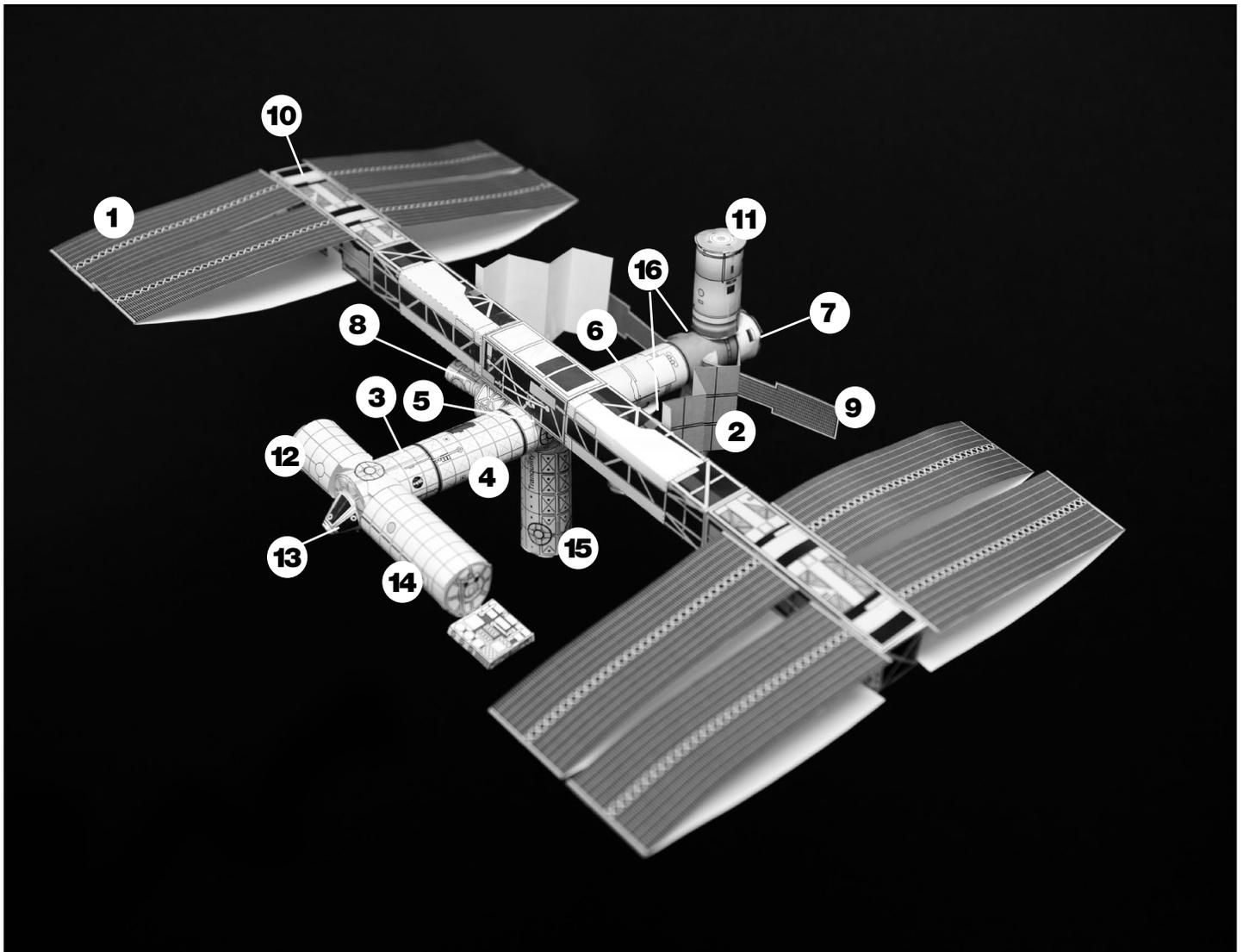




Parts of the Model

1. Solar Panels
2. Radiators
3. Harmony
4. Destiny
5. Unity
6. Zarya
7. Zvezda
8. Quest Airlock
9. Zvezda Solar Panels
10. Truss
11. Russian Research Module (MRM2)
12. Columbus
13. Pressurized Mating Adapter
14. Kibo
15. Tranquility
16. Russian Research Modules (MRM 1) and Multipurpose Laboratory Module (MLM, not seen in photo)



