Construction Guide for Quick Build MIG-29

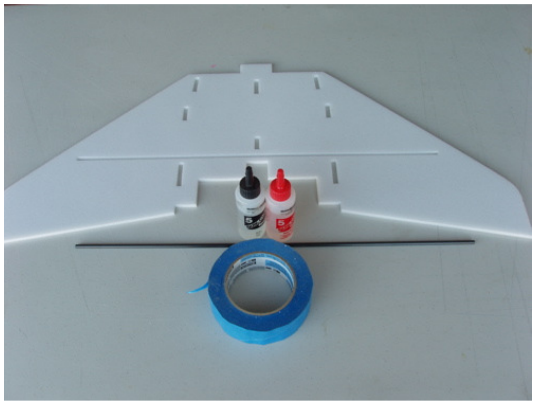
Design by Tomas Hellberg

This kit is very simple to put together. The biggest danger in messing up this kit is gluing the pieces to your work bench. But before you begin, take a couple of minutes to read over this entire construction guide as well as the parts in your kit. It's just a 3D puzzle with all interlocking pieces. Total construction time is about 2 hours and then you can take as much time on your finishing as you want.

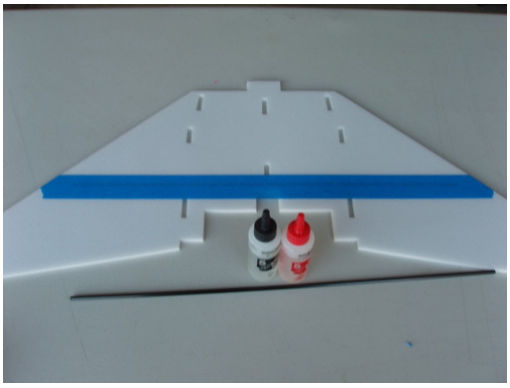
Glue: We recommend using 5 minute epoxy for gluing in the carbon fiber wing spar and UHU Creativ glue for foam for just about every other joint. But you can use 5 minute epoxy on the entire plane and it really won't make a big difference. For a real quick build, you could even use hot glue on everything but the carbon spar, but we think that is not a great option. **One more thing: we recommend you dry build you entire plane using some tape to hold everything together.** It lets you see how things fit and lets you plan out your build. Plus, if you are planning on doing any painting, IT MIGHT BE EASIER TO PAINT IT BEFORE YOU PUT IT TOGETHER.

Last but not least, we want to thank Tomas Hellberg for giving us permission to kit this awesome design. Now onto the build!

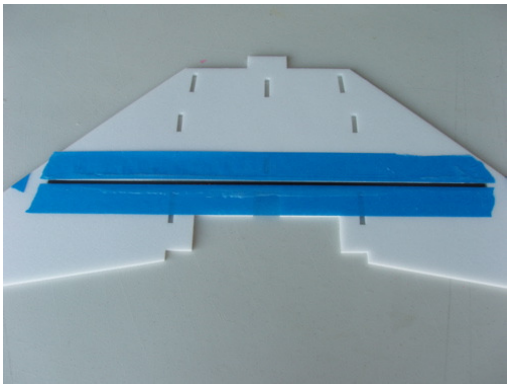
1. The carbon spar. The carbon spar is important because it gives your plane the needed strength on the wings to withstand all the forces of nature. So take your time on this. Also, this step has a good chance you could glue the wing to your workbench. Don't do this. It won't improve the aerodynamics of your workbench. Use some wax paper, or some extra tape or just be careful. Get your wing out, your 5 minute epoxy, some masking tape and your carbon rod.



Next, figure out which side of the wing will be the top side. Mask over the slot in your wing using masking tape or painters tape as shown. NOTE: You might have to extend the slot a bit with a sharp hobby knife.



