

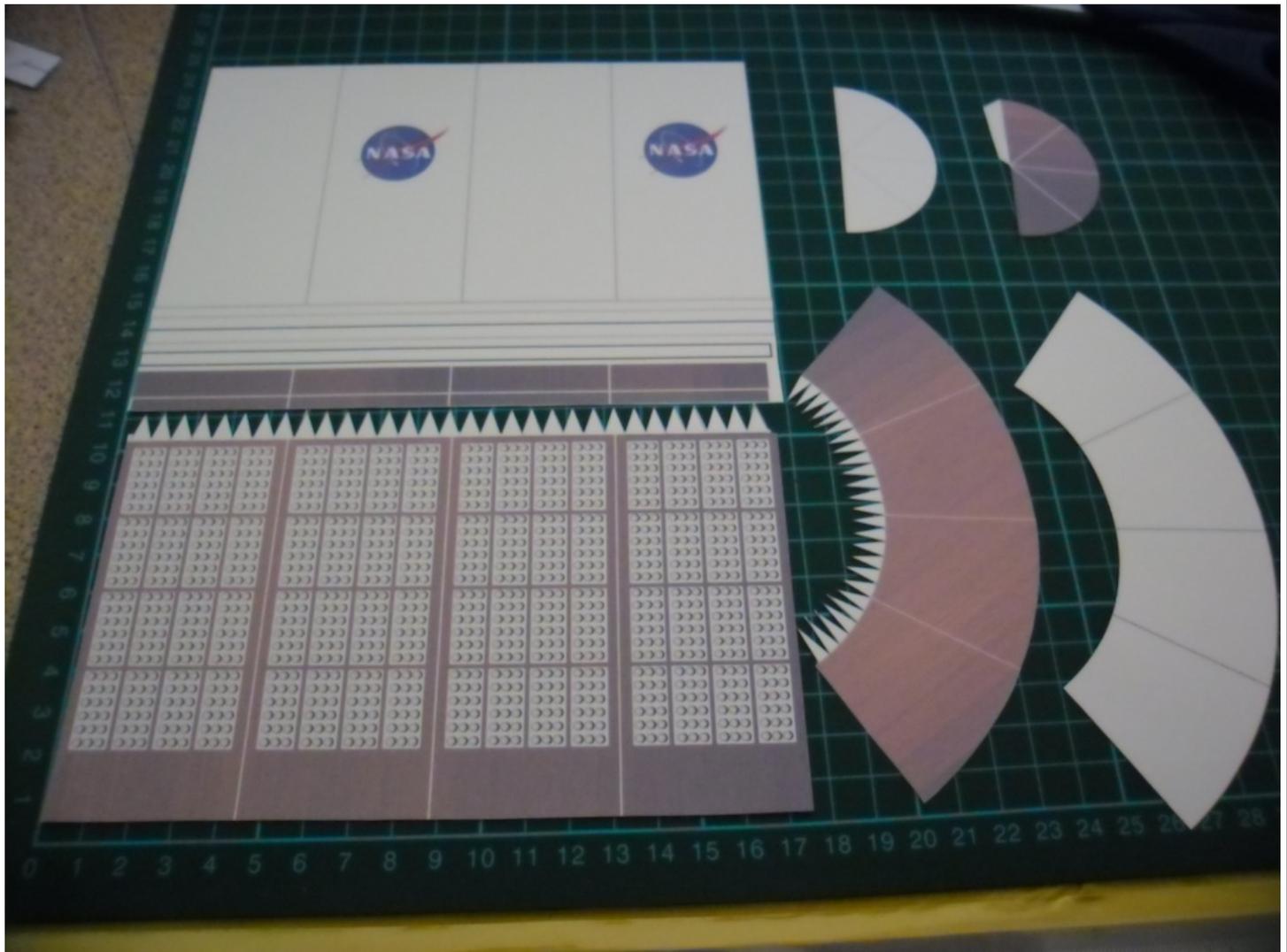
# Instruction Manual: Space Launch System

