

adjusting the PID

Command head heating target: M303 E0 S260

(S260 is the head heating target temperature of 260°C. It can be set according to the printing materials. Reference value: PLA- 195 °C ABS-250 °C)

Command hot bed : M303 B S50

(S50 is the target temperature of the hot bed, which can be set freely according to the needs of the printed materials. Reference value: PLA- 50 °C ABS-100 °C)

If the printer does not work for a long time or the screen displays an error

Please adjust the PID value

PLA heating head 195 ° C hot bed 50 ° C usually starts printing for 3-5 minutes

ABS heating head 260 ° C hot bed 100 ° C usually start printing 7-10 minutes

F1-A F1-B (24v 350w 110/220v)

Pronterfac (<http://www.pronterface.com/index.html#download>) or Repetier-Host (<https://www.repetier.com/>)

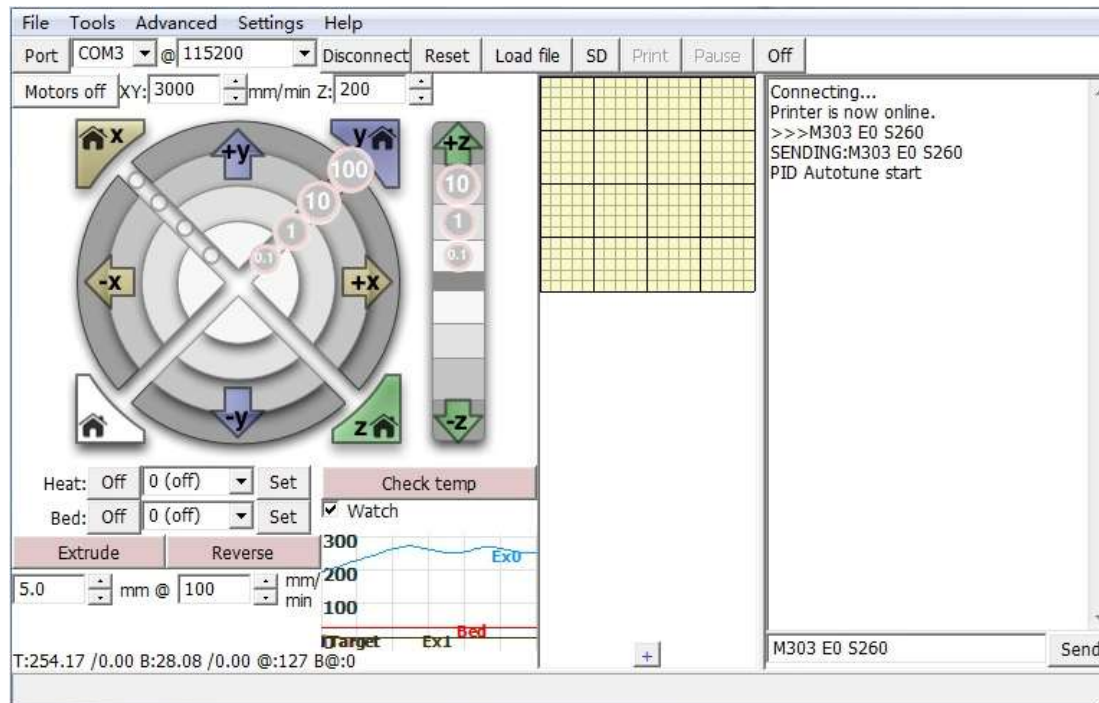
- First connect the pc and printer with usb cable
- PC computer to open the host computer software (repetierHost or Pronterface, etc.) to connect to the printer .



