

ABSTRACT

Many accidents cases like four wheeled vehicle calluions oceured cases of accident are usually caused by mechanical problems of the vehicle or lock of focus of driver in driving. Based on the problems, a system is needed on a vehicle that is useful to avoid collisions when driving four wheels with the other four wheeled vehicle users. This study has the design and implementation of an automatic brake system on four wheeled vehicle prototype, with transsmition media in the form of vlc and photodiode as media receiver.

In this final project, an automatic is realized to reduce accident in/on? Diriving using vlc an a transmission, this tool consists of an LED placed on the front of a four wheeled vehicle as an electric light modifier, photodiode as a light modifier to electricity and data reception. The data transmitted in this final project is biner data consist of output, from LED on the transmitter that connector to the microcontroller that has been programed for automatic brake.

In this final project, it can prove bring the transmission of LED that can send serial data of number or charcters. The voltahe on transmitter is 1,96 volts and the voltage who received at the receiver is also obtained when the transmitter send data at an angle of 0 degrees at a distance of 10 – 60 cm. at a distance of 10 cm produce of a voltex of 2,12 volts, 30 cm produce a voltage of 1,66 volts 40 cm= 1,34 volts, 50 cm= 1,22 volts, at a distance of 60 cm= 1,10 volts. The prototype can sent data in maximum from time at a distance of 60 cm.

keyword: VLC, Photodioda, LED.