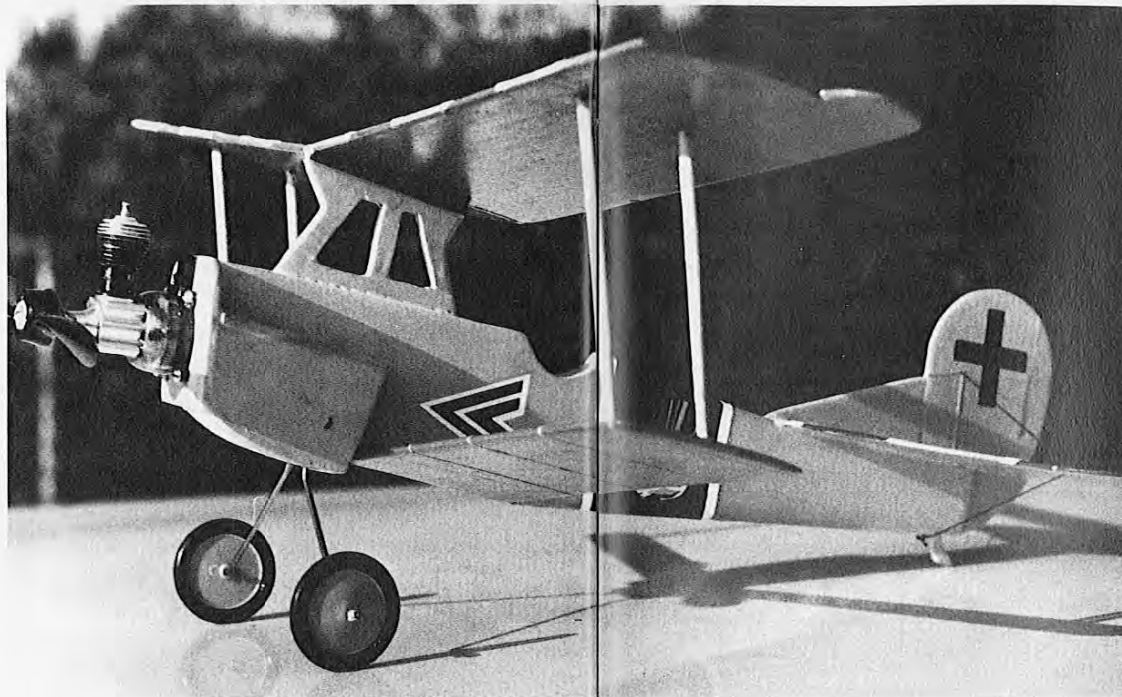


Your Fokker D-7

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The D-7 is one of the easiest World War One airplanes to recognize due to the lack of external bracing wires. This clean looking aircraft was one of the strongest planes made during world war one. Pilots discovered that this fighter had an uncanny ability to stand on its tail without stalling or spinning.

I wanted to build a handsome, sport profile model of a biplane of the World War I era and the D-7 proved to be what I was looking for. This .020-powered free flyer is a very rugged model and will provide you with many hours of fun flying.

Begin construction by cutting the fuselage and wing parts from a medium-grade balsa. The fuselage is made of three pieces from 1/8" sheet balsa. Lay the right fuselage side on your work bench. Glue the middle fuselage piece to this. Be sure you have cut out the slots for the wing pylon P-1, the tail skid T-1, and the landing gear. The slot for the landing gear is for the wire only; the ply pieces L-1 fit outside the fuselage profile. That is, the three-ply balsa fuselage is 3/8" thick; it is five-ply where the plywood pieces L-1 are located.

After the glue has dried, glue the plywood parts P-1, T-1 and L-1 in place. Glue the left fuselage piece to the middle fuselage piece. You now have three fuselage pieces glued firmly together with the plywood parts sandwiched in the middle. You can temporarily pin this assembly together, and put it aside to dry.

