

Assembly instructions for Airship Mooring Mast

About the St.Hubert mooring mast

When the Imperial Airship Scheme was developed by the British government in the 1920s, a fleet of several airships was envisioned, carrying passengers and mail between the British Isles, Canada, India and South Africa. The plan began with the construction of two huge dirigibles, R-100 and R-101.

Unlike some airships, which had to be hauled down to the ground for loading and servicing, these ships used a gigantic mooring mast when in service. To dock an airship, a cable was lowered from the nose and attached to another line running through the top of the 200-foot mast. Winching machinery within the tower then pulled the airship close enough for a mechanical coupling to lock it in place. The design of the mast allowed the airship to swing with the wind, the tail of the ship being anchored by heavy rollers which allowed lateral movement. A lift ran through the centre of the tower, and fuel, crew, passengers and cargo were brought up through the mast into the airship.

The first of these masts was constructed in 1926 at the airships' home station at Cardington, England. The Canadian government, an enthusiastic supporter of the airship scheme, chose to build an airport and mooring mast in 1927 at St.Hubert, near Montreal. Similar structures were also erected at Ismailia, Egypt and Karachi, Pakistan (then part of India). In August 1930, the R-100 successfully docked at St.Hubert, but this proved to be the only time the Canadian mast was used. The crash of R-101 en route to India later that year caused the cancellation of the Airship Programme, and the masts, now expensive relics, were demolished during the succeeding years.



The Model

This model builds into a 1/700 scale replica of the St.Hubert mast at the time of R-100's Canadian voyage. 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 **mastprts.pdf**. Print out the parts document on 8.5"x11" or A4 size white card stock suitable to your printer (67 lb. cover stock recommended).

Tools

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

- a) white glue
- b) a glue applicator such as wooden toothpicks or a small paintbrush
- c) scissors (optional)
- 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. Scissors, if used carefully, can be used for large curved parts.
- 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, the directional terms such as "top" and "bottom" are given assuming the model is standing upright. Scoring of parts is indicated by thin black lines outside the part's outline. 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.

Parts A4, A22, A24, A28 and A31 have a small circular cutout marked at the centre. These cutouts are optional, for modelers who may wish to run a supporting wire through the mast to mount an airship model.

Assemble the central column (**step 1**), so that the column is square in cross-section. Glue it to the printed shape at the centre of the base plate (**step 2**), aligning the corner seam of the column to the small printed arrow. Ensure the column stands perfectly vertical.

(**Step 3**) assemble the central building structure. Fold over the top flaps of the wall A6 before forming the octagonal shape. Insert the roof A7 to touch the lower edges of the wall flaps, ensuring the small arrow lines up with the wall seam. Slide the assembly over the central tower (**step 4**) and attach to the base, ensuring the walls match the printed octagon on the base, and that the wall seam lines up with the small printed arrow.

