

Vehicle Security System

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Abstract—paper is based on smart driving license card which would enhance road safety and vehicle security. The card helps to limit the vehicle operation on the basis of three parameter; driving license expiry date, vehicle ownership and category of the vehicle for which driving license is issued. The hardware and software system required to improve shelter and protection is develop. A unique authentication card is encrypted with a secret code and the details of the vehicle it is linked with anyone other than the vehicle owner will be allowed to drive the vehicle using the authentication card. If not authorized, when a person attempts to start the vehicle, the short message service [SMS] system send the driving license details to a pre-registered cell number and vehicle's explosion system is disabled.

Keywords: Smart driving license, Global Positioning System, Global System For Mobile, Radio Frequency Identification.

I.INTRODUCTION

New automobiles are protected by various security systems which are costly. The objective of the work is to develop a low-priced and reliable security system for automobiles. The user friendly device uses a pic controller which is interface with other peripheral like GSM (Global System for Mobile) and RFID (Radio Frequency Identification) reader and the GPS (Global Positioning System). If a person is licensed to drive a particular category of the vehicle, the system will permit the vehicle to be use once both the authentication and the driving license cards are validated.

II. Working Principle

The RFID card reader prepares to scan authentication card and smart driving license card when both the card validated, the PIC controller switches on the ignition system. Now if validity of anyone or both the could not be establish the PIC controller send the details of invalid card.

III. BLOCK DIAGRAM

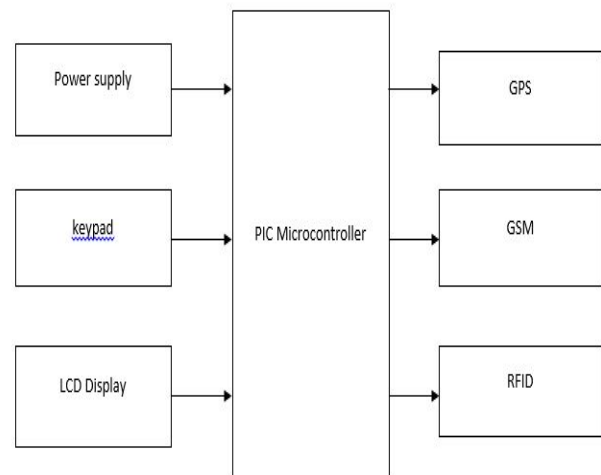


Fig.1 Block Diagram Of License Based Vehicle Security System

GSM



Fig: GSM Module

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The working of GSM modem is based on commands, the commands always start with AT (which means AT testation) and finish with a <CR> character. For example, the dialing command is ATD<number>; ATD3314629080; here the dialing command ends with semicolon .GSM Modem Global system for mobile communication (GSM)is a globally accepted standard for digital cellular communication. GSM is the name of a standardization group established in 1982 to create a common European mobile telephone standard that would formulate specifications for a pan-European mobile cellular radio system operating at 900 MHz A GSM modem is a wireless modem that works with a GSM wireless network. A wireless modem behaves like a dial-up modem.

GPS



Fig: GPS Module

GPS modules are popularly used for navigation, positioning, time and other purposes. GPS antenna receives the location values from the satellites. GPS gives information about:

- Message transmission time
- Position at that time

GPS vehicle theft tracker project detects the vehicle theft. Then it activates the Tracking system. Microcontroller reads the vehicle co-ordinates using the GPS modem. Then Microcontroller sends text SMS to the owner of vehicle using GSM modem. We have provided Ignition lock with this project.

RFID



Fig: RFID Reader

Radio Frequency Identification (RFID) Card Readers provide a low-cost solution to read passive RFID transponder tags up to 2 inches away. The RFID Card Readers can be used in a wide variety of hobbyist and commercial applications, including access control, automatic identification, robotics navigation, inventory tracking, payment systems, and car immobilization. The RFID card reader read the RFID tag in range and outputs unique identification code of the tag at baud rate of 9600. The data from RFID reader can be interfaced to be read by microcontroller or PC.

IV. Conclusion

This work deals with the design and development of driving license based security system for vehicle. This system prevents vehicle thefts and driving without proper driving license. The simulation of the system is done using PROTEUS 7.7 software. A physical system is under development and will be tested for effectiveness. The system will increase road safety and reduce vehicle thefts. Vehicle tracking and locking system use to track the theft vehicle by using GPS and GSM technology. This system is put into the sleeping mode vehicle handled by the owner or authorized person otherwise goes to active mode. The mode of operations change by person or remotely. When the theft identified, the responsible person and SMS to the microcontroller, then issue the control signal to stop the ignition system.

REFERENCES

- [1] Shital Y. Gaikwad and Maheshwari “V. C, Security System for Car using RFID, Thumb Impression, Steering wheel Lock Based on ARM 7” International Journal Of Current Engineering Vol.4,No.3(June2014)
- [2] PriyaDarshini and Prasannabalaje S.M , “Multilevel Security System for Automotives using RFID and Biometric Techniques in Lab view” International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering Vol. 2, Issue 4, April 2013
- [3] Amol S. Dhotre, Abhishek S. Chandurkar & S. S. Jadhav, “Design of a GSM Cell – Phone based Vehicle Monitoring & Theft Security System “International Journal of Electrical and Electronics Engineering (IJEED) ISSN (PRINT): 2231 – 5284, Vol-1, Iss-3, 2012.
- [4] Visa M. Ibrahim, Asogwa A. Victor “Microcontroller Based Anti-theft Security System Using GSM Networks with Text Message as Feedback” International Journal of Engineering Research and Development e-ISSN: 2278-067X, p-ISSN: 2278-800X, www.ijerd.com Volume 2, Issue 10 (August 2012), PP. 18-22.
- [5] B.ANUSHA, P.VENGAMAMBA, P.SWATHI, S.RAMYA, “Finger print based licensing system for driving” Mekapati Rajamohan Reddy institute of technology and sciences affiliated to JNTUA, Udayagiri, S.P. S. R. Nellore. (PG Project report)