

CASH CARRYING VEHICLE SECURITY USING EMBEDDED SYSTEM

Huziafa Faridy

*B.E student ,Department of electrical engineering , SSM college of engineering and technology
Kashmir, India*

ABSTRACT

As we know that the procedure of carrying cash and refilling it can be very risky .we have seen several instances where, either the driver of the cash van or the burglars have performed the heist easily. Several measures have been implemented to provide the protection for such vans like varying time of banking or delivery of cash ,CCTV monitoring,, training of security guards. But due to the incrementation in the technologies in this modern world, the methods used by the robbers are becoming increasingly complex, so the companies sought new ways to counter it and to take it a step further I initiated a model to secure the cash van as a locker security system using GPS, PASSWORD, GSM ,RF ID .It is reliable ,low in cost, compact in size and low power consumption design. several loopholes in the cash van security system can be nullified.

Keyword: GPS, GSM, RF ID

INTRODUCTION

Cash vans carrying cash for bank branches or for filling ATMs always possess a great risk of getting robbed sometimes armed robbers kill the driver of the van and take the van away to any location and take cash out of it .sometimes bank official ,who are guarding the vans ,run away with the van . so cash vans needs security for protecting it from such robberies. The present security system of the cash van is still no match to the modern burglars. The main aim of the project is to nullify several loopholes In the cash van security, and provide a solid plan to tackle burglars. So the idea is that no password would be accepted by the ATM present in van until and unless the van reaches the allocated site. once the van reaches the respective ATM unit, the official which is given the RF id card will place the card on the sensor outside ,the ATM in the cash van will display the message “enter password”. . so until or unless the RF id card is not placed on the sensor outside the desired atm site, you cannot enter the password and because of the fact that each time different password is generated it becomes more secure . basically main crux is that unless the van reaches the desired location ,no one can enter the password in the ATM present in the cash van. The message of “enter password” will only display on the screen when Rf ID is placed on the sensor outside the site. So the whole process of cash filling will be in presence of security persons making it more secure.

LITERATURE REVIEW

To improve the security system of the cash van and to decrease the loopholes in security system several mechanism have been developed and implemented which provide unique solution to the problem. Several papers are taken and revised accordingly, analysis of these papers are done on the type of parameters used and approach towards rectifying the problem.

Bank Locker Security System based on RFID and GSM Technology[1]. It is a high security system which is based on locker security system, only the genuine person is able to recover the money from locker . basically biometric system is used to identify individuals and verify their identity.it is a locker security system based on fingerprint, RFID, password, GSM , Capacitor based RF id is used and implemented.

Automobile Anti-theft System Based on GSM and GPS Module [2]. This system was designed in order to make automobile safer than the current scenario. basically GSM and GPS technology is used in this project In order to locate the automobile. It development is based on the high speed chip and detect automobile stolen to the automobile owner with the help of vibration sensor. Location of automobile can be obtained with the GPS module which is integrated in the system that is anti-theft.

Fingerprint Based Vehicle Security System [3]. In this project basically biometric and embedded system are intermixed to achieve the final product. the security of the cash van is provided with the hybridisation of biometric system and embedded system. Arduino mega is used in this project.

Fingerprint based authentication and security system using GSM and GPS technology [4]. This system basically deals with the positioning and tracking of the vehicle. It is an embedded system which consist of GSM module and GPS module. A ARM processor is installed in the vehicle. this whole setup is used to track the position of the vehicle. after pressing the emergency key it also sends the SMS to the server.

3. PROPOSED SYSTEM

This proposed system will enhance the security system of the cash van, making it more secure and also eliminating the loopholes in the security system. This system consist of RF ID, GSM modem, DTFT module, Processing module, actuating module and Arduino.

