

# Yak 54

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[www.3DMONDESIGNS.com](http://www.3DMONDESIGNS.com)



## **Specs:**

Wingspan: 30"

Length: 26"

Flying weight: 4.5-5.5 oz's

Center of gravity: 1/4"-1/2" behind the carbon wing spar

## **Recommended Power Setup:**

Motor: 24g 1300kv "Blue wonder type outrunner"

Speed control: 10-15 amp

Prop: 8x3.8 APC Slowfly

Battery: 3s 360-500mah 20c lipo

Servos: 3 - 5 gram or 9 gram

Lightweight receiver (4ch is all that is needed)

## **Items needed:**

Foam safe glue (I used foam safe ca and foam safe kicker)

Hot glue (used to hold servos to the foam)

.040 music wire and heat shrink tubing (for control rod ends)

Hinge tape (1" blendurm is the best but packing tape works great too)

Razor knife (used for cutting the carbon fiber rods)

# Build instructions

Tape the hinge lines.



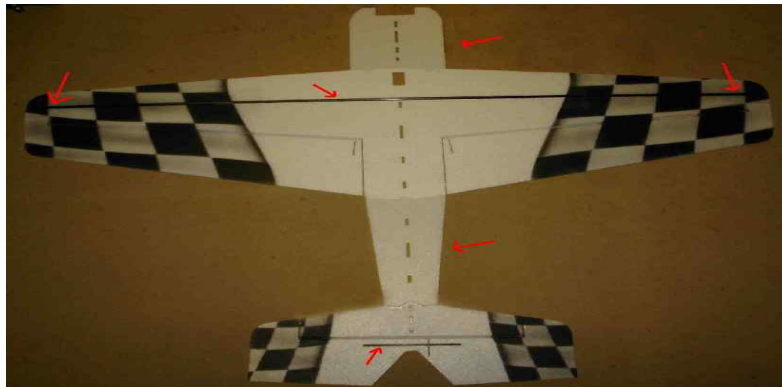
Glue the carbon wing spar in place.

Put a little bit of tape over the ends of the carbon wing spar.

Cut the thinner carbon rod at 3 1/2" and glue into the elevator slot.

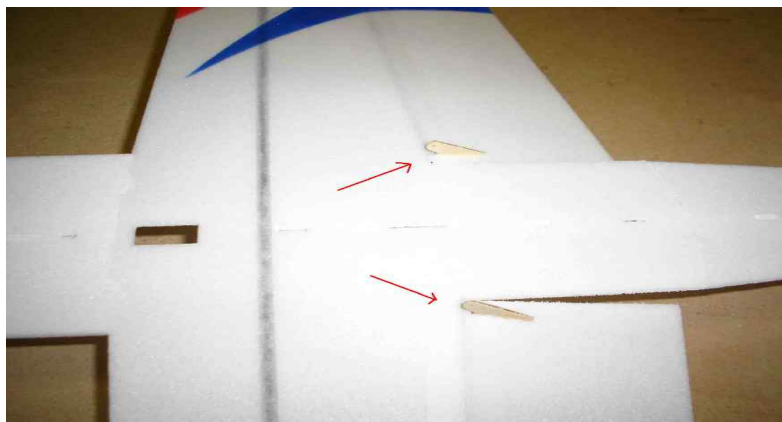
Glue the front nose to the wing section.

Glue the horizontal fuse piece to connect the wing to the elevator section.

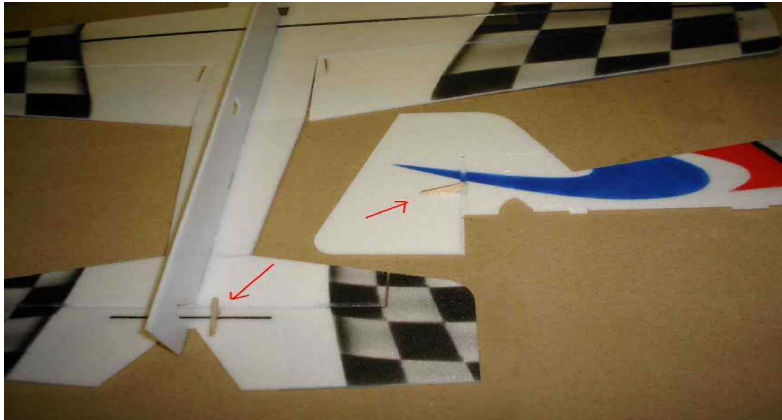


Glue the aileron control horns in place.

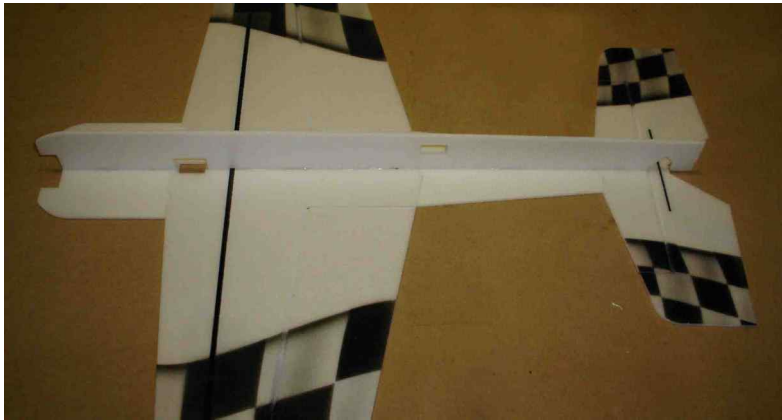
**\*\*The control horn with the notch is for the elevator\*\***



Glue the elevator(notched one) and rudder control horns in place.



