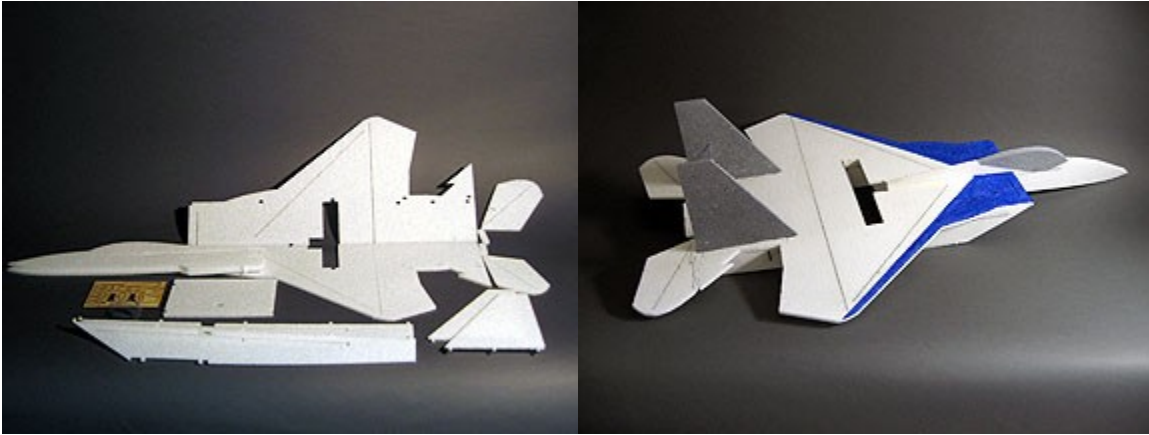


Assembly Instructions for the Budget RC RF-15

By: Tom Pepper



Lay out foam parts on a flat surface covered with plastic. Check to find 5 carbon strips, and 1 carbon rod. Also find a bag with wood parts and pushrod ends. Set aside the motor package for now.

Tools needed

- Budget RC Foam Safe medium CA and Kicker, or...
- Medium CA and Kicker, or Hot Melt Glue (Heavy though...)
- Epoxy for Motor Mount
- Hobby Knife
- Hot Glue gun and Glue for Hinges
- Painters tape, or low tack masking tape
- A flat building surface and well ventilated room

Gluing techniques with Budget RC Foam Safe Medium CA and Kicker.

Start by getting a flat surface covered with plastic or waxed paper to keep the glue from sticking. Open a window or 2 for some ventilation, because you are going to use a lot of kicker. Because EPP is rough, it leaves little gaps between pieces. If you use CA, you have to bridge those gaps with glue and pressure. Foam to foam joints require a healthy bead of glue each, then careful alignment and pressure to hold a section together. With your OTHER hand (3 would be nice) spray a small section of the joint with kicker (4 to 5 inches) and press together for 15 to 20 seconds. When that section has set, move down a bit and set the next section the same way.

Flip the joint over, and fill the backside with CA. Wipe off excess with a paper towel, then set it with kicker. Too much glue wiped over the surface of the foam will create shiny spots that show under the paint. After the kicker has evaporated, go back and fill the top joint with glue.

Gluing carbon is similar. Coat both sides of the carbon, lay in slot, and push down the foam and carbon to the tabletop. Pinch the joint together, apply kicker and hold until set. Move down the joint and set the next section the same way. When done, flip over the part and fill the slot with CA. Smooth with a paper towel, and set with

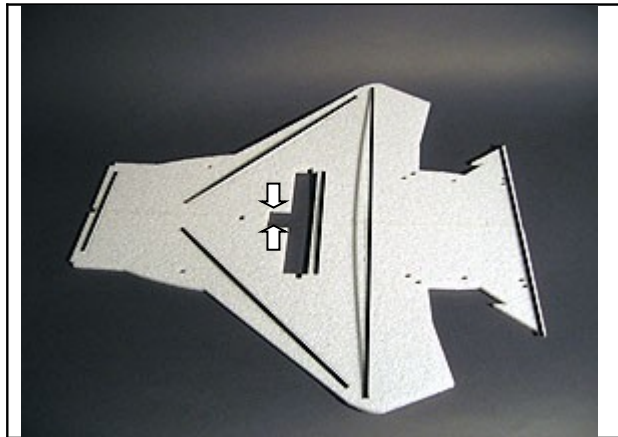
kicker. Avoid wiping glue all along the surface; it makes shiny spots under the paint later. Fill the top joint after the kicker has evaporated.