Build the Station Simulation: Team Directions

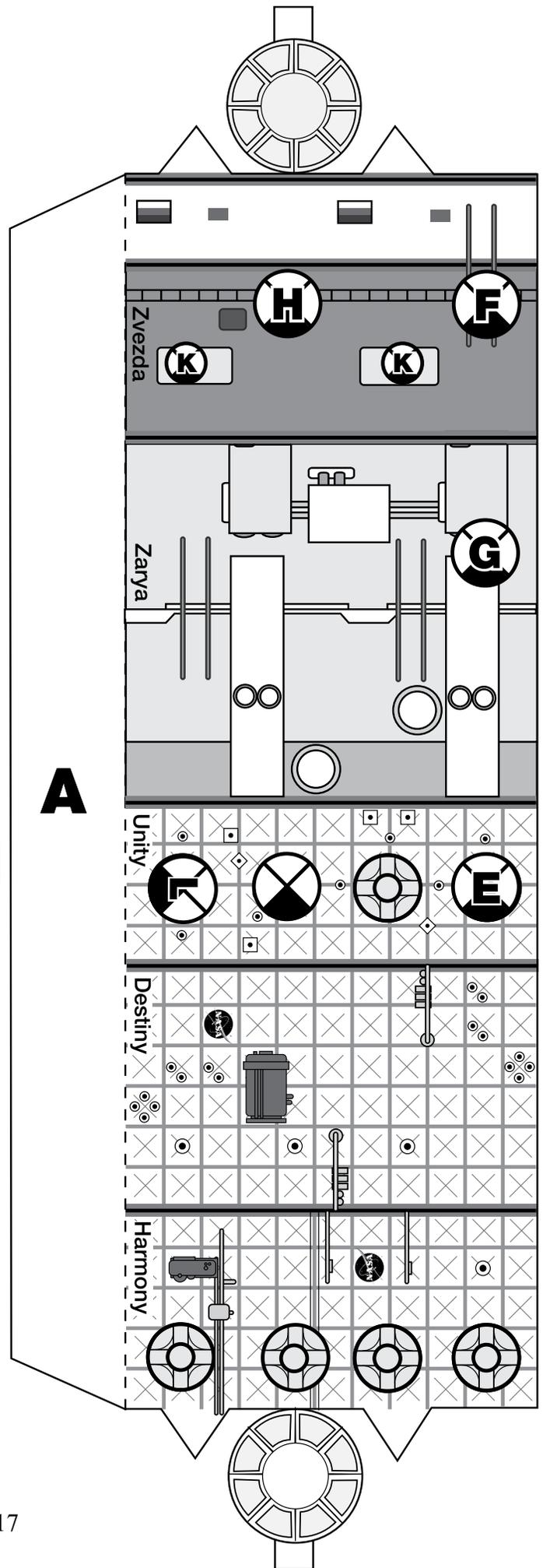
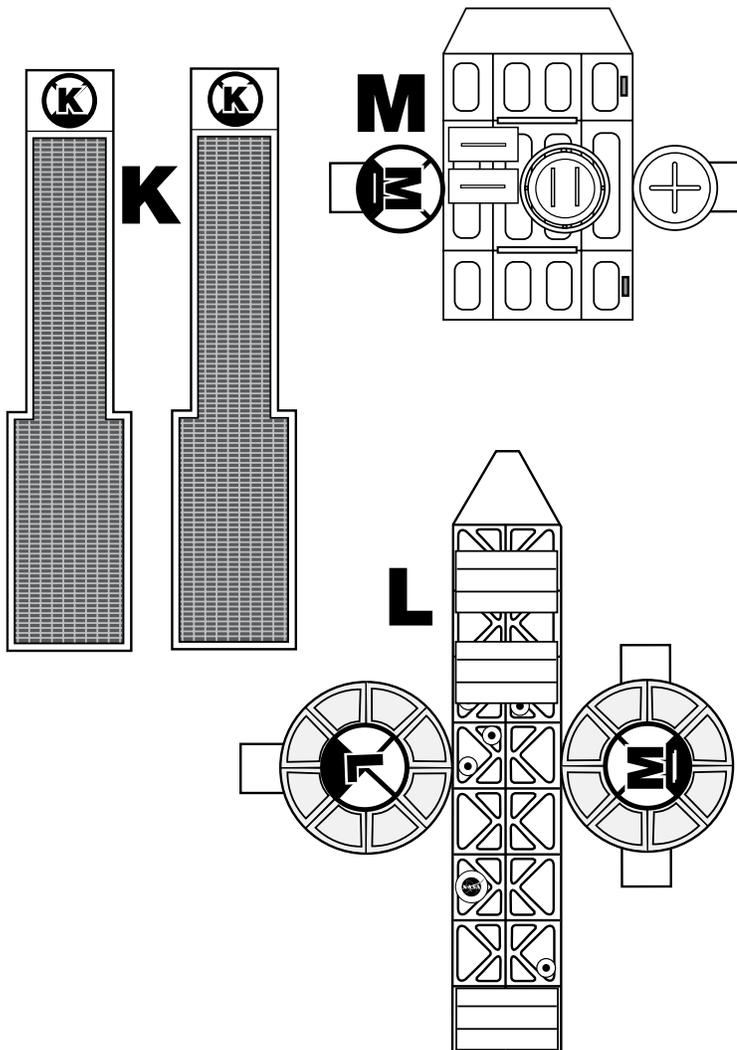
Team A: Roscosmos

