XCV-330 Enterprise

Version 1.0, Card Model Designed by David Lukens (C)2018
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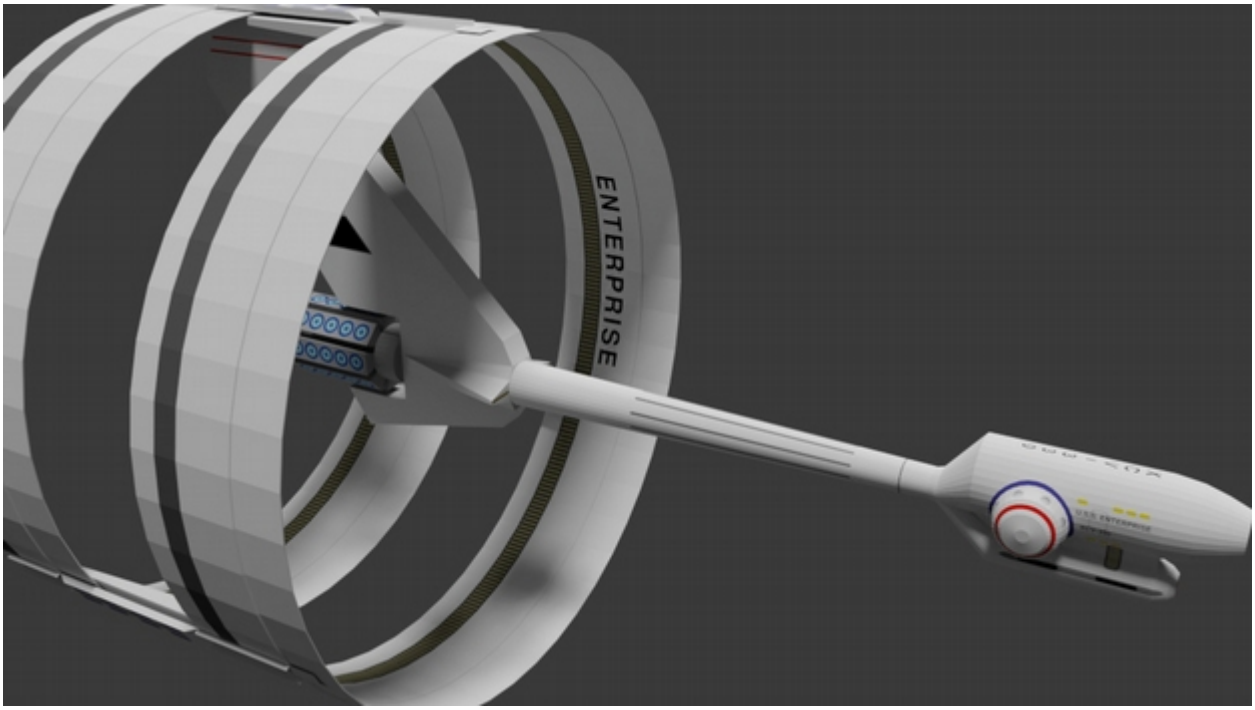
http://insanityunlimited.com/model_plans/



I hope you enjoy this model. I distribute it for free so that as many as possible can build it. If you think it is worth something, please drop a few dollars in the tip jar. Knowing that people are getting something out of all the work that goes into a design such as this makes a big difference. These models easily consume several hundred hours to design, layout, and build. Thanks.

-Dave

QR code for the tip jar:
Paypal Link

Forward

All of the photos used in this guide can be found in higher resolutions in the gallery:
http://www.insanityunlimited.com/gallery/paper_models/xcv-330/

Tips and Tricks

Here are a few things that have come up in testing the build that make life easier from several different angles.

- By default, print the pages on 60-70lb card stock.
- Use the high resolution images in my gallery for reference as needed. There are both CG and photos there.

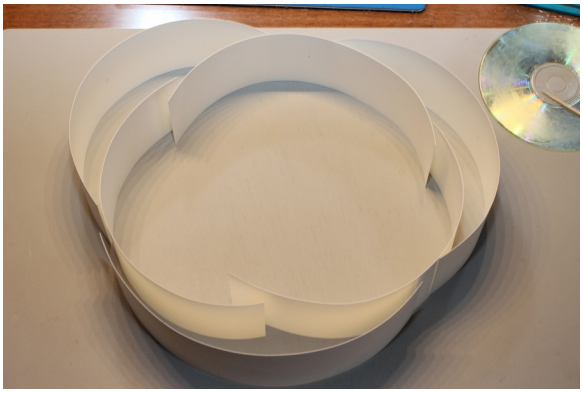
General Tips – These may or may not be useful to your building style

- Take your time.
- Test fit parts.
- If you don't like how a subsection of parts came out, then make another set.
- For large flat pieces, reinforce them from the inside with chipboard as desired.
- Use a metal straight edge as a guide for making scoring marks and long cuts.
- Use a chisel style blade for small cuts and corners.
- Edge color where needed with pencils/markers/paint.
- If you have a better technique for making some of these components, do it.

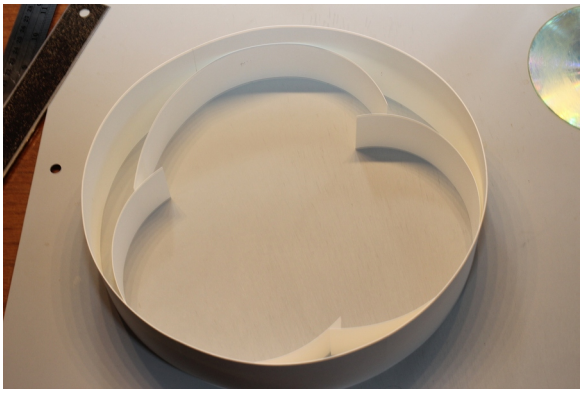
Warp Rings

The warp rings are made up of a total of 8 layers of card stock. The core of the rings are a pair of layers that are wider than the rest. Aligned with the rear edge of those two layers are three internal layers and three external layers. You will want to trim the layers to fit, as the thickness and density of your cardstock will determine just how long each piece needs to be.

Start by forming the core of the rings with parts “ring core-inner” and “ring core-outer”. Overlap the inner and outer parts to preserve the structural integrity. You will want to shape these into an even ring and let the glue dry before moving on.



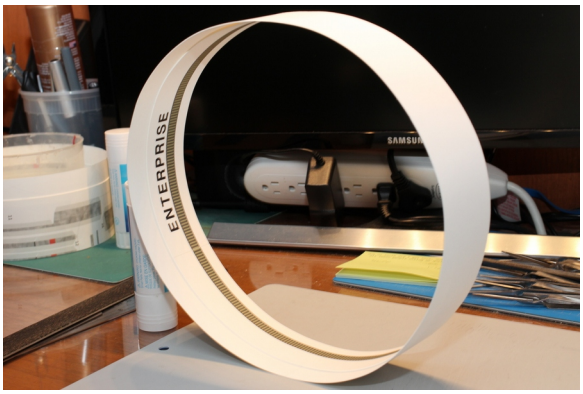
Next add the parts “ring inner - layer 2” to the inside of the core. Again offset the parts so that seams between this layer and the adjoining one do not overlap. You will need to trim the parts to length so that they fit flush against each other .



Now do the same with “ring inner - layer 1”. Again, you’ll need to trim the parts to length so that they fit flush against each other.

