

**UNIVERSITY OF SOUTHAMPTON**  
Faculty of Physical Sciences and Engineering  
Electronics and Computer Science

A project progress report submitted for the award of  
MEng Electronic Engineering

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**Killing the Kill Cord**

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UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF PHYSICAL SCIENCES AND ENGINEERING  
SCHOOL OF ELECTRONICS AND COMPUTER SCIENCE

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This project researches into sensor systems to ensure safety in the event of dangerous conditions exerted in power boating. In the past, existing methods have been ineffective. Currently, the common method is for the operator to attach a cord between themselves and the controls, and when this link is broken due to any circumstance, the engine is stalled. This relies heavily on the operator remembering to attach the device to both themselves and the controls, leading to catastrophic accidents due to human error. The goal of this project is to eliminate human error by creating a system which monitors sensors within the helm, allowing reliable and correct actions to be taken based on the feedback. Each scenario is tethered for allowing for the optimum boating experience, whilst maintaining the safety. A prototype system was designed and manufactured.



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## **0.1 Introduction**

## **0.2 Research**

### **0.2.1 Existing Devices**

### **0.2.2 Accidents**

### **0.2.3 Regulations**

### **0.2.4 Sensors**

#### **0.2.4.1 Wheel**

Capactive

Resistive

#### **0.2.4.2 Throttle**

#### **0.2.4.3 Proximity**

Infra-red

Ultrasound

### **0.2.5 Scenarios**

## **0.3 Work Completed**

### **0.3.1 Testing**

## **0.4 Work Remaining**