

**FROG**  TRADE MARK

**“S.E. 5A”**

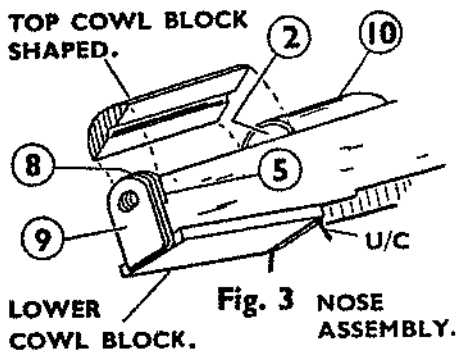
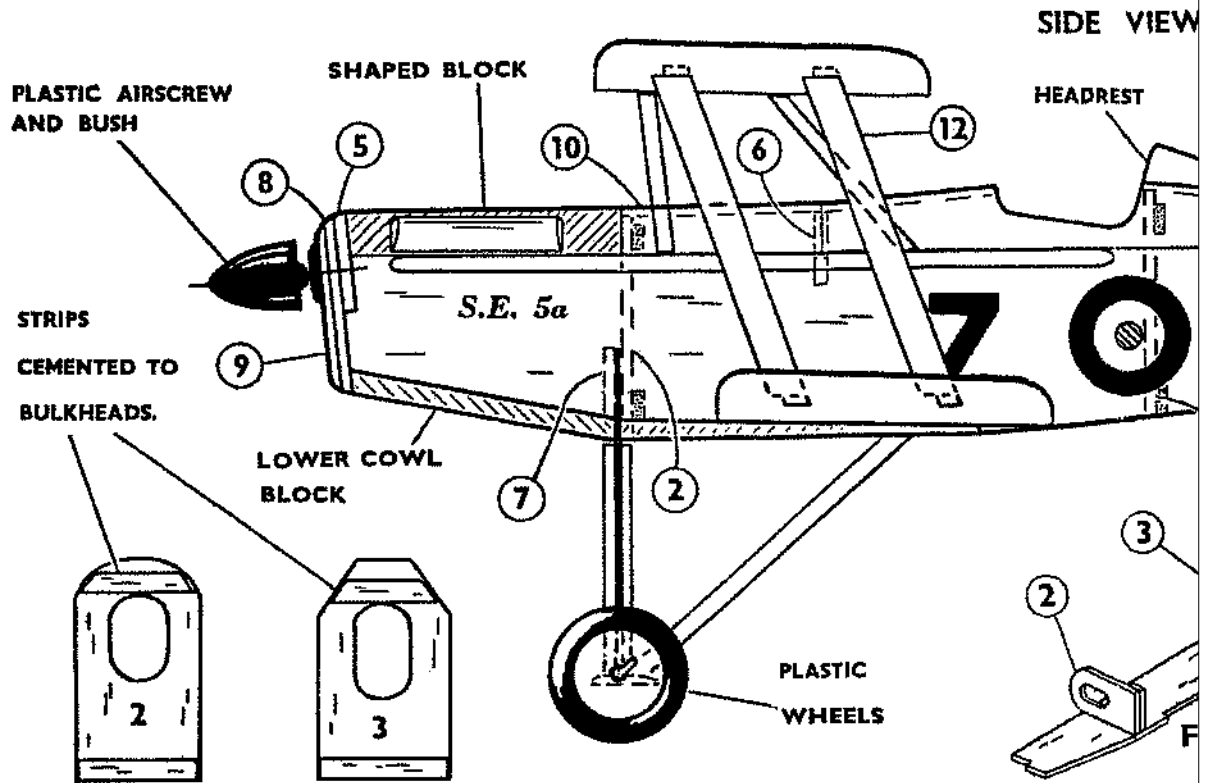
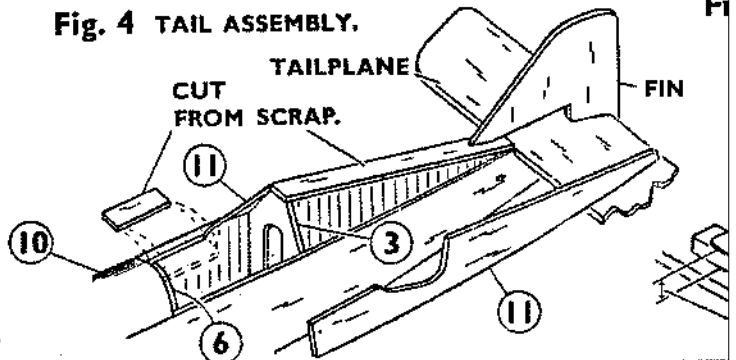


