

HOBBY LOBBY

Spitfire MK-IX

Incredible warbird fun in the park!

by Scott Stoops



Of all of the World War II Allied fighters, the Spitfire holds the most allure for me. Sure, the P-51 has its angular lines and distinctive radiator scoop, the P-47, its aggressive round nose and razorback, and the P-40, its bared teeth, but the Spitfire has that beautiful elliptical wing. Growing up in Boulder, Colorado, I was lucky enough to know a local pilot that owned and flew a two-seat Spitfire at local fly-ins and air shows. While I could never afford a ride, watching its low fly-bys always gave me goose-bumps along the back of my neck. There is just something about all that raw power attached to such a gorgeous shape.

For less than the cost of a few minutes worth of fuel in a full-scale Spitfire, you too can own a little piece of WWII history in a fun, park flyer sized package. Hobby Lobby's recently released Spitfire is an extremely scale molded foam park flyer that is perfect for patrolling your local park or schoolyard! For me, the Spitfire is one of those models that fits perfectly into my truck, always ready for a quick flight when time permits.

PHOTOS BY DAVID MIELKE

SPECS

PLANE: Spitfire Mk-IX

MANUFACTURER: Flying Styro

DISTRIBUTOR: Hobby Lobby

TYPE: Scale warbird park flyer

FOR: Intermediate and advanced builders and pilots

WINGSPAN: 32 in.

WINGAREA: 177 sq. in.

FLYING WEIGHT: 13-16 oz.; 13.8, brushless; 15.6, brushed

WING LOADING: 11.2 - 12.7 oz./sq. ft.

LENGTH: 27 in.

RADIO: 3 channels required; flown with Hitec Focus 3 transmitter, Hitec Electron 6 receiver, 2 Hitec HS-55 servos

POWER SYSTEM: Flown with AXI 2212/34 brushless motor, Jeti Advance Plus 12-amp brushless ESC, Thunder Power 3S 900mAh Li-Poly battery, included 4-blade 9x7 propeller; Stock brushed system: Speed 300 motor geared 7.7:1, Jeti JES 012 speed controller, 8-cell 720mAh NiMH battery, included 4-blade 9x7 propeller

FULL THROTTLE POWER: (brushless) 9.9 amps, 106 watts; 7.68 W/oz., 122.9 W/lb. (brushed) 5.7 amps, 51.3 watts; 3.28 W/oz, 52.61 W/lb.

TOP RPM: 5750 (brushless), 3310 (brushed)

DURATION: 10 minutes aggressive flying

MINIMAL FLYING AREA: Large park or ball field

PRICE: \$139.90

COMPONENTS NEEDED TO COMPLETE: 50-125 watt power system, 3 channel radio system, (2) 6-9 gram servos

SUMMARY

The Flying Styro Spitfire offers not only extremely scale looks, but also very stable and honest flight performance.

Modeled after one of the most famous fighters of all time, it isn't a trainer, but I was very comfortable operating it in relatively small spaces. Equipped with the optional brushless power system, it also delivers scale heart thumping performance, ripping around the field when you open up the throttle! Whether your goal is simulated dog-fights with your buddies, basic aerobatics, or simple park flyer fun, the Flying Styro Spitfire fits the bill nicely.





AIRBORNE

Since I decided to omit the landing gear on this model, the first flight began with a hand launch. Fortunately, this Spitfire is very easy to launch. No Herculean throws required here. Simply throttle up and she is off after a solid toss into the wind. I find it best on first flights to have a friend do launching duties, but once trimmed, I'm quite comfortable launching her myself. That big-4 blade prop does have a lot of torque at low speeds though, so I recommend launching at partial throttle. Especially with the brushless motor, you don't need anywhere near full power to fly, and the reduced torque will be less likely to cause problems with the launch. As soon as it gathers a little speed and is clearly flying, throttle up and have a ball.

The brushless AXI motor provides excellent performance for this scale warbird. Low passes are a thing of beauty! I found the roll rate to be very scale. I just love doing a victory roll after each strafing run. With its 4-blade propeller and scale lines, it just looks right!

Without a functioning rudder I wasn't able to test its spin characteristics, but I did test its stall tendencies, and I am happy to say they are very sedate. With the CG at the stock position, it recovers with very little altitude loss. I do like to fly traditional aerobatics, and may consider adding a functioning rudder, but for cruising the park, it just isn't necessary.

