

3dEPP.com

EPP Yak 55 Assembly Manual

Congratulations on the purchase of your new EPP Yak 55 airframe! The 3dEPP.com Yak airframe is a great flyer for pilots wanting to learn basic and advanced 3D maneuvers and has been proven to be the airframe of choice for some of the top pilots in the realm of 3D Flying. The tabbed design makes assembly super fast, super simple allowing you to get in the air quicker than ever before. Constructed from EPP this airframe is very durable and will provide hours of 3D flying fun!

SAFETY during Assembly

While assembling this kit the builder will be using standard modeling tools such as knives, adhesives, soldering iron and other common power tools. Please follow all safety precautions outlined by the manufactures of the products you use during construction of your kit, and always follow the important guidelines listed below.

ALWAYS protect your eyes when working with power tools, hand tools, knives and adhesives. It is highly recommended that safety glasses are always utilized when working with this type of equipment.

ALWAYS protect your body, fingers and hands when working with knives, adhesives, or tools. Never cut towards exposed skin when using hobby knives or blades. Insure hobby knives are placed on tables or benches in a manner that will not allow them to roll or be knocked off.

ALWAYS have access to a first-aid kit handy when working with knives, adhesives, or tools.

ALWAYS keep knives, adhesives, and tools out of reach of children.

SAFETY while Flying

SAFETY FIRST: Your EPP Yak 55 should not be considered a toy, but rather a sophisticated, working model. The EPP Yak 55 is capable of extreme maneuvers and if not operated correctly, could possibly cause injury to yourself or others and damage to property.

ONLY fly your aircraft in a safe open area, away from spectators, roads, vehicles. Never fly near overhead power or utility lines. Never attempt to retrieve an airplane that has become stuck in utility power lines or trees.

NEVER fly to close to yourself or other spectators. Spinning propellers are **DANGEROUS!**

ALWAYS fly within your control and never outside of your ability. If you are not an experienced pilot or have not flown this type of model before, we recommend that you get the assistance of an experienced pilot in your area or R/C club for your first flight.

ALWAYS have fun and be safe!

REQUIRED TOOLS

Hot Glue Gun

Hobby Knife

Small Phillips Screwdriver

Scissors

Wire Cutters

Needle Nose Pliers

Ruler or Straight Edge

Soldering Iron

REQUIRED MATERIALS

Welder's Adhesive (Available at Lowes Home Improvement)

Medium or thick CA (does not have to be foam safe with EPP)

Connectors for ESC to Battery

Hot Glue Sticks

Velcro

Solder

For additional information we highly recommend checking out the following links on RC Groups for tips, tricks and additional information.

3dEPP Website: www.3depp.com

3dEPP YAK 55 THREAD: <http://www.rcgroups.com/forums/showthread.php?t=1101664>

Leadfeathers EPP YAK 55 TREAD: <http://www.rcgroups.com/forums/showthread.php?t=964237>

EPP YAK 55 OWNERS CLUB: <http://www.rcgroups.com/forums/showthread.php?t=1028213>

