

# How to make an Easy-to-Build 37in. Wing Span Glider

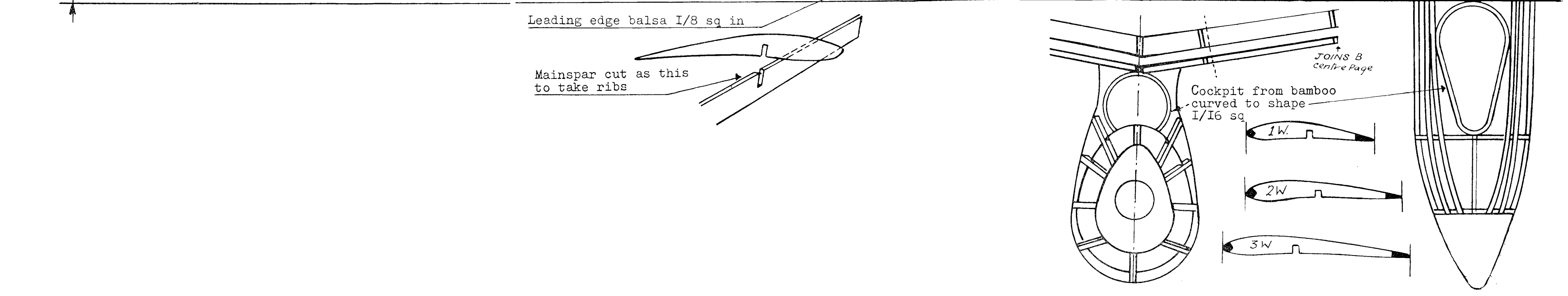
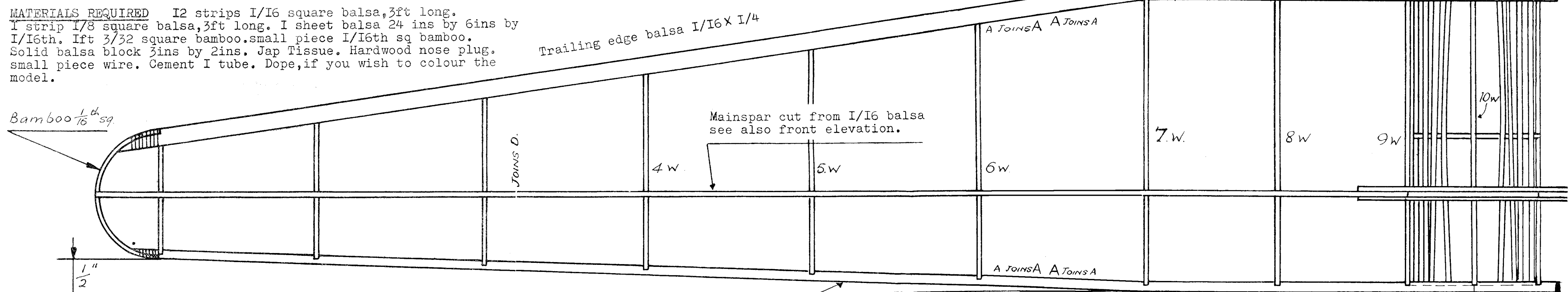
This Glider is reproduced by kind permission of "Le Modèle Réduit D'Avion," the premier Model Journal of France, and is an extremely easy and cheap model for the beginner. If you have not made a model before, then get down to this and you'll have lots of fun.

Before commencing construction you must either trace off complete the full plans on to cartridge paper, or mount down plans, joining up each section where shown. Plans are full size.

