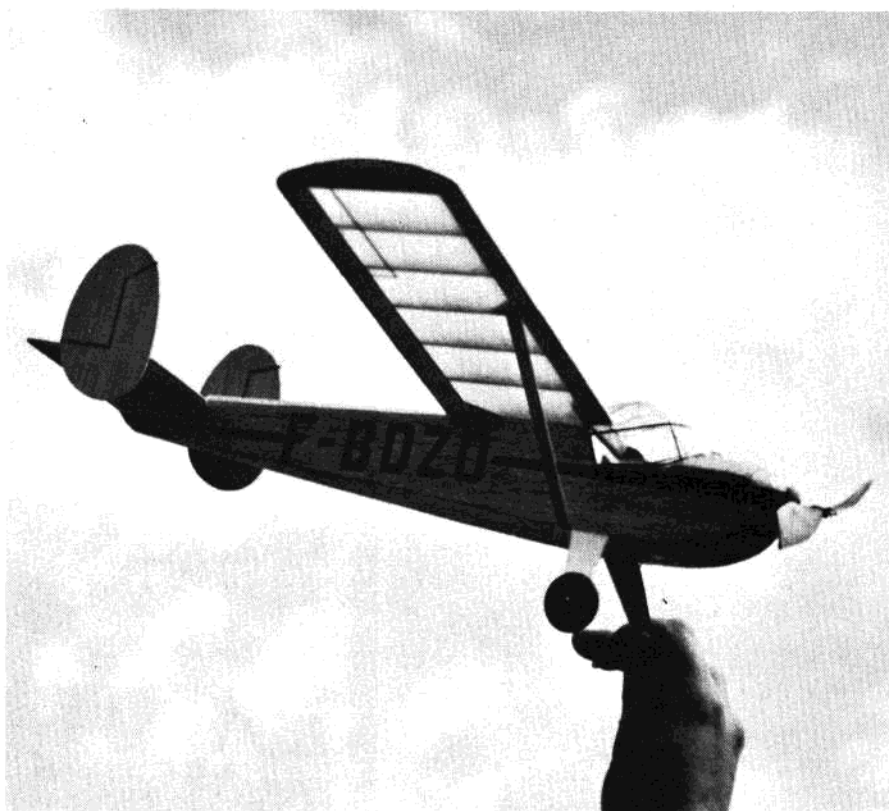


NORD N.C. 853S



Outdoor Free Flight Rubber
scale model of a delightful French
light plane of the late 1940s.

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While thumbing through an old copy of *The Aircraft of The World*, we came across a small three-view for this aircraft and were immediately struck by its suitability as a flying model.

The Nord N.C. 853 S. was produced in France in the late 1940s, and over 100 were built. Various versions existed, the main difference being in the types of engines used. Our model plans were scaled up from the above-mentioned three-view, so we can't claim that this is a super-accurate scale plane. However, it's a very pleasant and different shape, and makes an interesting model project.

Before beginning construction, it's a good idea to study the plan and see where all the pieces go. It's also wise to use a sheet of waxed paper to cover the plan before beginning to build.

Construction

The wings were built first, the right wing being made as shown on the plan, and the left wing on the reverse side of the plan. Begin by making the leading and trailing edge pieces, which are first notched for the ribs, and then sanded to section. Fifteen ribs are required, the three central ones being slightly shorter than the standard ones. Pin down the leading and trailing edges on the plan, and cement into place the ribs and the wing tip.

When this is dry, remove from the plan and make the other wing. When both wings are ready, place them on the plan with the tips blocked up to give the correct dihedral, and build the center section between them. The leading edges are joined by the 1/8" sheet dihedral brace which is trimmed to size after the wing assembly is dry. Add the gussets at the appropriate locations, and sand over the complete structure. A thin coat of clear dope is then applied, followed by another light sanding.

The fuselage can now be built. Begin by cutting out the frames, all of which are from 1/16" sheet. The undercarriage wire is bent next, and is sandwiched between the two pieces of frame 3, as shown on the plan. This sandwich should be well cemented, then squashed in a vise and left overnight so that a good joint is obtained. While this is drying, the fuselage sides should be cut out. The shape is easily transferred to the wood by placing the 1/32 sheet under the plan and pricking the outline with a pin. Join up the resulting pin holes with a ballpoint pen and then cut from the sheet. Make two sides, and cement into place the 1/32 sheet doublers at the nose, the motor peg station, and at the wing attachment location.

Now join the fuselage sides with frames 3 and 4; when these have dried, pull the sides together at the rear and cement. Frames 5 and 6 can now be installed, and then 2b and 1 in that order.

The bottom sheeting can now be cemented into place, and the 1/4" sheet

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between frames 1 and 2. Frame 2a is installed next, and the upper cowl area between frames 1 and 2 is covered with 1/32 sheet.

The noseblock, which is initially cut slightly oversize, is cemented into place now, and is carved and sanded to the final shape when dry. (The 1/16" square stringers on the upper rear fuselage should not be installed yet, as they are put into position after the wing and tail assemblies have been attached.)

Make the tail assembly from 1/16 sheet and carefully cement together, making sure that the rudders are vertical and aligned correctly. When this is dry, it can be cemented into place on the fuselage.

At this stage, we found it best to do a little covering. Cover the wings using four pieces of tissue, one for the top and bottom of each wing, then water shrink and give one coat of clear dope. When dry, the wing can be cemented to the fuselage, the 1/16" square stringers added, and the complete fuselage sanded and given a thin coat of dope before covering with tissue in order to save a little weight. One or two coats of light dope, with sanding, provide a satisfactory finish.

The windshield can either be cut down from an existing canopy, or built up from sheet celluloid. If you use the built-up method, it's wise to first determine the shape in paper, then transfer this shape to the celluloid.

Add the trim now, making the letters, etc., from black tissue. These are doped onto the fuselage, and the complete model can then be given a final coat. Add the wheels, wing struts and undercarriage fairings.

The propeller assembly is the last piece of the construction. We used a six-in. dia. plastic propeller, a 1/32 wire propeller shaft bent as shown on the plans, and a small wood or plastic thrust button. Drill a suitable hole in the nose block to suit the thrust button used, and make sure that the wire loop for the motor will pass through this hole!

The power for our model is supplied by four strands of 1/8" rubber about ten in. long. It's a good idea to first wash the rubber well, and then lubricate

it using any good commercial brand of lubricant. Before installing the motor, wind it once or twice on a bench rig to shake off the excess lubricant rather than coating the inside of the fuselage. After these runs have been made, the motor should be carefully installed in the fuselage.

Flying

After the motor is in place, check the balance against the location shown on the plan. Add weight (modeling clay) to either the nose or the tail as required. Now it's out to the flying field, and a few hand glides into some soft grass. If the model stalls, bend down the trailing edge of the stab; if the model dives, bend it up.

It's time for a few handwinds on the motor, so try about 50. We want a wide right circle under power, and also for the glide, so it may be necessary to bend one of the rudders to provide this. Once a reasonable turn circle and a glide have been obtained, try increasing the power and use a hand drill to wind the motor. It should be possible to get around 500 turns into this motor when it's broken in.