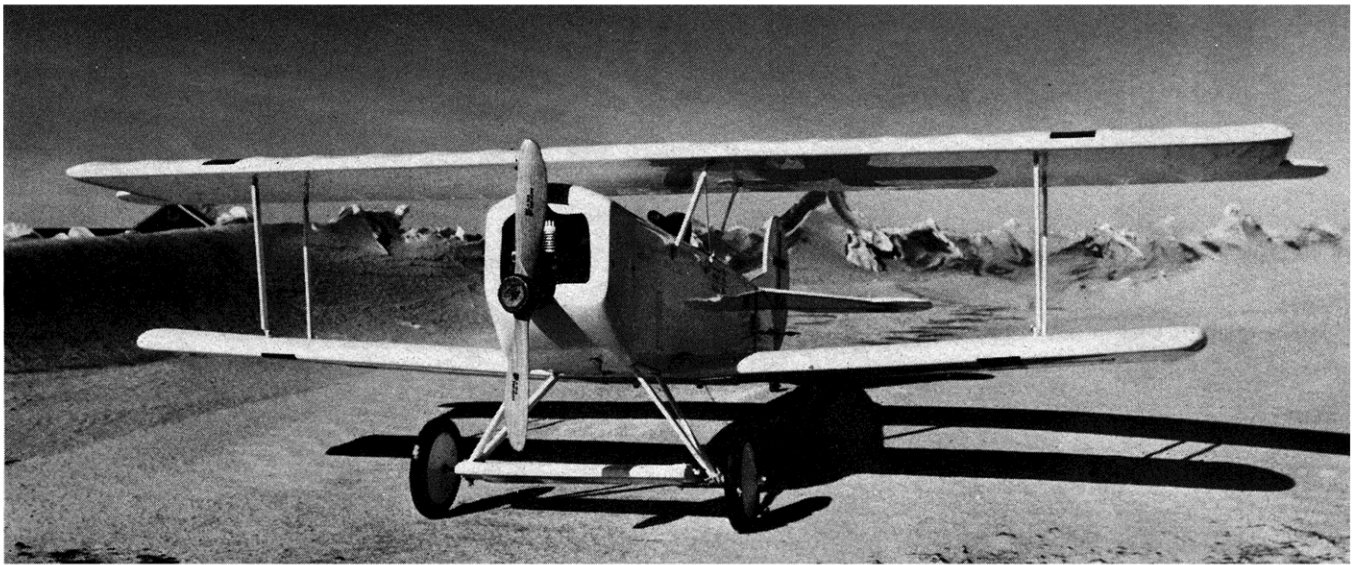


Reittmeister Uravitch and his wingman, Oberleutnant Arnie Rattner prepare to take on all comers. "Sehr Interessant!" (Ver-r-r-y Interesting!).



# FUN- FLYING FOKKER

Our Eastern Area Editor presents a worthy adversary for his successful SE-5a. The Fokker D-VII is the sport flier's answer to weekend scale fun.



**By Richard Uravitch**

PHOTOS BY THE AUTHOR

The Fokker D-VII was perhaps the culmination of WW I biplane design philosophy in perfecting the most efficient aerial killing machine. The Fokker D-VII was so feared by the Allies that it was specifically written into the Armistice agreement, with an order to "surrender all first-line D-VII aircraft." It was a potent weapon because of its stability (in an era when planes might not even recover from a spin), and the D-VII had the uncanny ability to hang on its prop at altitudes above 20,000', where most other fighters would stall and spin. It made even the most mediocre German pilot look like a real Ace. The plane was very easy to handle, yet maintained a high degree of maneuverability.

**Judging by the eerie background, this looks to be the first successful moon landing by an R/C model. One small touch-and-go for man . . . ! How could we more graphically show that the Fokker is fun anywhere?!**