3.1 BLOCK DIAGRAM

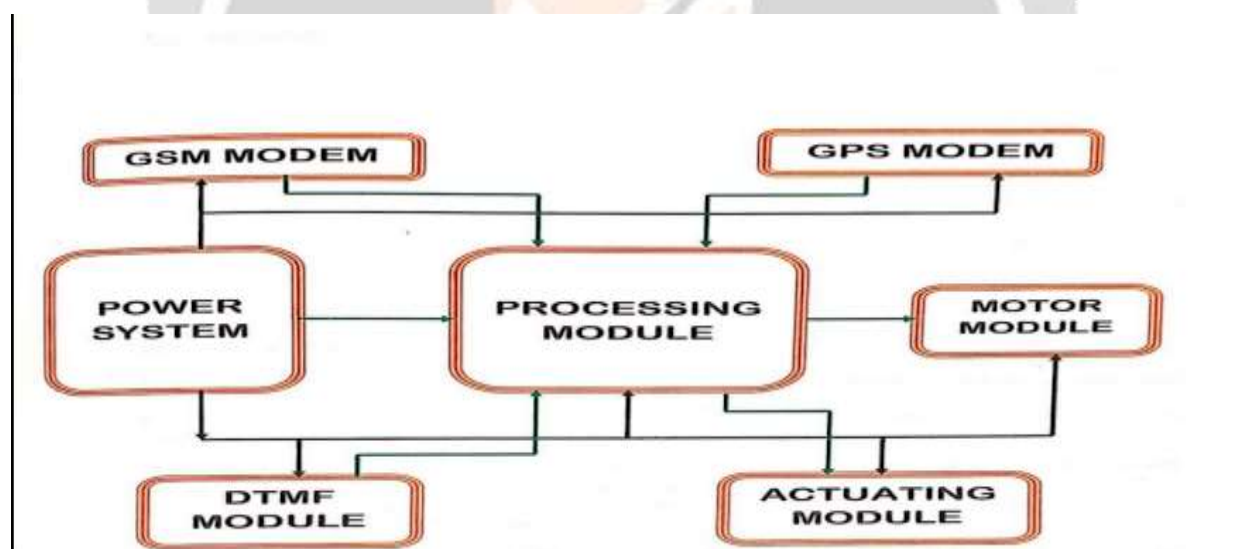


Fig 1:Block diagram

The figure above shown is the block diagram of the proposed model. It consist of five different types of module, different modules have different functions. power module provides supply to the circuit and drives all other module. Motor module is used for driving dc motors of two tier machine based on the logic provided by the programmer. the DTFT module is implied in the circuit in order to take the input that is password. in my project I have used Arduino having microcontroller (ATMEGA328) as a processing module. processing module is the main part of this circuit as it is an interfacing and controlling module that interfaces the peripherals and other modules used in the circuit. Similarly GPS and GSM technology is also used for the communication purposes in case of any mishap. we connected various components to the Arduino mega. the RF id, GSM modem, geared motor. The connection of RF id is the important connection to Arduino.

4.RESULT

The system is working properly and is performing really good in all conditions. In this system when RF id is placed on rf id sensor , it shows enter password and the GSM module sends the password to our phone . in case the password entered is incorrect more than 3 times , then it will automatically send one SMS to bank and other to nearest police station , stating that something suspicious is going on. My system is highly efficient and also working properly. The system I implemented is shown below

