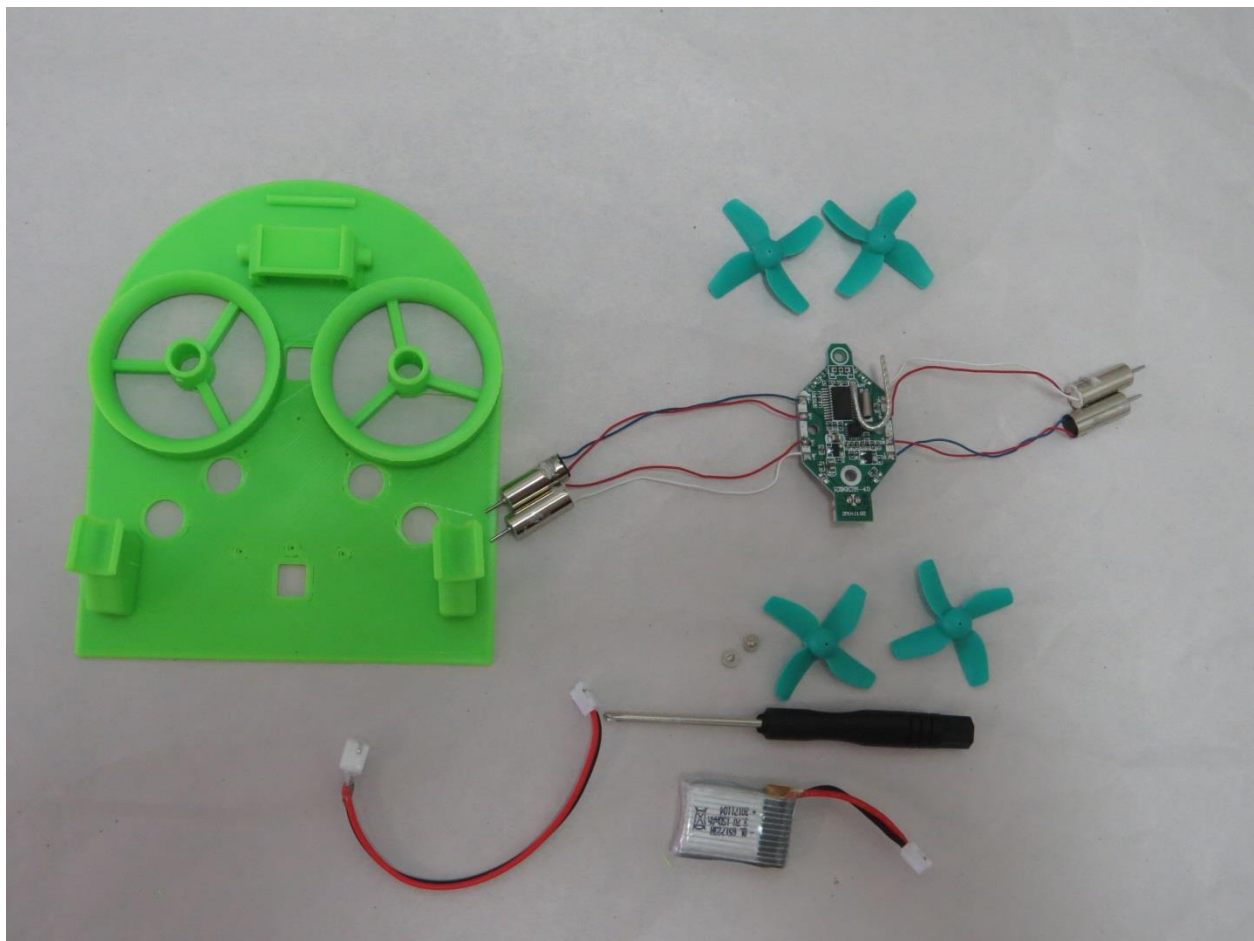


Thanks for purchasing our Whoover kit! You now have what we believe is the best and easiest Whoover kit available. The kits are available in 2 forms; Complete – Foam, Top and a 36mm Quad or Use-Ur-Quad with just the Top and Foam.

The 3-D printed Whoover top was designed for performance and ease of assembly. It will accept many of the 36mm quads available and has been tested with Blade Nano QX, FuriBee F36 and the Eachine E010. The Battery holder is printed with rubber band hold downs and 3-sided ridge for your FPV camera.

Assembly Require the use of a Hobby Knife and Glue or Hot Glue Gun, Adult Supervision Required.

On our top you will see small holes for board mounting screws, square holes and round holes. These are to accommodate Top or Bottom Mounted boards, Round Holes are for Motor Pass Through for no solder assembly and Square Holes for Battery Connector / Extension Pass Through. Don't be intimidated by the quantity of pages in the manual, Assembly is easy; we just want to cover everything for the novice to the experienced Whoover'ist. Enjoy!

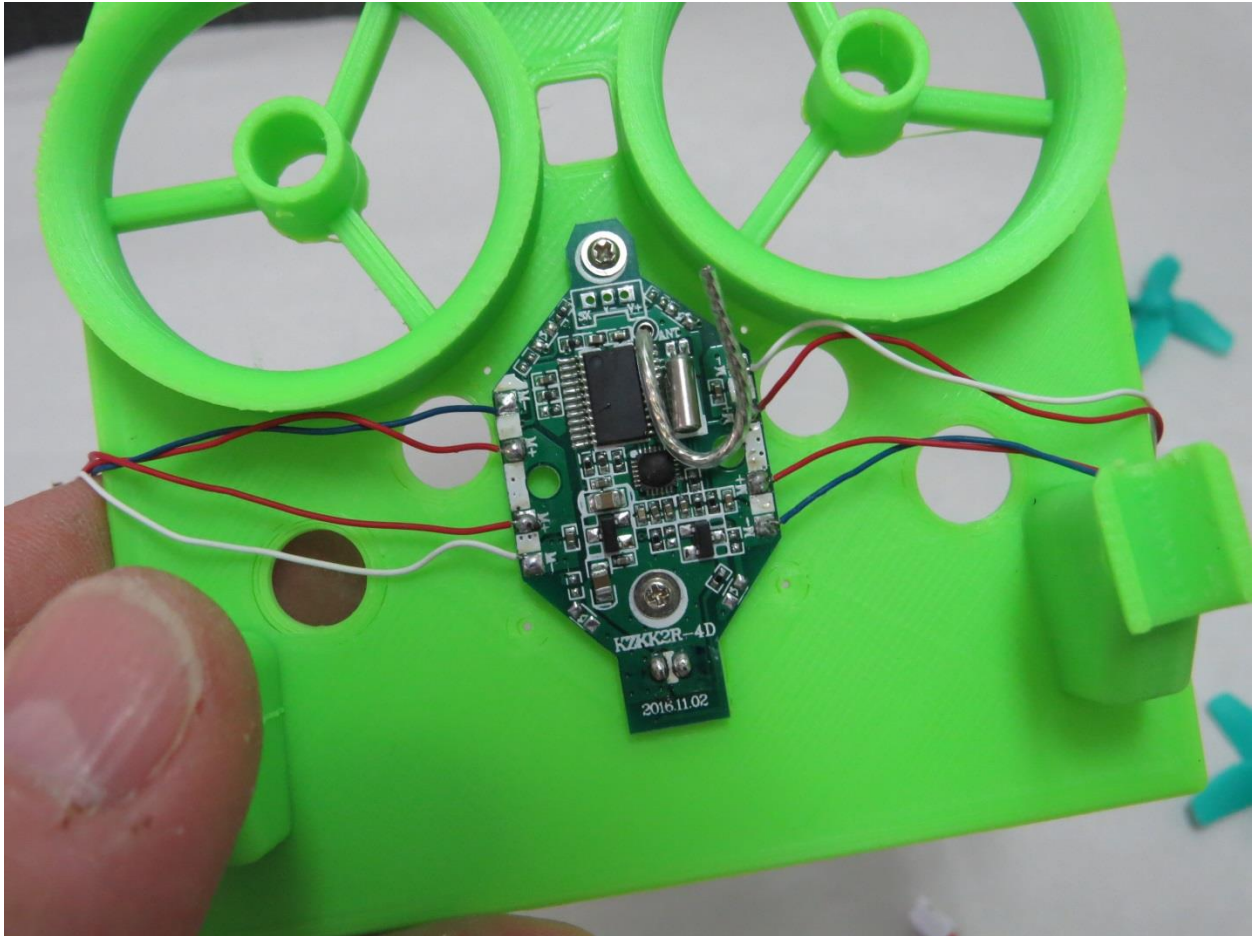


Let's Get Started;

FuriBee and Eachine's;

Carefully remove the frame from the motor and board. Use care as the motor cans are soft metal.

