

**Your Full-Size
BIPLANE
PLANS!**

RM PLAN FEATURE



Continuing the 'Wight' theme (Keith's an islander), 'Wight Lady' is ideal for 45 four-stroke or 25 to 40 size two-stroke engines.

Build Keith Humber's 48" span sports aerobatic biplane

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E recently lost the use of our power flying field – the farmer needed to plough it – but he was, however, good enough to let us have the use of a rather rough area of grass (actually about four acres but long and rough) by way of compensation so, rather than damaging our more elaborate scale models, there arose a necessity for a light, quick to build fun model with a slow landing speed. Hence 'Wight Lady' was conceived; a nice, light, slow biplane not too big but with a light wing loading and a good sport aerobatic performance.

The aerobatic side of her is really a treat! She flies very soft around the neutrals but when more control movement is used she snaps like a Pitts. The only difficult part of the construction is the cabane struts and even that isn't too hard – which leads me on to a brief resume of the construction and high points.

Get cutting

Starting with the fuselage, cut a pair of basic fuselage sides from 1/8in sheet together with a pair of 1/16in ply doublers. Glue up with PVA or contact adhesive (make sure the sides are handed). Cut formers from 1/8in ply noting that the rear turtle deck half-formers are 1/8in balsa.

Cut out a pair of 1/8in ply cabane mounts C1 and bolt to dural struts. Be as accurate as possible here because the wing incidence is aligned by lining the top of ply C1 with the basic fuselage sides. Glue each pair of cabanes to its relevant fuselage side then cut and frame up the engine bearers using epoxy.

Next frame up the fuselage sides on to the formers checking for alignment (the engine has approx. three degrees right side thrust). Cut out the tail group from 1/4in sheet and glue the tail into position over previously glued in 1/4in reinforcing doublers under the tailplane which support the tail junction. Glue the fin into position, cut stringers from 1/8in sheet and glue into position.

Plank the forward turtle decks with 1/8in

Wight Lady

sheet. The undercarriage is bent from 8swg noting the set on the short arms to enable the undercarriage to be raked forward. It is fixed into position with dural saddles, screwed to the grooved hardwood mounting blocks which are securely glued with epoxy.

The engine used on the original is a Saito 45 with a 4oz tank which is positioned through the round hole in the front former (you may have to cut a different hole to suit tank used). Position the tank before finally mounting engine or cut a tank notch over same. The dural cabane has ply saddles fixed either side to increase the width of bearing for wing mount. The wing bolts are threaded through brass mounts made from 13amp plug pins drilled and tapped. These brass mounts are positioned in the middle of studdings which are

fixed across the cabanes and lock-nutted into position.

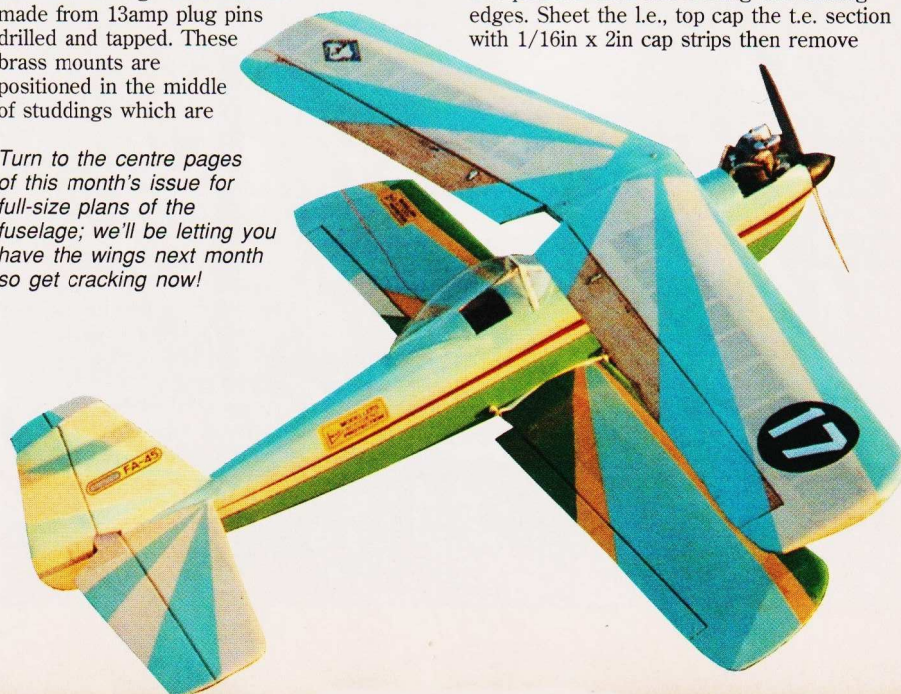
Wings

The drawing and photos explain this better than I can – it certainly works very well! The aileron servo lead goes through a hole in the fuselage top to plug into the Rx.

