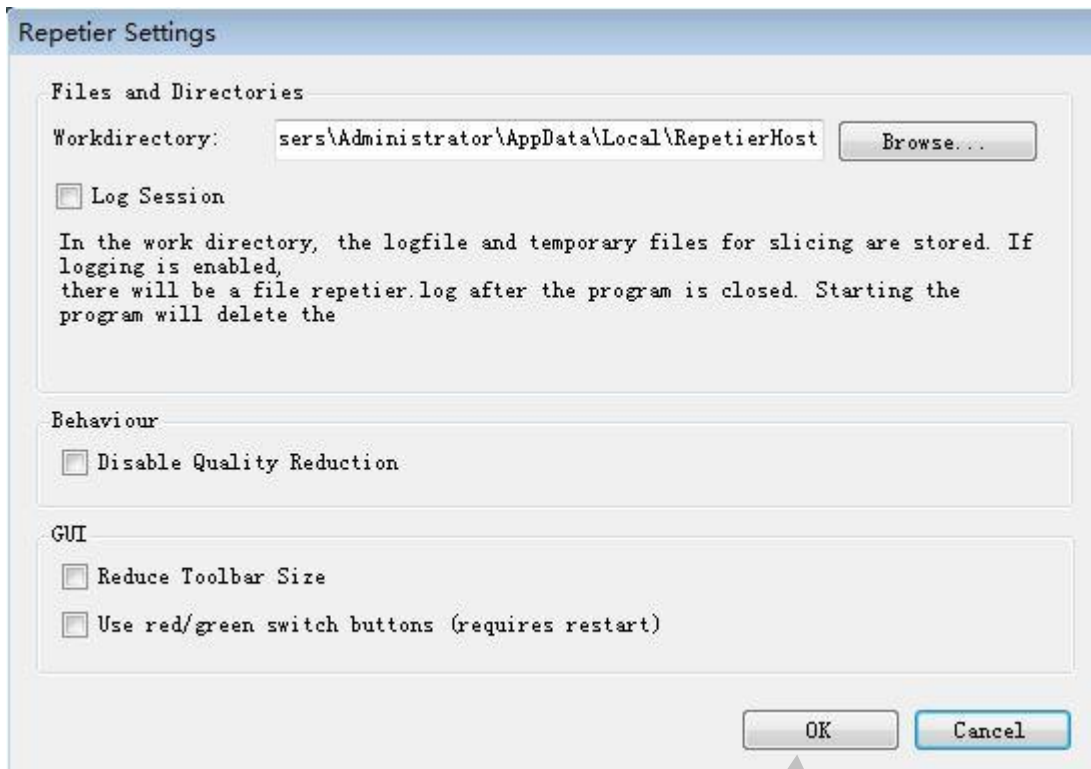
ABS for this manual, so our temperature is 230 and 110°C.)

Setting the PRINTER CONFIGURATION. Our DRT build size is 200*200*200MM, so change the number to 200 in the market form, the other could be the same as below picture,
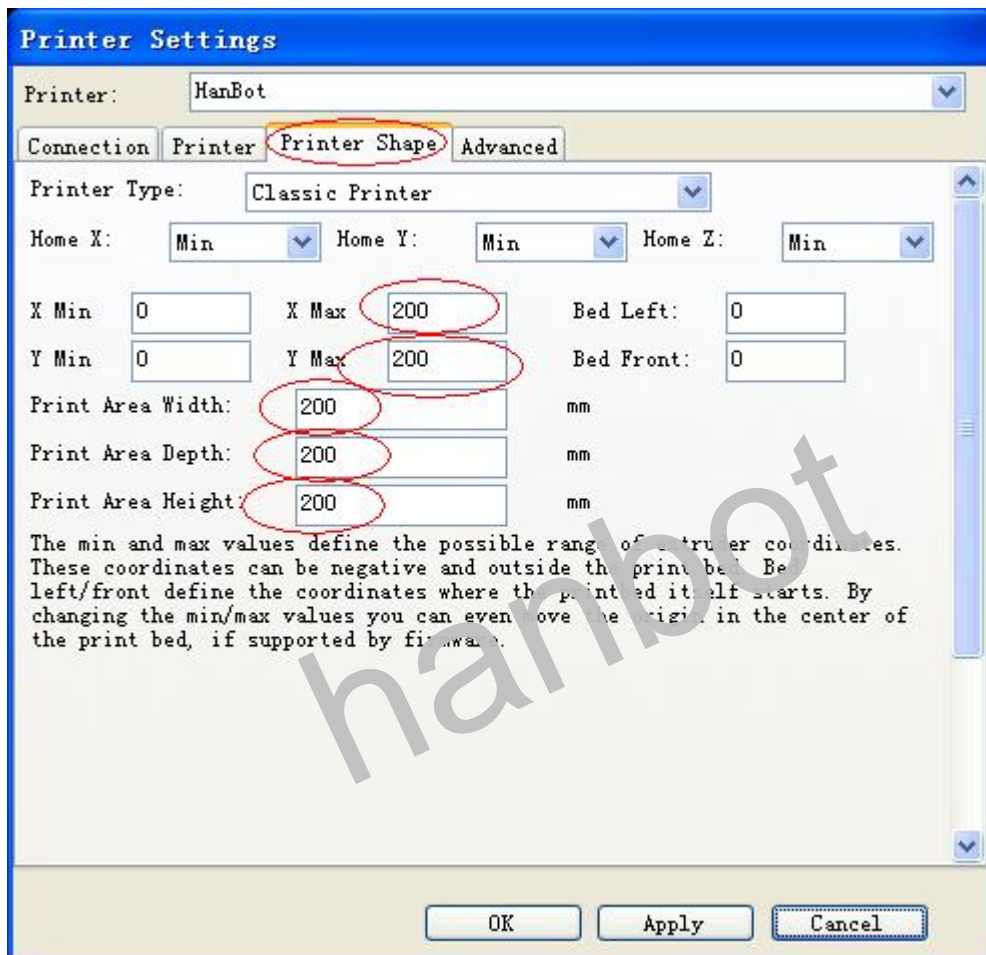
Then, click [OK]

PS: In the "Repetier General Settings", the workdirectory must be English, otherwise the GCODE cannot be generated. Refer to below picture
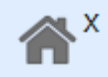
2)、Test

click ![Connect] , If connecting successfully, the software will show ![Disconnect]

Test the Moving control and the end-stop

Click "Homing" button ![home], After that, move the X/Y/Z axis to check the movement.