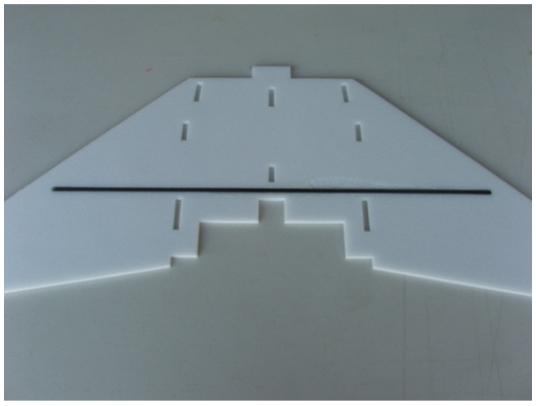
Then flip the wing over, mask on either side of the slot to prevent excess epoxy from getting all over your wing.



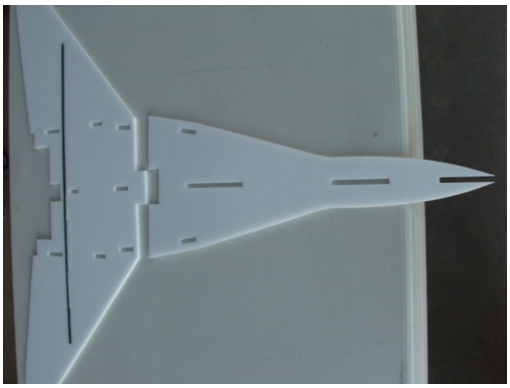
Now, mix up a good amount of epoxy and stir well. The key with epoxy is to really get it mixed well. So mix it like crazy. We recommend using a small cup made of paper or something so you can bend the lip to make like a little spout, but any container will do.

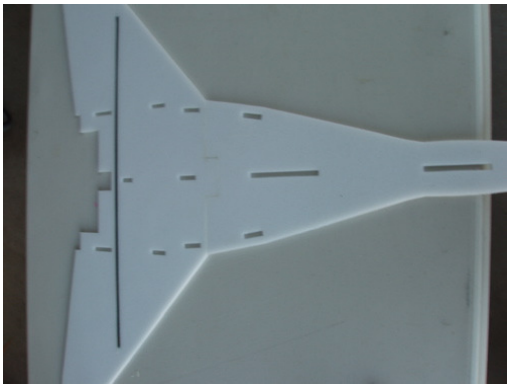
Next, and this is important, make sure your rod is NOT in the slot. The picture above shows it in the slot but we were just test fitting the rod. Then pour in the epoxy the length of the slot and even it out within the slot. Insert rod and mash down hard. Wipe away any excess epoxy that oozes out. It helps if you have a good piece of card board or something to use as a squeegee.

Now remember about gluing your wing to the table? Now is a good time to check if your tape on the bottom blew a hole in it and leaked epoxy all over the place. If so, wipe it up and make sure you don't glue the wing down. Can you tell we have glued our wing down a time or two? Okay, don't wait too long, like 5 minutes and remove your tape. That is pretty much the hardest part, and you are done!

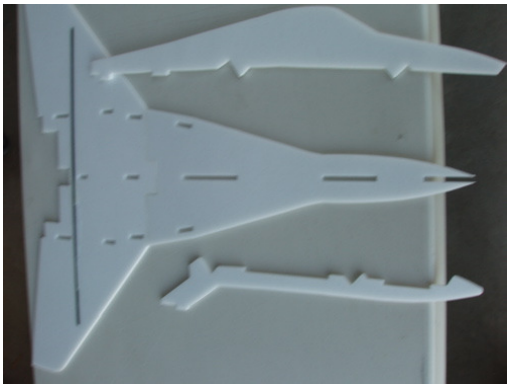


2. Front fuselage assembly. Next, we recommend using epoxy for this step too, it makes the rest of the assembly go a little quicker if you have a nice rigid joint here. Mix up a bit of epoxy and spread on one side of the joint and push it together. Make sure here not to glue to the table again. Really, this happens a lot.



