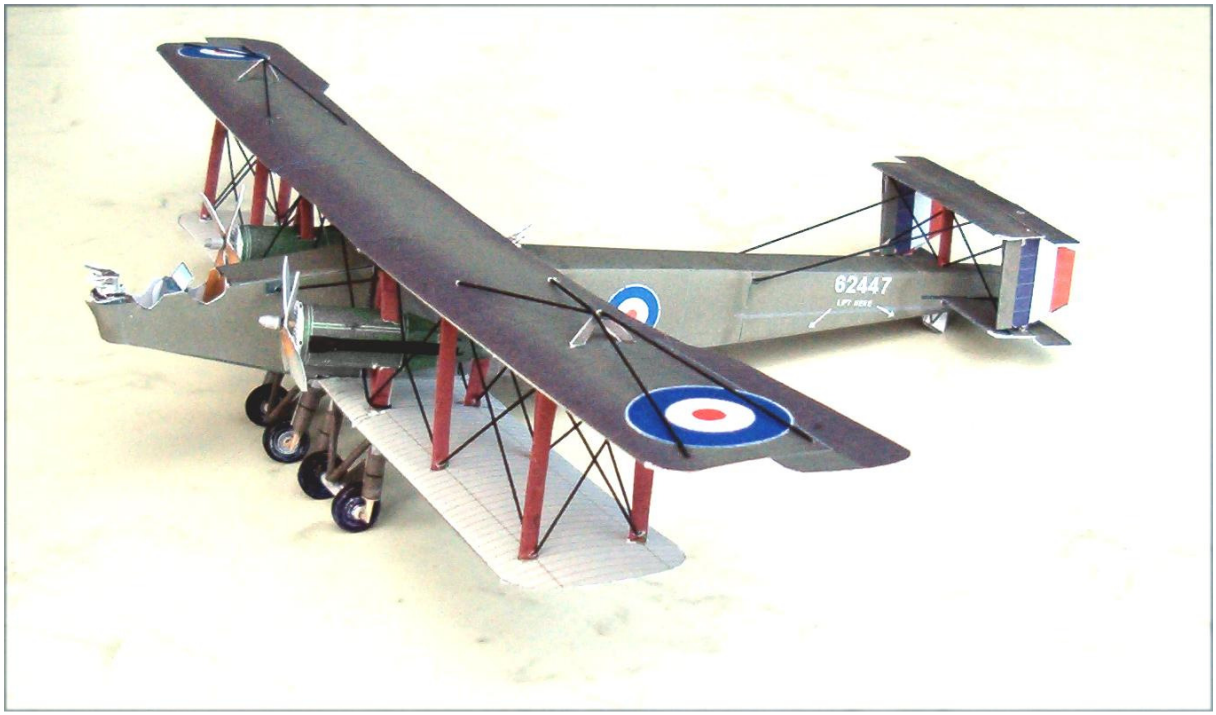
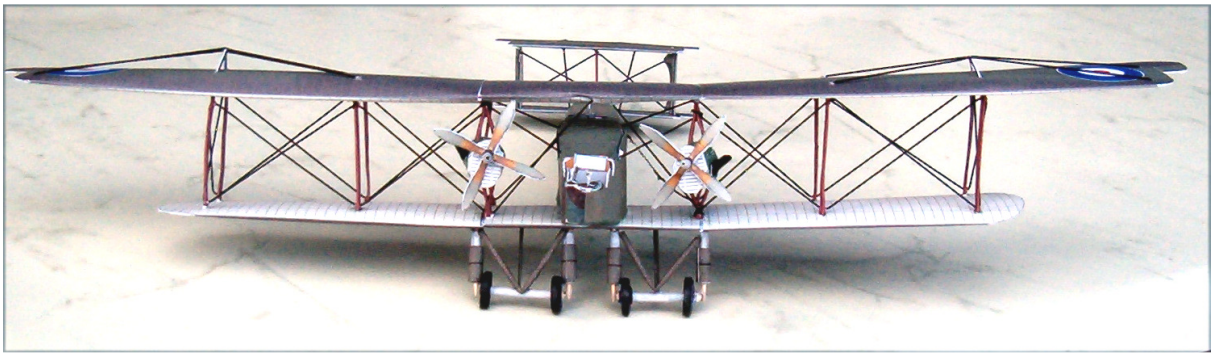
Bob's Card Models

www.bobscardmodels.altervista.org and www.zealot.com [Resources]





Handley Page O/400 1:72

Handley Page, Limited was founded by Frederick Handley Page (later Sir Frederick) in 1909 as the United Kingdom's first publicly traded aircraft manufacturing company. It went into voluntary liquidation and ceased to exist in 1970. The company, based at Radlett Aerodrome in Hertfordshire, was noted for producing heavy bombers and large airliners.

The Handley Page Type O was an early bomber aircraft used by Britain during World War I. At the time, it was the largest aircraft that had been built in the UK and one of the largest in the world. It was built in two major versions, the Handley Page O/100 (H.P.11) and Handley Page O/400.

"A machine capable of paralysing the enemy," demanded Commander Charles Rumney Samson, who was the initiator of the HP O/100 and O/400 programme.

The model is based on the excellent art published in the French "l'encyclopédie illustrée de l'AVIATION", no. 137.

The machine depicted, no. 62447, is one of the first of locally assembled machines, fitted with Liberty engines, and named 'Langley'. It was used by Billy Mitchell to show that bombers could destroy warships. No.62448 hit the Ostfriesland and later dropped a 4000-lb (1814-kg) bomb.
It was the first Handley Page Bomber built in the United States, by the Standard Aircraft Corporation, and first flew on July 6, 1918. It was wrecked when it lost power and force-landed in mudflats on Elizabeth River March 10, 1919.

General characteristics

Type:	Heavy bomber with a crew of 3-5.		
Motors:	2 Rolls-Royce Eagle VIII, 12 cylinders in V-formation, 36 HP.		
Performance:	Max speed		
	Fully loaded at sea-level, 157 km/h.		
	Cruising at 3 050m, 119 km/h		
Weight:	empty 3 860 kg, fully loaded 6 060 kg.		
Dimensions:	Length:	1	9,17m
	Wingspan:		30,48m
	Height:		6,72m
	Wing surface area:		153,10m^3
Armament:	Variable, usually 16 projectiles of 50kg, or 1 bomb of 748kg, 1 or 2 Lewis machine-guns on Scarff circular platforms.		

