

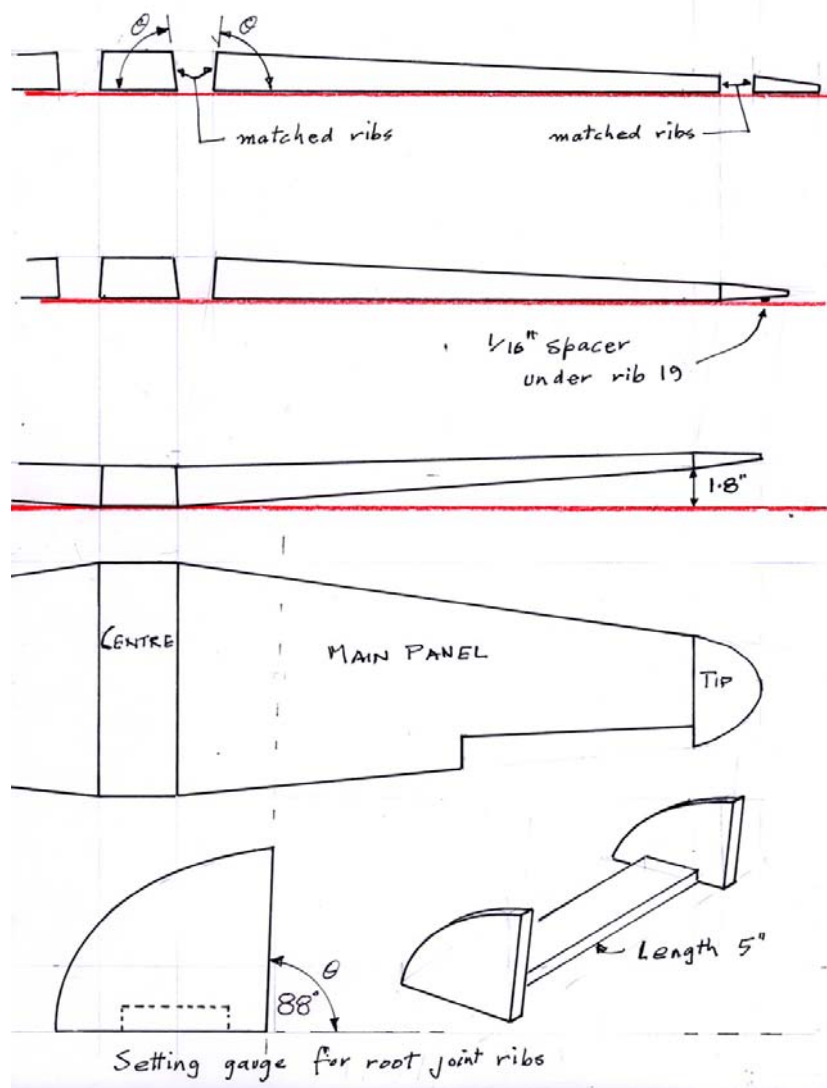
Wing

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The wing consists of two main panels, two tips, and a centre panel. These items are connected by glued butt-joints. Some special care is needed to make these joints neat and strong.

Adjacent joint-ribs should be marked as pairs, then trimmed to exact-same profile. Colour-stain the edges to remind you not to alter the profiles.

The four ribs at the centre joints must be accurately inclined to suit the dihedral. Use the setting gauge.

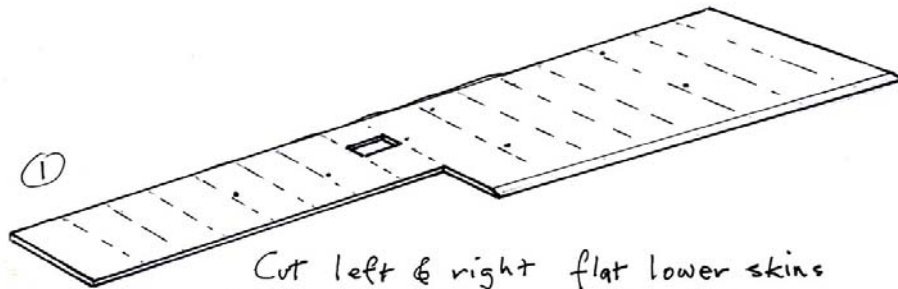
Prefit carefully for minimum gaps. It is important that the skin end-grains have 100% glued contact. Two or three spots of glue are sufficient on the rib faces. Prime the end-grains with cyano, then join with balsa cement.