To simulate the brushed power performance, I set the throttle for the brushless setup at my predetermined brushed maximum rpm setting. That setting happened to be just below half throttle, so you can see the dramatic difference between the 50-watt stock power system and the 120-watt brushless system. One item of note, I fly at 5500 msl in Colorado, so you can expect approximately 15% higher numbers at sea level when compared to my numbers here. Simulating the brushed system, I found the Spitfire to be flyable, but lacking that punch I had grown to love with the brushless system. It required full, or nearly full throttle at all times. Most modelers can expect improved performance from the brushed power system flying closer to sea level, but I think the brushless system just makes sense for the average modeler. It's a drop-in, maintenance-free solution, something that is very important with the limited access once the model is assembled.

The Spitfire is very stable at slower speeds, but with a slightly higher wing loading than some park flyers, be sure to keep the speed up until you're comfortable with its stall characteristics. Because of the drag from the 4-blade prop, I carry just a touch of throttle through the landing pattern. Simply bleed off the airspeed in the flare and then chop the power just as she touches down for a nice smooth landing.



The Spitfire offers exceptional detailing for such a compact lightweight model. It is well suited for prominent display between sorties.

ASSEMBLY

The Flying Styro Spitfire came from Hobby Lobby nicely packaged and undamaged in a double walled set of boxes. The Spitfire's basic structure is made from molded foam. Having built several similar models in the past, I knew that manufacturers could mold details into the foam structure. I hadn't, however, seen any of the new Flying Styro models, and was absolutely amazed at the attention to scale accuracy. Molded into the structure are scale panel lines, rivet lines, canopy lines, fairings, etc. Simply amazing! Another nice touch is the hardened exterior skin on the molded foam. The skin is far more durable than any other molded foam I've ever seen!

Basic assembly includes installing the power system of choice (check the Tips for Success section for more on this), gluing the wings together and to the fuselage, and gluing the tail on. I used epoxy for those important steps. Following the instructions yielded a straight and strong airframe.

Radio installation couldn't be easier. The aileron servo fits nicely into a light plywood bracket, and the elevator servo is attached



The generous fuselage hatch offers easy access to the radio installation and battery. Note the two rare earth magnets in the fuselage. I added them along with mating magnets in the hatch provide positive attachment with easy removal.

with balsa blocks to the side of the fuselage. A preliminary check of CG showed that the model would balance nicely with the battery resting on the leading edge of the wing. The interior of the fuselage is hollow, so you've got plenty of room to move equipment to achieve a proper CG if yours comes out slightly off. I attached the receiver, ESC, and battery with Velcro. The canopy hatch provides clean access for battery swaps as well as radio adjustment. I used several small magnets to secure the hatch to the fuselage.

Along with the basic structure, the kit also includes several sheets of molded plastic. Included in these sheets are dummy landing gear, the canopy, exhaust stacks, antennas, a scale pilot and cockpit. If scale is your thing, Flying Styro has given you all the parts you need to make this a fantastic scale display model! I on the other hand, chose to finish my model with a focus on flying! I did use the majority of the vacuum formed parts, omitting only the landing gear and a couple of antennas that looked likely to



