

ABSTRACT

PROTOTYPE OF ROAD CROSSING AID USING HC-SR04 ULTRASONIC SENSOR AND INFRARED SENSOR

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Pedestrian safety around zebra crossings is still a problem main concern. Even though there are clear traffic rules, this often happens accidents due to driver disobedience or lack of attention to pedestrians. One of the factors that can increase the safety and comfort of road crossings is the use of effective tools that help overcome these problems more practically and efficiently. A system in the form of a "Prototype of Road Crossing Aids using the HC-SR04 ultrasonic sensor and infrared sensor" was created to improve pedestrian safety and more efficient traffic management. Prototype created used experimental methods consisting of NodeMCU ESP8266 as microcontroller, HC-SR04 ultrasonic sensor as cross protector, infrared sensor as a vehicle speed detector that passes two infrared sensors, traffic lights as an indicator for drivers when there are crossers, as well as a buzzer as a warning for crossing when the vehicle was passing at a speed exceeding 30km/hour. The system output is the speed of vehicles passing through the LCD layer and the system monitoring vehicle speed and height of crossing objects that can be seen in real time via the website using Thingier.io.

Keywords: Pelican Crossing, Traffic, Crossing, Ultrasonic Sensor, Infrared Sensor, Thingier.io, Buzzer, ESP8266.