Fig. 4 TAIL ASSEMBLY.



**INTRODUCTION.**

The Frog Junior Scale Series covers a range of models which are based on the designs of service and light aircraft.

In common with other Frog models, they embody very simple construction methods having all the parts cut to shape, which only require cementing together.

To ensure a satisfactory job, study the plan and check the parts with it before commencing. Assemble the model step by step as shown.

Cement and “dope” are not included in this kit, but they can be bought at any model shop. Use quick-drying balsacement (glue) such as Frog Universal. You will also need a balsa knife or razor blade and a few pins.

If you enjoy building this model, remember there are many others in this series equally attractive.

**BUILDING INSTRUCTIONS**

**FUSELAGE ASSEMBLY.**

Carefully remove all the parts from the balsa knife or a piece of razor-blade to separate clean edge. Start by marking the bulkhead pieces 1 from the side-view drawing. Then cut a balsa strip cut from scrap, to bulkheads 2 and 3. Cement these to one of the side panels, as shown in fig. 2. They are upright, and allow to dry. Then cement in place with bulkheads 4, 5 and 6 as in fig. 2.

**UNDERCARRIAGE.**

Cement the shaped wire piece into place with bulkhead 2. This is held in place by piece 7, with the wire. Fit the wheels in place and bend the wire over.

50 mm 100 150

# .E. 5A"

JUNIOR  
SCALE  
SERIES

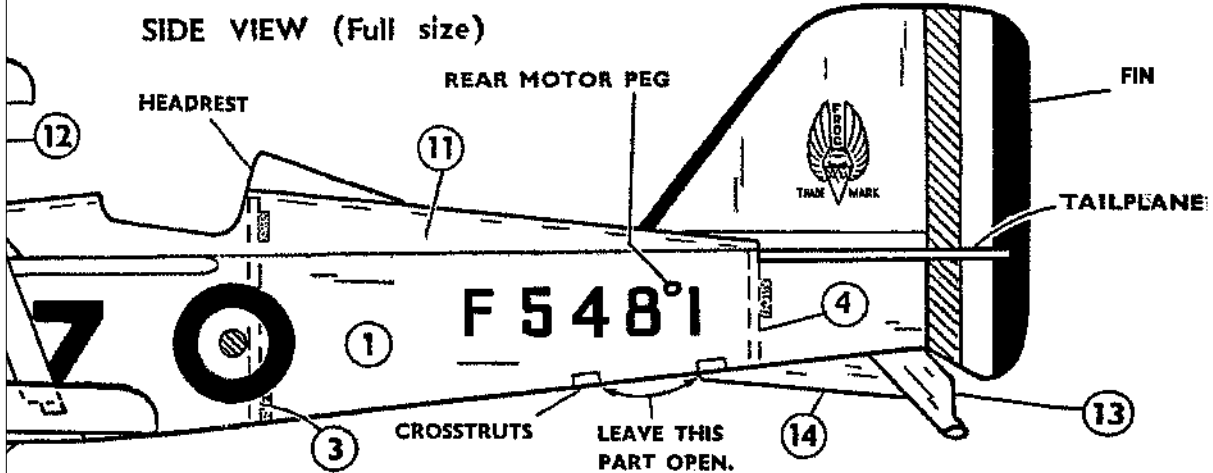


Fig. 2 FUSELAGE SIDES ASSEMBLED TOGETHER.

