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| **Title:** | Design and Implementation of Control System Lifeguard | | |
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| **Abstract:** |  |
| The main purpose of this paper is the design and implementation of the control system Lifeguard. The device is remote-controlled by an RF transmitter and receiver through radio frequency, for this system used a cork sheet to make the physical structure of the device. Two brushless DC motors are used to drive the device. A servo motor is used as a rudder to control the directions. When the transmitter sends the signal to the receiver using radio waves, it drives the motors, causing a specific action to occur. The device motors cause the propellers to turn as the propellers are attached to the motors by shafts. A pressure difference is produced between the forward and rear surfaces of the propeller blades and water is accelerated behind the blades. The propellers push the device backward by a massive amount of pressure thus the device moves forward. The ESC controls the speed of the motors. A servo motor is used to operate the rudder. The servo motor is attached tightly to the rudder. The transmitter also operates the servo through radio frequencies. When the servo rotates this causes the rudder to change direction. | |