

Engine Locking System

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ABSTRACT

Today almost all the vehicles are well equipped with vehicle security systems. Even after these thieves are stealing the vehicles by breaking the barriers. This project is the right answers for this downside. Using this project, one will manage his vehicle's engine by means of an SMS. ARM7 is the heart of the project. The microcontroller verifies for authentication of the person, if the person is authorized, engine management is taken place. Keypad is used for authentication purpose and is interfaced with ARM7 to enter the password. 16x2 digital display is interfaced to display user-required info. Just in case if the incorrect password is given for 3 times then the engine gets locked and buzzer will beep. This lock is discharged only if GSM receives the messages from registered mobile number.

Keywords: GSM module, Buzzer, LPC2148 (ARM), Keypad

I. INTRODUCTION

Nowadays car theft is becoming a common issue in overall world. As per reports, on an average 1.65 lacks car were robbed in India. That was the main concern to look onwards; number of complaints was reported every day related missing cars or missing vehicles, so everyone wants better alternative for their car's security systems in lower cost. So, this project would be able to bring in some respite each for the customers and also the producers. Since the system is integrated around the engine, therefore it can't be accessed by criminal and is sort of reliable on each security system with the GSM technology. The system is going to be able to bring down the numbers of automobile thefts and that is that the real thrust on working on this project. Current automobile security system includes GPS, buzzers, door locks etc. to prevent vehicle robbery. But they are still not able to prevent car thefts. These systems

also have price issues, value for the gadget is just too high. So, an inexpensive different is that they would like of the hour. "Engine locking System" is enforced using the GSM technology. The flexibility of this technology and ever presence of the GSM helps the system to retrieve standing of the automobile. Global System for Mobile Communication (GSM) is a good choice of the communication to replace the conventional alarm, because it doesn't require much cost.

In terms of general technical explanation for this project, the GSM is interfaced with the microcontroller, which controls all the main functions in a vehicle. How the system works is when a person tries to steal the vehicle, the microcontroller gets interrupted and sends SMS to car owner via GSM. On the receipt of the message, the owner sends back the SMS to the GSM modem to lock the engine.

II. LITERATURE SURVEY

[1] Author has implemented application for wireless car ignition system using Bluetooth. Car engine is turned on by sending a Bluetooth signal from mobile phone. Bluetooth is interfaced with ignition switch which controls the main function of system. Microprocessor inside auto starter module constantly monitors engine temperature.

[2] Author has proposed an anti-theft protection system for vehicle with finger print verification. Proposed system also contains GSM and GPS modules which provide up to date information about ongoing trip by tracking the vehicle.

[4] Author discusses the problem of drunken driving and road accidents. To avoid this, they have proposed system which automatically locks vehicle engine if person tries to drive after consumption of alcohol. Proposed system also contains GPS module to track the position of vehicle and GSM module to send message on registered number.

III. PROPOSED SYSTEM

In our proposed system ARM 7 is used as controller. It is interfaced with keypad which is used to enter the password

There are three conditions:

1. If password is match then user will send SMS using GSM like "Start the engine"
2. Suppose anyone tries to steal vehicle and enters incorrect password for three times then Engine will get automatically lock.
3. Engine lock is released after positive acknowledgement from registered user.