For the finish of the inner layers, apply “ring inner”. The enterprise lettering should align at the 9 o’clock and 3 o’clock positions inside the ring. Trim the strip without the enterprise lettering on it so that the three strips fit flush against each other on the interior of the ring. Don’t worry if you have to trim into the grid pattern on the parts as other components will be glued over top these seams later on.

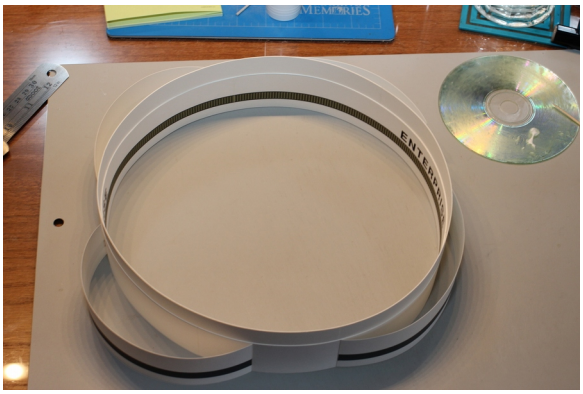
This image is of the ring core with the interior layers in place.



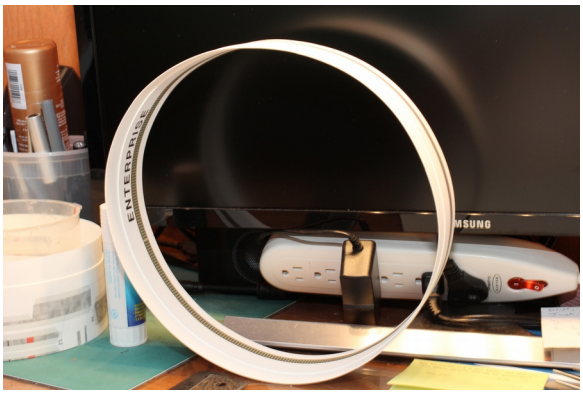
We will do a very similar operation for the three exterior layers of the rings. Apply “outer ring 4” to the outside of the ring core. You will need to trim these to length so they fit flush against each other. Make sure the seams do not line up with the layer beneath them.

Do the same thing again with “outer ring 3”.

Do the same thing (yet again) with “outer ring exterior”.



Below is the finished ring with both interior and exterior layers applied.

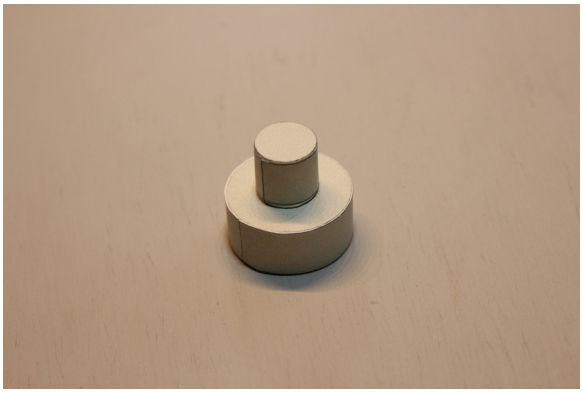


You will make a total of two of these rings.

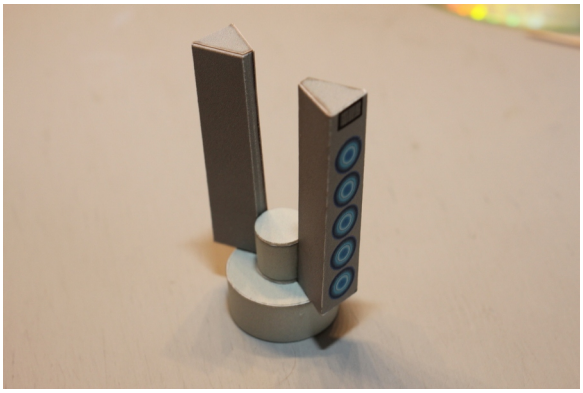
Engines

Start by creating the engine ring and hub. Both are simple cylinders with the circular disks used as caps on each.

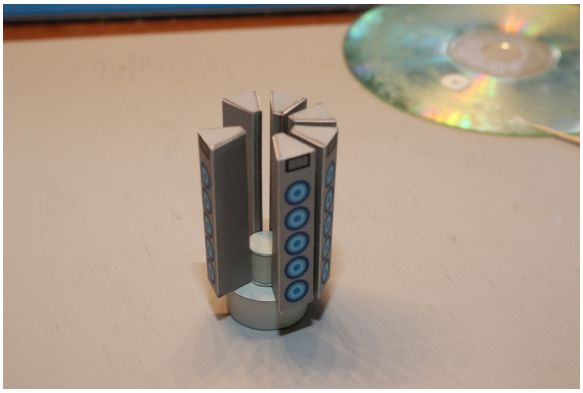
The smaller one is centered on the large one. Align both sets of seams together as this will be the bottom of the assembly.



Construct all eight of the engine pods into triangular prisms. They are glued evenly onto the hub above.

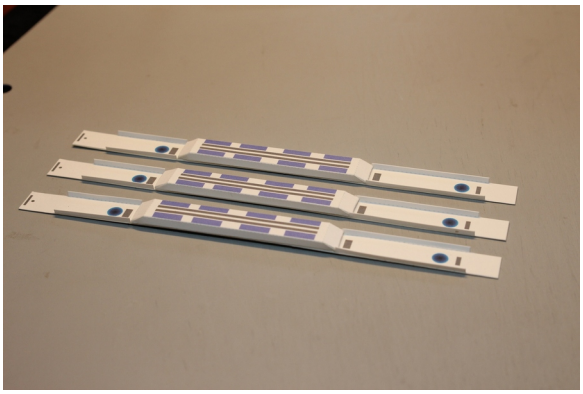


Start by gluing a pair onto the 12 o'clock and 6 o'clock positions. Then glue a pair onto 3 and 9 o'clock, then put the other four on evenly.



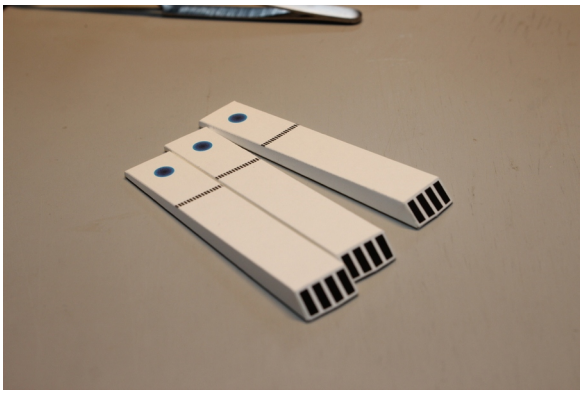
Ring Rails

The rails are made up of three parts. The rail proper, a reinforcing backing, and a trapezoidal shape in the center. Start by folding the edges up on the rails and gluing on the backing part. Once that is done glue on the trapezoidal shapes (grey lines with purplish rectangles).



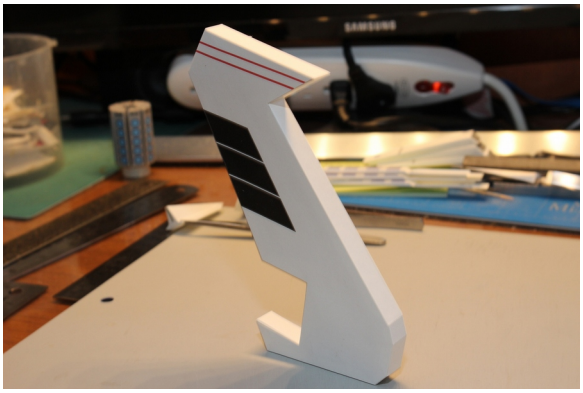
Ring Scoops

The three scoops are simple shapes with a base plate. Glue them together as shown in the photo below.



