

KEIL KRAFT

LUSCOMBE SILVAIRE

The all-metal Luscombe Silvaire is one of the most beautiful American light planes ever produced. Plans for this 1/20 scale model were drawn up from data supplied by the Luscombe Corporation of Dallas, Texas, U.S.A.

Building this model is quite simple — but study the plan carefully and follow these instructions exactly. Use a metal straight edge as a guide when cutting along the lower edge of ribs — and for other straight cuts. Cover the plans with a sheet of greaseproof paper before starting to build. Pins should be used to keep the various frameworks in position on the plan until they are dry.

QUICK BUILDING SCHEDULE.

1. Cut out all the formers and other fuselage parts (F1 - F16) and build up the 'U' shaped portions F6a and F7a from 3/16" x 1/16" strip.

2. Pin the F13 crutch members to the top view of the fuselage, cut pieces of 3/16" x 1/16" to shape and cement them in place. Now cement the upper halves of the formers (F4 - F11) to the crutch frame — checking the angles of F5 and F6a with the 'Y' template (see plan). Insert the F12 pieces between the F6a and F7a formers — flush with the outside edges. Attach the 1/16" sq. side braces to F5, F6a and F7a.

3. When dry, carefully lift the top fuselage assembly from the plan and attach the lower halves of the formers. Cement F1, F2 and F3 together and then attach to the crutch (note the slight backward tilt). Notch F14 into F3 - F6.

4. Cement F16 to the underside of the end of the crutch. When dry, cement three main lower stringers in place. Lightly cement a piece of 1/16" scrap on top of the crutch at the extreme end. Now attach the three upper stringers — both in front and behind the cabin.

5. Attach the two remaining stringers — from F3 - F7. Sharply curved stringers may be bent by carefully pressing with the thumbnail on the inside of the curve at intervals of 1/4".

6. The undercarriage is made up from two pieces of wire — A and B. Bend A to shape, using the patterns shown on the plan. Begin by bending the rear legs first, then bend up the ends to form the 'V' portions. Finally, bend the ends over to form the front cross piece. Insert in the fuselage, then bind the ends of the wire together. B is a straightforward piece of bending — the ends being cemented or soldered to the lower ends of A. Reinforce with scrap balsa at the attachment points — and use plenty of cement. Fill in with scrap where the wire enters the fuselage — to provide a seating for the covering tissue.

7. Install the cabin window in the top of the fuselage — between F6a and F7a. Carve and sand the nose formers (F1 - F3) to shape and check that the nose plug is a snug fit. Cement the tailskid to the rear of the fuselage. Cover the top of the fuselage between F3 and F4 with stiff writing paper — then do the same between F4 and F5. The top of the fuselage from F6a to F8 is also covered with writing paper — first cutting out a hole the shape of the upper cabin window. Cement the tail peg pieces (F15) in position. Add the cabin braces ('V').

8. Build the two wing panels next. Begin by pinning the trailing edges and tips flat on the plan, then add the ribs — checking that the latter are quite vertical, except for the W1 ribs

which are tilted inwards slightly (check with 'Z' template) to allow for the dihedral angle. Note also how the W1 ribs are cracked and bent in the top view.

9. Next add the spars and the leading edges. These parts are gently cracked to provide taper at the tip. When the panels are quite dry, remove from the plan and shape the trailing edges with sandpaper — flat on the building board. The leading edges and tips are also shaped as indicated.

10. Build the tailplane and fin flat on the plan. Wait until they are dry, then lift up and round off the outer edges. Cover the flying surfaces with tissue. Cover the flying surfaces with tissue (using tissue paste as adhesive) — starting with the undersides of the wing panels and tailplane. Lap about 3/32" of the tissue over the leading edges, trailing edges and tips. Spray the tissue with water (or steam) to tighten in preparation for dopping. Give the flying surfaces one coat of dope (thinned 50%) and pin them down flat on the building board (packed up with scrap strip to prevent the dope sticking to the board) until quite dry. This prevents or at least minimises the chances of warps developing.

