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GSM TECHNOLOGY USING VEHICAL ENGINE LOCKING SYSTEM

Himanshu Chandrakar^{1st}, Mr. Srikant Singh^{2nd}, Mr. Rahul chawda^{3rd}
1,2 Dept. of Computer Science, Kalinga University, Naya Raipur, Raipur,
Chhattisgarh 492101, India

Abstract:

As of now the greater part of individuals having their own vehicle, burglary is occurring on leaving and some of the time driving uncertain spots. The protected of vehicles is very fundamental for public vehicles. Vehicle motor securing framework is introduced in the vehicle, to locking motor engine. The primary objective of this paper is to shield the vehicle from unapproved access by giving a protected secret word and controlling it by utilizing GSM innovation. A four digit secret phrase is set as default, utilizing a 4x3 keypad and is shown on the 16x2 LCD. In the event that in the event that we enter an off-base secret phrase a message is shipped off the proprietor's portable number and a signal is heard following a postponement of mile seconds time. The primary reason for this task is to keep vehicle from burglary. The usefulness is accomplished by identifying vehicle status in burglary mode and by sending a SMS to proprietor of vehicle. The proprietor would then be able to send back the SMS to handicap start of the vehicle. Consequently in this manner the wrongdoings can be decreased to incredible degree as vehicles today are being taken in enormous number. Henceforth vehicle today require high security which can be accomplished with the assistance of this application. How this framework functions is the point at which an individual attempts to take the vehicle, the microcontroller is hindered and the order is send SMS to the GSM modem. This is done to stop the motor. Engine is being utilized in this framework to demonstrate vehicle ON/OFF state. This paper essentially manages the idea of vehicle security and how it tends to be carried out to the vehicle motor. The GSM innovation is utilized for sending messages to known the situation with the vehicle motor. We have seen a lot of information on mishaps caused because of smashed and drive. We have planned this undertaking to take care of the said issue. The fundamental working of the GPS tracker and liquor indicator project: As demonstrated in the video showing, the task is activated on turning on the vehicle with the assistance of the start key. This would activate the functioning circuit and make the whole unit in a watchful mode. Liquor identification is acted continuously by the liquor sensor, the microcontroller, and the Analog to computerized converter circuit. Accordingly there will never be a circumstance when the framework is in a shadow or a rest state.

In the GPS based alcoholic and drive discovery project, the framework creates an alert once the degree of liquor estimated over a set edge esteem. Simultaneously motor, locking is finished with the assistance of deactivating the Relay and DC engine. Likewise, it peruses information from the GPS unit which gives the situation of the vehicle to the microcontroller. At that point the microcontroller sends SMS to the handheld cell phone with the assistance of a GSM modem. The client can tap on the connection in the got SMS. The incorporation of the GPS

tracker with Google Maps would guarantee that the situation of the guilty party is given out on the guides promptly to guarantee the simple area and conceivable further activity.

Index terms:- GSM, Microcontroller, LCD, Moter, Arduino.

I. INTRODUCTION

In Present days robberies in auto is expanding at quick rate. So to ensure cars we created framework "Vehicle motor locking framework utilizing implanted based GSM innovation" which is worked by utilizing 8051 microcontroller with GSM module. It is extremely modest and easier contrasted with other antitheft vehicle locking frameworks. The Global framework for versatile correspondences (GSM) is the most famous and acknowledged norm for cell phones on the planet. It works in 900 MHz recurrence. Numerous individuals use GSM administration across the world. The utilization of the GSM standard makes global wandering extremely regular between versatile clients, by getting to supporters of utilization their cell phones in numerous spaces of the world. The principle reason for this undertaking is to forestall vehicle from robbery. The usefulness is accomplished by distinguishing vehicle status in burglary mode and by sending a SMS to proprietor of vehicle. The proprietor would then be able to send back the SMS to cripple the start of the vehicle. The GSM based framework is perhaps the most significant framework, which incorporate GSM .