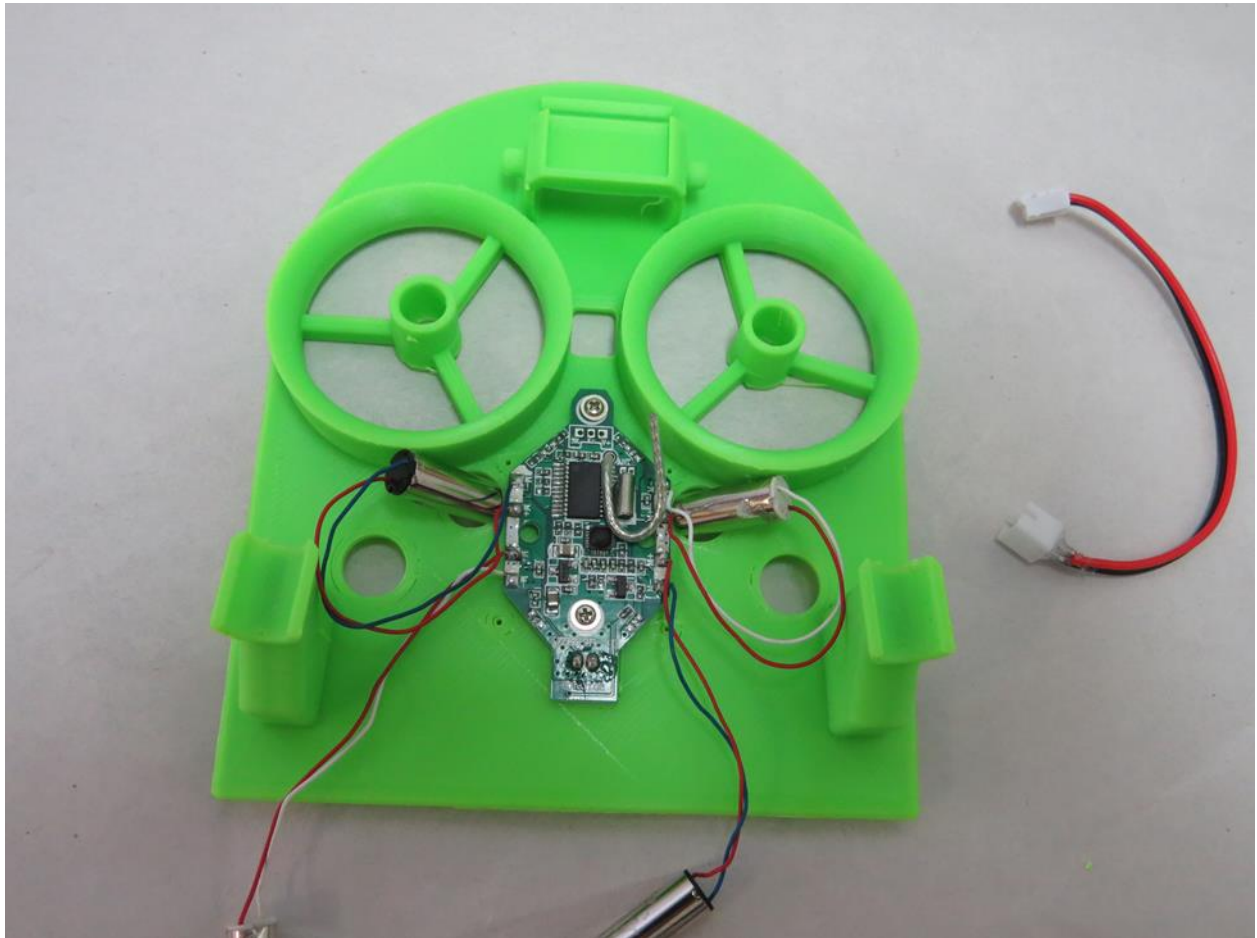
Tip; Push motor up then cut frame and watch the wires! Do Not Remove props at this time.



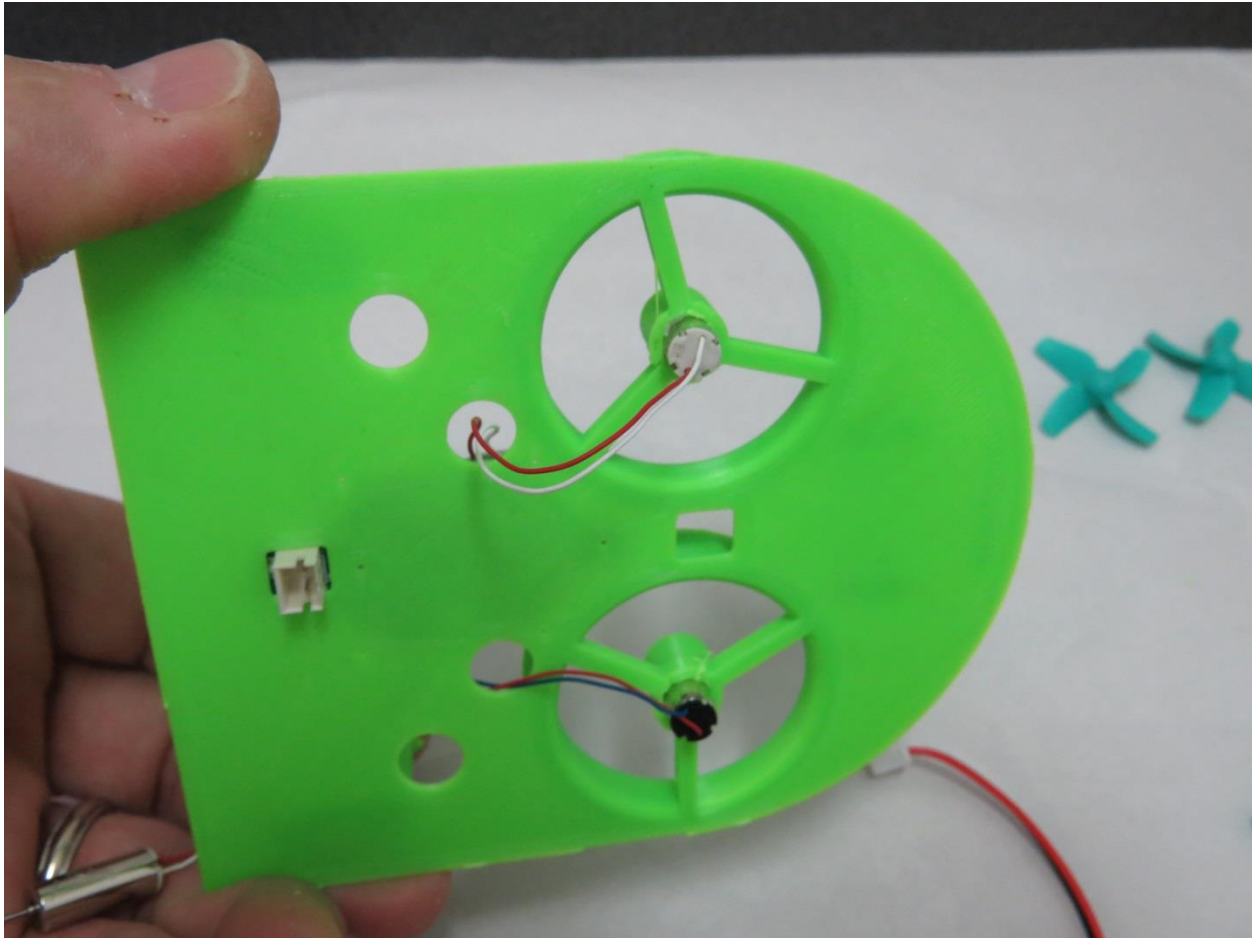
The Board mounts with the Battery Connector at the Back Square Hole. For Top Mounted Board; Connector faces down thru hole. Use original screws from Drone to secure board or use Double Stick Foam Tape. If using screws, tighten them Just Snug, not so tight that board bends.

NEVER USE ANY TYPE OF SUPER GLUE – Will get into motors and ruin them!

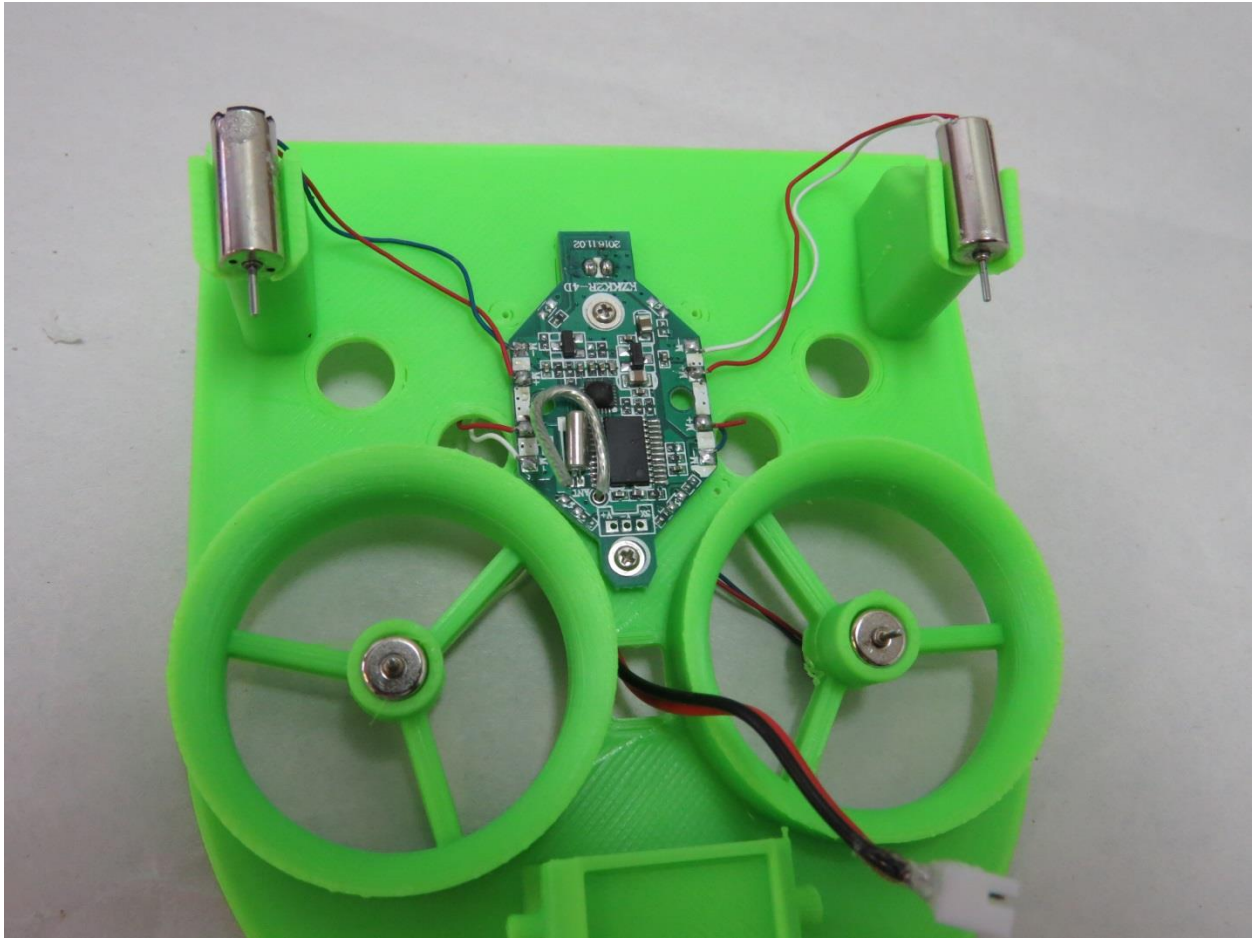
Only Foam-Tac or Hot Glue is recommended. Caution With HOT Glue Gun, Adult Supervision!



