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**FINAL REPORT:
AUTO SAFETY SYSTEM**

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ABSTRACT

The helmet is design to create extra precautions for the motorcyclist before and during their journey to their destination. This helmet consists of two functionalities which are indicator system and communication system.

For indicator system, this helmet indicates the motorcyclist to clip the helmet neatly. A parallel circuit that connects the Light Emitter Diode (LED) for light and buzzer for the sound that will trigger once the motorcyclist wear the helmet. For the communication system, the concept system of walkie-talkie is been used in this system. This system helps the motorcyclist to communicate if there is anything goes wrong during their journey especially a grouping motorcyclist.

Both of the systems were simulated in Proteus 8.0 software which is simulating the circuit if it can produce the output that desired. The design of the circuit which is Printed Circuit Board (PCB) also designed in the Proteus 8.0. The power supply is just using a dry cell which is 9V for the indicator system and three (3) 1.5V battery for the communication system's circuit.

The overall result is quiet satisfied which is the software and hardware is functioning based on desired output. For the indicator system, the hardware is to do a wiring in the helmet. For the communication system, the circuit is just the PCB board that is stick to the side of the helmet.

It is observed that the output that desired is successful. The project works based on desired objectives of this project.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

This project innovates a ready-made helmet that gives extra precautions to the motorcyclist. Furthermore, there will be one more function which is a communication system that has been attached to the helmet. For the indicator system, it will tell the motorcyclist to clip the helmet correctly. This is done through a simple parallel circuit by using a normally open switch and a normally closed switch. It is indicated through a Light Emitting Diode (LED) and a buzzer. LED and buzzer are also used to warn the users.

For the communication system, there are two circuits that have been used, which are an FM transmitter circuit and an FM receiver. For the transmitter circuit, it is used to produce a wave output from the audio input and be transmitted to the FM receiver which converts the input into a wave form change into audio output. This is the same function as a walkie-talkie.

For the FM receiver circuit, it uses the IC LM386. This IC is popularly used in amplifier circuits. It is suitable for battery-powered devices. So, it is suitable for this project because we are using only a DC power supply which is a battery.

1.2 Objectives

The objectives of this project are:

1. To design a project that can give extra precautions for the motorcyclist before starting a journey which indicates the motorcyclists to clip the helmet.
2. To create a helmet for the motorcyclists to communicate with other motorcyclists if anything happens during the journey.