

INSTRUCTION MANUAL

YAK54-380



SPECIFICATIONS

WINGSPAN:1014mm(40") **LENGTH:905mm(35.6")**
WEIGHT:700g(24.7oz) **WINGAREA:19.9dm²**
ENGINE:R-28C-1 motor **RADIO:4channel 4servos**

Before commencing assembly, please read these instructions thoroughly.



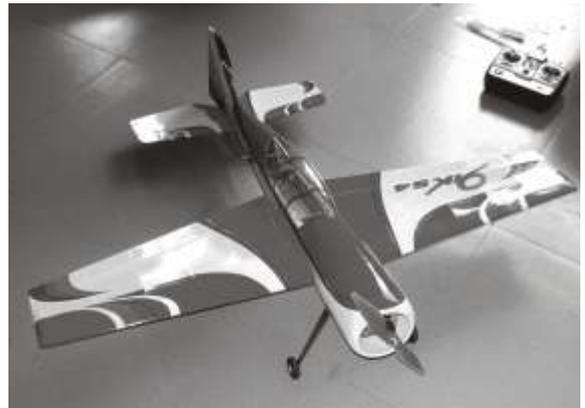
SAFETY PRECAUTIONS

- First-time builders should seek the advice of experienced modelers before commencing assembling and if they do not fully understand any part of the construction.
- You are responsible for this model's assembly and safe operation!
- Always keep this instruction manual ready at hand for quick reference, even after completing the assembly.

RICH-MODEL

RICH-MODEL is proudly presenting their electric series of the first new electric plane to the market. This new electric plane is Mini Yak.

This Yak is a balsa built-up ARF plane with scale appearance, suitable to perform 3D maneuvers and precision aerobatics. This 40 in. wing span Yak fly like a giant scale gasser Yak. Features two pieces plug-in wing w/CF tube and one piece canopy hatch opening provides spacious room for easy installation.



Thank you for choosing electric series Mini Yak of RICH-MODEL. Before you start building, please check the contents of the kit.

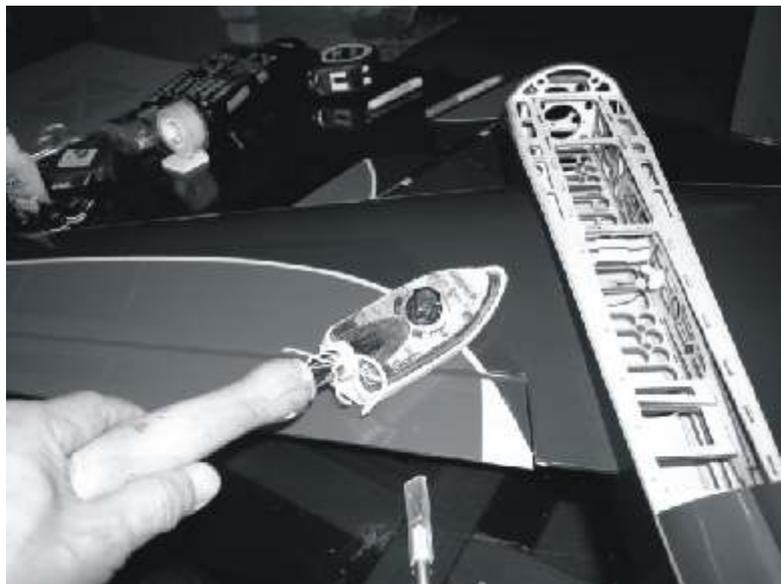
The building of this kit is a very straight forward job. However, please follow this step-by-step instruction manual to finish the job.

The kit should include the followings:

- 1. Fuselage w/ canopy x 1**
- 2. Main wing x 1**
- 3. Stab w/ elevators x 1**
- 4. Vertical fin w/ rudder x 1**
- 5. Cowl x1**
- 6. CF wing joiner x1**
- 7. Aluminum LG x1**
- 8. Hardware pack x 1**
- 9. Decal set x1**



Please start your building with ironing all parts that's covered in Ultacote. As they might not be ironed on as tight as it should be. Be careful with the tail feathers. Apply less heat when you ironing the tail and do not twist the surface as they are thin and easy to warp with high temperature.



Now we can start the building.

1. Attach main wing to the fuselage using the included nylon bolts.



**2. Find the elevator joiner and glue join two elevators together with it.
Make sure the hinge line is straight and elevator surface is nice and level.**

3. Insert the stab into the fuse. And roughly place it in the center, then measure the distance between rear corner of wing tip and front corner of the stab tip. Adjust the stab until the two measurements are equal.

