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VEHICLE TRACKING AND ALCOHOL DETECTOR WITH ENGINE LOCKING SYSTEM USING GPS GSM

Ms. P. Mamatha, Assistant Professor,Department Of ECE, SICET, Hyderabad
Parvenitha Sri Yagnam, Velemoni harish, V. Aravind Goud, Yendapalli Pranay Reddy
Department Of ECE, SICET, Hyderabad

Abstract:
Today, many accidents occur due to alcohol consumption by the driver or vehicle operator. The device I developed o nly works in the driver's position, whether he or she can drive or not, that is, whether he or she is drunk or not. If so meone drives after drinking more than the limit, the device works by locking the engine or vehicle. We created this p roject considering the safety of people sitting inside or outside the vehicle. Because both of them will eventually be a ffected by the drunk driver blocking the roads, and some innocent people may also be affected by driving beyond the driver's control. . By using this program in your vehicle, you can travel safely, reduce the risk of accidents, and redu ce the risk of accidents that occur while drinking and driving. Drunk drivers are bad, so bad driving affects some roa d users and brings into question the health and death of drunk drivers and others. Using the AT89S52 microcontrolle r and MQ3 based sensor and using inputs from ingesting or inhaling alcohol or other sensors. The system constantly monitors the mq3 output and if the limit is exceeded, it shuts down the system and my project starts running. The pur pose of this article is to prevent or reduce drunk driving accidents.

Keywords:Alcohol detection system, vehicle control system, accident prevention, drunk detection, single chip AT89 S52, built-in program

1. Introduction

Nowadays, we hear about many accidents caused by drunk driving. Drunk drivers will no longer be active. This affe cts some road users as well as impaired driving and can lead to health problems and death. In this project we are crea ting a car/motorcycle locking device. Vehicle Input from a sensor or input from an inhaler or other device. The contr oller records the sensor detection and when the limit is reached, the system is warned and the engine is shut down. T he engine will work together with the transmission and the process will be controlled by microcontroller 8051

2. Research Notes:

Here's a way to prevent accidents by analyzing the driver's breathing to see if they can drive. This is done by taking i nput from the MQ3 alcohol sensor and processing it using the Raspberry Pi module. The alcohol monitoring system connects to the Raspberry Pi processor to receive the status of the employee's car. Conditions are set when the driver takes a breathalyzer test. The system detects the alcohol content in the driver's body through the MQ3 alcohol senso r mounted on the vehicle's steering wheel. Returns the sensor value as voltage difference (analog output); therefore, a microcontroller with a builtin analogtodigital converter is required to acquire the data [1].This method uses Arduin o. We immediately check the operation of the driver and recommend using a breathalyzer connected to Arduino to d etect alcohol; so when the alcohol level is more than allowed the engine will shut down and the GPS module will det ect the engine. current location. The GSM module will also automatically send messages to the police or family me mbers. A solution initiative was created to build electric vehicles in a smarter way, working from the basic Arduino hardware platform, alcohol sensor, GPS and GSM modules[2] by analyzing various results of the car.Measuring dru g use and increase in drug use among drunk drivers during driver's license renewal. Confirm the presence of one or more illicit drugs in hair or urine using the LC/MS method. Chi-square test, Fischer direct test and Cochran-Armitage were used to examine the relationship between the characteristics of the sample and the presence of drug/p olydrug use. Implementation of this program can increase awareness of the severity of the problem and provide an ef fective way to reduce alcohol and drug use [3].Tradition is a big problem worldwide. The effects of excessive speed, not wearing a helmet, drunk driving and the death of many drunk drivers in accidents are the analysis and scientific

