



CONSTRUCTION

BY PAT TRITTE

Although the Storch is lightweight, it is not a floater. It has excellent flight performance and can operate from small rugged areas, just as the full-size plane did.



Fieseler Fi 156 Storch

World War II German Recon Bird

Used throughout World War II, the Fieseler Fi 156 Storch was a two-place observation airplane with a 46-foot 9-inch wingspan and a gross weight of 2,780 pounds. It was powered by a 240hp Argus As 10 V8 engine and had a range of 240 miles. The Storch would climb at 945 feet per minute and had a service ceiling of 15,090 feet.

The 55-inch-span model uses conventional wood construction and is 37.5 inches long. The model requires a 5-channel radio and has functional flaps. It features plug-in wings and has a fuselage hatch. No tools are required for assembly or battery access. With its large flaps and a flying weight of only 21 ounces, the Storch's slow flight speed and short-field performance are exceptional.

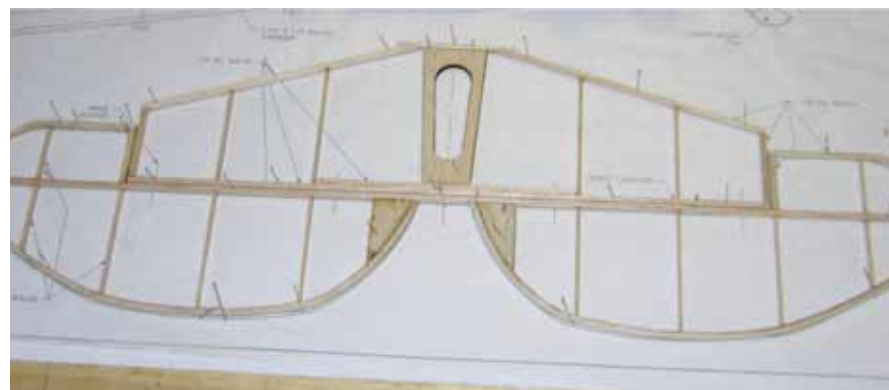
BUILDING THE MODEL

Begin by studying the plans. The Storch is a fairly complex build, and a lot of detail is provided. Familiarizing yourself with the assembly techniques will save a lot of time once construction begins. Patterns are provided for all of the parts, and the patterns can be used to make print wood sheets. Cut all of the parts required for each assembly as needed. The majority of the build is done directly over the plans

using Zap CA glue for general framing and Pacer Formula '560' Canopy Glue to attach the paper and plastic parts.

TAIL SECTION

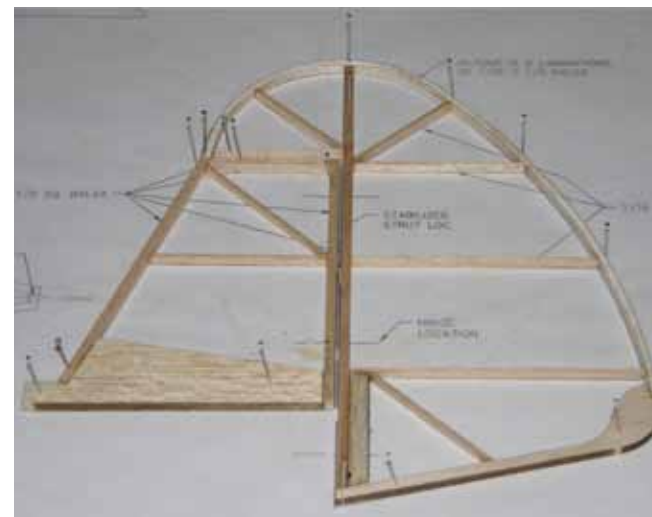
Begin by laminating (bowing) the rudder and elevator outlines. A step-by-step tutorial is available at patcustom-models.com/bowedoutlines.html. Assemble the vertical and horizontal stabilizers directly over the plans. Remove the frames from the board, and sand to shape. Cut the hinge slots, make up the hinges, and dry-fit them in place.



The horizontal stabilizer is built directly over the plans. To keep the tail light and strong, a bowed outline is used.