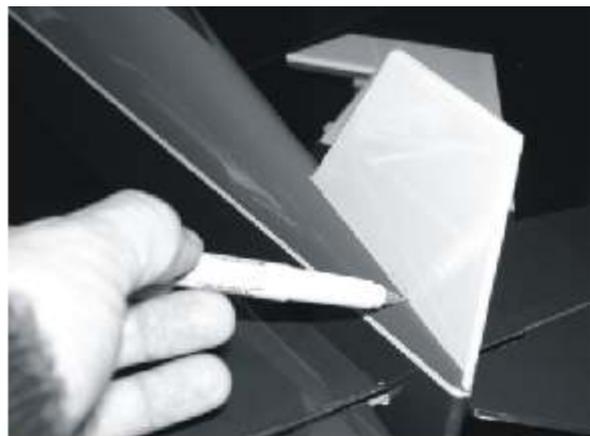


4. After you got the equal measurements between both tips. Draw lines on both side of the stab

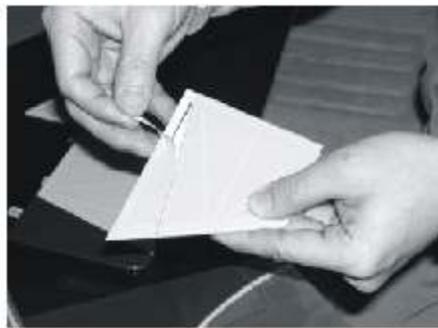
Along the fuse. Then cut off the covering along the line and peer off the covering. Now put it back to the fuse and check the level. *Remember to insert the elevator before the stab.



Hook up the hinges then CA the stab.



5. Place the vertical fin into the slot on the fuse. Draw lines on both side of the fin then cut off the covering, and CA the fin in place.



6. The nylon-fabric hinge is a nylon sheet laminated with fabric on both side. Before you CA it, you may wanted to bend it a few times. Place the bend line align with hinge line.



7. Bend all the hinges before you use it, and install all hinges on all control surfaces. Apply CA to all hinges with the control surfaces move to the highest throw you want it to have.



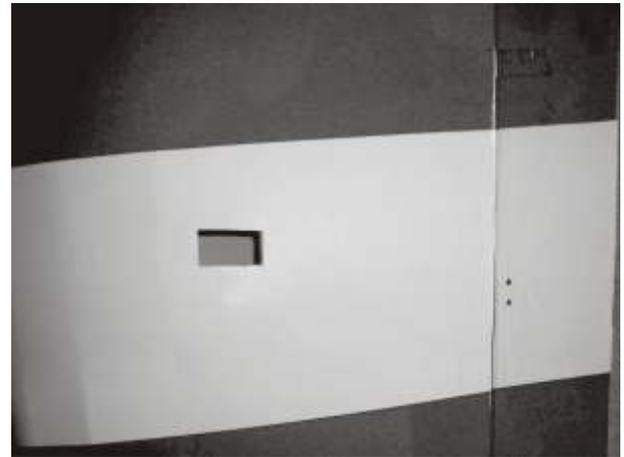
8. Now it's time to apply decal to all locations.

First find the transparent sheet from the package. This is what you use to bring the decals to stick on plane. Let's use Yak54-380 decal as example. Cut the transparent sheet into the size of the Yak54-380 decal, then peer off the transparent sheet. Stick it on the Yak54-380 decal. Then peer off with the Yak54-380 on the transparent sheet. Carefully locate the Yak54-380 on the right wing bottom. Align the Yak54-380 with the main spar then stick it on from one side to the other. Repeat the same process to do the rest of the decal.

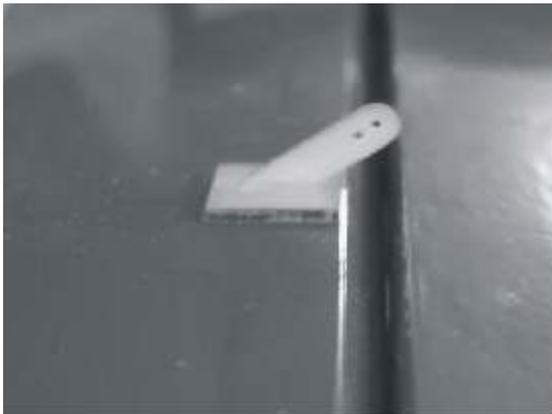


9. Install the control horns.

Every control surface should have a cut out slot for control horn. Cut off the covering as shown in the picture as this will give CA glue works better between balsa the phenolic board. Trim the slot if necessary.



10. Glue the phenolic control horns to Aileron, elevator and Rudder with medium CA. The Rudder control horn should be a pull-pull style horn with holding plates on both side. Make sure all horns are squared with the control surfaces.



11. Prepare the landing gear.

Find parts from hardware pack as shown in picture. Assemble the wheels, bolts and nuts as shown.

Use the included wood screws to install the landing gear with the wheels assembled onto the fuse.



12. Install the music wire style tail support as picture shown.



13. Now it's time to get all of your servos ready. Find push rod adjusters from hardware pack. Install it to the Aileron, Elevator servos.