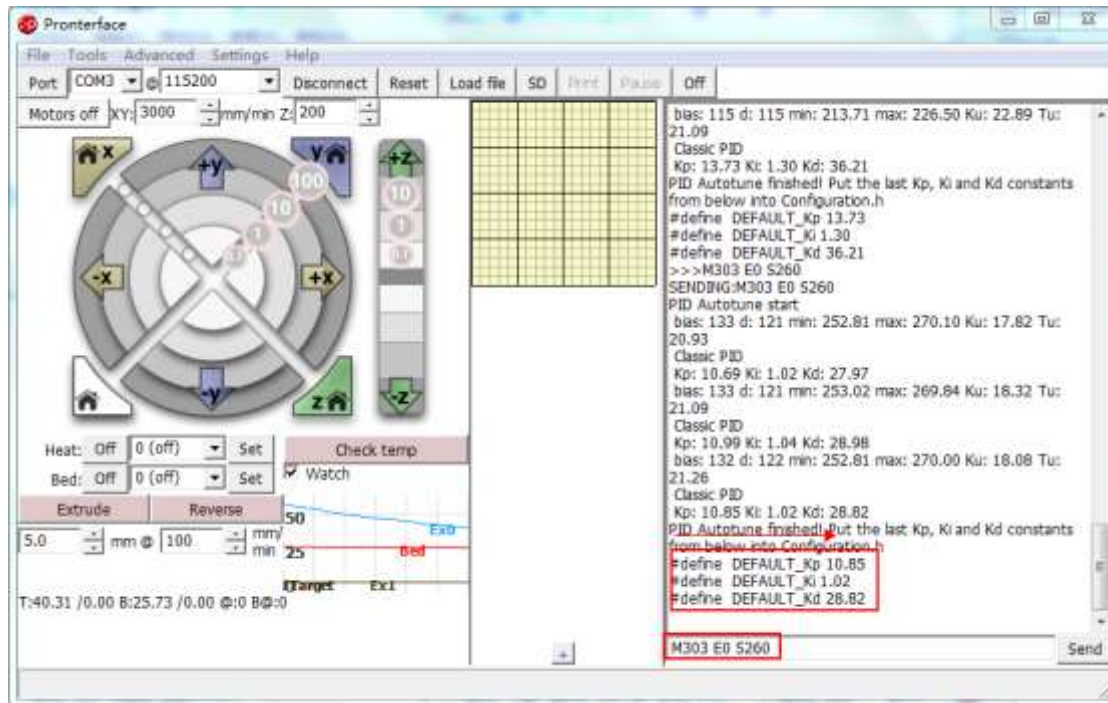
Heating head

Send the "**M303 E0 S260**" to the printer in the host computer software,

(**260** is the heating head temperature, Example PLA heating head 195 ° C
ABS heating head 260 ° C)