Materials:

- parts A, M, L, and K

Assemble parts A, K, L, and M; learn about the Russian and American parts of the Station that were the first to go up. Refer to the Parts of the Station Fact Sheet and complete the Team Worksheet. NOTE: The Harmony Node 2 was added after the last Truss section, but creative license is taken to add it to Team A. Components include the following:

1. Functional Cargo Block (Zarya)—Sunrise (A, K)
2. Node 1 (Unity) (A)
3. Service Module (Zvezda)—Star (A)
4. Destiny laboratory (A)
5. Remote Manipulator System—Canadian Robotic Arm
6. Quest Airlock (L, M)
7. Russian Docking Compartment and Airlock
8. Node 2 (Harmony) (A)



Team B: NASA

Materials:

- parts C, D, I, and J
- ice pop sticks or shish kebab skewers

Assemble parts C, D, I, and J. These are all American components. Refer to the Parts of the Station Fact Sheet. There are many sections to the Truss, each one completely filling the cargo bay of the Space Shuttle. Sections were added on alternating sides to balance the spacecraft. Solar Array Panels came collapsed like accordions and were unfurled a bit at a time. Refer to the Parts of the Station Fact Sheet and complete the Team Worksheet. Components include the following:

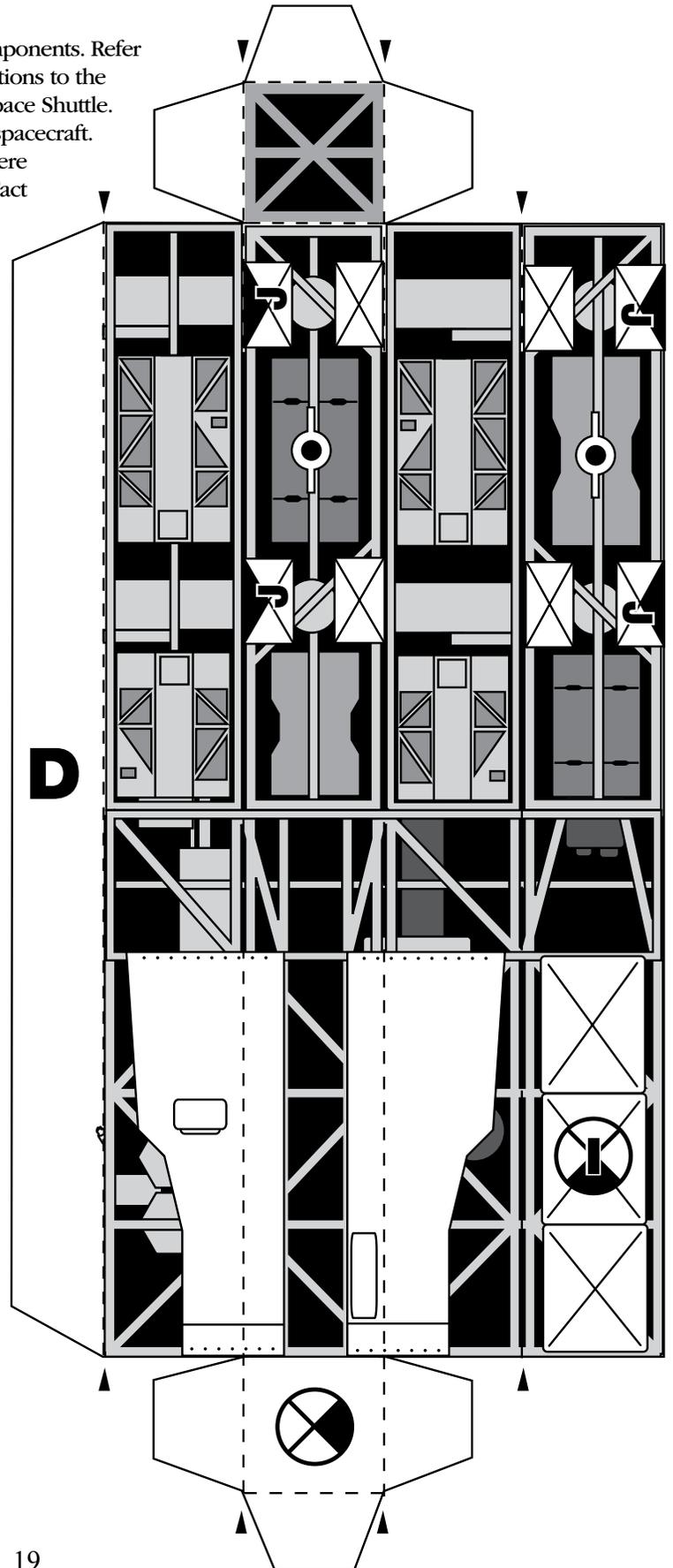
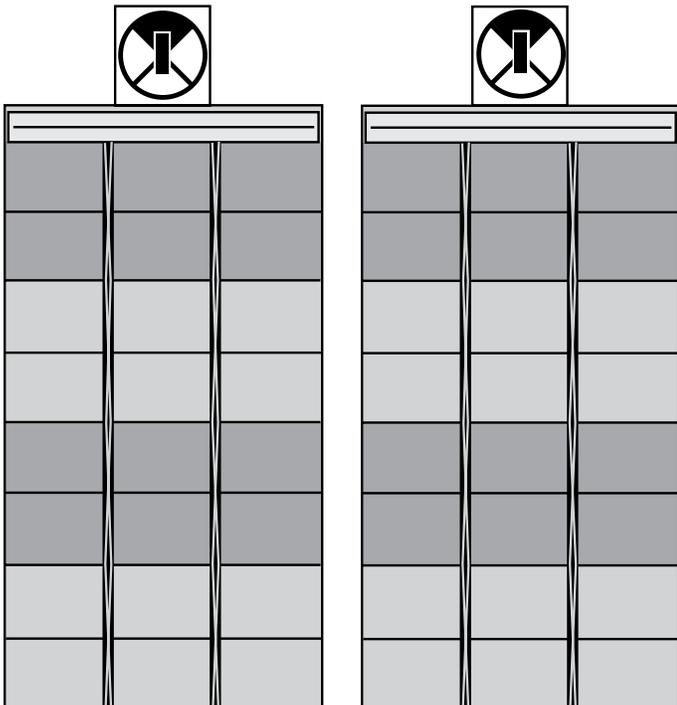
1. Zenith Truss (Z1) (C, D)
2. Port 6 Truss (P6) (C, D)
3. Starboard Zero Truss (S0) (C, D)
4. Starboard 1 Truss (S1) (C, D)
