Frog Flight Aeronca Sedan

This plan package is not a 100% copy of the original kit. As you make your way through the instructions you will see the differences. Here's just a few of them:

- The original kit used 1/16" balsa. This plan package uses 1/32" balsa with the exception of the fuselage formers. These are contained on one sheet and the 1/16" thickness is obtained by adding another 1/32" layer. The extra layer is laid cross-grain to the printed sheet. Spray contact cement is used for laminating the sheets together. Liquid cement will cause the balsa to warp.
- Instructions for a removable nose piece are included. 1/8" Tan II rubber is recommended for the motor.
- A three-piece wing with a center section is used instead of a two-piece wing like the original.
- Many pieces are slightly oversized to allow for custom fits.
- The original instructions were very vague. In this plan package they are broken down step-by-step.

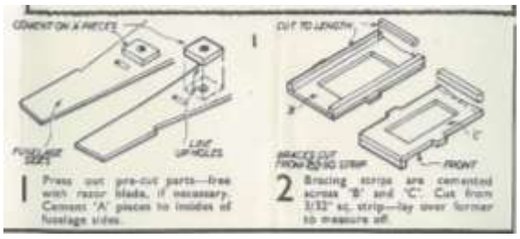
The complete original instructions are located at the end and include basic tips on how to fly the model. I hope you enjoy it. If you find any errors with the plan package I would greatly appreciate knowing about them. Please contact me at notsginivil40@yahoo.com

Frog Flight Aeronca Sedan

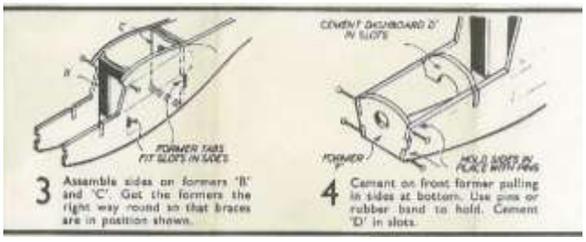
The original step-by-step instructions are presented here with notes about optional assembly procedures. The additional artwork is from a redesigned Cleveland Quickie Luscombe Sedan kit drawn by Paul Bradley of Parmodels.com. Visit his website to see some great plans for other kits.

This plan package is not die-cut like the original kit. It is highly recommended that a sharp Xacto® blade be used at all times. Don't skimp on this or you will tear the wood when cutting it out. Off-brand blades are not as good as the Xacto® brand. When the blade starts to drag, change it out for a new one. It is also best to **NOT** cut on the lines. Cut the pieces out oversized and sand down to the line. This is especially important when cutting out notches.

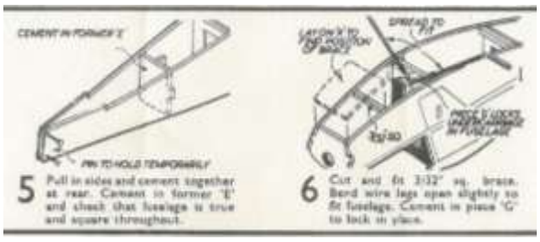
I prefer to use Loctite® brand Super Glue. Again, don't skimp on the brand name. Off-brand cements are inconsistent.



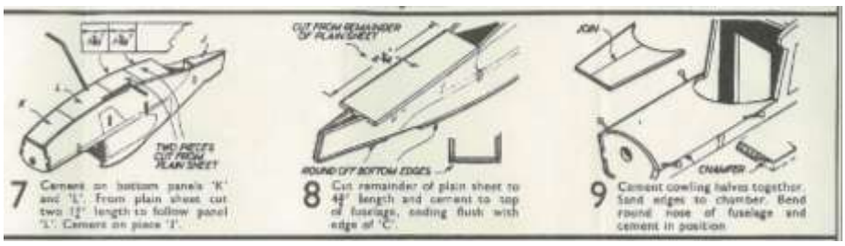
Add the motor supports as shown in step 1. The bracing strips in step 2 are not necessary since the fuselage formers are 1/16" thick with cross-grain construction.



