BME *Aircraft*

30% Edge 540 Instruction Manual

Congratulations, and thank you for choosing BME Aircraft ARFs. Before you start your assembling, we'd like you to pay attention to this step by step instruction manual, to ensure best performance.

I. Before assembling

1. Parts check list ---

When you open your boxes of 30% Edge 540, check all the parts. They should include the followings:

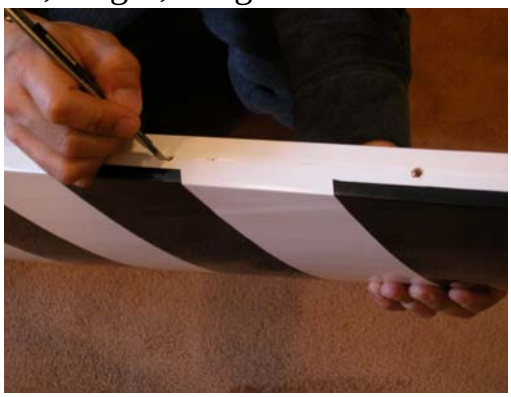
1x fuselage
1x front hatch
1x clear canopy
1x vertical fin
1x rudder
1x cowl
2x wheel pant
2x main wing (left, right)
2x aileron (left, right)
2x stabilizer (left, right)
2x elevator (left, right)
1x landing gear
2x main wheel
1x tail wheel assembling
2x wing tube (large, small)
1x hardware pack

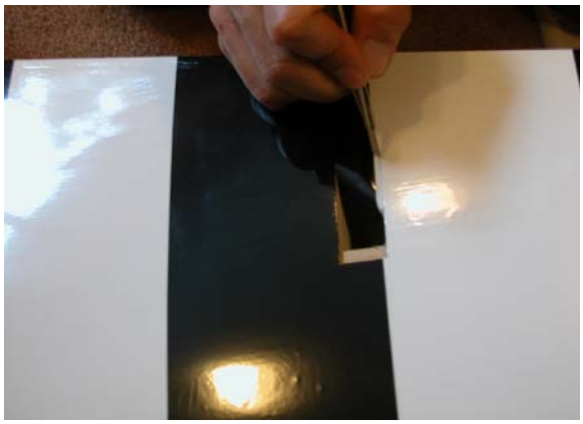
2. Iron all covered area

Before you start your assembling. Iron all film covered area to ensure all color trim stick on firmly.

3. Cut out all covered holes

Cut out all film covered holes for servos, hinges, wing tubes etc.



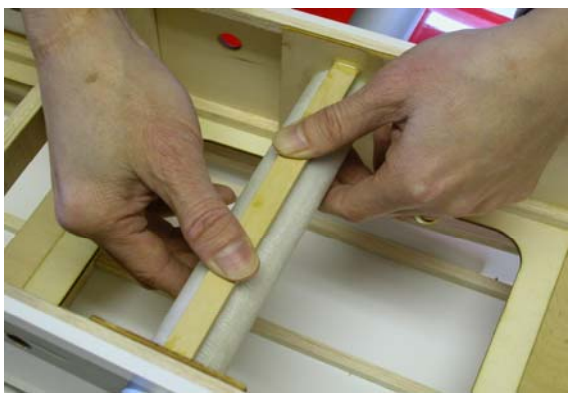


II. Start assembling

A. Fuselage

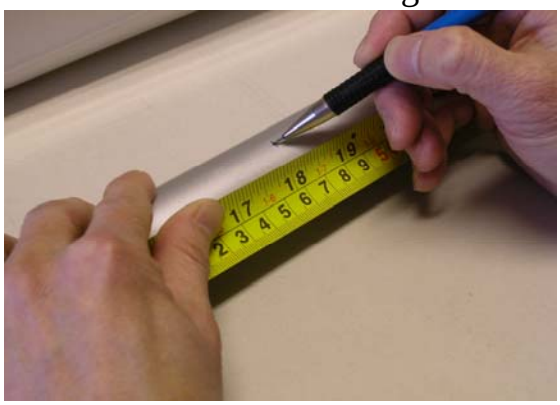
1. Wing tube hold (optional)

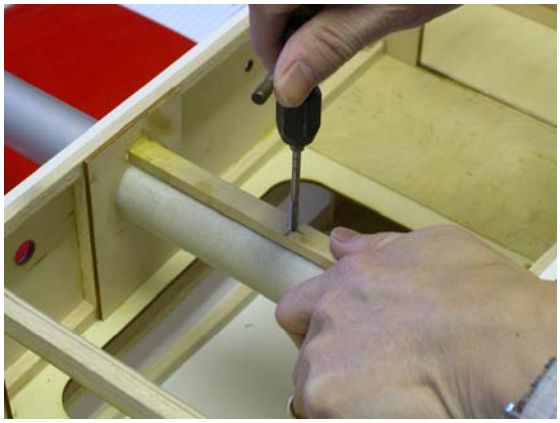
a. Cut a piece of 1/4” x 1/2” spruce with the same length as wing tube socket inside the fuse. Glue it on top of the tube socket with 5min. epoxy. Measure and mark the center of the socket.



b. Measure and mark the center of the wing tube,

then draw a line around the tube. Insert the tube into the socket in the fuse and align the center line of both tube and socket.





c. Drill and tap (6-32 rec.) the center through the spruce and tube. Use washer and spring washer on the bolt to secure the tube in place.