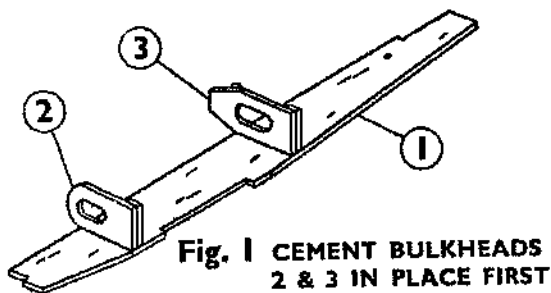


Fig. 5 RAISE WING TIPS AND CEMENT ALONG CREASE LINES.

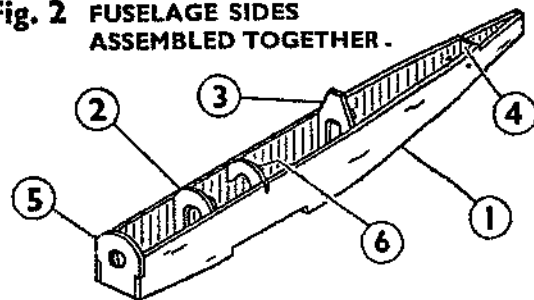
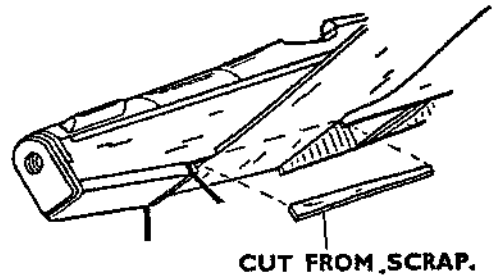
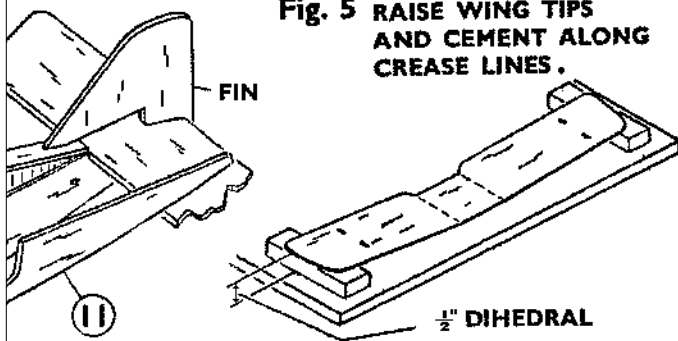


Fig. 6 EXHAUST PIPES AND LOWER WING ASSEMBLY.



## ASSEMBLY INSTRUCTIONS

### ASSEMBLY.

Remove all the parts from the balsa sheet using a piece of razor-blade to separate them with a part by marking the bulkhead positions on the side the side-view drawing. Then cement pieces of from scrap, to bulkheads 2 and 3, and cement the side panels, as shown in fig. 1. Make sure and allow to dry. Then cement the other side bulkheads 4, 5 and 6 as in fig. 2.

### FIN.

Shaped wire piece into place in front of bulkheads held in place by piece 7, well cemented over the wheels in place and bend the ends of the

### COWLING.

Sandpaper the ends of the lower cowl block to the angle shown in Side View and cement it into place. Then cement parts 8 and 9 to the front of the fuselage. Remove part 10 from the balsa sheet, damp it on the outside with water to help bend it to shape and cement it in place over bulkheads 2 and 6. Fit the top cowl piece in place between bulkheads 2 and 5. The underside should be cut away to allow more freedom for the elastic motor, fig. 3. Shape the blocks with a sharp knife or razor blade, and sandpaper them smooth.

### FUSELAGE DECKING.

Remove the decking pieces 11 from the balsa sheet and cement in place over bulkheads 3, 4 and 6. The top pieces are cut from spare balsa sheet, and cemented in place, see fig. 4. When set, sandpaper to a rounded section.



