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FINAL REPORT OF DIPLOMA PROJECT

STEPPER MOTOR CONTROLLER USING PIC

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ABSTRACTS

A stepper motor is a type of electric motor that is used when something has to be positioned very precisely or rotated by an exact angle. Because of these characteristics, stepper motors are widely used in industries which need the sequenced steps of movements. Some applications of this stepper motor can be seen in conveyors in industries, lifts, parabolic antennas and many more. In this project, we would like to show a stepper motor controller functioning using PIC 16F84A, which is the heart of this project. We programmed the input/output in the IC to make it perform some action on the stepper motor controller. The purpose of this project is to provide a more reliable stepper motor controller by using programming software.

TABLE OF CONTENTS		PAGE
Acknowledgement		ii
Abstract		iii
CHAPTER		
1	INTRODUCTION	
1.1	Project Background	1
1.2	Scope of work	2
1.3	Objective of project	3
1.4	Work progress	4
2	STEPPER MOTOR CONTROLLER	
2.1	Stepper Motor	7
2.2	Specification	7
2.3	Sorting and Numbering Coil	8
2.4	Stepper Motor Phase Sequencing	8
2.5	Motor Driver	9
2.6	Component data	
2.6.1	PIC 16F84A	10
2.6.2	Terminal Regulator (78L05)	13
2.6.3	Resistor	13
2.6.4	Capacitors	14
2.6.5	Ceramic Capacitors	15
2.6.6	ULN2803	17

CHAPTER 1

INTRODUCTION

1.1 Background

In the past few years, many efforts have been established into the development of stepper motor controller by the undergraduates in their final year project under the Electrical Department. This is because people are applying this stepper motor controller in the industries, also in their routine of lives.

Stepper motor is a very useful drive in automation applications. It is driven by discrete dc voltage pulses, which are very convenient outputs from digital computers and other automation control system. The stepper motor is also ideal for executing a precise angular advance as maybe required in indexing or other automation applications such as parabola system.

In this project, the heart of this project lies in the micro-controller system that controls every reaction and behavior of the stepper motor. The micro-controller use for this stepper motor is one of the PIC16F62X family micro-controller. The micro-controller will act to move the system by controlling the stepper motor, which made to control a turn position correctly.