2. Vertical Fin

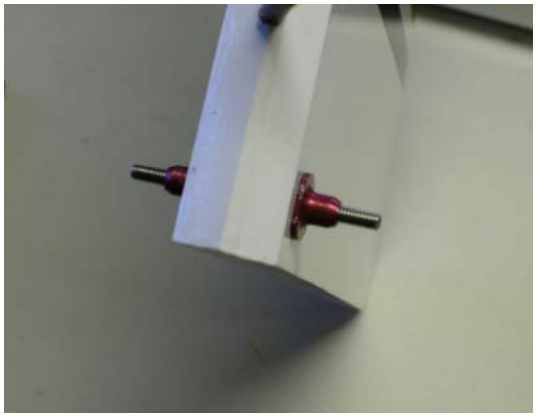
a. Put vertical fin into the fin slot and draw a line around the fin along the fuse.

b. Remove the fin from the slot, then cut out the covering film 1/8” away along the line.

c. Glue vertical fin onto the slot with 15 min. epoxy.

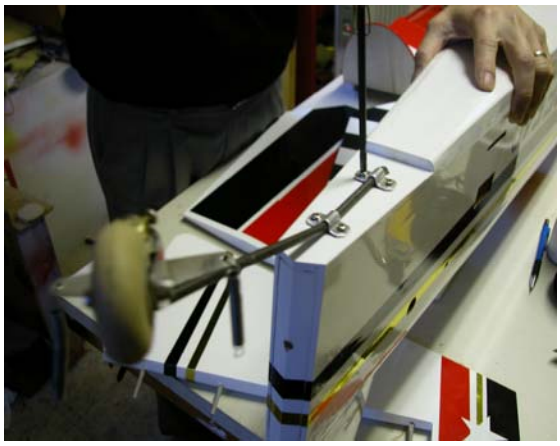
3. Rudder installation

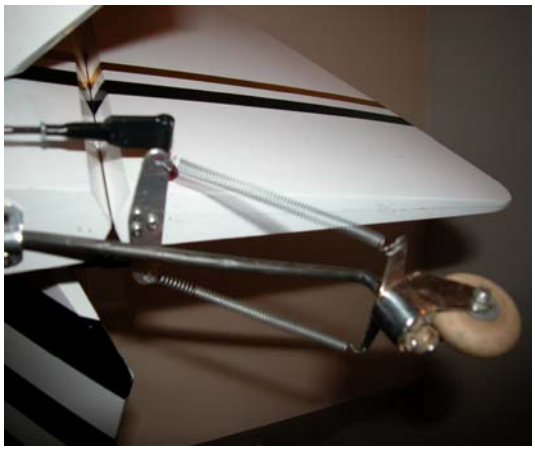
Install the control horn you choose to use on the hard point on the rudder. And glue the hinges (included) in place using 30min epoxy. Then glue all hinges into vertical fin with 30 min. epoxy.



4. Install tail wheel assembly

Install tail wheel assembly as pictures shown below.





5. Canopy and front hatch

a. Place canopy on top of the front hatch, make sure it's centered and symmetrical on both side. Then draw a line along the edge of the canopy.


b. Drill 3-4 holes on both side of canopy frame. Chose the same size drill bit as the wood screw you plan to use.

c. Put the canopy back on the hatch, align the edge with the line you'd drown. Then screw on the canopy. Make sure that the canopy has a tight fit to the front hatch.

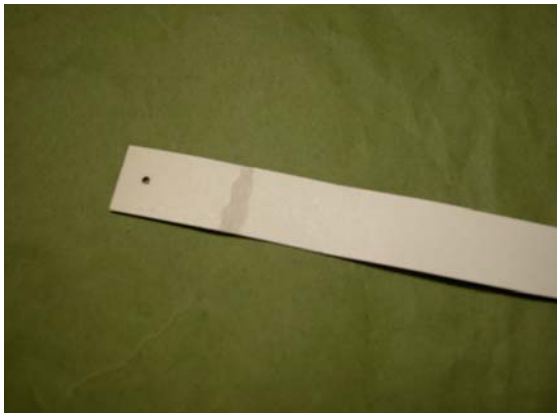

d. Take out the canopy from the hatch, apply a thick layer of plastic glue along the frame area. Then put it back on top of the hatch and fasten it with original screws. Please install your pilot and instrument panel before you glue the canopy back on.

e. Use two of 1 inch 4-40 screws with washers and spring washers to hold the hatch in place.