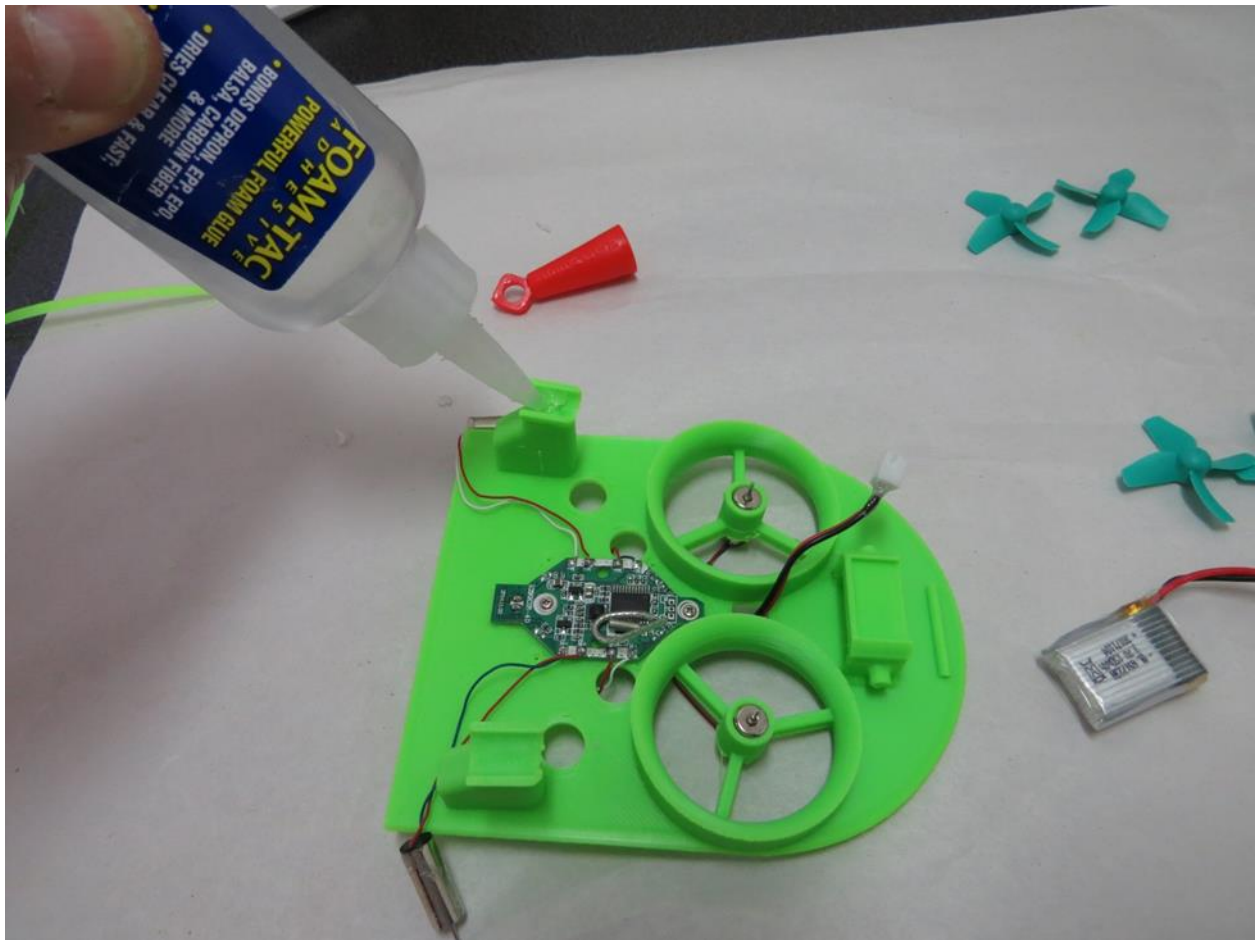
The 2 forward motors are the lift motors. To install these, carefully remove the props. Note there are right and left props. With the props off, feed each motor thru the round holes adjacent to the control board and then up thru the motor mount tube.



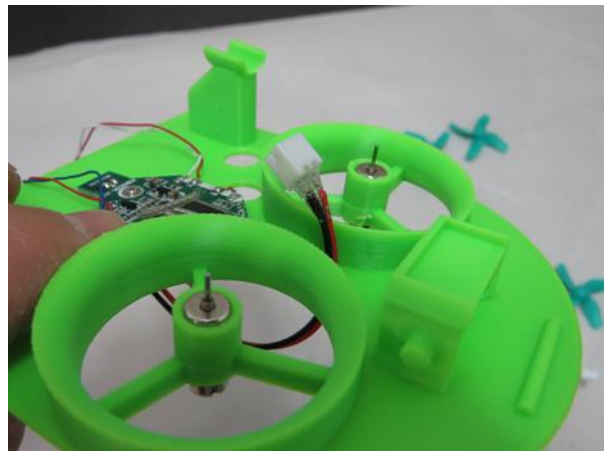
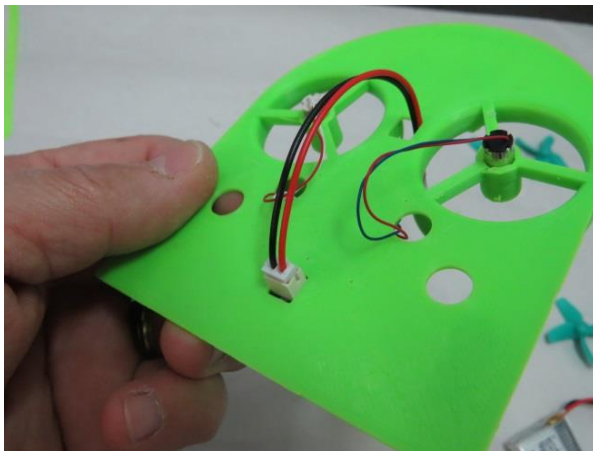
Secure each motor with Hot Glue or FoamTac at the bottom of the motor. Apply a small amount of glue at the bottom of the motor, no need to coat the motor. This will make later changes much easier. Position such that the top of the motor can is flush with the top of the motor tube. There is play to accommodate upgraded motors if used.



Now place the 2 rear motors on each adjacent pylon with the prop shafts facing towards the front. Use hot glue or FoamTac to secure them. Set the front of the motor can at the front of the pylon. Align them so they are centered in the mount. There is play to accommodate upgraded motors if used. Route the pylon motor wires so they will not get tangled in the props. A dot of FoamTac will keep the wires in place.

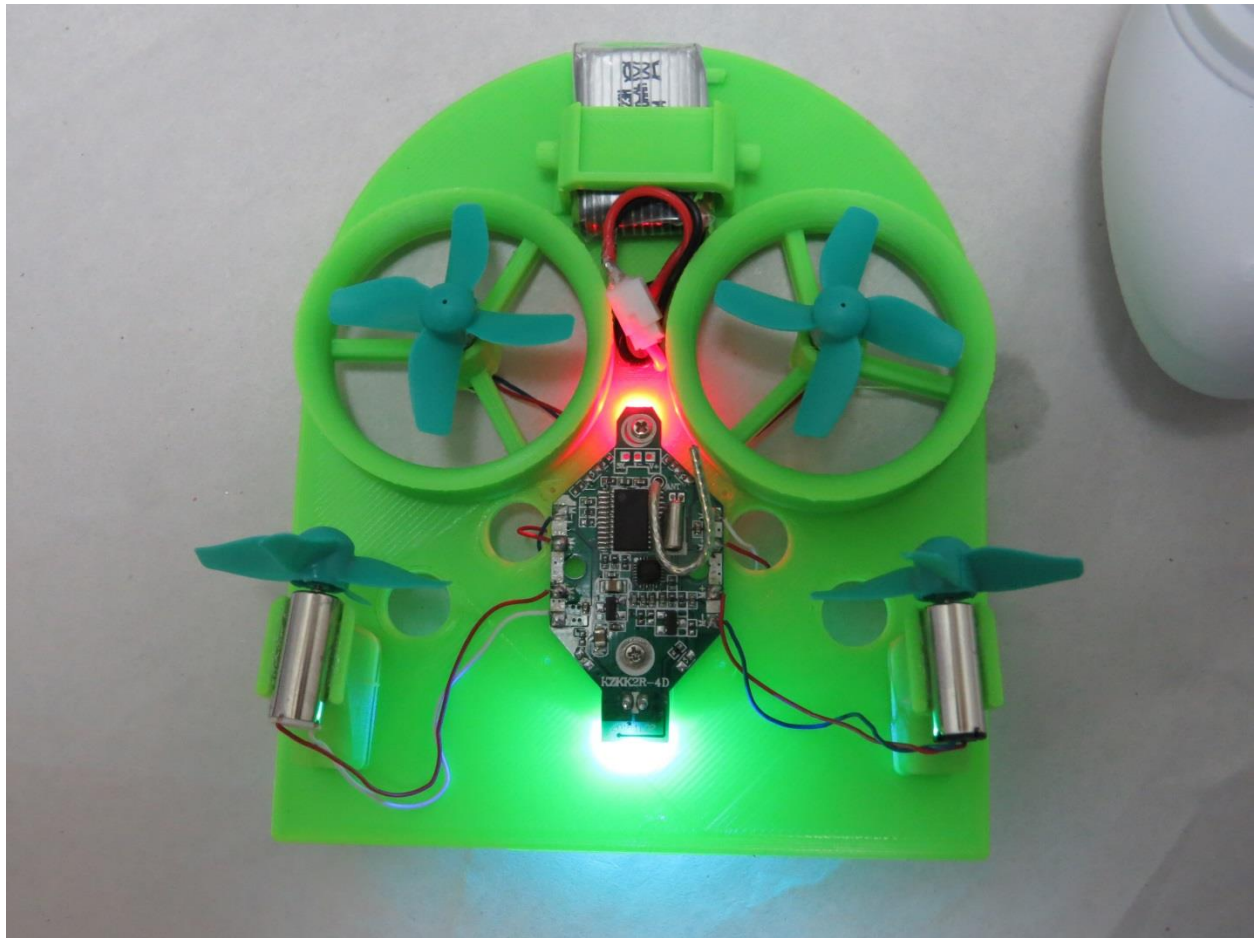


Use just enough glue to hold them. Too much equals a mess and extra weight.

