

Home Security System for Automatic Doors

By: Abdul S. Rattu

Advisor: Prof. Michael Caggiano

Objective

Design a radio frequency identification "RFID" door lock that will provide advance and fastest accessible security with ease of use for home doors and gates

Introduction

Home security system for automatic doors provides advance security of today's standard for homeowners. It will be used to open the home doors automatically just by scanning RFID tags wirelessly. In this project I worked to create a security system which is utilizing RFID technology to scan RFID keys at the door knob for automatic door lock purposes. This system is also connected with servo motor to perform a function of physical lock as well as there is a liquid crystal display attached which shows the welcome message on screen in case of authorized and unauthorized user attempts. This type of systems can be used in any type of doors and gates for high class and fastest accessible security with ease of use

Motivation

Nowadays most hotel room doors uses a RFID card to unlock the door, however these RIFD cards are not as convenient as this design project. Usually you have to insert the RFID card into hotel room door and wait for green signal, after the green signal you still need to manually rotate the door knob in order to open the door, however this system is very convenient and different than today's standards. In this system user will wirelessly scan the card at the RFID antenna and door knob will rotate automatically for the user. It will also display the name of the person on the screen and welcome sound through the speaker