# "S.E. 5A"

## INSTRUCTIONS (contd.).

### TAIL ASSEMBLY.

Lightly sandpaper the Tailplane and Fin edges and cement these parts in place on the fuselage, making sure they are quite "square" with it when viewed from either end.

### EXHAUST PIPES AND HEADREST.

Cut the 3/16in. square strip into 3 pieces. Shape one piece for the headrest and cement it in place, see Side View. Shape the other two pieces to a "D" section and fix them to top cowling block just above the fuselage side. Cut the thin square strip into two pieces, to the length given on Side View to form the exhaust pipes. Sandpaper these to a round section and cement them to the fuselage sides.

### WINGS.

Remove the cut-out wings from the panel, and sandpaper the edges smooth. Place them on a flat board or table, hold down the centre parts with weights or pins and raise the tips approximately 1/2in. as in fig. 5. Apply cement along crease lines and allow to dry. When these have set, cement the lower wing on to the bottom of the fuselage, see fig. 6. Cut two tapered pieces from spare balsa sheet, and cement them under the wing to line up with the fuselage sides.

Cement wing struts 12 to the lower wing in the slots, making sure they are upright when viewed from the front and cement the top wing in place on top of the struts, see that the top wing is directly above the lower wing (see the 1/4-size plan view). When this has set cut two of each centre struts to shapes given in fig. 7. Cement these in place as shown in Side View. The tailskid parts 13 and 14 are cemented together first and then fixed to the rear of the fuselage.

### COVERING.

Cut out the bottom fuselage covering piece from the plan and cement in place from bulkhead 2 to cross-strut.

### U/C FAIRING.

Cut two strips from spare sheet balsa and cement them to the U/C legs. When these have set, cement part 15 to them, between the legs, fig. 7. Cut two more pieces 2in. long, sandpaper the ends to an angle and cement them in place to form the rear U/C struts. (See Side View).

### DECORATING.

The balsa wood parts being ready-printed, very little, if any, painting is necessary, and should be restricted to the top part of the fuselage. Use Cellulose Lacquer, and apply it quickly and evenly with a soft brush. Do not put it on heavily, or the model will not fly well.

### MOTOR.

This is an elastic band 6in. long. Lubricate it with Frog Rubber Lubricant, or Castor Oil, and insert it with the help of a length of wire or thread. Bend a hook at one end of the wire and insert it into the front end of the fuselage. Hook the band on to it through the opening at the rear, and insert the rear motor pin (cane) through the holes in the fuselage and through the loop of elastic. Pull the band out through the front, and hook it on to the Airscrew shaft (complete with airscrew). The model is now complete and ready for flying. A drop of thin oil on the airscrew shaft will improve the running.

### FLYING.

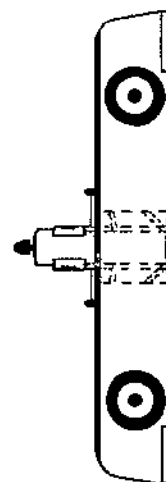
This model can be flown indoors or out, but it should only be used out-doors on a calm day, owing to its size.

A slight difference in balance may be shown with each individual model, owing to the varied density and weight of balsa wood.