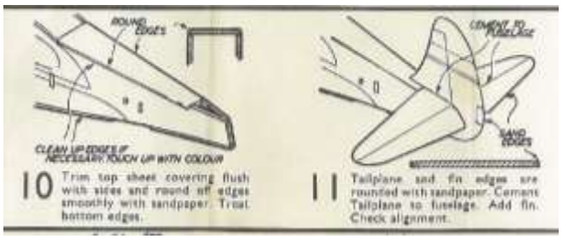
In step 3, former "B" is wider than former "C", therefore they should not to be set at 90 degrees to the fuselage side. Before gluing, make sure the fuselage sides are evenly aligned. No changes to step 4. An extra former "F" is provided if you want a beefier nose.



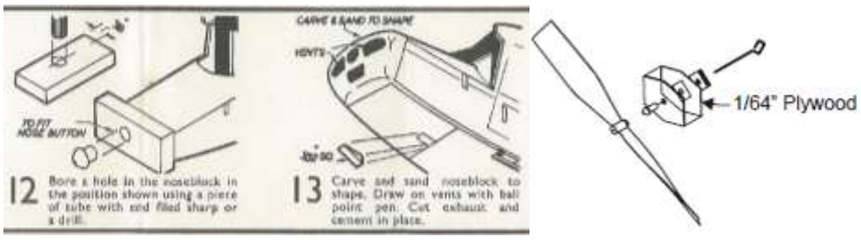
No changes to step 5. Step 6 shows a 3/32" brace. This is optional. The single piece of bottom fuselage shown is not necessary. A one-piece fuselage bottom is added later. Landing gear is shaped differently but attaches the same way.



In step 7, all of the separate pieces are replaced by a one-piece fuselage bottom. The square fuselage top shown in step 8 has been replaced by a piece that more closely matches the shape of the fuselage. Step 9 shows a two-piece top cowl. This has been replaced by a one piece cowl. All pieces are slightly oversized. Sand the edges as shown in step 10 after the pieces are glued on.



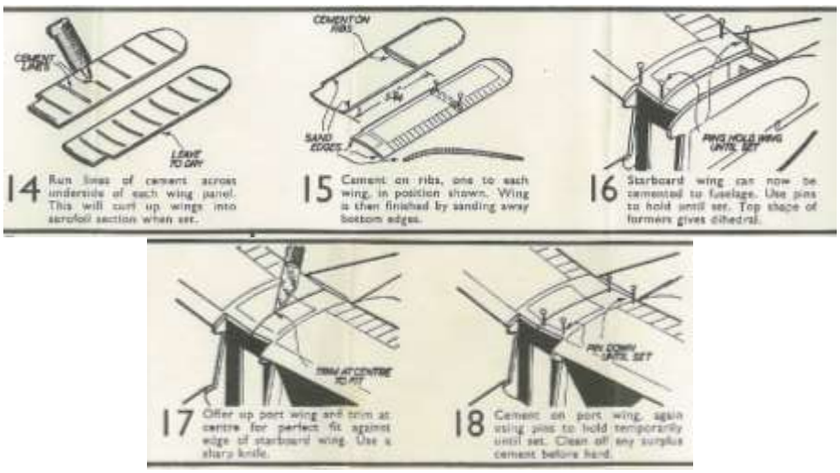
No changes to Step 11.



The block used in step 12 has been replaced by a formed, printed nose piece. Add a 1/64” piece of plywood to the back of the nose piece as a stiffener.

There are many ways to make a removable nose piece. I like to use a square nut cemented to the nose piece. This has several advantages:

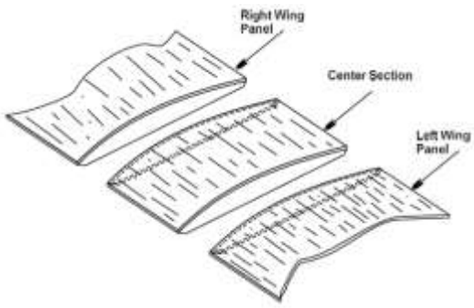
- Does not wear out
- Adds the right amount of weight to the nose
- A Peck-Polymer prop shaft button slides right in



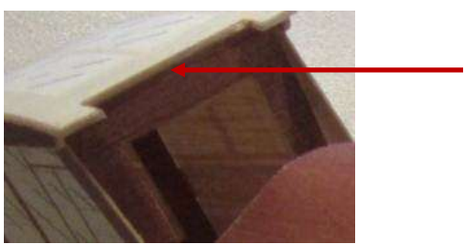
Step 14 is not necessary. Steps 15 through 18 are replaced by the following:

The original kit used a two-piece wing. This plan package utilizes a three piece wing with ribs added to create a small airfoil.