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Build instructions

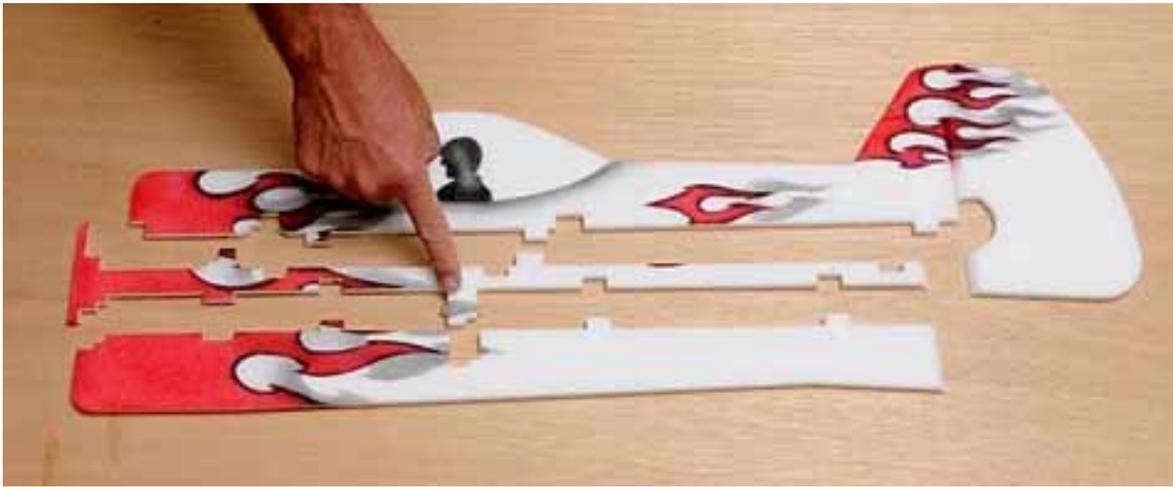
1. Lay out wax paper on flat surface.
2. Align wing, forward fuselage, aft fuselage and stabilizer.



3. Starting at the front motor mount apply a small amount of Welders glue along the back edge of the motor mount and forward center section of the wing where the tab is located. Pin or weight parts down to hold them in place while the glue dries.



4. Repeat this process for the joints between the aft wing and forward side of aft horizontal fuselage assembly and between the aft side of the aft horizontal fuselage assembly and the forward side of the horizontal stabilizer and elevator assembly.
5. Next separate the upper & lower fuselage and, retain the center section. The area of the servo from the center section can be used as a plug by cutting it off the center section and gluing in it place with Welders glue on the lower fuselage. The same can be done for the elevator and aileron servo which are located on the top fuselage. This is an option if using dual aileron servos or if a different size servo is used however; we recommend the HXT500 servo on all control surfaces.



6. Test fit top of fuselage to wing assembly to ensure tabs align. Leaving the rudder hanging off end of table will aid in test fitting the upper fuselage assembly.



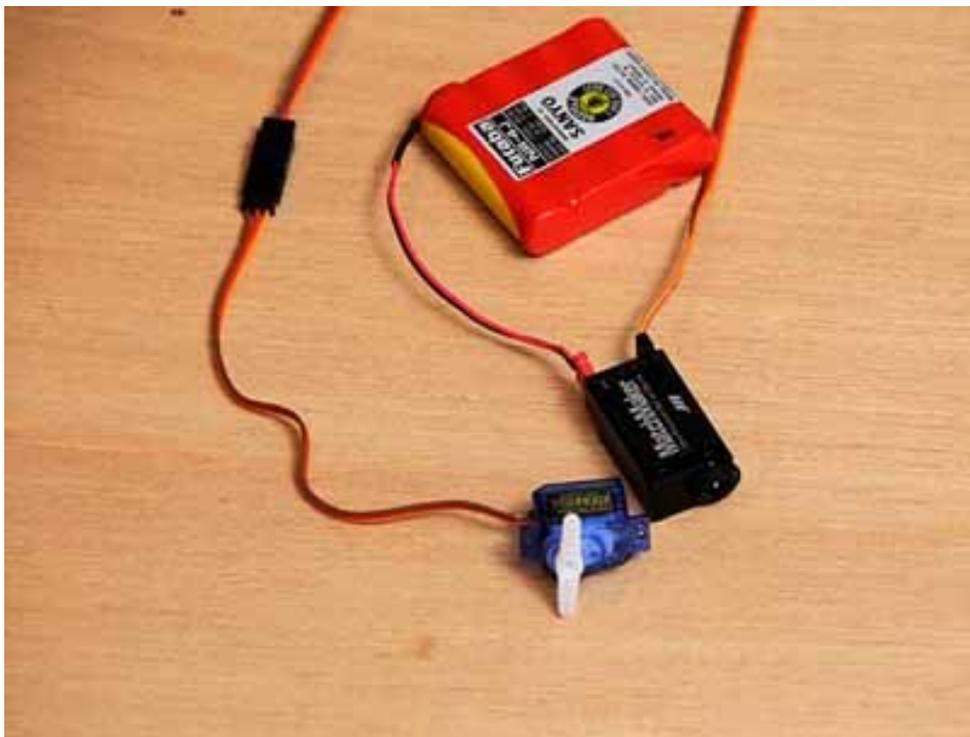
7. Once alignment is verified glue top of fuselage to top of wing assembly. Use a thin bead of Welders glue on the lower mating surface of the upper fuselage spreading glue evenly with your finger. Do not put glue in the area forward of the aileron servo cutout or forward where the motor mount will go.
8. Using a straight edge insure the top fuselage is straight along the length of the wing and tail section. A carpenter's square can also be used to insure the upper fuselage is square to the wing and tail section.
9. Let the upper fuselage and wing assembly dry for a few minutes. It is a good idea to press the upper fuselage assembly firmly into the wing and tail sections making sure the upper fuselage is not lifting or separating from the wing assembly as it dries.