![home X] - X homing, Y/Z is the same. After click, the axis will home.

![home] - After click, the 3 axis will home at the same time.

PS: If the machine is not homed, it could only move in Unilateral area; if you are not familiar with the machine, the move distance could not too far.

Check the temperature-test and heat system (Extrusion and heat bed)

If not heated, the number of temperature will be the same as ambient.

Click [Extruder: Heat Extruder | Extruder 1 | 20.00° C / 230] and [Printbed: Heat Printbed | Temp. 36.00° C / 110], the temperature will rise up. When the extruder temperature rise to 230(If PLA, the temperature could be 190), click [Extrude [mm] 10 ↓], check whether the filament is extruded fluently. Refer to the below picture:
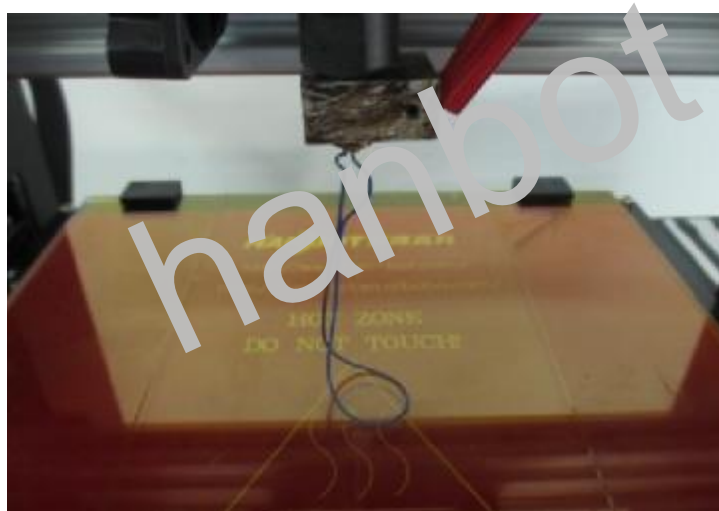
Check the fan

Adjust the fan output to 100%, then click [○ Fan], check whether the fan works well.
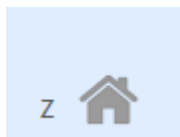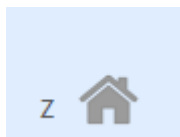
PS：When heat the bed, shut off the fan.

3 Print Models

1)、Machine Adjustment

Actually, every DRT is will adjusted. But during the shipping, there could be some error because of the hit or other aspects. So before printing, please check whether the heat bed is flat or not again and whether the height between the heat bed and nozzle is OK/
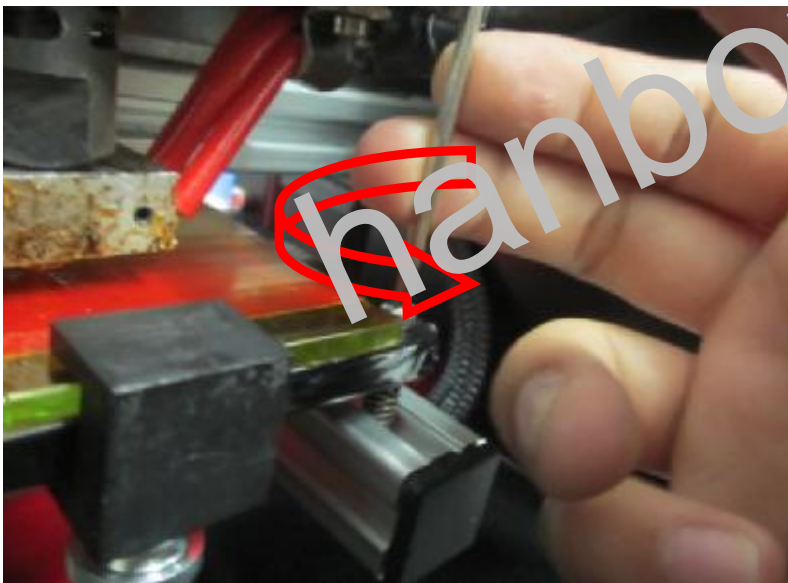
Click ![Z home icon](z home) , homing Z axis，check whether the distance between the heat bed the nozzle is almost the same as the below picture,

