

**Rancang Bangun Lampu Penyeberangan Jalan Khusus Penyandang  
Disabilitas Dengan Metode Webster dan Sensor Ultrasonik Berbasis Arduino  
Uno**

*Design and Build a Special Street Crossing Light for People with Disabilities  
Using the Webster Method and Arduino Uno Based Ultrasonic Sensors*

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**ABSTRACT**

*Pedestrian crossings are designed so that pedestrians can cross safely and are also visible to motorists and motorists. Arduino uno is a microcontroller board based on ATmega328 (datasheet). The method used for Arduino Uno in making Crosswalk Lights is the Webster method. Ultrasonic sensors are sensors that are widely used to create Arduino Uno-based technology. This sensor serves to change the physical quantity (sound) of electrical quantities and vice versa. Webster's method uses delay time minimization in the form of an optimal time equation to calculate the turn-on time of the crosswalk lights based on the density of vehicles and the width of the road. Ultrasonic sensors are sensors that are widely used to create Arduino Uno-based technology. This sensor serves to change the physical quantity (sound) of electrical quantities and vice versa. This research is about the Design of Crossing Lights for Persons with Disabilities using the Webster Method and Arduino Uno Based Ultrasonic Sensors. With this technology, it is hoped that it can help maximize the function of the zebra cross to provide safety for pedestrians, especially people with disabilities on the road.*

**Keywords:** *Disabled crosswalk lights, Arduino Uno, Webster method, Ultrasonic sensor*