Manual Print Bed Calibration

For Flashforge Finder using S3D

Warning

Watch your fingers!
This guide worked for me, I'm not responsible for any damages or violations!

Preperation

For safe movements it's recommended to move the X/Y axis seperatly from the Z axis (for example `G1 X10 Y10, G1 Z3`).

Move the axes in serval steps and reduce the speed when you are near to your coordinate (for example `G1 Z90 F6000, G1 Z95 F1000, G1 Z95.5 F500`).

Tighten the leveling screws clockwise (looking from the printers top) before you start.

This guide uses 0.3 mm distance between nozzle and print bed. If you want to use another distance you have to change the Z coordinates, the printer commands and your gauge (for example the business card).

To make commands open Simplify3D and press CTRL+D. Now click on the tab "Communication". Put the command in the input field at the bottom and press "Send".

The printer has to be connected with your pc using USB.
You need a kind of gauge with a thickness of 0.3 mm. I'm using a business card.

Calibration Points

Name	Number	X	Y	Z
Left	1	-65	-65	0.3
Right	2	65	-65	0.3
Back	3	0	65	0.3
Middle	4	0	0	0.3

Homing

1. Use absolute positioning
   ```
   G90
   M82
   ```

2. Start steppers
   ```
   M907 X100 Y100 Z40 A100 B100
   ```

3. Load offset values
   ```
   M132 X Y Z A B
   ```

4.   Reference Axes
        ```
        G28
        ```

Calibration

5.   Go to calibration point 1
        ```
        G1 X-65 Y-65 F3300
        G1 Z5 F3300
        G1 Z0.3 F100
        ```

6.   Put your gauge between print bed and nozzle.
        Loosen the screw under the calibration point and check with your gauge the distance. The nozzle should touch the gauge and you should feel a bit friction. While you check the distance, don't touch the screw.

7.   For safety increase the distance between nozzle and print bed.
        ```
        G1 Z1 F3300
        ```

8.   Repeat steps 5 till 7 for the calibration points 2 and 3.

9.   Go again to every calibration point to check the setting.

10.   Go to calibration point 4 and check the distance.

11.   If everything is OK go to homing position.
        ```
        G28
        ```

12.   Ready!