

## DESIGNING AN AUTOMATIC ENGINE LOCKING SYSTEM THROUGH ALCOHOL DETECTION USING ARDUINO

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**ABSTRACT:-** Road accidents are very common all over the world due to the lack of attention of drivers. Main reason of an accident is due to laziness, alcohol consumption and abnormal pulse rate of driving person. Road crashes are a common cause of injury and death among the human population. The main intent of this project is to detect the person when he will be in drunken position and send an SMS to the car owner. Whenever alcohol is detected the automatically engine stops and SMS is send to the corresponding phone number. In the same way location is also shared.

**KEYWORDS:-** Arduion, Crystal oscillator, Alcohol Sensor, GPS, GSM.

### I. INTRODUCTION

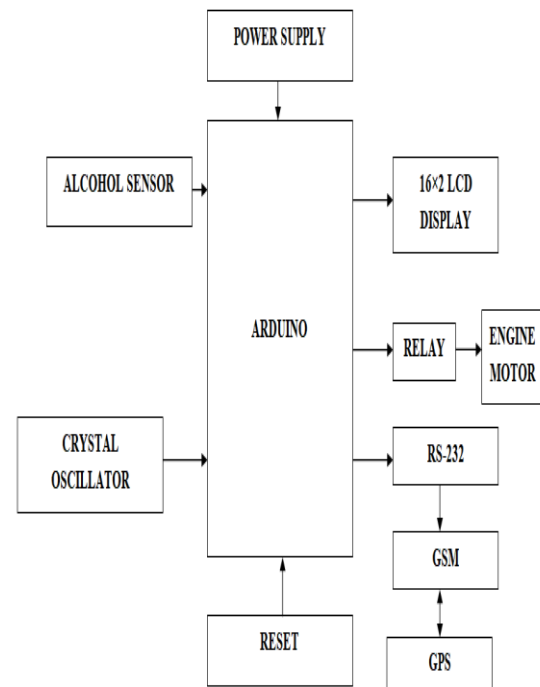
The investigation conducted by the World Health Organization in 2008 shows that about 50%–60% of traffic accidents are related to drunk driving. In present times, the cases of traffic accident caused by drunk driving has increased rapidly. It has, therefore, become evident that drunk driving does great harm to public security. Different technologies and techniques have been adopted to reduce the incidence of road accidents due to drunk driving by motorists.

The India laws currently controlling drivers to drink and drive because fine can stop them to drink and drive.

This system is installed in the vehicle. If the person is drunk and driving the car then alcohol sensor present inside the car detects the alcohol through the breath of the driver.

### II. PROPOSED SYSTEM

The below figure shows block diagram of an automatic engine locking system through alcohol detection using arduino.



**Figure (1):- Block diagram.**

The entire system is controlled by the Arduino. In this we use Alcohol detection

sensor, LCD Display, RS-232, GSM and GPS. By using alcohol detection sensor, alcohol is detected RS-232, GSM and GPS are used to for the purpose of communications.

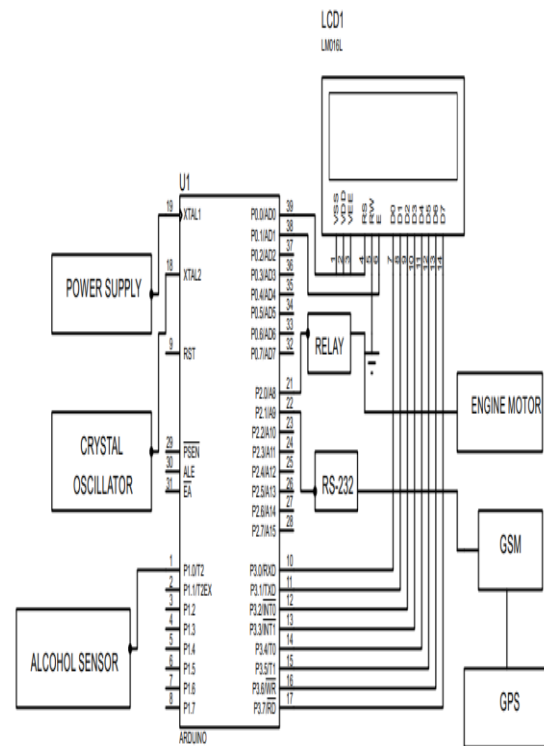
when the driver try to start engine by drinking alcohol, the sensor which is placed to the seat belt detects the alcohol content and ship the information to the arduion.

Here the arduion controller all the components when the alcohol is detected arduion send information to the engine motor with the help of relay so engine will get stop and also send message with location of the vehicle to the authorized mobile number

**Specifications**

Microcontroller	ATmega328
Operating Voltage	5V
Input Voltage	7-12V
Input Voltage (limits)	6-20V
Digital I/O Pins	14
Analog Input Pins	6
DC Current per I/O Pin	40 mA
DC Current for 3.3V Pin	50 mA
Flash Memory	32KB
SRAM	2KB
EEPROM	1KB
Clock Speed	16 MHz

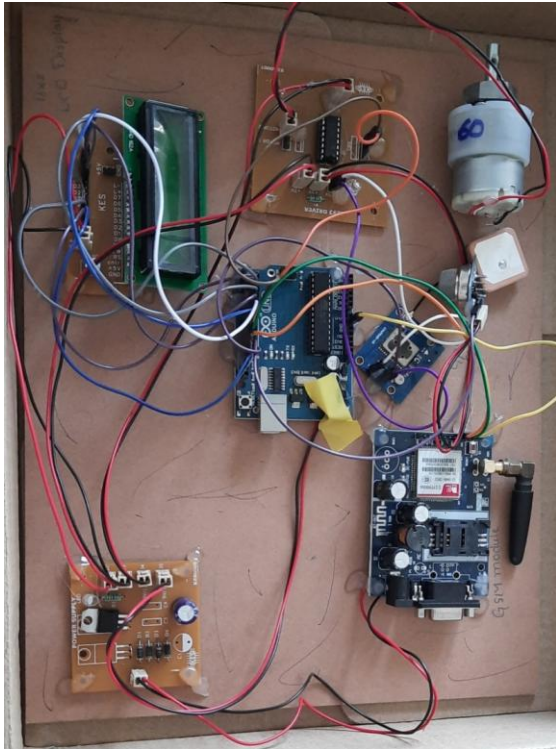
- Proposed system reduces the number of road accidents resulting from a driver tiredness.
- Security of vehicle.
- Proposed system can save the life and property.
- It Sends location of vehicle and its maintenance to user through GPS.



**Figure (2):- Circuit diagram of proposed system.**

**III.RESULTS**

**Applications:-**



**Figure (3):- Kit image.**

#### IV. CONCLUSION

This proposed system can reduce the number of road accidents that are occurring due to drunken driving. This system is now implemented using Arduino. In future it can be used in any organization to detect drunken persons. In addition to this GPS module can also be used to detect the location of vehicle if alcohol content is found in the body.

#### V. REFERENCES

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