II. MODEL DESCRIPTION AND ANALYSIS

1. Arduino microcontroller
2. 16×2 LCD display unit
3. GSM Modem
4. Ignition module
5. 12volt power supply
6. Vibration sensor
7. DC motor driver
8. Dc moter

1. Arduino microcontroller

The AT89S52 is a low-power, superior correlative metal-oxide semiconductor (CMOS) 8-cycle microcontroller with 8K bytes of glimmer programmable and erasable read just memory (FPEROM). The gadget is fabricated utilizing Atmel's high thickness nonvolatile memory innovation and is viable with the business standard 80C51 and 80C52 guidance set and pin out.

Features:

- Compatible with MCS-51 Products
- 8K Bytes of In-System Programmable (ISP) Flash memory
- 4.0V to 5.5V Operating Range
- Fully Static Operation: 0 Hz to 33MHz
- 256K Internal RAM
- 3 16-bit Timer/Counters
- Eight Interrupt Sources
- Full Duplex UART Serial Channel

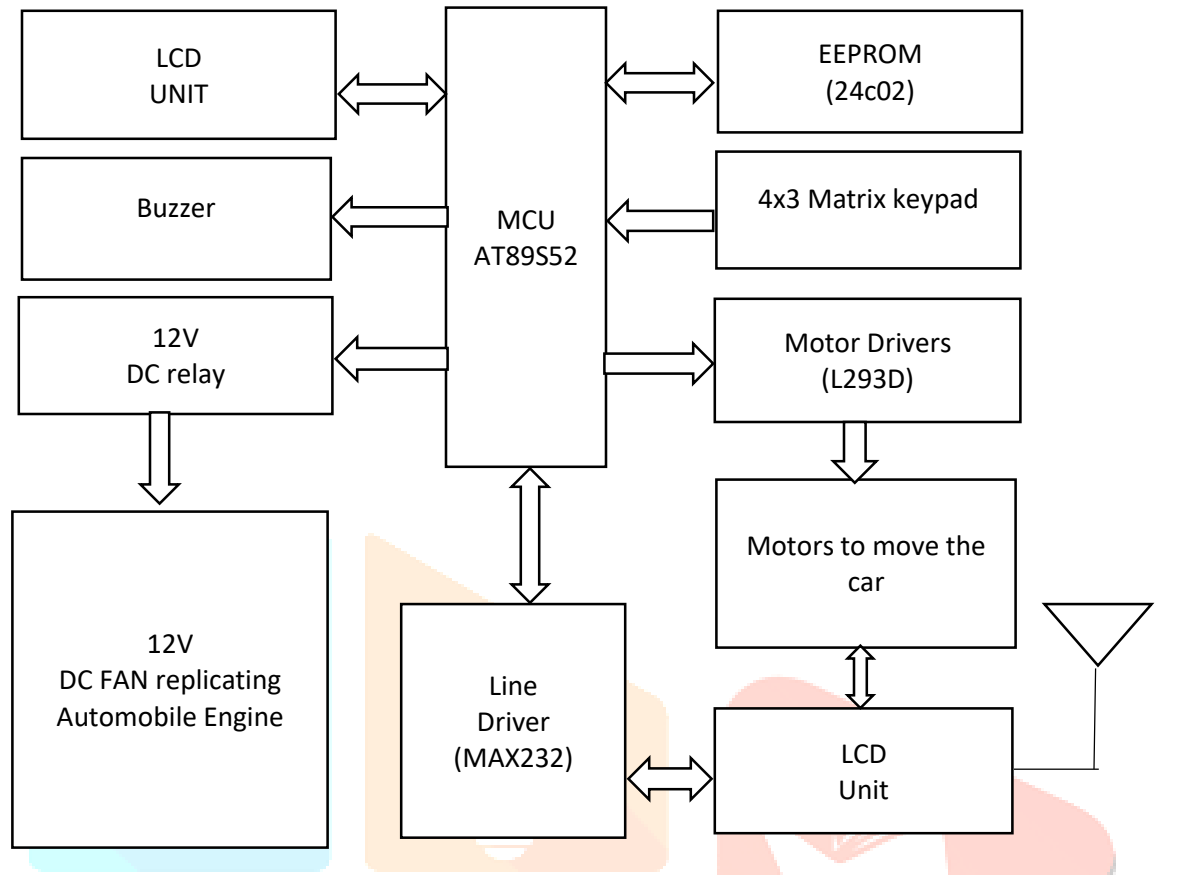


Fig1. Block diagram

2. 16x2 LCD display unit

A program should connect with the rest of the world utilizing information and yield gadgets that discuss straightforwardly with an individual. One of the most well-known gadgets appended to a regulator is a LCD show. Probably the most widely recognized LCDs associated with the regulators are 16X1, 16x2 and 20x2 showcases. This implies 16 characters for every line by 1 line 16 characters for each line by 2 lines and 20 characters for every line by 2 lines, individually.

