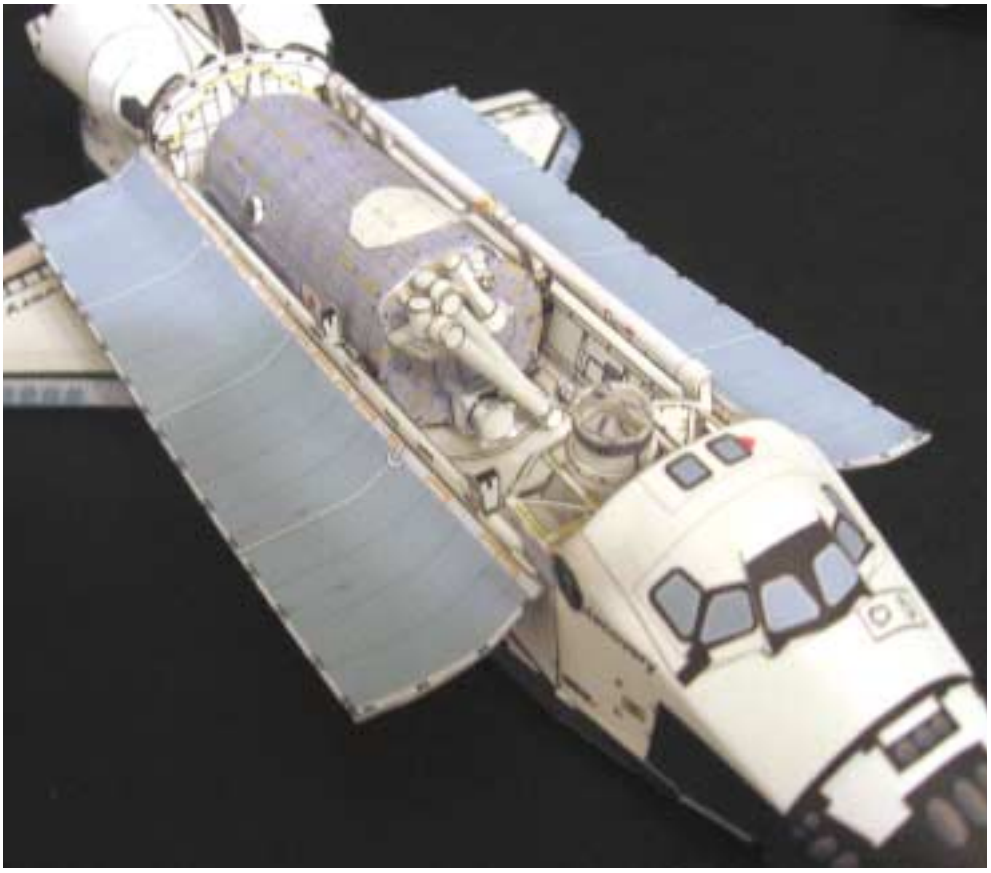
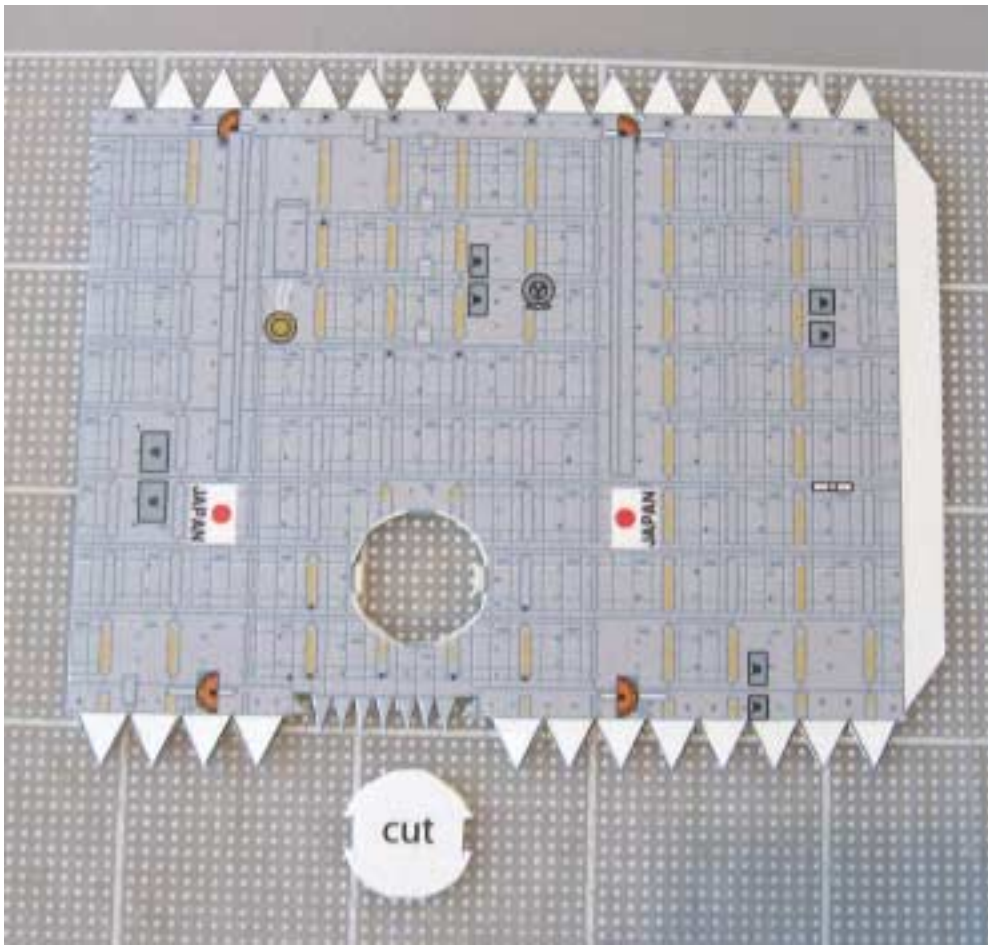
Assembly Instructions for STS-124 payload



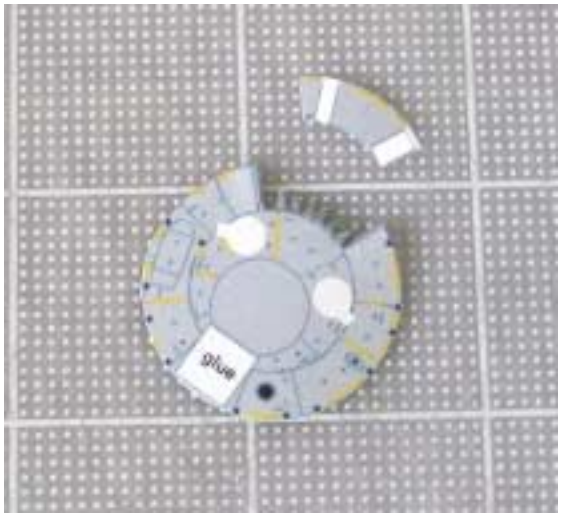
Building the "KIBO" Japanese Pressurized Module (JEM-PM)



The assembly instructions apply to both 1:144 and 1:100 scales for this model. Note that the 1:144 model has 2 versions of KIBO, one for payload bay configuration and the other for Space Station version.
The 1:100 scale model is only for Space Station version.

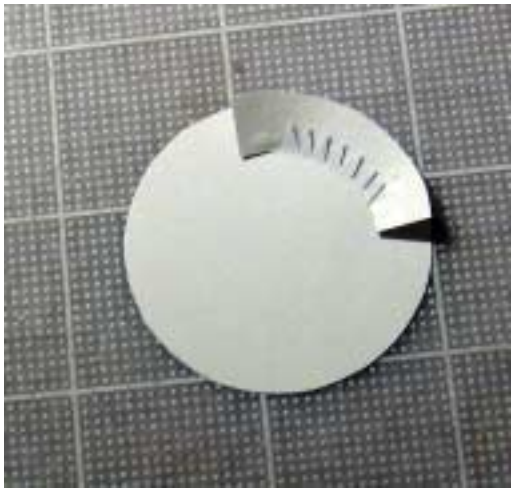
The photo shows the top port circle removed, only for the Space Station version. This circular part is not cut for the payload bay version because it will be covered by a "thermal blanket" part.

