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FINAL REPORT:
SMART CURTAIN ROLLER

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ABSTRACT

This project is entitle smart Curtain roller where the use of sound sensor and PIC 16F877A . When the sound sensor detected the sound once it will trigger the PIC to send information to the motor driver IC L293D to control the movement of the DC motor. This is because when the sensor detect high once the motor will run clockwise direction for five second and turn to anti-clockwise if another sound detected by the sound sensor. This system run based on a coding that have been done and burn in the PIC 16F877A. This project use 12V power supply to the power jack. The 12V power supply will drop by the voltage regulator to 5V. This is because the PIC and Motor Driver IC L293D will burn out if we consumed voltage high than 5V. The main objective of this project is to ease the user and this project also is a friendly electronic device. This project were control by using PIC16F877A and need to burn a coding that were made into the PIC, the coding were made by using the software name MPLAB X IDE v1.85. The design prototype has been fabricated and the output was shown in the software name Proteus 8 Professional.

CHAPTER 1

INTRODUCTION

1.1 Background of study

This project presented a model of curtain that use the direct current motor (DC) supply and controlled by PIC device (sound detector). This project used a wireless device to make it easier for user to open the curtain in their house without using any energy. The idea behind this project is to meet the upcoming challenges of the modern practical applications of wireless communication and to facilitate current successors with such splendid ideas that should clear the concept about wireless communication and control system.

Basic idea of this project is to provide the sound detector device to control the DC motor that can be used to produce the movement of the curtain. This curtain will move (close) when users clap the hand once and it will also move (open) when users clap the hand once. This is because, sound wave (transmitter) travel through the channel (air medium) to the receiver and the receiver detect the sound wave and covert the information using demodulation process (convert to the original signal).

The smart curtain roller project is design to user friendly and can save the time and energy. The project is use the PIC device (sound detector) for receiving and sending the signal to the DC motor.

The project design especially to the busy person, that don't have time to tie up their curtain. This is because this project has been programmed as a smart curtain roller that function to help them to tie up their curtain automatically.