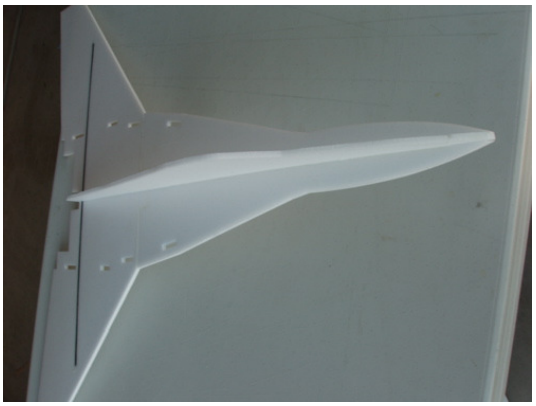


3. Next, let's get the canopy and forward lower fuse pieces and connect them. We used UHU Creativ for foam glue for all other joints from this point forward.

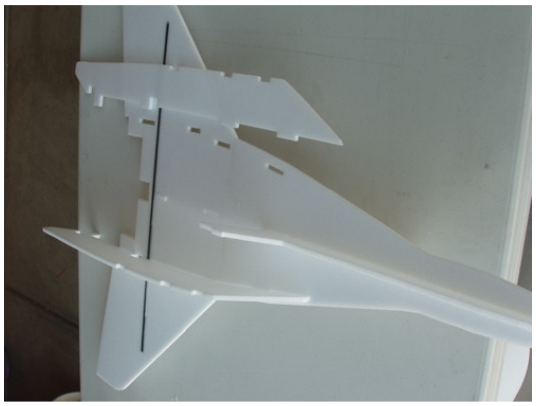


Make sure you attach the canopy (big piece) to the top of your wing (as

discussed the first steps). Attach the lower and upper piece through the slots.



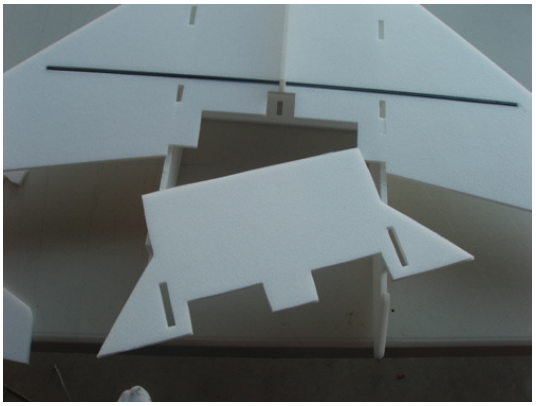
4. Engine Intakes. Find the two pieces that make up the engine intakes.

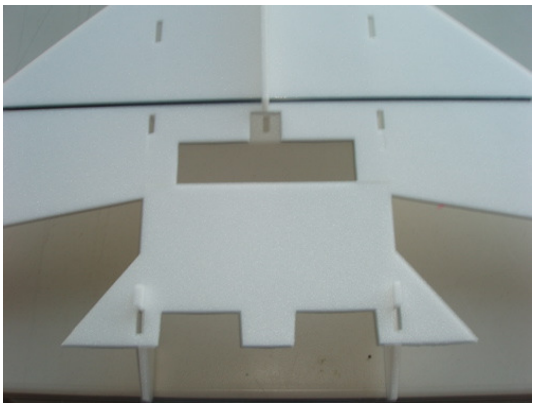


Flip your plane over so the bottom is facing up. You will attach the engine intakes by putting them through the forward most slots as seen in the picture above. You will notice a gentle bend as the intake curves around the body.

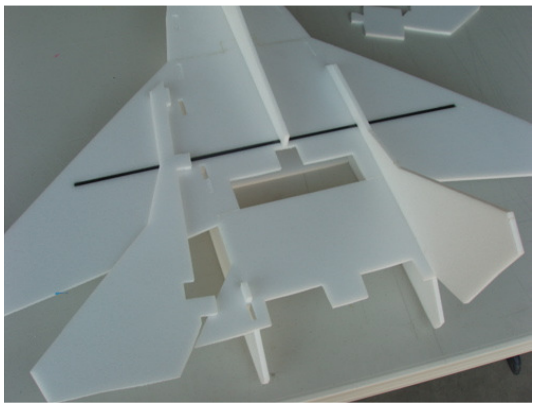
5. Bottom Fuse. Find the bottom fuse piece to enclose off the bottom. Glue into place.