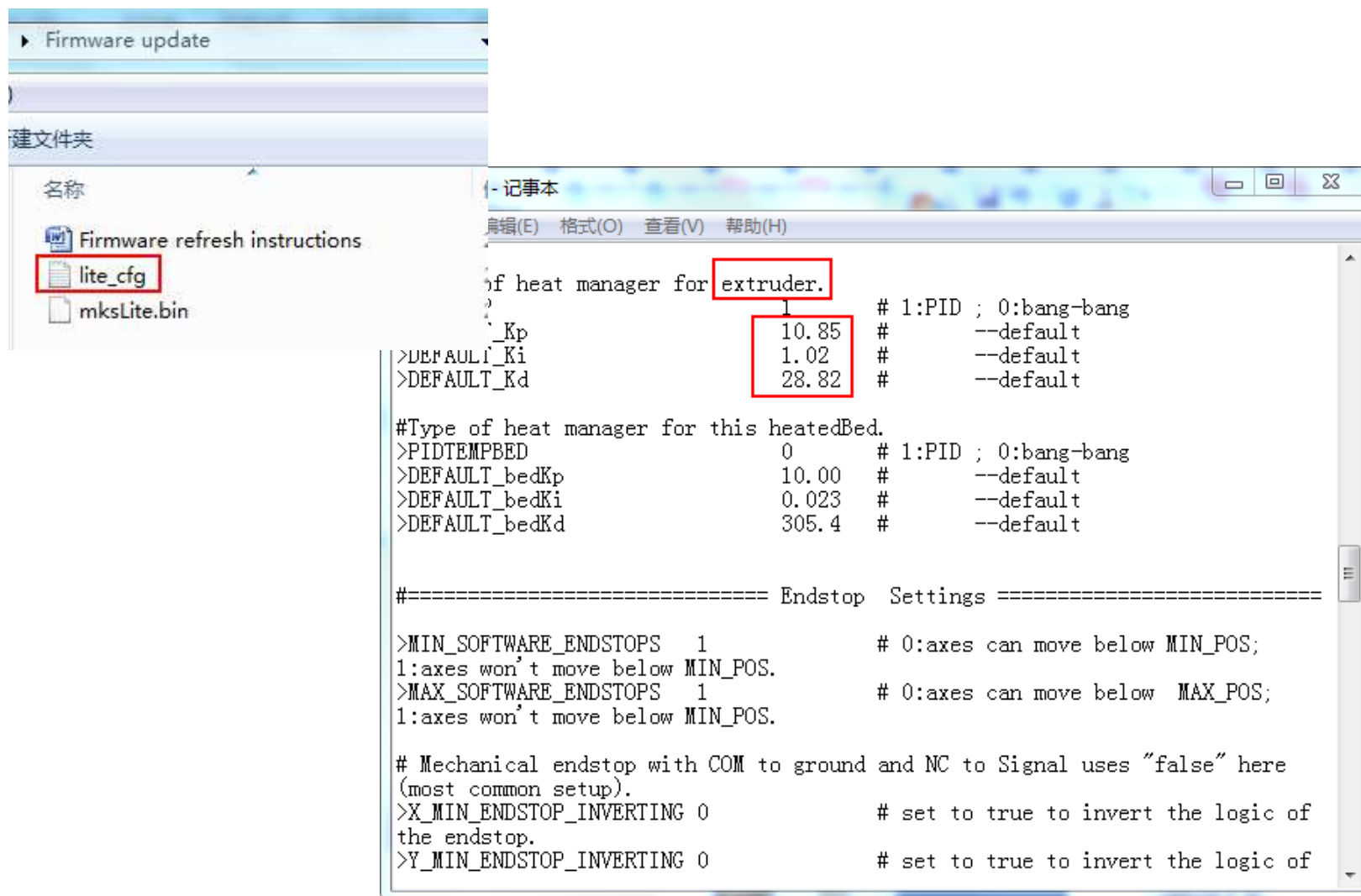


The waiting time usually takes a few minutes:



Then the calculation is completed.

Write the **Extruder PID** parameter to the following part of the "lite_cfg.txt" file.



The image shows a file explorer window on the left with the file "lite_cfg" selected. The main window is a text editor titled "记事本" (Notepad) showing the contents of the "lite_cfg.txt" file. The file contains configuration parameters for the extruder and the heated bed. The extruder PID parameters are highlighted with red boxes:

```
of heat manager for extruder.  
  1 # 1:PID ; 0:bang-bang  
  10.85 # --default  
  1.02 # --default  
  28.82 # --default  
  
#Type of heat manager for this heatedBed.  
>PIDTEMPBED 0 # 1:PID ; 0:bang-bang  
>DEFAULT_bedKp 10.00 # --default  
>DEFAULT_bedKi 0.023 # --default  
>DEFAULT_bedKd 305.4 # --default  
  
#===== Endstop Settings =====  
  
>MIN_SOFTWARE_ENDSTOPS 1 # 0:axes can move below MIN_POS;  
1:axes won't move below MIN_POS.  
>MAX_SOFTWARE_ENDSTOPS 1 # 0:axes can move below MAX_POS;  
1:axes won't move below MIN_POS.  
  
# Mechanical endstop with COM to ground and NC to Signal uses "false" here  
(most common setup).  
>X_MIN_ENDSTOP_INVERTING 0 # set to true to invert the logic of  
the endstop.  
>Y_MIN_ENDSTOP_INVERTING 0 # set to true to invert the logic of
```

File update save with **lite_cfg** .

Copy the re-saved "lite_cfg.txt" file and "mksLite.bin" to the TF card, and restart the power update firmware.