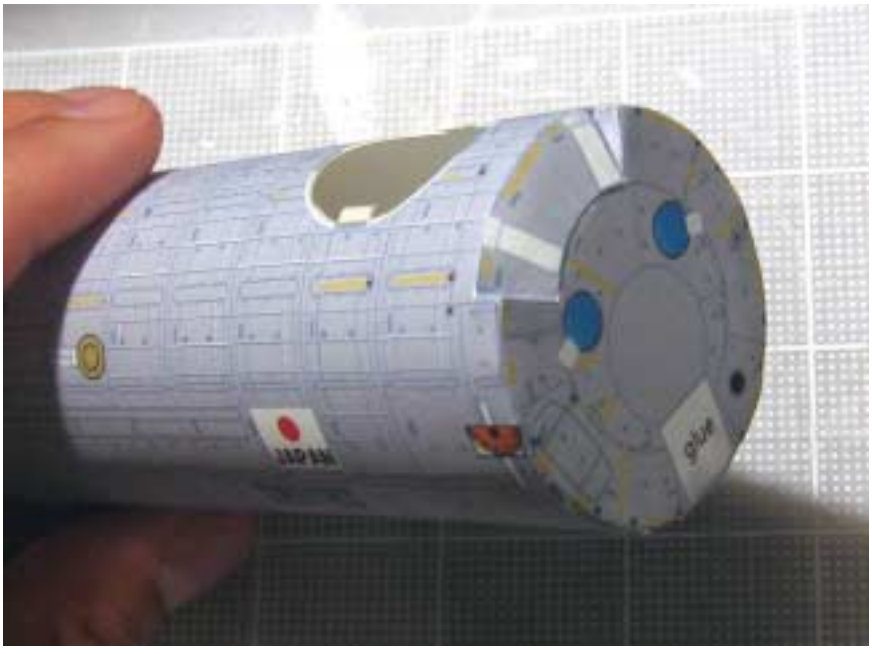
The photos presented on this manual are a combination of both scale models, 1:144 and 1:100 models.

