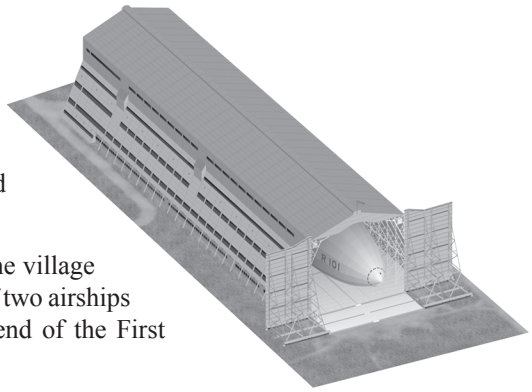
CURRELL GRAPHICS

Assembly Instructions for the Airship Shed



History of the Cardington sheds

For almost 80 years the countryside near the English city of Bedford has been dominated by two enormous structures. These are the Cardington airship sheds.

In 1917, in response to German Zeppelins, an airship factory was established near the village of Cardington. The new works included a large shed, intended to allow construction of two airships side-by-side. The first airship built there was commissioned only just before the end of the First World War, and in 1921 the site was closed.

In 1924 the British government developed the Imperial Airship Scheme which called for the construction of gigantic passenger airships, and Cardington was chosen as their home station. The existing shed was inadequate for these new ships, so in 1927 it was rebuilt and substantially enlarged. The following year another shed was brought from its original site at Pulham and erected beside the first. These sheds, now known as Number 1 and Number 2, were enormous structures with internal dimensions of 812 ft. in length and 157 ft. height, and incorporating some 4000 tons of steel. Between 1927 and 1929 the airship R101 was built in No.1 shed. R100 arrived in 1929 from Howden, where she had been built, to be housed in No.2 shed.

Cardington seemed destined to be the airship hub of the British Empire, but in 1930 R101 crashed on her maiden voyage to India killing most of those aboard. Shortly afterward the Airship Scheme was abandoned and the facility virtually shut down. With the threat of war toward the end of the 1930s it was reopened for the manufacture of barrage balloons and the training of their crews, and during the Second World War thousands of balloon operators passed through Cardington.

After the war, No.2 shed became a research station for building construction and fire safety. The size of the shed allowed the indoor construction of multi-story test buildings. In recent years airships have returned to Cardington, Advanced Technologies Group having used the sheds for the construction of new airship prototypes. In addition they have been used as motion picture sound stages. Although they are 'listed' as buildings of historical importance, their sheer size makes it costly to keep them in good repair, and their long-term existence is at present uncertain.

The Model

This model builds into a 1:700 scale replica of the No.1 shed as it appeared during the R101 era. A word of caution: this model is not suitable for assembly by young children, due to the use of sharp tools and the complexity of some assembly steps. Previous experience with card modeling is recommended. If you have any comments or suggestions regarding this kit, I can be reached by e-mail at models@currell.net

Model parts are contained in the document **shed_parts.pdf**, with optional display base parts in **shed_base.pdf**. Print out the parts document on 8.5"x11" or A4 size white card stock suitable to your printer. 67 lb. cover stock (approximately 8.5 thousandths of an inch or 0,2 mm thick) is recommended. Note that parts sheets F and G (pages 6 and 7 of shed_parts.pdf) are not required if the shed doors are to be closed.

Tools

Before beginning, you will need the following tools and materials:

a) white glue
b) (optional) spray adhesive for large flat parts
c) a glue applicator such as wooden toothpicks or a small paintbrush
d) a sharp knife for cutting
e) a flat cutting surface
f) a ruler or straight edge
g) a scoring tool or blunt knife for creasing the fold lines

Hints

a) Select a well-lit, comfortable work area that will remain undisturbed when you are not there.
b) Keep your hands and tools clean when working, to avoid getting glue on visible parts of the model.
c) It's easier to stay organized if you only cut out those parts you need for each step.
d) Make sure your knife is sharp. When cutting straight lines, use a straight-edge.
e) Study the diagrams carefully, and always test-fit the parts before applying glue.
f) You may wish to colour the edges of the parts to make seams less visible. Pencil crayon or paint applied with a fine brush can be used (experiment on scrap pieces to see what works best).

