

RCFOAM™

5651 Old Dixie Road, Suite #103, Forest Park, Georgia 30297
404.363.6680, 404.363.6681 FAX, www.rcfoam.com



Edge 540

Specifications	
Wing Span	36.75 in. / 933.44 mm
Length	30 in. / 762 mm
Prop	8/4-10/4.7 gws or other
Wing Airfoil	Flat
Weight	3.5 oz. –15 oz. with power package and gear
Radio	Micro Servos and Micro Receiver
Motor	Turnigy C2830-1050
Controller	25 AMP ESC
Battery	3S-30C 1050 MAH

Notes: * This kit requires a medium level of building skills to complete.

* This is not for beginning R/C flyers.

* Paint to your specifications!

This kit requires servos, a motor, a radio transmitter and receiver, a battery and a speed controller. Landing gear optional. Glue, tape and standard building tools needed. Visit www.rcfoam.com for power combo kits, paints, glues and materials to enhance your kit.

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READ THIS IMPORTANT INFORMATION BELOW:

WARNING:

Please be aware that this airplane is not a toy and if assembled or used incorrectly it is capable of causing injury to people or property. **WHEN YOU FLY THIS AIRPLANE YOU ASSUME ALL RISK AND RESPONSIBILITY.**

If you have not flown this type of model before, we recommend that you get the assistance of an experienced pilot in your R/C club for your first flights. If you're not a member of a club, your local hobby shop has information about clubs in your area whose membership includes experienced pilots.

In addition to joining an R/C club, we strongly recommend you join the AMA (Academy of Model Aeronautics). AMA membership is required to fly at AMA sanctioned clubs. There are over 2,500 AMA chartered clubs across the country. Among other benefits, the AMA provides insurance to its members who fly at sanctioned sites and events. Additionally, training programs and instructors are available at AMA club sites to help you get started the right way. Contact the AMA at the address or toll-free phone number below:

Academy of Model Aeronautics
5161 E. Memorial Drive
Muncie, Indiana 47302
(765) 287-1256, Fax: (765) 289-4248
or via the internet at: <http://www.modelaircraft.org>

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These are the glues mentioned in this instruction lesson.