Building Instructions

Print all sheets on between 160 and 230g card, except Instructions and Sheet 5 which should be printed on 80 - 90g Paper.
Always carefully fit parts together before gluing, and make minor adjustments if necessary.
Bright Green areas must be cut out, BUT only after gluing any folds. The Instructions will tell you when!
Although the model is relatively small, bulkheads have also been used to keep the correct cross-sectional form of the fuselage.

Fuselage

1. Cut out fuselage parts **1**, **2** and **3**. Fold 90° sharply, all tabs other than those marked with an ' * ', ie only the tabs on the front of **1** and the rear of **3**.
2. Cut off the long side tabs, glue one half and attach to part. Colour the inside sides of the bomber and pilot's well, by pasting paper **X** on both sides, inside. When dry, close **1**, then **3** by gluing the other half of the tabs.
3. Close/glue **2**.
4. Cut out, round/fold/glue, rear bomber pit **2C** with grey colour on the inside. Pierce/cut green dot and insert/glue machine-gun platform **2D** , insert **2C/2D** in **2** and glue in place.
5. Close/glue the front of **1**, then the rear of **3**.
6. Cut out green areas on top of fuselage **1** (pilot and bomber cockpits), and bend down tab marked "seats".
7. Cockpits: cut out cradle **2A** and fold down the two sides.
8. Cut out the cockpits **2B**, bend down all tabs, bend to a profile to fit the dark blue wavy line of the cradle, and glue in place on one side. When dry, glue the tabs to the other side.
9. Insert the cradle **2A/2B** into **1**, if all fits well, retract, glue both sides and re-insert. Snip any protruding card. Add the window for the pilot, gluing it on at the correct angle.
10. Insert/glue bulkhead **A** into part **3** as far as it will go (a depth of about 2cm), WITHOUT forcing it. Just add a tiny bit of glue on the 4 corners of the bulkhead.
11. Glue/join the 3 parts.

Wings

12. Lower: Cut out **4**, **5**, **6**. Pierce and cut the green slits and holes on the surfaces (used later for the struts). On **4**, fold only the long tab. Close/glue, likewise with **5** and **6**. Glue left and right wings **5** and **6** onto the central portion **4**, noting the angle of about 3°. This angle will be 'automatic' if you glue the 2 parts exactly to the central portion **4**.
13. Cut out, fold, struts for the cable rigging, parts **8A** and **9A**, and glue in place on the top of each wing.
14. Upper: Likewise with parts **7**, **8** and **9**.

15. Form the 14 struts **10** according to the instructions on the sheet, pierce the tiny holes on the top and bottom ends of each (used later for the securing cables). Insert each in the holes provided in the lower wing and glue in place At present, omit the 2 innermost, front struts - these will be added later with the motors attached. When dry, add the upper wing and likewise glue the struts in place.
16. Glue the top of the lower wing in the position marked and tabbed under the fuselage.

Tailplane

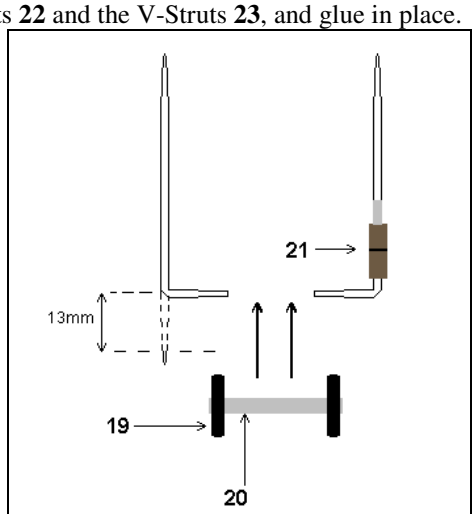
17. Cut out the Upper and Lower Tailplanes **11**, and the 2 Fins **12**.
18. Fold/glue the 2 fins.
19. Fold the trailing and side edges of the tailplanes. Snip out the green positions for the vertical strut **13**.
20. Close/glue the trailing and side edges of the tailplanes.
21. Glue on the Fins **12** on the lower tailplane.
22. Glue on the upper tailplane.
23. Glue in position in the green slits at the rear of the fuselage.
24. Finally, add/glue the central strut **13**.

Engines

25. Cut out parts **14**, **15** and **16**.
26. Pierce green dot of **14**, and snip to permit the snug fit of a tooth-pick.
27. On **15**, bend only the front tabs.
28. Round/close/glue **15** and **16.**
29. Join all 3 parts, cut out green slits on **15** (for struts).
30. Insert a strut **10** through each engine, and join/glue the tips.
31. Glue a strut to each engine.
32. Glue struts in place on wings.
33. The rear strut behind each engine is "in the way" - no problem - cut flush with the top surface and the bottom surface of the rear of the engine, and gently lever it so that the struts act as second supports for the engine. Glue the join.

Undercarriage - Main, Front (Also, see instructions on Sheet)

34. Cut out the Axle Sleeves **20** and roll each on a tooth-pick. Remove tooth-pick. When dry, re-insert the tooth-pick and on each end, roll/glue a wheel **19**.
35. For the vertical struts, cut the tip off one end of 2 tooth-picks, fracture at 13mm from one end, bend to 90°, and glue well. 2-3 above the bend, roll/glue a Shock Absorber **21**.
36. Insert/glue the short end of the shock absorber unit into each end of the axle sleeve.
37. Cut out and roll the 4 front wheels **19**. Blacken the sides with a black felt pen.
38. The axles are made of toothpicks cut to a length of 28mm. Glue a wheel 1-2mm from the end of a toothpick, slip an Axle Wheel Sleeve **20** over the axe, and glue the second wheel 1-2mm from the other end of the toothpick.
39. Prepare the Inclined Struts **22** and the V-Struts **23**, and glue in place.