For reference
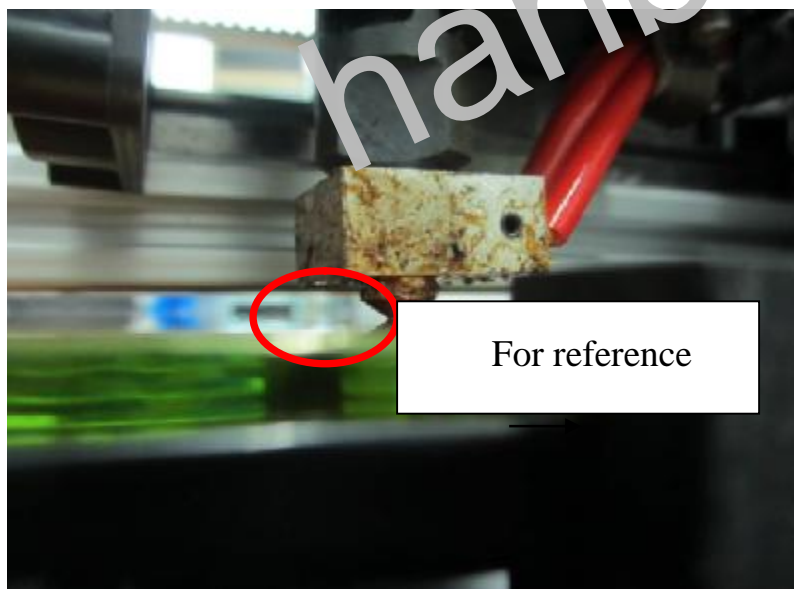
If the distance is too large as the below picture
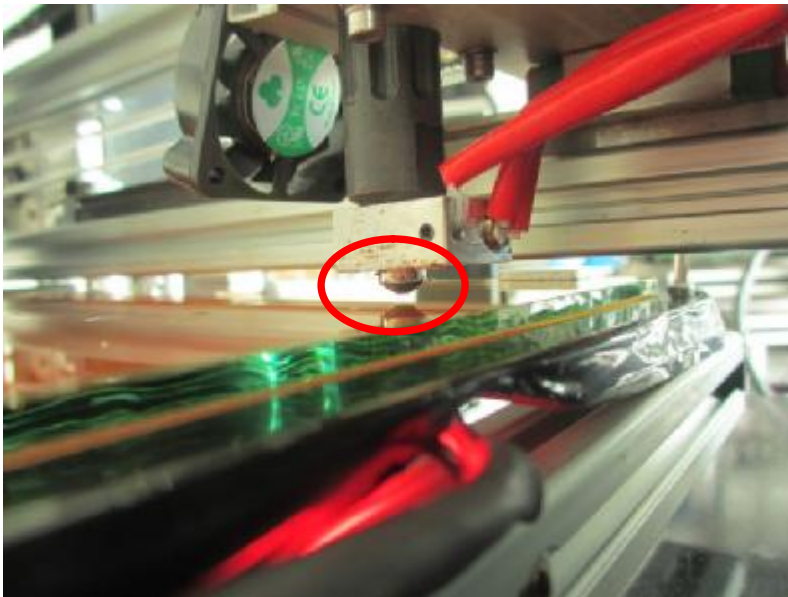
Use M2.5 hex key to loosen the screw counterclockwise as the below picture, when you are doing that, check the distance, reach to the suggested distance is OK

If the distance is too small as the below picture,

Use M2.5 hex key to loosen the screw clockwise as the below picture, when you are doing that, check the distance, reach to the suggested distance is OK
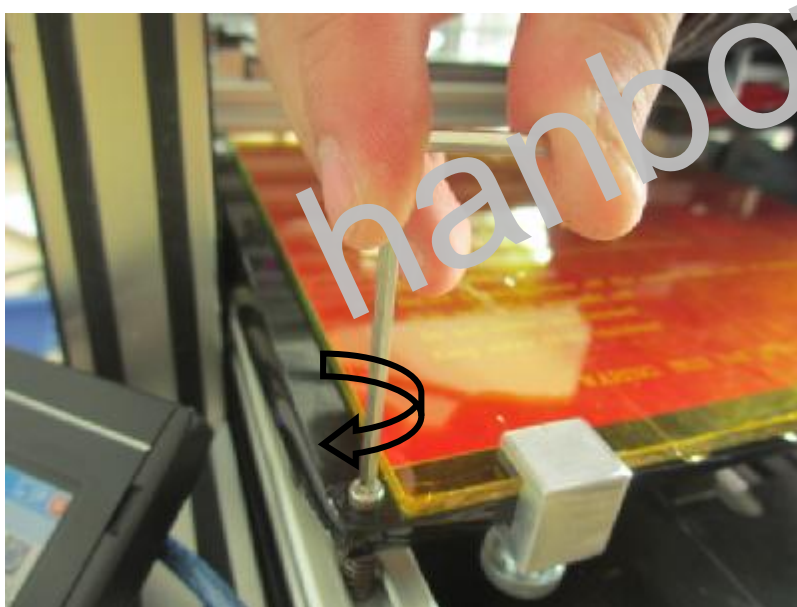
The adjustment for other 3 corners is the same as above.

2)、**Generate STL file to GCODE**

Our 3d printer support STL and Gcode file. And the it need the GCODE at last,
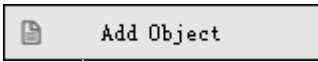
the quality of the GCODE will influence the precision. To generate the high-quality GCODE, please handle the slicing configuration well.

If you have already turned on the software, please shut it down. Find "Slicing Configuration", open it, double click" Double click and run", then press "Enter" button, then the slicing configuration well be set as our company's default. You can also change the settings according to your own demand.

Load Model

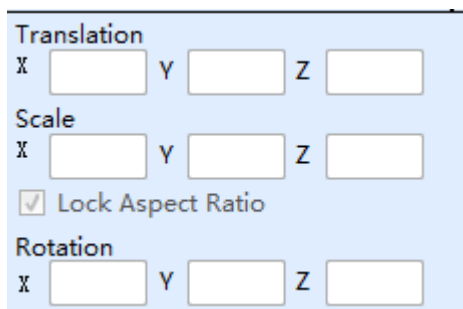Open the software, in [Object Placement], click [Add Object], choose the STL you want to print.

The right picture shows the sample.
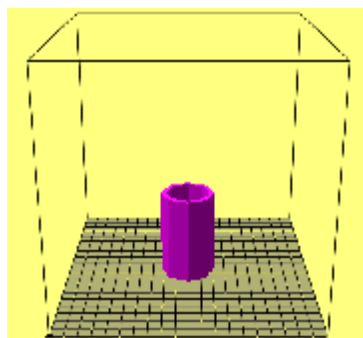
Models Mangement

You could see "Translation", "Rotation", "Scale" in the right part of the software,

"Translation"- change the position

"Scale"- Change the size

"Rotation"- the angle of the model.

There are "Center Objects", "Copy Objects" buttons, in the down part, you could
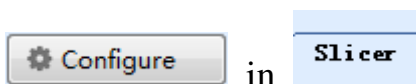
try these functions.