Assembly

In these instructions 'front' refers to the end of the shed with the main doors. Scoring of parts is indicated by thin black guidelines outside the part's outline or by dashed lines on the part's surface. Score parts *before* cutting them out. In the diagrams, subassemblies are identified by a number within a circle (e.g. ②), corresponding to the step in which it was assembled.

Glue the wall support pieces back-to-back (**step 1**) to create a double thickness internal support. Score and fold the rear roof/wall piece A2 (**step 2**) and glue the reinforcing strips C12 and D2 to the inside lined up with but not blocking the cutout slots. Glue one of the wall supports from step 1 into the wall structure (**step 3**), such that the wall shape conforms to the support, and the support protrudes through the wall slots at the top and sides. It is recommended you glue the support beginning at the top then working down each side in turn. Attach the triangular wall pieces C3 and C4 to fill the openings where the lower wall changes from angled to vertical. In a similar manner assemble the front roof/wall structure (**step 4**), using two internal supports.

Glue the rear wall surfaces back-to-back (**step 5**), ensuring the edges of the peak tab line up, then attach outer wall C10. Attach the rear wall assembly to the rear main structure (**step 6**) such that the peak tab fits into the notch cut into the roof, and the top and sides of the rear wall are flush with the side wall and roof edges.

At this stage, decide whether the shed doors will be permanently closed, or separate (allowing doors to be positioned in open or closed position). The closed door option is simpler and will not require the use of parts sheets F and G. If building with doors closed, glue internal brackets to the inside of the front wall surface, and the front doors to the outside surface (**step 7**), then attach this assembly to the front main structure (**step 8**), ensuring the peak tab fits into the roof notch. If doors are to be open, cut the front wall surface C5 into three pieces as marked on the part, and glue internal brackets to each part (**step 9**). Glue these three assemblies into the top and sides of the front main structure.

Attach the connecting strips into the rear of the front main structure (**step 10**) then carefully glue the front and rear structures together (**step 11**). Take care to ensure the edges butt together snugly, and that the surface markings line up properly. It is recommended you begin at the top then work down each side in turn.

Fold the stairwell bulges E3 to shape and attach to the light blue locating marks on the shed sides (**step 12**). Fold the ridge structures to shape, bending the stiffening tabs underneath but leaving the locating tabs straight, then glue to the shed roof (**step 13**).

Step 14 is necessary only if the doors are to be opened. When attaching the inner walls to the main structure it is recommended to begin at the roof peak and work down each side in turn. Attach brackets F3 and F4 to the front inner surface F1, then attach to the shed, conforming to the shape of the inner support and with the flaps on F1 glued to the inside of the front wall. Glue the middle surface F2 into the shed such that the front edge overlaps the light blue marking printed on the front surface F1. Finally glue the rear surface G2. Take care when inserting these surfaces that they do not protrude beyond the lower edges of the outside walls, or the shed may not sit flat on its base.

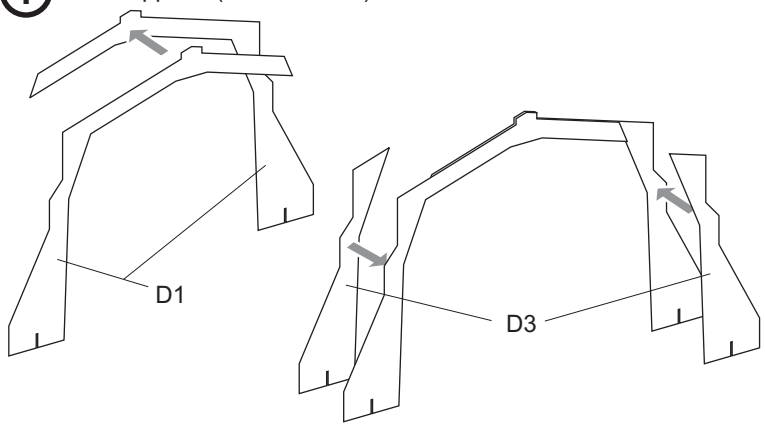
Step 15 shows the optional display base. Attach the base parts H1 and J1 to a flat, stiff piece of wood or foam-core, ensuring they butt together snugly. Fold and glue the locating tabs H2 onto the base, then attach the shed (the tabs fitting into the slots in the shed internal supports). Ensure the shed is aligned correctly on the printed outline.