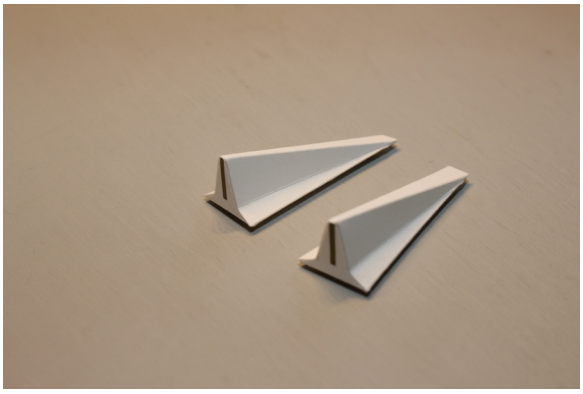
Strut

The strut is an irregular polygon with the two red stripes at the top. Parts 1 and 2 are the sides. Part 3 is the top plate. Part 4 is the front of the strut with part 6 the back and part 5 the bottom.



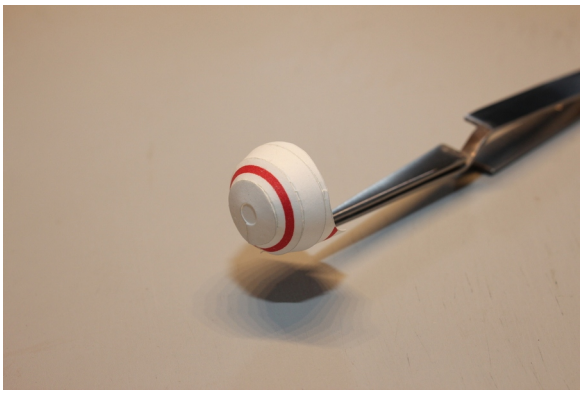
Wings

The wings will go on either side of the strut. Shape them as in the picture below.



Sphere

The sphere will eventually go on the side of the nose. It is made up of several concentric rings and nest within each other. Part 1 goes inside part 2, 3 inside part 2, 4 inside 3, 5 inside 4.

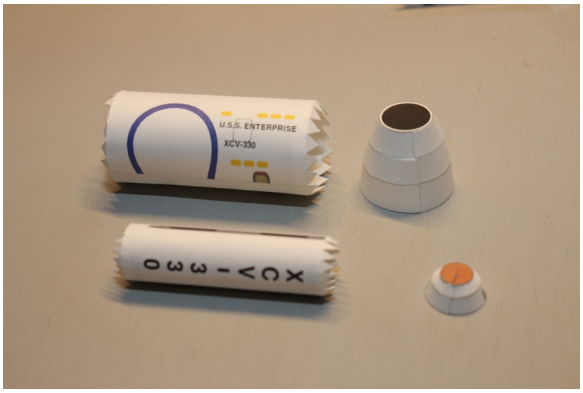


Nose

The nose is primarily two cylinders with additions to each.

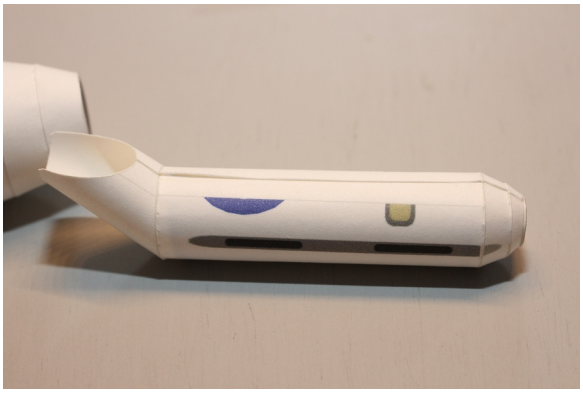
Form part 2 into a cylinder and laminate part 1 to use as a former inside it. Make the rings for parts 3, 4, and 5 and next them inside each other. Note that part 5 should be a concave cone (it goes inwards).

Form part 7 into a cylinder and laminate parts 6 to use as formers. Build the rings of parts 8, 9, and 10. Part 11 does not require any shaping as it is a flat disk. Assemble these together to form the nose of the upper cylinder.

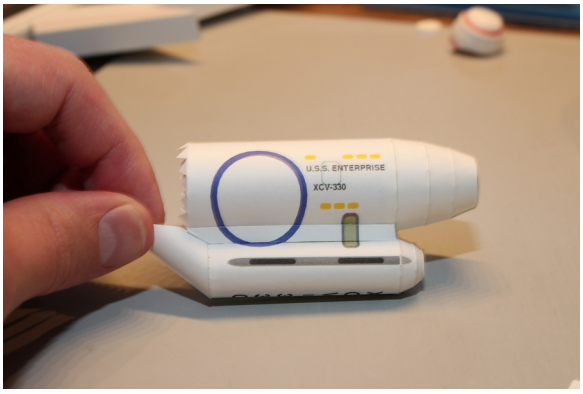


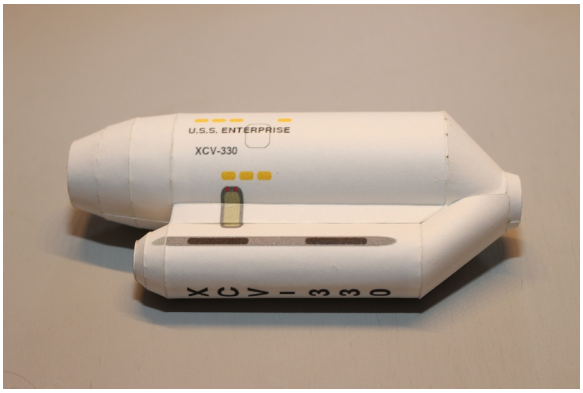
Glue the front cones (parts 3-5 and 8-11) to the front of each cylinder.

Form part 11 and glue it to the back of part 2.



Use part 13 to join the two cylinders together. Make sure that the graphics line up on both sides properly.



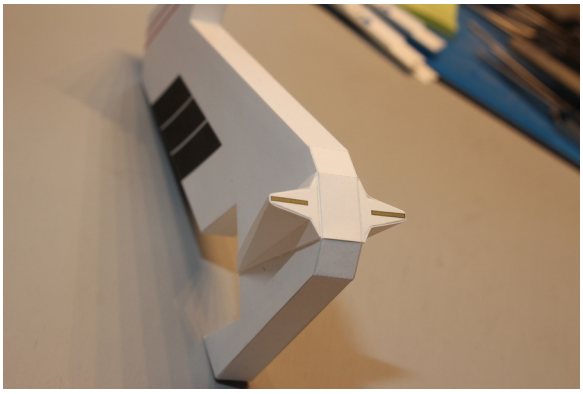


Glue the sphere to the side of the nose centered over the blue circle on the starboard side. Shape part 14 and glue it to the back of part 7.

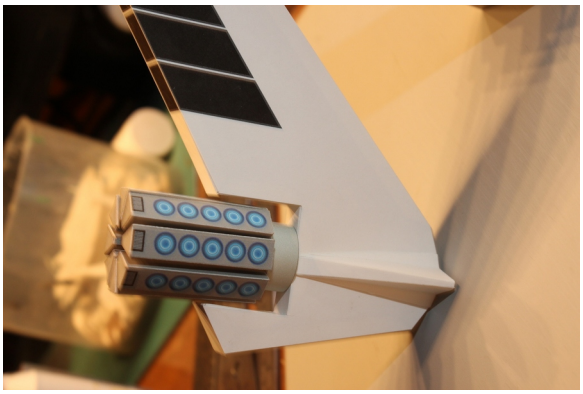
Roll part 16 and use 15 and 17 as end caps for it. This is glued to the back end of parts 12 and 14 to transition to the neck of the ship.