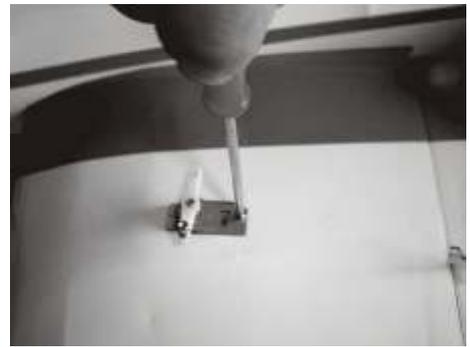


14. Servos installation.

Aileron servo should be installed with double side foam tape. Take the servo mounting plate from the wings. And attach the servo to the plate, the servo arm should be on the center of the opening set at 90 degree. Put the plate back in the wing with servo already installed. Use three wood screws to secure the plate. Do this on both wing halves.



Elevator servo should be installed on the fuse side. Adapt a piece of extension wire to the servo wire depending on where the receiver you plan to place.



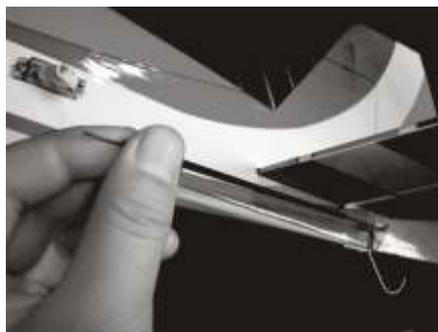
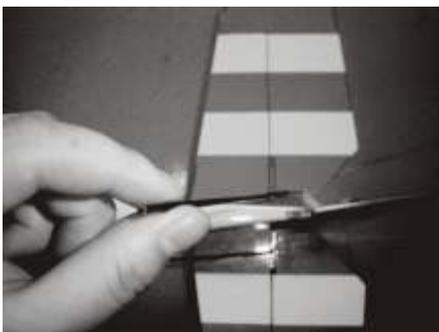
15. Make up the push rods according to different length required.



16. Build a pull-pull cable system for rudder. Use the included cable and clip tubes to make a pull-pull wire.



17. Assemble the carbon fiber tube after you assemble the pull rod.

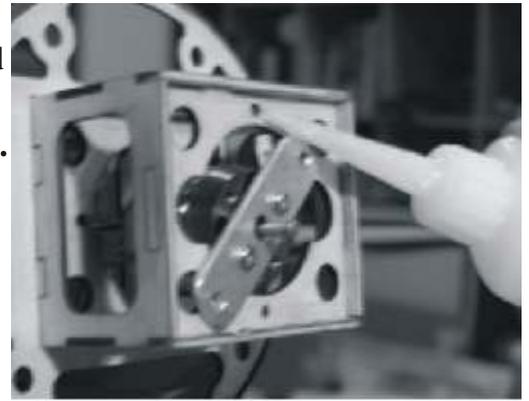


18. Motor installation.

On the motor mount of Mini Yak, there're two plates for mounting the motor. You can decidethis according to your motor length. Thepoint is that you have to let the motor shaft to stick out far enough to clear the cowl.



After you decided where to mount the motor, use wood screws to secure it to the mounting plate. Don't forget to put a drop of thin CA into the mounting screw holes. Then screw the motor back in place.



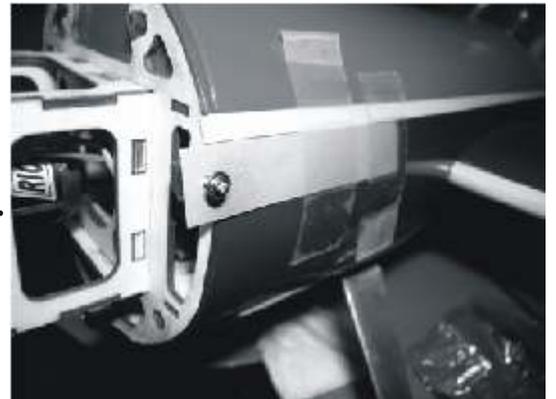
19. The fuselage of the Mini Yak is wide open when the canopy is removed from the fuse. It's easy to move equipments around when it's open. Use Velcro to hold battery, speed control and receiver firmly in place. The battery is recommended to place in-between first and second section of the fuse.



20. Cowl installation

Prepare three strips of card paper about 12mm wide by 60mm long.

Drill a 2mm hole at one end of each paper strip. Also drill a 1mm holes on each cowl holding tabs. Now tape the paper strip with these two hole aligned. Repeat this on all three tabs.



21. Put the cowl back in with the paper strip cover on the outside, and attach the prop adaptor. Adjust the cowl to clear the prop the thrust angle. Then drill through the holes on paper strips.



22. Hold the cowl with wood screws going through the tabs.



23. Now is time to set up the plane.



Control surface movement

Set up the control surface throw as follow:

Aileron 35 degree low rate 20 degree

Elevator 45 degree low rate 25 degree

Rudder 45 degree low rate 35 degree

CG is located at 3 1/2 in. from leading edge, measured right by the fuse.