Fig. 7

WING ST  
AND U/C

C  
F



Te  
ward c  
pin to  
small v  
into th

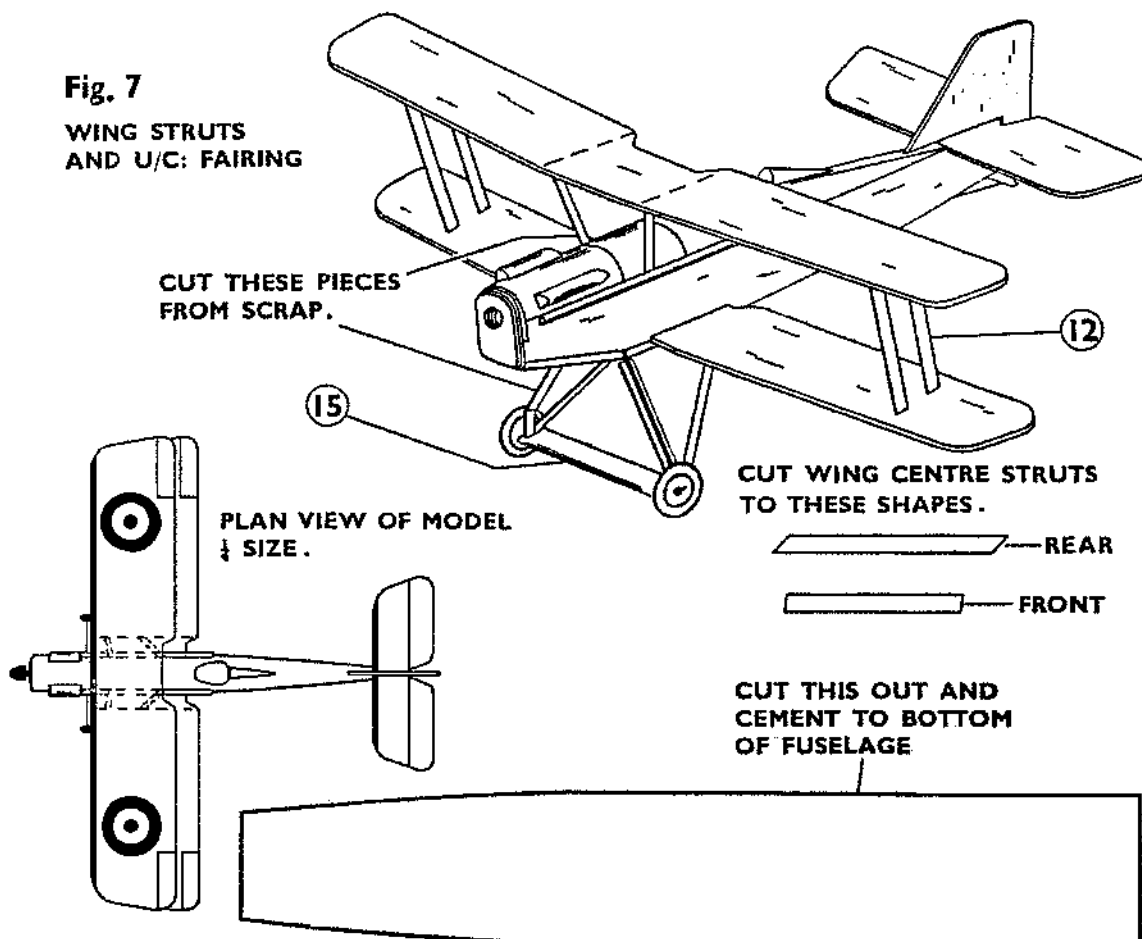
W  
the mo  
twistin

In  
300; if

mm

100

150

**E. 5A"****CAT. No. 583FK.****Fig. 7****WING STRUTS  
AND U/C: FAIRING**

Test-glide the model first to check the balance. Hand-launch it in a slight downward direction. If it dives to the ground, add a small weight such as a small nail or pin to the rear end of the fuselage. If the model climbs steeply and stalls, add a small weight to the nose of the fuselage. A small nail or drawing pin can be pushed into the cowl block for this.

When the glide seems satisfactory, put a few turns on the motor and launch the model into wind (if any). The turn can be adjusted by bending the fin, or by twisting the wing slightly.

Increase the turns on the motor gradually, up to a maximum of approximately 300; if the motor is not lubricated, the turns must be limited to approximately 150.

Designed and Made in England by

**INTERNATIONAL MODEL AIRCRAFT LTD.**

MORDEN ROAD, MERTON, LONDON, S.W.19.

Printed in England.