

Automatic Engine Locking System for Drunk And Drive

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ABSTRACT

This study developed a prototype alcohol detection and engine locking system by using a microcontroller interfaced with an alcohol sensor along with an LCD screen and a DC motor to demonstrate the concept. The system uses MQ-2 alcohol sensor to continuously monitor the blood alcohol content (BAC) to detect the existence of liquor in the exhalation of a driver. By placing the sensor on the seat belt, our system has the capacity to continuously check alcohol level from the driver's breath. The ignition will fail to start if the sensors detects content of alcohol in the driver's breath. In case the driver got drunk while driving, the sensor will still detect alcohol in his breath and stop the engine so that the car would not accelerate any further and the driver can park by the roadside. Results: Results from testing the proposed system adequately matched the requirements for starting a car's engine once the level of alcohol detected in the breath of the driver is higher than the prescribed level permissible by law.

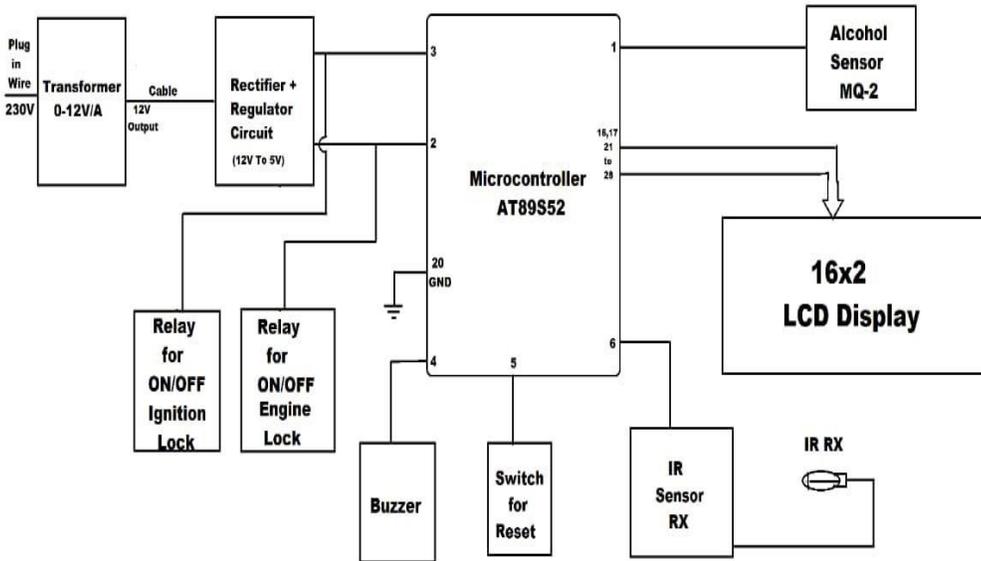
Key words: Transformer, MQ2 Sensor, Microcontroller, Relay, LCD

Display, Buzzer, Switch, IR Sensor.

INTRODUCTION

These days, majority of road accidents are caused by drink-driving. Drunken drivers are in an unstable condition and so, rash decisions are made on the highway which endangers the lives of road users, the driver inclusive. The act of drivers getting drunk before or while driving as well as delegating law enforcements agents to arrest and persecute culprits. However, effective monitoring of drunken drivers is a challenge to the policemen and road safety officers. There is need for an automatic alcohol detection system that can function without the restriction of space and time.

BLOCK DIAGRAM



Block Diagram Hardware Required

- Microcontroller.
- Rectifiers.
- Relays.
- IR Sensor.
- MQ2 sensor.
- LCD display
- Buzzer.
- Reset.
- Regulator.
- Transformer.

WORKING

A 12 volt 1 ampere transformer is given, this Transformer converts 230 volt to 12 volt which is connected to the rectifier with regulator circuit. We used two 7805 regulator this regulator is convert 12 volt into 5 volt and it is connected to the relay and another one is connected to the microcontroller for a protection. Sometime if this both relay take a more current there is a chance that the controller will hang therefore separate regulator is used to prevent this problem Here we used IR Logic the LED is the IR transmitter and circuit is IR Receiver. When IR transmitter and IR receiver is not until in front of each other lock will not detect. If obstacle if occur then signal is detected and IR receiver stop receiving and display shows the message that SEAT BELT IS FASTENED.

Software Required

- KEIL U VISION.
- FLASH MAGIC

ADVANTAGES

- Detects Alcoholic person in the car by Alcoholic sensor.
- Provides an automatic safety system for cars and other vehicles as well.
- Reduce accident.
- Cost effective.
- Reduce human efforts.

APPLICATIONS

- “Alcohol Detector project” can be used in the various vehicles for detecting whether the driver has consumed alcohol or not.
- This project can also be used in various companies or organization to detect alcohol consumption of employees

CONCLUSION

- In this project we have developed a real time model that can automatically lock the engine when a drunken driver tries to drive a car. Now-a-days car accidents are mostly seen.
- By fitting this alcohol sensor into the car, we can save guard the life of the driver and also the remaining passengers

References

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