Generating Gcode
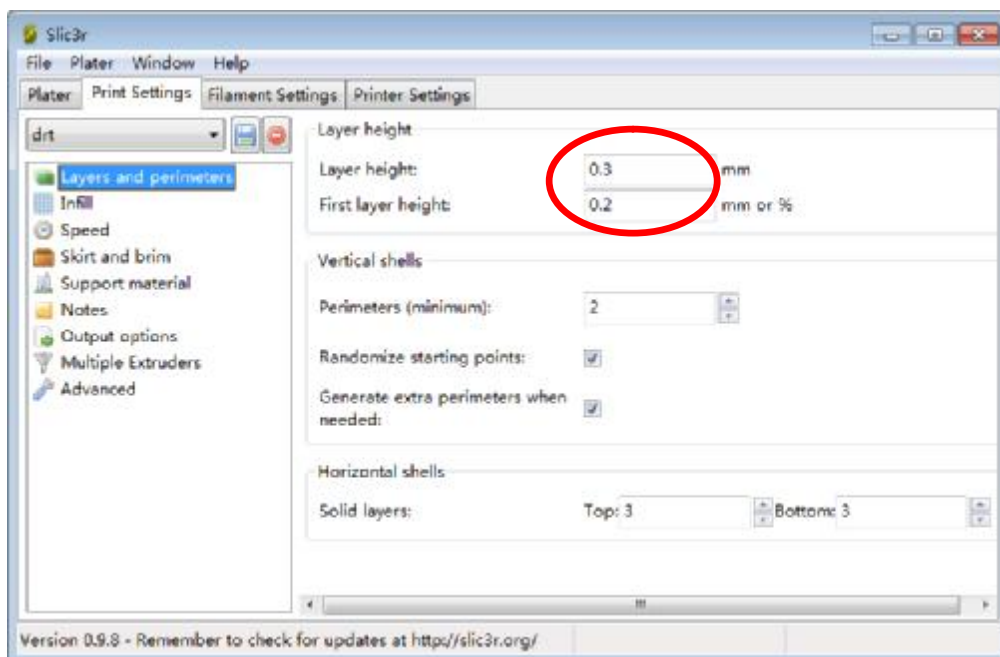
If you print ABS, choose DRT2(ABS), in
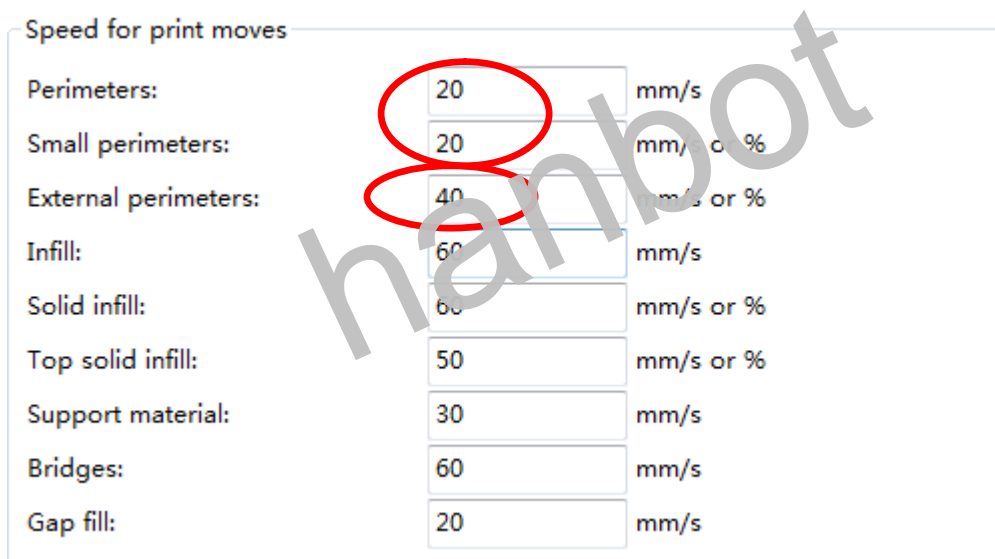
PLA, choose DRT2(PLA)

If you want to change the settings, please refer to below pictures after click,

 in

13

Layer height is suggested 0.3mm, first layer height 0.2mm

Perimeters speed suggested 20, small perimeters suggested 20, external perimeters