5. Port 1 Truss (P1) (C, D)
6. Port 3/4 Truss (P3/4) (C, D)
7. Port 5 Truss (P5) (C, D)
8. Starboard 3/4 Truss (S3/4) (C, D)
9. Starboard 5 Truss (S5) (C, D)
10. Radiators (I)
11. Solar Arrays (J/D)

The Truss acts as a support structure for the radiators and solar arrays.

To Assemble the Truss:

1. Score along tick marks and roll/fold lengthwise, slipping flaps C and D on the inside of the roll. Glue or tape where the art lines up. Fold small square tabs on the ends to enclose the Truss.

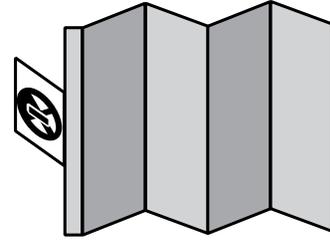
2. Butt the two ends marked with  together, matching up the black pie-shaped quarters. This forms one long Truss. Glue or tape the ends together.



Adding Solar Arrays and Radiators:

1. Cut out the Radiators (I), then score and fold along the lines where darker and lighter grays meet to make an accordion fold. See the illustration below.

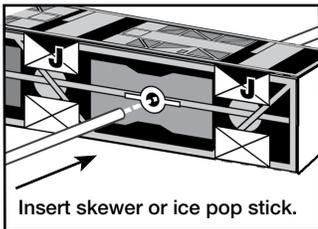
2. Glue and/or tape to the corresponding marks on the back side of the Truss. Make sure that the printed side faces outward.



3. Cut out the Solar Panels (J). It is recommended that you do not cut out the blank space between pairs because leaving them together will help to maintain their rigidity. To further help keep them from sagging, wooden shish kebab skewers or ice pop sticks about 4 inches long may be inserted through the middle of the Truss. Make the holes where the symbol  appears.