Roll the three segments of the neck and use the disks as end caps on each. Glue the segments together with the seams aligned on the bottom. Join the nose of the ship to the neck.

Glue the wings to the sides of the strut so that their forward face is even with the forward face of the strut. See the photo below.



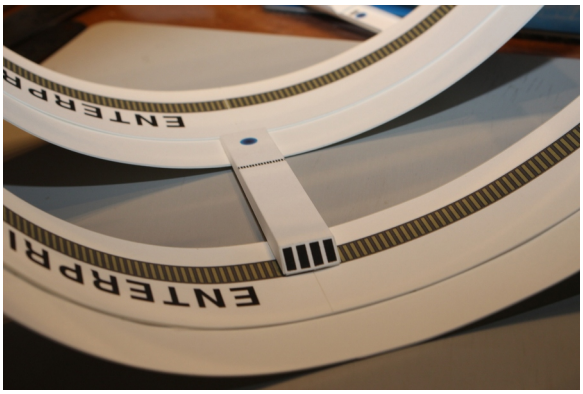
Glue the engine segment inside the cutout in the strut.



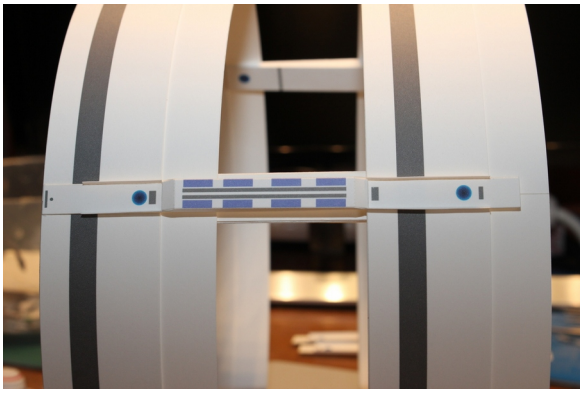
The entire strut/neck/nose assembly should look like this now.

Glue the three scoops such that they join your two warp rings. The leading edge of the scoop should just cover the grid pattern on the forward ring and just touch the step on the inner layers of the rear ring. They

are 120 degrees from each other with one on the top center.

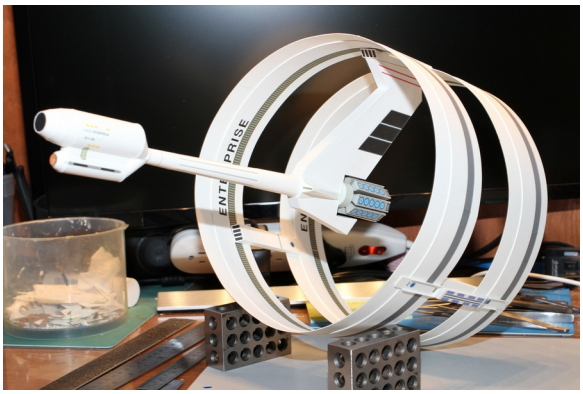


On the outside of the rings, on top of each of the scoops glue the rails. See the photo below for details.

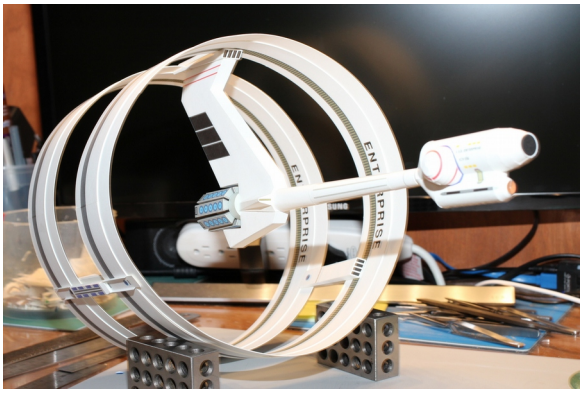


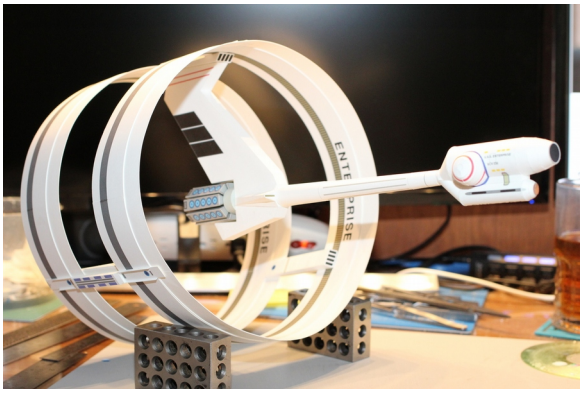
We should now have two rings joined on the inside by the scoops and on the outside by the rails.

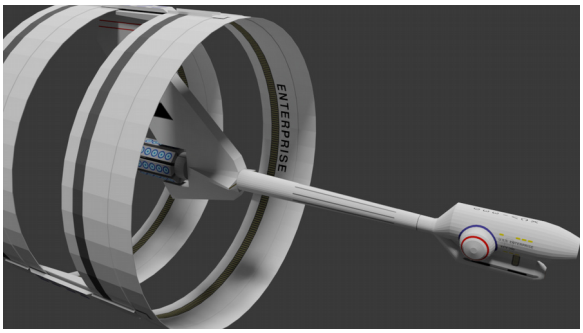
Finally, glue the strut/neck/nose assembly to the top centered scoop. The leading top edge of the strut should come to the front of the scoop and be centered left/right.



Now you're stylin'.