Assembly of Wheels/Axle

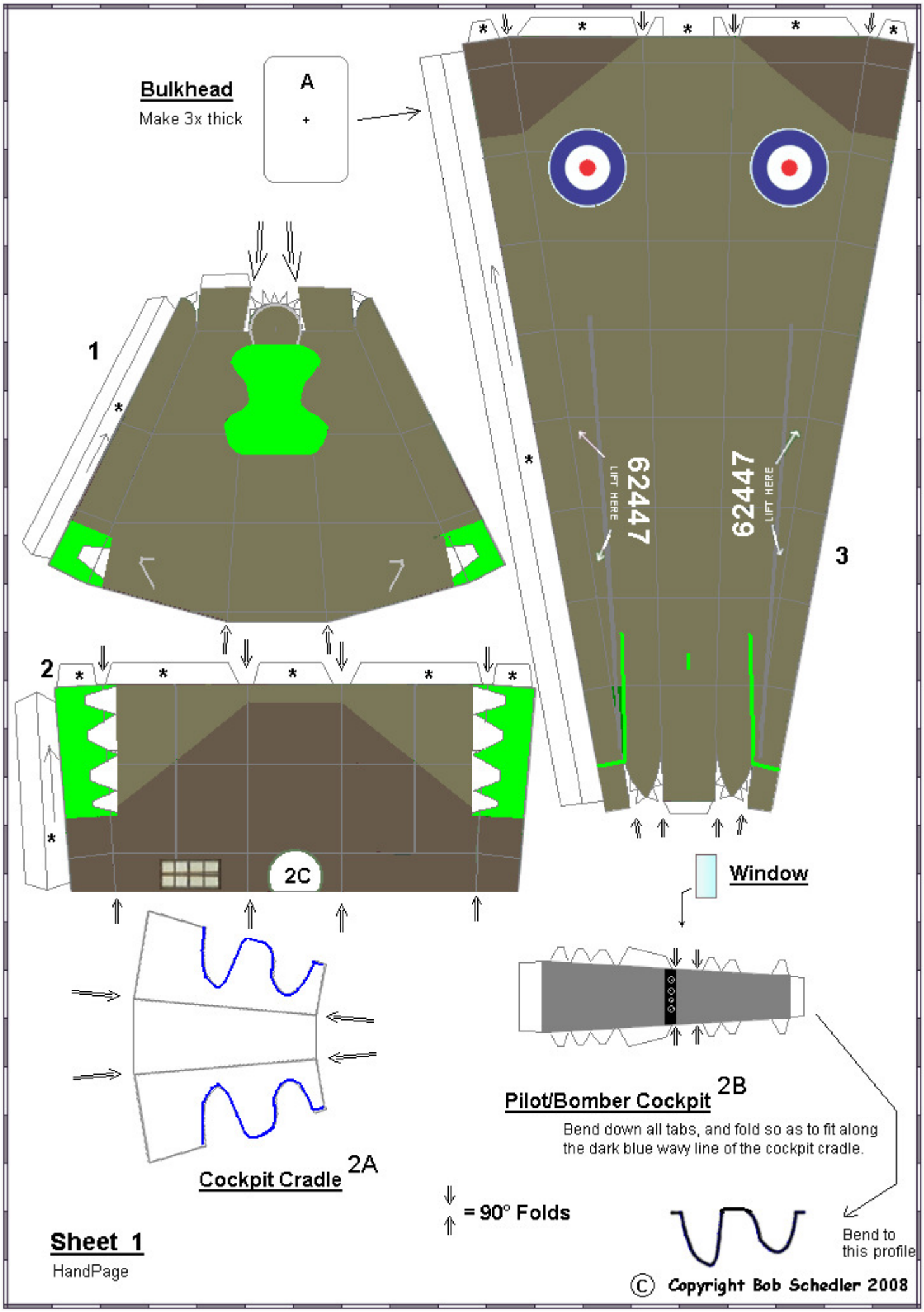
Wire rigging

40. Use a black or grey cotton-coated elastic, 0.5-1mm thick. Using elastic prevents any sag, if a very little tension is employed when 'sewing.'

Varia

41. Glue the Nose Cone **18** on each propeller axle tip, and add a propeller unit in each motor. Cut the rear end of the tooth-pick to length as necessary.
39. Add the pilot seats **24**.
40. Cut and roll/glue the 2 exhaust pipes **26**, pinch the front end of each, and glue on the outer side of each
41. engine.
42. Add the 2 machine-guns **25** at the front, and the 1 at the rear. Cut off as much white card around the
43. machine-gun as you dare!
44. Add the Rear Tail Skid **27**.
45. Cut out, fold and glue the Display Stand **28**.