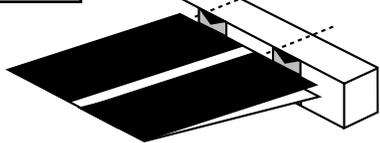
4. Fold the tabs up.

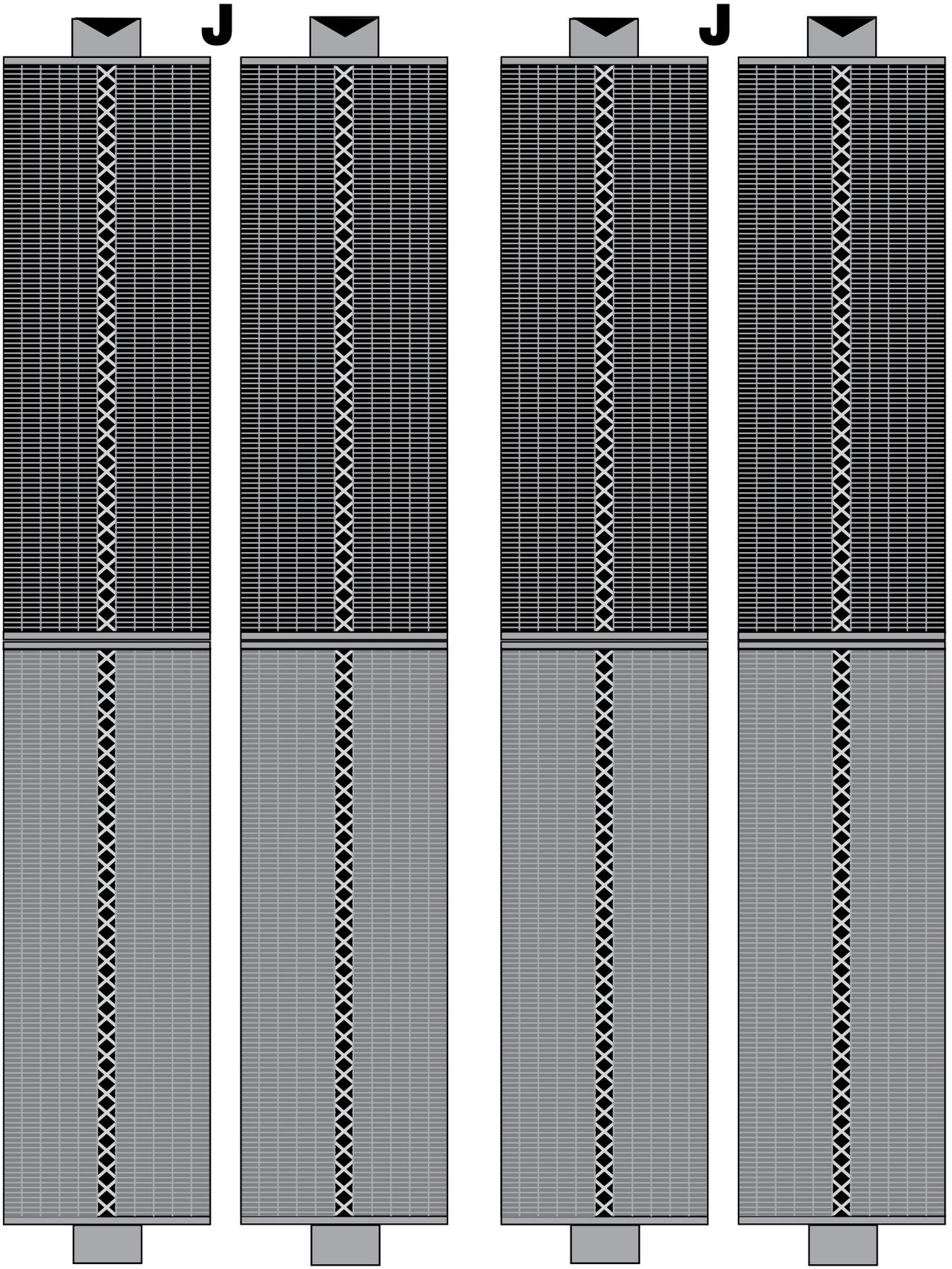
5. Fold the panels in half so that one set of tabs lines up with the other set. Quartered rectangles indicate where to glue and/or tape tabs to attach the Solar Panels (J) to both sides of the Truss. See the illustration below.