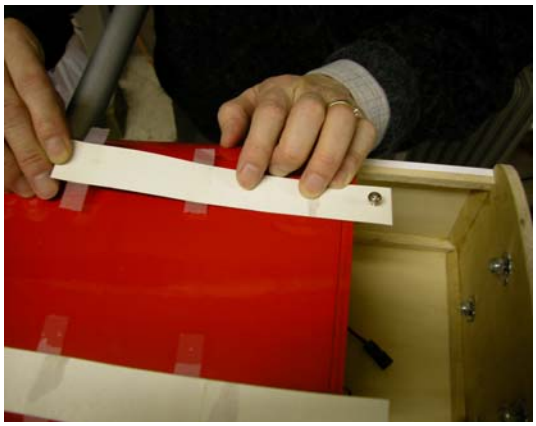
6. Install cowling

a. Before you install the cowl, you have to install your engine first. Depending on the engine's dimension, you want to off set the center

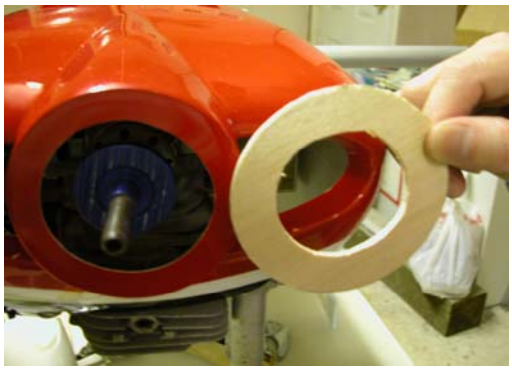
line according to the length from prop hub to the mounting plate, so that you can have a proper right thrust (3degree rec.) angle. The thrust line is located 2 3/4” from the bottom of the engine mounting box.

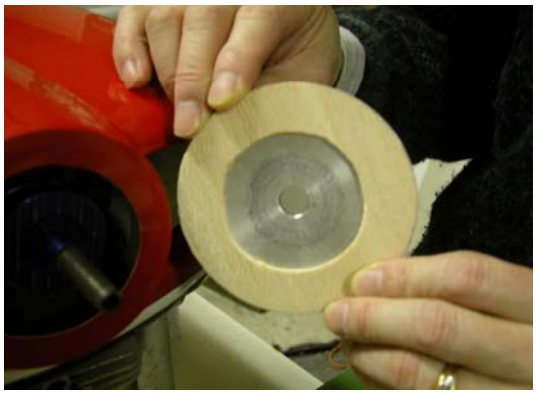


b. After your engine has been install properly, prepare 6 strips of card paper about 1 inch width and 5 inches long. drill a 4-40 hole on one end. Then align the hole with the cowl holding tabs and tape it firmly.



c. Prepare your cowl. Then cut a 3 1/2” donut from a 1/8” balsa, CA glue it on the back of spinner plate.





d. Place the spinner back plate into the shaft of the engine, CA glue the balsa onto the cowl and align the circle.

e. Tighten a prop in front of the spinner plate, and align the cowl curve with the fuselage. Then mark the hole through the paper card strips.

d. Drill holes for 4-40 size screws according to the marks, secure the cowl with the screws provided. Cut off balsa donut in between spinner plate and cowl.

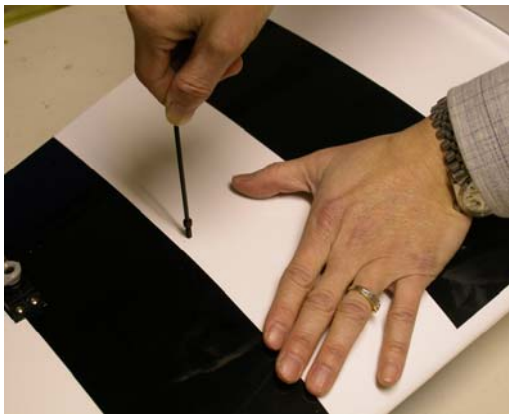



B. Wings and Stabilizer

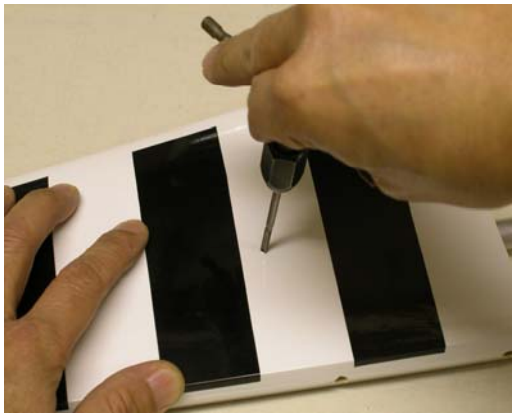
1. Place the fuselage inverted on a flat surface , then plug-in wings into the tube on both side. Make sure the wing root attach to the fuse side evenly.