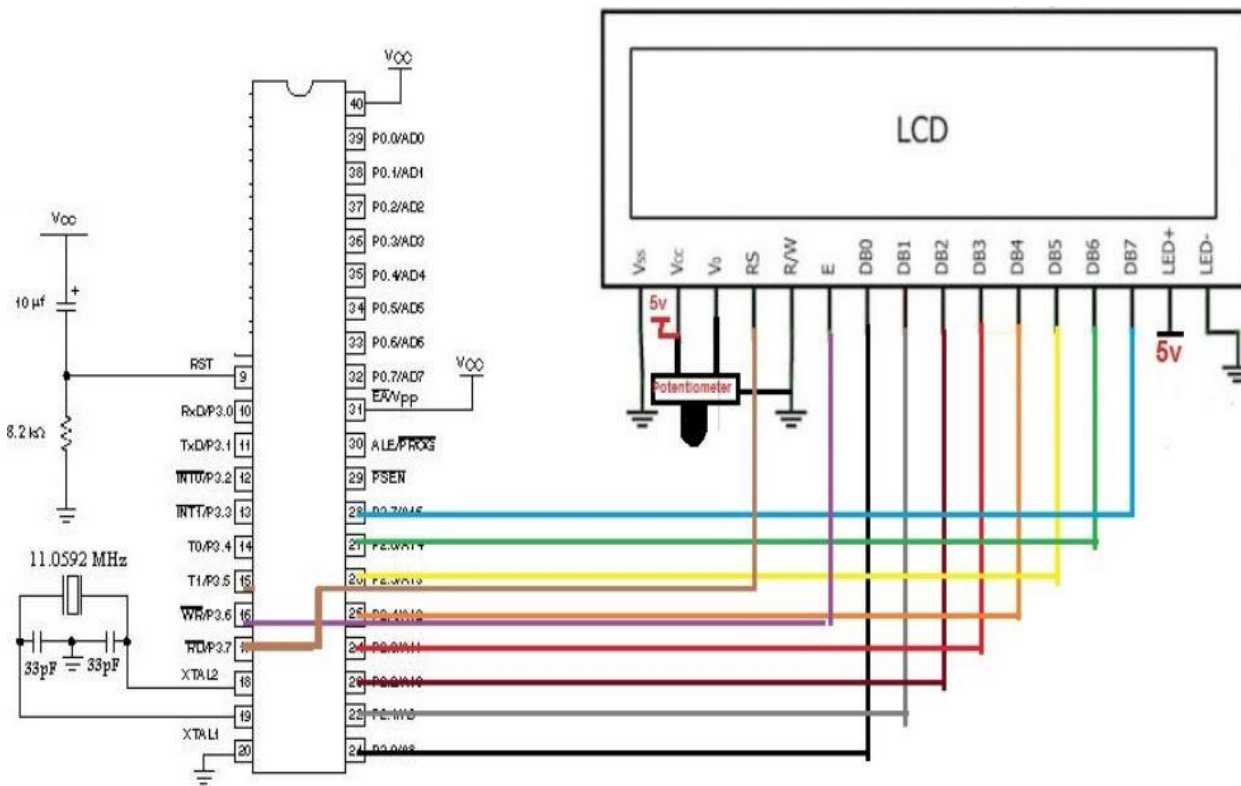


Fig2. LCD display

3. GSM Modem

The GSM Modem accompanies a sequential interface through which the modem can be controlled utilizing AT order interface. Here we utilize a SIMCOM made (SIM300) modem interfaced with the microcontroller works in 900 MHz recurrence. The GSM modem explicit orders are adjusted to the administrations offered by a GSM modem, for example, text informing, calling a given telephone number, erasing memory areas and so forth Since the fundamental goal for this application is to tell the best way to send and get instant messages, just a

4. Ignition module

A start control module (ICM) is a PC that controls the start curl or the start loop's terminating time. The start control module is the core of a vehicle's start framework, since it manages flash age inside the motor. The start control module depends on the vehicle battery to give the 'flash' that gets the start framework rolling and afterward at last turns on the vehicle. All in all, a vehicle's start has the work of taking the 12V of battery inside the vehicle, and utilizing it to produce a high voltage that can at that point be shipped off sparkle plugs, what start the vehicle. The start control module is typically situated inside or close to the vehicle's wholesaler also, is generally covered with protecting mixtures to ensure its inward electronic parts.

5. 12volt power supply

This force supply segment is needed to change over AC sign to DC sign and furthermore to decrease the sufficiency of the sign. The accessible voltage signal from the mains is 230V/50Hz which is an AC voltage, yet the required is DC voltage(no recurrence) with the abundance of +5V and +12V for different applications. In this part we have Transformer, Bridge rectifier, are associated sequentially and voltage controllers for +5V and +12V (7805 and 7812) through a capacitor (1000 μ F) in equal are associated equal as demonstrated in the circuit graph