If the front doors were not assembled in the closed position, glue the inner and outer door surfaces back-to-back (**step 16**) and cut along the centreline to separate the doors.

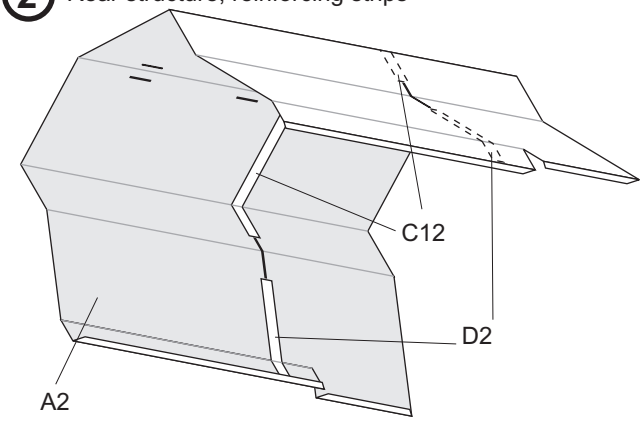
Fold the rear wall trusses E1 and attach to the vertical markings on the rear wall, with the lower edge against the base (**step 17**). Attach crossbeams D8 and E5 as shown. Assemble the front door supports (**step 18**). Fold the lower beam C7 to shape and attach to the door base. Attach trusses E2 and E4 to the vertical markings on the door and position beams C7 and C11 using the template diagram. Attach crossbeams D8 and D9 as shown (**step 19**).

Fold and attach the side girders E7 to the small locating marks printed on the lower side walls (**step 20**). Attach the other end of the girder to the base. Place or glue the doors (if separate) along the rails printed on the base. Fold and attach the windsock E6 to the roof peak. This shed will accommodate the R100, R101 or Vickers Transatlantic airship models; if you wish to display an airship within the shed, assemble the cradle (**step 21**) appropriate to the model.

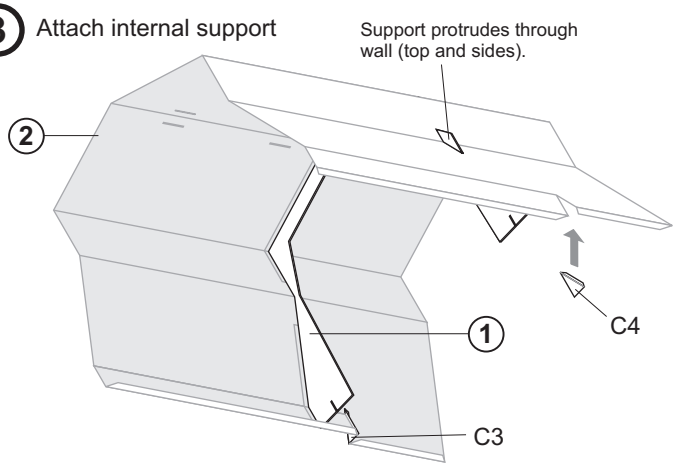
1 Wall supports (3 assemblies)



