

# Star Bound Magazine — Habitat Panel Print Sheet

Tri-hook interlocking triangle panel, design revision r49 · Sheet Rev 65, September 11, 2026 · [starboundmagazine.com](http://starboundmagazine.com)

This is a panel for a spinning habitat: a ten-inch equilateral triangle that locks to its neighbors with a hooked joint on all three edges, no bolts and no welds. The real part is stainless steel. The plastic one proves the geometry, which nobody has done yet. We are asking you to print two, put them together, and tell us what happened.

## The two files

|                               | tri-hook-panel-100mm-r49.stl   | tri-hook-panel-254mm-r49.stl          |
|-------------------------------|--------------------------------|---------------------------------------|
| <b>What it is</b>             | 4-inch test piece. Start here. | Full-size panel, 10 inches on a side. |
| <b>Side length</b>            | 100 mm (3.94 in)               | 254 mm (10.00 in)                     |
| <b>Footprint with tongues</b> | 103 x 92 mm (4.05 x 3.60 in)   | 261 x 232 mm (10.28 x 9.14 in)        |
| <b>Thickness</b>              | 7.5 mm (0.30 in)               | 19.05 mm (0.75 in)                    |
| <b>Bed needed</b>             | Any printer                    | About 265 mm on the long axis         |
| <b>Print time, rough</b>      | Under an hour                  | 6 to 10 hours at 0.2 mm               |

Both files are the same model at two scales. The small one fits every machine and answers the fit question just as well; the big one is for anyone with a 300 mm bed who wants to hold the real size.

## How to print it

- **Orientation:** the file is already flat face down. Load it and print. Do not rotate it. The studs are on top and print without supports.
- **Material:** whatever is on your spool. PLA or PETG, any color. We are testing whether the parts go together, not what they are made of.
- **Layer height:** 0.2 mm is fine. 0.16 mm if you want a cleaner hook.
- **Walls and infill:** 3 or 4 perimeters, 20 to 30 percent infill. The ribs carry the shape.
- **Scale:** 100 percent. Do not let the slicer scale it to fit. If it does not fit, print the 100 mm file instead.
- **Print at least two.** Turn one over and try to hook it to the other. That is the test.

## What we want to know

Whichever way it goes, write to [hello@starboundmagazine.com](mailto:hello@starboundmagazine.com) and tell us:

- Which file, which printer, which material, what layer height.
- Did the hook go home? Which edge would not seat square, which stud was tight, where it bound and where it rattled.
- What your printer did to the lip of the joint. Elephant's foot, stringing, a rough underside.
- A photo of the two panels locked, or of the place they would not lock.

Your name, or your shop's name, goes in the article that reports the results, unless you tell us not to.

## Stage two, for anyone with metal

Nobody has printed this panel in stainless yet. If you run a binder-jet machine, a metal filament line (316L filament through an ordinary printer, then debind and sinter), or know a lab that does, we want to talk. The number we are after is what the joint holds: two locked panels pulled apart along the direction they slid together, until one lets go. Fifty of those numbers, not one. The article "One Press or Ten Thousand" on the site explains why.

Download the files and read the design articles at [starboundmagazine.com](http://starboundmagazine.com) — "A Thousand Garages," "Sixteen Inches of Steel," "Launch the Parts, Not the Ship," and "One Press or Ten Thousand." Questions: [hello@starboundmagazine.com](mailto:hello@starboundmagazine.com)