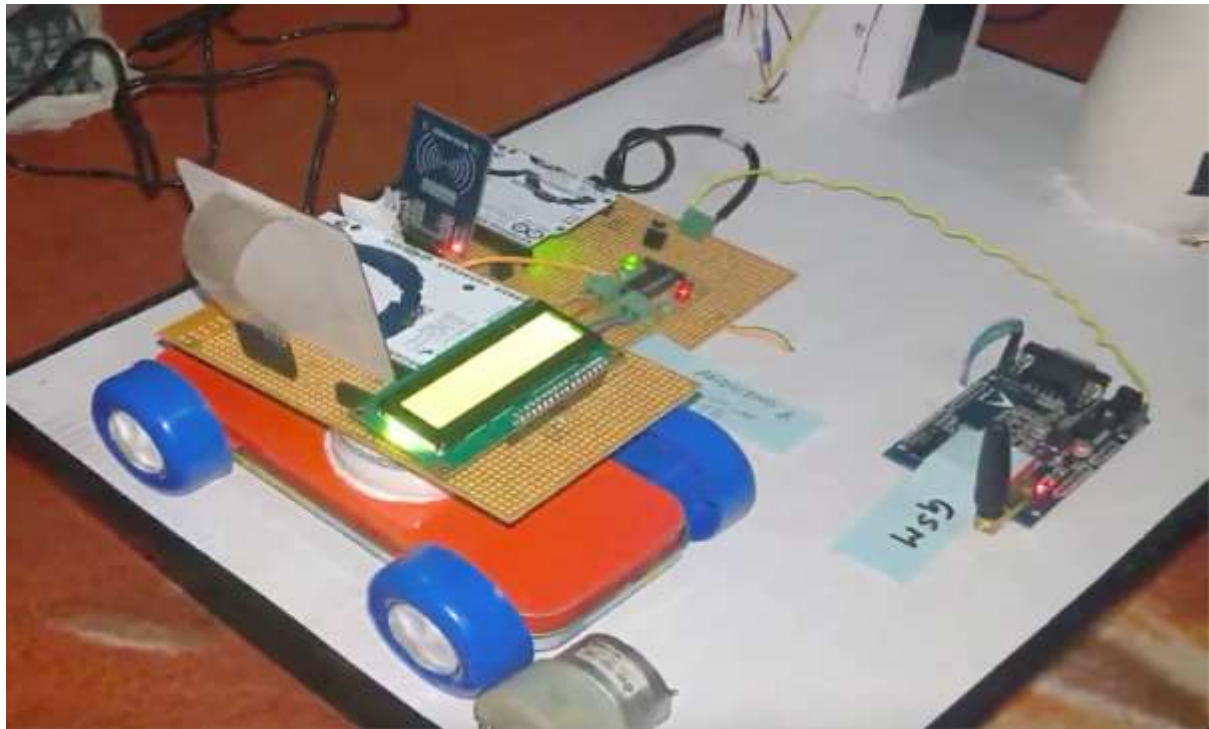


Fig2: CASH VAN WITH RF ID TAG, GSM AND DTFT MODULE



Fig-3: Message send to bank through GSM

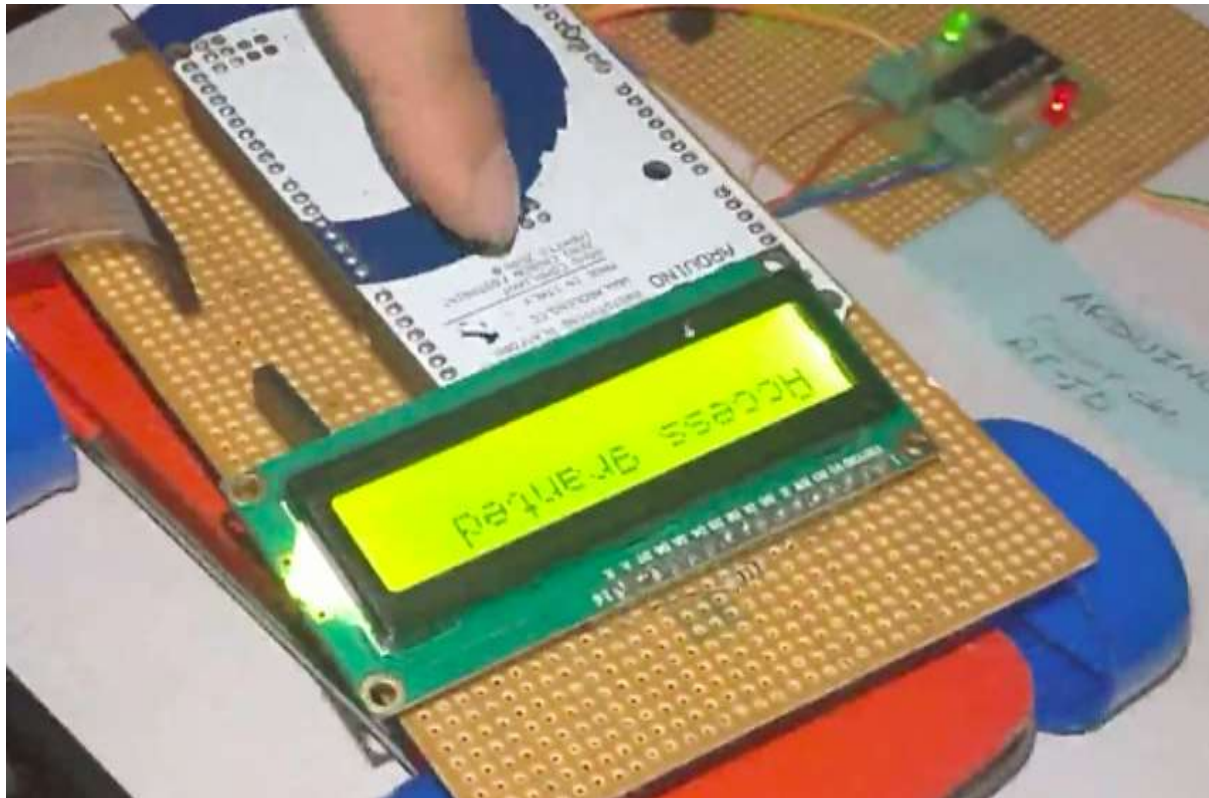


Fig-4: When correct password (ACCES GRANTED)