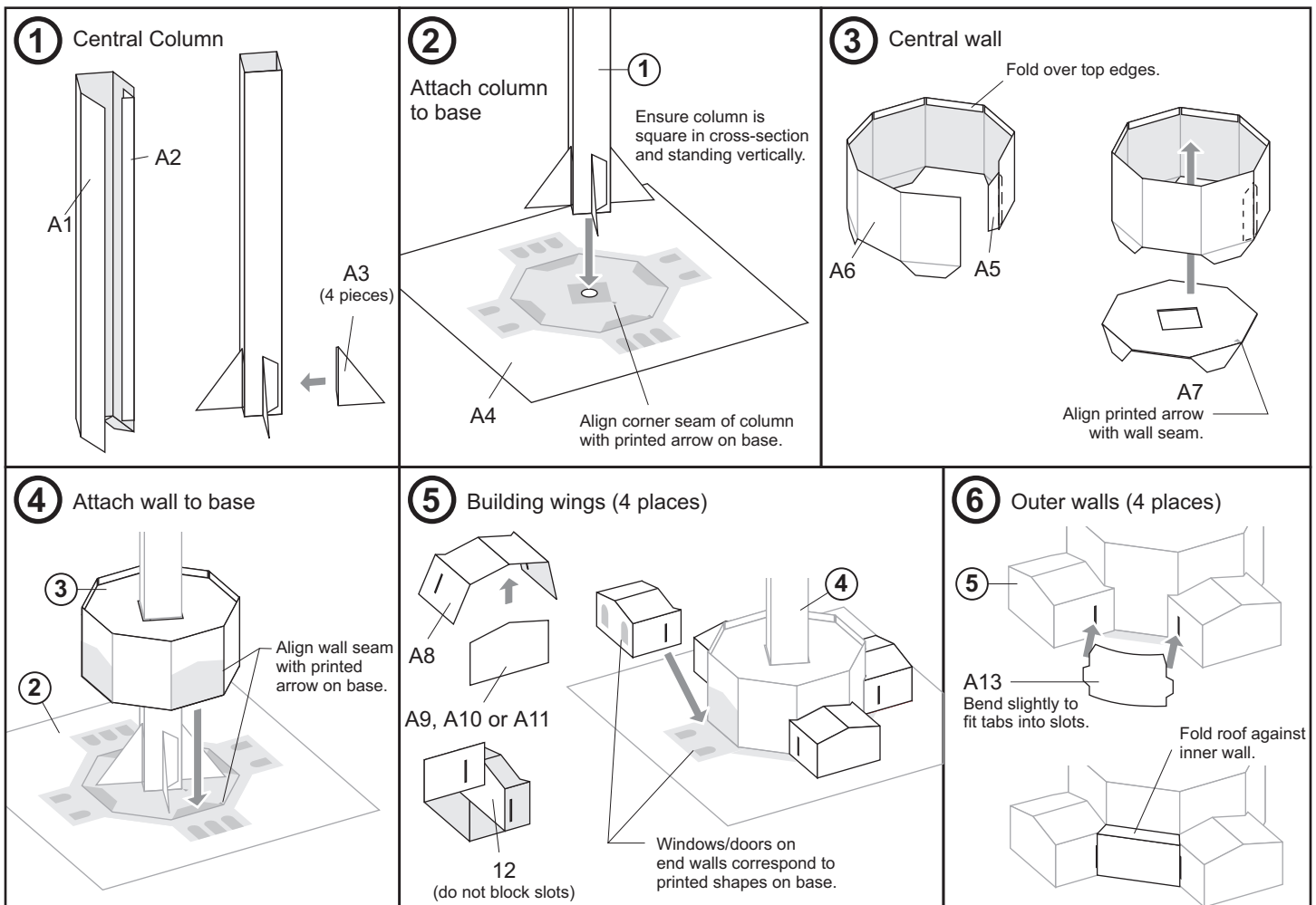
Assemble the building wings (**step 5**) and attach to the central building structure. Locate each wing so that the doors or windows on the end wall match the shapes printed on the base. Attach the outer walls between the wings, using the slots in the wings for location (**step 6**). Fold the roof so that the top edge rests against the wall of the central structure.

Assemble the tower structural members (**step 7**) using the template provided on the parts sheet. It may be helpful to temporarily attach the horizontal members A15-A18 inked side down to the template (using low-adhesive tape for easy removal), then glue the vertical columns A14 into place. Note that the scored end of A14 points down (wide end of the structure). Bend and glue together the horizontal members (inked side facing outward) to form a conical framework (**step 8**), then glue to the underside of A19, using the printed markings to align the columns. Slide the assembly over the central column (**step 9**) and glue the bottom ends of the columns to the building roof.