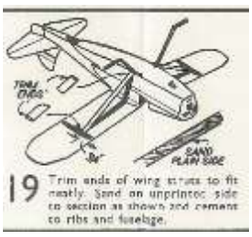
Before starting this assembly I would like to offer this tip which is completely optional. Since ribs are being added to produce an airfoil, attachment of the ribs can be aided by inducing an airfoil shape into the wing beforehand. In other words, there is a way to bend the wing in order to create a natural airfoil shape. This is accomplished by lightly moistening the wing on the bare balsa side. Then attach it vertically to the side of a five-gallon bucket and allow to dry overnight. There are various ways of attaching it to the bucket such as covering the wing with wax paper and then tape over the wax paper to the bucket. You may have a better way. Again, this is completely optional.



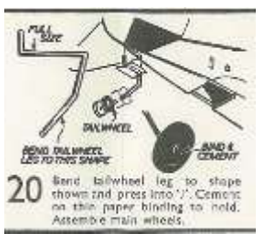
Glue ribs to each side of the wing center section. Glue a rib to the root end of each wing panel. Place a block under each wing that raises the tip to one inch. Using the edge of a work bench as a guide, sand the wing panel root rib flat. This will provide a one inch dihedral for each wing when glued to the center section. The ribs should saddle the fuselage when the wing is glued on. An additional rib is affixed to each wing panel at the start of the aileron outline as indicated by the arrow above. After the rib has been glued in place, trim the bottom of the rib flat. You can also make additional ribs from spare balsa if needed near the tip.



When gluing the center section in place, DO NOT attach the leading edge area. The windshield will slide between the fuselage former and the center section when installed.



No changes to step 19.



Step 20 has been replaced by a printed balsa tailwheel.

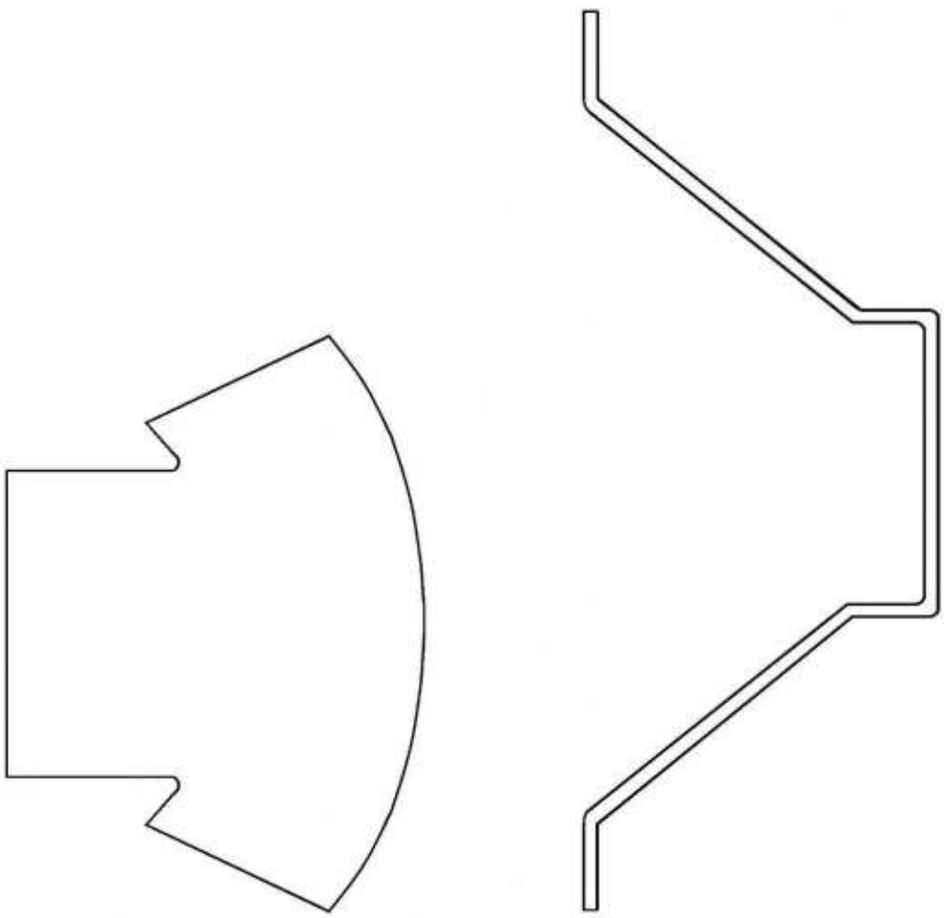
No changes to step 21. The original kit came with a six inch propeller.