suggested 40.
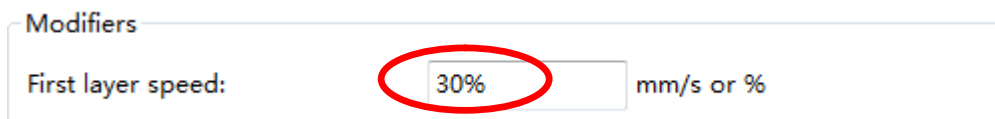
First layer speed suggested 30%, if too fast, the parts could be warping.
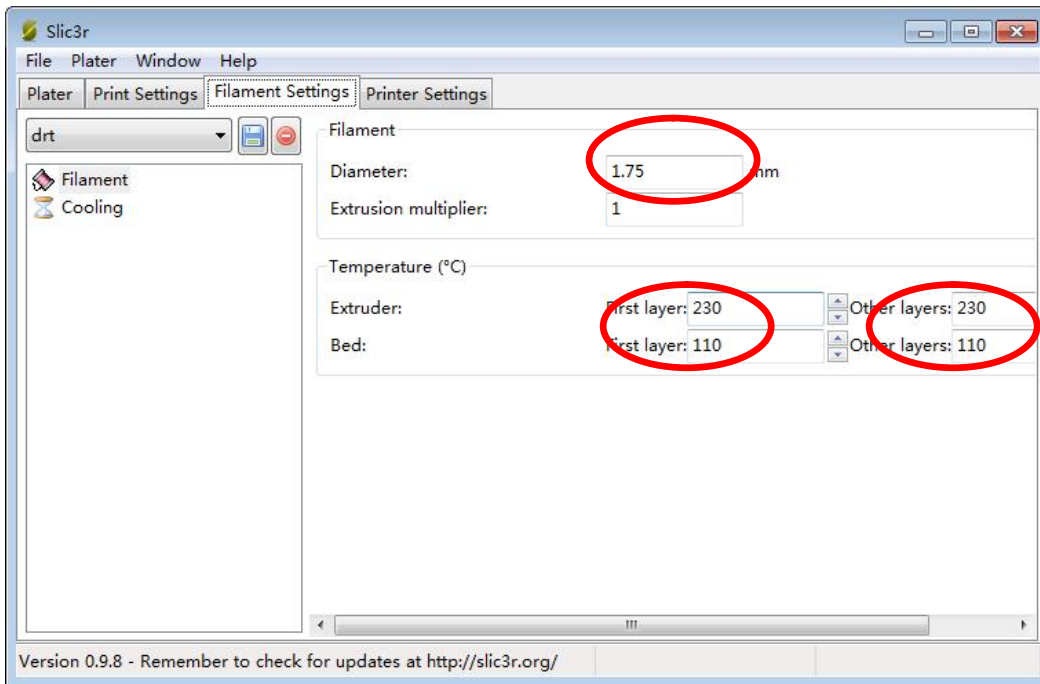
Filament diameter 1.75, extrusion multiplier 1, extruder temperature 230, bed 110(because we are printing ABS)
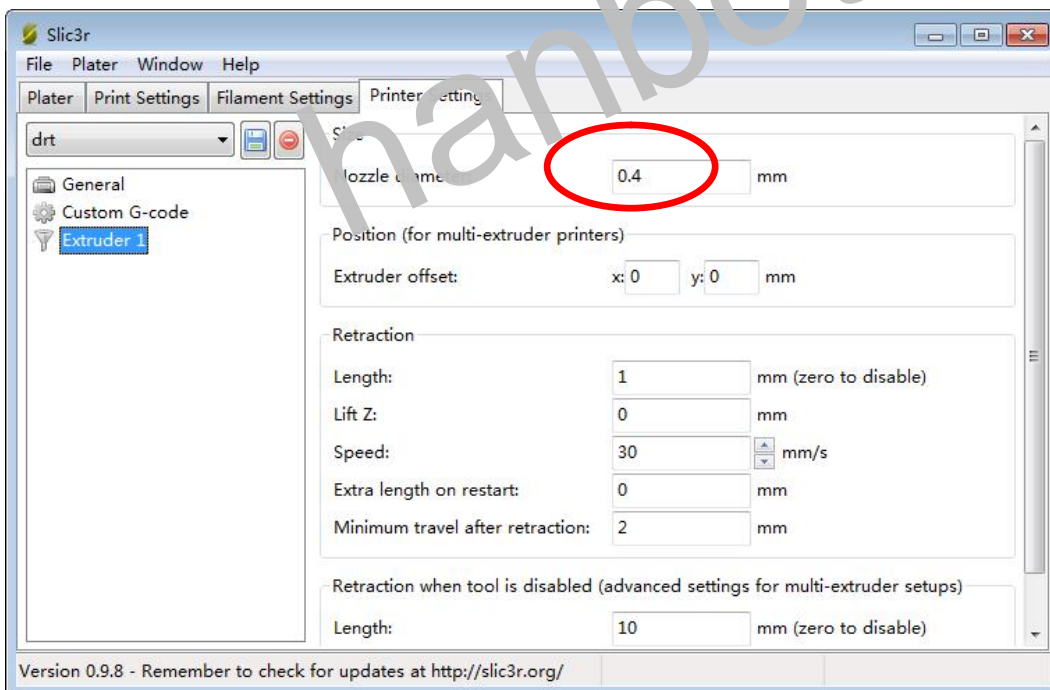
Nozzle diameter 0.4

After every change, we must click [icon] to save, remember the save name.

Choose the saved configuration as the above picture,(I save the name as DRT) Now your setting is done.

Click then Click ,

Gcode is being generated as the right picture

Gcode is generated
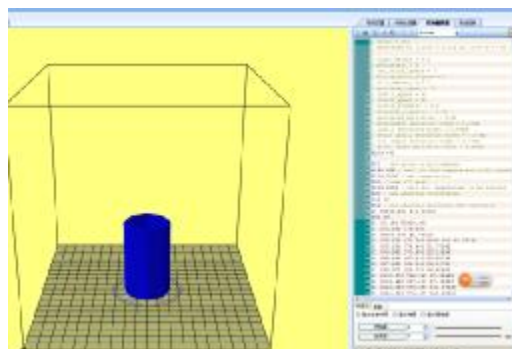
3)、**Printing**

After connecting the machine with computer, click , when the temperature rise to the setted, the machine will work.

PS：The first layer is very important, it is better that leave the machine after its successful printing.
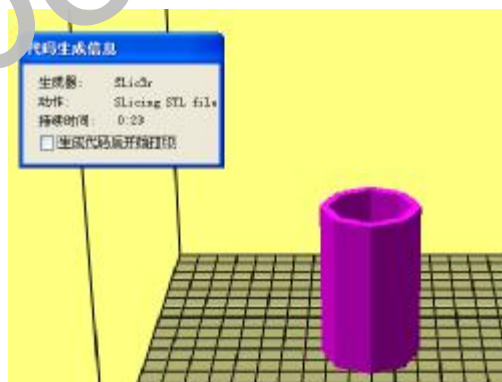
4)、**Off-line printing**

Off-line printing is better, especially for big models costing more time. After the GCODE is generated, click "Save" button and save it to SD card, the save name could only be in English or Arabic numbers After saved, please refer to the "LCD Control Systems" for more details.

