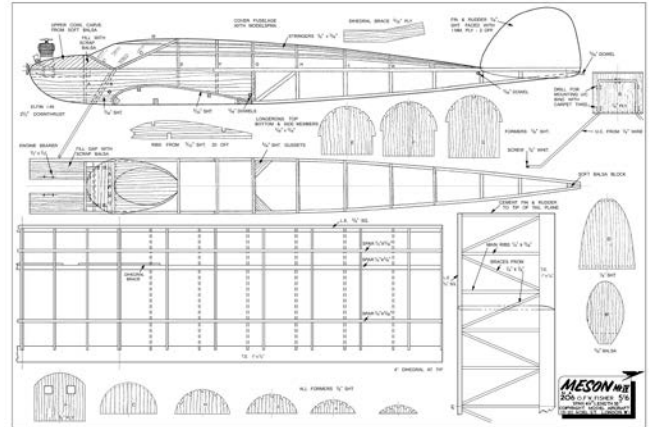
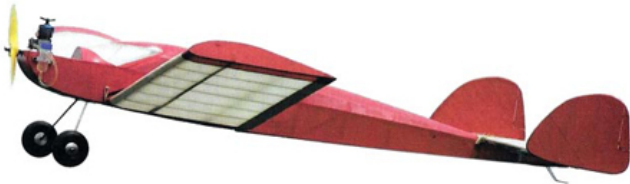


Meson MkIV



A Successful Low Wing Free Flight Monoplane of Rugged Construction for 1.5 c.c. engines by O.F.W. Fisher.

The "Meson" Mk. IV is the latest of a series of low wing monoplanes, most of which were fitted with radio control. In its original form the Mk. IV was powered by the Allbon Javelin 1.49 c.c., but it has also been flown with equal success when powered by other similar capacity engines, including the new ball bearing Elfin 1.49 c.c. Construction is quite straightforward and combines simplicity with strength.

Fuselage: Cut the 3/16 in. sheet side formers to shape, and build the fuselage side from 3/16 in. sq. balsa directly over the plan. The second side should then be built up superimposed on the first. Now mark the positions of formers E, F, and G, on the inner surfaces of the side formers, and then cement the formers at right angles to one side, using a set square or postcard. The other side can now be cemented over them. Draw in the tail ends and cement, inserting a scrap of soft block as shown in the small plan sketch. Add the 3/16 in. sq. top and bottom spacers, and the remaining formers H, J, K, and L, which are cemented on top of their respective top spacers.

Next step is to cut out A, B, C, and D. Former B, of 1/8 in. ply, takes the cantilever undercarriage, which is 1/8 in. dia. steel wire bent to shape in a vice, the ends being tapped to take a 1/8 in. Whit. nut. The assembly is attached to B by drilling to 1/16 in. clearance on

either side of the wire at the positions indicated, and binding with strong carpet thread.

Now cement formers A, B, G, and D in position, filling in the space below C with scrap 3/16 in. sheet. The cabin top former M is carved to profile from soft balsa and cemented to D, after which the cabin can be covered with celluloid sheet. When this is completed the top stringers can be cemented in place, being butted against D.

Engine Installation: Mount the engine on the 1/2 in. sq. bearers, using lock nuts. The engine can be mounted in either the upright or inverted position, but care must be taken to ensure that 2 1/2 deg. downthrust from the datum line is built in. The engine anti bearers arc placed in position, the ends protruding through the 1/2 in. sq. holes in bulkhead A.

The gap between the side formers and the engine bearers is filled in with scrap sheet and the whole firmly cemented. The upper engine cowling is carved from soft block balsa.

Wings, Tailplane and Fins: The wings are built over the plan, as is the center section, in the orthodox way, but remember to cant the root ribs to allow for the dihedral, and firmly cement the 3/32 in. ply dihedral braces in place.

The tailplane, which is a flat plate section, is constructed directly over the plan, the main ribs are made from 1/4 x 3/16 in., the diagonal braces from 1/4 x 1/8 in. A piece of straight grained wood should be selected for the trailing edge to obviate any warping tendency. The tailplane is sanded to section.

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The fins are cut from 1/16 in. sheet and faced with 1mm ply.

Covering: The aircraft can be covered with heavyweight Modelspan, in which case the fuselage is given three coats of clear dope, also the wings, tailplane and fins. However, to make the aircraft literally "prang proof" it can be covered with lightweight nylon. Nylon has the additional advantage of being shatter proof, in the event of collisions with trees, posts, and all the other natural hazards of a typical flying field, and is well worth the extra initial outlay-involved.

If it is decided to cover with nylon, give the airframe one coat of clear dope, then after sanding, stretch the dampened nylon over the surfaces, keeping the weave at right angles to their edges. Pin the nylon in the stretched position and dope to the airframe through the mesh. Great care should be taken to ensure that the nylon is fully stretched over the airframe as its shrinking properties are very poor. When doping nylon use glider dope to ensure adequate tensioning. Finally the entire machine is given a coat of fuel proofer.

Trimming: Test glide over grass, and trim for a gentle left hand turn. The machine, as built from the plan, should have a fairly fast shallow glide and inherent stability. However, the trim can be readily adjusted by packing the trailing edge of the tailplane to raise the nose, and the leading edge to correct a stalling tendency. When the correct glide trim has been realised, power flights can be attempted, firstly with reduced rev's and gradually working up to full power flights.