- Unplug the USB computer and the 3D printer
- Turn off the 3D Printer power
- Insert TF card
- Turn on the power
- The system will update automatically

Hot bed PID adjustment method:

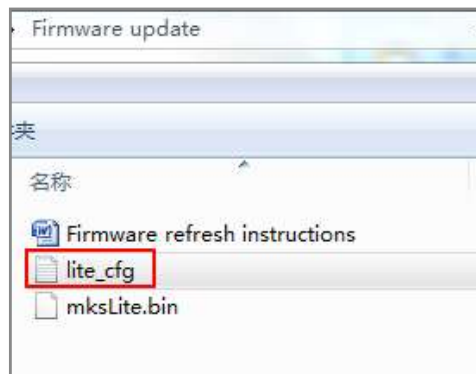
1. Send the command : **M303 B S50**
(50 is the hot bed temperature, Example:
PLA hot bed 50 ° C ABS hot bed 100 ° C)

The image displays two screenshots of the Pronterface software interface, illustrating the process of sending the M303 B S50 command and the resulting PID autotune results.

Left Screenshot: The Pronterface window shows the command **M303 B S50** entered in the command field. The status bar indicates the printer is online. The interface includes a control panel with buttons for Home, Move, and Extrude, and a temperature graph showing the bed temperature (Ex0) and extruder temperature (Ex1).

Right Screenshot: The Pronterface window shows the results of the PID autotune process. The status bar indicates the printer is online. The command **M303 B S50** is entered in the command field. The output text displays the autotune results:

```
Connecting...
Printer is now online.
>>>M303 B S50
SENDING:M303 B S50
PID Autotune start
bias: 20 d: 20 min: 49.39 max: 50.73 Ku: 37.97 Tu: 18.81
Classic PID
Kp: 22.78 Ki: 2.42 Kd: 53.57
bias: 20 d: 20 min: 49.36 max: 50.87 Ku: 33.82 Tu: 19.30
Classic PID
Kp: 20.29 Ki: 2.10 Kd: 48.95
bias: 20 d: 20 min: 49.36 max: 50.84 Ku: 34.34 Tu: 19.30
Classic PID
Kp: 20.61 Ki: 2.14 Kd: 49.71
PID Autotune finished! Put the last Kp, Ki and Kd constants from below into Configuration.h
#define DEFAULT_Kp 20.61
#define DEFAULT_Ki 2.14
#define DEFAULT_Kd 49.71
```



```
lite_cfg - 记事本
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)

WATCH_BED_TEMP_PERIOD          120      #Seconds
WATCH_BED_TEMP_INCREASE        2        #Degrees Celsius

Type of heat manager for extruder.
PIDTEMP                        1          # 1:PID ; 0:bang-bang
DEFAULT_Kp                     10.85      # --default
DEFAULT_Ki                     1.02      # --default
DEFAULT_Kd                     28.82      # --default

#Type of heat manager for this heatedBed.
>PIDTEMPBED                    1          # 1:PID ; 0:bang-bang
>DEFAULT_bedKp                 20.61      # --default
>DEFAULT_bedKi                 2.14      # --default
>DEFAULT_bedKd                 49.71      # --default

#===== Endstop Settings =====

>MIN_SOFTWARE_ENDSTOPS 1          # 0:axes can move below MIN_POS;
1:axes won't move below MIN_POS.
>MAX_SOFTWARE_ENDSTOPS 1          # 0:axes can move below MAX_POS;
1:axes won't move below MIN_POS.

# Mechanical endstop with COM to ground and NC to Signal uses "false" here
(most common setup).
```


File update save with **lite_cfg** .

Copy the re-saved "lite_cfg.txt" file and "mksLite.bin" to the TF card, and restart the power update firmware.

- Unplug the USB computer and the 3D printer
- Turn off the 3D Printer power
- Insert TF card
- Turn on the power
- The system will update automatically

Congratulations
Set up successfully



my3dltd@163.com

Any questions please contact us
<https://github.com/my3dltd/F1-MSK-V1.1-WIFI>
<https://diymaria.aliexpress.com/store/2092087>