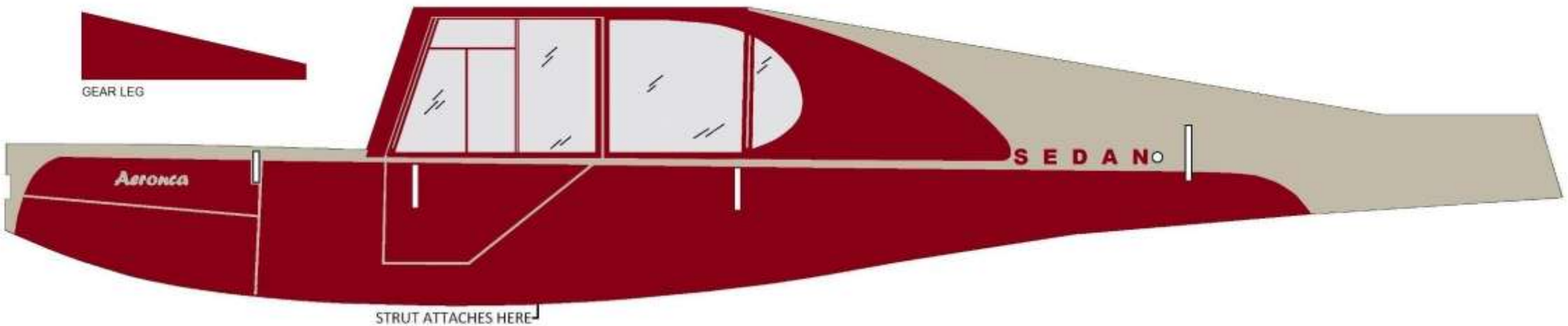
You can attach the windshield like this if desired. I chose to slide the top of the windshield under the leading edge of the center section as previously noted.

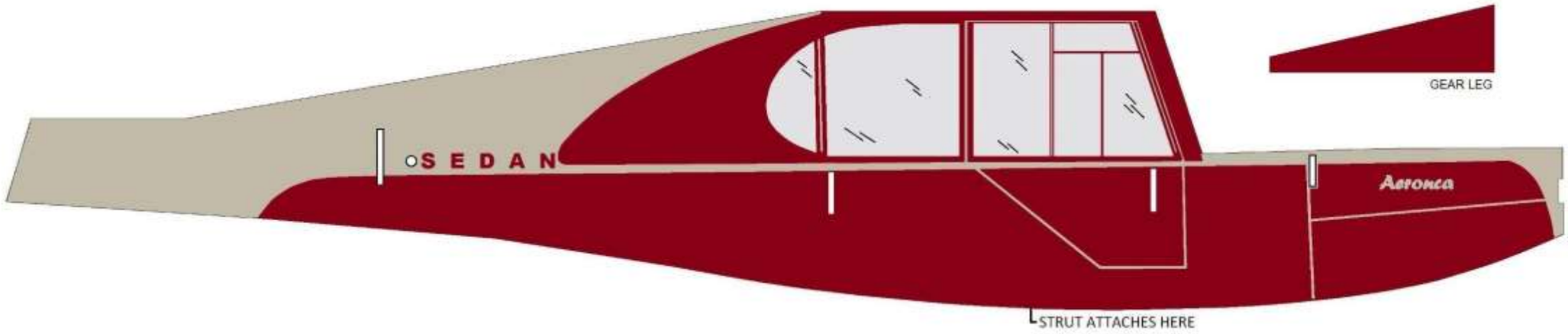
The only change to step 23 is the use of an aluminum tube instead if a wood dowel.