WINGS

Assemble the wing panels directly over the plans, and build the flaps and ailerons in place during wing construction. When complete, lift the parts from the board, and sand to shape. Cut all the hinge slots, and dry-fit the parts in place. Center the servo arms, and glue the flap and aileron servos onto the mount plates using silicone caulk. Run the servo leads through the wings, with a few inches protruding from the root rib. Cut and fit the aluminum strut fittings onto A4, and secure with a wrap of sewing thread and



The vertical stabilizer is built directly over the plans. To keep the tail light and strong, a bowed outline is used.



The finished wing panel will be removed from the board and sanded to final shape.

a thin line of Zap glue. Glue the brass joiner tubes in place.

FUSELAGE

Build the left and right fuselage frames over the plans. The upper cabin frame will not be glued in place until after the frames have been joined. Lift the frames from the board, and sand them flush on both sides. To join the frames, begin by cutting four 1/8-inch-square balsa "A" crosspieces. Pin the frames over the framing plan, align the frames vertically, and glue the crosspieces in place. Lift the frame from the board, and glue all of the formers

in place from FB5 forward, except the landing-gear mount assembly.

Pull the aft section together, and glue FT4 and the bottom crosspiece in place. Build and glue in place the tailskid mount assembly and B1, then pull the tailposts together. Add formers FT1 through FT3 and FB6 through FB8, followed by the top and bottom stringers from FB4 aft. To assemble the upper cabin, sand bevels into the frames using the cross-sectional drawings for reference. Pin the formers in place on the drawing and glue the frames to it, then glue the upper cabin assembly in place. Assemble the landing-gear

SPECIFICATIONS

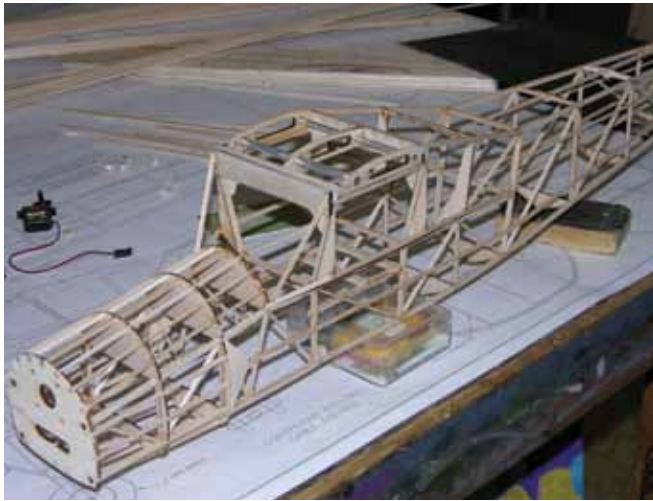
Model: Fieseler Fi 156 Storch
Type: 1/10-scale WW II observation aircraft
Wingspan: 55 in.
Wing area: 392 sq. in.
Weight: 21 oz.
Wing loading: 7.3 oz./sq. ft.
Length: 37.5 in.

GEAR USED

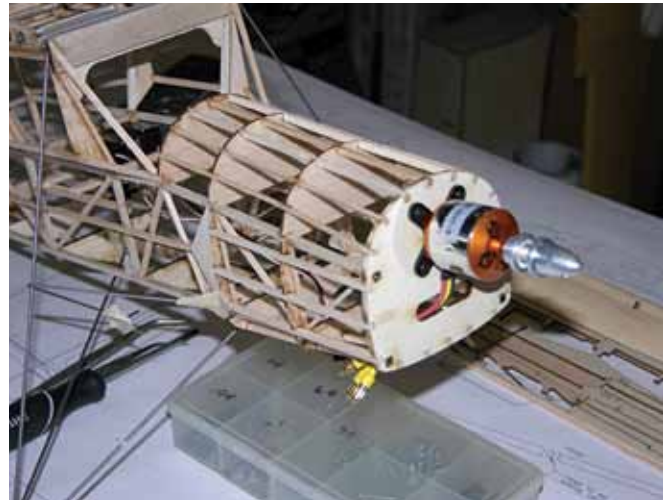
Radio: Spektrum DX7 w/ AR6000 receiver (spektrumrc.com)
Servos: Four 6g submicro servos (flaps and ailerons); two 8g submicro servos (elevator and rudder)
Motor: Suppo 2217/9T outrunner w/ 20A speed control (suppomodel.com)
Propeller: APC 11x5.5E (apcprop.com)
Battery: Sky Lipo 1300 2S LiPo (hobbypartz.com)

All ready for the Storch's maiden flight.