Assembly goes in 5 phases

1. **Horizontal Surfaces, Carbon Strips, Hinging Elevons**
2. **Lower Vertical Surfaces**
3. **Rudders**
4. **Painting (Must Be Painted Heavy Both Sides)**
5. **Motor and Radio Installation**

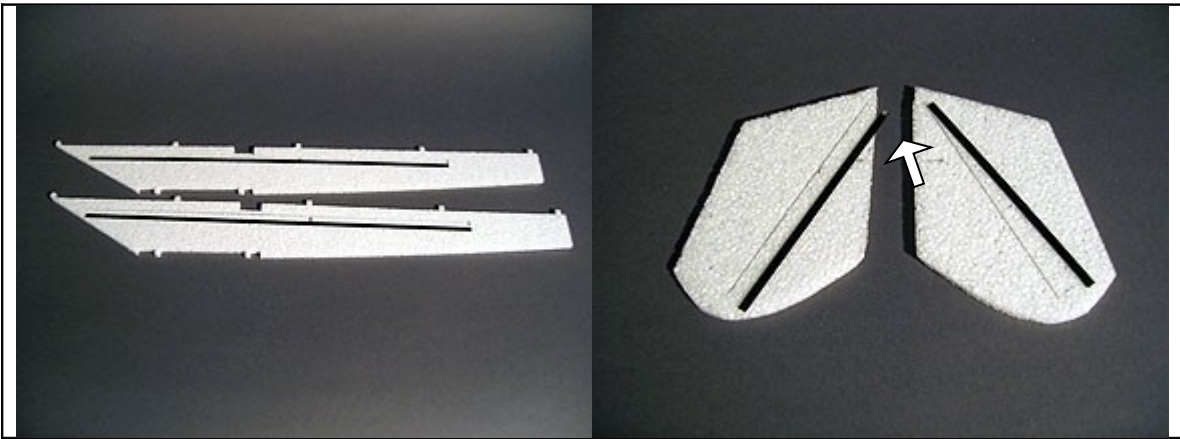
1. Horizontal Surfaces

- Glue wing halves together. Cut Carbon Strips to fit into all slots, and back edges of motor cutout and tail.
- Glue in all Carbon Strips



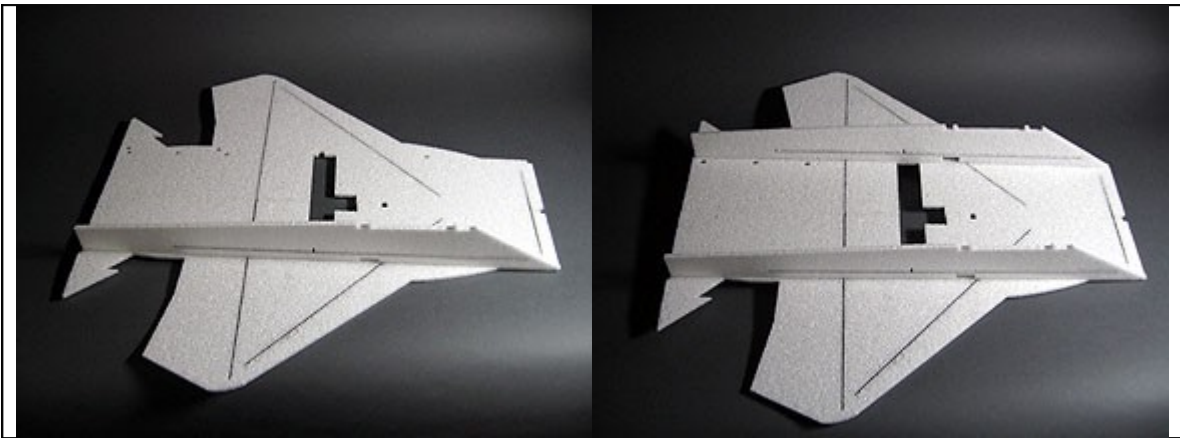
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- Cut and glue in Carbon Strips to Engine Sides and Elevons