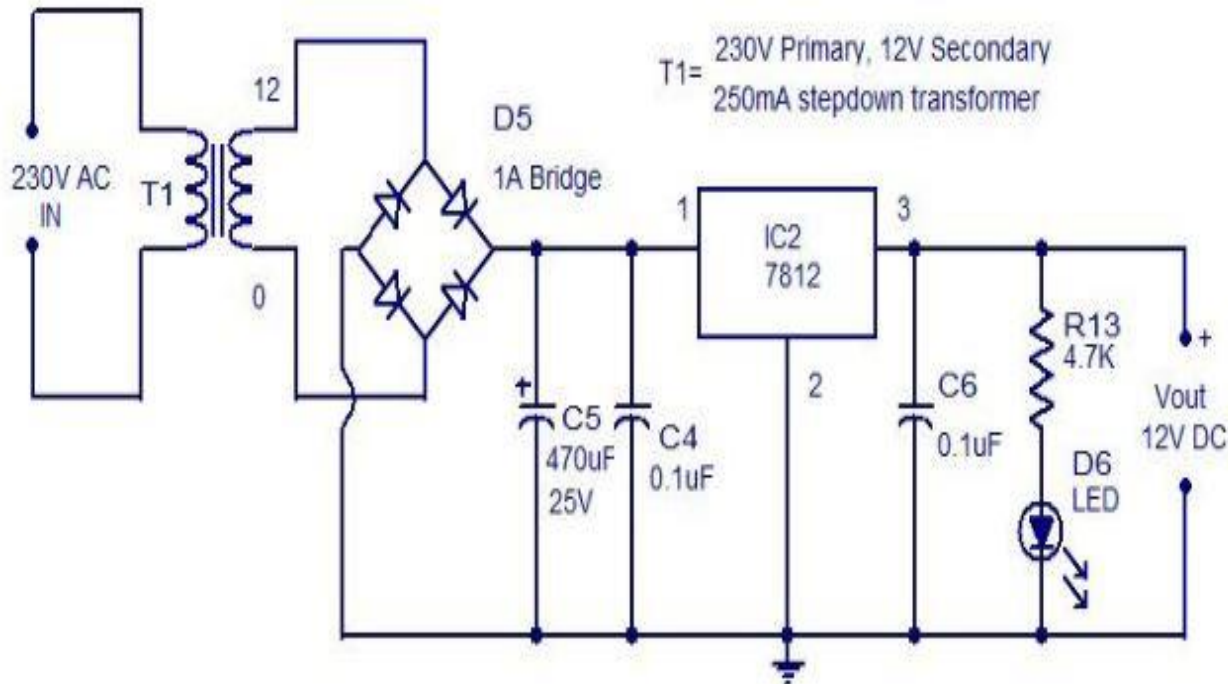


Fig3. Circuit Diagram of Power Supply

6. Vibration sensor

The GSM Modem accompanies a sequential interface through which the modem can be controlled utilizing AT order interface. Here we utilize a SIMCOM made (SIM300) modem interfaced with the microcontroller works in 900 MHz recurrence. The GSM modem explicit orders are adjusted to the administrations offered by a GSM modem, for example, text informing, calling a given telephone number, erasing memory areas and so forth Since the fundamental goal for this application is to tell the best way to send and get instant messages, just a subset of the AT-orders set should be executed. Fundamental AT orders: "AT order set for GSM Mobile Equipment" depicts the Main AT orders to impart by means of a sequential interface with the GSM subsystem of the telephone.

7. DC motor driver

Our DC engine driver family gives the least difficult and most adaptable IC arrangement accessible for driving brushed DC engines. Current restricting and adaptable current guideline modes. Observing and security highlights, for example, empower cooler running Features that simplify designs incorporate coordinated force MOSFETs and a charge siphon less force design that gives incorporated temperatures to enduring activity.

DC engines were the primary kind generally utilized, since they could be controlled from existing direct-current lighting power appropriation frameworks.

8. DC motor

A DC engine is any of a class of rotational electrical machines that converts direct flow electrical energy into mechanical energy. The most normal sorts depend on the powers created by attractive fields. Practically a wide range of DC engines have some inward