

**FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA
KAMPUS PULAU PINANG**

FINAL REPORT OF DIPLOMA PROJECT 2

(KEU380)

LIFT CONTROLLER USING PIC

20 OKTOBER 2005

**MOHD SHAMSUL BIN SHAMSUDDIN
2002361841**

**MOHD AZIMI BIN MOHD SIDEK
2002361827**

SUPERVISOR'S NAME:

EN ZAKARIA BIN HUSSAIN

ABSTRACT

Today, lift is a technology that can help human in order to make a work fast, without using a lot of energy. So the invention of lift is important for human. In many recent years, the invention of lift or elevator is improved to make it more efficient. Like the addition of the sensor to detect the overweight, and sensor in the door that detect the project.

It is not only to carry human but besides that the usage of lift is involved whole thing that deal with the weight. The simple lift is designed by using a Peripheral Interface Controller PIC16F84A but this lift is design to have only two stages for one ground floor and first floor. The usage of PIC16F84A is very suitable to this project.

ACKNOWLEDGEMENT

Bismillahirrahmanirahim. With the name of Allah S.W.T the most gracious and merciful, and to our prophet Muhammad S.A.W. Thanks to Allah S.W.T for giving our opportunity to complete this project successfully.

We would like to thank our supervisor, En zakaria bin Hussain for his kindness, spend his time to our group during we do this report of the project. He also teaches us how to do this project especially about the circuit. Without his co-operation, we don't finish this project in the time.

Special thank we wished to our lecturer in Faculty of Electrical engineering who give guide and opinion to our project. Then to our members and classmates that has give opinion and discuss about the project.

We also wanted to wish thank to library department because gave a good co-operation to us when we wanted to surf an internet and find a book and final report of past year project to make a references to do our final report.

Lastly to our parents especially to our mother and father where gave us a support, spirit and motivation of us to finished this thesis in time and for all who gives us a co-operation and help us during we do this final report, than we wish and "May Allah Bless You"

Thank You

TABLE OF CONTENTS

PAGE

Abstract	i
Acknowledgement	ii
Table of Content	iii

CHAPTER

1 INTRODUCTION

1.1	Background	1
1.2	Scope of work	2
1.3	Objectives of the project	3
1.4	Chart of Progress work	3
	1.4.1 Table of progress work	4

2 DIFFERENT TYPES OF LIFT

2.1	Definition of lift	5
2.2	Types of lift	5
2.3	Types of lift hoist mechanism	7

3 CIRCUIT DESIGN AND OPERATION

3.1	Circuit Operation	11
3.2	Circuit Design	14
	3.2.1 Schematic Diagram	15
3.3	Components list and data	19
3.4	Component description	21

CHAPTER 1

INTRODUCTION

1.1 Background

Lift controller using PIC, Peripheral Interface Controller is a controller designed to control the lift operation by PIC 16F84A microcontroller. The lift is driven by a DC motor and sensed by both a limit switch on top of first floor and at bottom of the ground floor. The system designed is not very complicated because the lift is design just for two floors that are the ground and first floor.

The usage of PIC is an ideal controller comparing to the other controller. This because of the PIC provides a high performance of the operation and it has proven before. The operation of PIC is depends on these two limit switches which is on top and bottom limit switch. It means, our lift is designed to move upward and downward depend on two pushbuttons at ground and first floor.

The only different of the lift system compared to the other systems is that it does not have a door like the others. The lift system is designed effectively and can be used and apply at building, risky place like construction site to carry things, or in port that used to carry things during loading and discharge period.