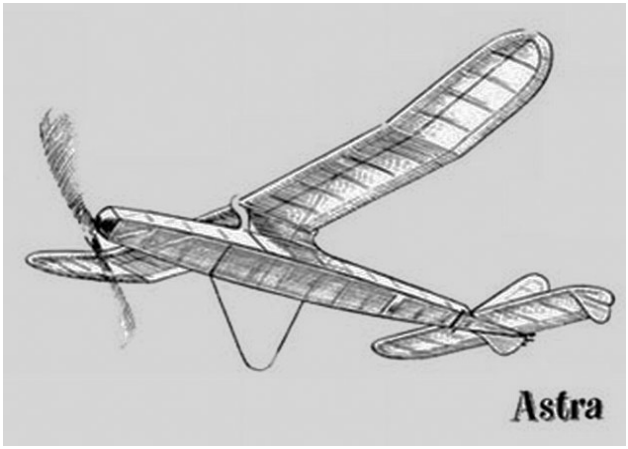
Astra

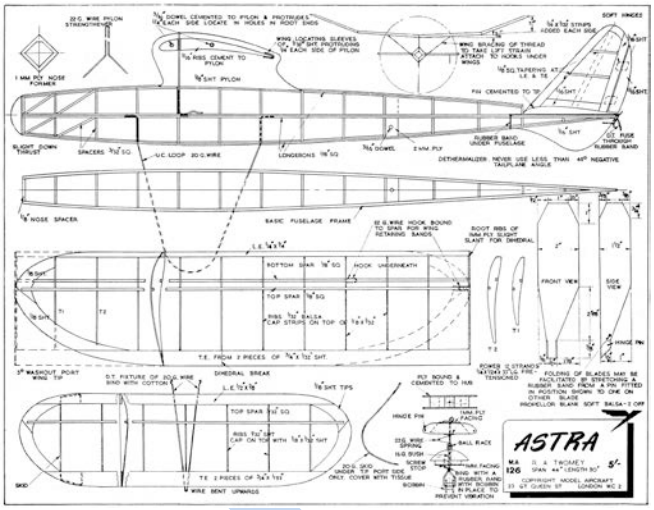


An easy to trim competition rubber model by R.A. Twomey.

Astra is an attempt at a competition rubber model large enough to catch the thermals (and stay in sight), but without the trimming difficulties one associates with Wakefields. This is not meant as a slur on that fine type of model, it is generally agreed, however, that the successful Wakefield men (with a few notable exceptions) have virtually to specialise and to fly nothing else.

Astra is of approximately Wakefield wing area, weighs 6 oz. in flying trim, and has a very narrow fuselage and small amount of rubber. Models of this type are singularly easy to trim and one does not need to be an expert to get good results. Not possessing the kind of courage that rubber winding requires, the writer has never dared to put on more than 650 turns, which gives a motor run of around 45 sec. and a climb to about 350 ft. The glide compares well with many sailplanes.

The original model won the 1951 R.A.F. Championships (open rubber event) at Coningsby with two flights of 2 min, 33 sec. and 5 min. 00 sec. It had previously qualified for the championships by taking top place in the rubber team of Flying Training Command. On this occasion one of its flights clocked 9 min. 13 sec. o.o.s., which was submitted as an R.A.F. record. A second model, the builder's second-ever rubber job, went o.o.s. in its first week of life with a 6 min. flight on very few turns. Best Astra flight so far is 13 min. 15 sec. d/t.



Wing construction: Build each wing separately on the plan, beginning construction with L.E. and bottom half of T.E. (built up from sheet). Front of T.E. should be chocked up about 1/16 in. to allow continuation of rib contours. Cement wing ribs in position and add top spar and wing tips. Now add top half of T.E., and rib capping strips (top only). Next crack wing L.E., T.E., and spar in the position shown on plan and prop wing tips up to 3 in. to give correct dihedral. Cement dihedral break and allow to set. Finally remove from plan and add lower spar. Cement wire wing fixing loops on top spar at wing root (rubber band holds to other wing) and on bottom spar 6 in. from wing root (to accommodate thread wing bracing, which takes all the strain and is looped at the other end to clip over fuselage wires).

Fuselage: Fuselage is built as any normal slab sider, then rotated through 45 deg. to become a " diamond fuselage." Add pylon, pylon bracing wire, undercarriage loop and under fin. Cut away tail end of top longeron to allow tail plane to sit on the two " center line " longerons.

Tailplane and Fin: Built in the normal manner, it has also a built-up T.E., and rib capping-strips (top only). When completed, cement and bind d/t wire (shown on plan) underneath tail plane. Fin is built on the plan and then cemented firmly to tail plane. Under fin (port only) is of 20 s.w.g. wire and is tissue covered.

Propeller: Propeller is a 15 in. dia. twin-bladed folder and is carved from block. Check balance of blades and ensure they cannot fold forward. Check firmness of

Astra

hinge-pins and positive folding blades (rubber band from one blade to the other will help).

Covering: Lightweight Modelspan. Clear dope, one coat. On the writer's model prop, blades also were tissue- covered and doped, but banana-oil fiends may prefer to go their own way !

Trimming Notes: Make up the rubber motor with 12 strands of 1/4 in. X 1/24 in. 33 in. long, tension and insert. With rudder and slight variation of tail plane incidence (if necessary), achieve a glide trim of fairly tight right-hand circles, just off the stall.

Model Aircraft Magazine May 1952