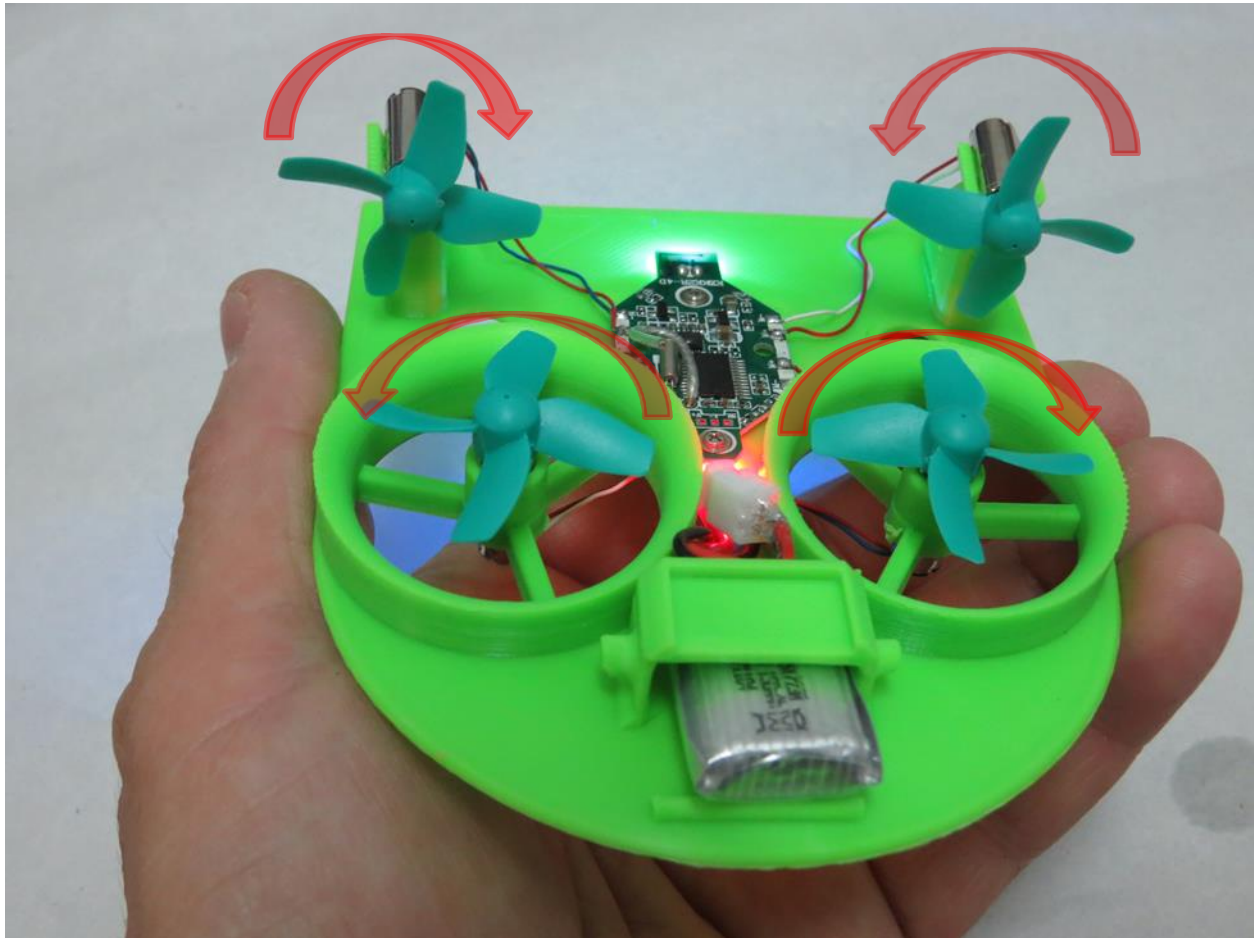


Battery Connections; If you need we have Micro 2.0 plug-in extension cables or a solder type extension cables. To use the extension cable, connect it on the underside and route it up thru the forward Square hole. When you slide in the battery all will reach fine. If you handy soldering; you can connect the extension lead to the top of the board > **Be Sure Polarity Is Correct, Or Board Damage Will Result!**

When the glue is set carefully press on the correct prop while supporting the back of the motor.



From these 2 photos, note the propeller orientation / pitch of the props, the motor wire colors and where they are connected to the main board. The Red Arrows show the rotation direction and high edge of the prop must be leading in the same direction. If not correct you will not have proper control.

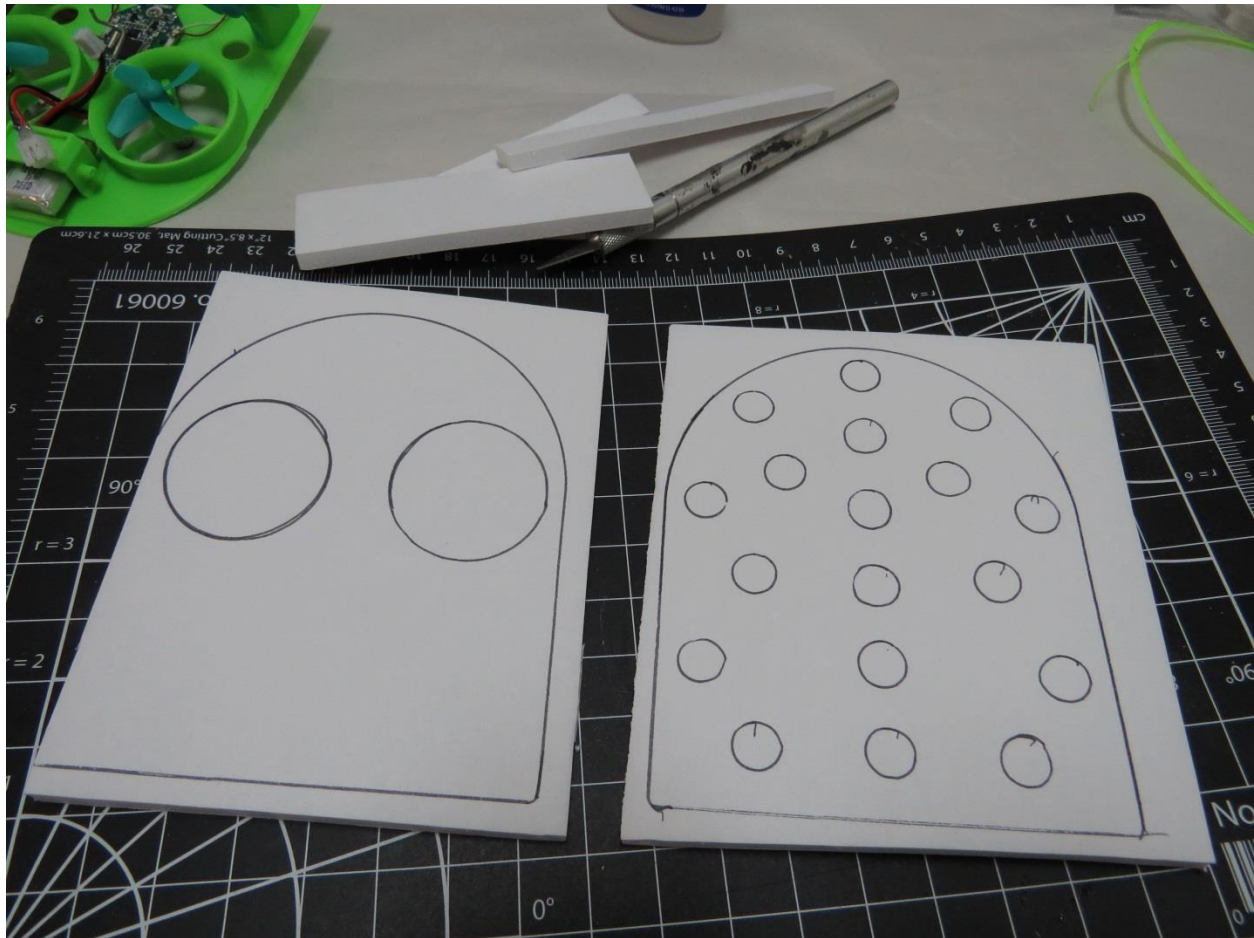


Functional Test; Prior to gluing it all together, a quick test is in order. With batteries in your transmitter and a charged running battery, follow the quad instruction sheet to power up and Bind the quad while it is level. Secure it so it does not shoot away or tangle the props. Raising the Left stick will cause all the motors to rotate. Be sure your lift motors are blowing down and pylon motors are blowing towards the rear. While the left stick is forward approximately ½ way, move the same stick to the right. The Left Rear motor should increase in speed. Do the same but move stick to Right and the Left Motor will now increase in speed. Now lower left stick and remove the battery, shut off transmitter. If the test was successful, on to final assemble. If not review the above and correct as necessary.

Building The Foam Base

The Foam; Using a safe cutting surface and a sharp #11 type blade and Xacto Knife cut the perimeter of each supplied Top and Bottom.