---oooOooo---


Bulkhead
Make 3x thick
A
1
2
2C
3
62447
LIFT HERE
62447
LIFT HERE
Window
Pilot/Bomber Cockpit 2B
Bend down all tabs, and fold so as to fit along the dark blue wavy line of the cockpit cradle.
Cockpit Cradle 2A
= 90° Folds
Bend to this profile
Sheet 1
HandPage
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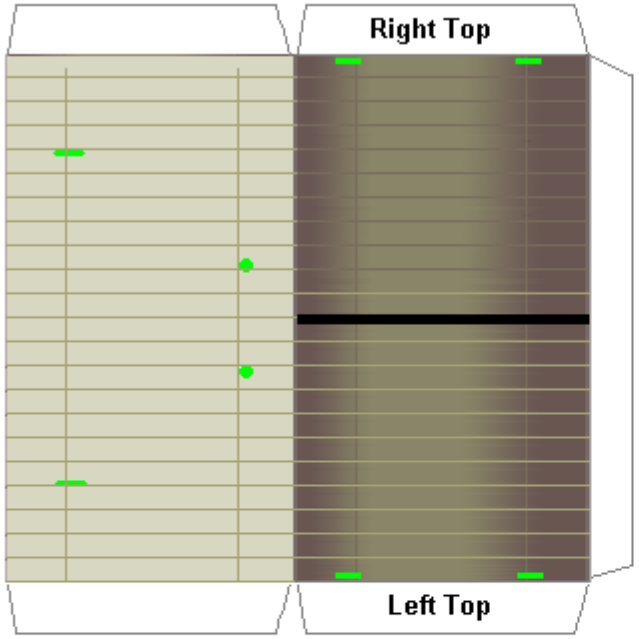
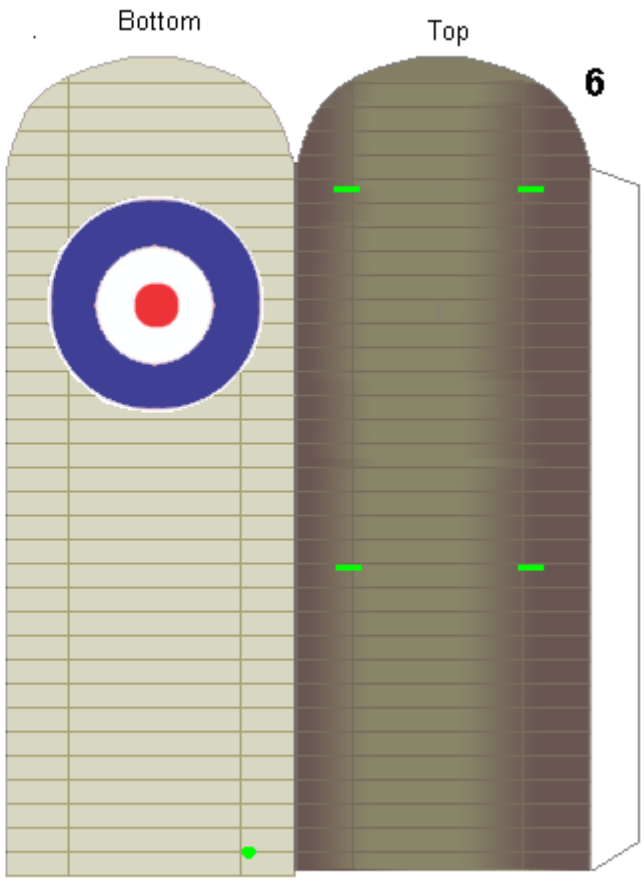
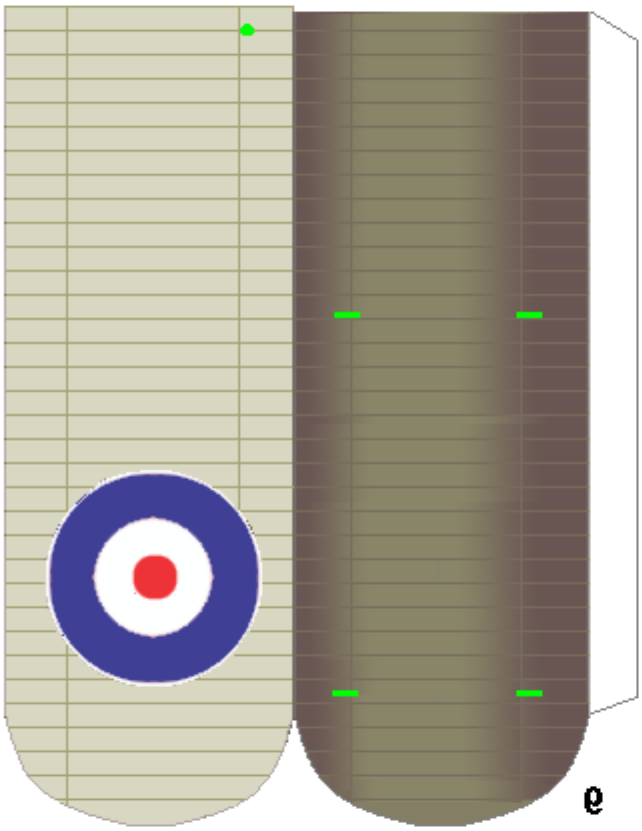
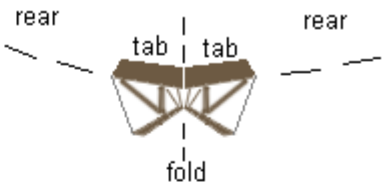




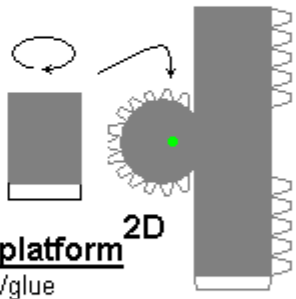


Lower Wing

Pilot Seats 24



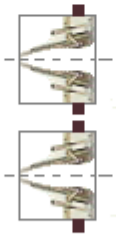
Rear Skid 27



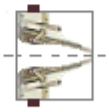
MG platform 2D

Roll/glue around pin.

