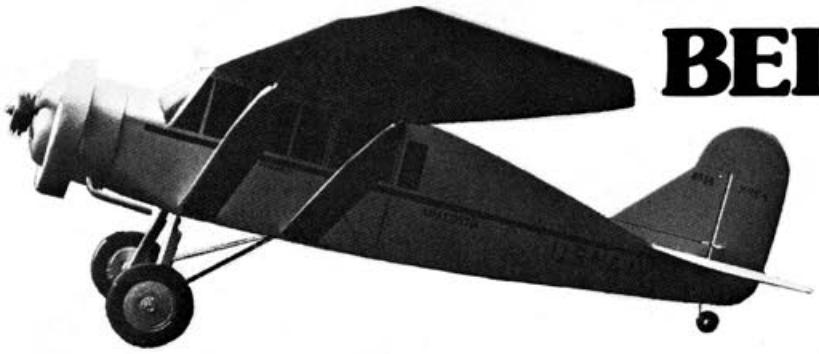


# BELLANCA SKYROCKET

**Nearly 26ins wing span of a Golden Age American monoplane for .010-.020 cu ins engines and two function micro R/C equipment.**

HOW IT BEEN a long time since you built a small model? Have no fear, 1/32" and 1/16" sheet balsawood *is* still available and much easier to cut than the thicker versions. You will find that your finger and thumbs, having grown during the building of large scale models, will shrink again as you start on this mini scale **Bellanca**. Just because the 'Skyrocket' is, by average standards, a small model it does not follow that you have to rush through the construction and finishing; take your time over it and you will find it a satisfying and intriguing exercise. In particular, take care to cut out all of the parts very accurately as this will assist in the 'gluing together' phases and avoid the cursing and swearing when components do not fit!

Bellanca produced a number of interesting light commercial aircraft, including the 'Columbia' 'Cruisair' and 'Junior' and although they are less well known than the Pipers and Cessnas they make ideal scale subjects – good proportions and plenty of character. The 'Skyrocket' had a wing span of over 46 feet, gross weight of 4600 lbs and was powered by the reliable Pratt and Whitney 'Wasp' nine cylinder radial engine. The roomy interior and excellent load carrying capability (the wide chord wing struts adding to the lift) of the 'Skyrocket' appealed to the US Navy and they utilised these aircraft in the 1930s, mostly for experiments with radio equipment.

## Construction

With the limited space available for the radio equipment it is essential to plan the *exact* positions of the servos, receiver and battery. No switches are used on the Century Systems micro airborne pack, a combined isolating/charging mini-jack plug socket being fitted on the underside of the nose. Closed loop control, using monofilament nylon line for the cables, was fitted to the rudder, although a conventional pushrod would also be suitable. Pushrods should be positioned before the top rear sheeting is added – it saves fishing around for the ends at a later stage.

Wing fixing to the fuselage is by a ply tongue at the rear and a single 6 b.a. bolt into an anchor nut, at the front; the struts also help to restrain the wings in positive 'G' manoeuvres. If this method seems to be a little too permanent for your liking, you could use wing retaining dowels and rubber bands but, sheet the top of the wing centre section and the first bay of the wing panels with 1/32" sheet if this system is used. You need not be concerned about building a substantial engine cowl and cooling ring, it is unlikely that the model will be excessively nose heavy and it would be folly to attempt to fly it with a rearward C of G. A relatively thick ABS vacuum formed cowl was used on the prototype model but it would be quite easy to build up a cowl from sheet and triangular section balsawood. Wing struts are permanently hinged to the fuselage with split pins – the smallest size you can obtain – and the tops of the struts are retained by pianowire rods into split pin heads fixed into the wing.

There is little point in describing the basic construction in details, it is conventional box structure fuselage, built up wings and sheet tail surfaces, if you can't build this one from the plans you really should be concentrating on training or simple sports models. As usual, keep the tail end as light as possible, otherwise you may find it necessary to add noseweight. Cyanocrylate adhesives will help to keep the overall weight to a minimum, the slower drying types give valuable extra seconds for accurate positioning and the set can be speeded up by spraying an accelerator from an aerosol can. Thread control surface hinges are probably the most practical but mylar drafting tape is less unsightly.

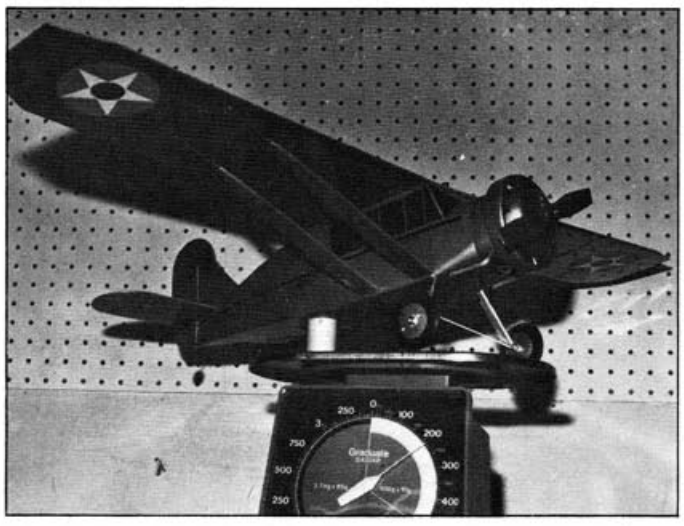
## Finishes

Heat shrink film, or tissue and dope are the obvious covering materials for the 'Skyrocket' although 'Micafilm' may result in a lighter overall finish – watch for any warping on the wings. The prototype aircraft was painted silver overall except for top surfaces of the wing and tailplane/elevator these being a bright yellow. 1930s style insignia decorated the upper and lower surfaces of both wings and the lettering and fuselage cheat line were black. Fuel proof the model with a matt or eggshell clear polyurethane clear varnish (thinned down) after the final decoration is complete, a gloss finish looks unreal on small scale models.

## Flying

In the words of the old free-flight masters, find a green pasture with long grass and build up the engine revs slowly. Seriously, it is doubtful that you will find a lush meadow these days, but it is preferable to fly these mini-models over grass on the first flights. If you are using a TD 020 engine carry out test flights with the propellor fitted backwards to limit the thrust. Go easy on the control movements, very little rudder and elevator movements are required and, if you have them, rates should be on the *reduced* movements position.

Keep your eyes on the model at all times and don't try to stretch the glide, the 'Skyrocket' will not have a 'floaty' glide and the speed must be maintained to allow a round-out for landing. Have fun!



*This little lightweight tips the scales at just under 8oz. ready to go! Film covering used on the prototype, insignia painted on white 'Fablon' and lettering and windows with Indian ink – matt polyurethane varnish fuel proofer.*