Component Sorting & Storage Tray System with Calibration & Torture Testing all in one!

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VIEW IN BROWSER

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Summary

If you want to stress your 3D printer perhaps consider printing something that is much more useful than a small boat.

3D Printers > Accessories

Tags: componentbox trayforsorting components trayforscrews tray trays component componentsstorage

This is a stackable component sorting & storage tray system which also provides Printer Calibration stress & testing.

Main Features of the Tray system:

1. Stackable
2. Label Insert Pockets
3. Pouring Ports for ease of re bagging parts.
4. Secured components for extended use or storage.
5. Dual Bolt Length Gauge

6. Optional secure lid.
7. Key Slot Mount for wall or bench hanging.
8. 10mm high internal storage clearance.

Stress & Calibration Features:

1. 40mm Perimeter & Bridge Test
2. Hole Calibration Detail, 10, 5 & 3 mm diameters.
3. 45 degree overhang test.
4. Interference Slider Tests - 0.1 mm to 0.4 mm
5. Extreme Overhang Test - 50 - 80 degrees.
6. 20 x 20 mm Bridge and X\Y axis calibration.
7. 10 mm Z axis Calibration.
8. 50 mm Bridging & Perimeter Test.
9. Bridging Beam Width Test - Widths 0.4 - 3.2 mm.
10. 100 mm X Axis Calibration.
11. 100 mm Y Axis Calibration.
12. Support Material Offset Distance spacing Test - 0.1 & 0.2 mm offsets.
13. Recessed Hole Bridging Test - 5. 4 & 3.5 mm diameter holes.

Notes:

1. The interference sliders have a 0. 5 mm tolerance to the top of the apertures to allow for the internal bridging. Therefore the interference test is based on the side and bottom clearance only.

Printing:

1. The first layer is a torture test in itself. The first layer really needs to be very slow to give all the details a good chance to adhere. I print @20% first layer speed & 50% infill in Orca or Bambu Slicer.
2. The design is based on a layer height of 0.2 mm with a 0.4 mm nozzle.
3. I have included some anti warp straps to the end of the Interference Slider apertures. These can be removed to release the sliders after printing. The rattle created by the sliders can get a little irritating but up to personal choice post printing.
4. Each tray printed on a X1 Carbon in 2 hours 50 minutes and on a Voron V.2.4 in 3 hours 50 minutes.
5. Print in the orientation uploaded for best results.
6. Tray printed in ABS & PLA. Tray Retention Clips printed in ABS & PETG.

Model files

2-tier-tray-clip-v1.stl

3-tier-tray-clip-v1.stl

tray-lid-v1.stl

torture-tray-label-inserts-v1.stl

torture-tray-standard-v1.stl

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