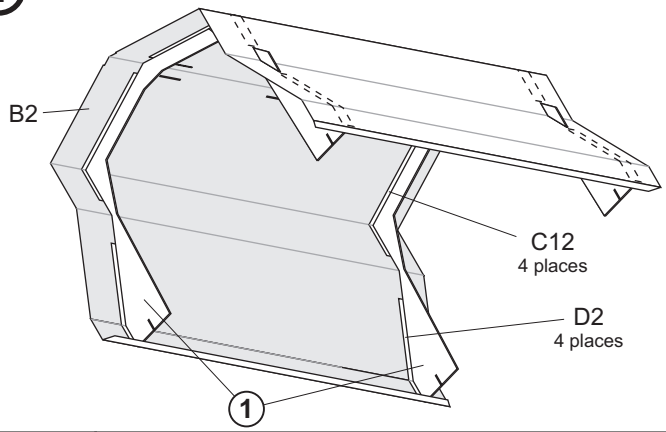
2 Rear structure, reinforcing strips



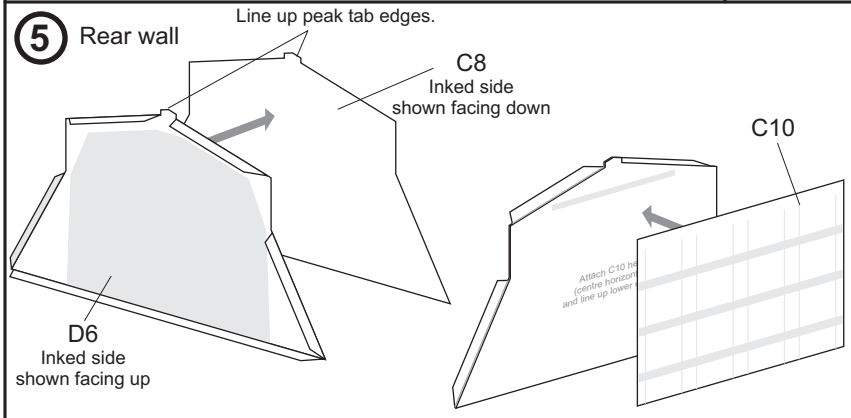
3 Attach internal support



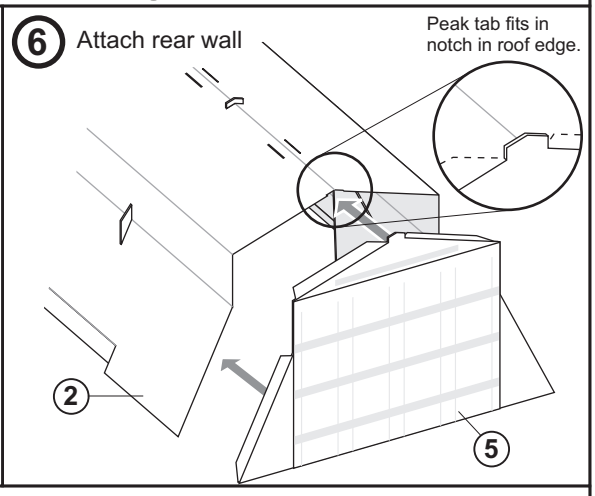
4 Front structure with supports



5 Rear wall

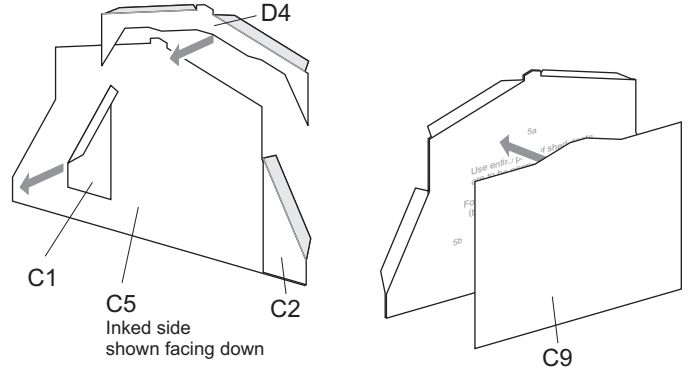


6 Attach rear wall



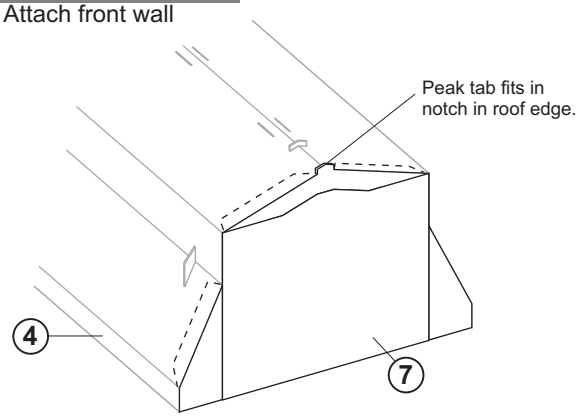
7 Doors closed option

Front wall

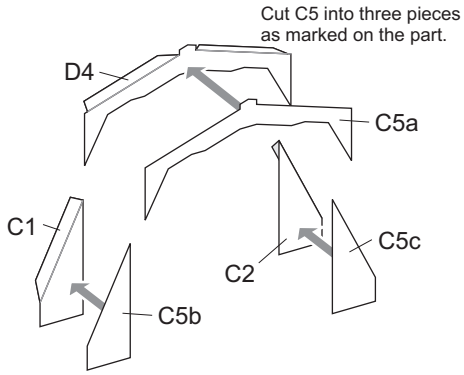