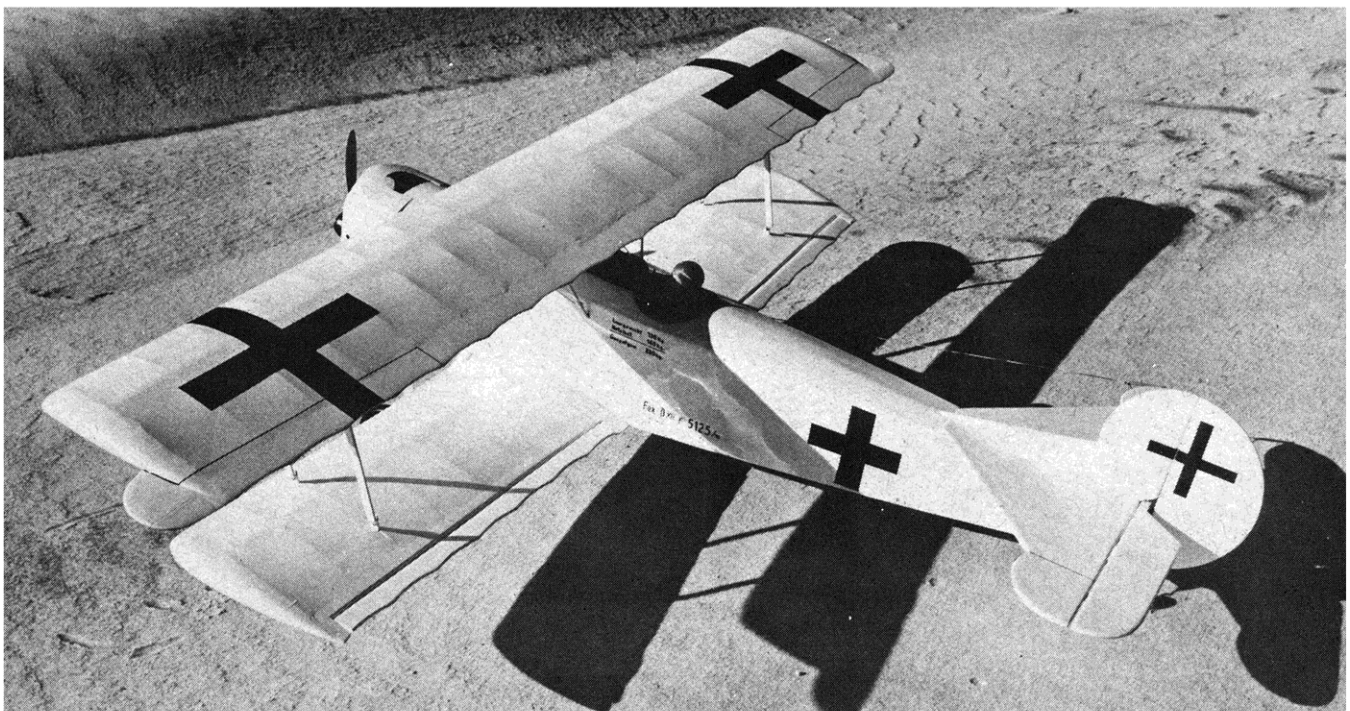
There are some historical misconceptions about the famed German fighter. First, Anthony Fokker did not design the ship. The actual engineer was Reinhold Platz, although Tony Fokker was instrumental in refining the basic design and improving its performance. Without Fokker's talents as a flier, the D series of aircraft (the D designated a single-seat fighter/scout) would never have reached production.

**Easy-to-execute Fokker can be thrown together quickly, covered in plastic film, and ready to fly in no time. Ailerons only on the bottom wing for added simplicity.**

Many people erroneously associate the Red Baron (von Richthofen) with the D-VII; although the great WW I Ace had been shot down shortly before the first aircraft came to the front lines. The Baron probably did fly the prototype for evaluation purposes, of course. History seems to indicate that Manfred preferred his trusty tri-plane to the biplane design.

\* \* \*

Those of you who are regular readers of *Scale R/C Modeler* will remember my SE-5a (December '76). The airplane has been very well received, undoubtedly because it is .29-.45 powered, and builds extremely fast. There have been some rather laudatory reports on the fun-flying characteristics of the model. It seems to have found a comfortable niche as a sport flyer, which still looks very



nice on the ground. In short, it seems that we have a real winner on our hands.

As might be expected, there were requests for a sequel to the SE-5a, with a lot of enthusiasm for a combat machine with which to do mock aerial battle. So we set to work on the scourge of the skies, and designed a model that would actually share many common building parts with the SE-5a.

The same objectives were kept uppermost in evolving the D-VII, so that it would go together quickly, have that Sunday Flyer stability, and still be capable of looking realistic enough for the Sport Scale aficionados. Features such as ruggedness and easy ground handling were carefully considered, and the resulting model is very polite on the runway, and can take an amazing amount of abuse. For those who have built the SE-5a, you'll be able to use the leftover lumber for this ship; while those starting from scratch should be able to get a completed framework for about \$15 in balsa.

*(For those who wish to try the SE-5a, the author still has plans available for \$5.95, and a fiberglass cowl for \$7.95. See ordering details at the end of this article. PHP)*

## FUSELAGE

The fuselage is built "old stick model" style, by constructing the basic sides directly over the plans. The shaded areas indicate this basic frame. When both sides are complete, epoxy the 1/16" ply doubler in position. Note that doubler covers both the 1/4" balsa side and upper 1/4 x 1/4" longeron. Make certain you build a RIGHT and a LEFT side. After the assemblies dry, cut 3/16" off the front of the RIGHT side (from top to bottom)—this will insure the built-in right thrust.