## *Payload Fairing: 8 metre diameter*

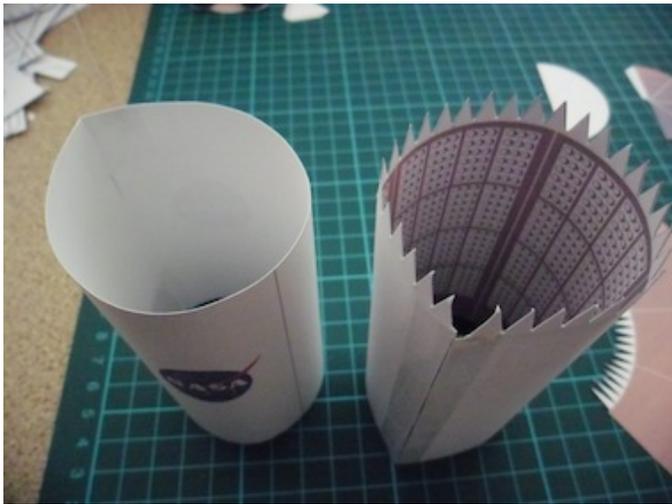
**Designer's comments:** This model has been designed without the benefit of engineering blueprints. Only publically available conceptual diagrams and illustrations have been used. As a consequence of this, a certain degree of 'artistic licence' has been used to create a model that exhibits at least a modicum of realism.

The assembly of a model should follow a procedure that vaguely resembles the method for cooking a meal; i.e.

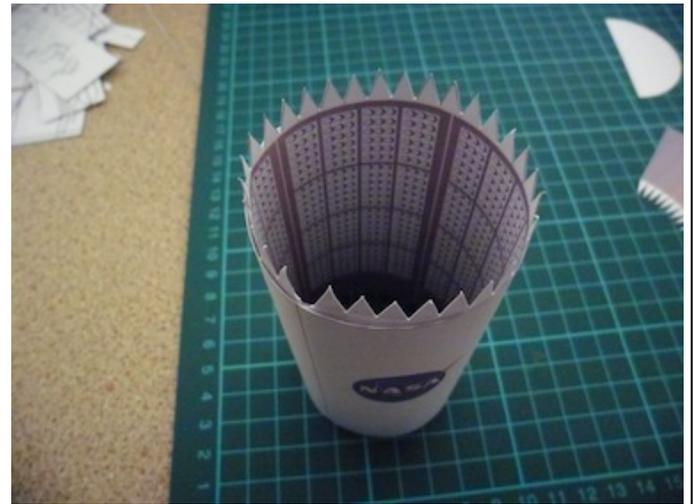
- Prepare a place where you can work, without distractions.
- Get all of your equipment (utensils) out and ready.
- Get all of your parts for the model (ingredients) printed, cut out and ready to start.
- Lastly, try to have a location for your model prepared in advance, so that when it is finished, you will know where to place it.



1. These are the parts that you will need to commence the assembly of the payload fairing. The pieces necessary for the basic (8 metre diameter) shroud are presented. These pieces are the same for the enlarged (10m diameter shroud) – only slightly smaller. The two largest pieces (the cylinder exterior and interior – left of the image) can be glued together. The interior acts as a giant 'glue tab' – eliminating the need for a separate glue tab.



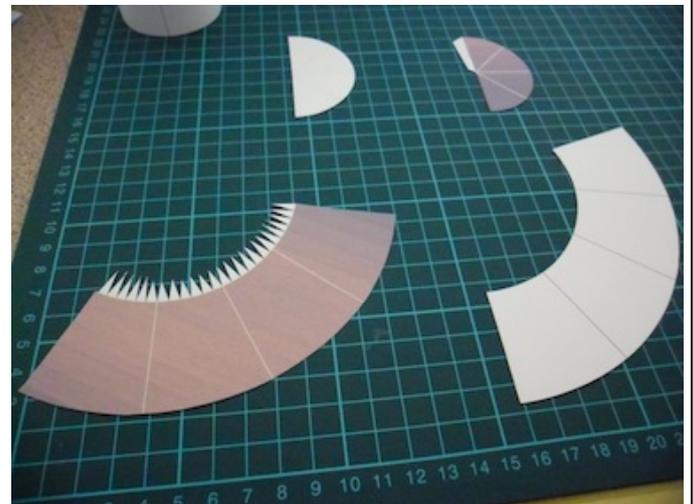
2. If you use sticky-tape instead of glue, then you can assemble the interior/exterior separately.



