

ABSTRACT

Driver distraction due to mobile phone usage is a major cause of road accidents. This project presents an atmega328 vehicle speed control and indicator system that enhances road safety by automatically responding when a driver attends a phone call while driving. The system ensures that appropriate warnings and corrective actions are taken to reduce accident risks.

When an incoming call is detected, the system displays the caller details. If the driver attends the call, a 20-second timer starts, and a warning alert is triggered. If the call remains active beyond 20 seconds, the left indicator automatically turns on, signaling a potential distraction. If the call continues beyond 25 seconds, the system reduces the vehicle's speed and activates the hazard lights to warn surrounding vehicles. The vehicle remains in this controlled state until the call is disconnected, after which normal driving conditions are restored.

This system integrates an atmega328, a GSM module for call detection, a motor driver circuit for speed control, and relay-based controls for indicators and hazard lights. The automation ensures real-time intervention without driver input, reducing the chances of accidents caused by distractions. By implementing this system, road safety can be significantly improved by discouraging prolonged phone usage while driving, serving as an effective countermeasure against distracted driving while promoting responsible road behavior.