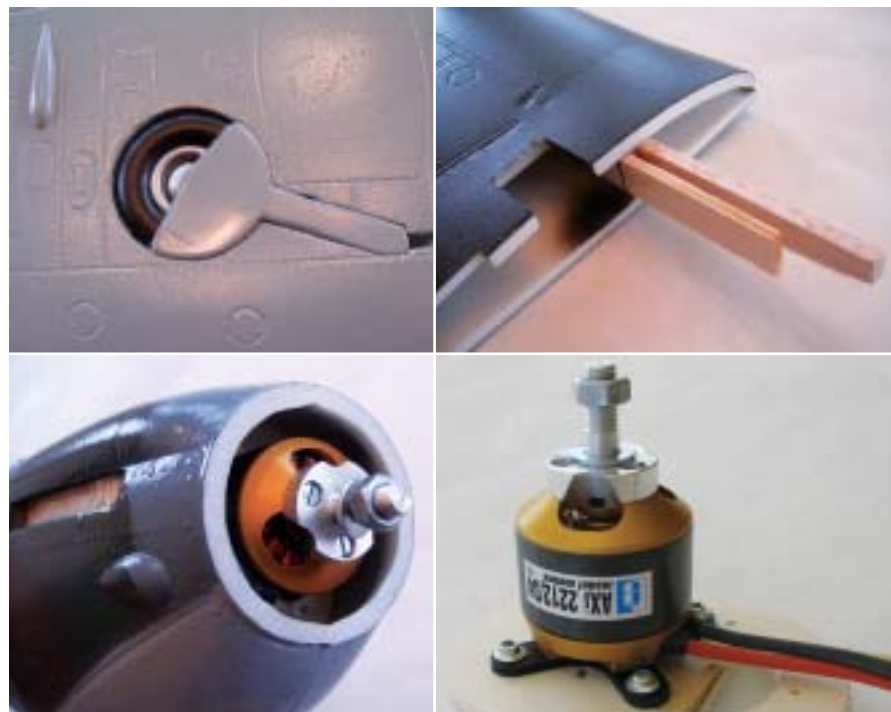
break under repeated use. Most of the plastic parts come pre-painted to match the airframe. The only part needing additional painting was the pilot figure. Credit goes to my wife, Michelle, for his wonderful paint job.



The ailerons are controlled with a center servo and torque rods; a very clean and realistic installation.

I used Uhu Por glue as a contact adhesive to attach the numerous vacuum formed plastic scale parts. Just spread a thin film on mating parts, let it air dry for a few minutes, then push the parts together for an instant bond. Flying Styro does include a set of flyable landing gear with the Spitfire, but for me, a fighter needs to have its wheels retracted for best

realism, so I omitted them in favor of hand-launches and belly landings.



Clockwise from top left: Dummy wheels can be installed in the retracted position for hand launching. Fixed landing gear is also included with the kit if you prefer to fly off a paved surface. The Spitfire kit includes an additional plywood wing joiner to strengthen the wing if you are installing fixed landing gear. I left it and the gear out to save weight and drag. I cut a small plywood filler piece and glued it into the firewall with a backing plate to provide a secure mount for the AXI motor. The AXI nestles neatly into the nose once the firewall is installed. The spinner provides a perfect visual "cap" to the nose and closes up the front end.

TIPS FOR SUCCESS

I wanted to be able to give feedback on the stock power system as not all modelers will choose to upgrade to brushless. I bench tested that setup and determined a max RPM for the brushed power system. By using the same propeller with both power systems, I could simulate the power of the stock power system by flying with the brushless system limited to the lower max rpm. For those results, check the Airborne section.

The stock power system is a brushed Speed 300 motor in an included gearbox. The power system is first attached to a light plywood firewall. Then the entire assembly is glued into the fuselage. In my opinion, it would be very hard if not impossible to access the power system once installed. I was concerned about my ability to maintain or upgrade the stock power system without doing major surgery to the airframe. Knowing that I wanted spirited scale-like performance from my Spitfire, I chose to install the recommended AXI brushless motor, rather than the stock brushed power system. With the relatively low cost of brushless motors and controllers, I think most modelers should consider this option. I couldn't be happier with the decision.

The actual installation of the brushless AXI motor was very easy. I used the stock firewall and added a 3/16-inch light plywood doubler behind the firewall for additional structure. Using the AXI radial mount, the motor simply bolted right onto the firewall. Amazingly, the distance from firewall to propeller adapter was identical for both motors, so the firewall was simply glued into the fuselage in the stock position. Per the instructions, I added a slight right and down thrust offset (around 2 degrees of right and 1/2 degree of down). These settings have worked perfectly.

If you do keep this or any other model in your car during the summer, make sure you park in the shade, or leave the windows cracked. The summer sun can bake your interior, and anything in it.

CONCLUSION

For me, the Flying Styro Spitfire really filled a hole in my fleet. I needed a model that I could keep in the truck ready at a moment's notice that was durable and really fun to fly! I found the Spitfire fit the bill perfectly. Overall, I think it's the ultimate in scale warbird park flyer fun!

Links
Hobby Lobby International, Inc.
www.hobby-lobby.com, (615) 373-1444

For more information, please see our source guide on pg. 169.