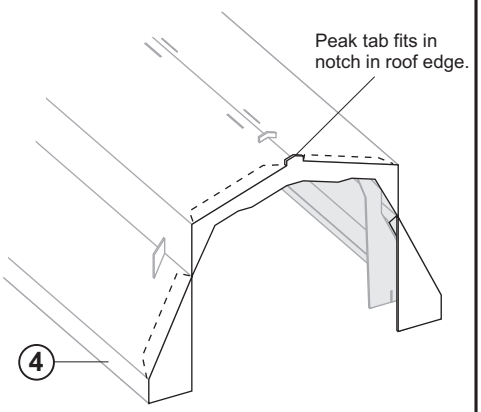
8 Doors closed option

Attach front wall

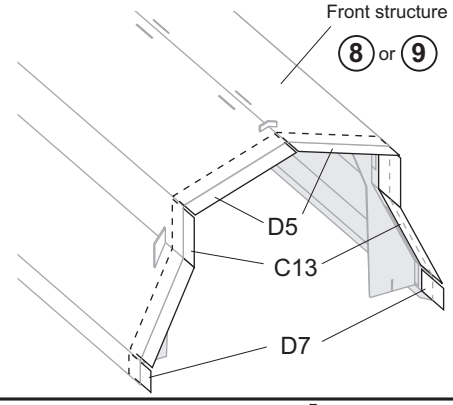


9 Doors open option
Front wall

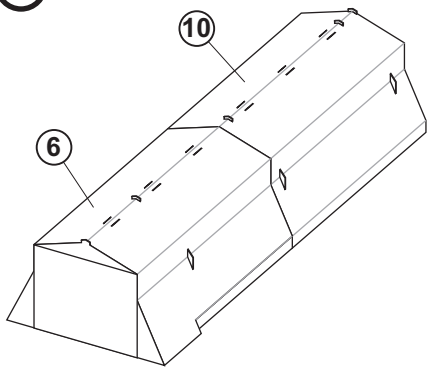




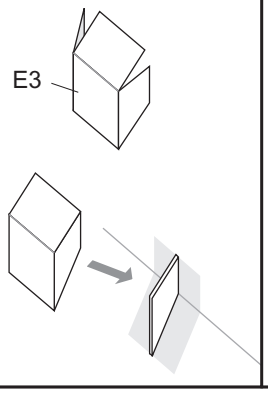
10 Connecting strips



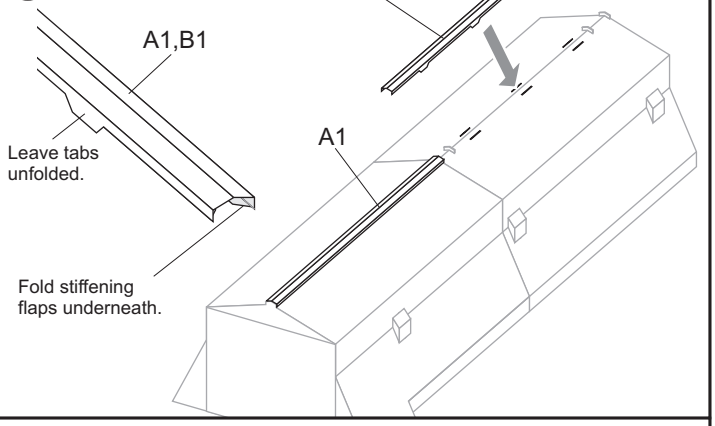
11 Join front and rear halves



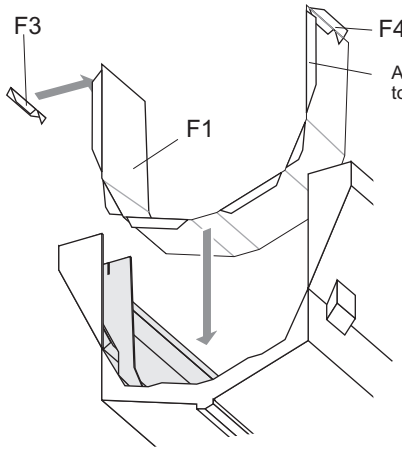
12 Stairwell bulges
(6 pieces)