Our next step, and this is one of paramount importance, is marking

the position of the cabane assemblies directly on the ply fuselage doublers. Using the template on the plans, position accurately and mark locations. Accuracy is essential to insure proper upper wing incidence. Having completed this step, install bulkheads #3 and #4, taper edges of the rear longerons and join at the tail. I generally sandwich one rudder hinge between the sides when joining the tail.

Cross bracing (1/4 x 1/4" balsa) is now added between the sides. Length of each cross brace is shown on plans. Cut two of each cross brace since one is required at both top and bottom. These are glued between the fuselage sides at each point of the upright bracing. Fill in the space between bulkhead #8 and the tail with 1/4" sheet, after adding the stab platform. This same space on the lower fuselage is filled with 3/16" ply, since it serves as the tail wheel mount platform. Now add all upper bulkheads (1, 2a, 3a, 4a, 5-8) and sub-side sheeting. Add the maple landing gear blocks.

Install the 3/16" ply firewall, making sure it's seated properly to provide the correct right thrust. Epoxy 1/2" triangular stock to reinforce firewall and bulkhead #3. Locate and epoxy the hardwood wing hold down blocks to the ply fuselage doublers. After checking alignment, the fuselage top sheeting is added.

## CABANES

These cabanes are simple to construct from 1/8" ply, stripped to 3/4" width. Build these directly over the plans, and make two identical assemblies. Drill a series of small holes in the lower edges, to provide penetration for the epoxy when these assemblies are installed. This epoxy seepage forms "rivets," which improve strength tremendously.

Using a sharp X-Acto, from the inside of the fuselage, cut through the upper sheeting where the ca-

banes are to be inserted. When enough clearance has been obtained to position the cabanes exactly where you previously marked the doublers, epoxy them liberally into position. Epoxy and screw the 1/2 x 3/4" hardwood cabane cross members into position, to form the upper wing platform.

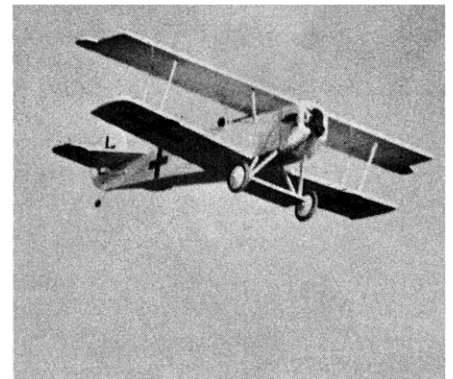
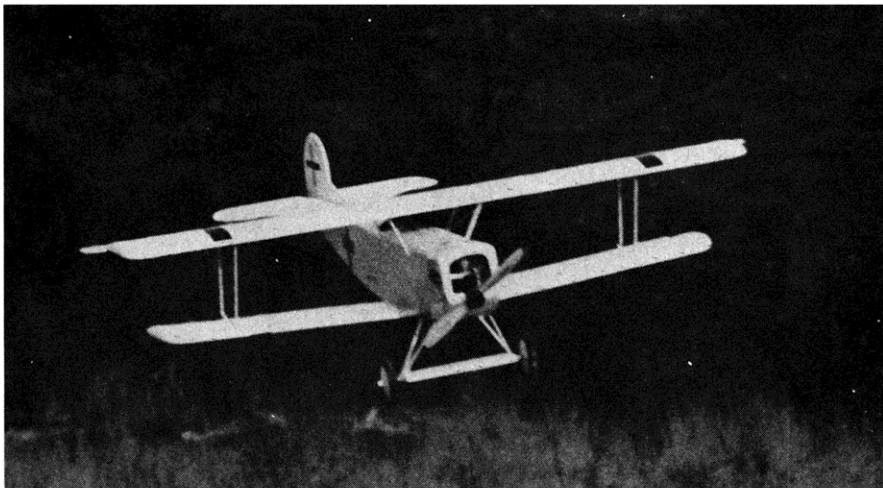
## WINGS

Although two must be built, they go together very quickly since all ribs are identical, with only the center section ribs being undercut to accept the balsa sheeting. The top wing is built flat, since it requires no dihedral. Pin down the lower spar, trailing and leading edges. Glue all ribs in position, then add the upper spar. Epoxy the center section braces (1/16" ply) and allow the entire assembly to dry completely before removing from board. Add the center section sheeting, tip blocks and interplane strut tabs. Remember, these extend from the lower surface of the upper wing.

The lower wing is a three-piece assembly, with the center section being built first. The outer panels are joined to it, with the 1/16" ply dihedral braces. Tips should be blocked to 1" under each tip while epoxy cures. Add the hardwood locating dowel, center section sheeting and tip block. Install interplane strut tabs, remembering that these extend from the upper surface of the wing. A small piece of 1/16" balsa is glued around each of the tabs to provide an adequate surface to which the covering may be adhered. (see detail drawing) The 3/4" ailerons are cut directly from the trailing edge stock, and suitable linkage is installed.