Rear bomber pit 2C



front
Tabs : bend 90°

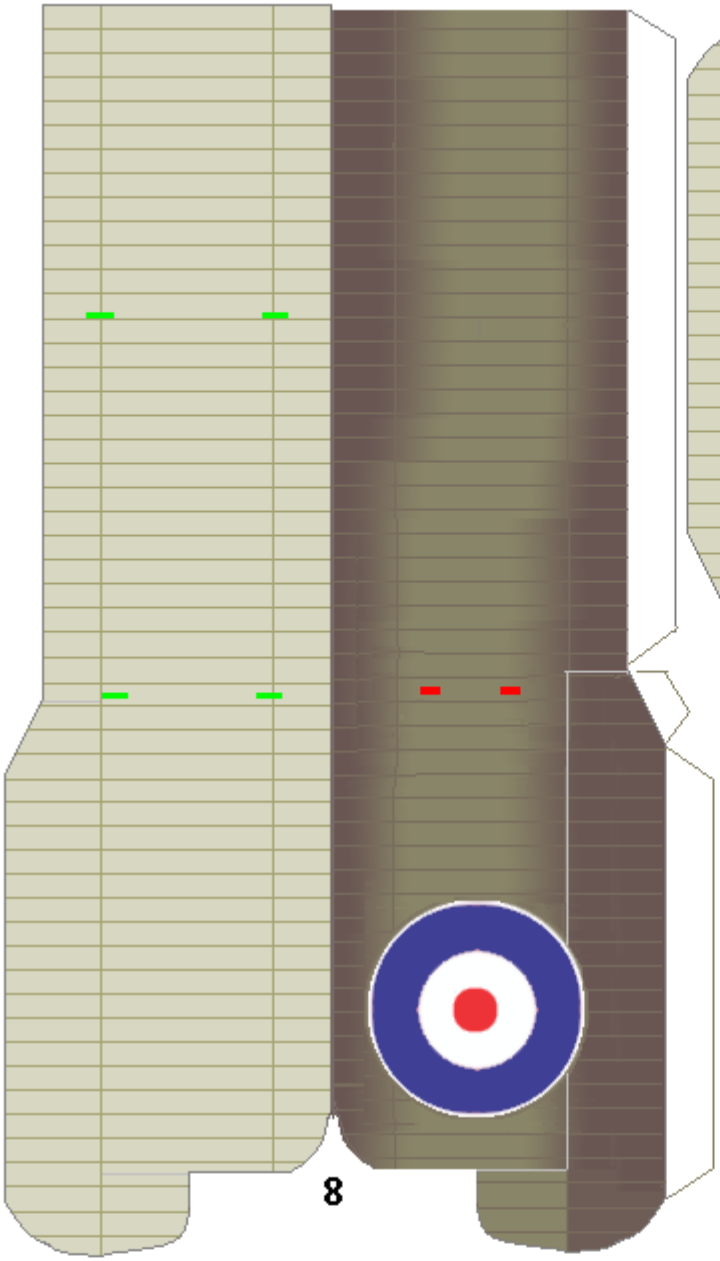


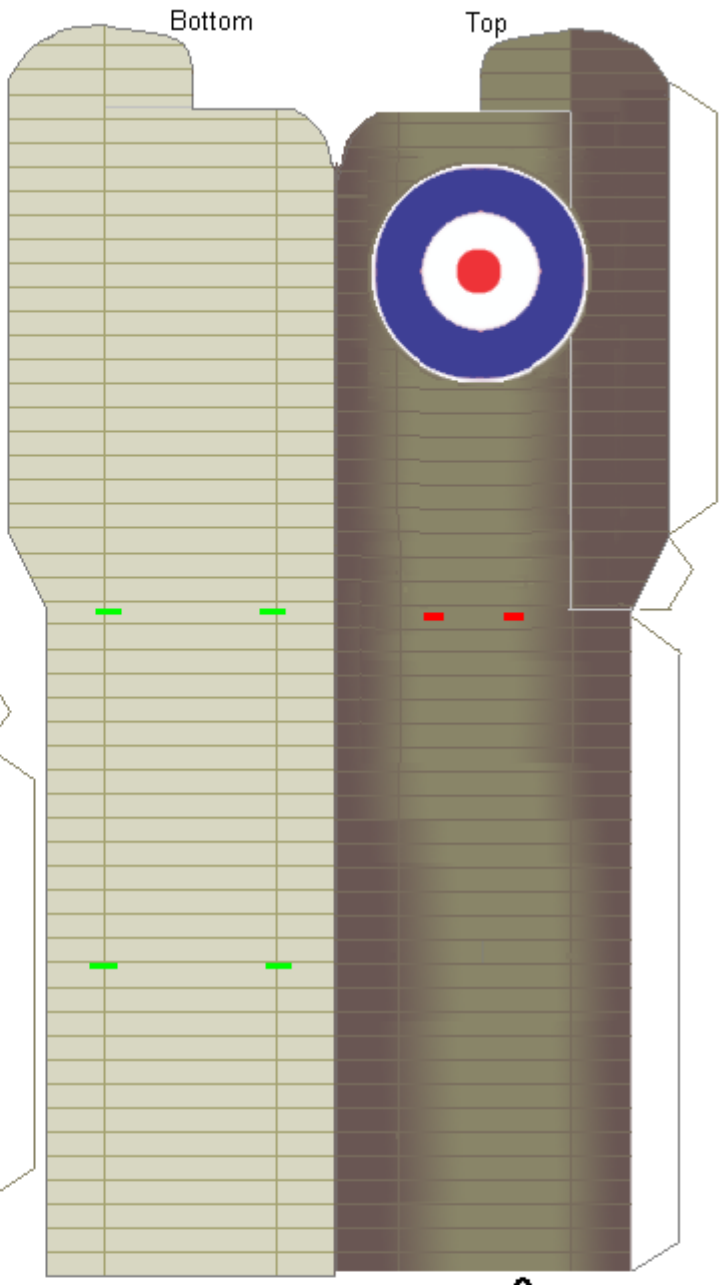
rear
Do not bend

Machine-guns 25

Sheet 2

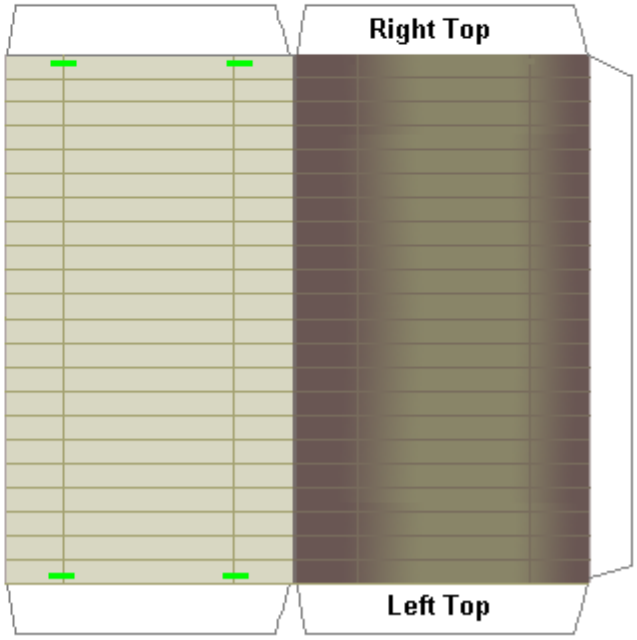
HandPage

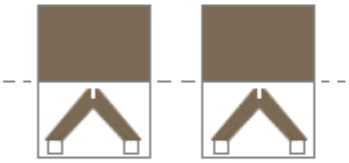




Upper Wing

7



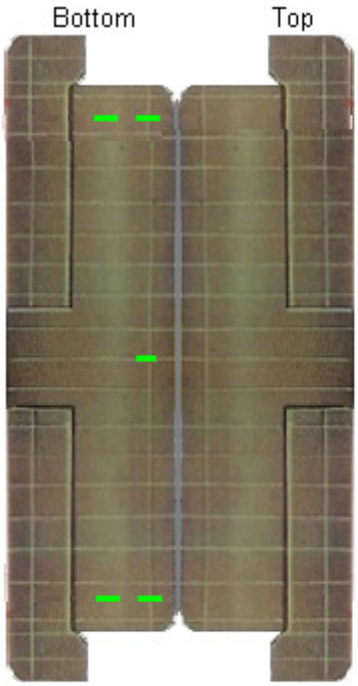


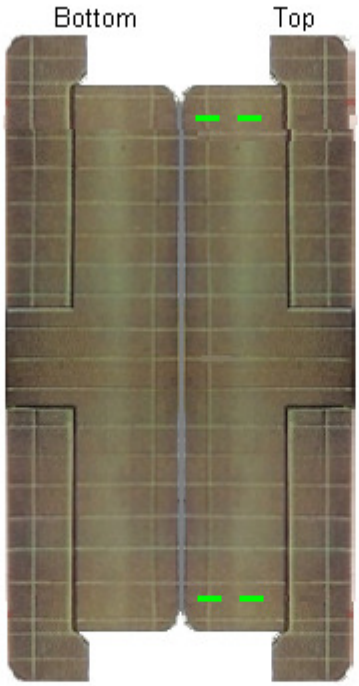
Cable Struts 8A, 9A

Cut out, fold, glue, insert tabs (do not bend) in positions marked red on the top of both wings.