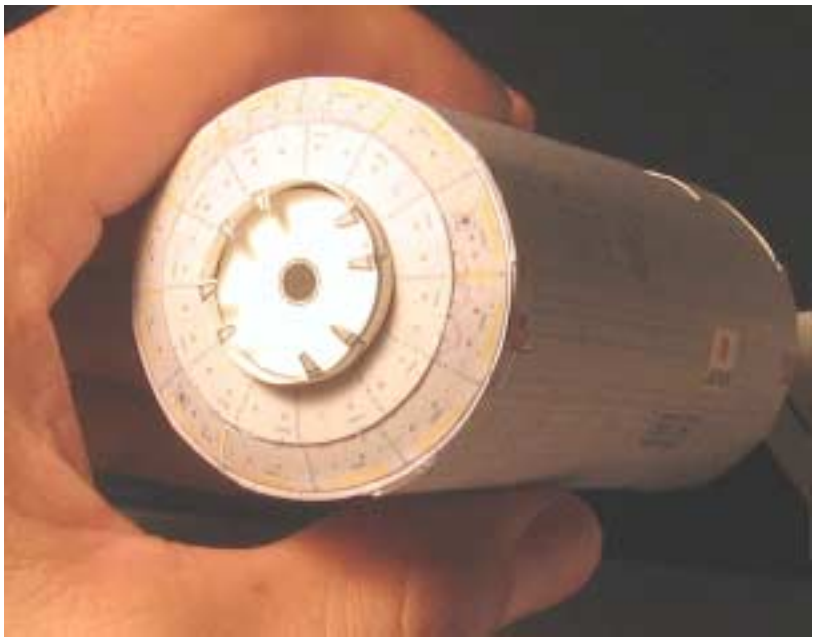

glue

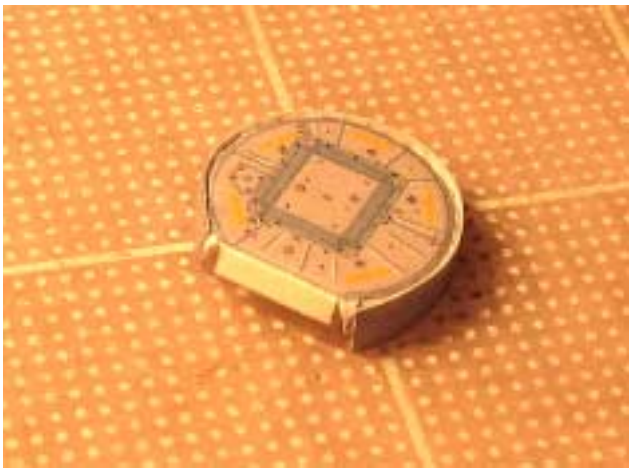

glue

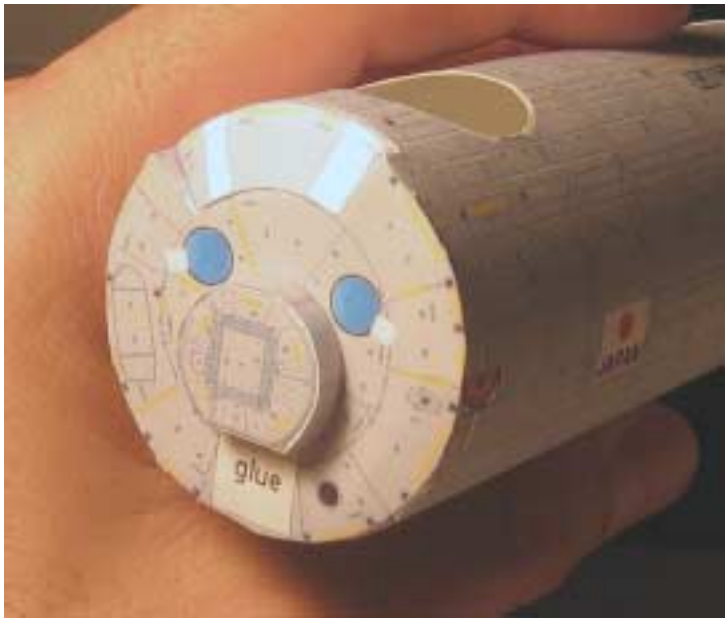

glue

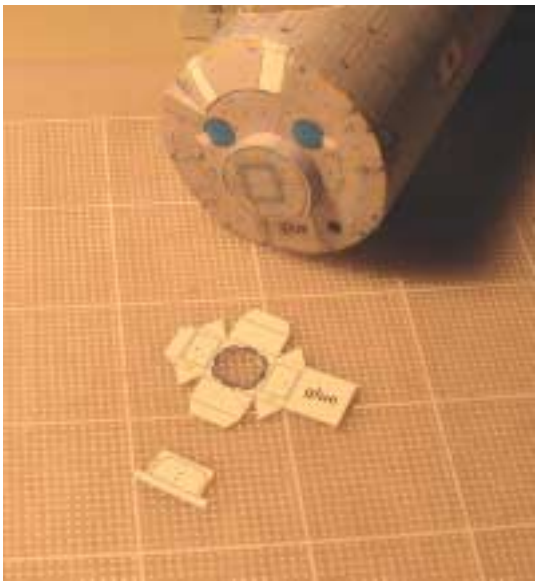


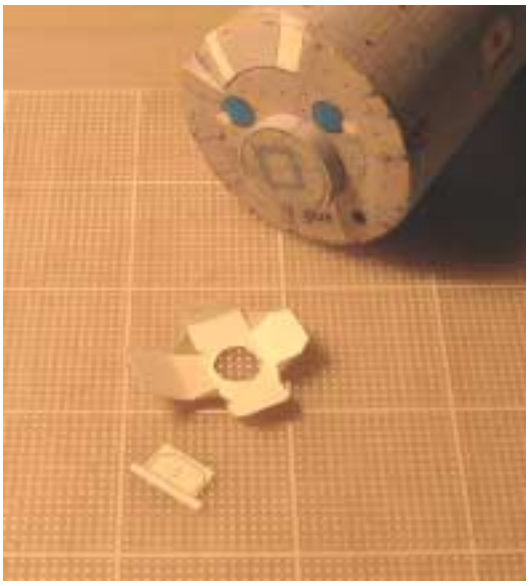

glue

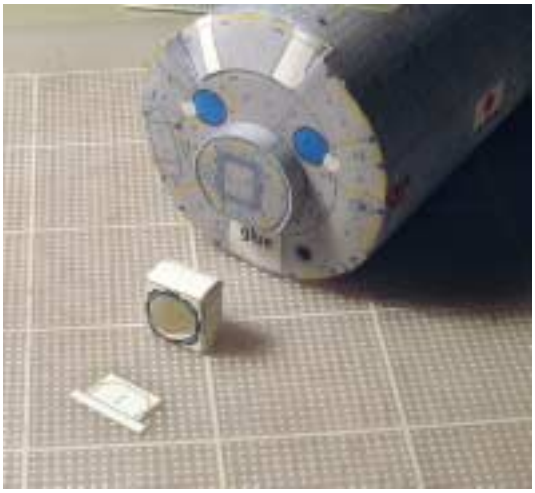


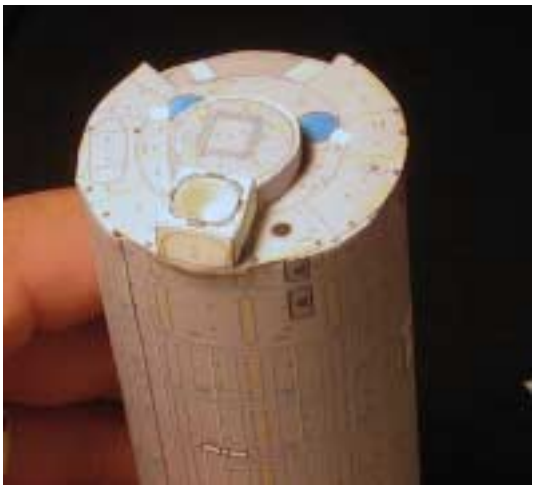


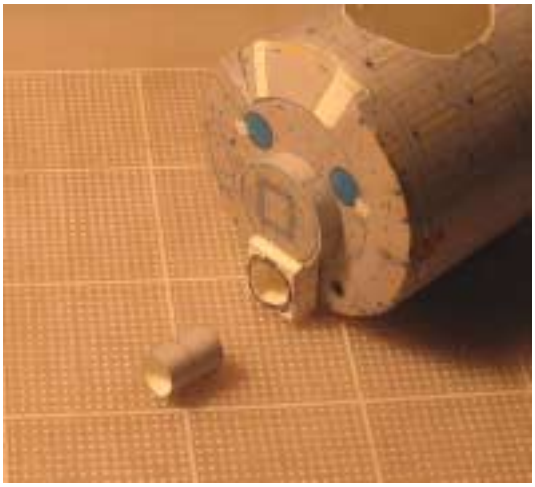

glue

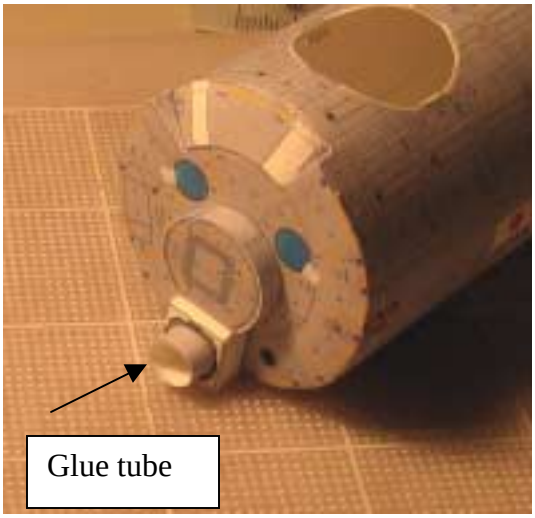


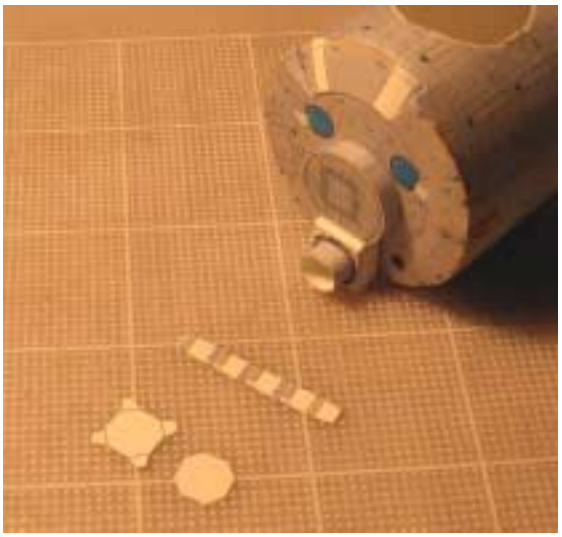


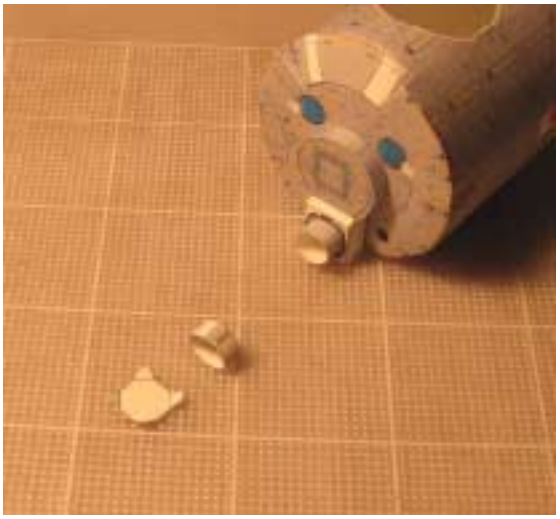


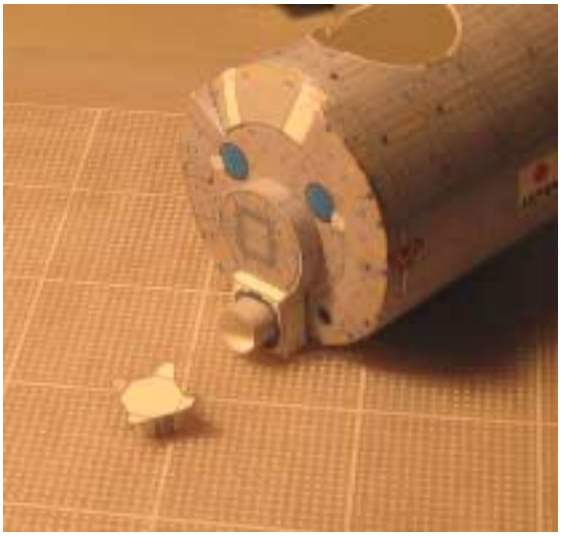


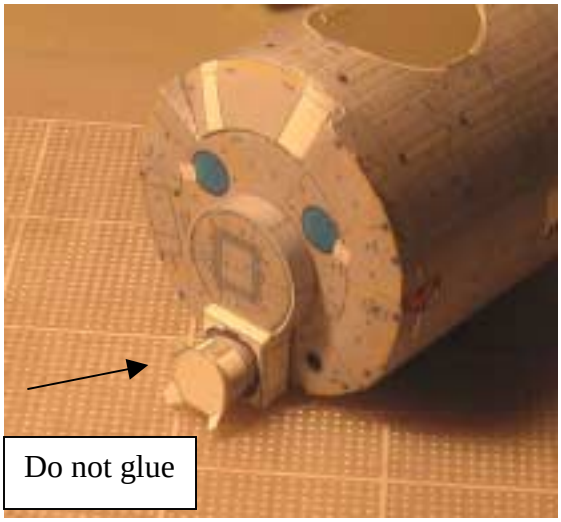



Glue tube

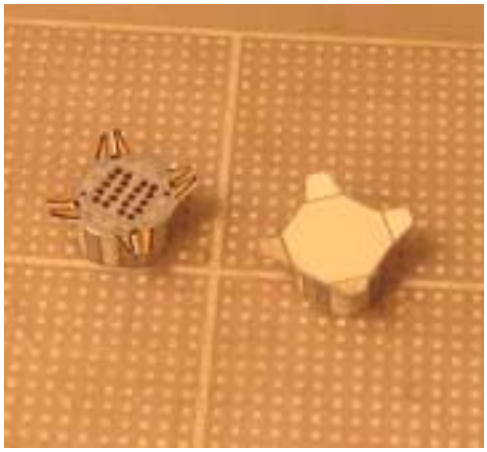




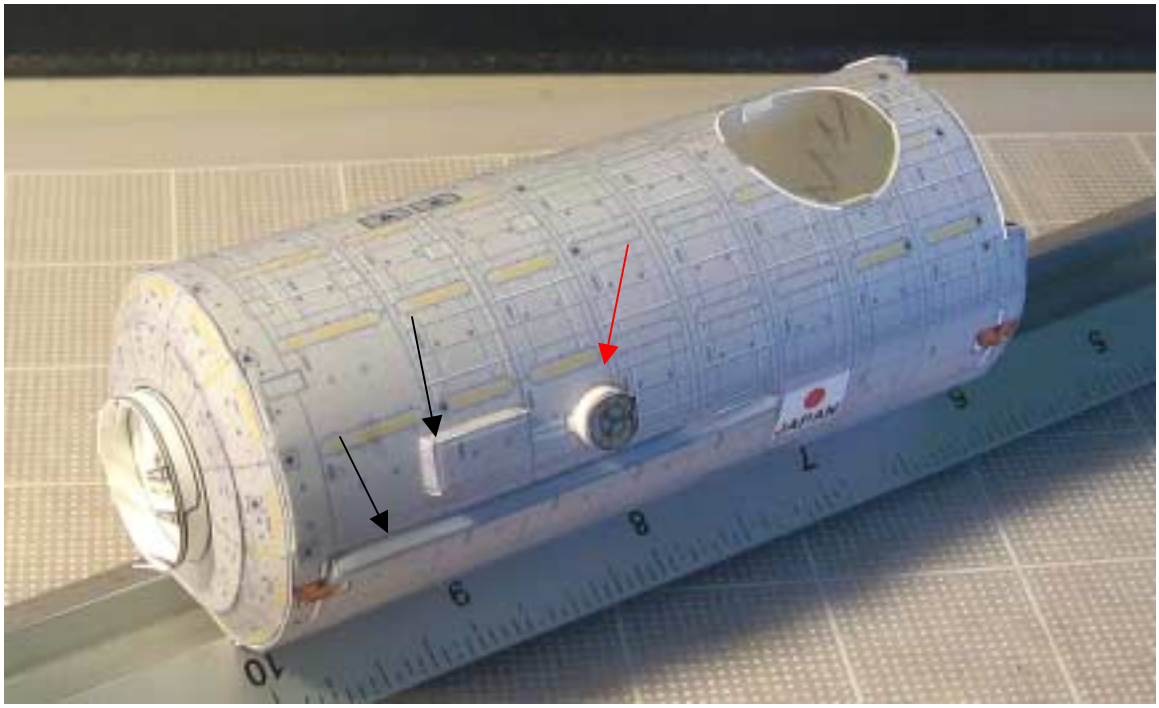




