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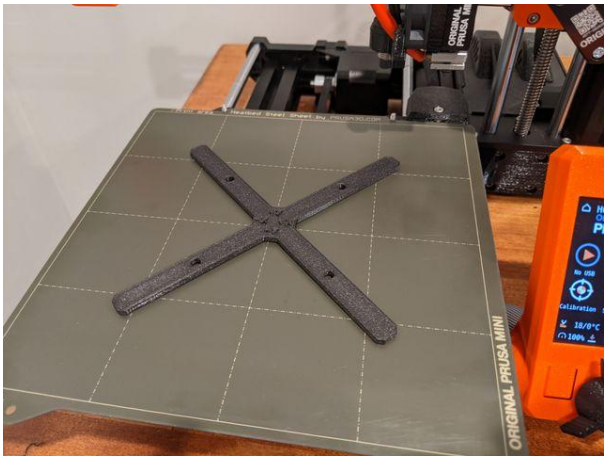

XY Skew Calibration Test Part

ericman314

VIEW IN BROWSER

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Summary

Correct your printer's skew in the XY plane using this calibration part

0.64 hrs	1 pcs	0.20 mm	0.40 mm	PLA	8 g	Prusa MINI / MINI+

3D Printers > Test Models

Correct your printer's skew in the **XY** plane using this calibration part. **XY** skew causes parts printed flat to become stretched on one diagonal. Squares become parallelograms, circles become ellipses, etc.

Align the part with the diagonals of your print bed, then measure the lengths of the legs after printing. You can calculate the correction factor for use with a script such as gskewer using this formula: **xytan = 1 - sqrt(4b^2 / (a^2 + b^2) - 1)**. In this formula, **a** is the size of the part on the **+x/+y** to **-x/-y** diagonal, and **b** is the size of the part on the **+x/-y** to **-x/+y** diagonal.

The nominal size of **a** and **b** is **150 mm**.

Example

Here are actual measurements from calibrating my own printer. Although I used mm, the formula will work with any units. This was using PLA.

Measured lengths of legs: **a = 149.2 mm**, **b = 150.08 mm**

xytan = 1 - sqrt(4 * 150.08 ^ 2 / (149.2 ^ 2 + 150.08 ^ 2) - 1) = **-0.00586**

After applying the skew correction, the next part came out much closer: **a = 149.62 mm, b = 149.60.**

Model files

xy-skew.stl

xy-skew.3mf

Print files

xy-skew_02mm_pla_mini_38m.gcode

PLA 0.40 mm 0.20 mm 0.64 hrs 8 g Prusa MINI / MINI+

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