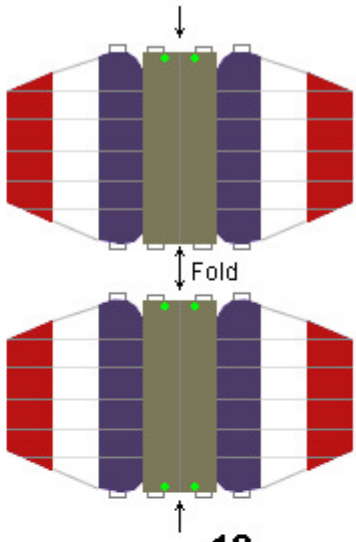
Sheet 3

HandPage





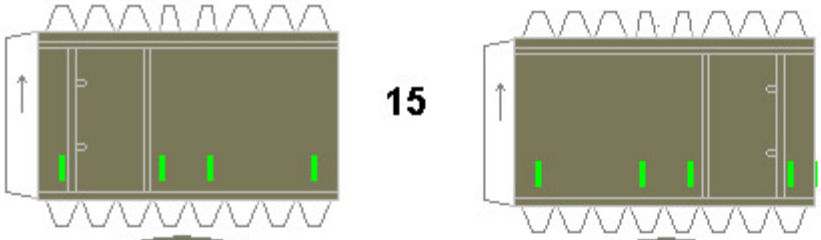
Upper Tailplane 11 **Lower Tailplane**



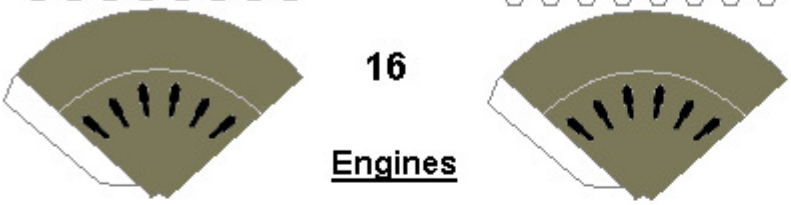
Fins 12

LEFT Make 2x thick RIGHT

14

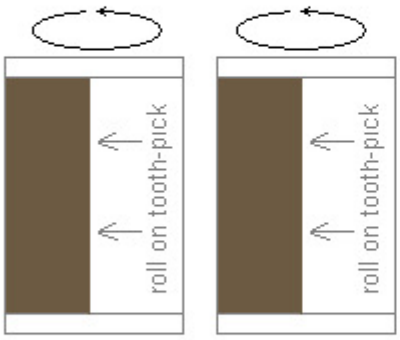


15



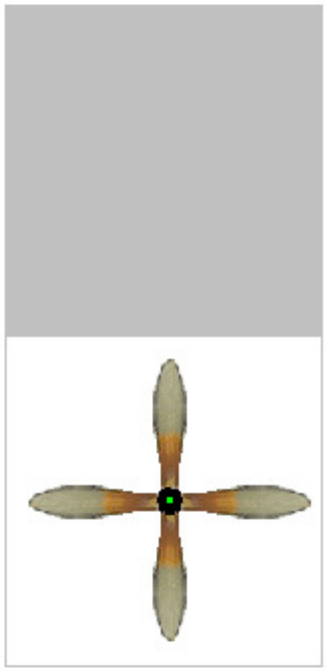
16

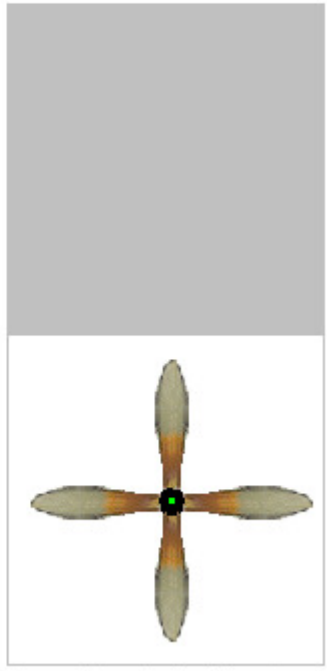
Engines



Inclined Strut 22

Roll each on a tooth-pick, glue to close. When nearly dry, flatten each strut to give more or less a flattened ellipse.