Build sequence for main panel ① to ⑦

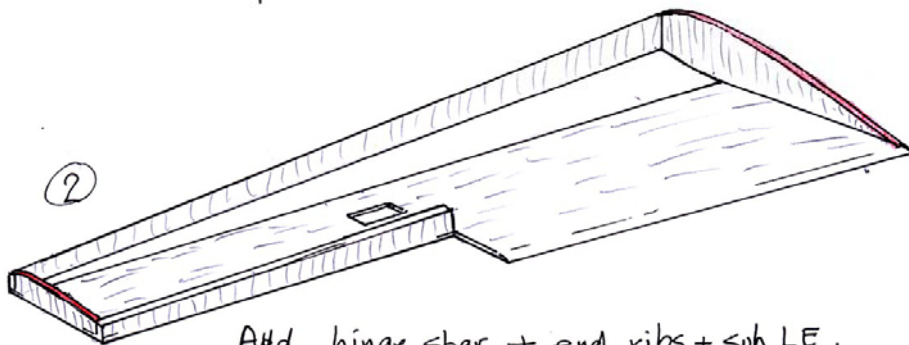
W3

①



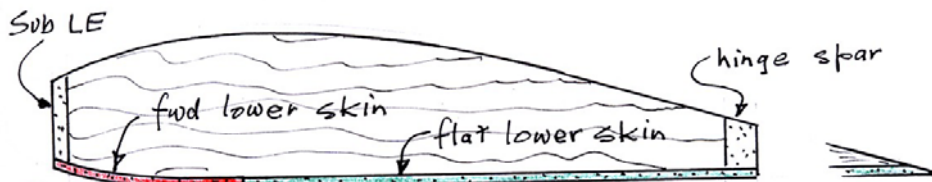
Cut left & right flat lower skins to finished outline. Mark all hook and screw positions on inside & outside. Mark all rib positions on inside.

②



Add hinge spar + end ribs + sub LE.

Sub LE

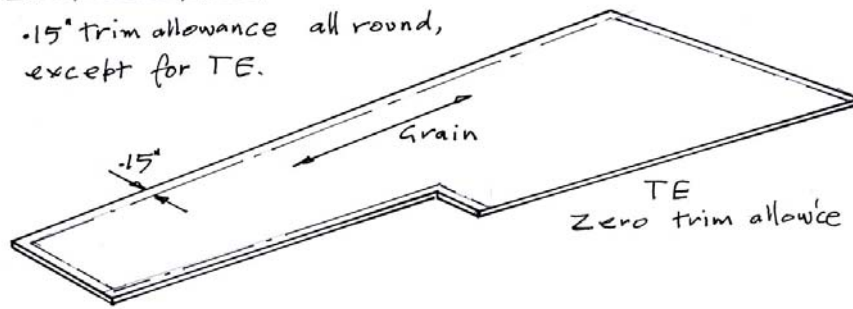


③

Add all remaining ribs + curved fwd lower skin + minor internal items.

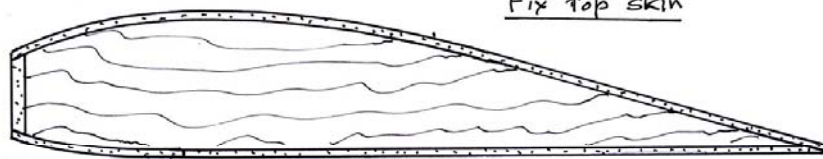
④ Prepare top skin

.15" trim allowance all round,
except for TE.