Glue the bottom half of the fuselage to the wing/elevator assembly.



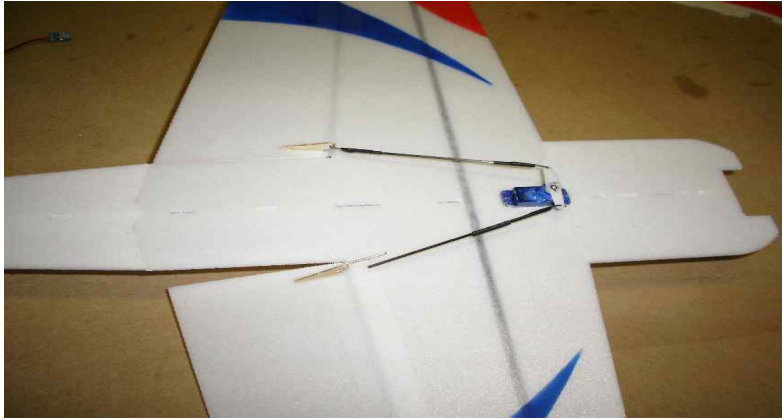
Cut 2 pieces of carbon rod at 3 5/8" for the aileron control rods.

Glue a .040 music wire with a Z bend on the end to the rod.

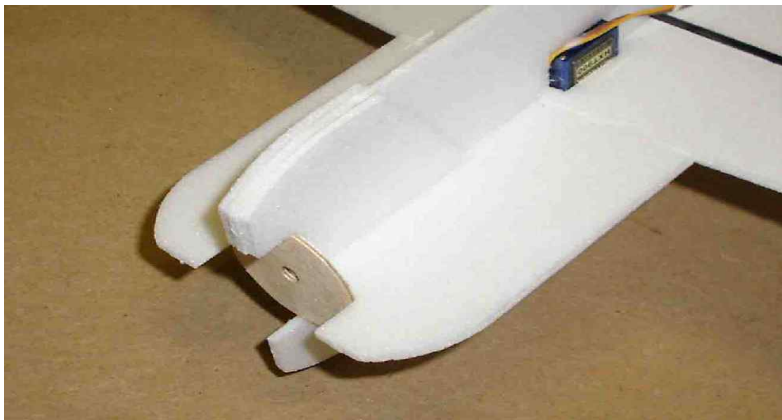
Put heatshrink over the wire and carbon.



Glue the aileron servo in place with a couple of dabs of hot glue.  
Center the aileron servo horn and attach the aileron pushords.  
Make sure the ailerons are lined up with the fuselage sides.  
**\*\*Don't forget to slide the heatshrink onto the rod before gluing\*\***



Glue the top half of the fuselage to the rest of the plane and flip over.  
Tape the hinge line where the rudder meets the bottom fuselage half.  
Glue the motor mount, then glue the 2 bottom stiffners to the fuselage.



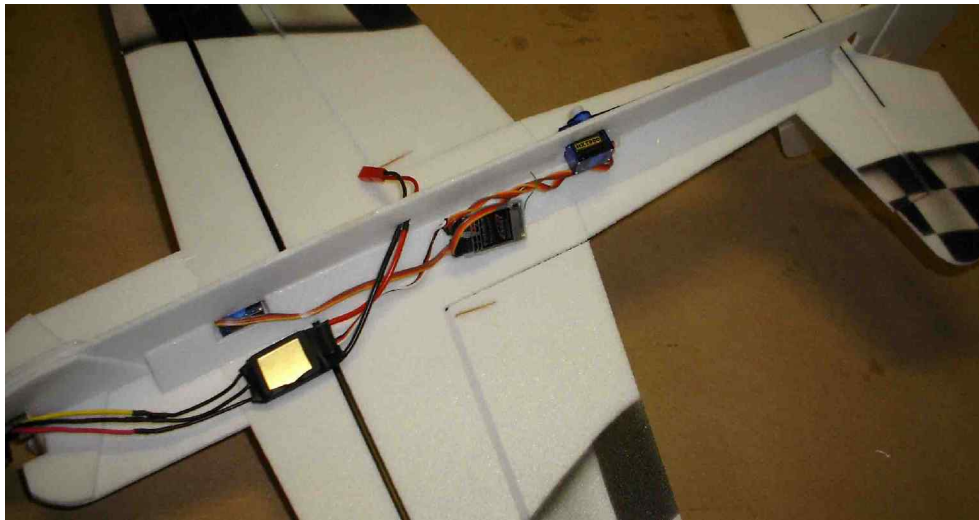
Glue the 2 other motor mount stiffners in place.



Cut the elevator control rod at 6 1/8" and the rudder control rod at 8".  
Glue the elevator and rudder servos in place with a couple of dabs of hot glue.  
The elevator servo goes in the bottom hole on the left side.  
The rudder servo goes in the top hole on the right side.  
Attach the control rods to the control surfaces.

Glue the remaining fuselage supports in place on each side.

Attach the motor and mount the receiver.  
Mount the speed controller off to the side to help with the lateral balance  
because of the weight of the battery on the other side.



The battery goes on the opposite side and gets attached to the angled support piece with velcro.



Ok, the assembly is complete.



Radio setup:

High rates: 45-50 deg's all surfaces

Low rates: 20-25 deg's all surfaces

60-70% expo is recommended in high rates

Balance the plane.

The C.G. Is 1/4" to 1/2" behind the carbon wing spar.

Be sure the control surfaces are going the right direction.

The motor does not need any right or down thrust  
due to it being built in by design.

The Yak 54 is now ready to fly.

Have fun flying the Yak54!

If you have questions concerning the build, feel free to contact me at:

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