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Design and Construction of an Automated Boat that Removes Debris from the Ocean

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Abstract: *Water bodies have a huge aquatic ecosystem within them. Any high concentration of suspended solids can cause numerous issues for aquatic life by blocking light from reaching submerged vegetation, hence there is a need for a solution to remove this debris from the water bodies. This project design and construction of an automated boat to remove debris from the ocean is focused on developing a robust and efficient prototype solution for autonomously collecting and managing marine Debris, thereby contributing to environment conservation. The two-channel remote control with receiver will enable the boat to navigate predefined routes, identify and collect debris using specialized mechanism and return to a designated collective point. The Two-Channel remote control system allows for precise maneuverability and control over the boat's function. Through a combination of engineering principles, propellers, conveyer belt, tread mill arrangement and shafts. this project aims to address the critical issues of ocean pollution while showcasing the potential for remote controlled boat in maritime environmental management. The anticipated outcomes include a functional prototype, comprehensive operational documentation and preliminary performance assessments, setting the stage for potential scalability and deployment in real-world Ocean clean up initiative.*

Keywords: DC Motors, Conveyor belt, propellers, tread mill arrangement and shafts

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