component, either electromechanical or electronic to intermittently alter the course of current stream in piece of the engine. DC engines were the first sort generally utilized, since they could be controlled from existing direct-current lighting power conveyance frameworks. A DC engine's speed can be controlled over a wide reach, utilizing either a variable stock voltage or by changing the strength of current in its field windings. Little DC engines are utilized in devices, toys, and apparatuses. The widespread engine can work on direct current yet is a lightweight engine utilized for compact force apparatuses and machines. Bigger DC engines are utilized in impetus of electric vehicles, lift also, lifts, or in drives for steel rolling.

III. METHODOLOGY

The whole framework is introduced in the motor alongside GSM modem. Subsequent to giving the force supply and checking the situation with the GSM, If the situation with the GSM is off, at that point we can work the whole framework with a switch. The whole framework is introduced in the motor alongside GSM modem. Subsequent to giving force and checking the situation with the GSM, a SMS is ship off the proprietors versatile. On getting the adaptation turn over the motor and vehicle pushes ahead. Assuming the situation with the GSM is off, we can work the motor framework with a switch. The fundamental reason for this venture is to keep vehicle from burglary. The usefulness is accomplished by identifying vehicle status in robbery mode and by sending a SMS to proprietor of vehicle. The proprietor would then be able to send back the SMS to handicap start of the vehicle. To secure autos we created innovation which is worked by utilizing microcontroller 8051 with GSM module.