The wings are made from 3/32" balsa. Drill small holes in the wings to accept the struts which are made from 1/8"

dowel. Sand the ends of the wing struts similar to the shape of the nose cone of a rocket. Use a drill smaller than 1/8" dia. to make the holes. If you don't have a drill, use the point of your balsa knife to make the holes. Work slowly and be careful not to split the wood.

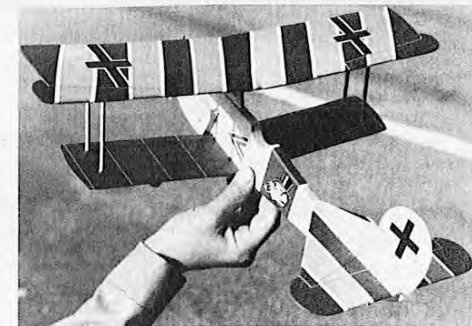
To make the wing dihedral, pin one of the top wing panels to your work bench and glue the other wing in place. Raise the tip of this wing 2 inches from your table. You can cut a piece of scrap balsa to a 2" length and pin to the wing tip. A small strip of silk or Silkspan may be glued over this joint for strength. Glue the bottom wing together in the same manner.

Make the two stabilizer parts from 1/16" hard balsa. Glue together and lay aside to dry. The tail is made in three pieces—the fin, the rudder and the lower rudder piece—from hard 1/16" balsa. Glue the fin to the rudder and put aside. The bottom rudder piece is not glued at this time.

Cut out the motor mount from 1/8" aircraft plywood, available from your hobby shop. Drill four holes large enough to accept the screws for your .020 engine. Cut out the two nose stiffeners from 1/16" plywood. The two motor mount braces are made from 1/8" plywood.

Glue the two nose stiffeners to the fuselage front. When dry, the front of the fuselage should be sanded so the plywood motor mount will have 2 degrees left thrust. (Measure the two-degrees on paper, using your protractor and transfer this measurement.) Glue the motor mount in place using plenty of glue. When this is dry, glue the two 1/8" plywood

WOULD YOU BELIEVE A FREE-FLIGHT?
FLY IT OVER TALL GRASS OR A
CUSHIONY FIELD AND IT WILL LAST
A LONG TIME.



Left: The designer cut quite a few corners to come up with an ultra-strong model. It always can be repaired. The real D-VII—Roman number if you wish to split hairs—was considered one of the strongest planes of World War I. Above: Note the dihedral required for free flight—or, as some guys call it, "uplift." If you think the color scheme wild, WWI crates were painted every which way. Famous aces liked such one-upmanship. Below: Preflighting their D-7 these happy aces fill the fuel tank of the Cox .02 and ready the booster battery. As you can see, the model is not too small—or too big.



Now that you have glued the tail surfaces in place, the lower rudder piece can be glued to the bottom of the stabilizer and the rear of the fuselage.

The entire aircraft is painted with clear dope. Add a little thinner to your dope, and I wouldn't advise using more than one color coat. Remember, the lighter your model is, the better it will fly. You may use craft trim tape and decals to decorate your D-7. Paint the plane with the color of your choice. It is best to use a high visibility color such as orange, red or yellow.

Since the author had a large field available, there was no danger of his D-7 flying out of sight. You may need to limit your motor run. While dismantling the engine is not always recommended, one way of cutting down an engine run is to partially fill the tank with small balsa blocks and to time the resulting engine run until you have the desired run. Or the fuel can be measured out with an eye dropper and timed for run, after which the same amount of fuel can be added for each flight. The model flies well but is fairly heavy and not inclined to glide very long.

Bolt your .020 to the firewall. I used a 5 1/4-3 prop and the plane moves out pretty fast. Before you use power, test glide the model over tall grass. You should strive for a long straight glide. If the ship dives, bend the rear of the stabilizer up and, if it stalls, bend the stabilizer down. Your first flight should be under reduced power and with a little left rudder. Experiment until the ship flies in large circles to the left. If you should develop any problems in trimming the aircraft, try to get an experienced free-flyer to help you.