With the cabin assembly complete, the wing center section is dry-fitted into the frame. It won't be glued in until final assembly. The windshield frame will be added after the fuselage is covered.



The Suppo 2217 outrunner is mounted on the firewall using sheet-metal screws. The right thrust is set up using flat washers under the left side of the mount.

mount, and glue it in place. The remaining formers can be added, followed by the cowl stringers forward of 3B, then build the wing center section over the plans.

Set up the rudder and elevator servos, and install the elevator pushrod guide tube. Install the rudder cables, and mark the exact location where they exit the fuselage. Install the motor, and test-run to ensure proper rotation. Build the cowl

using laminated layers, or carve it from a block and hollow it out.

LANDING GEAR

Build the landing-gear mount assembly. Bend the B struts using the provided patterns, then slip the struts into the mount and glue the assembly in place. Bend the remaining struts, and fit them into the fuselage. Tweak the struts as

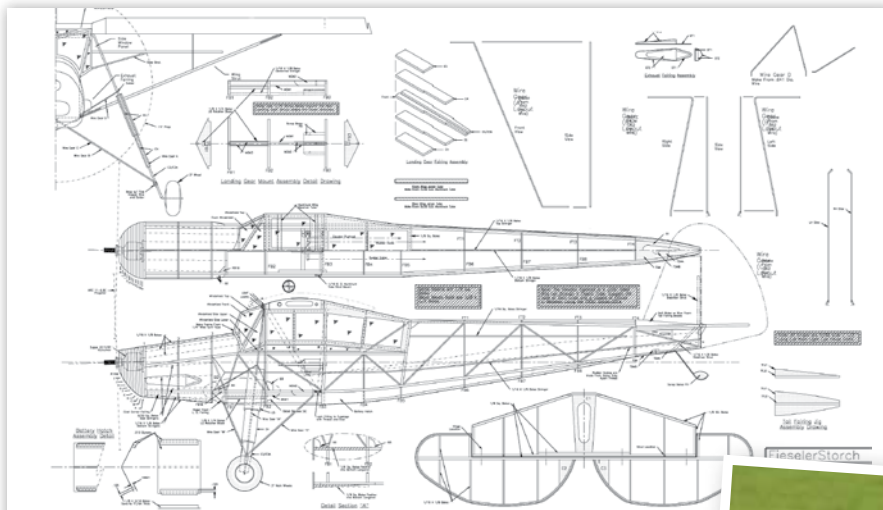
needed for a good fit. The landing gear won't be permanently assembled until after the fuselage is covered.

FINAL DETAILS

Do a final sanding, then fully assemble the model to correct any problems that might crop up. Fix them now while things are still accessible. Build the jig for the tail fairing block, and sand the blocks to shape. Build the lift and jury struts, and fit them to the model to produce one degree of wingtip washout. Build the battery hatch, and fit in place. Make all of the cabin window frames and the cowl fairings out of file-folder paper, and glue in place.

COVERING

The model can be covered with tissue or light silkspan and dope, or any lightweight iron-on film, such as Microlite. Do not use MonoKote or UltraCote due to the excessive weight and shrink rate. If painting is required, look in on my tutorial at patscustom-models.com/paintinglitefilm.html.



Fieseler Fi 156 Storch | X0216A

Designed by Pat Tritle, this classic WW II observation and STOL aircraft is a great performer. It has lightweight balsa "stick and former" construction, and laser-cut parts are available from the author. It has function flaps and scale construction and outline.

Span: 55 in.; Length: 37.5 in.; Radio: 5-channel; Power: 2217/9T outrunner; LD: 2; 3 sheets; \$27.95



To order the full-size plan, visit AirAgeStore.com.