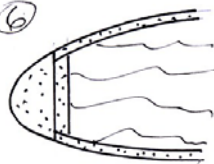
⑤

Fix top skin



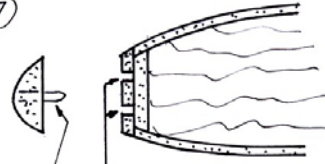
Zero twist, [root-to-tip]
on flat underside.

⑥



Outer Leading Edge

⑦



3 locating
dowels

Slots for
motor conductors

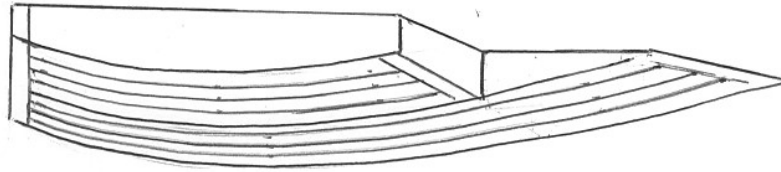
Inner Leading Edge

Wing skins are all 1/16" medium balsa [about 15 grams for a 3"x 36" sheet]. Best quality required.
Edge-join sheets to obtain width. Sand smooth while flat.

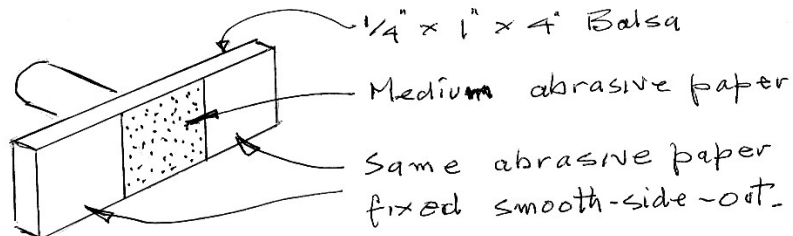
When fitting intermediate ribs, ensure that the sub-leading-edge is straight.



Many items should be cut overwidth, and trimmed after fixing.



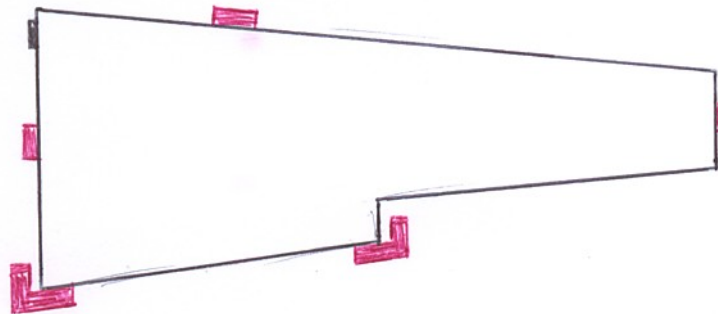
View this way to check uniformity of ribs. Adjust as necessary. **Do not remove any material from the matched-up end ribs.**



This high-spot sanding tool reduces the risk of removing too much material.

Fixing the top skin.....wing main panel

I use Dunlop Thixofix for this job. It's an easy-spread non-stringing contact adhesive. Apply to both surfaces. Bring together as soon as the adhesive is touch-dry. Practice, in advance, on spare balsa.

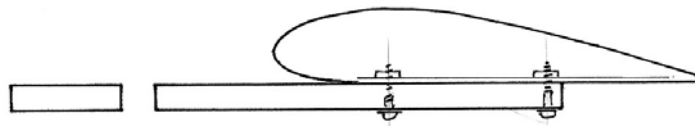


Glue five balsa blocks to the building board, to locate the wing panel. Fix a temporary leg to the front of the root rib to prevent the panel tipping nose-down.

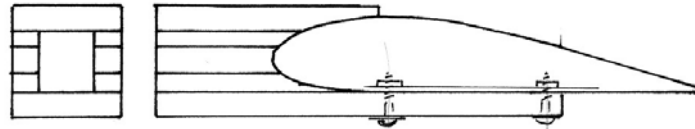
Make first-contact at the trailing-edge, with the position of the skin controlled by the two L-shaped blocks.