No changes to steps 24 through 26.

Make Landing Gear from .025” piano wire. Wheels are 3/4” diameter.




GEAR LEG
Aeronca
SEDAN
STRUT ATTACHES HERE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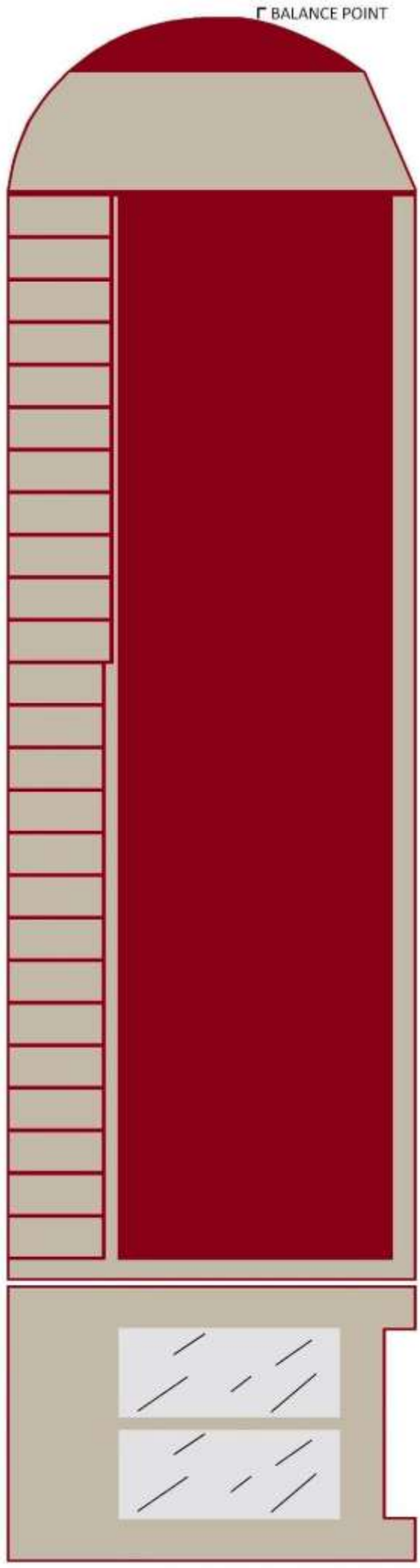
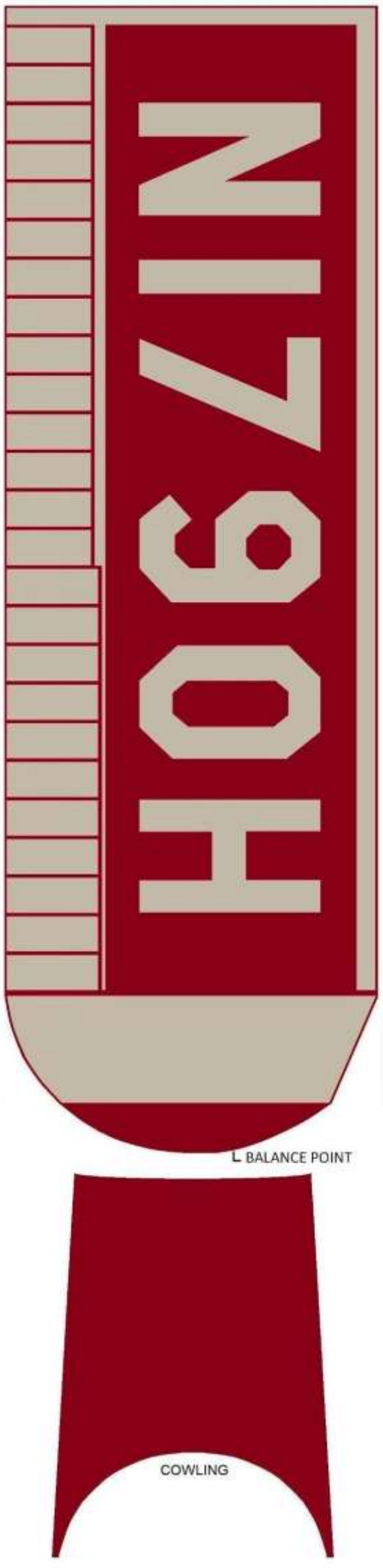