2. Lower Vertical Surfaces

- Glue Engines Side Perpendicular to bottom of Wing

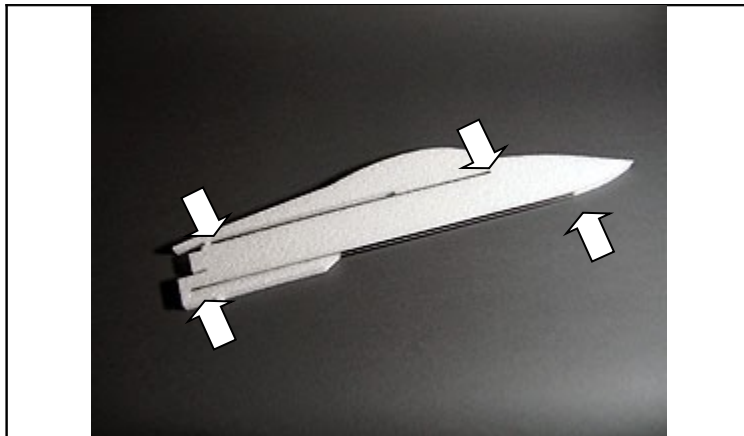


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- Use Hot Melt Glue to hinge the elevons. (Hinge After Painting) See the separate video on Budget RC home page if you are unfamiliar with the technique.

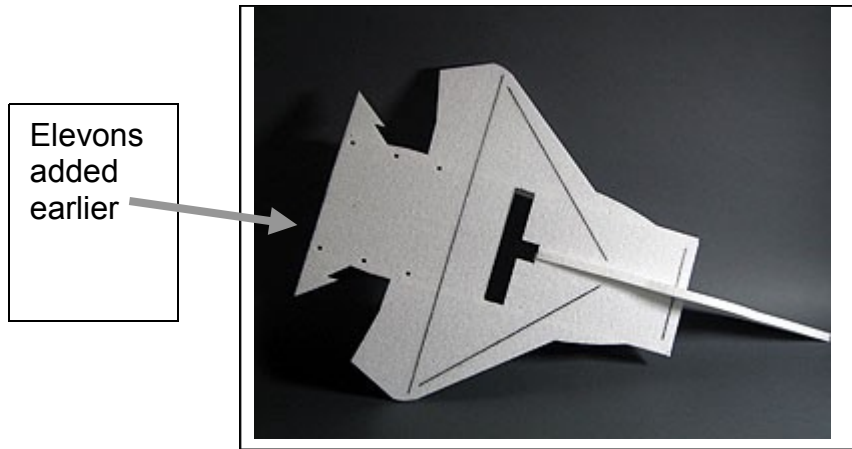


- Glue Carbon Strips in each opening of the fuselage halves.
- Glue Carbon Strips in each lower slot, extending forward to the start of the lower curve of the nose.
- Laminate the 2 fuselage halves together with careful alignment.

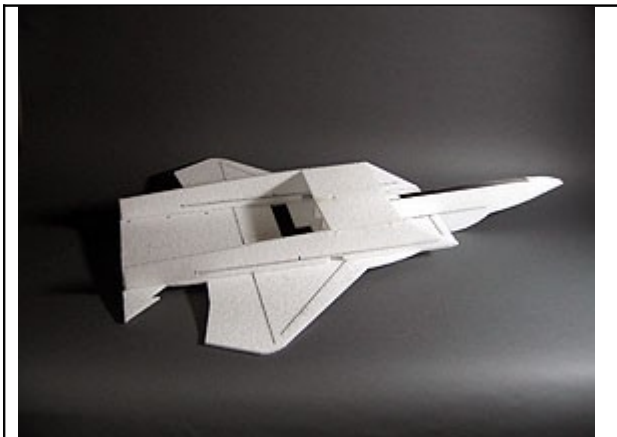


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- Glue the fuselage / nose section on, top and bottom.



- Bottom Plate. You may want to install this AFTER painting and radio installation.



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3. Rudders

- Add each rudder to the top rear surface gluing at 90°.
- Add the bracing Carbon Rods in the little slots. Glue each end liberally.
- Add the engine exhaust “nubs” at the back.