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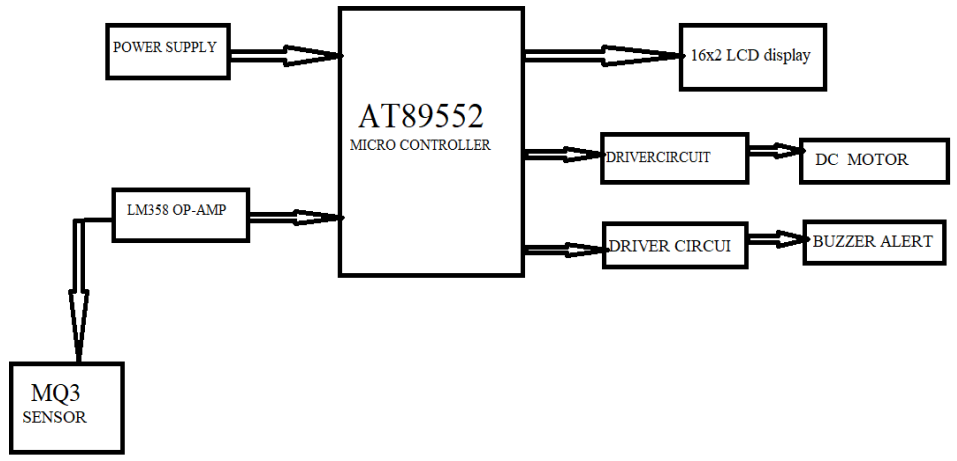
thought in this field. In general, paradigms include concepts such as theoretical models, categories, measurement or qualitative methods. Effective car accident prevention is planned by using a breathalyzer. PIC 16F877, equipped wit h all the design that does not allow the driver to drink and drive, has mq3 and LCD screen. Finally, this article helps reduce the number of cases [4].Emergency is provided using Bluetooth modules and can be detected on Android pho nes using sensors that measure these changes. Some restrictions change during an information emergency. Whenever someone sits in the driver's seat, many things happen that are not accounted for by the system. Alcohol Sensor - Me asures whether the person has consumed alcohol. RF transmitters are used to transmit data at rates of 1 to 10 kbps. T he RF transmitter is installed in the vehicle and the RF receiver is installed in the vehicle. RF receivers also operate on the same frequency. The transmission from the RF transmitter is received and analyzed by the receiver. The vibra tion sensor is connected to port A and will provide an analog value to the ADC control port. Most people's cars will burn. The optic nerve prevents the person in the driver's seat from falling asleep. The vehicle slowed down when it a rrived at the scene. When an event occurs, the piezoelectric sensor provides a high value and reports the event. The MQ6 sensor is designed to detect the driver's alcohol concentration[5].

1. SUGGESTED ACTIVITY:

Block diagram



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The main aim of the project is to reduce the number of accidents caused by drunk driving. Here my device is equipped with mq3, which detects the alcohol content in the driver's breath and provides this information (whether he drinks alcohol or not) as input to the microcontroller. Therefore, this system could reduce the number of car accidents and alcohol deaths in the future.

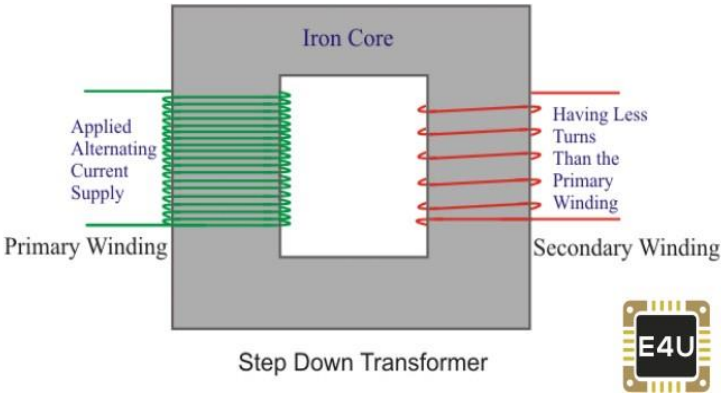
If there is alcohol content at that time,

1) LCD display "alcohol"
2) The vehicle will stop working automatically.
3) Ringtone.

This application is in an embedded application. An embedded program is a combination of computer hardware and software that can be configured or programmed to perform a specific task.