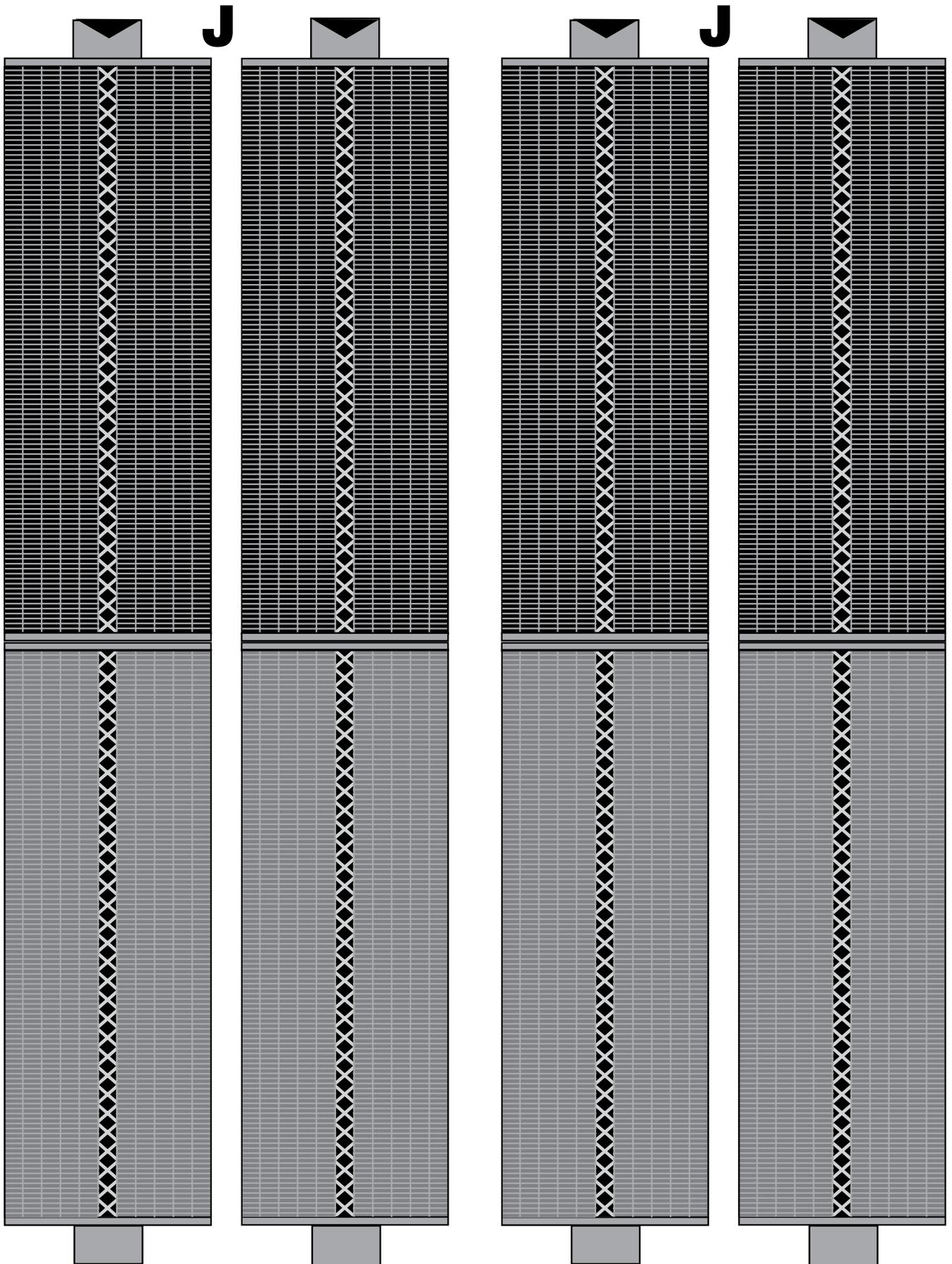


Insert skewer or ice pop stick.

Tab should be level with the top and bottom of the Truss.







Team C: ESA and JAXA

Materials:

- parts B, E, F, G, H, and N

Assemble parts B, E, F, G, and H. The Space Shuttle docked at the pressurized mating adapter on part N through 2010, when the Station was completed. Refer to the Parts of the Station Fact Sheet and complete the Team Worksheet. Components include the following:

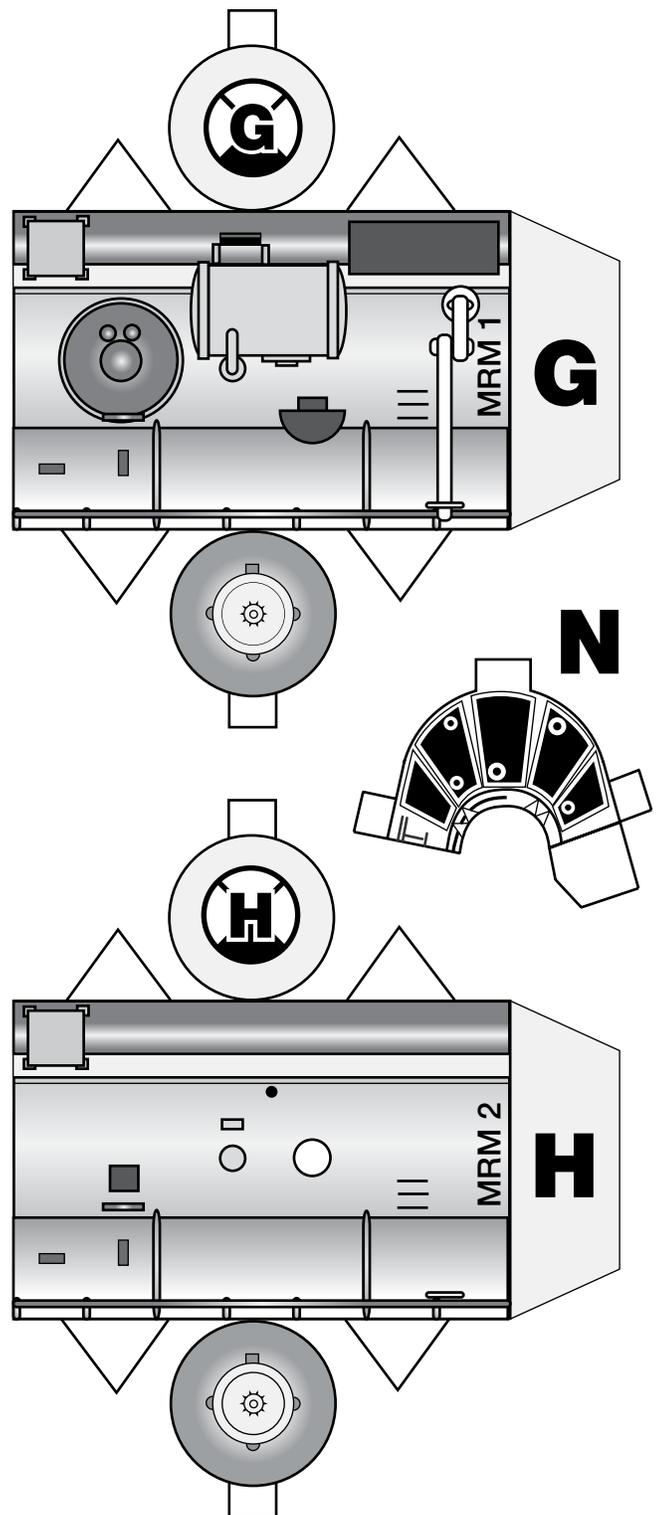
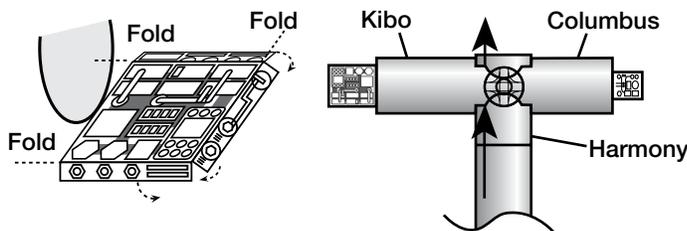
1. Columbus Laboratory (B)
2. Kibo Laboratory—Hope (B)
3. Japanese Experiment Module Pressurized Module (JEM—PM) and Canadian Robotic Arm Dextre (too small for model) (B)
4. Russian Multipurpose Laboratory Module (F)
5. Node 3 (Tranquility) and Cupola (E)
6. Russian Research Module (G, H)
7. Pressurized Mating Adapter (N)