BALANCE POINT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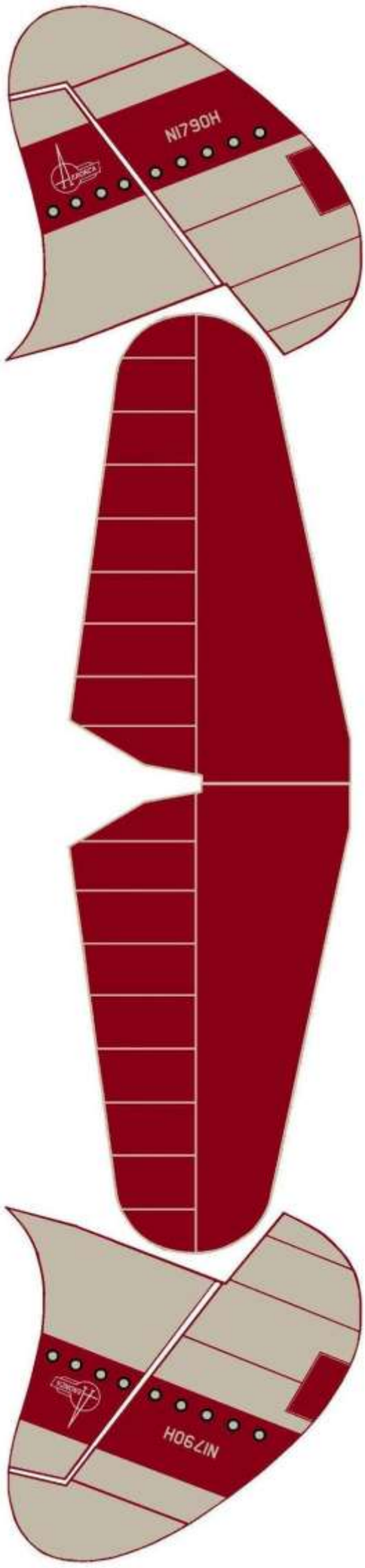
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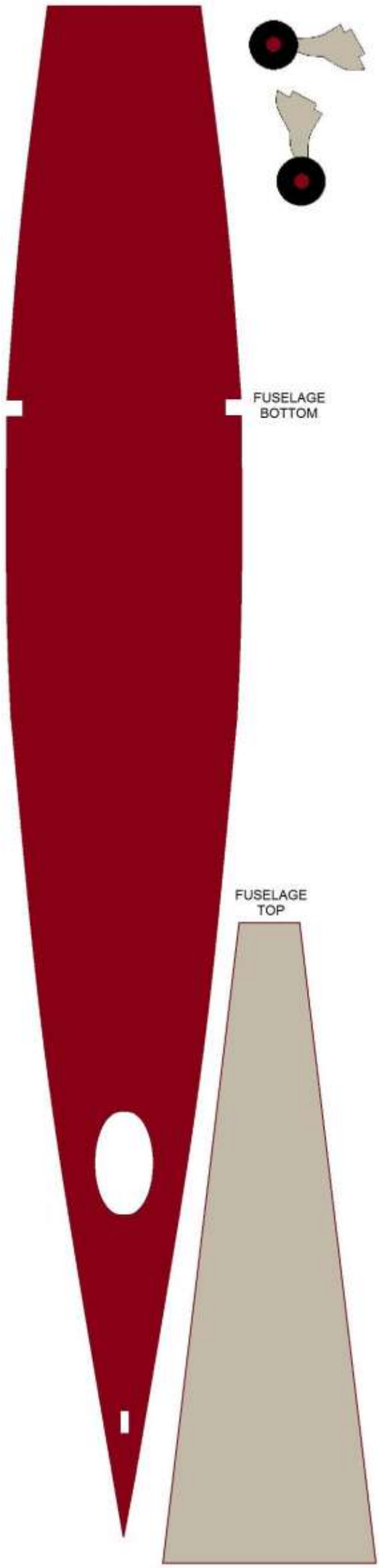
FUSELAGE
BOTTOM
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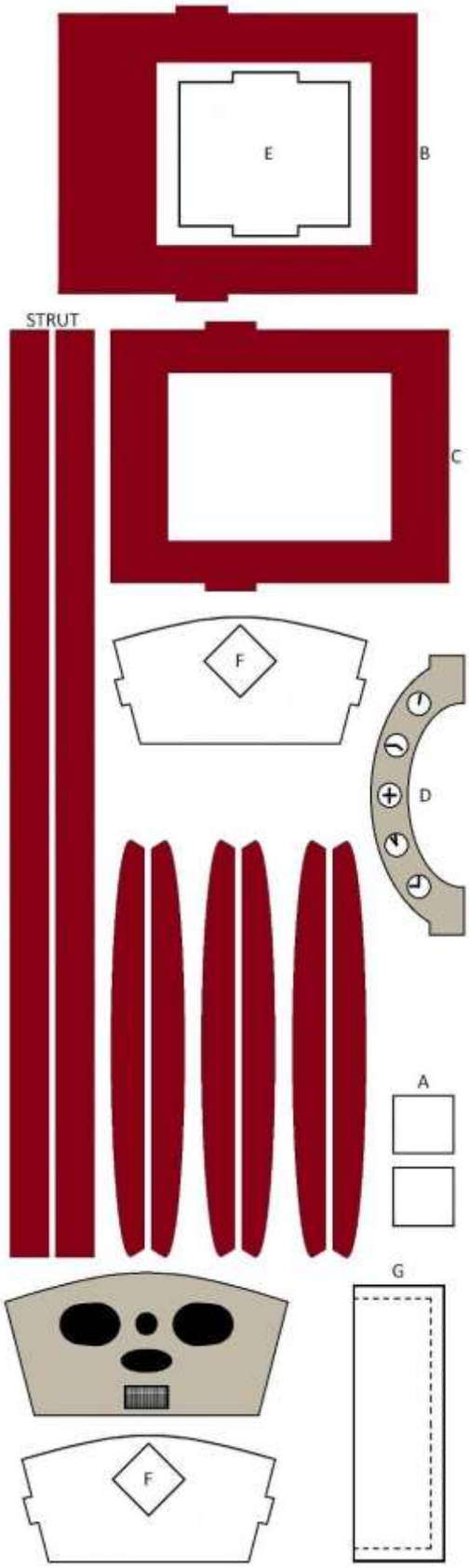
TOP