5. If glued / attached correctly, your shroud should now appear to be identical to the above image.



3. If you decide to use sticky-tape, gently push the interior inside the exterior of the payload shroud.



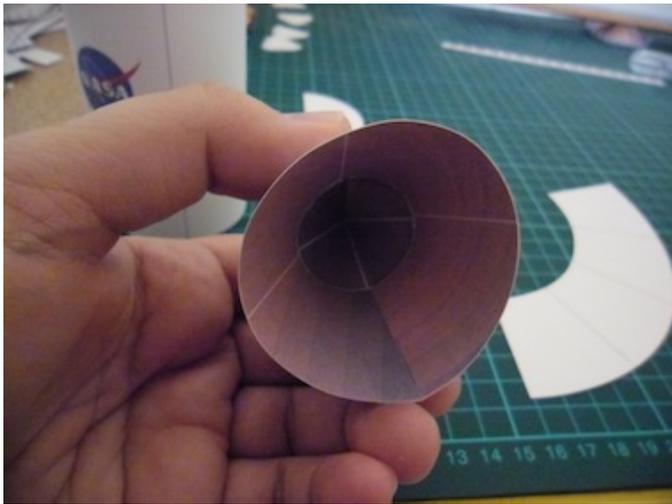
6. These are the parts for the conical section – take the dark parts (interior pieces) and glue them.



4. The base of the interior should fit [flush] with the exterior. The only portions of the interior still protruding above the exterior will be the triangular glue tabs.



7. You should end up with a “biconic” inner section – see the above image.



8. If you use sticky tape, then this is what the biconic upper section will look like.

If you use glue, then you may have to attach each part to the interior of the cylinder separately; i.e. insert the larger cone first and glue it into position using the triangular tabs on the cylindrical portion of the interior.

Once this is done (and the glue has dried), repeat the procedure with the smaller cone part.



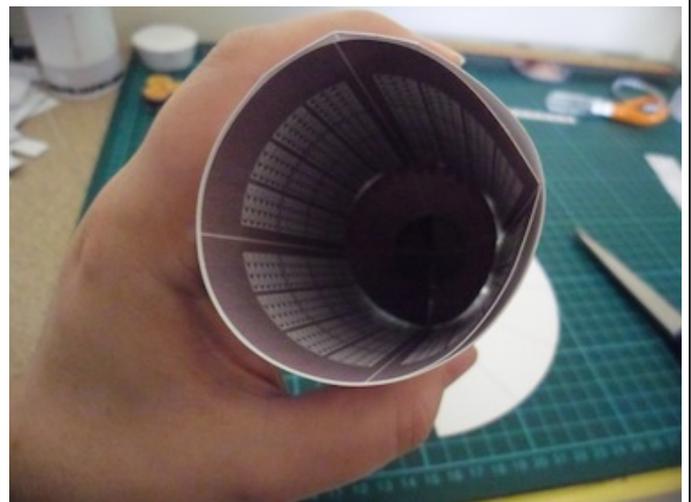
9. The interior biconic section (parts) needs to be inserted from the base of the cylinder.

If you attempt to insert it from the top, then your conical parts will become “snagged” on the triangular glue tabs – which will undoubtedly create a considerable mess.



10. The interior sections of the shroud, glued into position, ready to have the exterior parts attached.

You can clearly see in the above image that the interior has a large surface area and will be able to function as an enormous glue tab... easily allowing the exterior parts to be attached.



11. The camera didn't really do justice to the interior of the shroud - but with the naked eye, you can see the whole of the interior... and more to the point, no internal bracing or circular support parts should be needed – leaving the maximum internal volume available for any other models to be placed inside.

You should also be able to see the inaccuracies in my own cutting and gluing attempts. There are a few [minor] gaps in-between the interior and exterior of the payload shroud.



12. The base of the shroud, where it attaches to another model – either the SLS third stage or the SLS core itself.

A small dark grey band has been glued to the base of the shroud. This acts as a connection. The connector [part] should then be protruding from the base of the exterior by at least 5 millimetres.



13. To ensure that your model has been built correctly, you should have another central part of the SLS to test the join.

You should either have the SLS core (seen in the background on the above image) or the third stage (seen in the foreground) available to assist you.



14. This is the completed exterior. An 8-year-old could do this with sticky-tape... so a properly glued version will undoubtedly appear even better.

**Note:** although the 8-metre and 10-metre payload shrouds are virtually identical, the 10-metre version has several new parts, which are crucial for it to function and be connected to the SLS.

For a full description of how to create the enlarged (10 metre diameter) payload fairing... please read the relevant instruction manual.