10. Next test fit the lower fuselage into the bottom side of wing and tail assembly. Make sure the lower fuselage and rudder fit flush against each other this joint will form the lower hinge.
11. Place fuselage upside down on edge of table, and place a weight on top of the wing to keep it stationary on table.
12. Again making sure the lower fuselage to rudder hinge area is flush against each other, glue the lower fuselage to the wing and tail assembly. Do not glue forward of the aileron servo or the motor mount area. Let this assembly dry for a few minutes.
13. Place a small bead of Welders glue on the lower rudder hinge line and fuselage area. Run a popsicle stick or scrap piece of balsa along the hinge line to spread glue evenly to form the lower section of the hinge. Using a push pin in the top of the rudder and down into the vertical stabilizer will aid in holding the rudder in place



14. Next wipe each of the servos with a clean cloth and alcohol to remove grease residue on the outside of the servo housing.
15. Center the aileron servo with your radio or servo centering tool and install the long double sided servo arm. Use the outer holes on the long servo arm.



16. Glue aileron servo with horn located towards the rear of aircraft. Glue servo in place with hot glue a small amount on the mounting tabs of the servo case is sufficient.



17. Next locate the 10mm motor mount supplied with the kit. Lightly sand the surface of the motor mount to insure a good bond between the motor mount and the foam. Test fit the mount before gluing in position. Place a small amount of glue on each of the four sides of the motor mount and spread evenly along the mount. Carefully but quickly slide the mount into place making sure the screw is located on the bottom side. Make sure the upper and lower fuselage and the forward horizontal motor mount foam are aligned with the plastic motor mount.



18. Put a bead of Welders glue on all sides of the upper & lower fuselage to wing assembly mating areas. Use a round dowel rod along the length of the joint form a nice fillet between fuselage and wing and tail assembly.



19. Test fit the plywood control horns in precut slots on top side of ailerons. Make sure the small hole in the control horn is directly above the hinge line. Once the fit has been verified remove the control horn and apply a small amount of Welders glue or super glue to the control horn and insert into slot in foam again making sure the hole in the control horn is directly above the hinge line.



20. Install the pre-made end of the aileron control horn into the plywood control horn that was just glued into the aileron control surface.



21. Install the pre-bent z bend music wire into the aileron servo control arm. Make sure the aileron servo is centered for the next step. It is very important to make sure the servo is centered. Next slide a piece of heat shrink tubing onto the carbon rod. Now hold the carbon rod and the music wire on the forward side up by the servo parallel to each other and super glue together making sure again the aileron servo stays centered and the aileron is flat on table (it may be necessary to trim the carbon rod if it is too long and extending past the control horn). Once the two are glued together make sure the aileron is streamline with the inboard side of the wing when servo is centered. Slide the heat shrink tubing over the carbon and music wire. Being very careful and making sure you do not get too close to the foam use a lighter to shrink the tubing over the carbon rod and music wire. If using kicker the foam will absorb the kicker which will ignite and burn the foam. Repeat the process for the opposite aileron.