E
B
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HALES

QuickBuild SERIES

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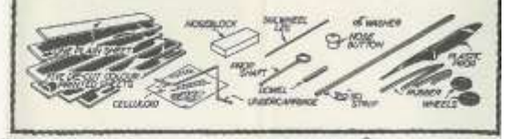
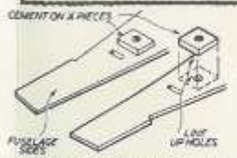
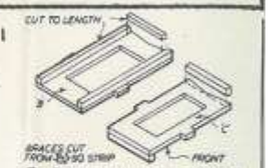
IMPORTANT: CHECK AND IDENTIFY YOUR KIT PARTS



YOUR ASSEMBLY INSTRUCTIONS

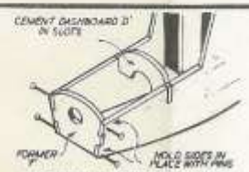


1 Press out pre-cut parts—free with razor blade, if necessary. Cement 'A' pieces to insides of fuselage sides.

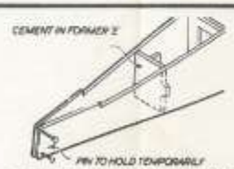


2 Bracing strips are cemented across 'B' and 'C'. Cut from 3/32" sq. strip—lay over former to measure off.

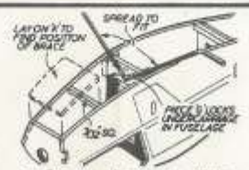
3 Assemble sides on formers 'B' and 'C'. Get the formers the right way round so that braces are in position shown.



