

**GSM BASED MOTION SENSOR FOR HOME
SECURITY SYSTEM APPLICATION**

MOHD IZZUDDIN BIN ZAKARIA

**FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA
MALAYSIA**

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ABSTRACT

Home security system has becoming an essential part of home appliances nowadays. This is due to the possibilities of intrusion, burglary and robbery are increasing day by day mainly at the residential area. Thus, this project was proposed to increase the home security level by design of a system which consists of a sensor to detect motion, radio frequency (RF) transmitter and receiver for making wireless sensor, a microcontroller and The Global System for Mobile Communication (GSM) module for communication between user and microcontroller. An alarm sound will be triggered when motion sensor detect movement. The GSM is use for sending the Short Message Service (SMS) from the microcontroller to the user's mobile phone and also receiving the SMS from user's mobile phone that automatically enables the controller to take further action like switching off the alarm. The prototype was successfully developed, tested and has been installed at residential area in Taman Cahaya Alam, Sec U12, Shah Alam.

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CHAPTER 1

INTRODUCTION

1.1 PROJECT BACKGROUND

People lifestyle in the modern society today is changing rapidly with the evolution and enhancement of the technology. The advancement in technology such as GSM has been used to increased safety and security level of home. Besides, mobile phones today have a lot of function instead of making call or messaging system. The use of mobile phones is now extended to different purposes. Today smart phones are available in the market with different applications and hardware which can be implemented without any further development or enhancement. With the help of the GSM network for example, a mobile phone can be used to implement for controlling devices in far distance and getting notification on the current situation.

The goal of this project is to increase the level of home security by implement a GSM based for home security system which using GSM to remotely control the alarm and getting alerts the user through the SMS. The GSM/GPRS SIM900 module and Arduino Uno Board can be used for communication between the mobile phone and the sensor installed at the home. The mobile phone acts as a controller and can access the system anywhere as long as the GSM network is present.

GSM Based Motion Sensor for Home Security System Application works via fairly simple. The system consists of the motion sensor with RF transmitter and the