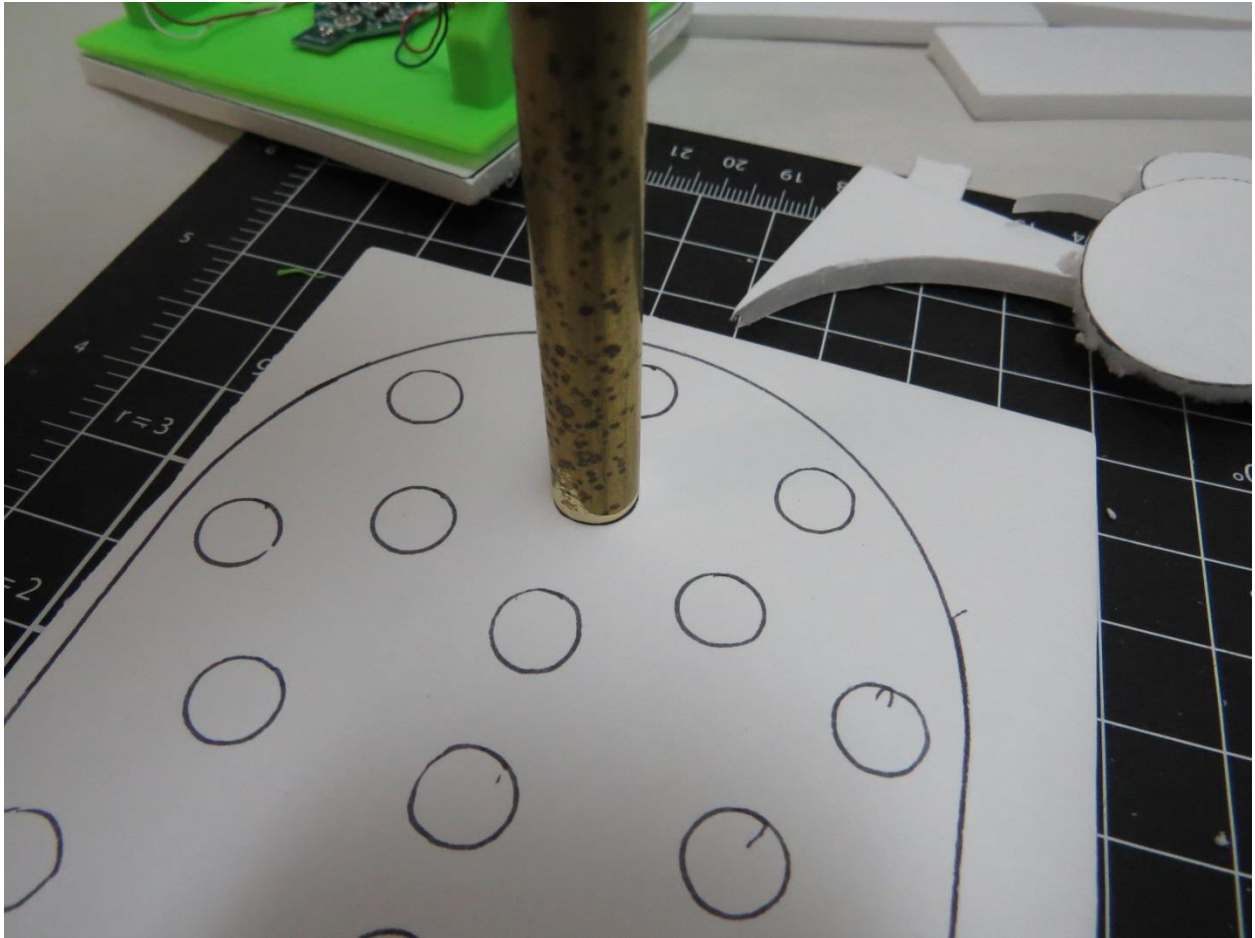
Tip; Use a sharp blade. Your first cut should just be top paper. A straight edge will help. Cutting curves; use an up and down motion like sawing to maintain control. Keep cuts perpendicular (square). Then finish cut the foam down to the bottom paper.



Do not Remove the Paper Yet! The top foam has the 2 large holes; cut those out. If you used the bottom Battery extension cable make a slot in the foam for it to lay from the rear Top Square to the Front Top Square.



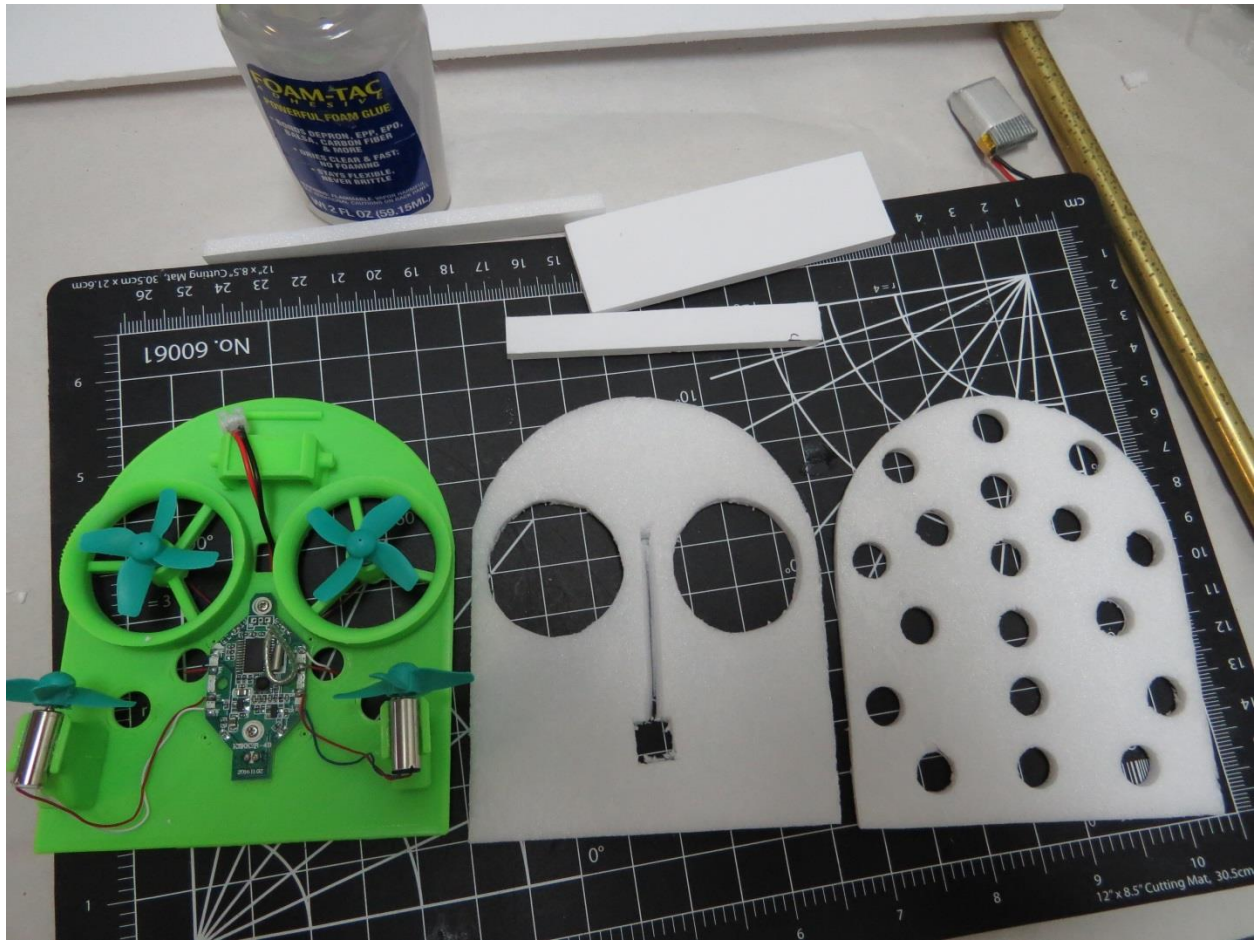
The Bottom has a series of holes for exit air; they are easily cut with a $\frac{1}{2}$ " diameter Brass Tube with the edge sharpened with a file or sand paper. Carefully place the sharpened end over each hole and rotate the tube. It will cut thru the paper and the foam. No need to cut thru the bottom paper, just to it. Do this for all the holes.

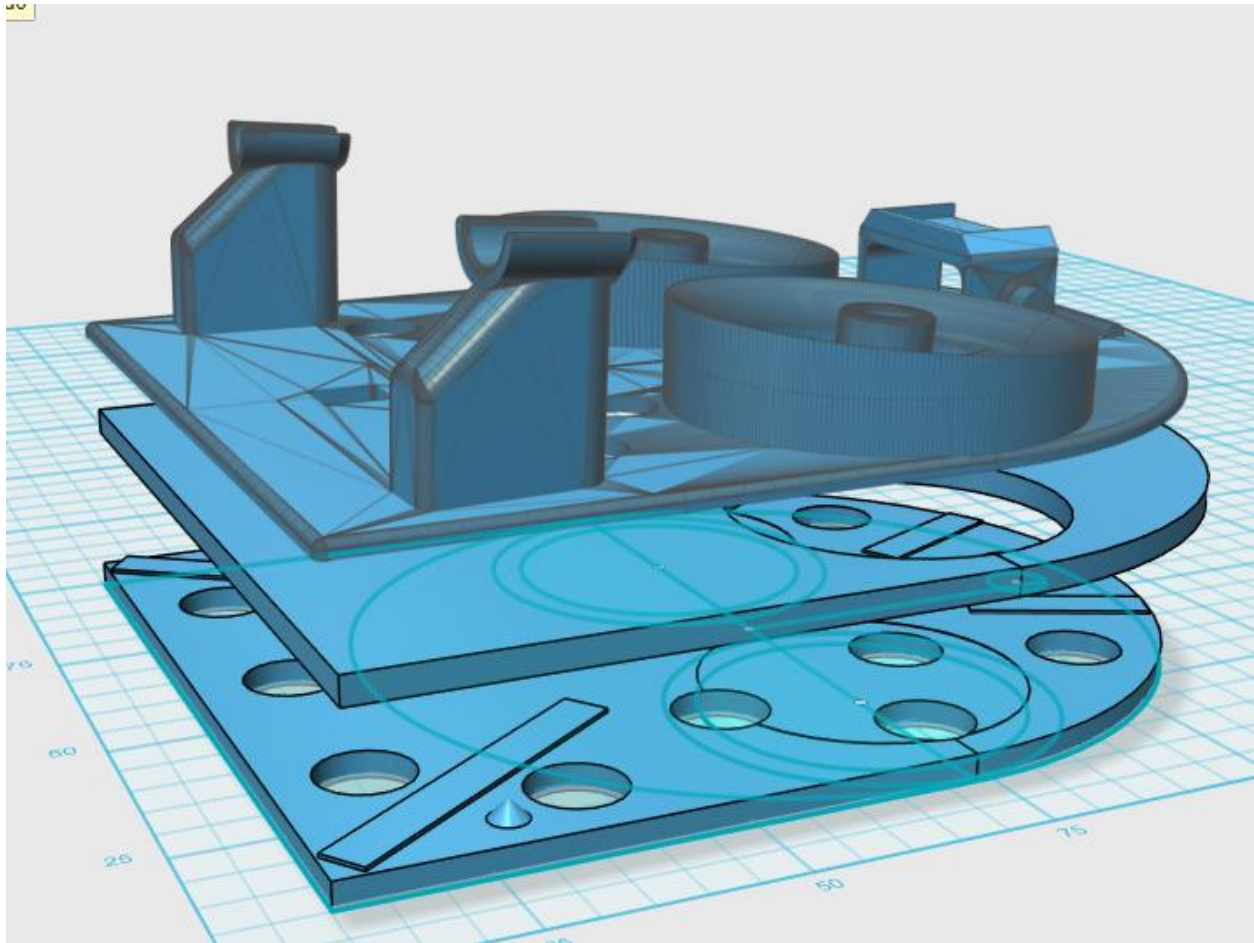


A gentle twist of the tube will cut thru the paper and down thru the foam and to the bottom paper. No need to cut thru the bottom paper. (Note - Later models will have the holes pre-cut)

