

La Anguila Float Device (AFD)

The AFD, as shown in **Figure 1**, is an open tube design that houses the electronics sealed enclosure, thruster motor, and ballast. An SPST toggle switch activates a timer relay countdown for 90 seconds. When the countdown is complete, the timer relay closes the normally open switch and activates the Bilge pump motor cartridge thruster for 60 seconds. The thruster motor will draw water from the lower end of the AFD and push water through the top and side holes, descending the AFD to the pool's floor. The thruster motor then deactivates in 60 seconds and the AFD will ascend due to its positive buoyancy to the pool's surface. After 30 seconds, the timer relay reactivates the thruster motor for 60 seconds, descending the AFD to the floor of the pool. After the 60 seconds, the timer relay will deactivate the thruster motor, allowing the AFD to ascend to the pool's surface.

Materials

- PVC Tubing-10 cm I.D. x 89 cm H
- Acrylic Electronics Enclosure - 9 cm O.D. x 30.5 cm H
- Thruster Motor (12 Volt, 3 Amperage)- 500 gpm Bilge Pump Cartridge
- Metal Alloy Ballast
- SPST Waterproof Toggle Switch

Control Box: The control box does not use any AC wiring. The control box and ROV are fully DC-wired.

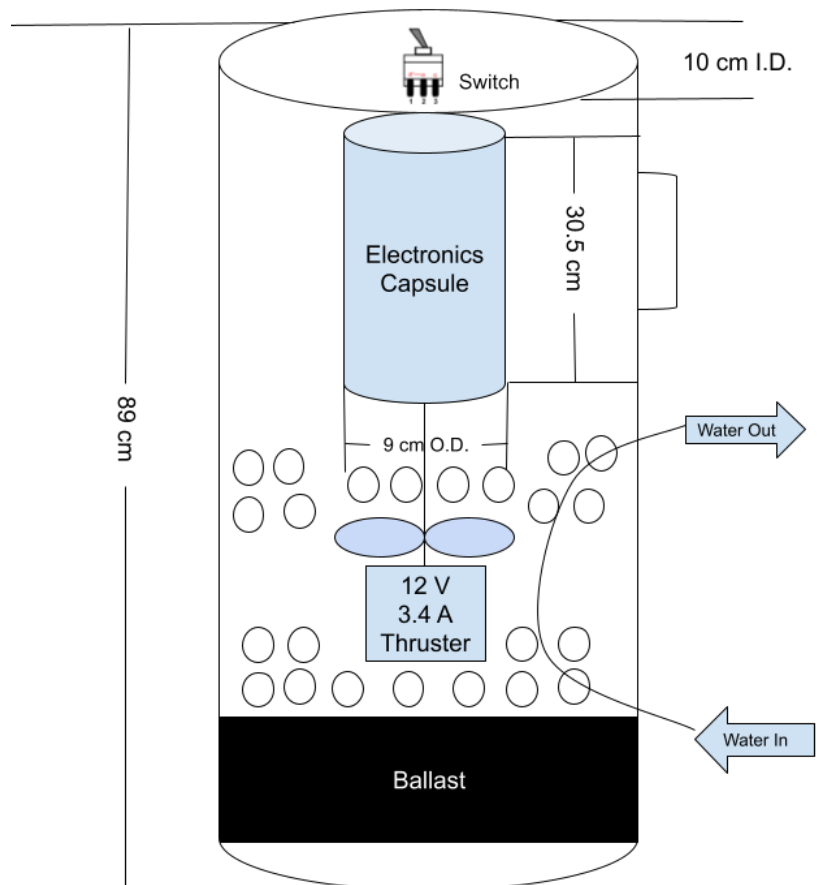


Figure 1: Mechanical Diagram of La Anguila