



CubeX 3D printer

How to Check Level on CubeX



Procedure

1. Ensure the print bed is on place on the printer and nothing is on the bed including parts.
2. Add thin film of Magic Glue to each corner as shown in Figure 4 in $\sim 50\text{mm}^2$

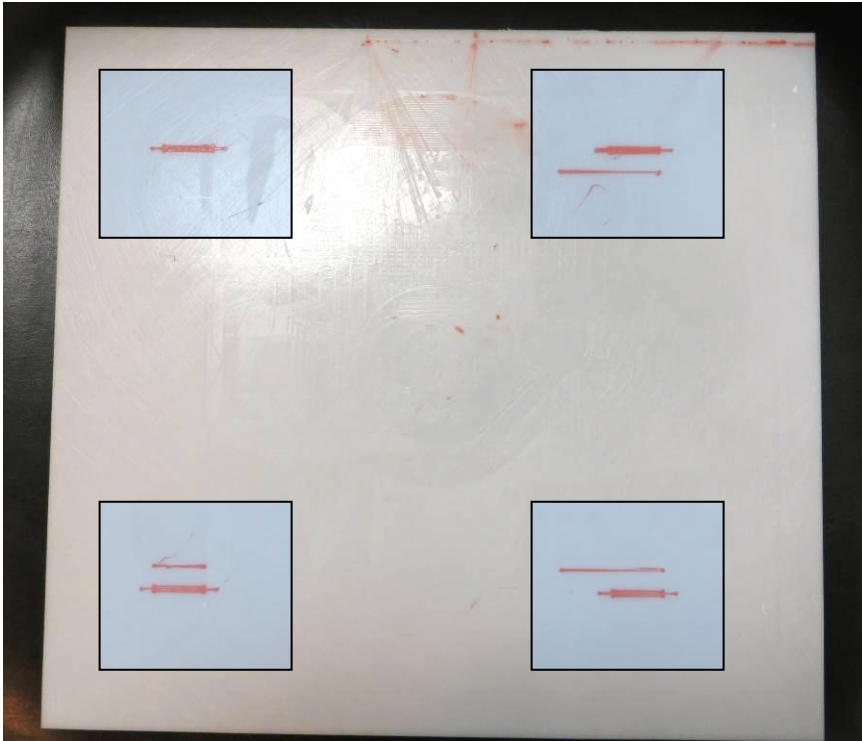


Figure 4. Areas for Magic Glue

3. Run Level_lines.cubex print.
4. In each corner a purge line and then a series of three lines will be printed.
5. Criteria:
 - a. Each set of lines should have a middle line going thru that does not have any spaces above or below in reference to the Top and Bottom lines as in the CLOSED metric for the Z_GAP test.

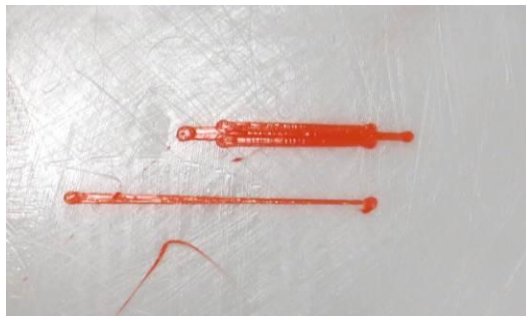


Figure 5. A Pass criteria for 1:4 corners

6. Adjustment:

- a. If the LEFT REAR corner has space between the test line and top and bottom lines, rotate the LEFT-REAR adjustment screw $\frac{1}{2}$ turn to raise bed.
- b. If the RIGHT REAR corner has space between the test line and top and bottom lines, rotate the RIGHT-REAR adjustment screw $\frac{1}{2}$ turn to raise bed.
- c. If the LEFT **and** RIGHT FRONT corner has space between the test line and top and bottom lines, rotate the FRONT adjustment screw $\frac{1}{2}$ turn to raise bed.
- d. If the bed is severely out of level, then a combination of $\frac{1}{2}$ turns will need to be performed.
- e. Once the adjustment has been made, re-print the Level_lines.cubex file for verification.

7. Examples:

- a. The image in Figure 6 below shows the LEFT REAR corner with space between the test line and top and bottom lines. Thus, rotate the LEFT-REAR adjustment screw $\frac{1}{2}$ turn to raise bed.
- b. The image in Figure 7 below shows the resulting verification print. All four corners now have the same image with NO spaces above or below the test line. The print bed is level.

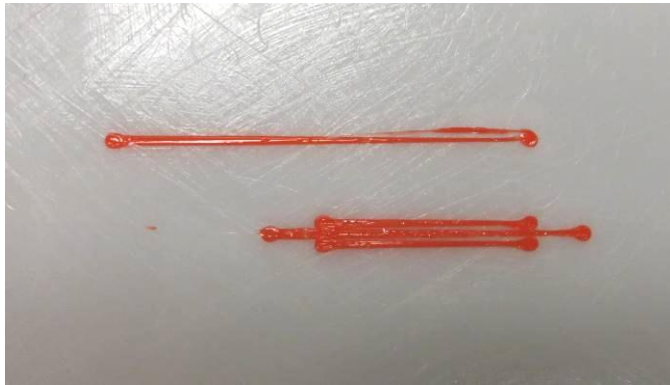


Figure 6. LEFT REAR corner with space between the test line and top and bottom lines.

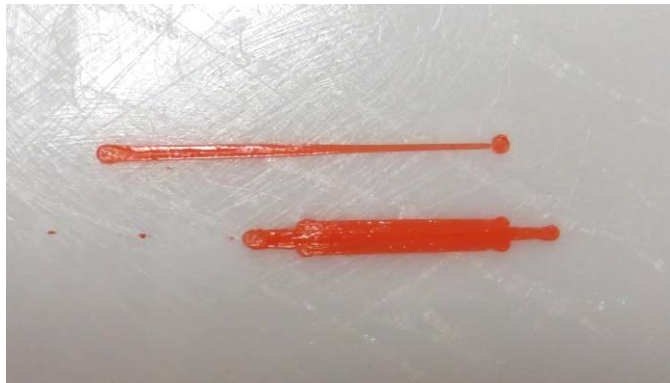


Figure 7. LEFT REAR corner with space between the test line and top and bottom lines removed after adjustment.

8. Z-GAP verification after Level_test.

- a. If the Level test required for an adjustment screw to be turned over 1/2 complete revolution, the Z-GAP should be retested for verification.
- b. If the Level test required for an adjustment screw to be turned less than 1/2 complete revolution, the Z-GAP does not need to be retested for verification.



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