## FINAL ASSEMBLY/COVERING

Use whatever material you like, from mylars to silk. The prototypes were all covered with Silkspun Coverite and doped. This makes them tremendously strong, with little



Sneaking across enemy lines in a power-off glide. Conservative wing loading makes the D-VII a pussycat to land.



weight increase. The original prototype has some 150 flights on it, and is still going strong. Hinge all surfaces, install rods, tank, engine and mount. Proceed with all the neat little dress up items like machine guns, Williams Bros. 3-3/4" wheels, and pilot (square goggles, if you will!). Add whatever you like. Have a ball! This airplane can be as simple or as dressed up as you like.

**Arnie Rattner's D-VIII has lozenge-pattern Coverite on the wings and forward fuse to add a note of "realism" to his weekend fun flier.**

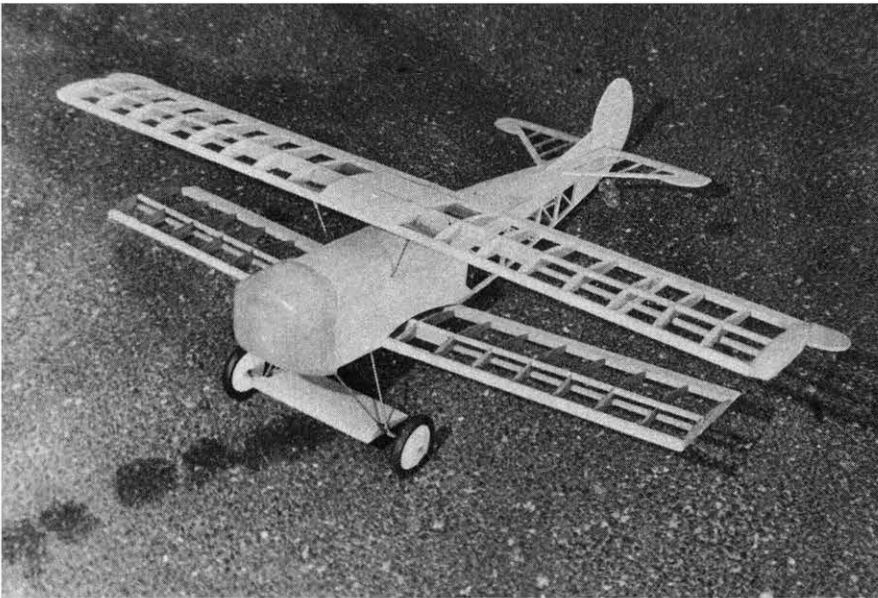
#### FLYING

The prototypes were flown with a variety of engines ranging, from a vintage Enya .35 through a Super-Tigre .46. However, the Enya .35 or

Tigre .46 pull the airplane along briskly, with scale characteristics displayed at half throttle. The original prototype is powered by a K&B .40 FR and weighs 5 lbs., which brings the wing loading in at 16 oz./sq. ft.

Check the CG, and make certain it is not aft of the rearmost limit. Don't be concerned if additional weight must be added to the nose, since it will probably take about 6-8





The bare bones reveal how basic the construction really is. Fiberglass cowls available. The landing gear spreader bar may be eliminated for grass field operations.

vator. The stall occurs at somewhat less than a walking speed, and it is straightforward.

This D-VII flies as easy as the average Goldberg Falcon, and is probably as easy to build. It makes a great subject for WW I combat and dogfighting. If your D-VII exhibits a tendency to "kite" or "balloon" in a strong wind, place a 1/16-1/8" shim under the rear cabane cross brace. This decreases the upper wing incidence and improves penetration.

\* \* \*

**NOTE:** For those of you who don't mind some extra work and want to clean up the D-VII a bit, the plans will be shipped with a supplement sheet describing the installation of 1/8" wire cabanes. These allow for screw mounting the upper wing rather than the conventional rubber band hold down.

Plans and fiberglass cowls available from Scale Model Products, Route 25A, Rocky Point, NY 11778 for \$5.95 and \$8.50 respectively. Add \$1.00 for postage and handling.  $\Delta$

ozs. WW I aircraft generally have short nose moments and the D-VII is no exception. It is, however, a bit better than most.

Run up the engine, check all controls at different power settings, and aim the airplane down the runway. It may require just a touch of right rudder, depending on how accurately your gear was bent. The airplane will fly itself off in about 20-25 feet. Aileron only rolls are of the smooth

barrel type. Snaps are achieved by application of rudder with aileron, but these are not treacherous. Recovery from just about any attitude is accomplished by neutralizing the controls.

Landings can be "wheelie" or three pointers, but the former looks really great. The sink rate on final is moderate, but it can be floated in by coming off power and gradually feeding in back pressure on the ele-

