

# VEHICLE THEFT INTIMATION AND FUEL LOCKING

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**Abstract:** As the crime rate is going up, security system for vehicles is extremely essential. The idea is to use wireless technology to intimate the owner of the vehicle about any unauthorized access. This is done by sending an auto-generated SMS to the owner. Also the owner can send back the SMS which will disable the ignition of the vehicle. Thus, owner of the vehicle from anywhere can switch off ignition of his vehicle.

We can also integrate a GPS system, which will give exact position of the vehicle in terms of its latitude and longitude. Further this data can be sent to the owner via SMS who can enter this value on Google maps to get the exact location of the vehicle.

In this proposed system if someone tries to steal the vehicle, the arduino gets an interrupt through a switch mechanism connected to the system and commands the GSM modem to send an SMS. The GSM modem interfaced to the arduino receives the message, which activates a mechanism that disables the ignition of the vehicle resulting in stopping the vehicle. A lamp can be used to indicate the engine ON/OFF condition.

**Keywords-** GPS, GSM, Arduino, Modem, SMS.

## I. INTRODUCTION

Theft is a major crime in India and is rapidly increasing day by day which has become a threat to the society. People came up with different ideas son as to restrict this crime but their plan became the only partially successful not fully successful to remove this crime from its very roots.

The basic motto of this project is to restrict the crime of vehicle theft in India permanently. According to this project , initially when the thief will try to break through our vehicle then a message will be initiated to the owner of the vehicle about the unauthorized access to the vehicle, if then too the vehicle get stolen then we can send a message from our mobile through which the fuel system of the vehicle will get locked and I also revert a message to the owner which will have the coordinates of the exact location of the vehicle. So this will be a great plus point for the society and will help to restrict the crime rate in India.

With the help of this project we can ensure safety of various vehicles like ambulance, ATM money

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transferring vehicles etc, so that if any misshapen takes place then the police can easily track and retrieve the vehicle by getting exact coordinates where the vehicle is located.

## II. RELATED STUDY

1) Vehicle tracking systems can now also be found in consumers vehicles as a theft prevention and retrieval device. Police can follow the signal emitted by the tracking system to locate a stolen vehicle

2) Most of the papers show two separate methodologies like GPS and GSM for detecting vehicle theft. In some cases both of them are implemented as a combine unit but there are some issues related to providing exact visual location

3) Based on the current requirements, besides integrating both the technologies, in our project we are providing a complete unit that monitor and locate the vehicle, thereby ensuring complete security to the vehicle.

## III. PROPOSED MODEL

In this proposed model, two methodologies i.e; GSM is used for locking the fuel and GPS is used for tracking the location of the vehicles. Recent models used these methodologies but separately i.e; rather they have used GSM Module for locking or they have used GPS for tracking the location of the vehicle but in this proposed model both the technologies are merged together so that by the help of GSM we can track the fuel system of the vehicle and with the help of GPS we can locate the exact position of the vehicle.

- Initially, when there will any unauthorized access to the vehicle or say that if anyone will try to break through the vehicle security system the an ultrasonic sensor will sense the disturbance and then the Arduino will activate the GSM so a message is sent to the owner about the unauthorized access.
- Secondly, if by some means the thief manages to steal the vehicle then the owner of the vehicle can send a SMS to the GSM connected to the vehicle then this message will activate the arduino which will further activate the solenoid valve connected between the fuel tank and the engine of the vehicle. This will

block the flow of fuel from the fuel tank to the engine of the vehicle which will result in stopping of the vehicle. With this a revert message is also sent to the owner of the vehicle with the help of GSM and GPS connected to the vehicle so that coordinates of exact location of the vehicle are sent to the owner with the help of which the owner can reach the location and get back his vehicle.

This is the method proposed for the security of vehicles so that the major crime of vehicle theft can be restricted in India

#### IV. PROPOSED BLOCK DIAGRAM

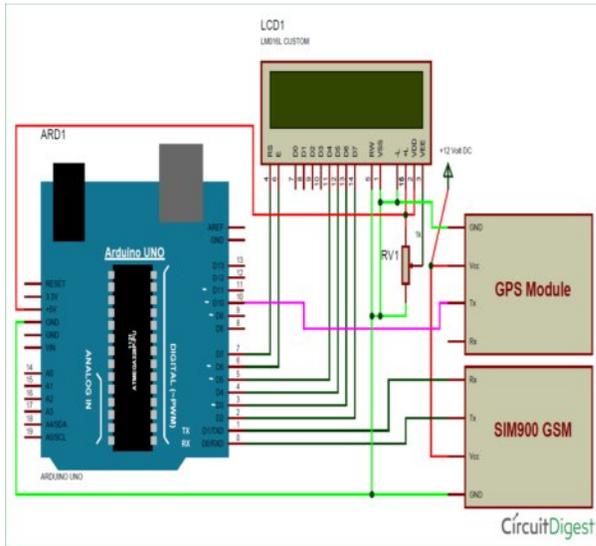


Figure 1: (a) Vehicle Unit

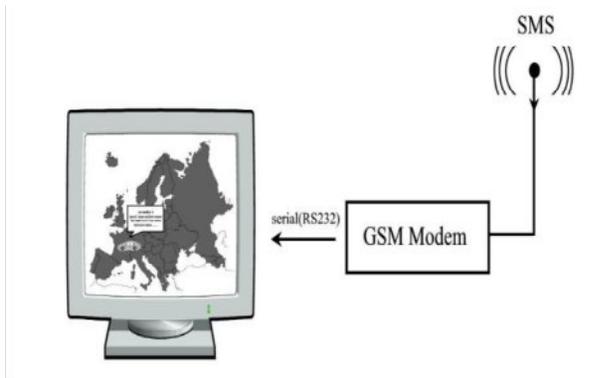


Figure 1: (b) Remote Location

#### V. GSM MODULE SIM 300

- Sends and receives the SMS with a portable SIM card facility
- Communicate with controller
- In serial mode
- Requires 12V/100mAmp
- Powerful AT Command set.



Figure 2: GSM Module.

#### VI. GPS RECEIVER

- It receives the information sent by satellite in terms of latitude and longitude
- The GPS receiver compares the time a signal was transmitted by a satellite with the time it was received. The time difference tells the GPS receiver how far away the satellite is.



Figure 3: GPS

#### VII. COMMANDS

AT COMMAND	FUNCTION
AT+CNMI	Gives the indication of arrival any SMS
AT+CMGF	Selects the data mode for GSM module
AT+CMGR	Read the incoming SMS
AT+CMGD	Delete the SMS
AT+CMGS	Send the SMS
AT+CMGW	Write the SMS into memory

### **VIII. CONCLUSION**

From the help of this paper we have proposed method with the help of which we can restrict the major crime of vehicle theft which is increasing rapidly in India. At a very minimal cost we can restrict this crime as proposed by this project. The merging of two methodologies i.e.; GSM and GPS we can lock the fuel of the vehicle so that the vehicle stops at its very place and we can get the coordinates of exact location of the vehicle respectively. This will help to restrict many crimes and will provide safety of vehicle so that everyone who owns a vehicle can be free minded about their vehicle and are not afraid of losing their vehicle. It will also help the police to locate lost vehicles and will ease their work. It will also help the police to locate lost vehicles and will ease their work. It will keep safe many public transport vehicles such as buses, ATM money transfer vehicles which will be a great plus point to the society.

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