6. Pre-Flight Checklist

Before Flight

❑Fully charge two battery.

❑Download program onto Arduino Pro Mini board and test buoyancy engine

❑Adjust "risedrivetime" in program for maximum syringe water capacity.

❑ Adjust the potentiometer for the depth you wish to dive: Counter-clockwise for shallower and clockwise for deeper.

Before Flight 2

❑ Start and center moving mass in buoyancy engine (BE), then pause it before closing bottle.

❑ Ensure there are no wires or other obstacles obstructing the cap closure.

❑ Back cap off threads ½ to ¾ turn and slide over first set of threads – then tighten cap.

❑ Make sure the rudder is perpendicular to the wings.

Before Flight 3

❑ Rudder mount should have four screws: Two to secure rudder and two to adjust the rudder's position.

❑ Make sure the servo is centered at the bottom of the bottle.

❑Remove rear plastic clip from bottle cap to allow more space for outside ballast adjustments.

❑ Understand how to adjust for pitch, roll, and yaw as well as how to ballast to near neutral buoyancy.

Flight

❑ Attach safety tether to center cable-tie loop.

❑ Burp your bottle: Run the BE a couple of cycles holding the glider vertically underwater.

❑Check for leaks: Excess bubbles leaving cap seal or moisture/condensation inside the bottle.

❑ Test fly: Adjust ballast as necessary to achieve nearly equal forward progress for both the dive and rise cycles.

❑Feed out tether line freely so that the glider's forward progress is not impeded.

After Flight

❑ Turn off master power switch.

❑ Check for leaks and dry as necessary.

❑ Leave cap open to further dry and avoid any pressure build up. Store in a cool dry place.

❑ Battery can be recharged in place.

❑ With power off, snap cap can be left on battery to cover terminals.

❑ Discard any damaged or soaked batteries according to manufacturers recommendations.