

## ABSTRACT

*The speed detector functions to detect how fast a vehicle is passing on the road. Based on Law No.22 of 2009, it explains the maximum speed of 80 km / hour for intercity roads. Meanwhile, for urban areas the highest speed is 50 km / hour. Meanwhile, in residential areas it is 30 km / hour [3]. The fact is there are still many residential vehicle users who do not comply with the regulations, especially regarding the speed of the vehicle itself. This makes residents in the Giri Loka 3 residential area anxious, plus the straight road to the housing is up to 200 meters and does not have speed bumps, which will make motorists even more willing to drive their vehicles. Based on accident data from Laka Then the District Police. Tangerang and South Tangerang, the accident rate is quite high, as many as 25 victims died due to traffic accidents, compared to 2018 where 10 victims died. Meanwhile, there were 111 serious injuries and 508 minor injuries in 2019 [12].*

*With these problems, we need a tool that can detect vehicle speed in housing. The design of this tool aims to make residential areas safer, especially for residential residents who want to do outdoor activities. This system is designed to measure the speed of vehicles passing the residential roads. This system consists of two pairs of sensors, the sensor used is Abo-20, which detects the presence of the vehicle. The maximum speed limit in housing that is permitted for 2-wheeled and 4-wheeled motorized vehicles is below 30km / hour.*

*The test results obtained the output value for vehicle speed in housing. Based on the test results, the delay in sending data for this tool is 4.551 seconds until it is sent on the LCD and has an error percentage of 3.84%. This shows that the accuracy of this vehicle speed gauge is quite good. Based on the results of the questionnaire, the respondents answered that 75% agreed to make this tool in Giri Loka 3 Tangerang housing..*

**Keywords** : Abo-20 Sensor, Speed, Lcd