6. Rear Fuselage. Flip your plane over so it's sitting right side up. Find the rear fuselage piece and attach. **NOTE: You can go ahead and mount your motor now, if you complete Step 8 first. It might be easier for you, but not necessary. See step 10 for details.** You will note that there are tabs that fit into the slots.

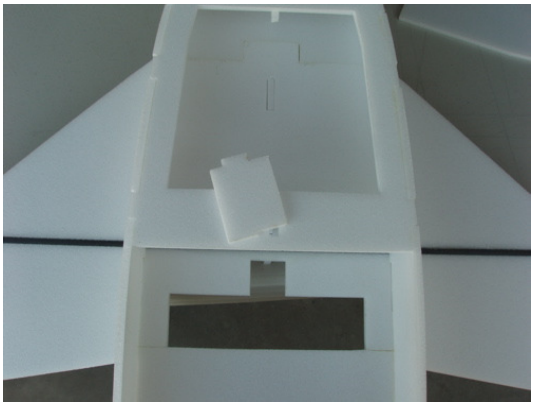


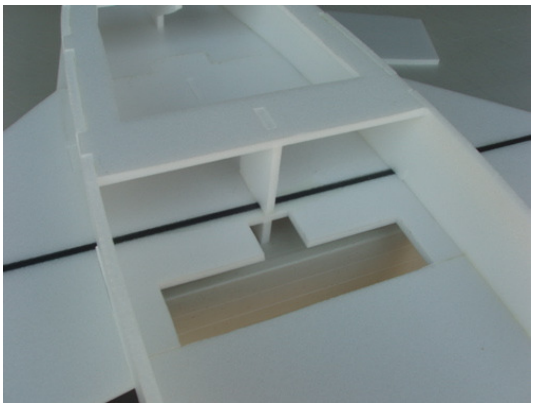


7. Vertical Tail. Next get the two vertical tail pieces. Fit them into the remaining slots with the tabs on the tail pieces.

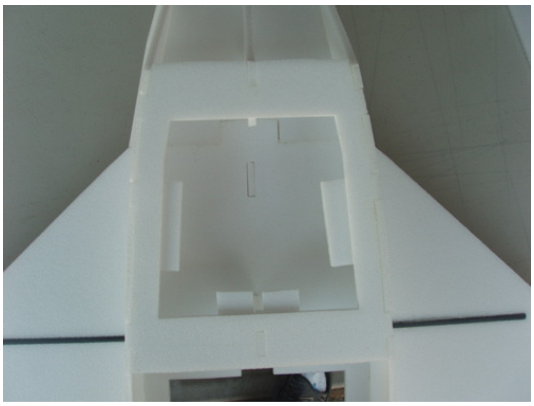


8. Reinforcement Piece. This is the little rectangle piece that is left. It goes under the plane to reinforce the box you created. We recommend using epoxy on this piece. It is mounted near the motor area.