4 Cement on front former pulling in sides at bottom. Use pins or rubber band to hold. Cement 'D' in slots.



5 Pull in sides and cement together at rear. Cement in former 'E' and check that fuselage is true and square throughout.

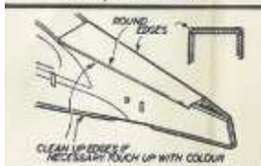


6 Cut and fit 3/32" sq. brace. Bend wire legs open slightly to fit fuselage. Cement in piece 'G' to lock in place.

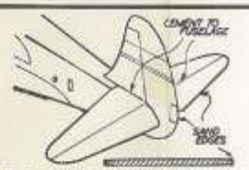
7 Cement on bottom panels 'K' and 'L'. From plain sheet cut two 12" length to follow panel 'L'. Cement on piece 'J'.

8 Cut remainder of plain sheet to 4½" length and cement to top of fuselage, ending flush with edge of 'C'.

9 Cement cowling halves together. Sand edges to chamfer. Bend round nose of fuselage and cement in position

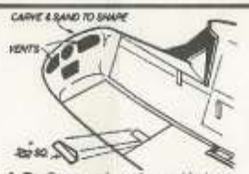


10 Trim top sheet covering flush with sides and round off edges smoothly with sandpaper. Treat bottom edges.



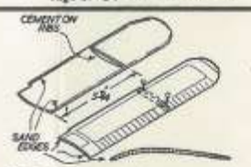
11 Tailplane and fin edges are rounded with sandpaper. Cement Tailplane to fuselage. Add fin. Check alignment.

12 Bore a hole in the noseblock in the position shown using a piece of tube with end filed sharp or a drill.



13 Carve and sand noseblock to shape. Draw on vents with ball point pen. Cut exhaust and cement in place.

14 Run lines of cement across underside of each wing panel. This will curl up wings into aerofoil section when set.



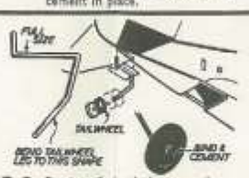
15 Cement on ribs, one to each wing, in position shown. Wing is then finished by sanding away bottom edges.

16 Starboard wing can now be cemented to fuselage. Use pins to hold until set. Top shape of formers gives dihedral.

17 Offer up port wing and trim at centre for perfect fit against edge of starboard wing. Use a sharp knife.

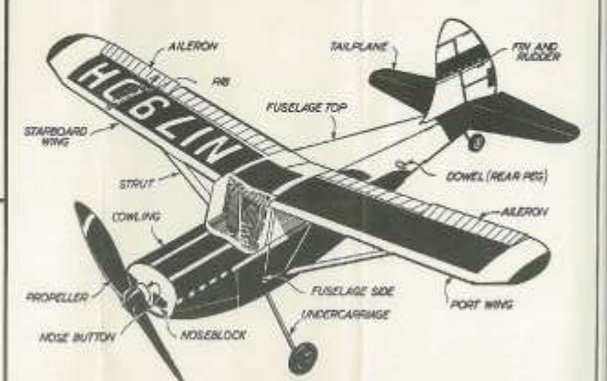
18 Cement on port wing, again using pins to hold temporarily until set. Clean off any surplus cement before hard.

19 Trim ends of wing struts to fit neatly. Sand on unprinted side to section as shown and cement to ribs and fuselage.



20 Bend tailwheel leg to shape shown and press into 'J'. Cement on thin paper binding to hold. Assemble main wheels.

21 Assemble button washer and propeller on prop. shaft. Bend back end of wire to engage prop. and cut off surplus.



22 Cut and trim celluloid to fit by trial and error. When satisfied with fit cement in place using pins to hold down.

23 Tie rubber in a 10" loop and draw through fuselage. Anchor rear end of loop with dowel pushed through sides.

24 Stick pins in wing tips at arrow marks and suspend on finger tips. If model does not balance level add weight.

25 Check glide trim. Bend elevators up to cure a dive down to cure stalling. Adjust turn by bending silicons.

26 Stalling under power is cured by cementing thin packing to nose-block to angle line of thrust downwards.

FROGFLITE

Quick Build series

Rubber Powered Flying Scale Models

HALES

AERONCA SEDAN