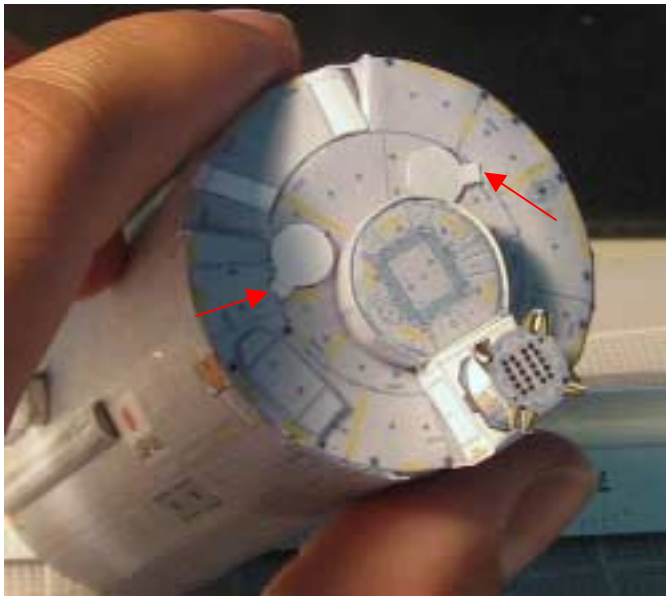
Do not glue



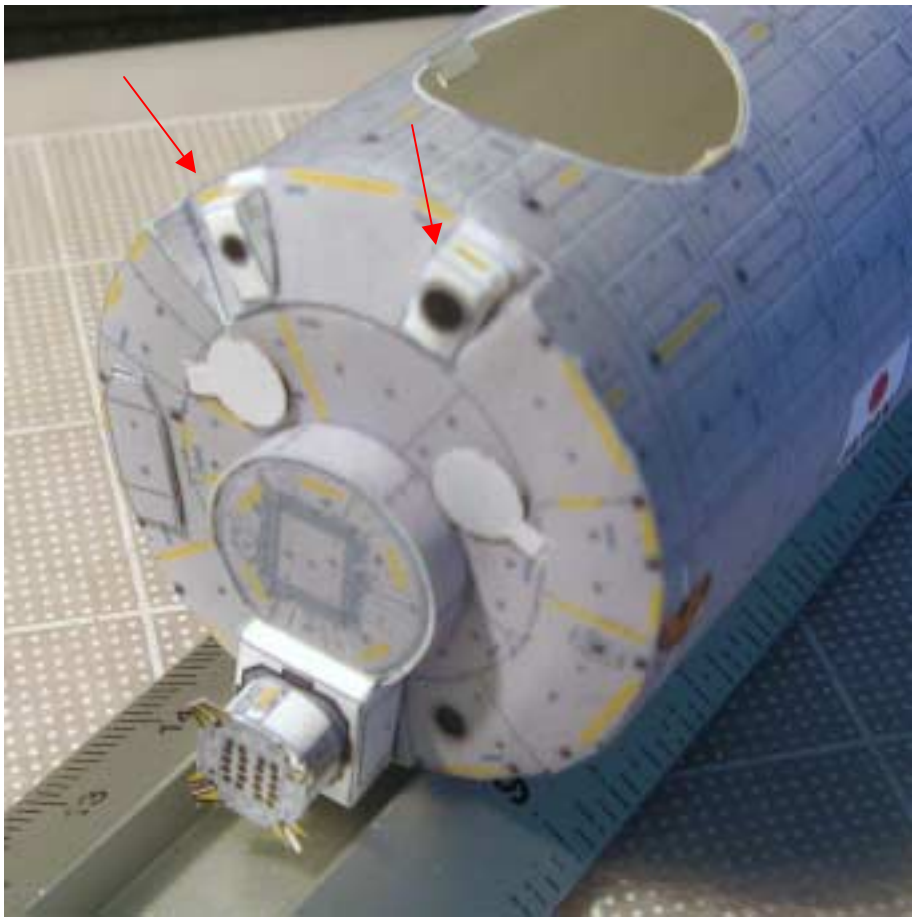
This is the Exposed Facility Berthing Mechanism. The one on the left is the actual part in Space Station configuration. The one on the right has a protective cover for payload bay configuration or used for the time being waiting for the Exposed Facility (mission STS-127).
This part snaps into place. DO NOT GLUE TO KIBO.



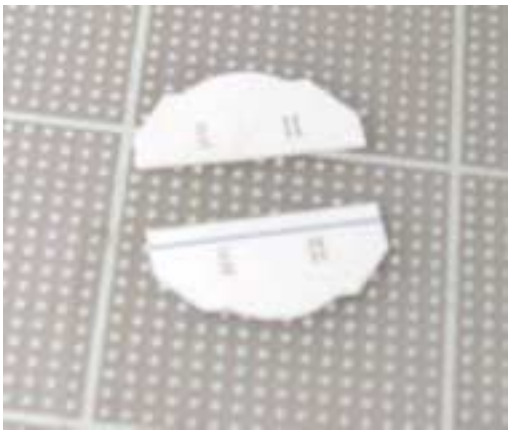
Addition of more details. The red arrow points to the Power and Data Grapple fixture. Add the side structures and rectangular box, too.



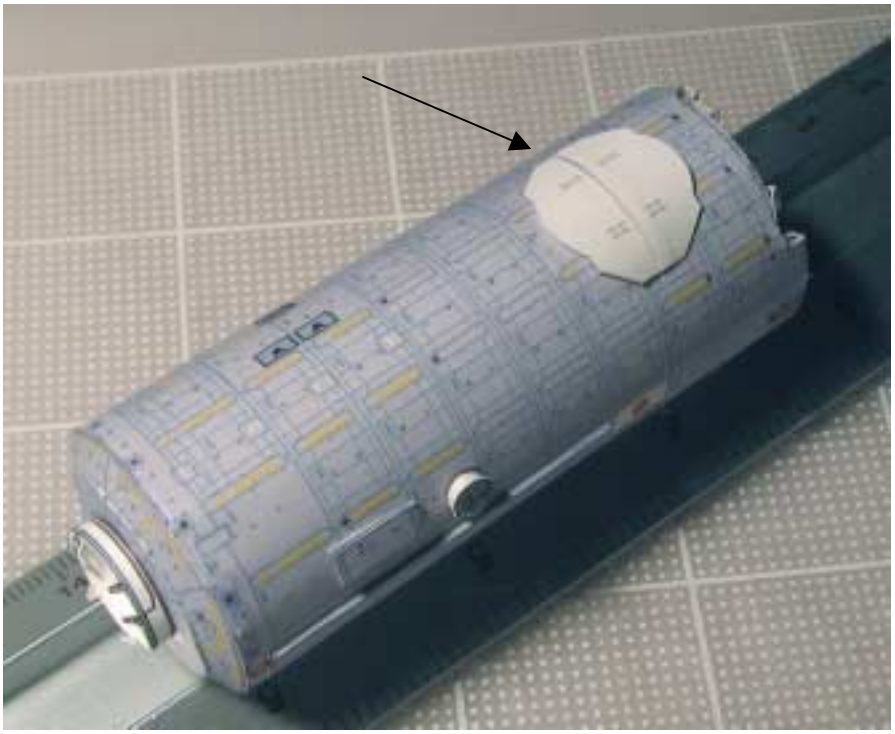
Add the window covers but glue only the square corners for both windows.