Features of GSM:

- Single supply voltage
- Typical power consumption
- Tri-band
- MT, MO,CB, text and PDU mode,
- SMS storage: SIM card
- Supported SIM card: 1.8V,3

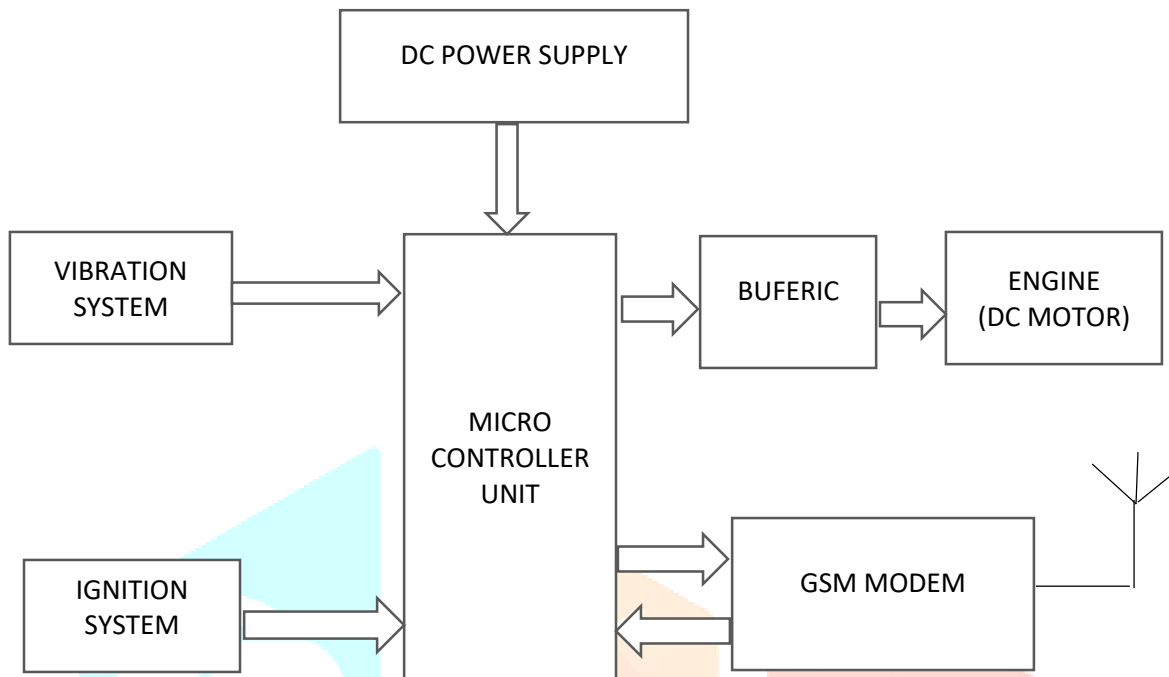


Fig4. Block Diagram

IV. FUTURE SCOPE

1. Presently just SMS highlight is accessible, we can incorporate the Call include for simplicity of activity.
2. Utilizing android application we can likewise stop the motor.
3. Amplifier could be interfaced to the GSM/GPS module so that during burglary action voice call could be set up with the proprietor.
4. This framework will be utilized in all autos vehicle in cutting edge because of its highlights. Notwithstanding this we can likewise add additional highlights like GPS to distinguish the area of the vehicle and furthermore to forestall vehicle crash and mishaps.

V. CONCLUSION

This strategy for the plan is special and it has highlights like minimal expense, and solid burglary control framework for an auto it is a danger to vehicle hoodlums and it can't be gotten to by an obscure people since it depends on GSM innovation. In our undertaking the security framework depends on implanted control which gives protection from robbery. The GSM modem gives data to the client on his demand. The proprietor can get to the situation of the vehicle at any moment. She/he communicates something specific to bolt the vehicle. This project manages the plan and improvement of a burglary control framework for vehicle just as ensure the existence of rider. In this paper, we have proposed a novel strategy for vehicle motor locking framework used to bolt vehicle motor by utilizing GSM innovation. When the robbery recognized, the mindful individual send SMS to the microcontroller, at that point issue the control sign to stop the motor engine.