



UNIVERSITI TEKNOLOGI MARA

FINAL REPORT :
HOME SECURITY SYSTEM IMPROVEMENT WITH THEFT PREVENTION

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ABSTRACT

The "home security system improvement with theft prevention" project was made to improve house security when there are no people inside a house. The project was made based on some researched in a neighbourhood which is the most cases that been reported and the most cases that have been reported is about thief breaking into house when there is no people inside the house. In order to solve this problem the project was made. This project was made by using two types of software which is MPLAB and Proteus software. The design of circuit was made by using Proteus software. For the coding, MPLAB software was used. The power supply is designed to be a supply to the main circuit. The power supply is designed by using the step down transformer to produce lower voltage. The 240Vac is step down to 12 V. The voltage regulator is used to regulate the voltage to supply to the main circuit. 5V voltage regulator is used as a power supply to provide supply to the main circuit. For the prevention of house from thieve, this project is build to develop an alarm system at house. The limit switch was replaced by the push button and the buzzer was replaced by the LED. This show when someone push the button, so the LED will light up. This means the buzzer will trigger when someone is trying to break into house. The push button act as a limit switch. When someone push the button, the alarm will be triggered that was show by the LED. The simulation run successfully as expected. The lamp light up when the distance of LDR torchlight is far from LDR. When the torchlight is near the LDR, the lamp will light off. This means the light is automatically on during night and off during day. For the push button and LED, when the push button is pressed, the LED will light up. This means when someone is trying to break into house, the LED that act as a buzzer will light up to make the neighbourhood alert with the alarm system. This alarm system is create as a prevention of thieve at house.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

This project is proposed to develop an automatic lamp based on LDR (Light Diode Resistor) that can automatically turn light ON/OFF based on light intensity. Research have been done at neighbourhood area which found that the thief problems are the most problems that they faced. Most of the cases happened when there was no one was at home. Based on this research study, new project development has been made to improve and tighten the home security system by using an automatic light that can ON and OFF light and will trigger alarm when someone trying to broke into house. House light can automatically switch ON during night and OFF during the day and trigger alarm when someone trying to broke into house.

1.2 Problem Statement

This project is purposed to encounter the problem while the house owner is away from their house for security system. The lamp inside house can automatically switch ON/OFF automatically when no one is inside the house. It can also be function to trigger alarm when someone trying to broke into house. Limit switching is installed at the door and windows for safety at house to prevent from thieves. When a thief trying to broke into house, by using limit switch at door and windows, the alarm will be triggered if the thieves open the door or windows to alert the house owner that something are happening at his/her house.