11. Dope the pieces of writing paper covering — then cover the fuselage with long strips of tissue. After water shrinking, give two coats of clear dope. Cover the A undercarriage struts with writing paper. Now attach the wheels — retaining them in position with dabs of cement.

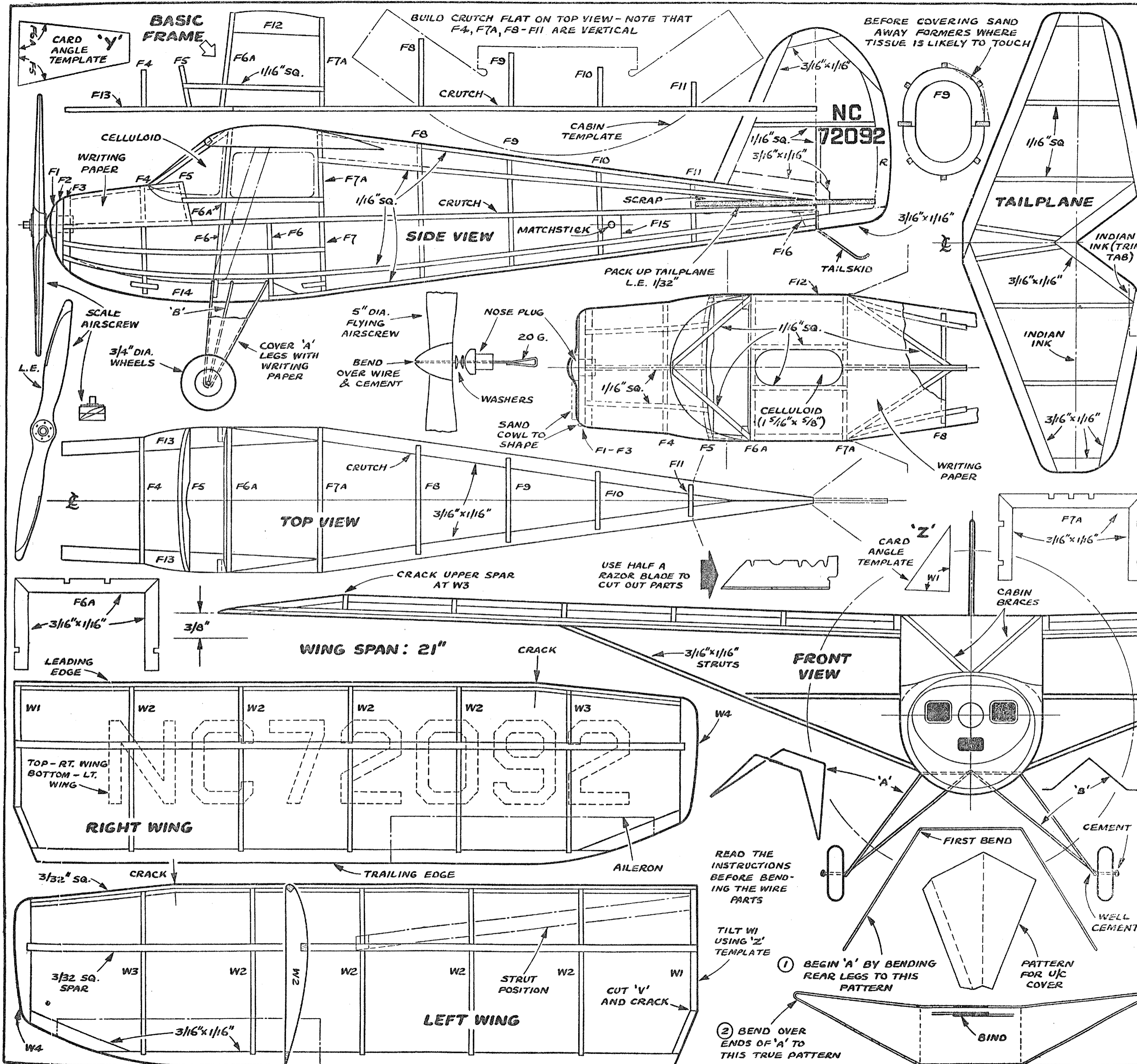
12. Cement the tailplane to the top of the crutch, checking that it is quite horizontal and aligned correctly in the top view. Fill in between the tailplane and the adjacent stringer with scrap. Cement the fin to the fuselage, checking that it is vertical. Cement the wing panels to the fuselage, blocking up the tips with books, until the correct dihedral angle has been reached.