CONSTRUCTION

FINAL ASSEMBLY

The fuselage is narrow and access is a bit tricky, so think ahead as you proceed. Install the rudder cables and the elevator pushrod. Install the flap and aileron Y-harness lead, bring the connectors out through the center section, and glue it in place. Assemble the landing gear, wrap and solder the joints, then install the main wheels. An alternate mounting method is shown at patscustom-models.com/wheelretainer.

Now, glue the tailskid in place.

Glue all of the hinges in place, then glue the tail section in place and add the fairing blocks. The flap and aileron pushrods are 0.032-inch steel wire with a Z-bend at each end. Glue the control horns in place, and adjust the control throws as shown. Connect the elevator pushrod using a Z-bend at the hinge line, then glue the control horn in place. Connect the rudder cables, and add a drop of Formula '560' Canopy Glue on the servo arm to prevent slippage.

Glue the cabin windows and flap-gap fairings in place. Add any desired details to finish up the model. Build up the leading-edge slats, and glue them in place on the wings. Balance the model as shown on the plans using the position of the battery to fine-tune the center of gravity. Build the battery tray out of light ply, and glue it in place. Secure the battery with hook-and-loop fasteners.

FLYING THE STORCH

The Storch is not a floater but, rather, a good solid flier that's very light on the controls. Using the 2217 outrunner



Photo by John Dibbs/planepicture.com

The Fieseler Fi 156 Storch

An observation aircraft built by Fieseler prior to and during World War II, the Storch was produced for the civilian market after the war in Germany, the Soviet Union, France, and Czechoslovakia, and it remains famous to this day for its excellent STOL (short takeoff and landing) performance. Conceived by Reinhold Mewes and Erich Bachem, Fieseler's design had a fixed slat the full length of the wings' leading edges, while hinged and slotted flaps and ailerons ran along the trailing edges.

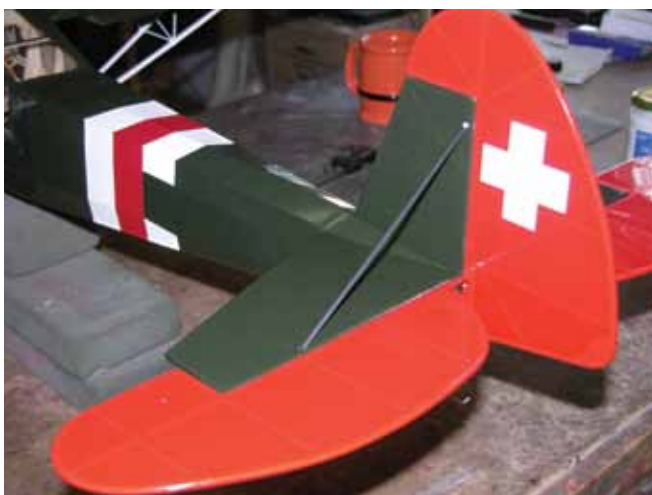
The Storch had folding wings, allowing it to be towed to required locations and stored in much smaller areas than conventional aircraft. Its rough-field takeoff and landing capability using an Oleo strut arrangement allowed it to operate from almost anywhere. With a stall speed of just 32mph, the airplane was capable of very short landings, including vertical or even backward landings in high winds.

motor with a 2S pack, the model exhibits scalelike flying qualities. Ground handling is excellent, and with the flaps deployed, it just won't stay on the ground for long.

The climb rate is substantial, so you'll need a little down-elevator to keep it in check. For full-flap takeoffs, down-elevator is required to prevent the model from stalling. With full flaps, the model will fly so slowly that the ailerons will become

ineffective, so stay on the rudder. The flaps also create a fair amount of drag, so use power to keep the sink rate in check.

After you get the feel of the Storch, try some short field takeoffs and landings. For full-flap touch-and-gos: When the main wheels touch, go to the takeoff position and the model will stick to the ground without a bounce, then power up and go again. ✈



The stabilizer struts are sanded to an airfoil shape and glued in place on the vertical and horizontal stabilizers.



The battery is secured to the tray with hook-and-loop fasteners and a strap to prevent the battery from falling out. Also note the balsa plates under the cover at the rear center landing-gear struts.