Beacon Foam-Tac Adhesive
SKU 33-008



Beacon 3-in-1 Adhesive SKU 33-003



Loctite Epoxy Adhesive SKU 31-005



UHU POR Adhesive SKU 33-001



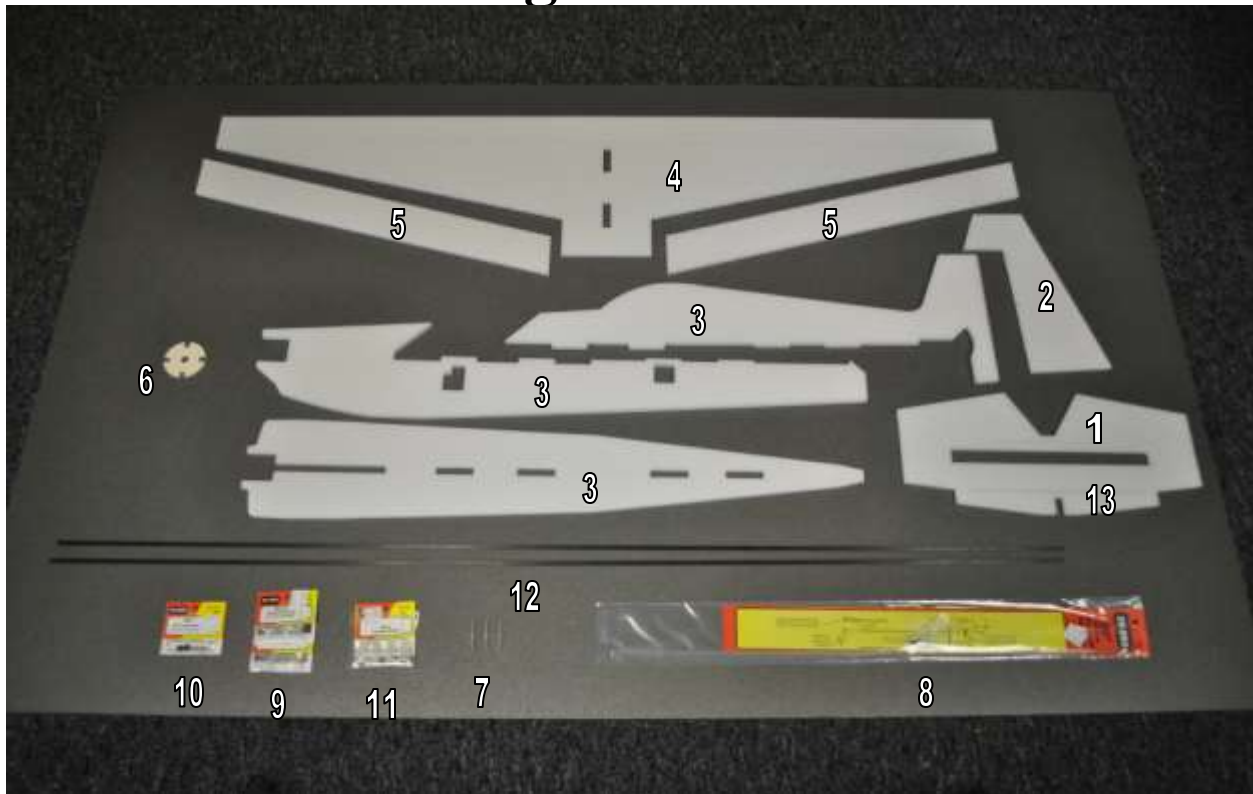
Loctite Epoxy Gun SKU 31-004



Loctite Gun Straws
SKU 31-00 or 31-007

RCFOAM

Edge 540 Kit



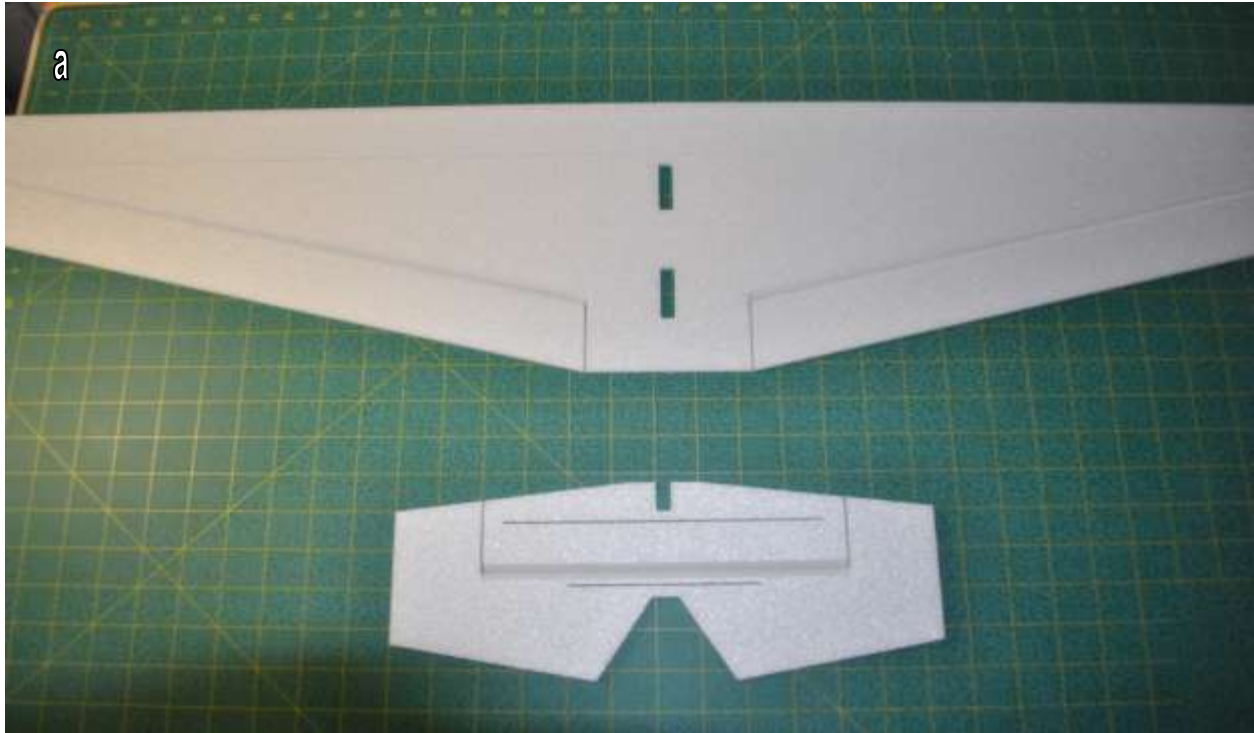
Parts included in Kit:

1. Elevator
2. Rudder
3. 3ea. Fuselage sections
4. Wing section
5. 2ea. Ailerons
6. Motor Mount
7. 3ea. Rudder pin hinges
8. 1ea. Control rod set
9. 2ea. Control horns
10. 1ea. Mini ez connectors
11. 1ea. Control rod guide
12. 2ea. 39" carbon strips

13. Horizontal tail

Note: (The model in this kit has the ailerons and elevator combined with the tail and wing. There is no need to bevel the hinges.)

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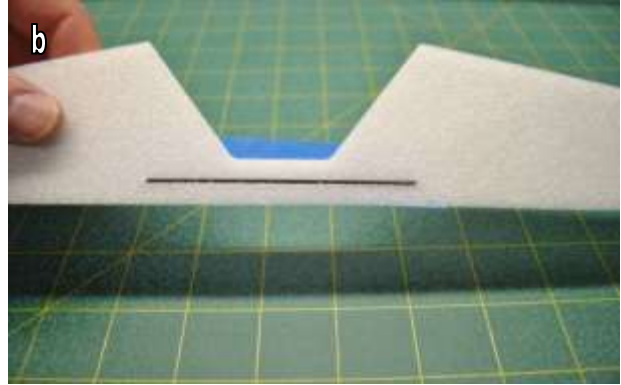


1.a.) In this section beveling the hinged portion of the flight controls is not required because the hinges are incorporated in the flight controls already. Simply follow the instructions on page 7 by adding the tape to the hinge lines.



2. a.) Next cut the carbon to size for all the pre-cut slots on the tail, elevator and wing sections. They can be cut to size with a pair of wire cutters and then have their edges sanded.

b.) Test fit the pieces and insert them into their respective locations. (This picture does not show the tail and elevator combined though this model does have a combined tail.)

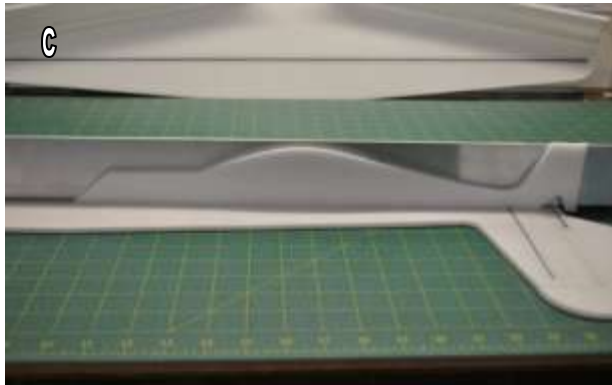


3. a.) Once the carbon is inserted into the slot, apply painter's tape to the opposite side (this applies to all the surfaces that take the carbon). b.-d.) Then flip the surface over and remove the carbon, leaving the tape on the surface. e.-f.) Next apply a bead of 5min. epoxy inside the opening and push the carbon back inside wiping the residual away. After this, apply a piece of tape on this side also. Then apply a weight on top of the surface so it will cure as flat as possible. After the epoxy cures, remove the tape from both sides and apply a small bead of epoxy over both sides of the carbon and smear it flat so it will spread into the foam. This will bond it into the foam better for a more rigid cure. Repeat this process at the other locations for the carbon.