13. Cut the wing struts to length and sand them to a streamline section. Then angle the ends and cement them to the wings and fuselage. For a strong joint, scrape away the tissue at the points where the struts are attached. Finally attach the cabin template with cement — working slowly and carefully. Sellotape is useful for holding the celluloid in position until the cement has set.

14. Begin the airscrew assembly by bending the hook for the rubber. Push the wire through the nose plug, add the washers and the airscrew — then bend over the front portion and cement into the notch in the airscrew. Cut away the tissue (on one-side) in the bay behind F15 and pull the motor through from the rear by means of a piece of weighted thread. Hook on the rubber loops to the airscrew hook and weight up the nose of the model with pieces of old cement tubes — until the model balances at the wing spar.

15. Choose a calm day for your first flights and glide the model to start with. If the nose comes up sharply and then abruptly drops, add more weight to the front. If the model dives, remove a little weight. Violent turns in either direction are usually due to warped flying surfaces. Correct a turn by twisting the trailing edge of the rudder away from the turn. More winds may be put on the rubber motor if rubber lubricant is applied. A spot of oil on the airscrew shaft cuts down on bearing friction.

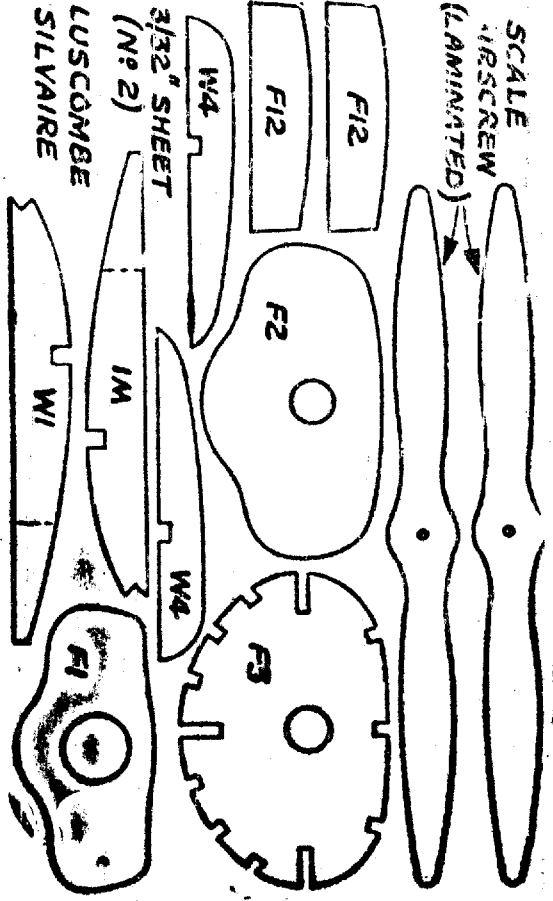
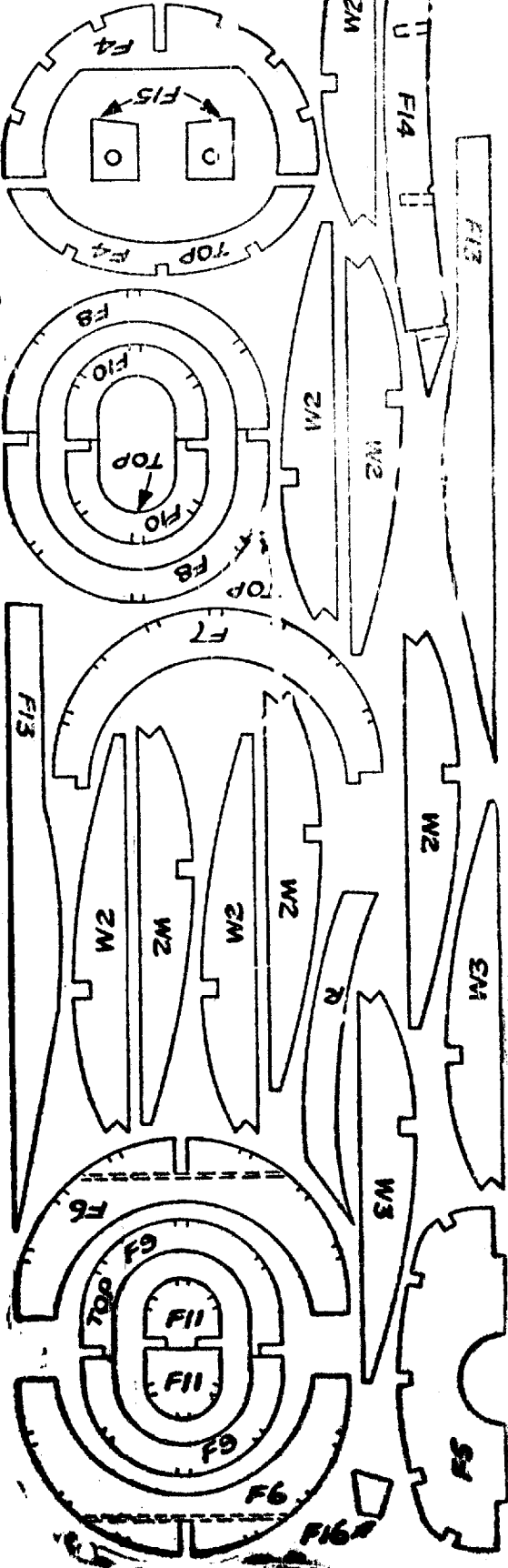
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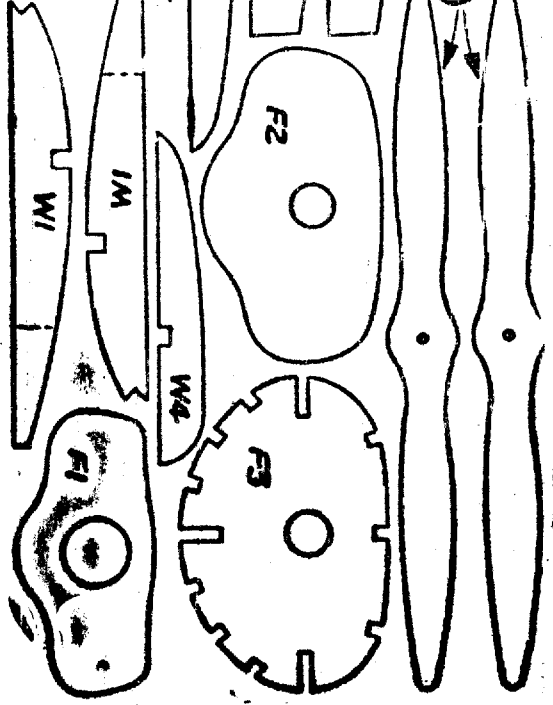
LUSCOMBE SILVAIRE

1/16" SHEET
(N° 1)



LUSCOMBE SILVAIRE

3/32" SHEET
(N° 2)



SCALE
1/8" SCREW
(LAMINATED)