ENTERPRISE

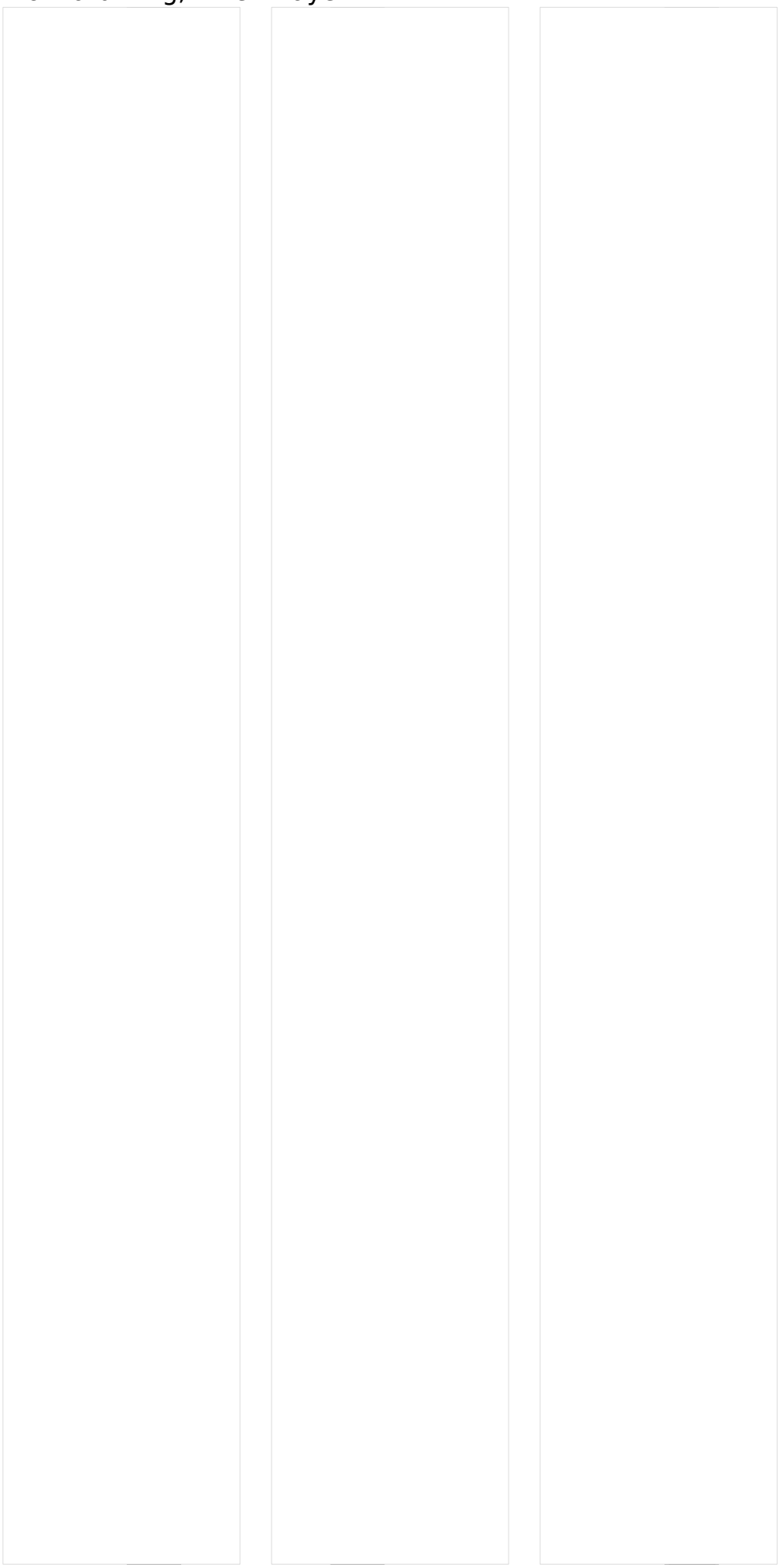

ENTERPRISE

Outer Ring - 4

Outer Ring - 3

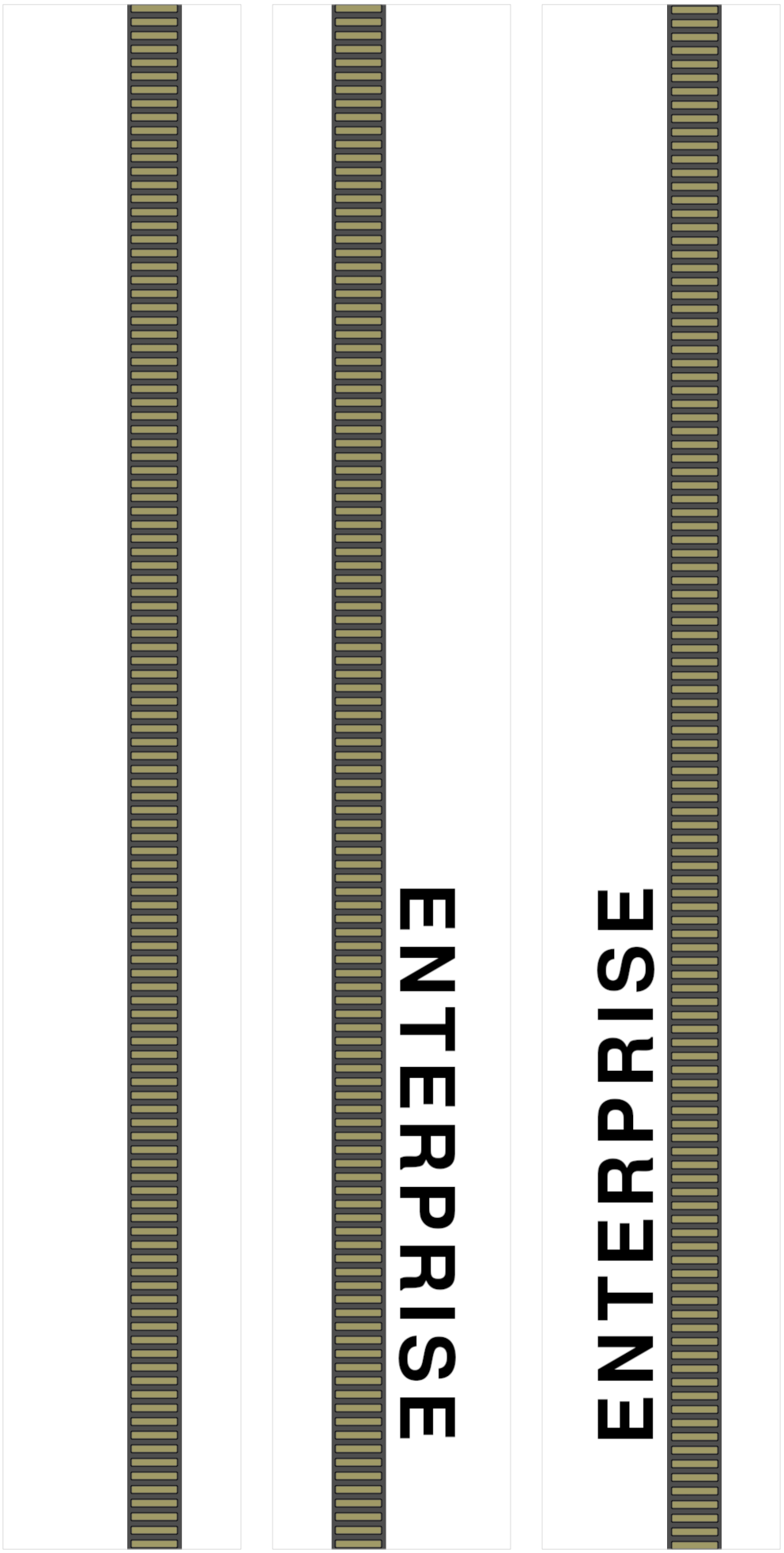
Outer Ring - exterior

