Executive Summary

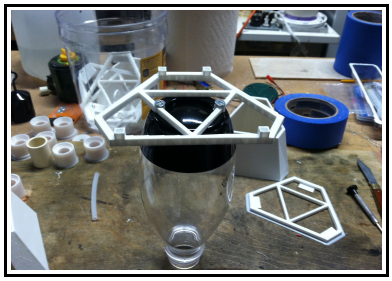
This month, I continued work on the flight system. I finished the paraglider, forward strut, equipment bay, and nosecone. The total mass as of this month is ~ 1190 gm. This leaves 310 gm for the canopy and release mechanism.

Technical Stuff

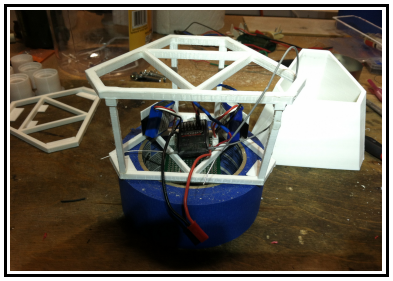
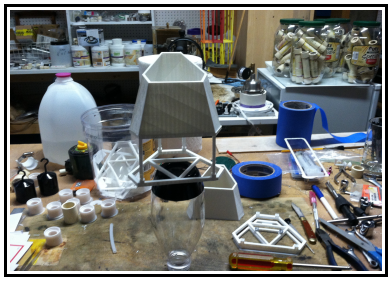
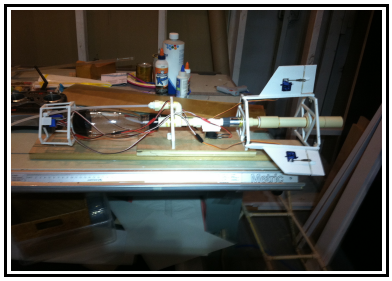
This month, I continued work on the flight system. I finished sewing the paraglider by hand, advancing manned space flight one stitch at a time. I used some RC control rods for the beams. As such, since I can't fold it, I'll lay the paraglider flat under the cockpit. This should make deployment easier. I attached the wing to the frame to get a feel for the rocket glider. Some adjustments are required, but I'm getting there.

Also, this month, I designed and printed a forward strut, an equipment bay, and a nose cone. The forward strut mounts to the oxidizer tank. It turns out that the Soda Stream® bottle I use as the oxidizer tank has two convenient holes in the plastic bottom. With the right design, I can use two small machine screws to secure the strut to the tank. It seems the Soda Stream® bottle was designed for Fisher Space Systems!





The equipment bay is attached to the forward strut. The equipment bay houses the receiver, batteries, and switch. I moved this equipment forward to offset the mass of the servos in the vertical and horizontal stabilizers.

Finally, the nose cone is attached to the equipment bay. I printed two copies of the nose cone. One has a mass of 45 gm and the other has a mass of 65 gm. If I have the mass allotment, I'll use the heavier one. I want to move the center of mass as far forward as possible. As pictured above, the total inert mass is ~ 800 gm. By adding the side panels, nose cone, propellant mass, and paraglider mass gives a total of ~ 1190 gm. This leaves ~ 310 gm for the canopy and release mechanism. I just might make it to launch!

Next month, I will continue working on the flight system. I plan on designing the canopy and release mechanism.