The wings are also pretty simple. Cut tip and root ribs making up blanks for ribs then produce a set of ribs by the sandwich method. Note that the top wing has a progressive section, a trick I use on my aerobatic sailplanes.

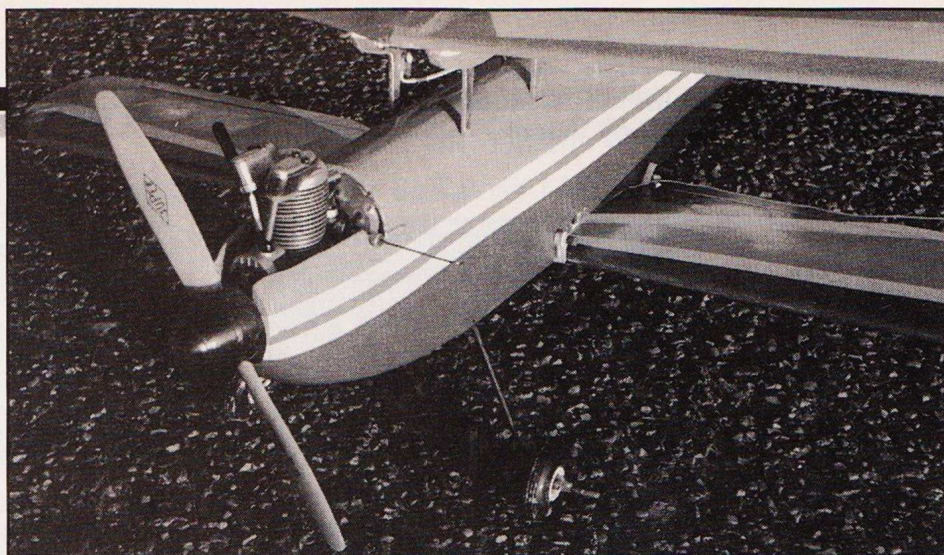
Frame ribs up onto the lower spar gluing into position then add leading and trailing edges. Sheet the i.e., top cap the t.e. section with 1/16in x 2in cap strips then remove

Turn to the centre pages of this month's issue for full-size plans of the fuselage; we'll be letting you have the wings next month so get cracking now!

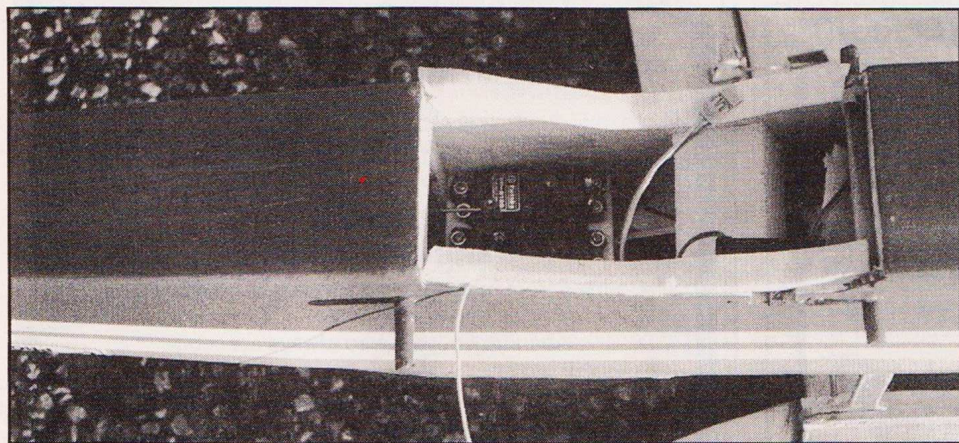


from building board. Complete the wing in the hand checking for alignment. Note there is no dihedral under either wing. The ailerons are produced from 3/8in sheet carved to section and hinged with mylar or similar hinges. The lower wing is parallel chord and the original had flaps built in but they did not prove to be effective so I never used them and have deleted them from the drawings.

The underside of the centre section is reinforced with a piece of thin ply (to take the scuff of the wing mounts) but fibreglass tape would be suitable as well. The original



Engine in the prototype is Keith's trusty Saito 45 four-stroke; provides plenty of power for versatile sports aerobatic performance.



Lower wing is simply banded on giving quick and easy access to the radio compartment.

model was covered in Solartex painted with car cellulose and fuelproofed with Tufcote.

Flying

Do make sure you check the c.g. and incidences. They should be OK but, if not, pack the wings to adjust. Both wings are rigged zero/zero but as the sections are different this means aerodynamically she isn't quite zero/zero! Next, check the direction of control movements; I still must admit to occasionally finding they are wrong sense, and I have been modelling since I was seven years old and that's 48 years ago!

So re-check, it's worth it. If all is as it should be you really shouldn't have any problems so best of luck and I hope you enjoy 'Wight Lady', she really is a fun machine.