Forward Ring, Inner - layer 2



Forward Ring, Inner - layer 1

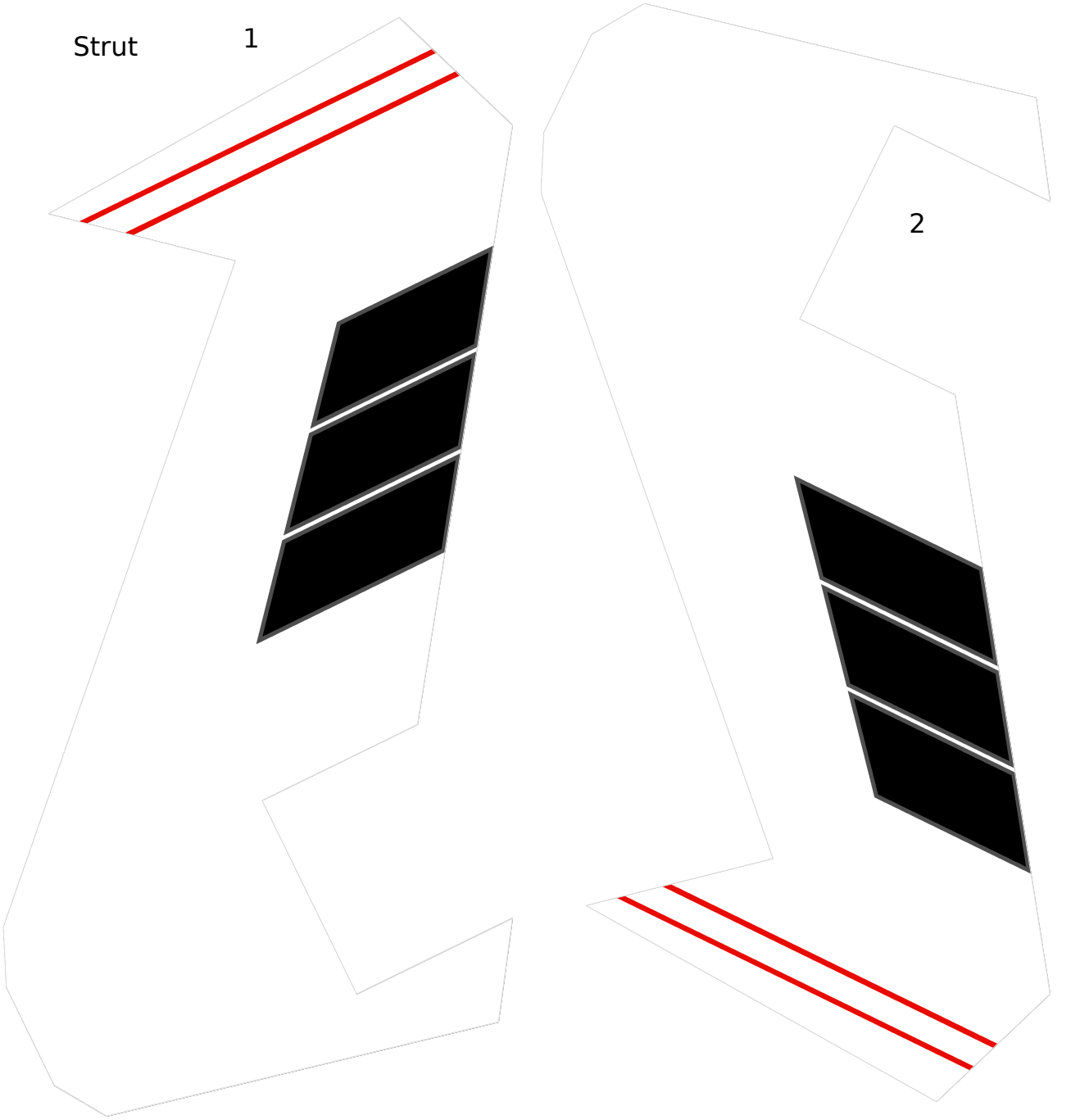
Forward Ring, Inner



Ring Core - inner

Ring Core - outer

Strut 1