**Construction of FUSELAGE** Trace off (a piece of typewriting carbon paper is excellent for this) parts marked 1 to 7 onto 1/16 balsa, and cut out. Take two strips 1/16 square balsa for longeron horizontal, & lay on plan, marking off where each part 1 to 7 should be cemented. Cement these two strips on either side into position. These strips will fit into slots on parts 1 to 7. Take seven more strips like the ones already in place, and commencing with the underneath one, cement into position. Next take two strips 1/16 sq balsa for top longerons these go from no 3 to 6 and are threaded through the small holes which you will see at the top of these parts, leave the cementing of these to no 6 until you have cemented in top longeron from 6 to the end. This section is cut from 1/8 square balsa. Next fix in small longeron on top between 1 & 2. Take a piece of 1/16 sq bamboo and bend to shape as shown on plan, side top & front, for cockpit. Cement in place. Fix in on bottom longeron a piece of bamboo 3/32 sq as reinforcement where cata putt hooks are fixed. Make two small strong wire hooks and cement and bind as on plan. We next come to the noseblock, which is made from solid balsa. Cut a piece 1 inch by 3/4 in by 1/8 in, roughly cut to shape, and cement onto front of fuselage, you can then sandpaper this to the required shape, note all three views of plan. Cut out small hole in centre of noseblock, into which noseblock plug will fit, allowing a space behind for small piece of lead. We have now completed fuselage.

**Construction of Main WING** Trace off ribs marked 1w to 9w onto 1/16 in sheet balsa, cut out two each of these parts. Cut out one part from 10 w plan. Trace off shape of main spar from front view, wing tip to dotted line, outside line shows shape, and cut from 1/16th sheet balsa. Lay on plan and mark off where ribs will come, cut in small slots for ribs as shown in sketch. Pin on plan this main spar, so that it stands vertically on plan, cement in ribs, pinning them until cement is thoroughly hard. The trailing edge and leading edge may next be added, sizes as it will be seen on plan. Note that the leading edge is joined to ribs by the corner of the square section balsa. Add bamboo wing tips as shown these are cemented and bound with thread, a thin coating of cement is put over thread after binding. Note that trailing edge is also bound with thread. Make both wing sections. Cut out from 1/16 balsa two parts for centre, see bottom left hand corner of plans on centre pages. These two parts are cemented on either side of each of the main spars, which come only to the point as shown. Fix in rib no 10. Join up leading and trailing edges. Sandpaper edges to airfoil shape. This completes main wing.

**MATERIALS REQUIRED** 12 strips 1/16 square balsa, 3ft long. 1 strip 1/8 square balsa, 3ft long. 1 sheet balsa 24 ins by 6 ins by 1/16th. 1ft 3/32 square bamboo, small piece 1/16th sq bamboo. Solid balsa block 3 ins by 2 ins. Jap Tissue. Hardwood nose plug. Small piece wire. Cement 1 tube. Dope, if you wish to colour the model.



**Construction of TAIL UNIT** Wings Trace off and cut out seven ribs to shape as shown from 1/16th sheet balsa. Take a piece of 1/16 by 3/16 balsa for trailing edge and pin down on plan. Take piece of 1/8 square balsa for leading edge and pin down on plan exactly over top. Fix 3/4 cement in ribs, three on either side and one in centre. Add bamboo wing tips as shown, cement and bind. Sandpaper both edges to airfoil shape. Wing is fixed to fuselage by sliding into space at rear, it is placed so that the flat surface of wing is to the top, and should be horizontally in line with the longeron horizontal. This wing may be fixed permanently or held in position with small rubber bands.

**Rudder Procedure** for this is the same as for wings. Leading edge from 1/8 square balsa. Main spar 1/8 sq. Trailing edge 1/16 th sq. Ribs out of 1/8 sq balsa. Bamboo wing tips same as before. Rudder is fixed to top longeron.

**Covering** Extreme top of fuselage between sections 3 and 5 should be covered with 1/32 sheet balsa or stout paper. Rest of fuselage Jap tissue. Wings and tail unit also Jap tissue. For correct procedure on covering see May 1936 issue in which a full length article was published. This issue is still obtainable price 4d post free.

**Flying** Before testing this model you must first adjust it for weight. Add a small piece of lead to the nose block, hold the model lightly in between the tips of the fingers at the extreme edges of the wing tips the model if correctly balanced should remain perfectly horizontal. If not then add or take away the amount of lead to give perfect balance. The method of flying a glider is clearly explained in an article written by the famous German Expert, Horst Winkler, in our May 1937 issue obtainable at the price of 4d post free