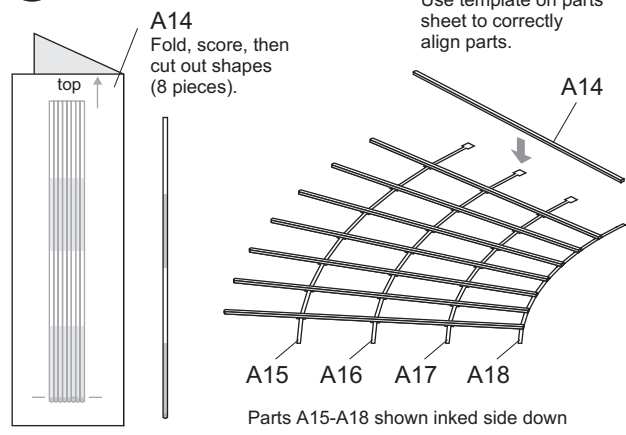
Assemble the lower housing (**step 10**) ensuring that the formers A22 and A23 do not protrude beyond the top and bottom edges of the housing wall, and that the arrow on A23 lines up with the seam. Colour the non-inked side of railing A25, and join the railing to upper platform A24 (**step 11**). Assemble the upper housing components, and join to the platform and lower housing assemblies (**step 12**). Slide the completed housing over the central column (**step 13**) ensuring the housing seam lines up with the central column seam.

Display

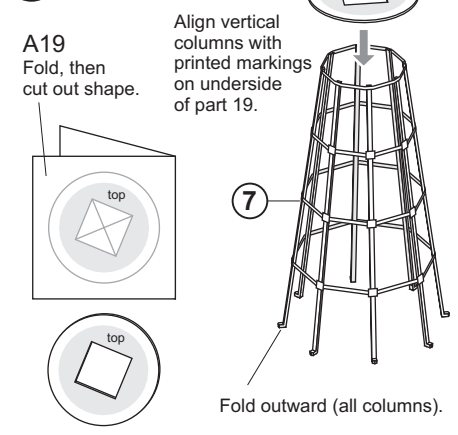
Step 14 shows some ideas for the display of the mast with an airship model. If a wire running through the mast is used (method 1), ensure that it is stiff enough to support the airship without bending, otherwise the mast may be damaged. Other methods include suspending the airship in position using fine thread or fishing line (2), or using thin wire supports beneath the airship (3).