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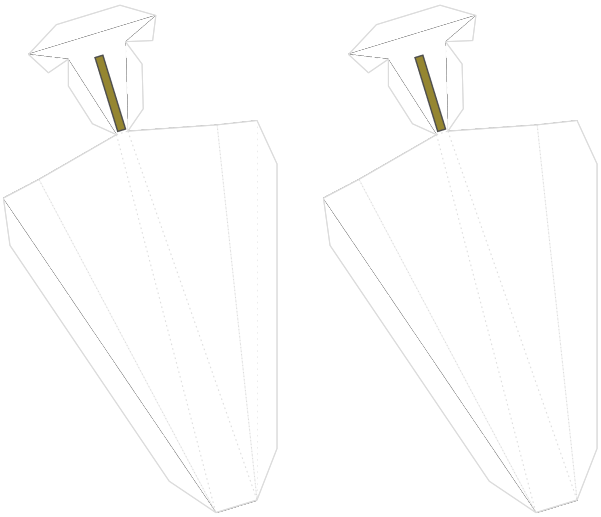
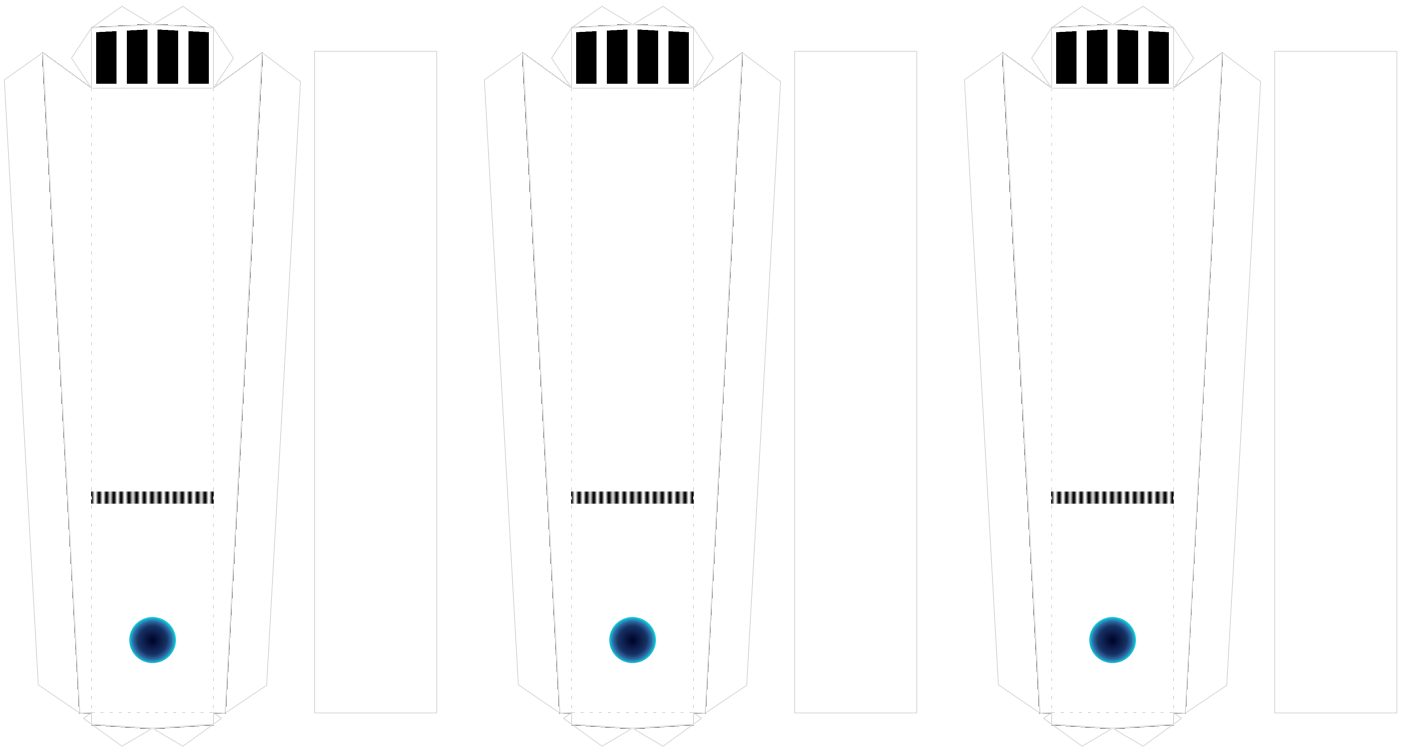
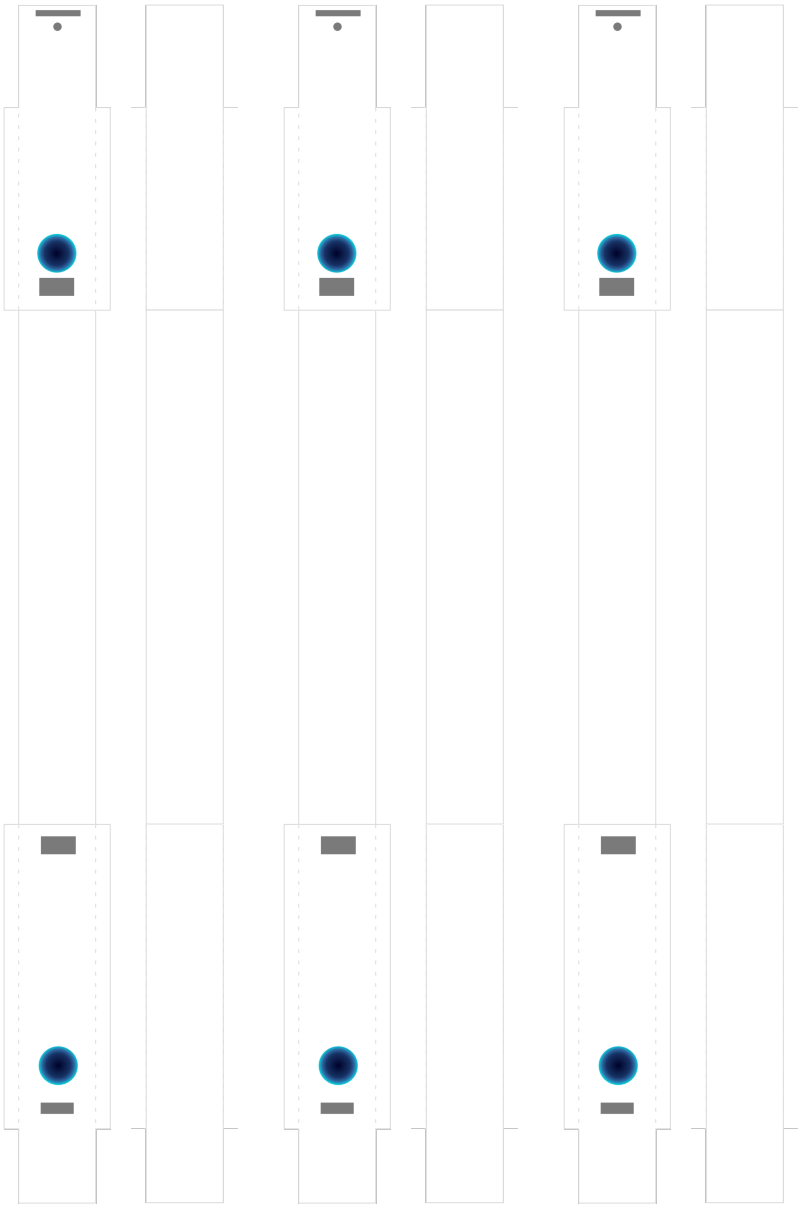
Wings