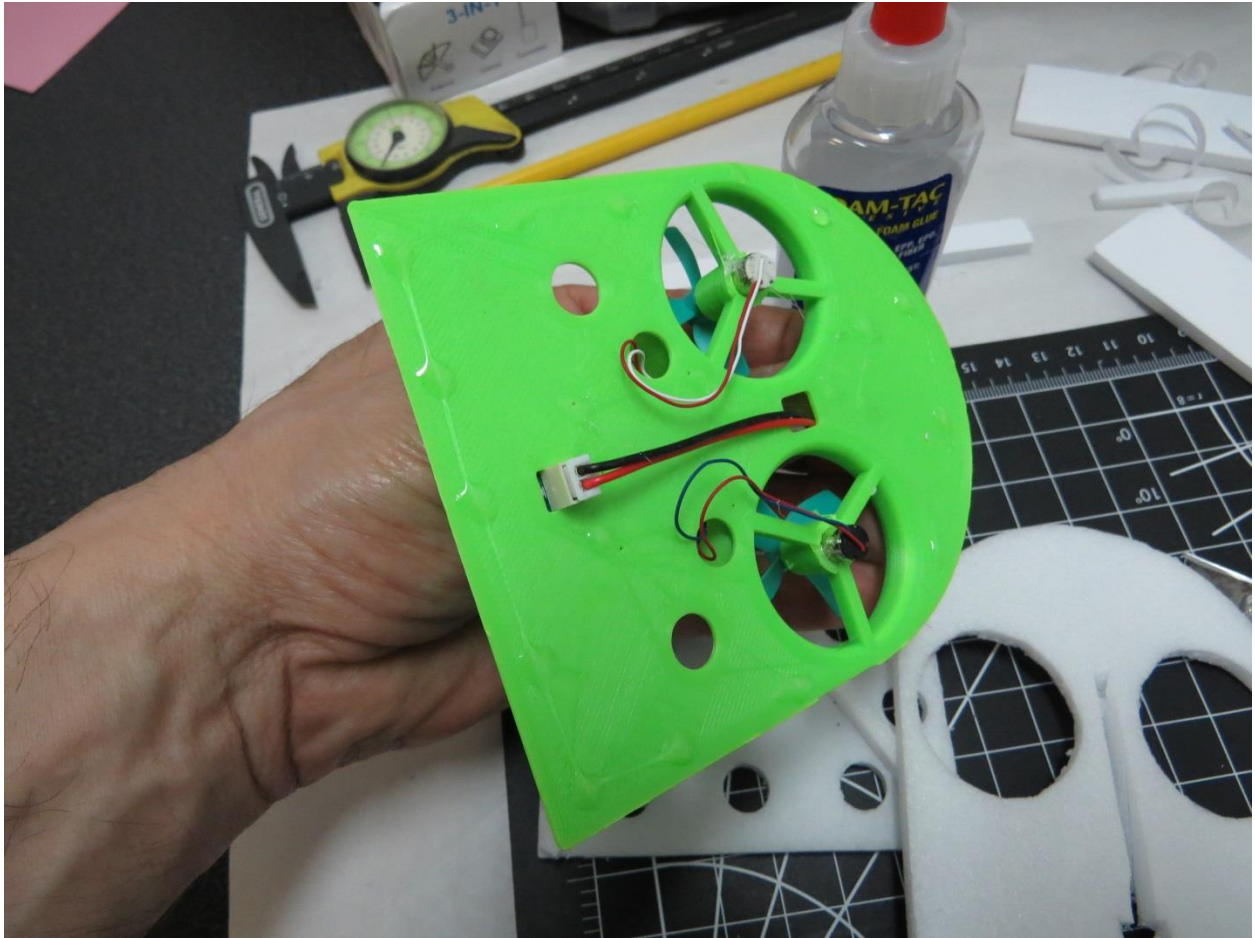


At this time you can remove all the paper from the cut foam parts only and discard it. The holes you cut should fall out, if not follow them up with the brass tube.





The drawing above shows the top and bottom foam sheets. Note the positions of the rectangles on the bottom. They are there to separate the pieces. They are placed so that they do not cover the bottom exit holes or protrude into the 2 lift holes. They are cut from the 2 lengths of ¼-inch square foam.



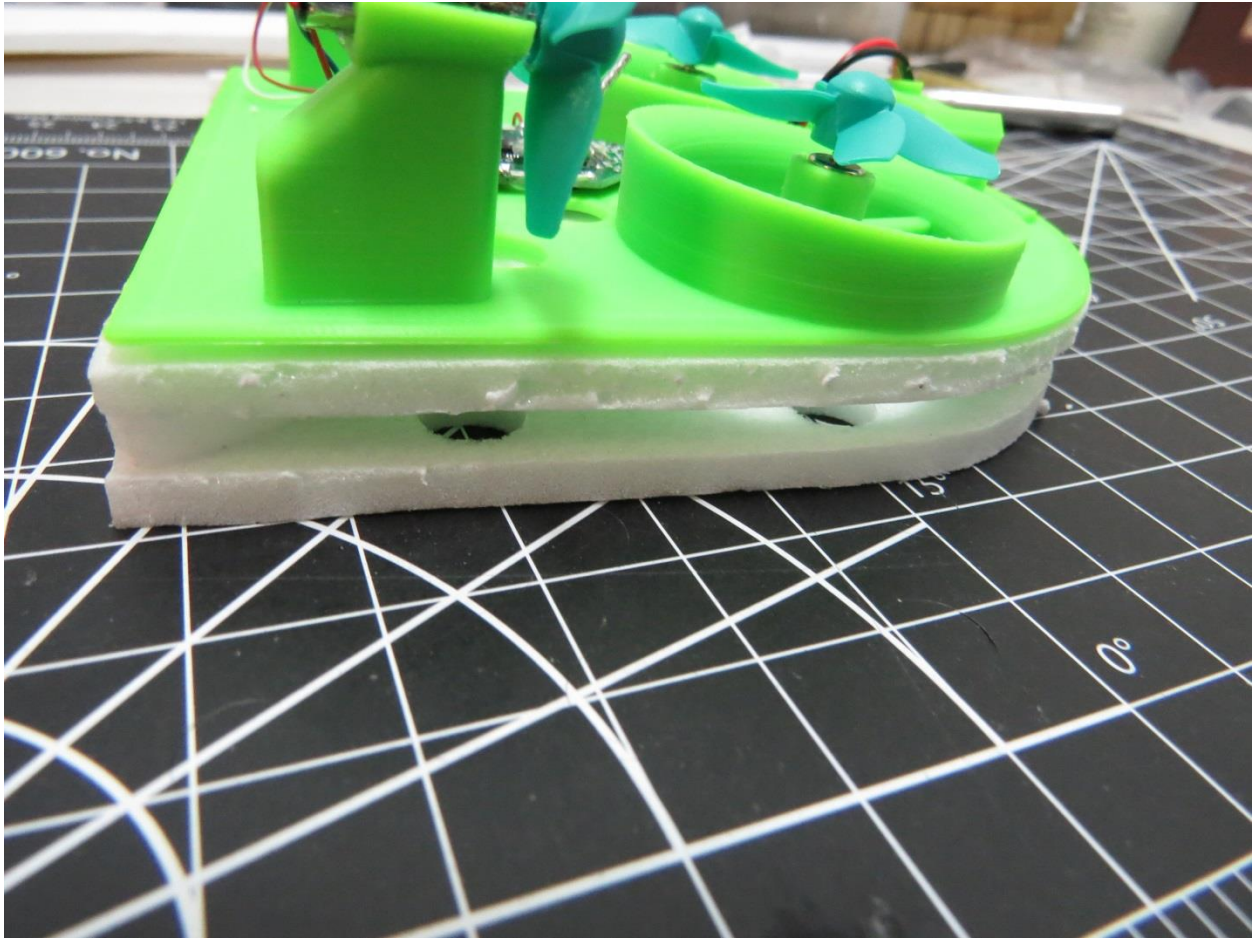
Lift Base Assembly; The foam with the holes that match the top is glued on first. Again only a small amount of glue is necessary. Place glue dots about an Inch apart around the perimeter and a couple by the center holes. Press together until glue sets.



If needed, trim the foam for smooth air flow for the lift fans. Be careful of the motor wires, do not cut them!