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4.a.) Once the carbon is cured it's now time to start preparing for the taping of the hinges on the wing, ailerons, elevator and fuselage sections. b.) First, lay the wing section and aileron bevel side down and butt them together. Holding them together run some tape over the seam from end to end. (Blenderm 1" hinge tape from RCFOAM). c.) Without moving anything, flip the aileron over onto the top of the wing and run a length of tape down the surface and cut flush with end. d.) Now tightly wrap the tape around the surface making sure to work the tape against the foam for a good bond. Now work the surfaces back and forth to loosen them. e.) Next insert and epoxy the pin hinges in place on the vertical tail and rudder. They should already be double beveled. Equally space the 3 hinges and make small marks on the tail and rudder. f.) Where the marks are located, make a hole about a 1/2 inch deep in the center the diameter of the hinge. When epoxying the hinges, make sure to apply a light lubricant to the center of the hinge so the epoxy will not stick. Once dry, wipe away excess and work the surface back and forth.



5.a) Now to start the fuselage, start with the wing and lower fuselage, fitting them together with your choice of glue such as UHU por, Beacons 3in1 or a thin bead of 5min. epoxy. b) Next glue the upper fuselage and center section together. c) While the glue sets up make sure to have a right angle handy to ensure the two pieces dry at a 90 degree angle so the bottom section will line up perfectly. A piece of aluminum right angle works well because the weight helps hold it into place. d) After the upper and center have dried the lower fuselage section can be glued on. (Make sure to fit check everything before gluing, as this gives you an idea where to apply the glue.) e) Ensure to apply glue here also (aft of the tail). f) After applying the glue, slide the lower fuselage section into place and then apply blue 1" painter's tape to the top nose area and tail section to keep them tight and aligned.



6.a) While the fuselage is drying the motor mount can be installed. b) Make sure to install the motor mount at 90 degrees to the fuselage in all directions. This will determine the plane's angle of attack flying. c) Because this is a critical area for torque, bond this area with 5min. epoxy or better. Apply the epoxy everywhere the mount contacts the foam for a good bond, this also helps align the nose. d) Now bond the wing everywhere it touches the fuselage. A thin bead of epoxy is recommended or the other glues mentioned previously. e) Now install the 2mm Depron on the leading edge, (there are 4 pieces included in the kit). This is done by using a spray glue such as the 3M 27. f) Applying the 2mm Depron on the leading edge changes the effect of the wing, giving it more of an airfoil effect. This is optional. Just trim to fit on the upper and lower surfaces and spray glue in place, then sand to fit.



The next few pictures indicate where the components are located on the prototype. Painting is done with an acrylic based craft paint sold at RCFoam. The center of gravity is located at the wing spar or just a little aft. This is the ideal location for performance.



The tail servos are stacked in this way: Rudder servo faces to the right on the bottom and the elevator servo faces to the left on top. Also notice the placement of the control horns on the rudder and elevator.





The aileron servo is configured like this: This is a Dubro white long arm and the control horns are as far inboard as they can go with the horn holes lined up at the center hinge. The ez connectors are mounted to the aileron servo arm. The control rods are cut and bent to match up.





Notice the placement of the receiver above and below the placement of the (ESC) or speed controller. The motor base usually screws on with 4 standard screws.





Here is the battery placement on the right side just aft the motor. With the components in these locations the battery only needs to move within an inch for balancing. Below is a picture of the landing gear and tail skid that can be purchased separately. To install the gear, just cut 2 small squares of 1/16" plywood and bond to each side of the plane. Then drill the gear and mount with mini bolts and nuts. Extra reinforcement might be required for hard landings.



If you have any questions on the building of the kit, please feel free to contact RC Foam. A combo kit can also be purchased for this particular kit, which gives you everything needed to fly except the receiver and transmitter.



RC Foam, LLC
5651 Old Dixie Rd., Suite 103
Forest Park, GA., 30297
PH: (404) 363-6680 Fax: (888) 373-4390
rcfoam@gmail.com

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