Add the top rectangular structures with the black circles as photo shows.



This is the thermal blanket used only for the 1:144 scale model in payload bay configuration.



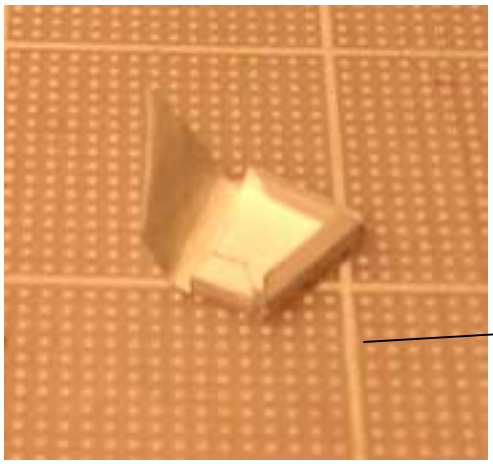
Differences between the 2 scales:

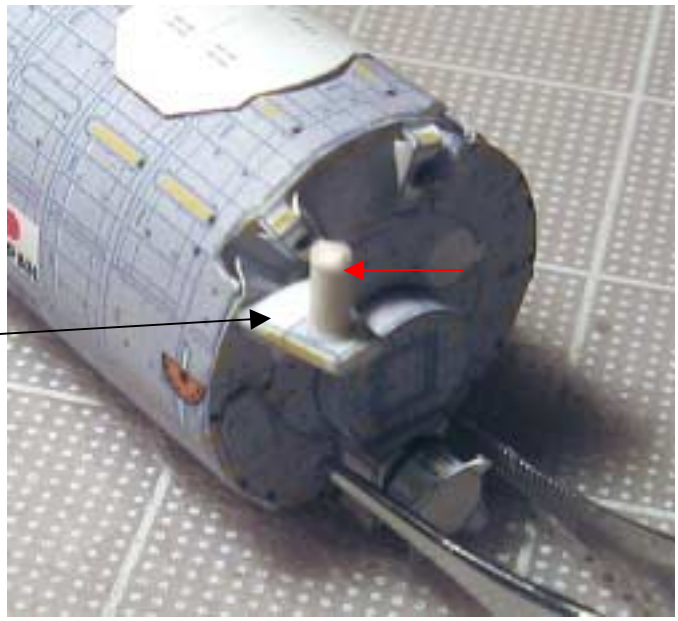
Top 1:144 model

Bottom 1:100 model

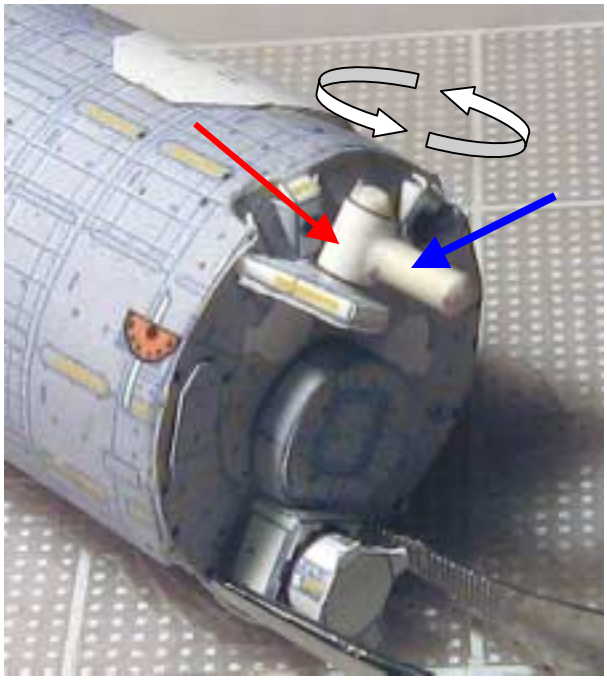
Building the Remote Manipulator System for KIBO

Use the schematic of the robotic arm, which is included in the downloadable file of this payload. It serves as a reference. The robotic arm can be built using cottonswabs for the 1:144 model. The width of a cottonswab is about 2 mm, which is compatible for this scale.
For the 1:100 scale model of the robotic arm, cardstock parts are available. The width of the arm for this scale is about 4 mm in diameter.

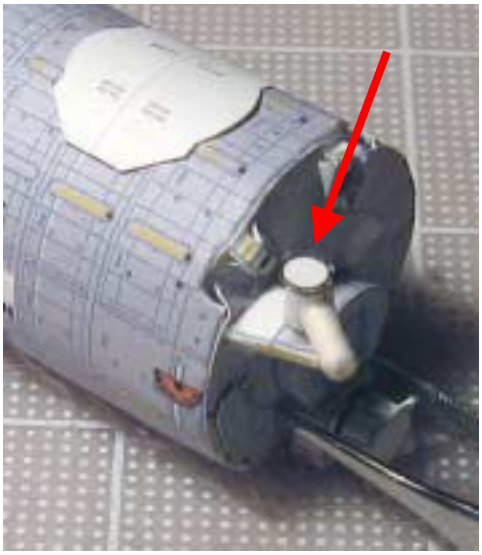




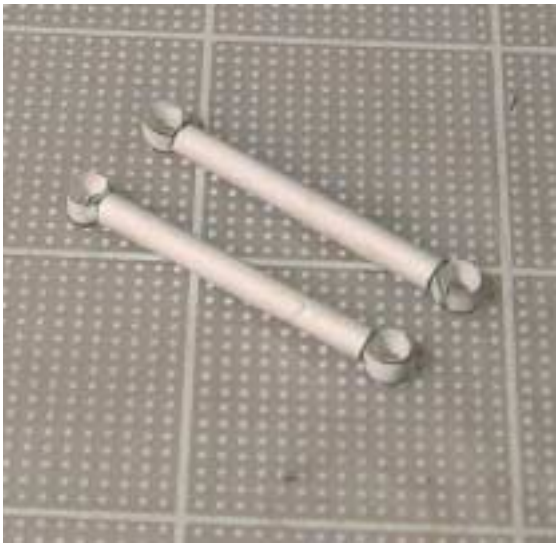
This is the robotic arm support platform.
The red arrow shows a piece of cottonswab used as a fixed point where the arm will be attached.



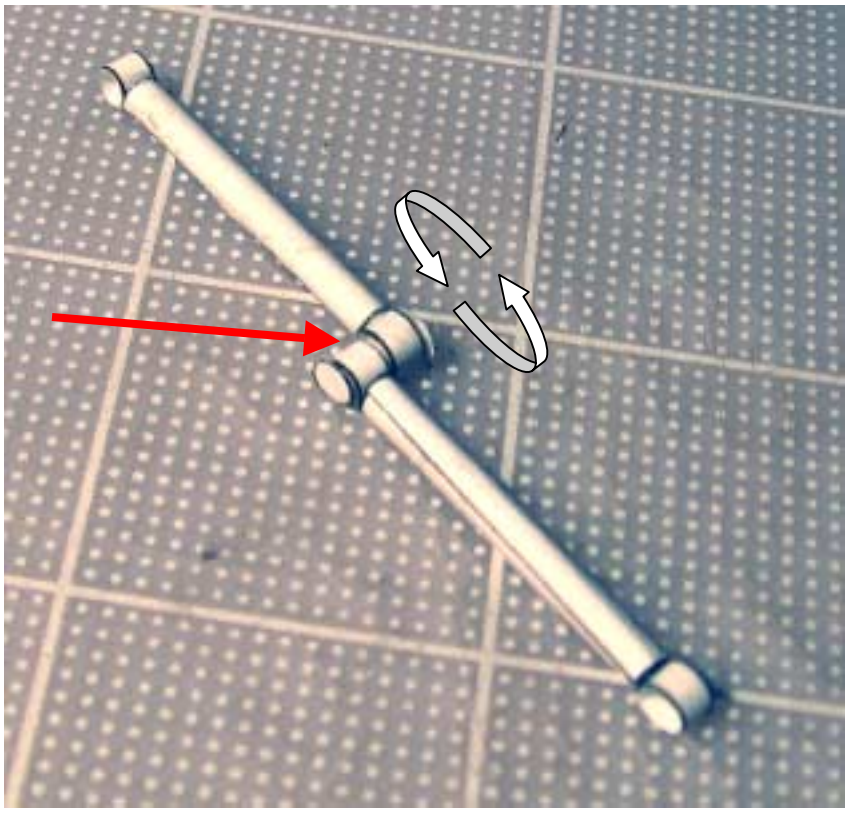
The blue arrow shows a second cottonswab glued to a cardstock cylinder (red). This cylinder is inserted into the first piece of cottonswab and will allow the robotic arm to rotate on its vertical axis.