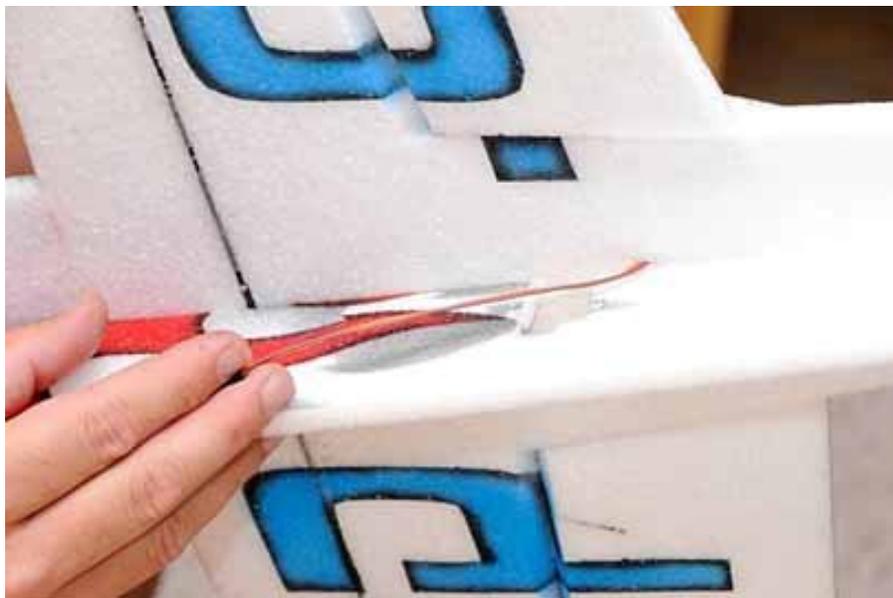




22. Install elevator servo in right side of fuselage and glue in place with hot glue.



23. Cut a small slot in foam for servo wires to feed thru to receiver as show in picture.



24. Test fit the plywood control horns in precut slots on top side of the elevator. Make sure the small hole in the control horn is directly above the hinge line. Once the fit has

been verified remove the control horn and apply a small amount of Welders glue or super glue to the control horn and insert into slot in foam again making sure the hole in the control horn is directly above the hinge line.