IV. METHODOLOGY

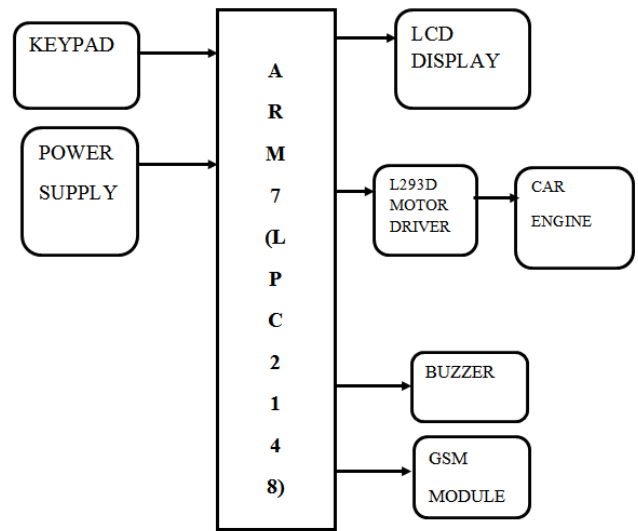


Fig. 1 Block Diagram

V. CIRCUIT DIAGRAM

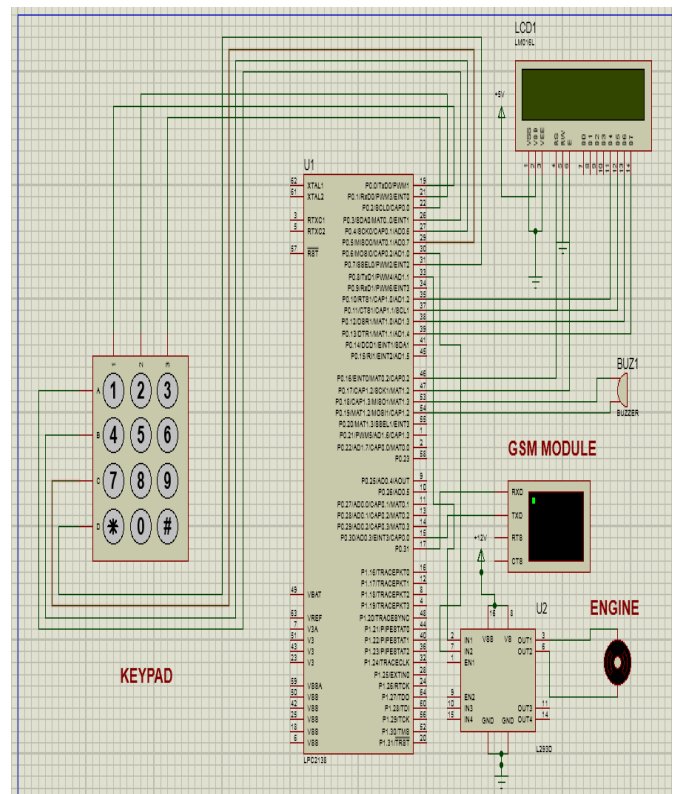


Fig. 2 Circuit Diagram

VI. RESULT



Fig.3 Result

A. HARDWARE REQUIREMENT

- ARM BOARD
- KEYPAD
- LCD DISPLAY
- DC MOTOR
- ENGINE

B. SOFTWARE REQUIREMENT

ARM 7(LPC2148)

This Is Heart of The System Which Controls All the Operations. The LPC2148 is 32-bit RISC microcontroller ARM7TDMI-CPU with real-time emulation and embedded trace support that combine microcontroller with embedded high-speed flash memory ranging from 32 kB to 512 kB. A 128-bit wide memory interface and unique accelerator architecture enable 32-bit code execution at the maximum clock rate.

LCD DISPLAY

All information will be displayed on LCD. Like engine lock, password wrong etc. LCD (Liquid Crystal Display) screen is an electronic display

module and finds a wide range of applications. A 16x2 LCD display is used which display 16 characters per line and there are 2 such lines.

KEYPAD

Here we are using 4*3 keypad, through which we are entering the set password. If password is correct then controller switches on the engine. If we entered three times wrong password that time engine will get lock automatically.

GSM MODULE

Using GSM module, we are sending an SMS to a particular mobile number. This means the module supports communication in 900MHz band. We are from India and most of the mobile network providers in this country operate in the 900 MHz band.

BUZZER

Buzzer will beep whenever engine gets lock and vehicle gets robbed.

VII.APPLICATION AND ADVANTAGE

APPLICATIONS

- Automotive Security.
- GPS modem also can be interfaced to this unit to trace and locate the geographical information of vehicle place.

ADVANTAGES

- Not access without owner permission.
- Easy to install and maintain.

VIII. CONCLUSION

During this project work, we've got studied and enforced an entire operating model employing a Microcontroller. Victimized this project, one will manage his vehicle's automotive engine by means that of an SMS. More improvement may be done to

the current project to find the position of vehicle by employing GPS. This can be done with the help of its latitude and great circle that then can be sent to the owner of the vehicle via SMS. This knowledge may be then entered by the owner on Google map to seek out the precise location of the vehicle.

Cite this article as :

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