Add the circular stopper and glue to the tip of the vertical cottonswab.

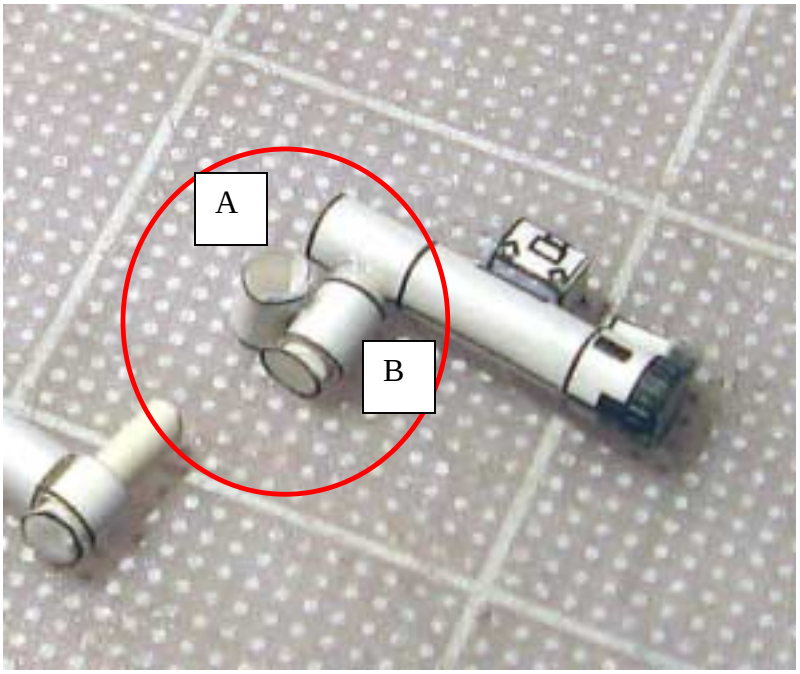


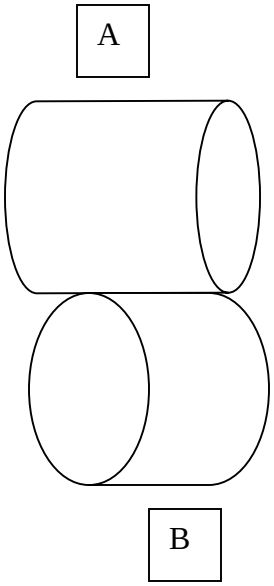
These are the 2 parts that form the Main Arm of Kibo. Note that on each end there is a small cylinder.



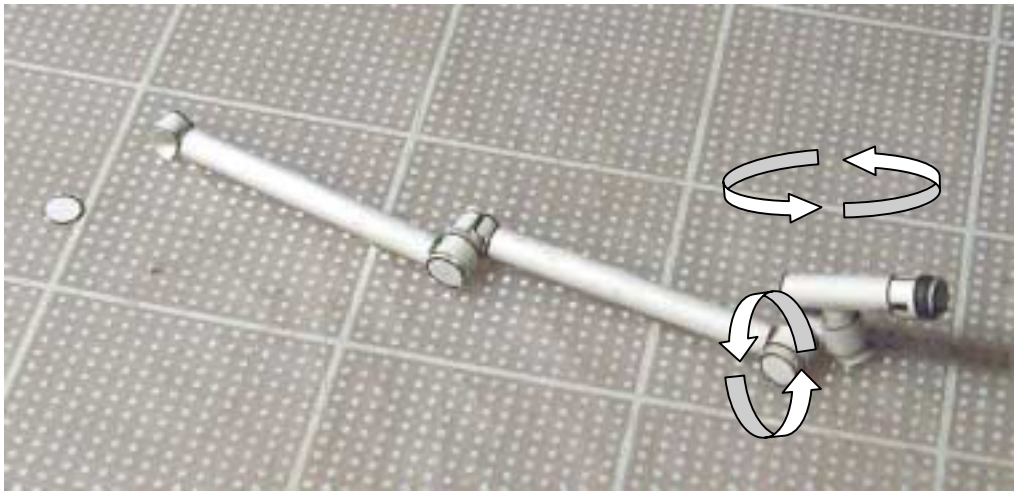
Both parts are joined with a third piece of cottonswab.

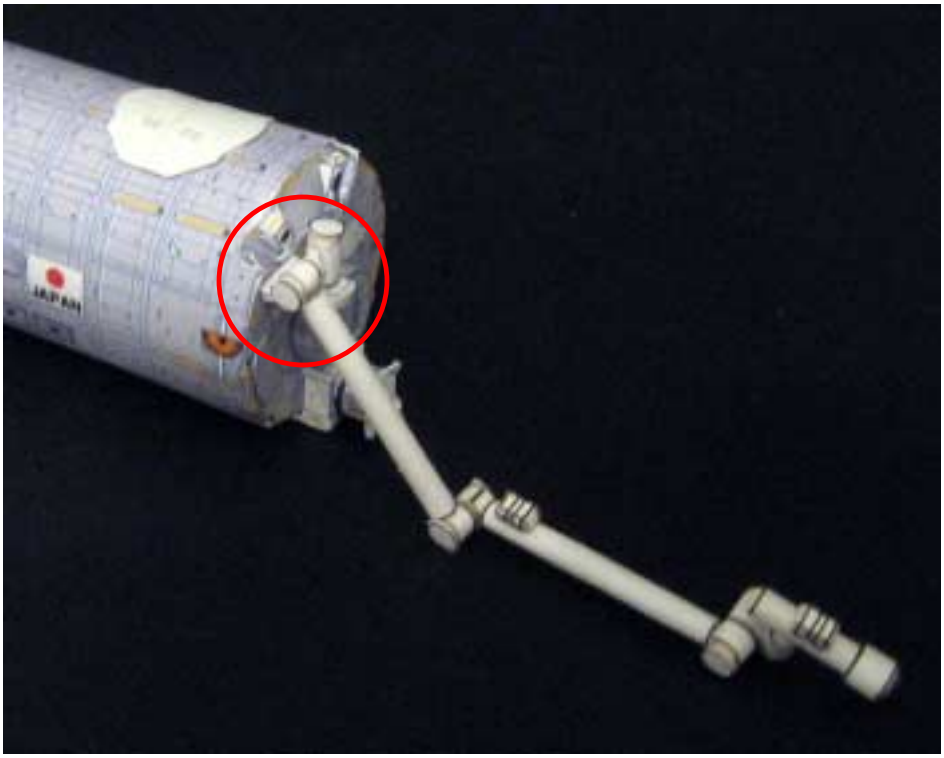
The third part of the Main Arm consists of a smaller part that has the End Effector (arrow)
The photo below shows a close up view of this part with all its elements.





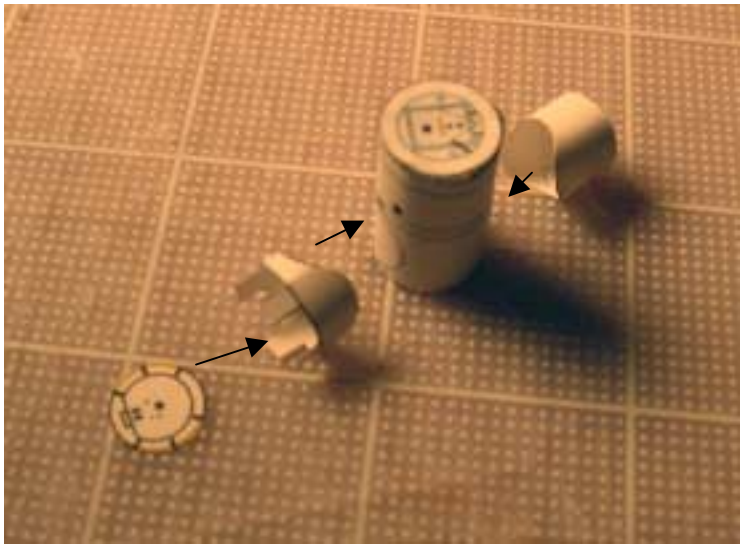
The circle shows an important detail. These are 2 cardstock cylinders glued to each other as the graphic shows. One cylinder (A) will be joined to the main arm and the other cylinder (B) serves as the holder for the End Effector part of the arm.