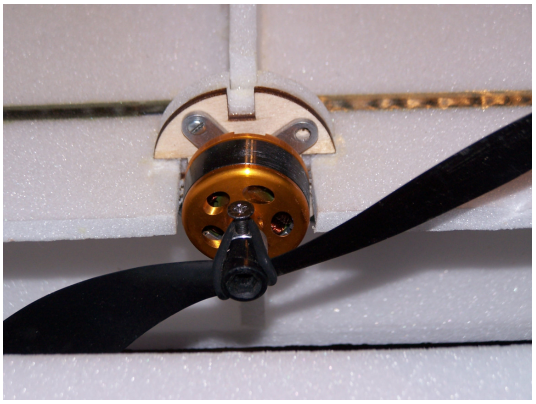


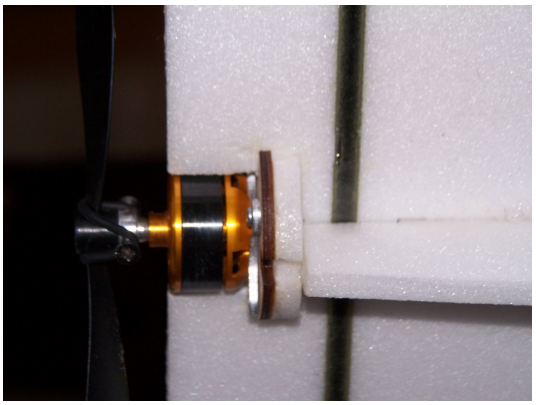
9. Hatch construction. This is the part that might take some creativity on your part. The hatch piece can be attached about a million different ways. Velcro, magnets, and good old fashioned duct tape just to name a few. But you will need to use some scrap pieces of foam to let the hatch stay in place. See below.

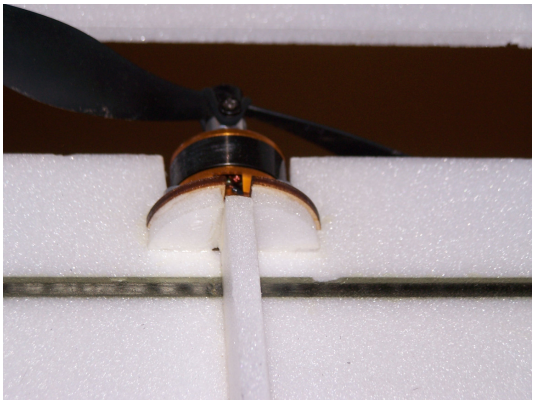


10. Motor Mount. In you kit you should have a ply piece and a little foam disk

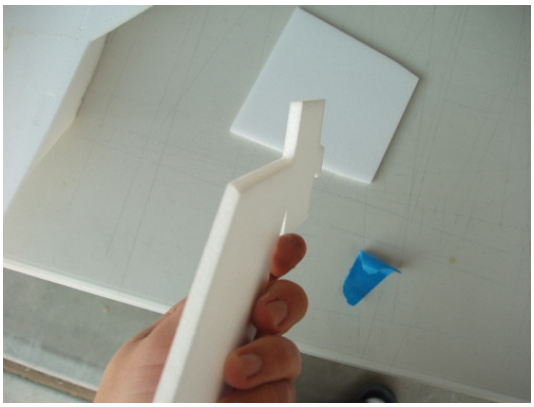
that match up. Go ahead and laminate them together with some epoxy. Then, mount it to the motor area using epoxy.



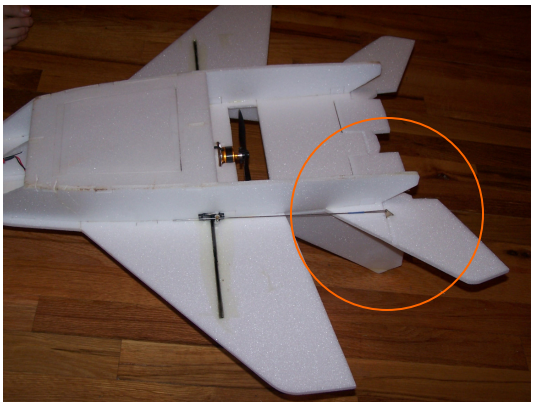




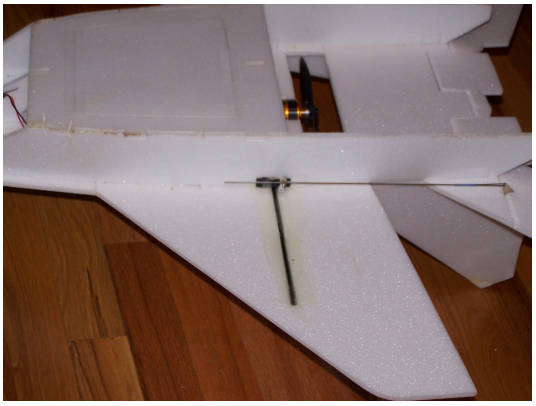
11. Aileron Prep. You will need to attach your ailerons next. First you will need to bevel the edge so the hinge works properly. See pictures. Using hinge tape (not provided) or some 3M scotch tape, attach the ailerons to the body. You may need to sand these pieces a bit to make sure they do not rub on each other in the middle.

