



IJIRCCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 11, Issue 4, April 2023

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 8.379



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Alcohol Sensing Machine Display with Alarm

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ABSTRACT— The main aim of this report is to develop a system that can detect the alcohol content in the air exhaled by the driver and automatically turn off the car if Alcohol percentage exceeds the limit. In this project I am using **arduino uno**. I am going to embed the program to receive data from alcohol sensor, convert it into digital form and then control the ignition system. Alcohol sensor gives out analog data that can't be analyzed by **arduino** so I use analog to digital converter to convert it in to digital format. After that the data is stored and then compared to threshold values if the value is beyond its

I. INTRODUCTION

This report presents the progress in using a alcohol Detector, a device that senses a change in the alcoholic gas content of the surrounding air. The sensor will then analyze the amount of alcoholic vapors and offer the user some indication of the amount of alcohol present. ⚡ This device is more commonly referred to as a breath analyzer; as it analyzes the alcohol content from a person's breath. The device is mostly used by law enforcement to determine whether an individual has been driving under the influence of alcohol(Articles, 2011).

II. STATEMENT OF THE PROBLEM

Solve cases of road accidents due to drunk driving ⚡ Curb recklessness of highway drivers ⚡ Also prevent drunkenness among workplace employees, organizations etc

III. AIM AND OBJECTIVES

The aim of this report is to design an alcoholic detector that sound alarm with the aid of buzzer. The objectives include

⚡ To design power supply circuit ⚡ To develop the alcoholic sensor circuit ⚡ To implement the microcontroller unit
⚡ To develop the software implementation

IV. SCOPE OF THE STUDY

This system detects the content of alcohol in the breath and thus it attempts to clamp down alcoholics. This system uses arduino, LCD display, MQ-3 gas sensor, relay and buzzer. The output of the sensor is directly proportional to the content of alcohol consumed. ⚡ Nowadays alcohol sensor play a significant role in our society and it has vast applications. arduino-1.8.19 ide will be used as the simulation software for the software programming Authors and Affiliations

V. REVIEW OF RELATED WORKS

In the year of 2008, LIU zhen-ya, WANG Zhen-dong and CHEN Rong, "Intelligent Residential Security Alarm and Remote Control System Based On Single Chip Computer", the paper focuses on, Intelligent residential burglar alarm, emergency alarm, fire alarm, toxic gas leakage remote automatic sound alarm and remote control system,

which is based on 89c51 single chip computer. The system can perform an automatic alarm, which calls the police hotline number automatically. It can also be a voice alarm and shows alarm occurred address. This intelligent security system can be used control the electrical power remotely through telephone (Geng, 2007).

VI. ALCOHOL GAS SENSOR(MQ3)

The analog gas sensor - MQ3 is suitable for detecting alcohol, this sensor can be used in a Breathalyzer. It has a high sensitivity to alcohol and small sensitivity to Benzene. The sensitivity can be adjusted by the potentiometer. Sensitive material of MQ-3 gas sensor is SnO₂, which with lower conductivity in clean air. When the target alcohol gas exist, the sensor's conductivity is higher along with the gas concentration rising, use of simple electro circuit, Convert change of conductivity to correspond output signal of gas concentration

VII. CONCLUSION

This is a relatively straight forward and easy project that doesn't require much in terms of construction and implementation; in which it's also very efficient and hassle free

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INNO  **SPACE**
SJIF Scientific Journal Impact Factor
Impact Factor: 8.379



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