Finally the whole arm is placed onto the horizontal cottonswab piece at the front end of Kibo.

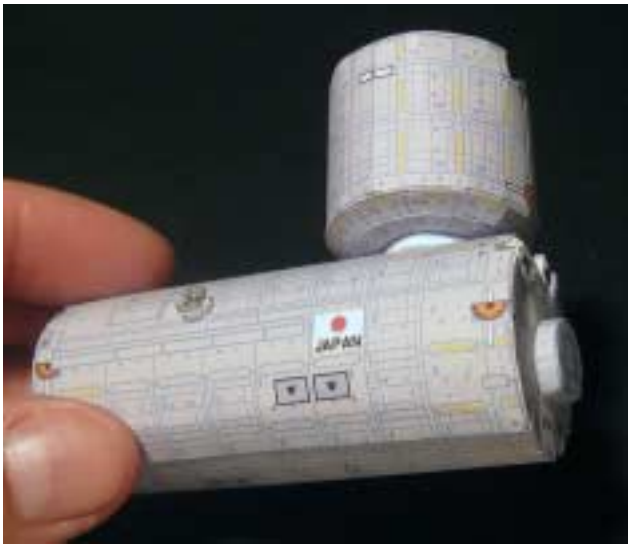
Building the Orbiter Docking System

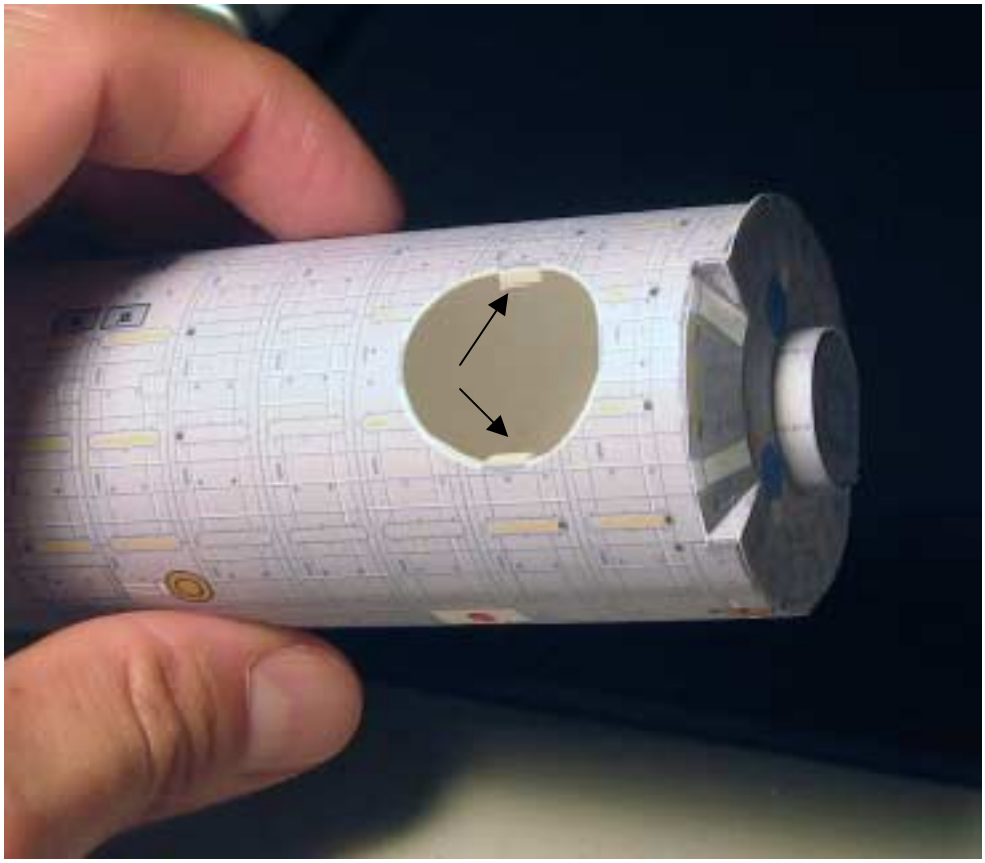


Make a cylinder and glue the elements indicated on this photo.

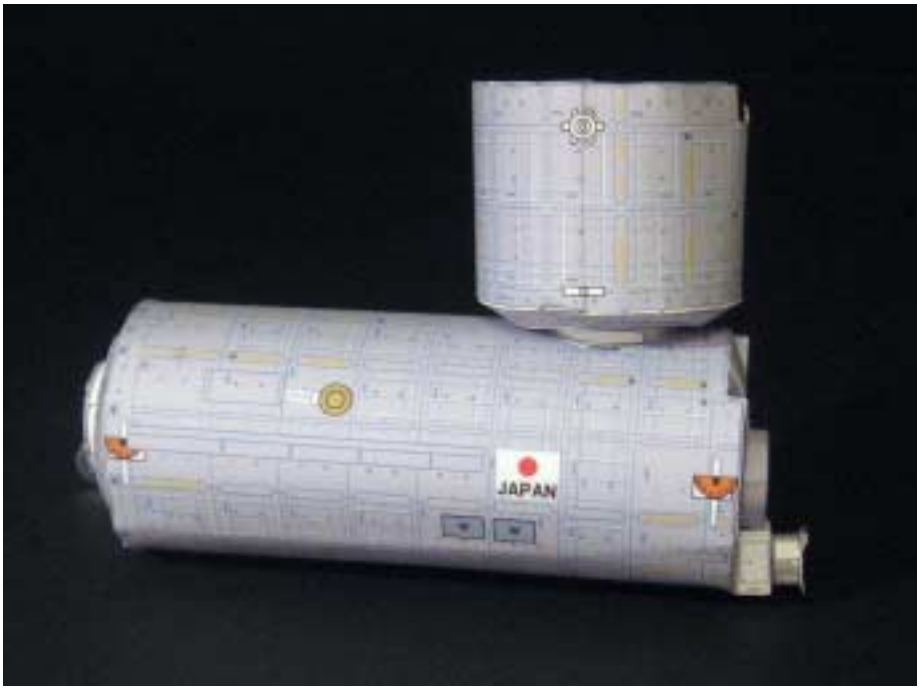
Note location of KU-band antenna that is glued on the tab from the right payload bay door.