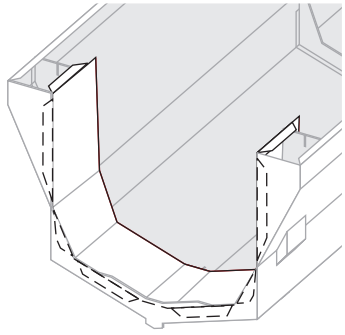


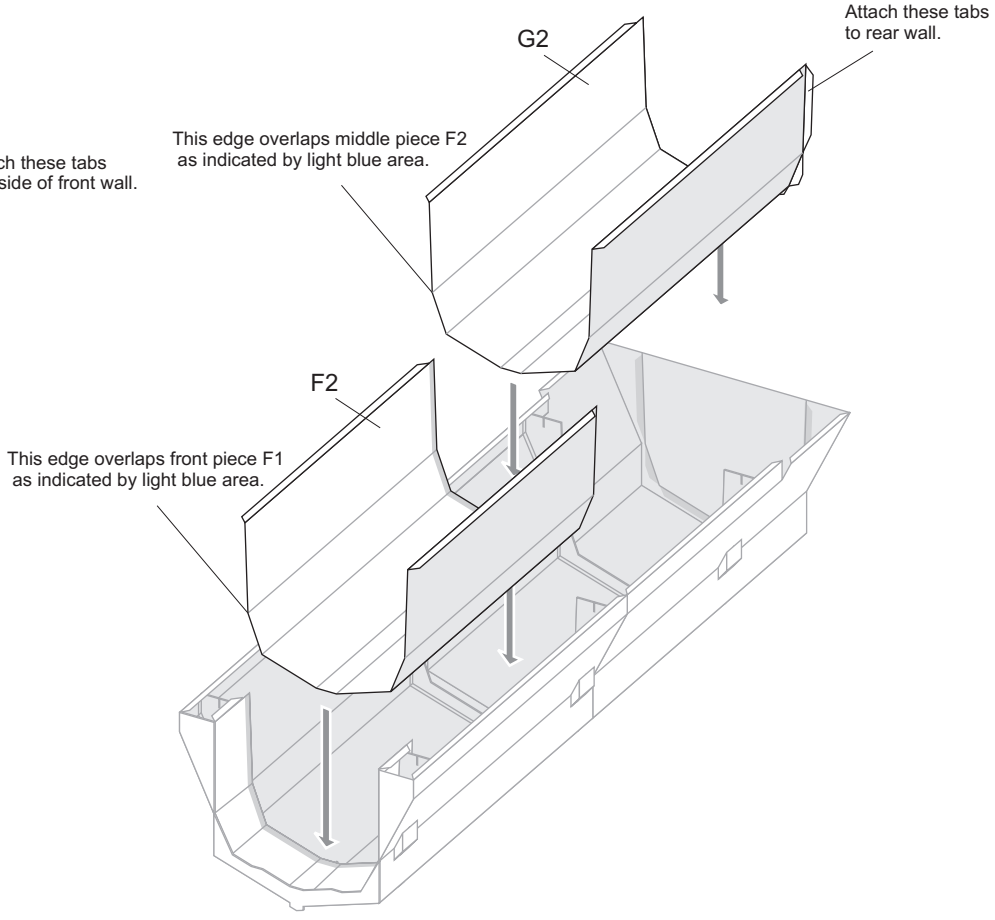
13 Ridge structure



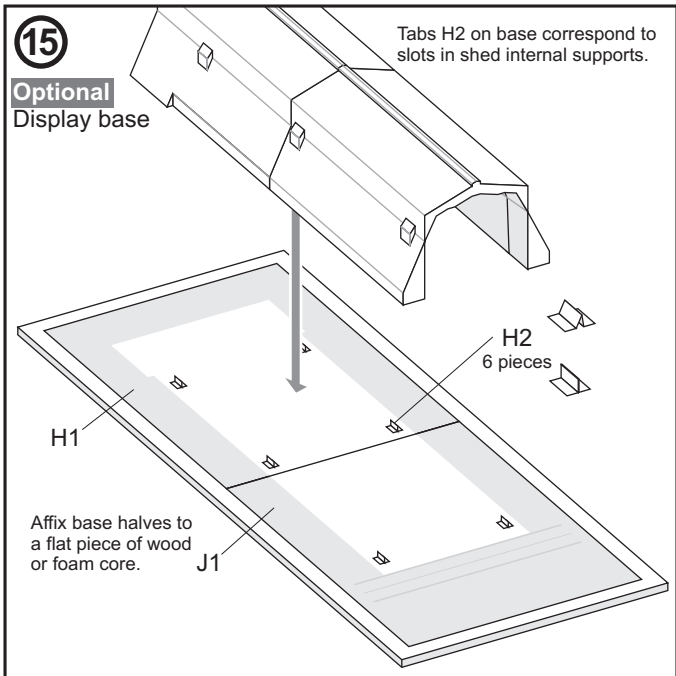
14 Doors open option
Internal structure





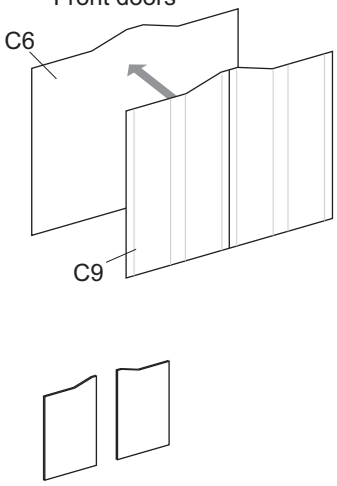


15 Optional Display base



16 Doors open option