2.Then drill a hole through the hole on the dowel which is pre-drilled on the wing bottom, using no bigger than 6-32 drill bit. Make sure that you only drill through one side of the tube.

3. Use a 6-32 tapping bit to tap through the wing tube. Then fasten the tube with a 6-32 bolt provided.



4.Repeat the above step to complete the stabs.



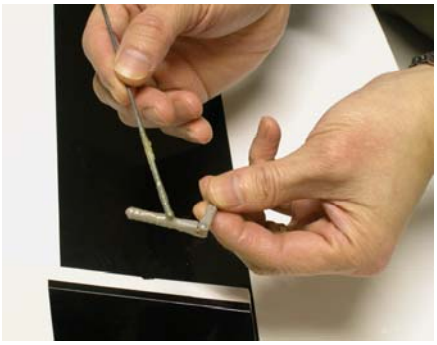
5. Install control horns to the hard point on ailerons and elevators. Make sure that the push rods should be square to the hinge line when linked with servo arms.

6. Once the control horns are installed, next step is to hinge all control surfaces.

a. Put one drop of 2 stroke engine oil on the hinge axle, repeat this to all the hinges you plan to use.

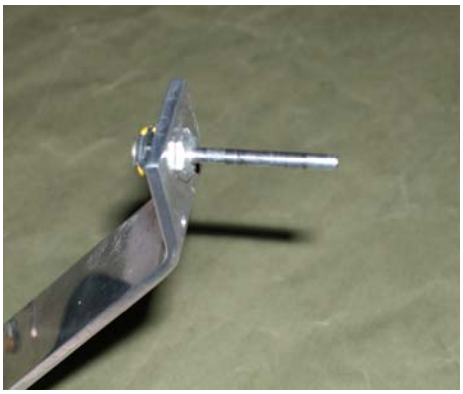
b. Try fitting the hinges into all control surfaces and wings.
Mix enough 30 min. epoxy, stuff epoxy into the pre-drilled hinge holes, one control surface at a time.
Epoxy one side of the hinges and insert

them into the holes. Do the same to the other side of the hinges and wings and complete installation of all hinges.



C. Landing Gear and Wheel pants

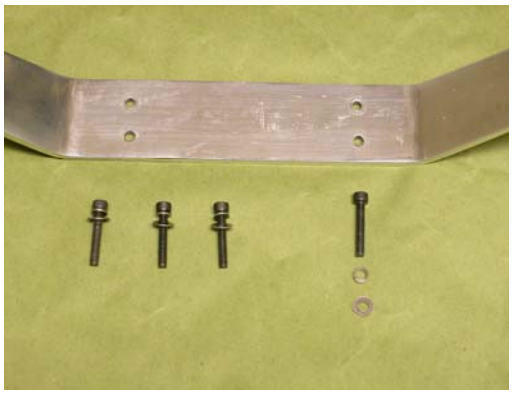
1. Fasten wheel axles (provided) to the landing gear. Then secure wheel on the axle using two collars, one on each side of the wheel.



2. Drill a 1/2” hole at the mark spot on the wheel pant and cut it open to the downside of wheel pant with a width of the axle’s diameter. Make sure that you make one for right side and one for left.

3. Mark and drill holes for the wheel pant holding bolts. Install T-nuts on the inside of wheel pants.
   Secure wheel pants with provided 4-40 screws.

4. Install landing gear on the designated location with provided 8-32 screws. Make sure you use both washers and spring washers.



D. Install radio equipments and linkages

1. A 6 channel (or more) computerized radio is recommended so you can chose to use flaperon for aileron and program mix elevator with one AUX channel.
2. Servo with more than 100 oz/sq. in of torque is recommended for each aileron. And servo with more than 130 oz/sq. in. is recommended for elevator. And 150 oz./sq. in. is for rudder.
3. Rudder push rod should be 4-40 size rod or made up from a carbon fabric tube. Pull-pull system is recommended for rudder linkage.
4. Aileron throw is recommended to have 35 degree up and down.
   Elevator should have 45 degree of throw.
   Rudder should have 45 degree of throw.
5. Dual rate and Exp. are recommended, rates depend on personal preference. Try 60% to start with.

E. CG setting and incidence

Before your test fly, always check your CG and incidence. The CG for

your Edge 540 should be located between 4.5” and 5.5” back from the leading edge of main wing. The incidence of the main wing, stab should be 0 degree as well as the engine thrust. Incidence should be checked when thrust line is leveled.

Thanks again for choosing BME Aircraft. Enjoy your flying.