

Agile jet fighter with duration

HOBBY LOBBY

MiG-15

by Tyler Renkert

The MiG-15 is one of the most recognizable of the war birds with wings and tail swept at a 35-degree angle. This aircraft was originally designed to intercept B-29 bombers, and it was outfitted with two 23mm canons and one 37mm. The MiG was capable of speeds over 650 mph, which was extremely fast for the 1950's.

Alfa models has done a great job in recreating this aircraft for today's RC pilots. The airframe is made of a durable foam

with a hard plastic shell to protect the belly of the ship during landings since there are no wheels. The wings are foam as well, but they are hollow and contain balsa for rigidity. Alfa also has included a solid steel rod that is pre-bent and that slides into both



wings, providing a rock solid wing joiner. The model is painted with a very authentic silver paint, which is augmented by the realistic molded finish of the foam; even the rivets are raised, adding to the realism.

The best part of this package is the ducted fan. First, it is really cool to have an electric ducted fan model with a brushless powerplant. Second, the model includes a fan with a housing that doesn't need three hours of labor to install and prep for flight. This is a simple plug and play design—awesome! Hobby Lobby recommends an AC brushless motor to power the fan. This is the proper fit and perfect power range; I would not change a thing.



SPECS

PLANE: MiG-15**MANUFACTURER:** Alfa Models**DISTRIBUTOR:** Hobby Lobby**TYPE:** Park flyer**FOR:** Intermediate pilots**WINGSPAN:** 29.5 in.**WING AREA:** 198 sq. in.**FLYING WEIGHT:** 17 oz.**WING LOADING:** 12.4oz./sq. ft.**LENGTH:** 29 in.**RADIO:** 3 channels required; flown with Hitec Eclipse 7 transmitter, Hitec Electron 6 receiver, (2) HS-55 servos**POWER SYSTEM:** AC 25/25-26 Mk 2 brushless motor, (3-blade ducted fan), Jeti Advance PLUS 18A brushless speed controller, Thunder Power 3S 11.1V 1320mAh Li-Poly battery**FULL THROTTLE POWER:** 16 amps, 190 watts; 11.2 W/oz., 179 W/lb.**TOP RPM:** 31,500**DURATION:** 10+ minutes of mixed flying; 15-20 minutes loafing around**MINIMAL FLYING AREA:** Ball field**PRICE:** \$159.00 for ARF with ducted fan; as flown: \$337 (Motor, speed control, battery, servos)

COMPONENTS NEEDED TO

COMPLETE: Radio, receiver, servos, brushless motor, battery

SUMMARY

The MiG-15 from Hobby Lobby has to be seen, but you will hear it before you see it. The ducted fan is outfitted with a brushless motor that spools up to 31,000 rpm, creating great thrust to drive this pocket rocket. The screaming fan is the greatest sound when you are at the field; everyone turns to see what is coming down the runway (similar to when a straight pipe Harley comes down the street), but this ain't no hog! This bird has changed my perception of foam aircraft—I am now a believer.



AIRBORNE

This MiG was my first opportunity to work with an electric ducted fan. The control surfaces are aileron and elevator only, so it is easy to set up on the radio. The pilot must remember that the thrust is created in a different manner than conventional airplanes. Yes, there are impeller blades to create thrust, but with a ducted fan the air is drawn into an inlet and then forced out the exhaust port in the rear of the airframe.

A propeller-driven plane sends its thrust rearward, but it washes over the control surfaces, whereas the "exhaust" from a ducted fan does not. There is a lag between the time you apply full throttle and when the plane accelerates. The impeller takes a second to spool up when you apply throttle, and the airframe takes a second or two to increase speed for more control surface authority. As a result, if you fly low and quite slow and get into a dicey attitude or position, you cannot necessarily save yourself with brute power.

I learned this the hard way. I was inverted over the runway and decided to slow the MiG down so a buddy could get a "good" shot of the plane, thinking that I could just "power" out of a low pass and fly away. Well, I made the lowest inverted pass that day and caught the canopy in the grass — and could not use power to save myself. Now,



had this been prop-driven, I could have sent a quick blast of air over the surfaces to raise the nose enough to power out and climb away. The MiG was back in the air after a quick foam-safe CA repair.

The MiG only requires a light toss to get her flying because it is so light. This ship will fly very slowly like a trainer, or it will rocket around much like a pylon racer, banking hard around the field. It has a broad flight envelope, and yet it is also a docile flyer. The roll rate is axial and smooth but not too fast, and it is easy to handle.

The MiG will climb at a nice angle and is capable of inside and outside loops. The key for aerobatics is to keep it moving in forward flight. As long as you have sufficient altitude to absorb the lag time, you can play safely all day.

The 3-cell Li-poly cell provides a good 15 minutes of stress-free flying since this ship is really fun. I found myself making passes at 1/2 throttle, only to open it up and bank away at full throttle, just to hear the fan spool up.



There is plenty of room for the Thunder Power 3S 11.1V 1320mAh Li-Poly battery.

TIPS FOR SUCCESS

Building the MiG took me about four hours in total, but there are ways to make it easier. The main thing is to become familiar with the technique of constructing a foam model, as it is much different from standard balsa building. Hobby Lobby recommends that you use Uhu Por adhesive and epoxy on the horizontal stab and main wings. Foam safe CA may

small pin to open the foam cells. This allows the glue to form a better bond and creates a good adhesion point to anchor the root of the wings.

CONCLUSION

I am a believer in foam. This project was really fun to work on because everything fit perfectly, and there was no re-engineering required. The setup from Hobby



seem like a safe bet but you'd have to be quite careful applying accelerator (accelerator causes the CA to heat up while curing and can itself attack the foam). I stuck with Uhu Por and epoxy.

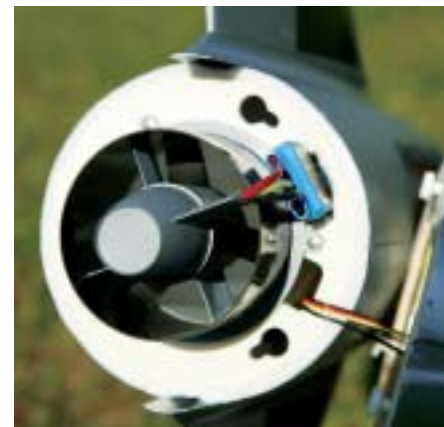
The wing mounting area on the fuselage needs to be sanded lightly and perforated with a

Lobby is the way to go. Flying this plane is as much fun for the pilot as it is for the crowd. It is an eye-catcher that brings the fun of ducted fans to an affordable level. This would be a great second or third plane for a pilot with aileron experience.

This bird can travel in your car for those opportunities when you just want to get a quick flight in or show it off at the field. I believe anyone that flies her will have blast. 🌟

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

For more information, please see our source guide on pg. 161.



Aft view of the ducted fan unit; the AC brushless motor is nested within the center pod.