Before fixing the top skin, double-check that all internal work has been done.

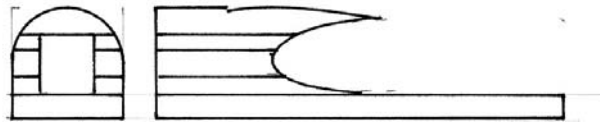
Engine nacelles



Make bottom lamination to drawing size. Medium or hard balsa. Screw to wing.



Add laminations. Light balsa. DO NOT GLUE TO WING. Aperture to be snug fit for motor.

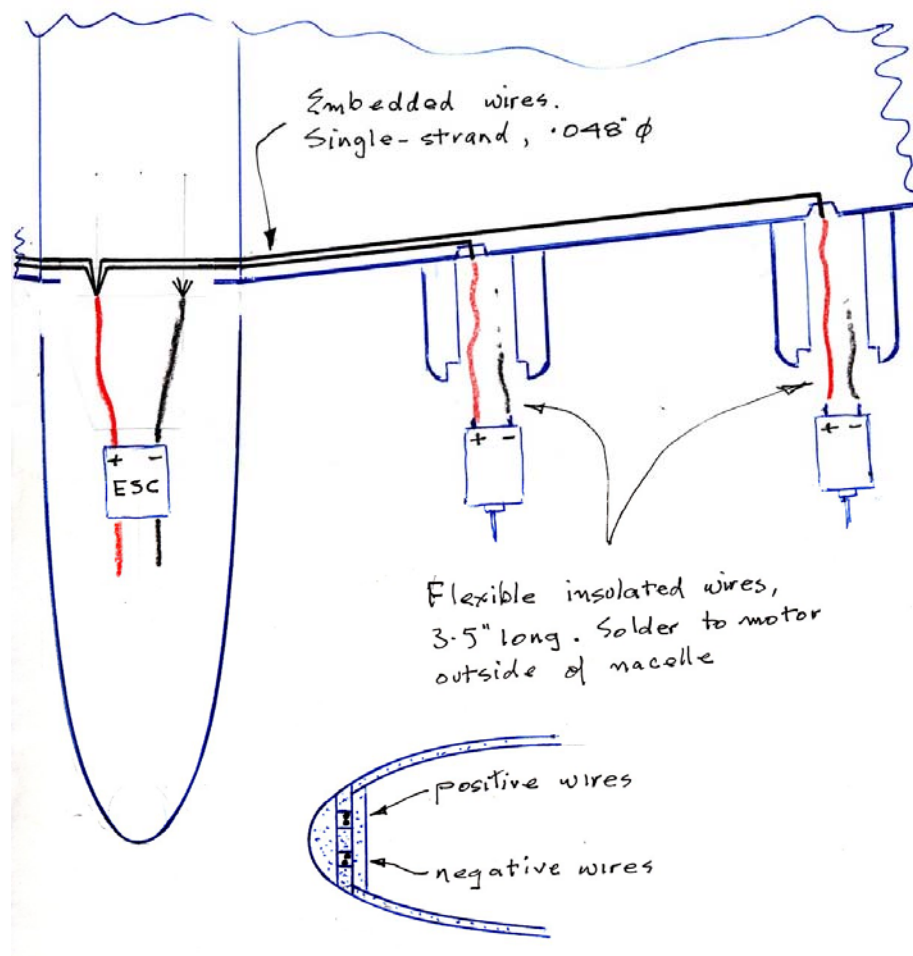


Remove from wing. Carve top shape. Reattach to wing and mark nacelle position on wing top surface.



Remove from wing. Carve lower shape.

Motor wiring in wing leading edge
Positive wires are shown. Negative wires are similar.



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This photo shows a similar wing [not the Sunderland].



Tip floats