4 LCD control Systems

1、 Install SD card and connect control box

1：Insert the SD card to REPRAP and Prusa I3   2．Insert the SD card to DRT

3：Connect the control box

After connecting, if the control box has no feedback, please turn the slot conversely immediately and connect with the PCB board again. When the LCD display lights up, restart the machine.
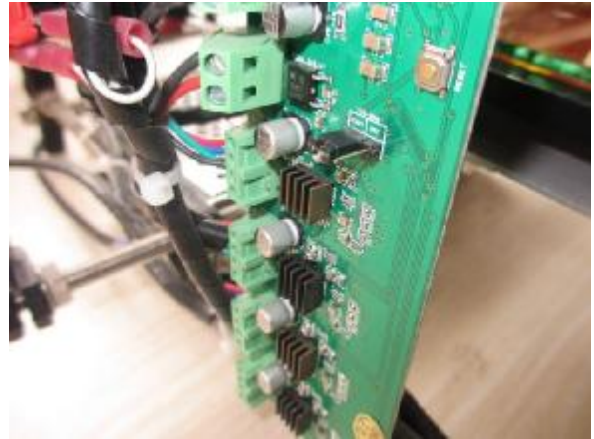
4：Restart the REPRAP and PRUSA I-Plug the three-legged hop hat

5：Press the Power On/Off button to restart the DRT

2、**First Page(Inform Screen)**

6：Real LCD display

7：Explanation for LCD display

Under First Page, you could adjust "CHOOSE" button to change the print speed.

If machine is printing, you could feel the change of the printing.(Default =100%,

the default configured speed.)

3、**Main Page**
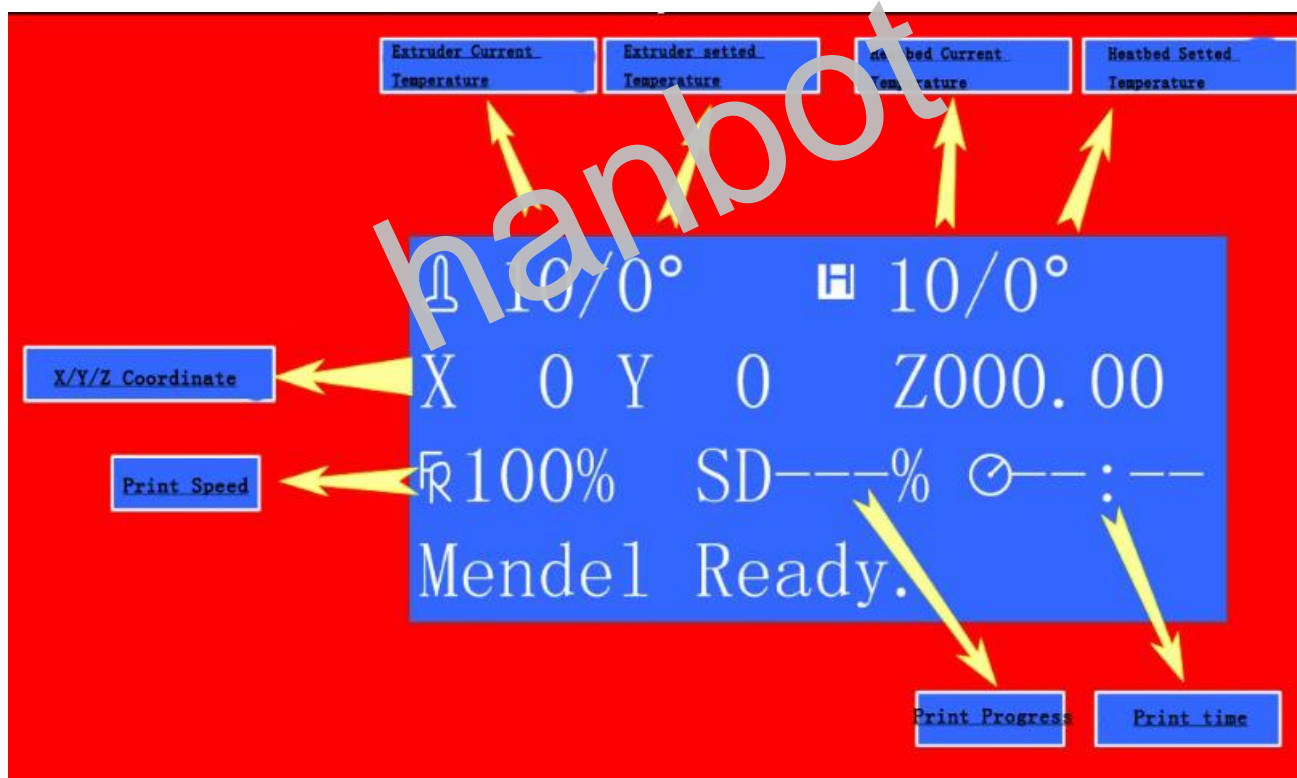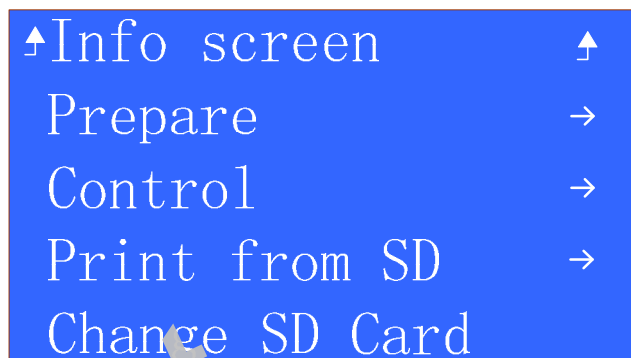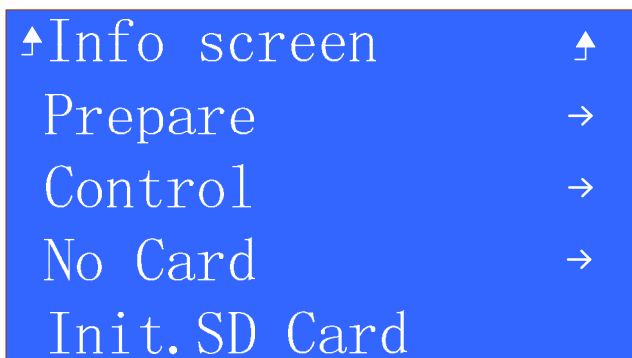
Under First Page, press "Confirm" button, get into the Main Page(PS: if you