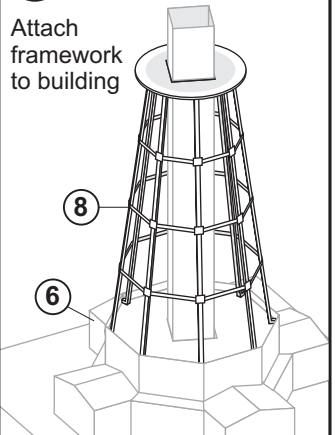
7 Assemble structural members



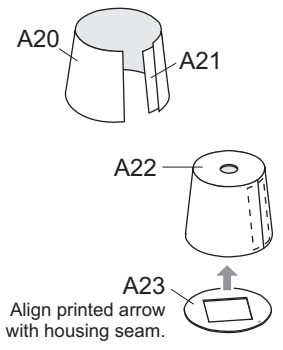
8 Tower framework



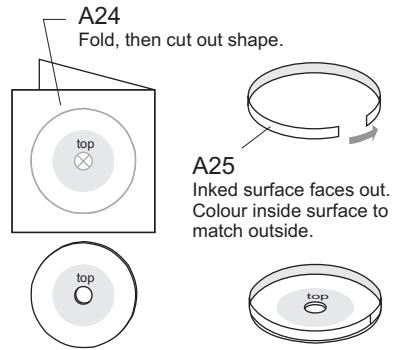
9 Attach framework to building



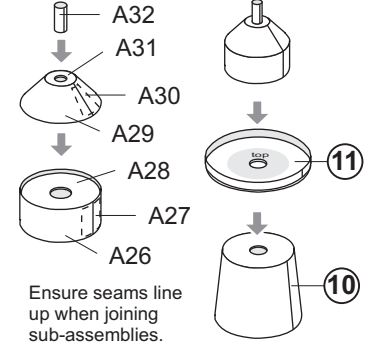
10 Lower housing



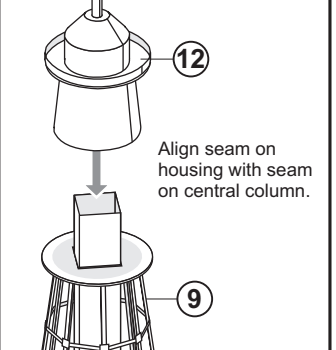
11 Upper platform



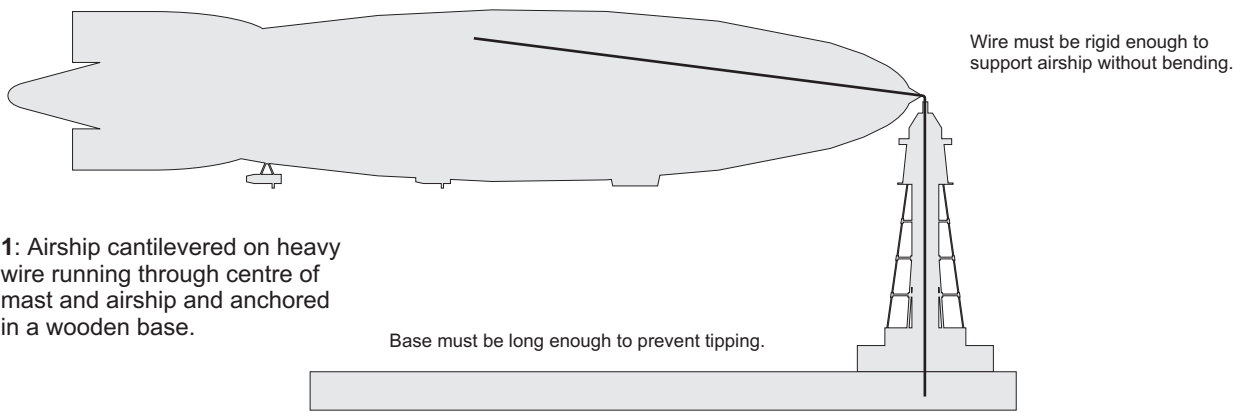
12 Housing assembly



13 Final assembly

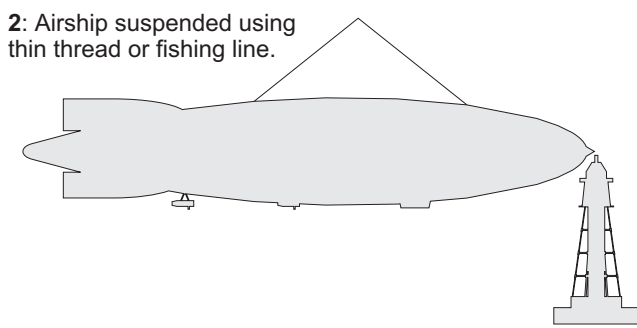


14 Ideas for display of mast with airship model

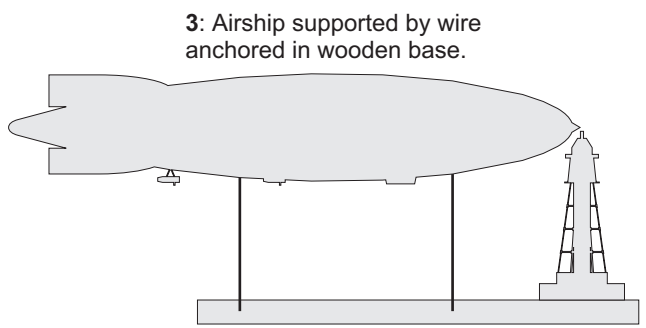


1: Airship cantilevered on heavy wire running through centre of mast and airship and anchored in a wooden base.

Base must be long enough to prevent tipping.



2: Airship suspended using thin thread or fishing line.



3: Airship supported by wire anchored in wooden base.