Kibo and the Experiment Logistic Module

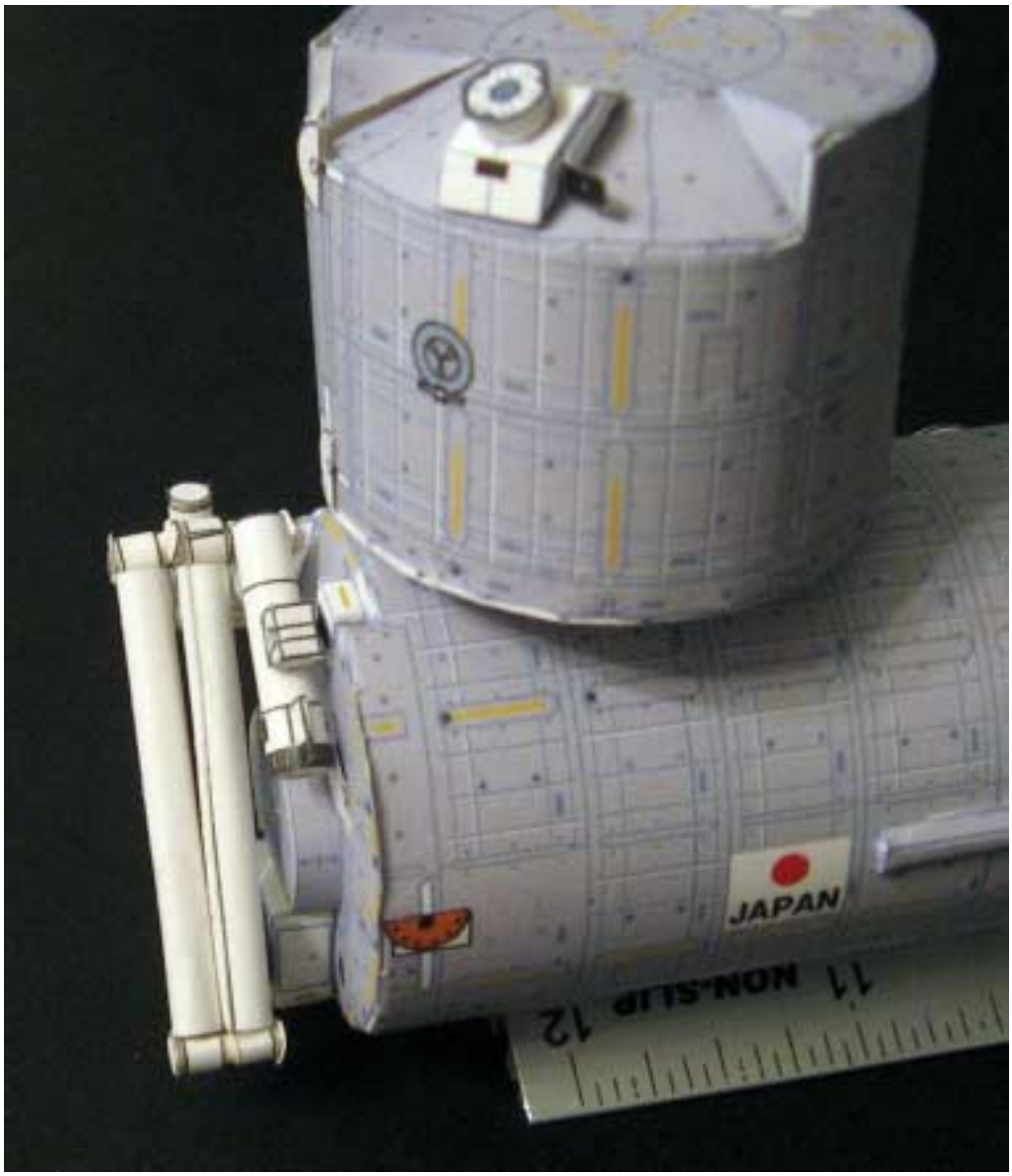




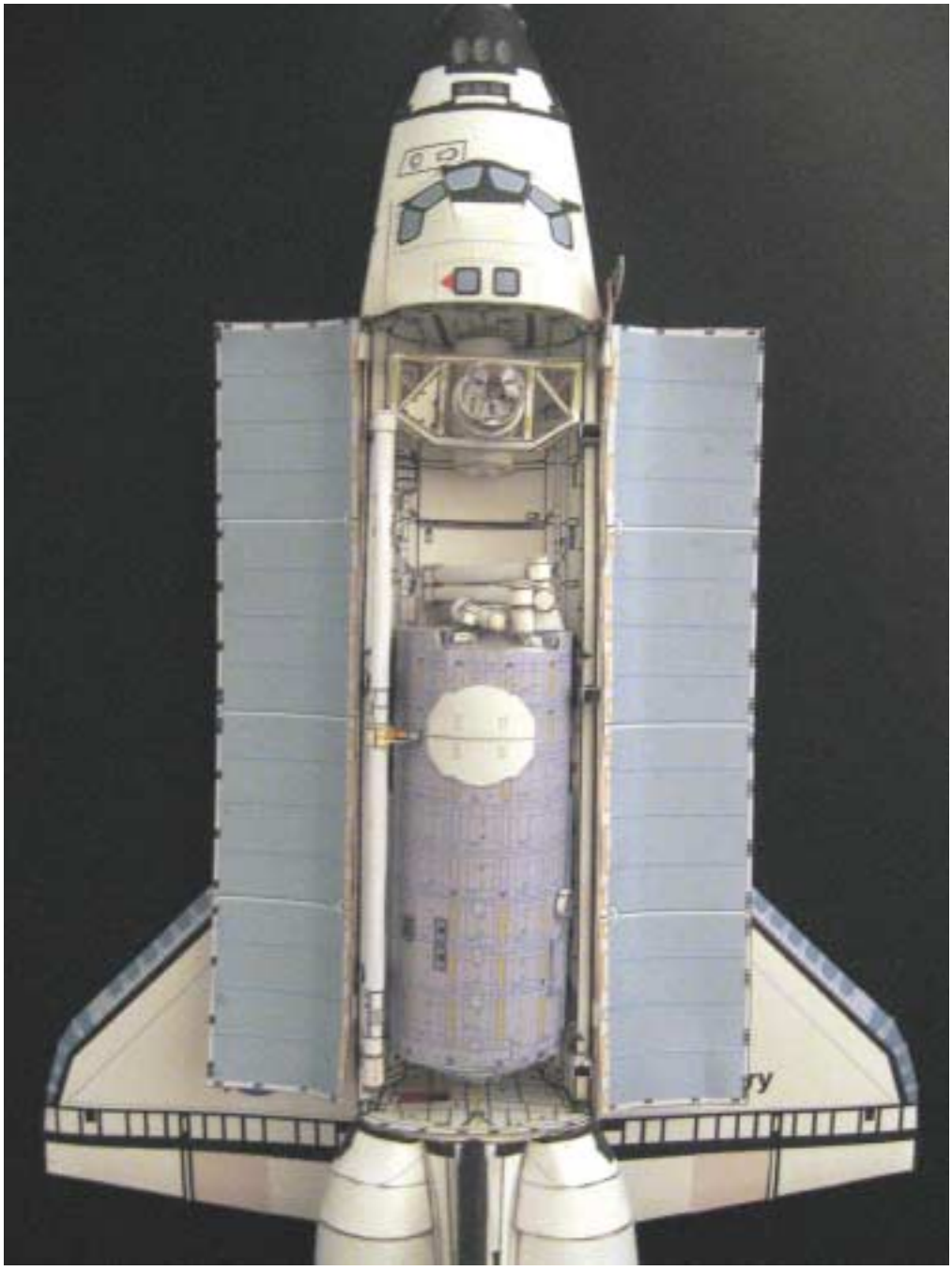
These small tabs will help stabilize the Logistic Module on top of Kibo.

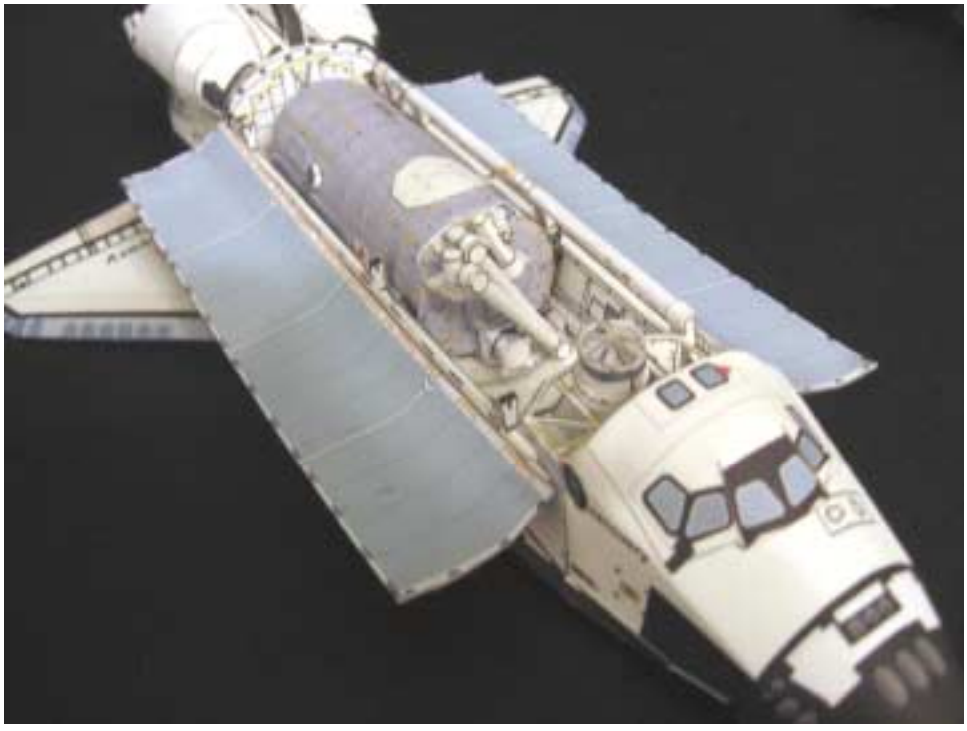


Reference photos



The arm has full motion for both scales, 1:144 and 1:100 models.





Enjoy this model!

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