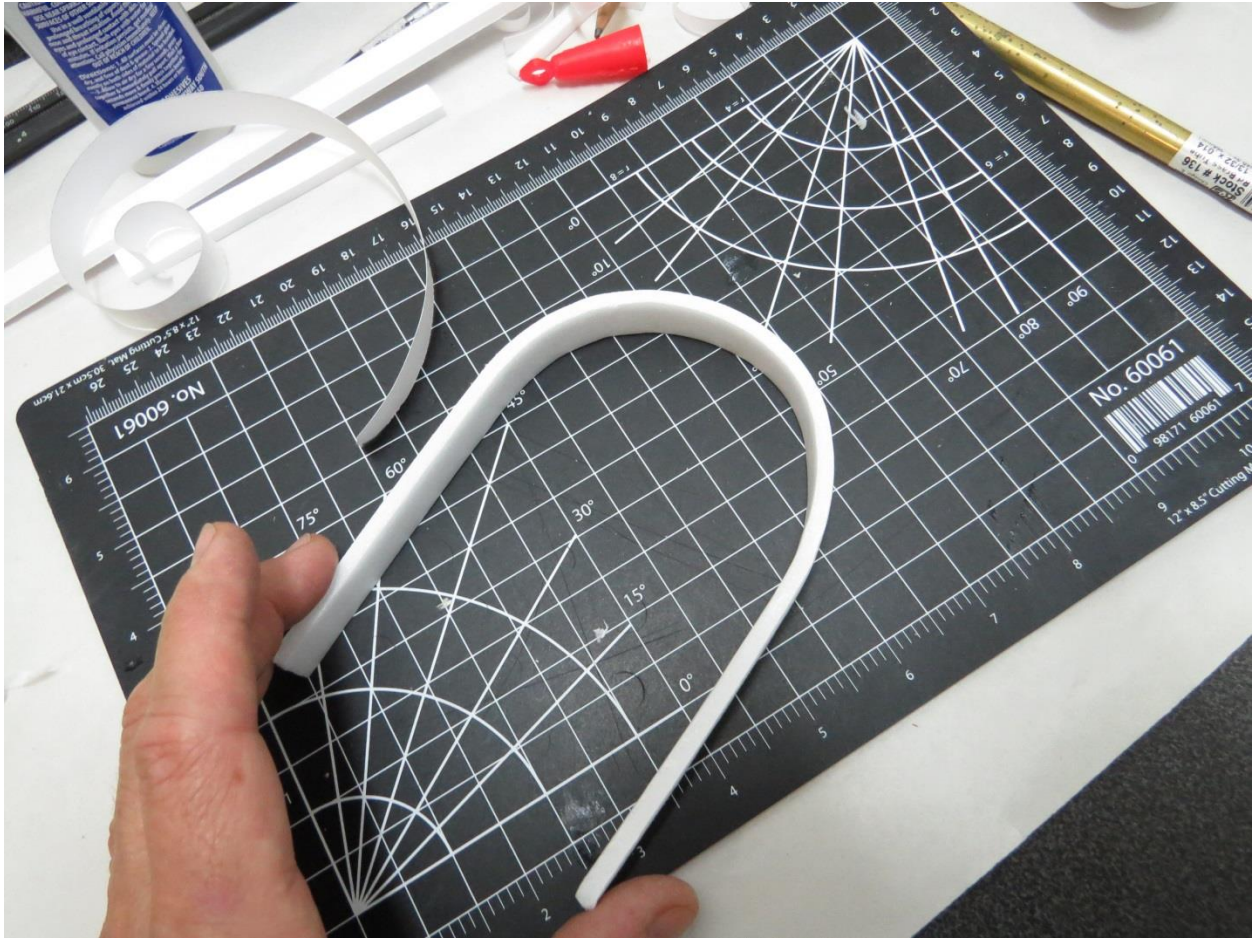
Locate and glue the thin separator $\frac{1}{4}$ -inch pieces to the bottom avoiding the exit holes. Test fit the bottom to the top and be sure they don't intrude in to the lift holes. If good, glue the bottom to the top and align the pieces vertically. Be sure the glue is set before proceeding to the next step.



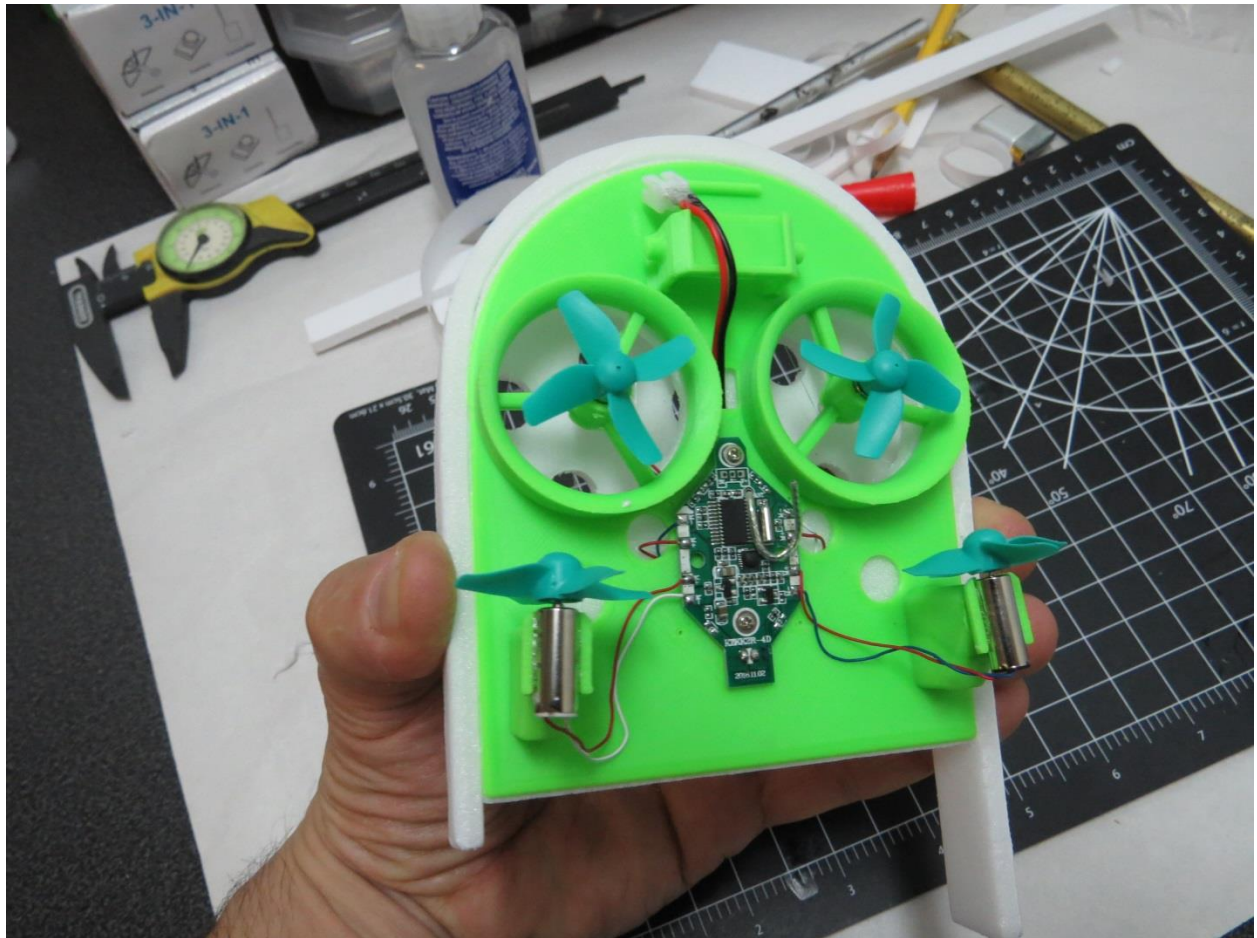
Now it is time to seal the sandwich and create the air chamber that will lift your Whoover! Here we use the long piece of foam. Remove one side of the paper. Now slowly rub it against a rounded counter top while gently bowing it.



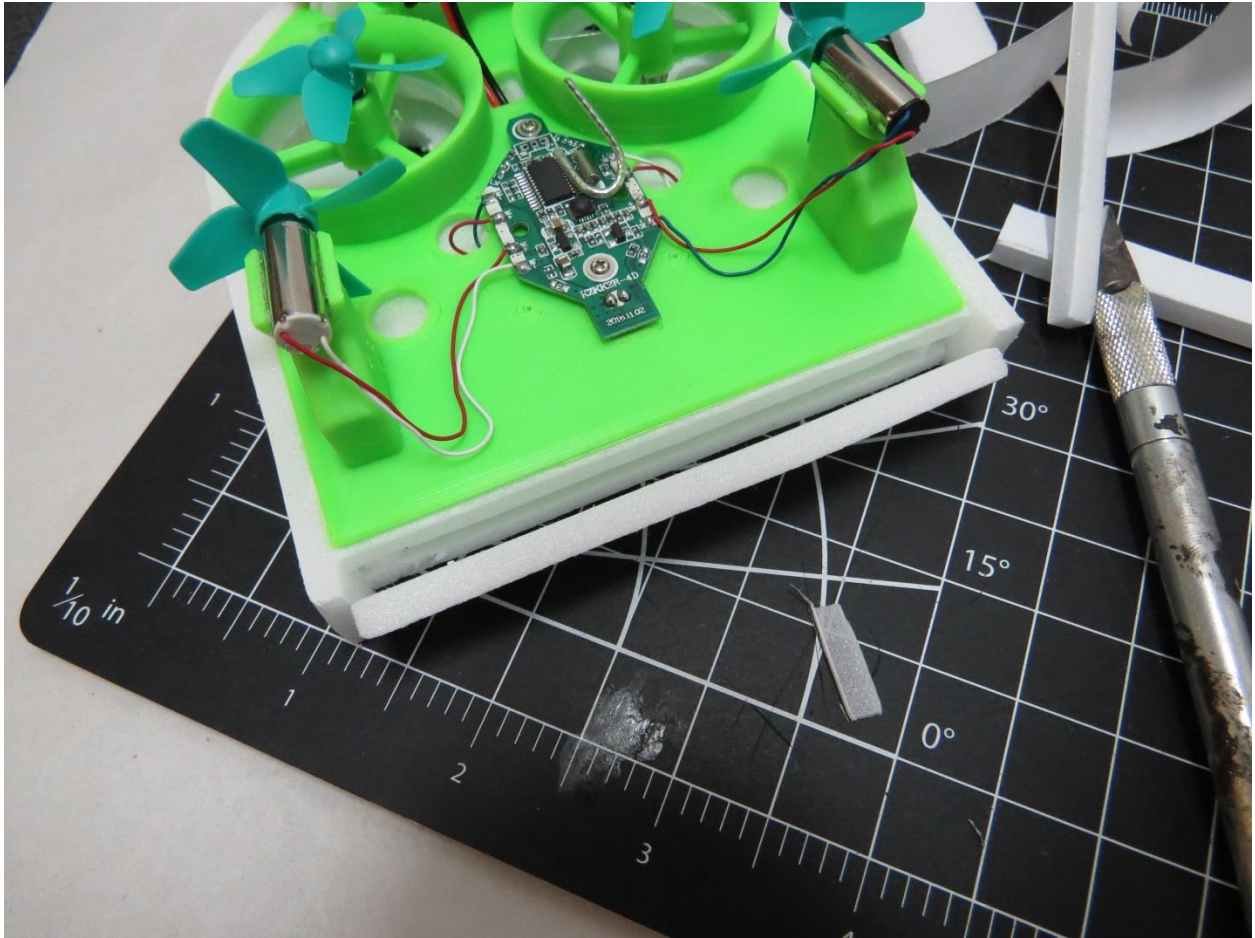
Do this in the center 4-5 inches. This will wrap around the front of the Whoover. Knead it with your fingers to finish the curve and test fit.