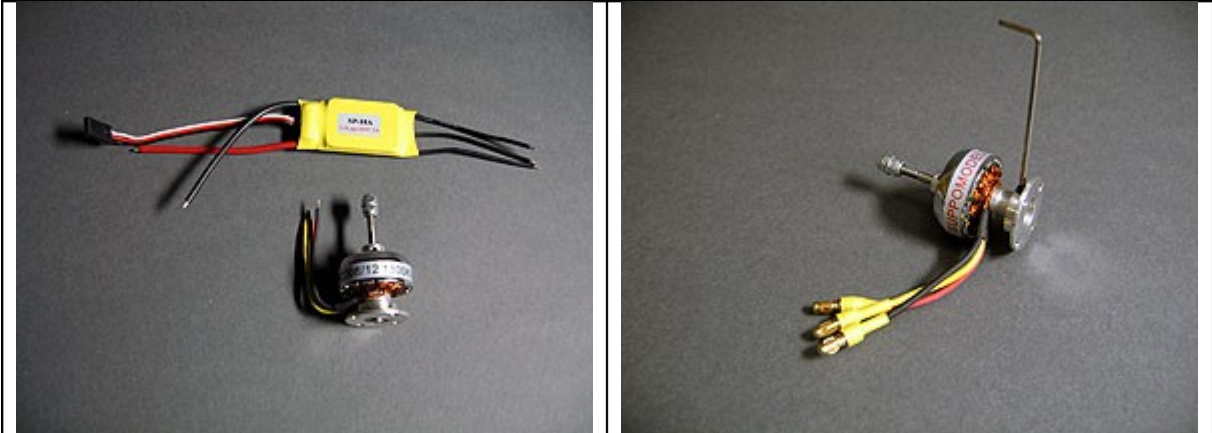
4. Painting

- Enamel spray paint is used to stiffen the airframe by spraying at close range until the area is wet and paint is soaking into the foam. Paint starts to appear on the other side if you have it “soaked” enough. Dollar Store Brand, Krylon etc...
- One **ENTIRE CAN** is sprayed onto the plane in one session!!!
- Spray one side at **3 inch** range, then flip over and finish the other side.
- Remember to paint the lower plate if it is not attached yet.
- Spray edges and hinge gaps, other tight areas.
- Place on a flat surface to dry, in well ventilated area. (Outside works) It may appear warped, but will straighten as it dries.
- Only about 1.5 oz. of weight are added after drying 2-3 days.

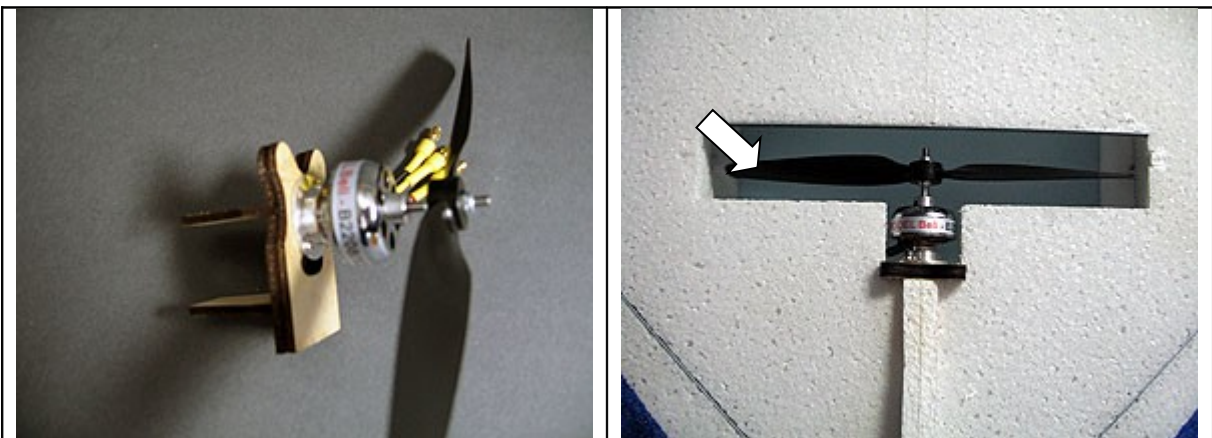
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5. Motor and Radio Installation

- Solder on any needed connectors to ESC and Motor.
- Glue together motor mount
- Remove mounting plate from motor, and install on motor mount, then remount motor