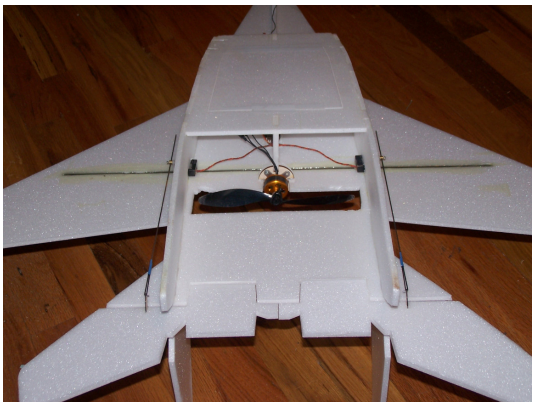


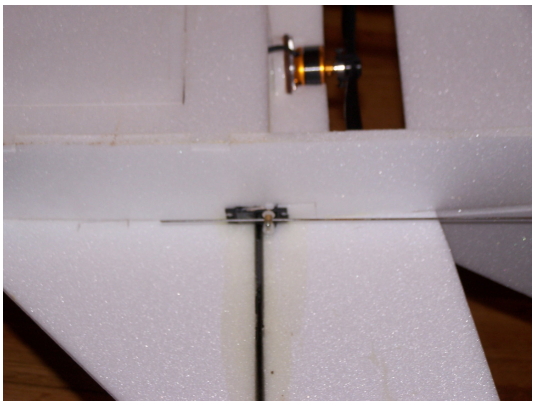
Here (below) you can see the beveled gap in the aileron to allow for free movement positioned on the bottom of the plane.

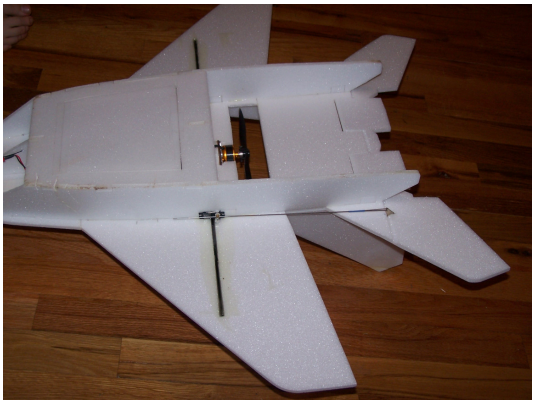


Servo and control horn mounting. This is all about preference. You can mount your servos pretty much wherever, but we prefer under the wing and right over the CF rod. This gets all the wires inside the box on the plane and makes it easy. Study the pictures below.