press nothing in 15 seconds, the system will turn into First Page, automatically)

```
⬆Info screen      ⬆        ⬆Info screen      ⬆
 Prepare          →         Prepare          →
 Control          →         Control          →
 No Card          →         Print from SD    →
 Init.SD Card               Change SD Card
```
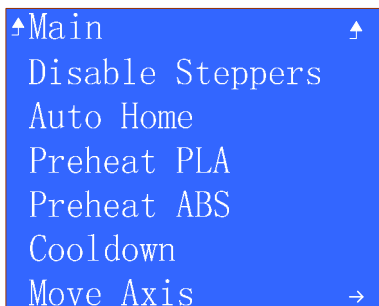
8：Main Page without SD card in the machine   9：Main Page with SD card in

the machine

Choose "Info screen" system will change into First Page

4、**Part Page——"Prepare" item**

In Main Page, choose "Prepare"：

```
⬆Main             ⬆
 Disable Steppers
 Auto Home
 Preheat PLA
 Preheat ABS
 Cooldown
 Move Axis        →
```

10: Prepare Item

Choose Main, get into Main Page

Choose "Disable Steppers", make stepper motor into Non-enabled state, you could push the motor by hands

Choose "Auto Home", X、Y、Z axis homing;

Choose "Preheat PLA", nozzle and bed's temperature will rise up to 192°、58° automatically according to PLA's parameter.

Choose "Preheat ABS", nozzle and bed's temperature will rise up to 240°、110° automatically according to PLA's parameter.

Choose "Cooldown", the nozzle and heatbed stop heating.

Choose "Move Axis", moving the X/Y/Z axis and extruder after choose the distance.
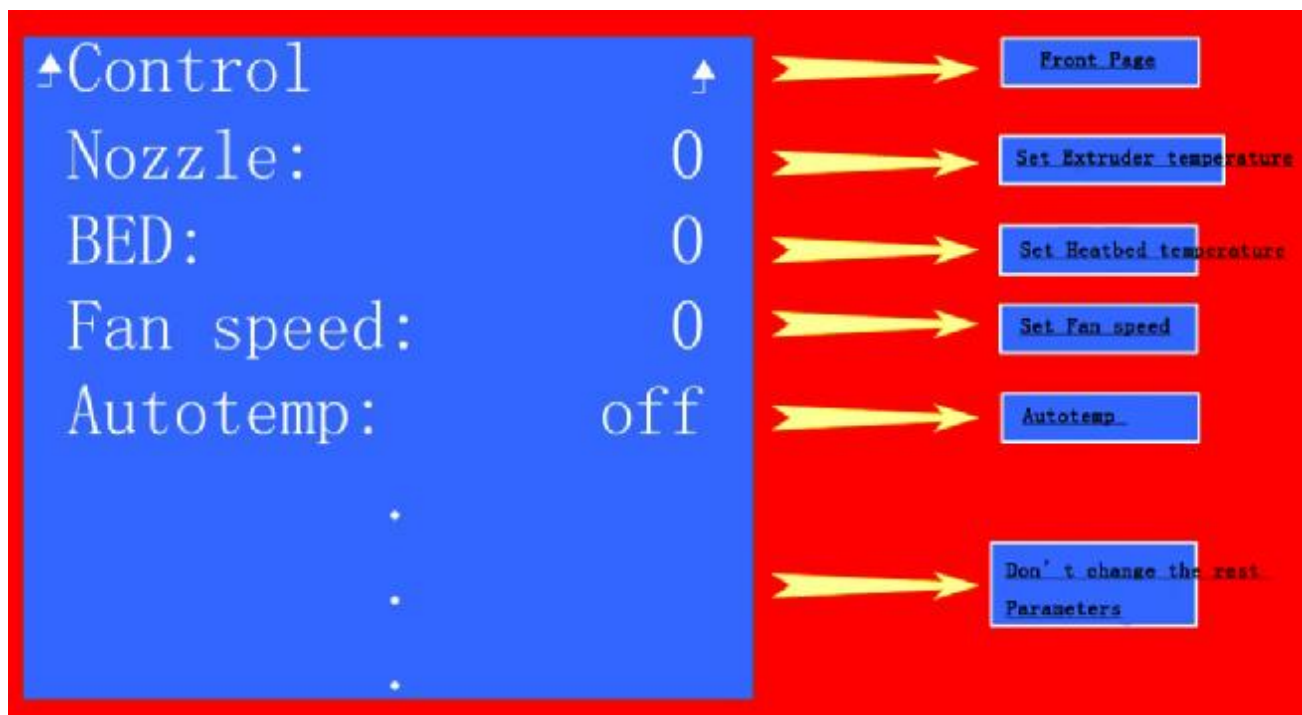
5、Part Page——"Control" Item

In Main Page, choose "Prepare":

```
⬆Main                          ⬆
 Temperature                   →
 Motion                        →
 Restore Failsafe
```

