

Vehicle Fuel Theft Detection Using 89C51

Mr.Aniket Shinde , Mr.Atharva Mane, Mr.Purvesh Sapkale, Mr.Amanraj Singh,
Prof.Jyoti Deshmukh , Prof. Firoj Mulani

Department of E & Tc , JSPM's,JSP,Pune

Abstract :

The system will manipulate a mobile phone to send SMS. Even though the SMS can be sent using the features available in the mobile, the objective of this experiment is to activate the SMS sending by the mobile phone using external program connected physically to the mobile phone. Antitheft security system utilizes an embedded system designed with GSM to monitor and safeguard a car. In attempt of theft the system sends text message to the car owner and at the same time starts up an alarm from the buzzer installed within the system. The safety of vehicles fuel is extremely essential for public so this project came to our notice due to the alarming rate at which vehicles fuel are being stolen in our country and with this design our vehicle can also be monitored irrespective of where it is parked , provided there is a GSM network coverage. Our model (theft detector) uses very few electronic components and looks very small and compact and can be mounted on vehicles easily.

Keywords: - Security system, Microcontroller 89C51, GSM etc.

I. INTRODUCTION

It has application in Car, Bikes and all other vehicles. This project has a GSM modem which send sms to owner of vehicle when there is fuel theft going on. Vehicle Petrol theft is one of the main concerns of many bike owners and car owners. Many times we have heard or some of us have already faced that petrol from their bike or cars has been stolen. Main intention of this project is to avoid such situation. In SMS based petrol theft detection system, we have used a Level sensor to detect the petrol level in petrol tank. If the level goes below certain threshold level then this sensor gives a particular signal to the microcontroller. Then microcontroller turns on the buzzer and sends SMS to the car/bike owner. Microcontroller is a heart or Central Processing Unit of the system. If we are driving our car or bike, in this case petrol or the diesel level will decrease which can trigger the microcontroller through the level sensor. To avoid this situation we have taken a signal from ignition key.

Whenever the bike owner or car owner or driver inserts key into the ignition lock and switch it on then at that time a signal will be given to the microcontroller. This way microcontroller understands that the bike/car has been started and so it will not monitor fuel level. We have provided bike ignition key with this project. Level sensor is turned on only when the key is removed from the ignition lock. So once the person gets out of the car then he/she will remove the key and system is activated.

Password

Various systems are available & that are as follows;

Detecting Oilwater Interfaces in Oil Tanks Ahmed M. Al-Naamany et al (2007) describes that a new ultrasound-based technique was developed to determine oil, emulsion and water level in the oil tank. It consists of a compact, programmable ultrasound-based multilayer level measuring device for a feed forward neural network is implemented.

Contactless Liquid-level Measurement Frequency-Modulated Millimetre Wave Through Opaque Container

Tatsuo Nakagawa et al (2013) describe a non-contact method for measuring liquid level by an opaque container is proposed. A millimeter-wave Doppler sensor is to detect by a target container developed, and measures the liquid level on the basis of the absorption of millimeter waves in the liquid. One of the challenges is to accurately measure liquid level (sub-millimeter error) in spite of the inherently large beam diameter of the millimeter wave by diffraction

Why we select this system?

Vehicle Petrol theft is one of the main concerns of many bike owners and car owners. Many times we have heard or some of us have already faced that petrol from their bike or cars has been stolen. Main intention of this project is to avoid such situation. It has application in Car, Bikes and all other vehicles. This project has a GSM modem which send sms to owner of vehicle when there is fuel theft going on.

II . BLOCK DIAGRAM

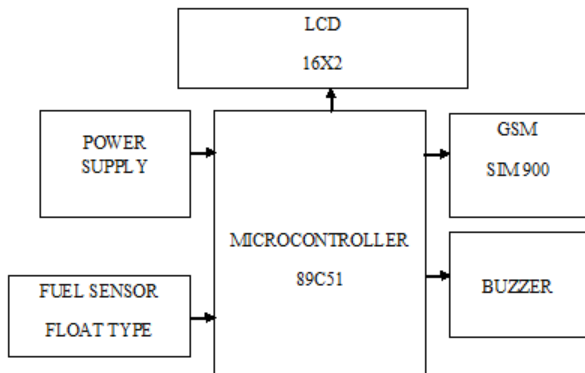


Figure 1. Block diagram of system

Figure 1 shows the block diagram of the system.

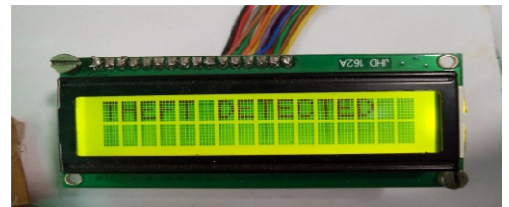
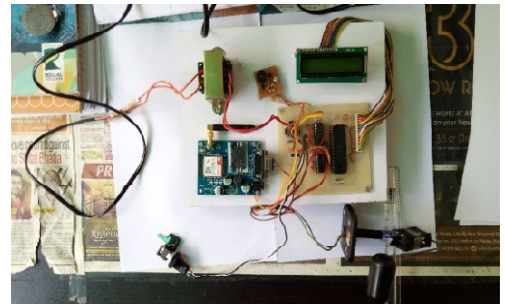
Liquid Level Sensor :- The function of liquid level is to detect the variation in fuel level and it gives variable output voltage as per the variations in level.

GSM Modem : GSM modem is used to send messages to the owner of the car or bike.

Buzzer :-Buzzer plays very important role in our project. A buzzer is turned on whenever petrol theft is going on or petrol is stolen.

LCD Display :-It is known as Liquid Crystal Display. It displays various messages like “Ignition key inserted”, “Ignition key removed”, “Petrol theft is in progress”, “Sending SMS”, “SMS send successfully”.

III . EXPERIMENTAL RESULTS



IV CONCLUSION

We have a design a unique GSM based fuel theft indicator. This system assures the security vehicle fuel whenever the vehicle is at rest and the monitors the fuel level in the fuel tank. If the fuel level decreases when the bike is at rest the system detects that fuel theft is going on. And it will raise the alarm and send the message to the owner of the vehicle that **“Fuel Theft Detected”**. To send this message we used GSM module. This GSM module has a unique IMEI number. By using this IMEI number we can track its location in case the vehicle is theft.

V REFERENCES

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