12. Connect up your electronics and paint as desired.

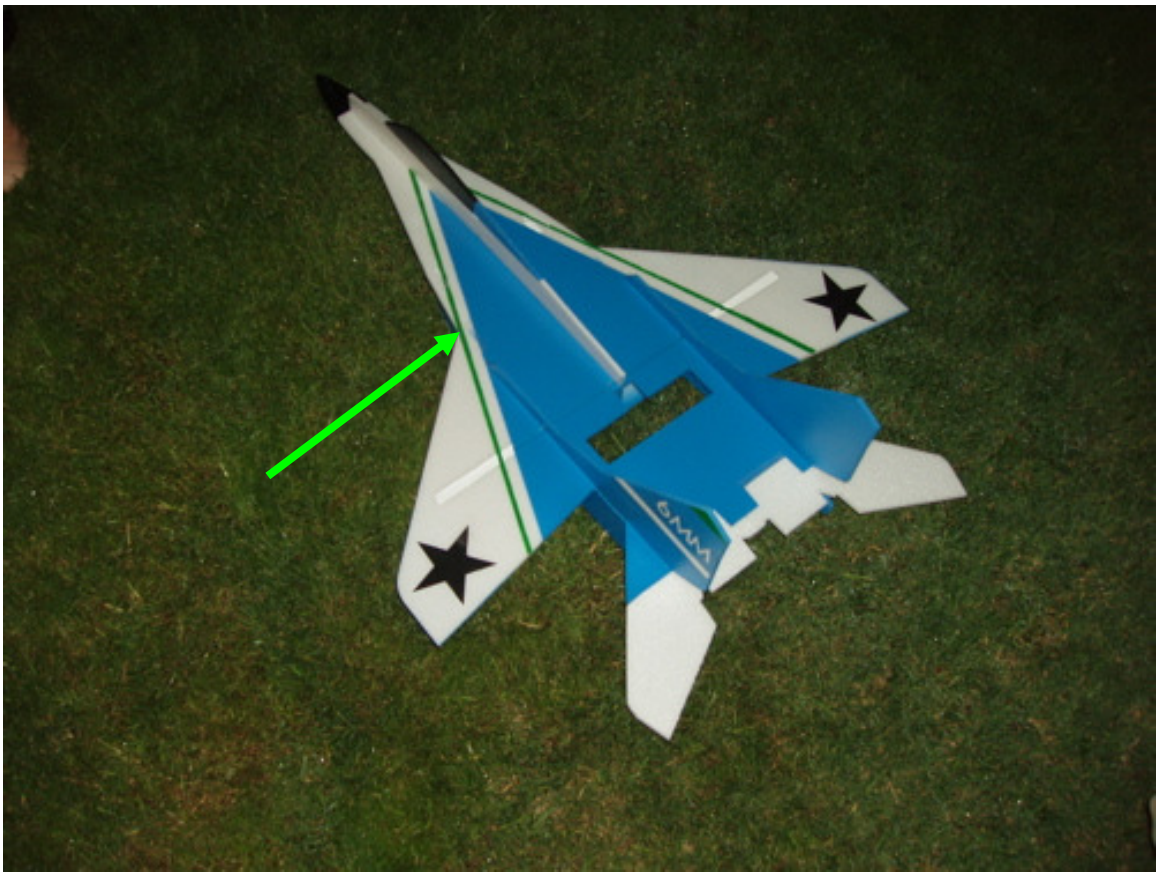
Note on finishing. We coated our entire airplane with some Minwax water based polyeurathane. It came in a spray can. We did about 2 coats and it worked great. Then we just used regular spray paint and some masking tape to finish it off. The Minwax protected the foam from the foam eating regular spray paint. It was like a force field in a spray can. The bottom line here is test out your paint on some spare foam or only use foam safe paint. It will melt your airplane if you are not careful.

Recommended Set Up. First, what we mean by recommendation. It's what we used and it works well. So you can use a different combo if you like. **Also, with just Tailerons, this plane, and all the Quick Builds perform great, but if you really want to increase roll rate, add in some ailerons, just tie them directly to the tailerons and you will be in business.**

Rocket
Motor: Grayson Hobby GH2216-06 Brushless Motor and 30 AMP ESC "Parkjet Combo"
3cell 1320 Thunder Power Battery
6 x 4 Prop
2 HS-55 Servos

Parkflyer
Motor: Scorpion 2205-36 Outrunner
3cell 1320 Thunder Power Battery
7x6 Prop
2 HS-55 Servos

Center of Gravity Location is 3" rear of the wing break (wing break is shown below)



For more information on this model please see the RC Groups discussion thread: http://www.rcgroups.com/forums/showthread.php?t=757214 or go to our website: http://www.6mmflyrc.com.