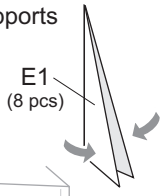
Front doors

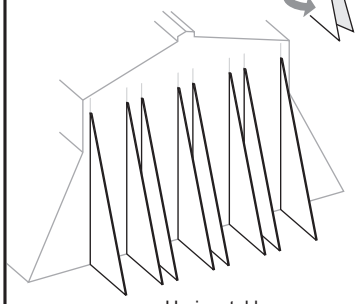


Cut along centreline.

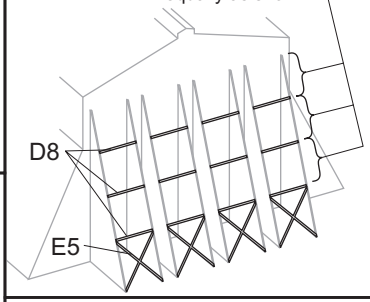
17 Rear wall supports

Glue supports to rear wall at right angle.



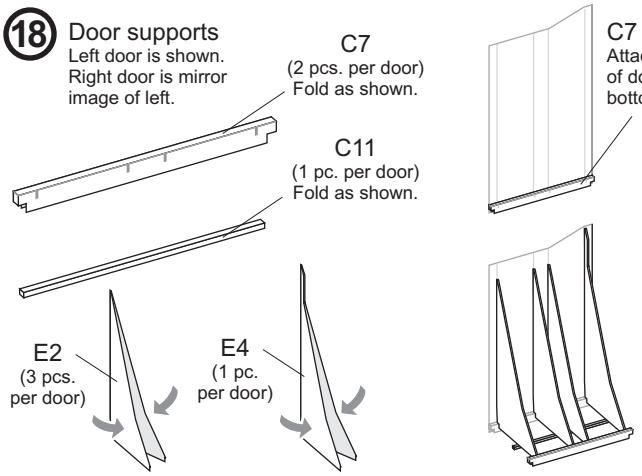


Horizontal beams spaced equally as shown.

