

**RV INSTITUTE OF TECHNOLOGY AND MANAGEMENT**

A Project Report on

SAFETY SYSTEM OF VEHICLES

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**INTRODUCTION**

In popular cities like Bangalore, many of us use cars for transport and according to statistics, it has been recorded that on an average 657 accidents occurs per day in Bangalore alone. This project mainly concentrates on safety systems in vehicles which are helpful in times of emergency situations when the passengers are unable to control the vehicle. In situations where the driver loses control over the vehicle due to medical conditions like cardiac arrest, muscle cramps or dizziness, this project can be used to indicate the emergency condition to the neighboring vehicles. This project is based on the principle of two way switches.

**PRINCIPLE**

Two way light switch is a switch that can be used in conjunction with another two way light switch to turn a light (or lights) on and off from more than one location.

There are 2 switches named as S1 and S2. In the ON condition the S1 is connected to A and S2 is connected to C or S1 is connected to B and S2 is connected to D therefore completing the circuit and allowing the current to flow in the respective paths. If the switches are in any other positions, then there will be a circuit break which will hinder the current flow and hence switch is said to be in the OFF position.

**CONSTRUCTION AND WORKING**

This is the circuit diagram of our project. Using alternator, the chemical energy from the engine battery can be converted to electrical energy to source the two way circuit. There are two switches located conveniently from the driver and the fellow passengers. During an emergency situation, on pressing the switch, the LED lights at the bumpers and side mirrors will glow, thereby alerting the other vehicle drivers around.

**COMPONENTS USED IN OUR MINIPROJECT:**

* **Alternator** - An alternator is an electrical generator that converts mechanical energy to electrical energy in the form of alternating current.
* **Connecting** **wires**
* **Two way Switches**
* **LED**

**![](data:None;base64,iVBORw0KGgoAAAANSUhEUgAAAAEAAAABCAYAAAAfFcSJAAAAAXNSR0IArs4c6QAAAARzQklUCAgICHwIZIgAAAALSURBVAiZY2AAAgAABQABYlUyiAAAAABJRU5ErkJggg==)**

**CONCLUSION**

This is a simple project worth saving many lives. It is also very economical since it involves a simple two way switch circuit. It can be further modified and made more automated and user friendly by incorporating artificial intelligence and under lighting systems. Using this technology, we can develop a safety system company and implement it in as many vehicles as possible.