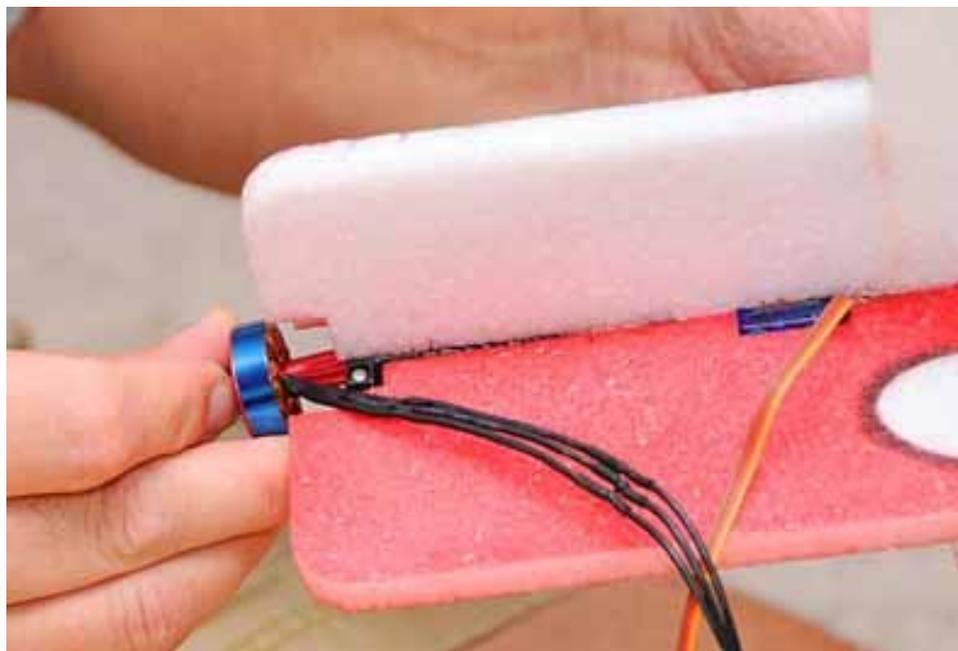


25. Use the 11" graphite rod for the elevator. Using the same technique as used on the ailerons, center the elevator servo and insure servo arm is located as close to center as possible. Hook the pre made end of rod into the servo arm. Making sure servo is centered and elevator control surface is centered and streamlined with the horizontal stabilizer glue the z-bend to the carbon rod with super glue. Next heat shrink the tubing over the carbon and wire again being very careful not to get too close to the foam with the lighter.

26. Center the rudder servo, install servo horn in precut slot on rudder and repeat the process used on the ailerons and elevator to complete the rudder control rod assembly.



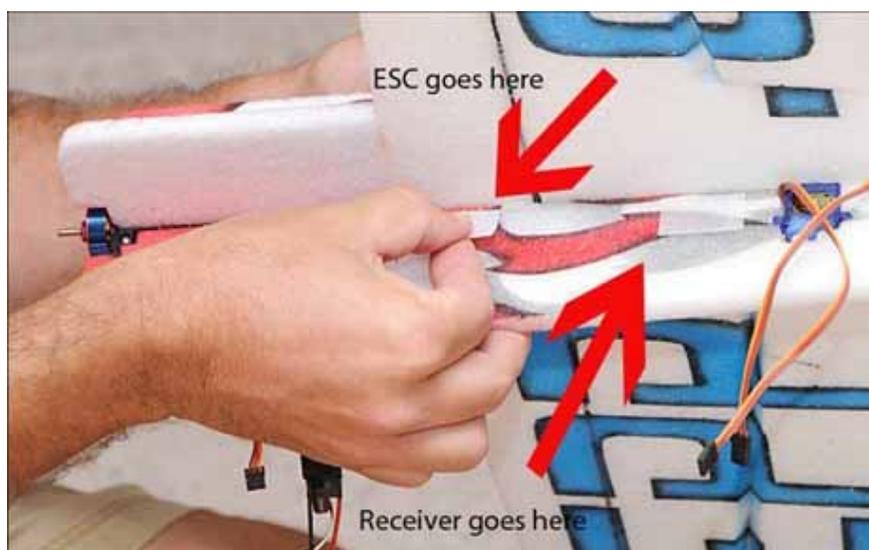
27. Solder the motor to the esc, and make sure motor is spinning in the right direction. Install the motor into the motor mount and tighten small screw located on the lower side of the motor mount.



28. Install Velcro on the right hand side of fuselage for mounting battery, we use the ruff side of Velcro on the plane and the fuzzy side on the battery.



29. Put small piece of Velcro on left side for esc & receiver again we use the ruff side on the plane and the fuzzy side on the esc and receiver.



30. Cut a whole in the lower side of the fuselage near the carbon wing spar to allow for wires to reach battery on right hand side of fuselage.

31. CG should be about at 9" from the nose of the plane. You can use this as a starting point and change it to your liking. The Yak 55 has a wide range of CG so play around with it to see what you like.

32. Congratulations on your build!

THANK YOU FOR CHOOSING

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