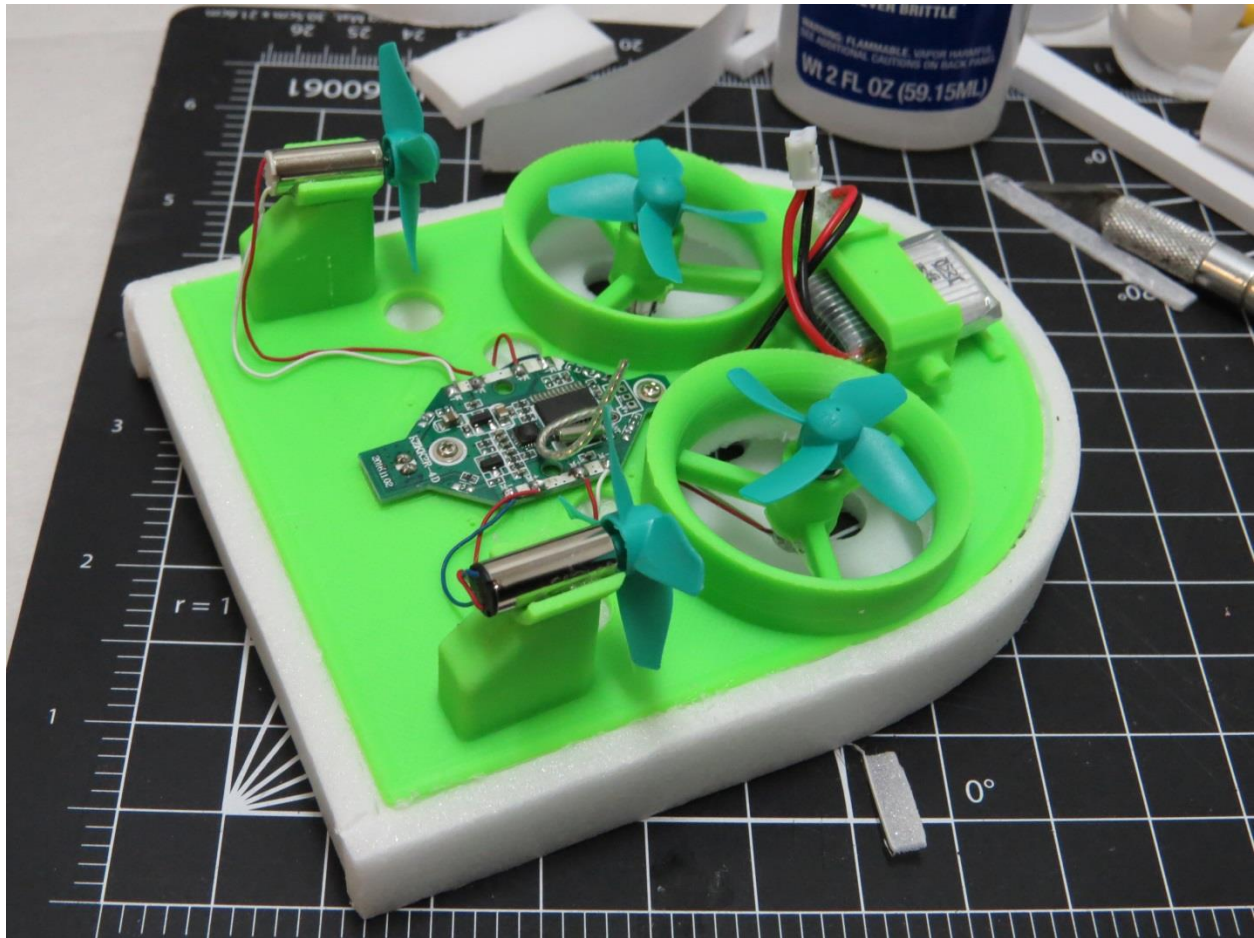
Be sure it over hangs at the rear of the chassis by at least $\frac{1}{4}$ inch. We will trim the excess later.



Apply glue to the top and bottom edges sparingly. We don't want it to ooze out. Position and hold till glue set.



Now take the short wide piece and trim its length to fit between the overhang. Peel the paper from both sides and glue in place the same way.



You have just completed the main assembly of your Whoover! The final step is the Tyvek skirt. This will make the Whoover super slippery. Tyvek is a strong, lightweight fiber paper used to cover houses and make envelopes. Typical lightweight Tyvek is used on the post office large envelopes. One of the envelopes makes a minimum of 20 skirts. They will need occasional replacement as they fold down over time.

TYVEK STRIP

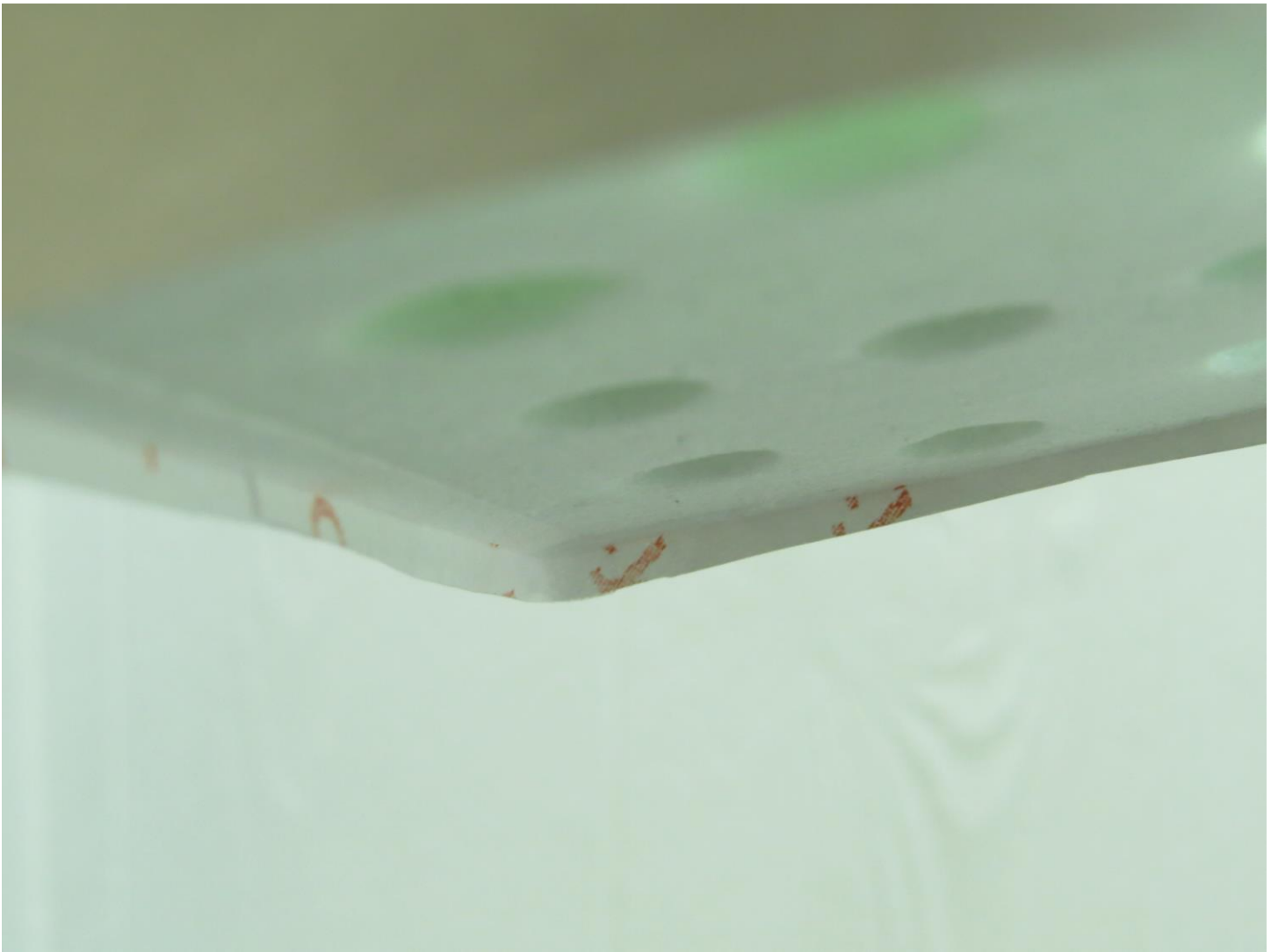
$\frac{1}{2}$ wide

16 inches long

To create the skirt cut a strip $\frac{1}{2}$ inch wide by 16 inches long. This will be wrapped around the perimeter of your Whoover with approximately $\frac{1}{8}$ inch hanging below the bottom. The bit hanging below will reduce the surface friction and increase speed.



To size the skirt, wrap it around your Whoover and cut so you have about 1 inch excess. The overlap will be glued to itself. Apply some FoamTac to one side of the overlap. Pull it snugly around the Whoover and press the glued end to the skirt. Hold it until glue set.



Once fully set, you can slide it down and set the bottom overhang. A few dots of FoamTac will keep it in place and allow easy adjustment or replacement.



You're Done! What are you waiting for?? Go race. For more excitement add an FPV camera on to the battery holder! It's all set to take an Eachine 25mw camera, rubber bands included!