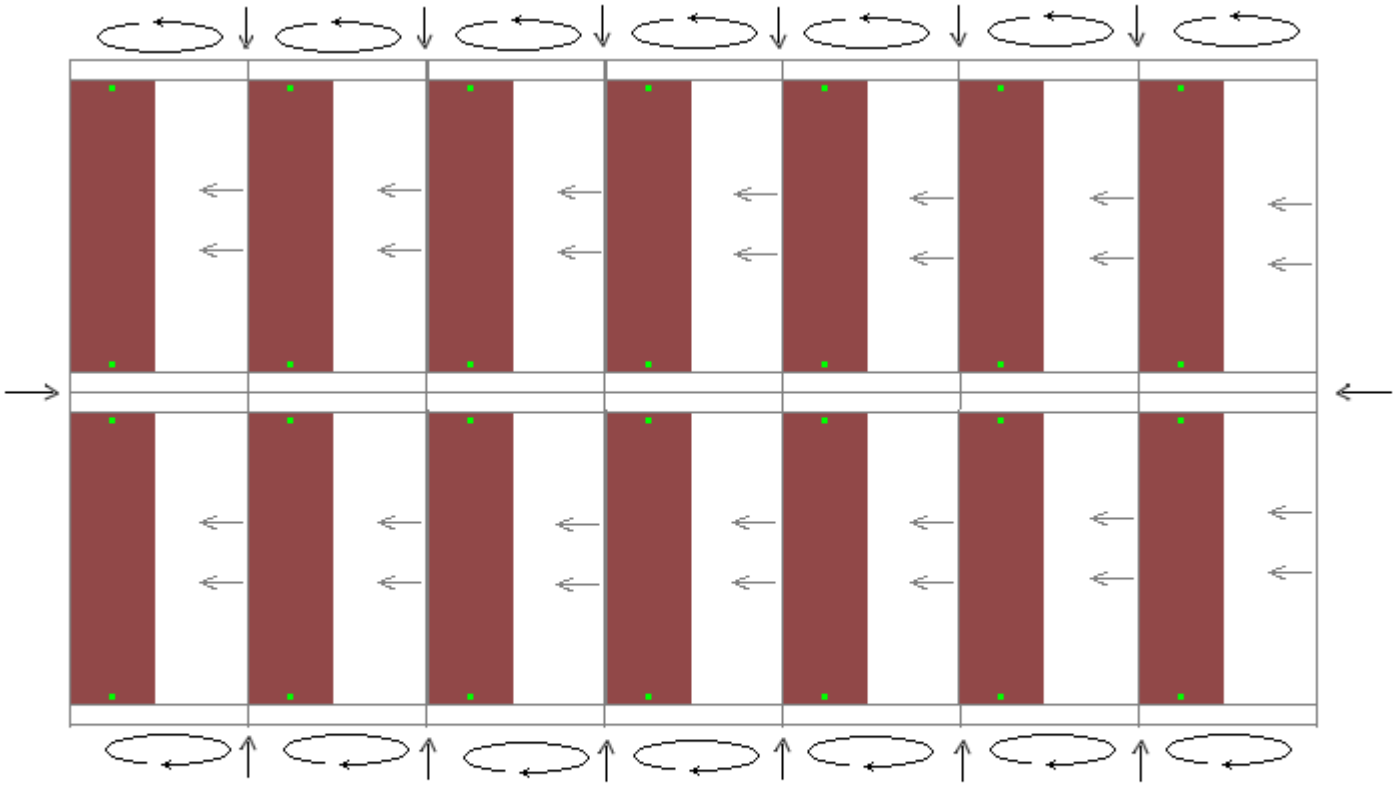


Propellers 17

Fold along dotted line, cut out and glue. Pierce centre (green), stick on a toothpick, glue, add nose cap.

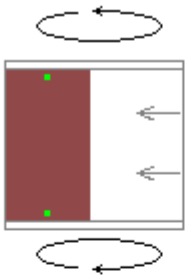
Sheet 4

HandPage



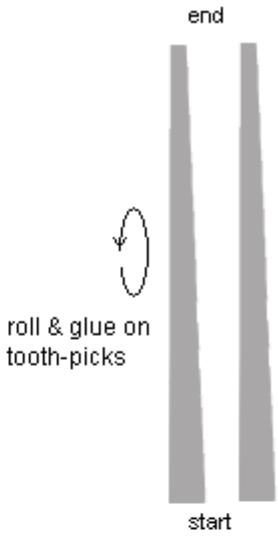
Struts, Wing 10

Cut out along outer arrows, to give 14 struts. Roll each on a tooth-pick, glue to close.
When nearly dry, flatten each strut to give more or less a flattened ellipse.
Pierce green dots after flattening.



Central Strut, Tailplane 13

Roll on a tooth-pick, glue to close. When nearly dry, flatten each strut to give more or less a flattened ellipse.
Pierce green dots after flattening.



Propeller Nose Cones 18

PRINT THIS SHEET ON PAPER

Inside colouring X

Pasted inside the pilot's and the bomber's compartment, on the side walls.

Exhaust Pipes 26

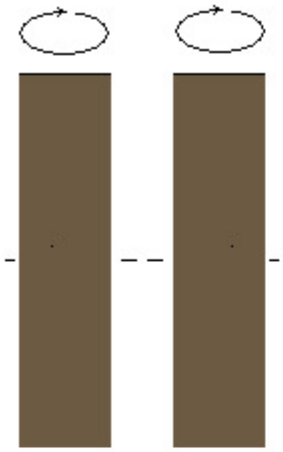
Roll/glue around tooth-pick

Wheel Axle Sleeves 20

Roll around toothpicks, glue & slip on wheel axles (toothpicks).

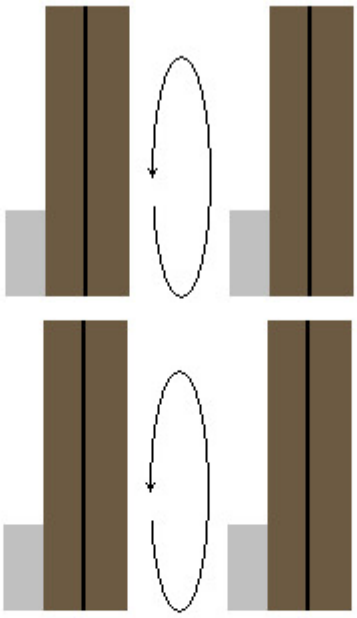
Sheet 5

HandPage

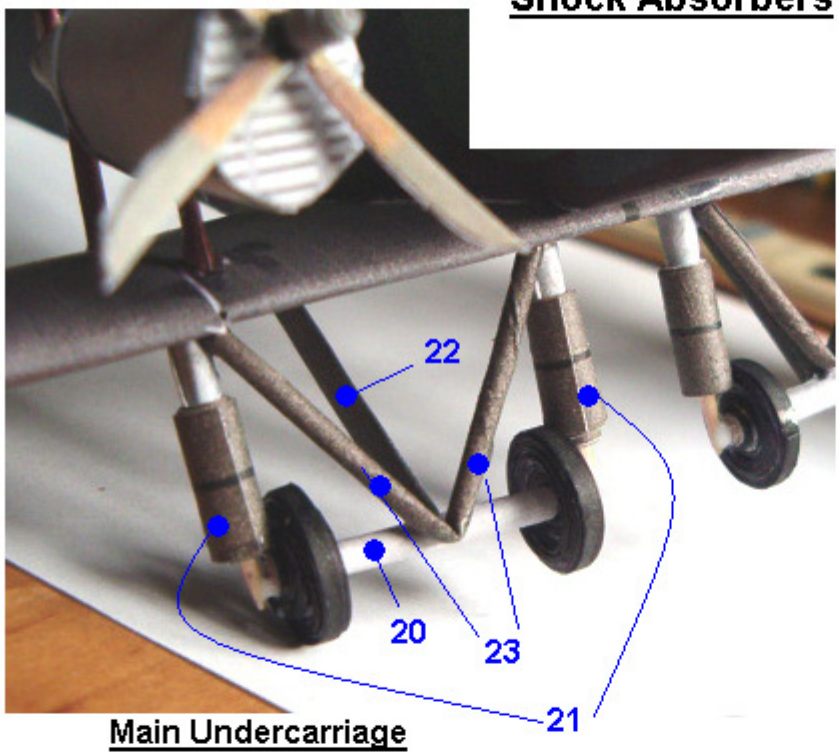


V-Struts 23

Roll each on a tooth-pick, glue to close
When nearly dry, fold in the
middle to give a V.