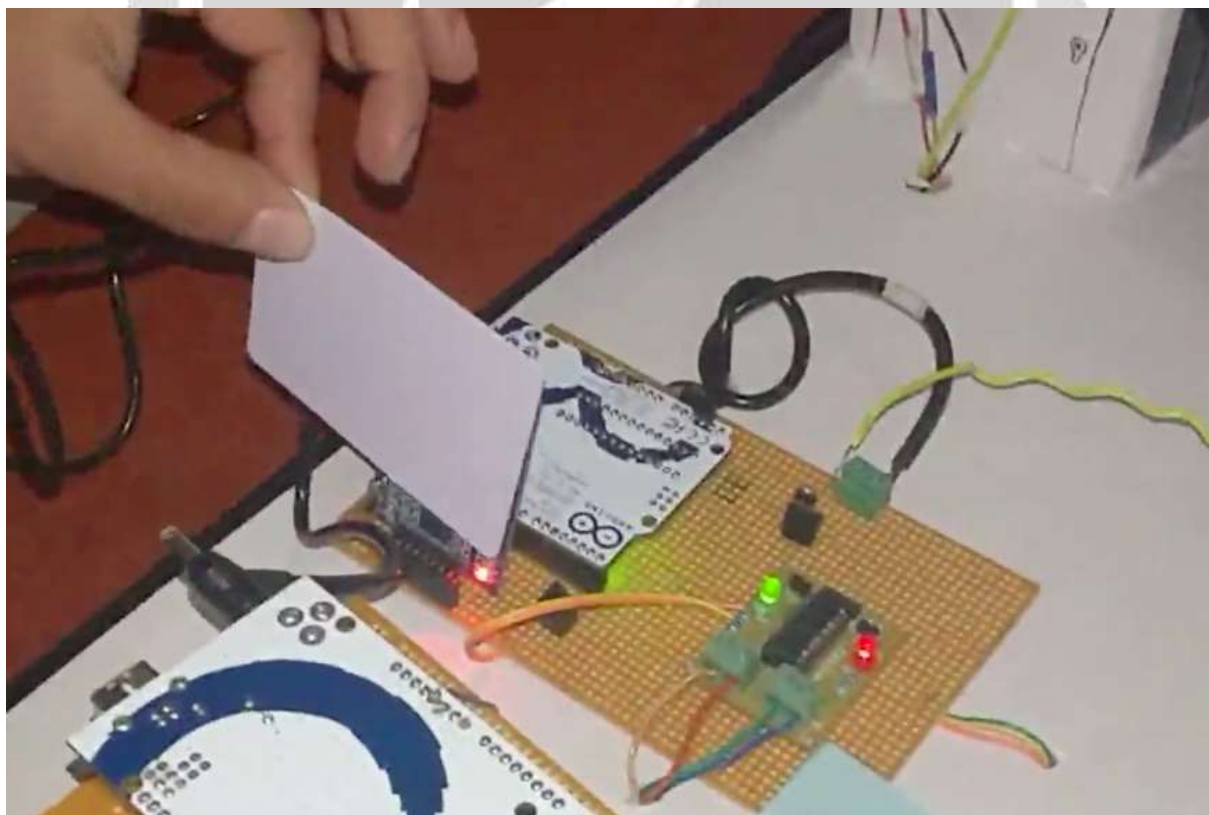


Fig-5 Tagging RF id card to sensor in order to activate password

5.CONCLUSION

As the methods used by modern burglars are becoming complex day by day which are making our security system pretty much outdated. So in order to tackle the modern techniques used by the burglars I have presented a idea which will remove the loopholes in the security system of ATMs to some extent, and will surely provide a better security system. I have presented a security system using GSM, GPS, PASSWORD, which is low in cost, compact in size and completely new system in the cash van security. thus the risk of carrying cash and refilling ATMs can be avoided to some extent. also the employs cannot run away with the cash or the driver cannot rob the van carrying cash anymore.

6.REFERENCES

1. A.Viyayamanasa, Ch. Sumalatha K.Ramasujana, I.Meghamala, K.Lakshmi Prasanna, K.Hema Rani "Bank Locker Security System Using RFID and GSM Technology" International Journal for Research in Applied Science & Engineering Technology Volume 4 Issue IV, April 2016 ISSN:
2. Disha D. Kotadiya, Hiloni S. Detroja, Prutha J. Vasoya, Prof. C. B. Bambhroliya "GSM Based Bank Locker Security System using RFID, Password and Fingerprint Technology" International Journal for Innovative Research in Science & Technology| Volume 2 | Issue 11 | April 2016 ISSN (online):
3. Anjali Bakshi, Vikas Goel "Fingerprint Based Vehicle Security System" International Journal of Informative & Futuristic Research (IJIFR) Volume - 3, Issue -12, August 2016 Continuous 36th Edition, Page No: 4486-4494 ISSN: 2347-1697
4. J.A.shaikh, shubhangi mali, "Fingerprint based authentication and security system using GSM and GPS technology" International Journal of Engineering Trends and Technology Volume-45 Number8 -March 2017

BIOGRAPHIES



Department of electrical engineering , SSM college of engineering and technology, Kashmir, India.
Currently working as J.E Electrician in ESPL Patnitop.