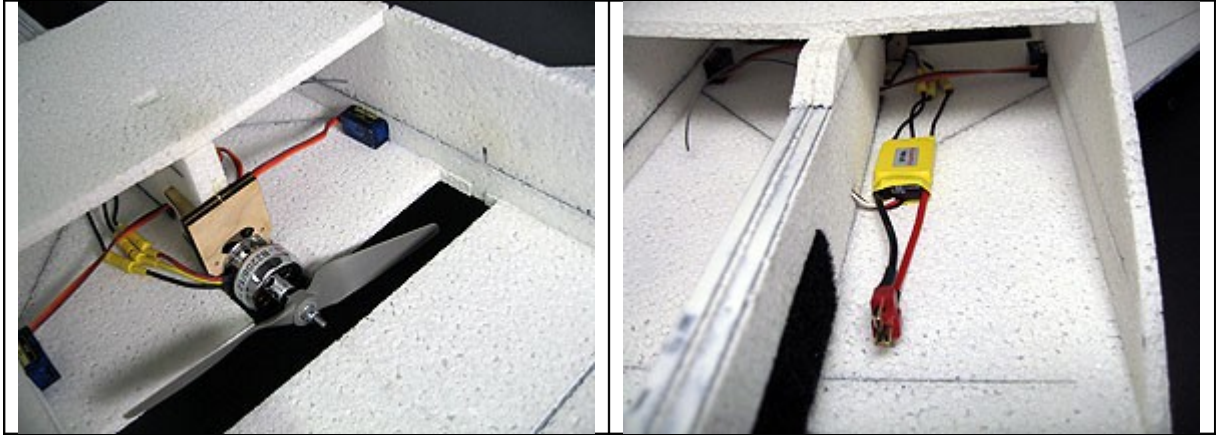


- Attach prop to motor, then glue in mount with epoxy, using the prop to set the mount at 0° horizontal, and 0° vertical thrust.

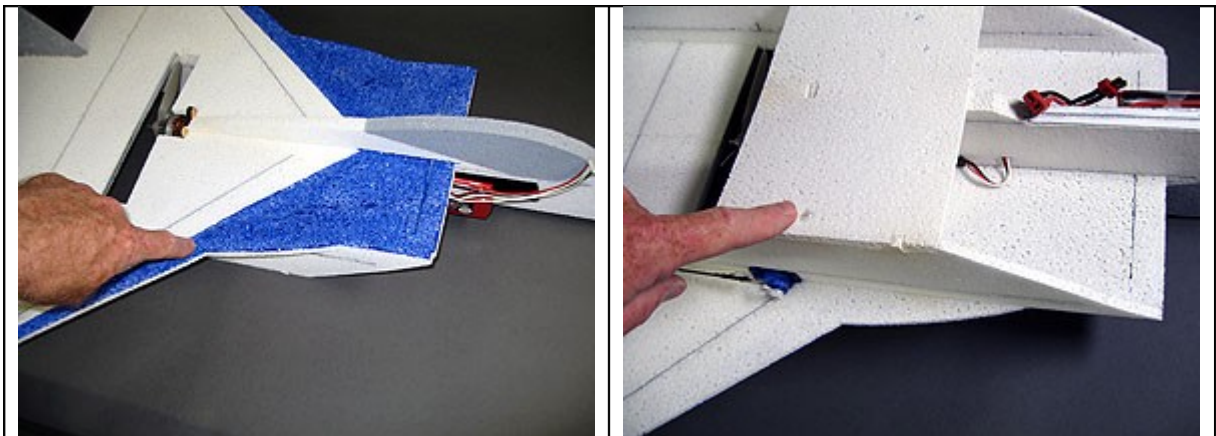


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- Install servos in cutouts, and run ESC forward toward the nose
- Install receiver, check operation of all components
- Install bottom plate if you have not done so yet



- Center of Gravity is 8" back from top of engine inlet.
- Move your battery to get the proper CG, then attach battery Velcro
- I put 2 dots of hot melt glue at the CG on the underside to "feel" as I attach the battery each time



Continued....

Setup for flying...

- Props tried with 2208 – 1800 KV motor on 3S and 500 – 900 mAh lipo
 - 6 x 4 APCe at 100W
 - 7035 GWS thin electric at 100W
 - Cut down 8060 GWS thin electric at 180W and 900 mAh lipo
- Choose Elevon mixing in your transmitter
- For first flights use maximum throws on Elevons, then add 15 – 30% exponential
- Check CG with battery attached each time
- Prop installed facing the front? Watch for the spinning prop, grab on top and apply $\frac{1}{2}$ to $\frac{3}{4}$ power and toss up at 20 – 30 degrees. Fly to safe altitude and trim out.
- Cut back power and float it in, with a medium flair just before touchdown.