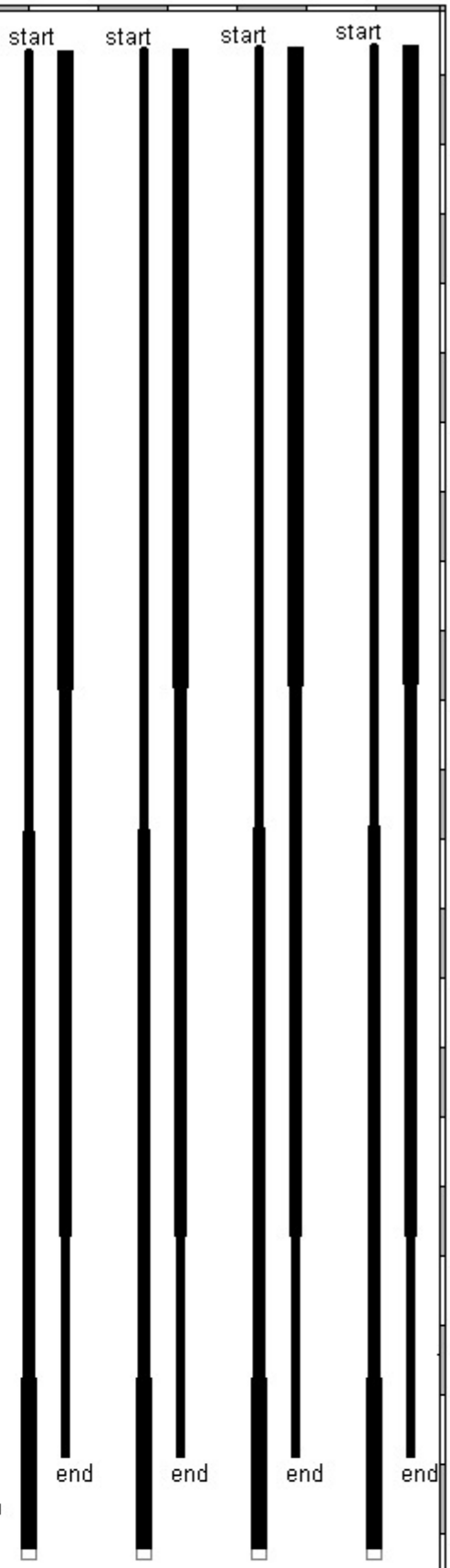
Shock Absorbers 21



Main Undercarriage

Axle sleeves 20

Roll, but do not glue, on a
tooth-pick. Glue to close
the form. Glue a wheel on
each end. Felt pen blacken
the wheel.

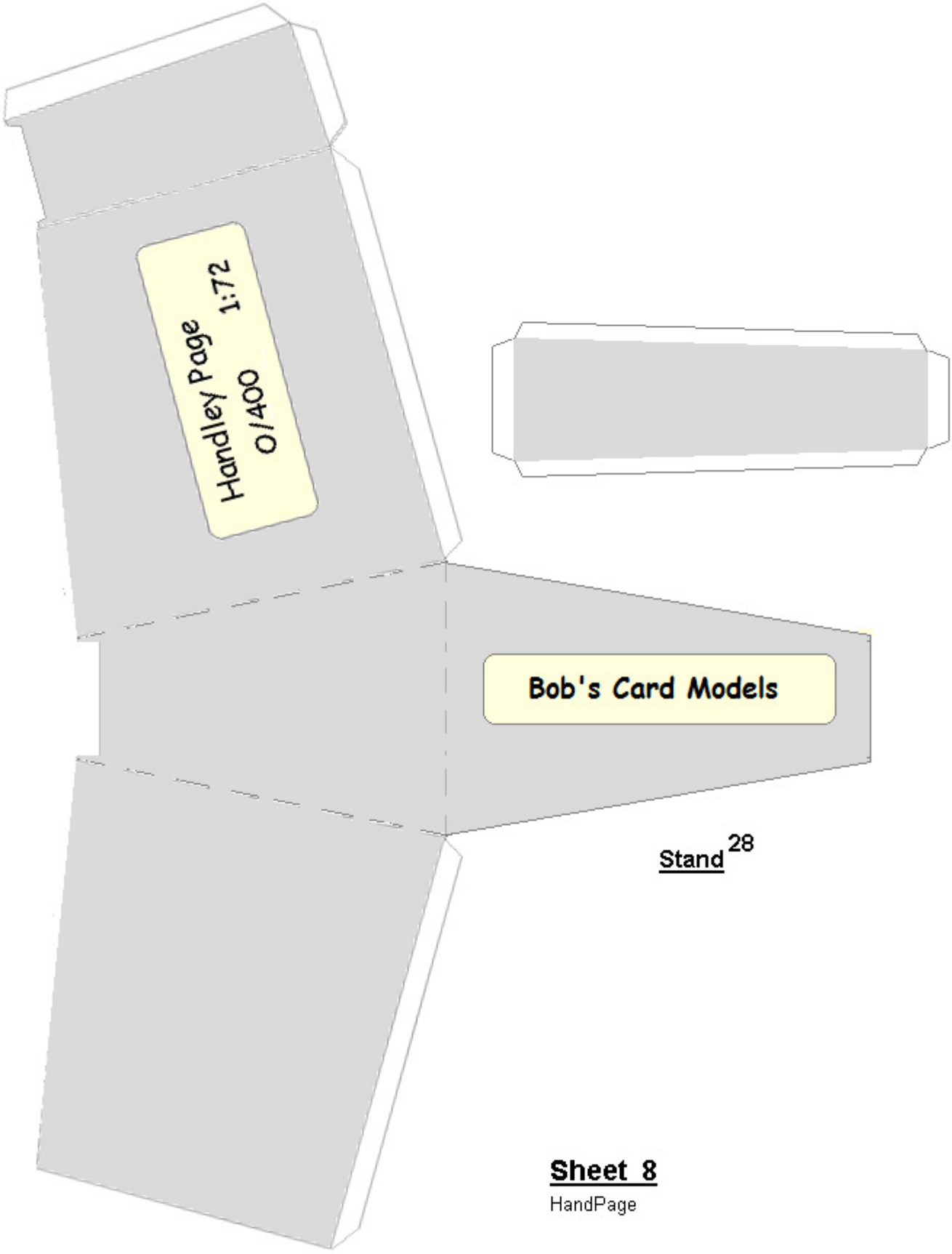


4 Wheels 19

Cut out, join, glue the start end on
the end of the axle sleeve **20**,
roll/glue. Repeat on the other end.

Sheet 6

HandPage



Stand 28

Sheet 8

HandPage