Los Fresnos High School Engineering Club/SeaPerch Facts

23’-24’ Team Members: Diego Loa, David Rincon, Austin Nava, Isaac Kuntz

Our SeaPerch is unique because:

What makes our SeaPerch unique is that while we worked on the aesthetics and performance of our ROV, we kept quality as our #1 priority. We put much of our effort into ensuring that the structural integrity, electrical continuity, and organization of wires and components were functionally and permanently top notch. We achieved this by malleting the structure together, soldering/insulating/securing and continually testing the copper wire for any weaknesses, and using zip ties among other things to organize the wires, motors, pool noodles, and robot arm without interferences. Therefore, we created an efficient, strong, and reliable ROV.

SeaPerch Design Overview:

Our SeaPerch design takes into account hydrodynamic principles for the best balance of performance and reliability. This ROV has positive buoyancy for the ease of movement and lifting objects, an optimized reduction in frontal surface area to reduce hydrodynamic drag, a rotational-retractable arm for completing different objectives, many drilled holes for water leakage to reduce weight by water entrapment, motors made from scratch secured by metal holders with mesh to increase grip strength, wires/floaties thoroughly secured/organized with zip ties, and every component is built durably to last.

Our biggest takeaway this season is:

Our biggest take away this season (other than gaining experience using workshop tools, qualitatively and quantitatively understanding physics, etc.) was the understanding of the importance of the planning/organizing/design portion of the engineering design process. Creating a timeline to follow, gaining the materials necessary for physical prototypes/products, and organizing everything into an executable “format” was crucial to completing the SeaPerch competition, and this skill will be important to have for future engineering projects as well.

Two Years participating in SeaPerch
Two Times at the International SeaPerch Challenge

Our SeaPerch ROV