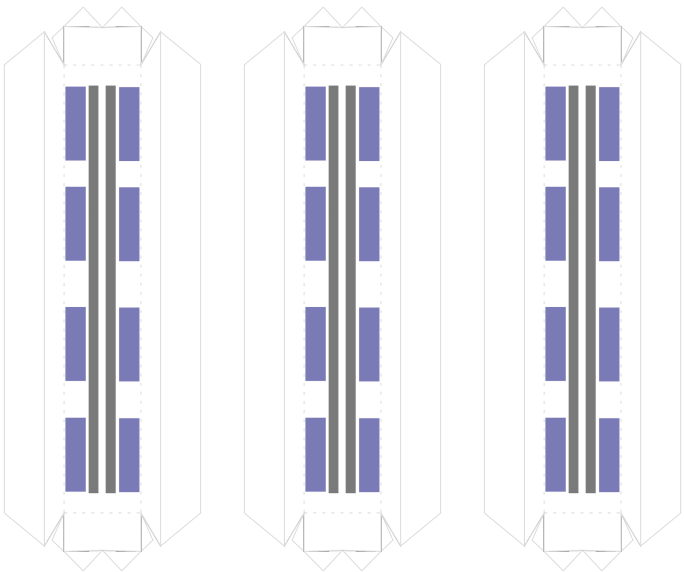


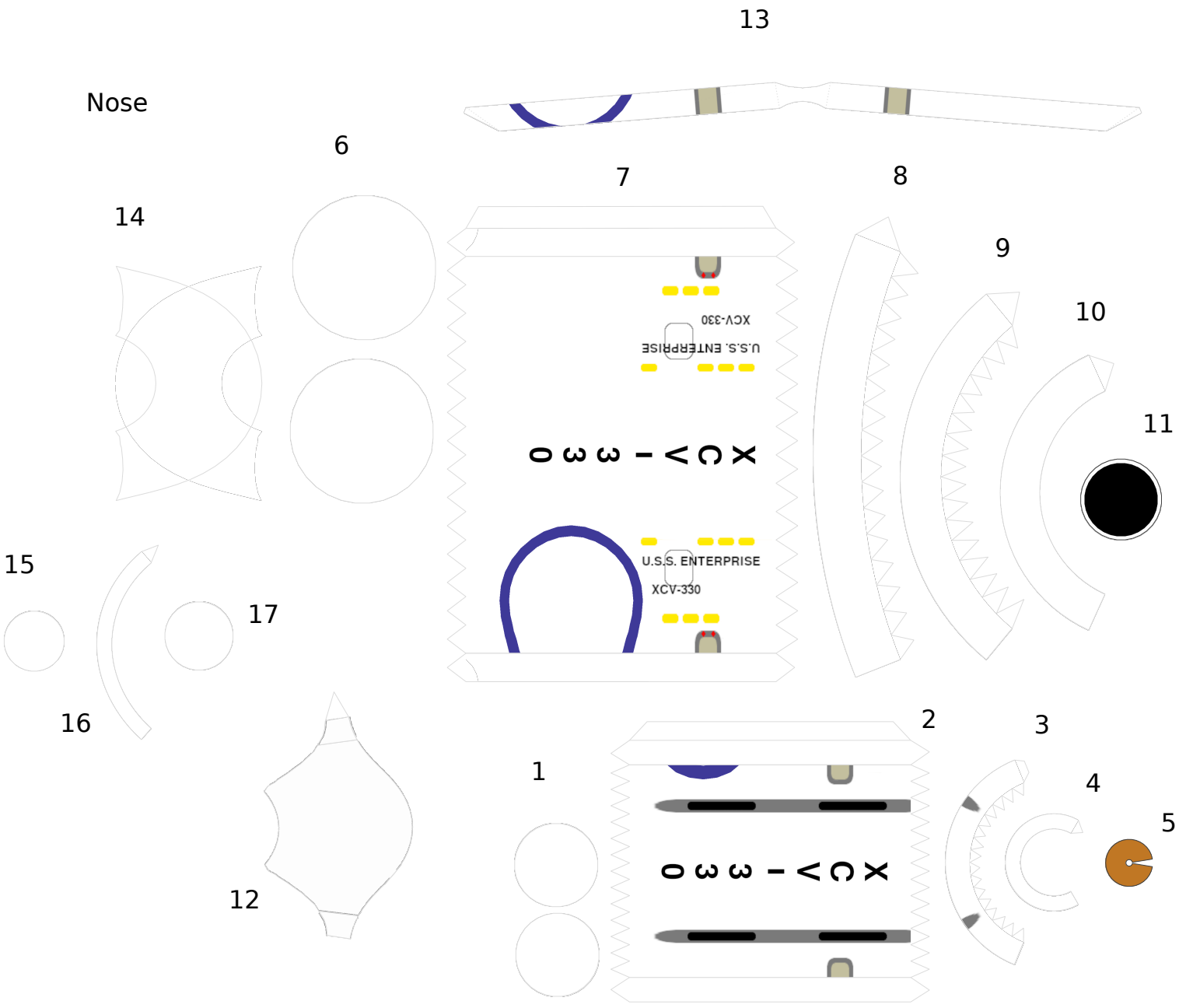
Scoops



Rails






Nose
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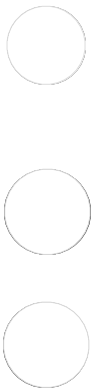
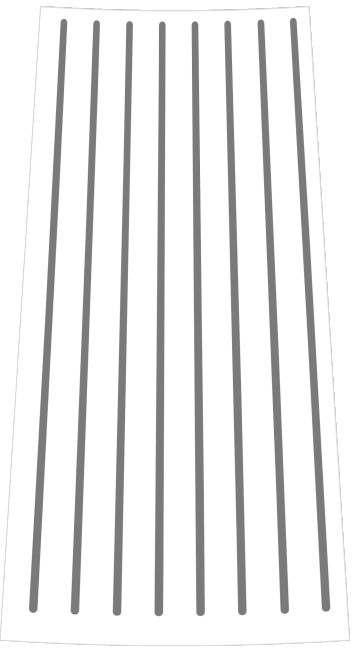
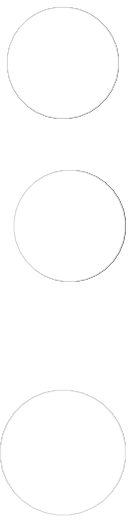
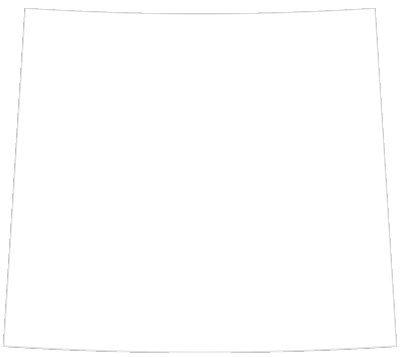
U.S.S. ENTERPRISE
XCV-330
U.S.S. ENTERPRISE
XCV-330

Neck









Sphere

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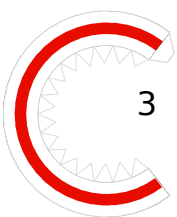

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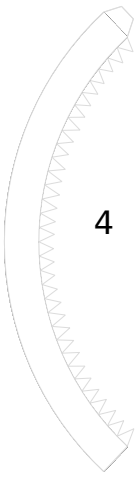

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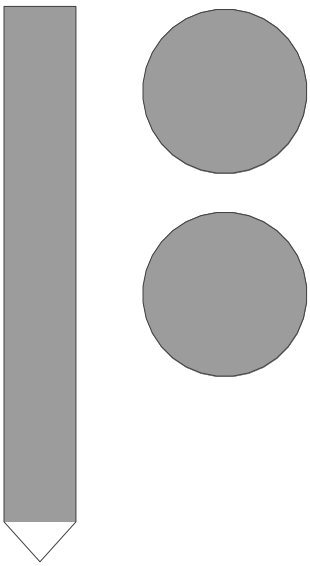
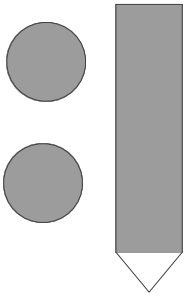
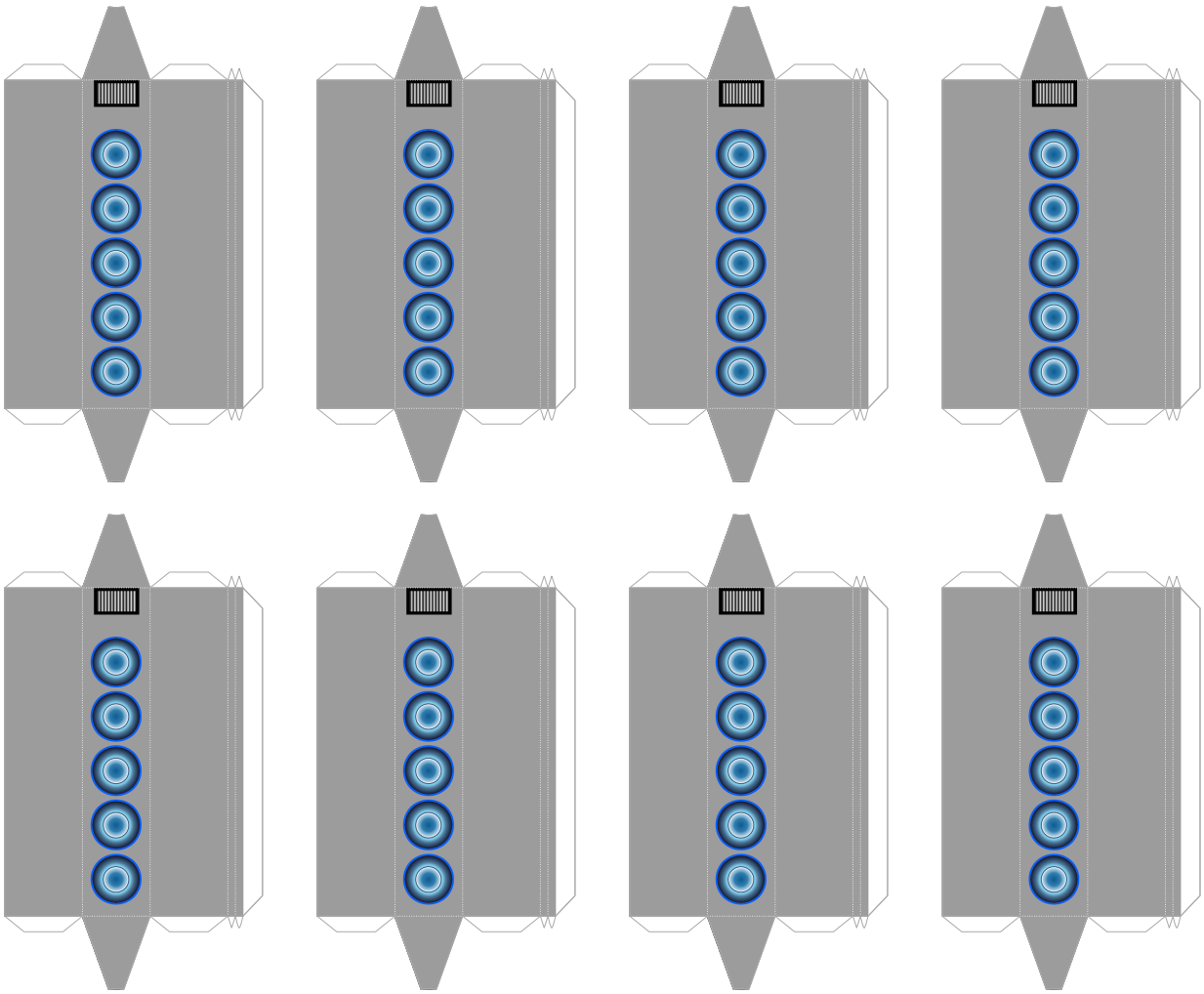


EngineRing



EngineHub

Engine