11：Control Item

Choose "Temperature", Below picture is detailed explanation for the item

12："Temperature" Item

Choose "Motion"，the parameters here is for specialists/

6、Part Page——"SD card operation" Item

Before open the machine, if there are no SD card, the First Page will be picture 8, when you put the SD card in and choose " Init.SD-Card"，machine will refresh automatically, turn into picture 9
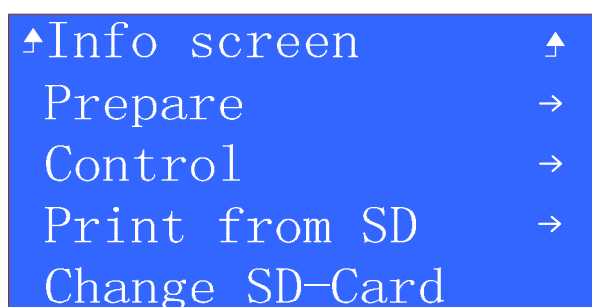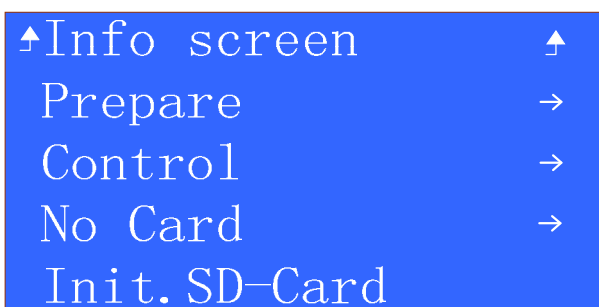
13：Main Page without SD card in the machine　14：Main Page with SD card in the machine
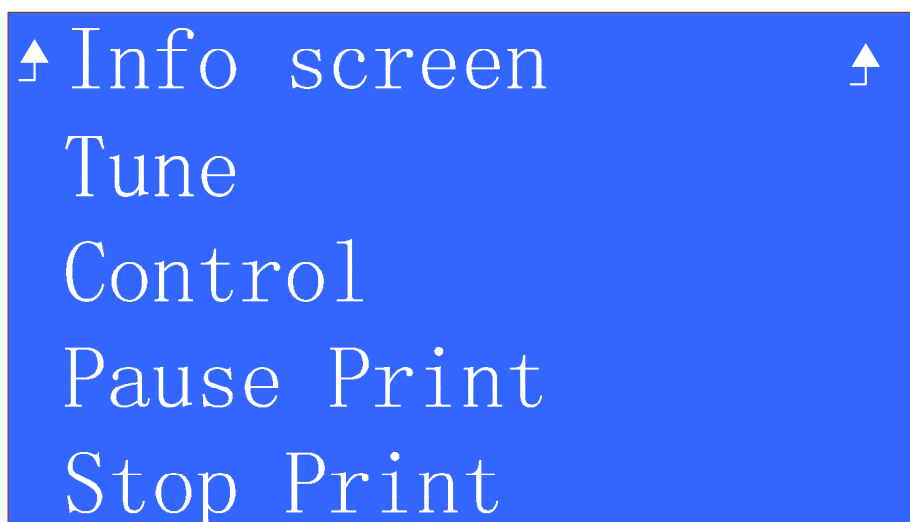
Off-line printing with SD card

In Main Page, choose "Print from SD", below is my SD card's contents:

```
⬆Main                    ⬆
  ↺Refresh
 test1.gcode
 test2.gcode
```

15：SD card's content

ü "Refresh", refreshing the files in the SD card

ü After choose one file, and the temperature is OK, machine wi5ll start.
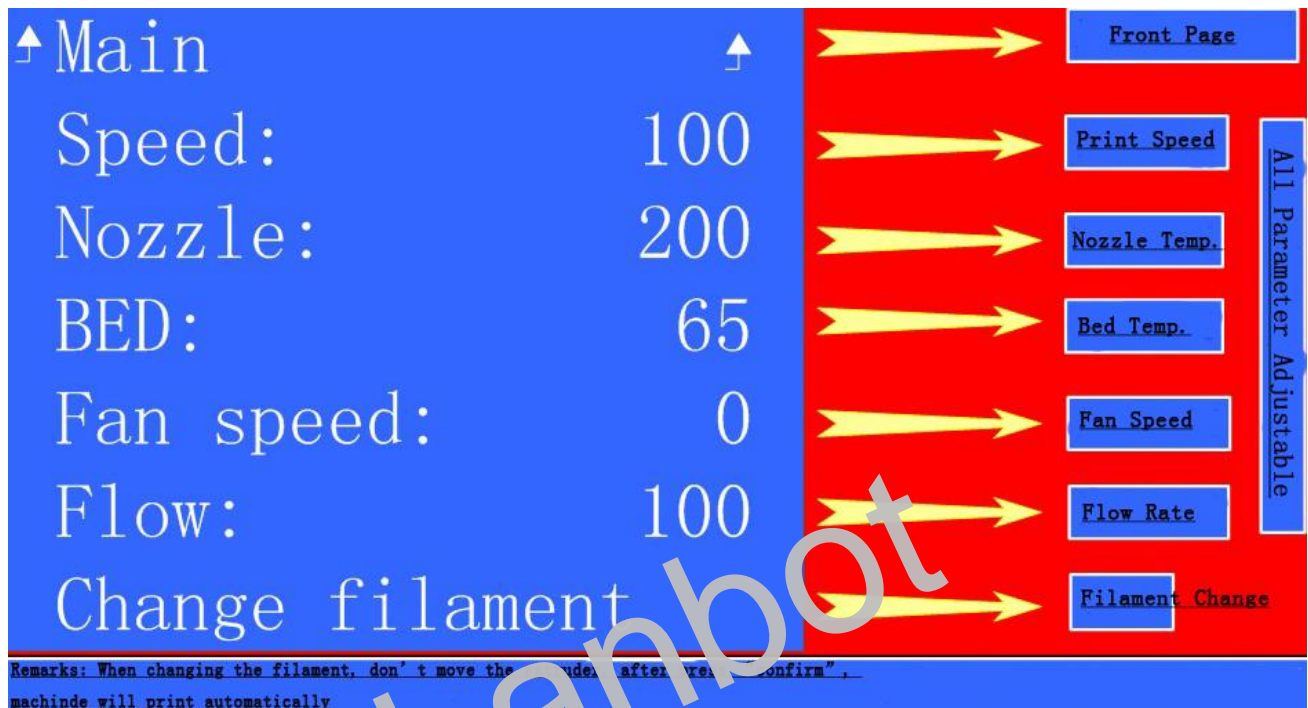
When printing with SD, below is is the content of Main Page

```
⬆Info screen             ⬆
 Tune
 Control
 Pause Print
 Stop Print
```

16：Main Page when printing with SD card

Choose "Pause Print", machine will pause

Choose "Stop Print", machine will stop.

After ch6oose "Tune", contents will be shown as below picture (the number might be different according to your own demands)

1 : Tune" details explanation

Websites

Any question, please visit our websites.

Website：7http://www.han-bot.com/

Forum：http://www.han-bot.com/bbs/forum.php?mod=forumdisplay&fid=36

Alibaba：http://han-bot.en.alibaba.com/