2. COMPONENTS

A.TRANSFORMER



B. LM 324 OPERATONAL AMPLIFIER

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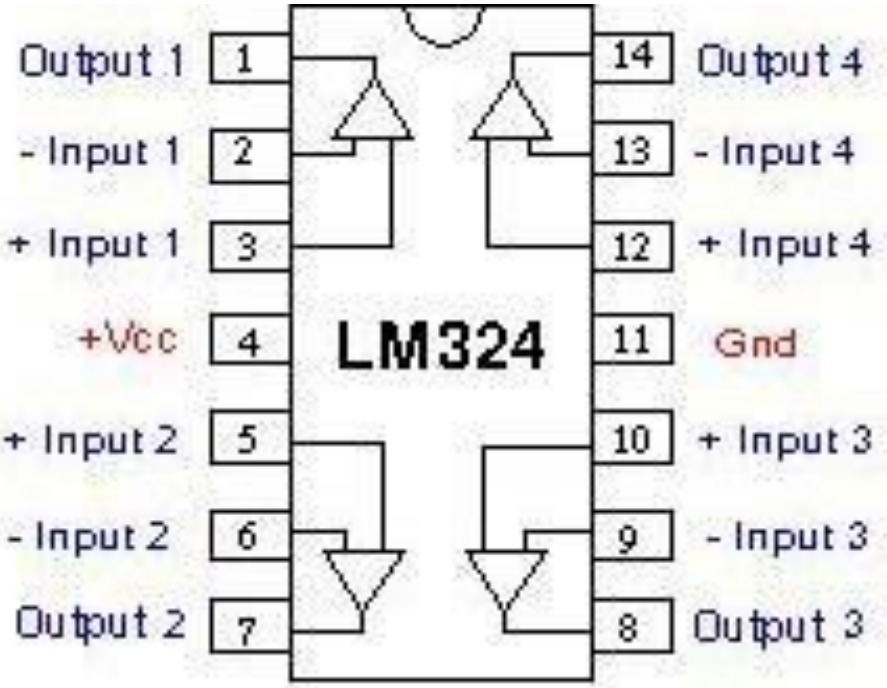

LCD DISPLAY

1. LCD (Liquid Crystal Display) screen is an electronic display module and find a wide range of applications.
2. A 16x2 LCD display is very basic module and is very commonly used in various devices and circuits.
3. 16x2 LCD DISPLAY means it can display 16 characters per line and there are 2 such lines

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D.MOTOR

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1) The speed of a DC motor is directly proportional to the supply voltage.

2) we reduce the supply voltage from 12 Volts to 6 Volts, the motor will run at half the speed

E.MQ3 ALCOHOL SENSOR

The alcohol detection sensor used in our project is MQ-3 SENSORF.MICROCONTROLLER

- It is an 8 bit cmos microcontroller with 8k flash memory and 256 bytes of ram
- The main advantage of this is
- 1)low power consumed devics
- 2)high performance
- NUMBER OF PINS=40PINS

OPERATING VOLTAGE=4 TO 5.5 V

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G. BUZZER

Buzzer or beeper is an audio signalling device, which may be mechanical,electromechanical, orpiezoelectric (piezo for short).

4. Conclusion - Not Drinking:

Once the drunk person enters the vehicle, the breathalyzer starts working and detects the alcohol, then the bell and bell ring. Bourth introduces the alcohol content and wh en the relay operates, it turns off the ignition and immobilizes the car, which is the m ain purpose of our project. We have created an intelligent machine with a microcontr oller at the core of innovation. We also use sensors with a range of 2 meters so that it can fit in any vehicle or be hidden from some people. The main benefit of this work is that it is smaller, more reliable and efficient. Today, people's views on driving safe ty have changed, and public safety has become a priority for our operations to be suc cessful and beneficial to society. The future vision of this work is that it can be used in automobile manufacturing, bringing innovations to automobile technology by addi ng safety features, thus bringing updated design for the automotive industry.

5. 6. Result:

We have prepared a system that detects alcohol in the driver's breath by stopping the car and reducing the risk of human life. The system comes to life with the use of the right microcontrollers and sensors. The device has been tested several times and tests show that the sensors and relays respond quickly when content is detected. Another feature of the system is that the breathalyzer works for a longer time and can be dete cted from a distance of 2 meters. Using embedded systems, we create road safety fea tures that can be used in smart cities and even villages. The proposed system will not only lock the vehicle while drunk and driving, but will also show the location of the locked vehicle to the police by adding GSM.

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