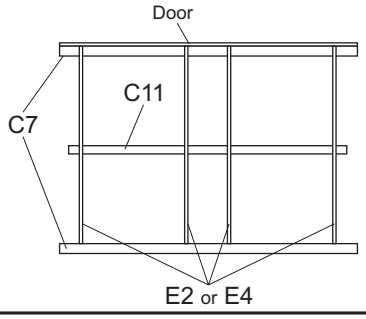


18 Door supports

Left door is shown. Right door is mirror image of left.

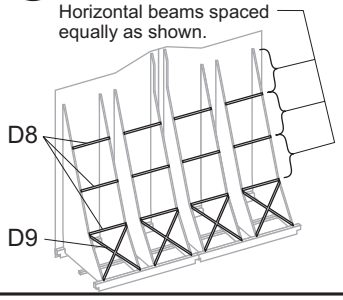


Door structure (top view). Use this diagram as an assembly template.

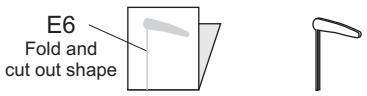


19 Door crossbeams

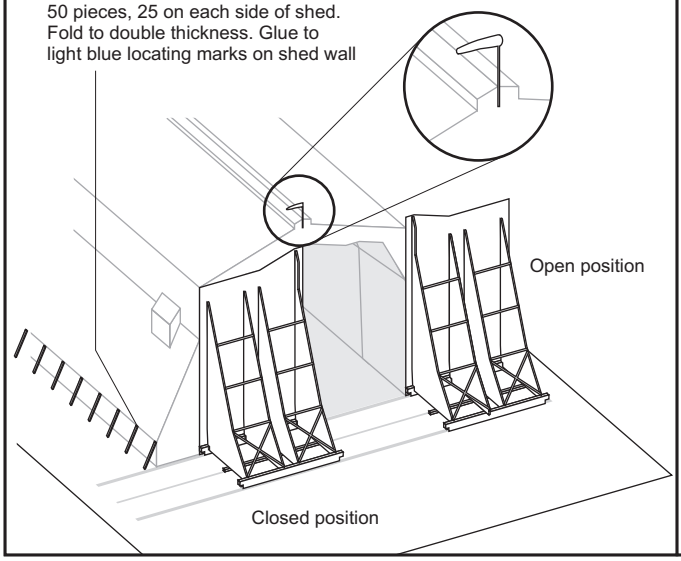
Horizontal beams spaced equally as shown.



20 Door placement, side girders and windsock

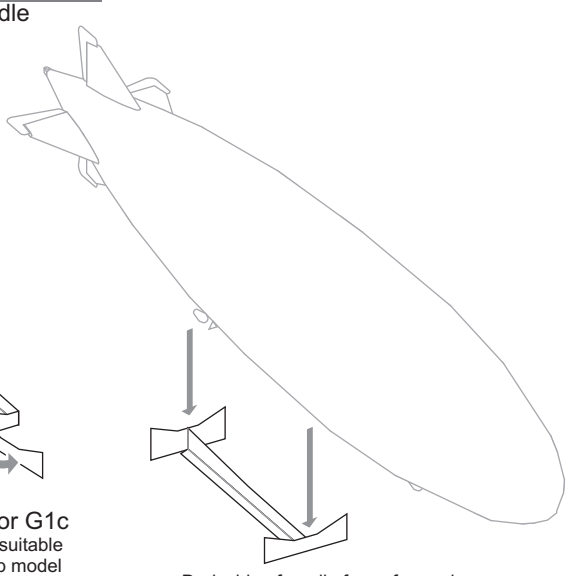


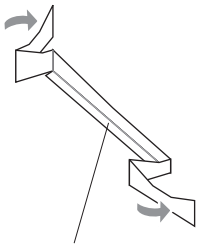
E7
50 pieces, 25 on each side of shed. Fold to double thickness. Glue to light blue locating marks on shed wall



21 Doors open option

Airship cradle





G1a, G1b or G1c
Choose part suitable for the airship model to be displayed.

Dark side of cradle faces forward.