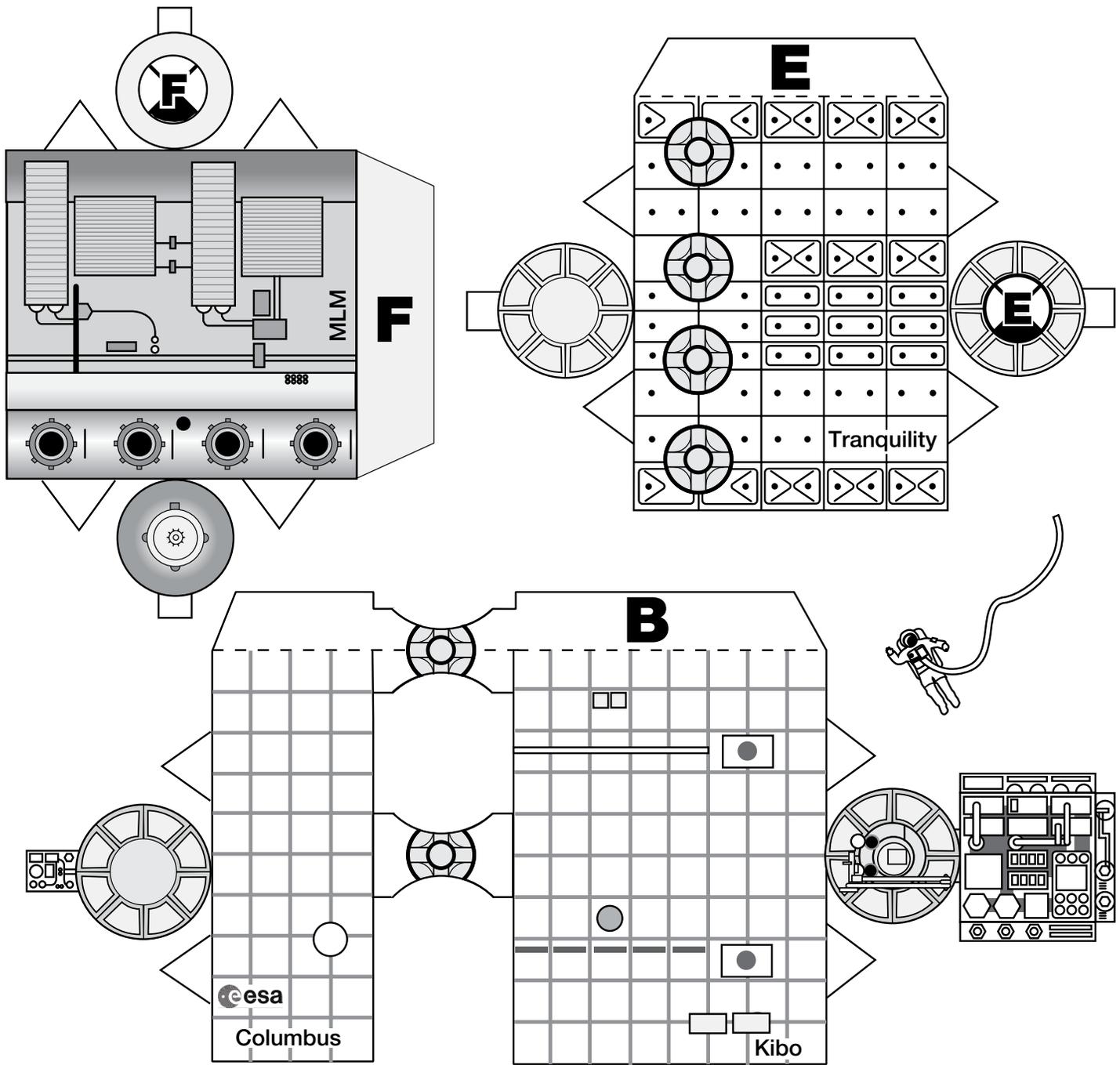
1. Starting with the core group of modules (indicated by the flap labeled “A”), roll lengthwise, slipping the flap with the “A” printed on it on the inside of the roll, and glue and/or tape the flap where the printed art lines up. Fold the pointed end tabs in, as well as the small square tabs on the module ends, and glue and/or tape them shut to make an enclosed cylinder.

2. Follow the same procedure for modules E, F, G, and H. L and M are rolled and taped together in the same way as the Modules; then, tape the completed L and M components together on the underscored letters on each end to form the Airlock assembly.

3. For the Columbus and Kibo modules (B), follow the same procedure. After attaching the round ends of the cylinders, bend the outside experiment platforms (the flat tabs with machinery on them) outward to be flat, on the same plane as the modules. On the larger Kibo platform, use a paper clip or the edge of scissors to score the three sides at the notches, and fold those down to give the platform dimension.

4. Slide the side opening of the Columbus and Kibo modules over the end of the Harmony module so that they are perpendicular, line up the hatches, and tape and/or glue into place.





Combining Modules and Truss:

1. Match up the joining  spots on the bottom of the Truss and the top of the Unity module on the longest of the module cylinders. Match the black quarters together to get the correct orientation.
2. Use the nylon fishing line to hang the ISS from the ceiling.

