

KEYPAD SYSTEM FOR LOCKER

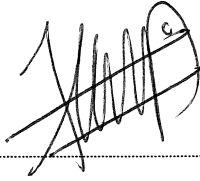
MUHAMMAD IZZAT BIN RAZALI  
QAMMARUL ARIEFF BIN LUKMAN  
SAHAL BIN MOHD RADZUAN

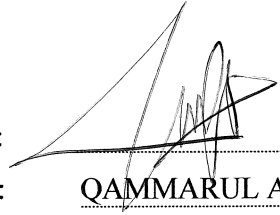
A project report submitted in partial fulfillment of the requirements for the award of the degree of Diploma of Electrical Engineering (Electronics / Telecommunications / Instrumentations / Computer)


Faculty of Electrical Engineering  
Universiti Teknologi MARA

APRIL 2013

“I declare that this report entitled KEYPAD SYSTEM FOR LOCKER is the result of my own group research except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.”

Signature :   
Name : MUHAMMAD IZZAT BIN RAZALI  
Date : 7/4/2013

Signature :   
Name : QAMMARUL ARIEFF BIN LUKMAN  
Date : 7/4/2013

Signature :   
Name : SAHAL BIN MOHD RADZUAN  
Date : 7/4/2013

## ACKNOWLEDGEMENT

Alhamdulillah and a lot of thanks to ALLAH for giving us the strength physically and mentally to strive and face every problem that occur during the time we are trying to complete the project. We would like to give our honour to our supervisor; Madam Siti Aishah binti Che Kar for scarifying her time and en energy in order to helps us completing this project. Moreover, our supervisor also helps us in giving valuables ideas about our design project and teaches us a lot about this proposal. She also supports us to finish the task before the dateline and complete the project with successfully.

In additional, we also would like to give our appreciation to beloved family and friend, who are really helps us financially, giving ideas, suggestions also a lot of support. The special tribute also given to lecture and everyone, who are involved directly or indirectly along the time until this project was finished. May ALLAH reciprocate their effort and give them His blessing in their life.

## ABSTRACT

Keypad system for locker is a technology created to make sure the user's locker will be in safe state. The user will put the password using keypad system and then the stepper motor will operate to open the locker. If the user put the right password, the LCD will show "Locker Unlocked" and the motor will operate to open the locker. But, if the password is wrong, LCD will show "Wrong Password! Please Try Again". When the user wants to close the locker, user just needs to close the door and push the button that functioning as the close button. The motor will operate again to close the locker door. This project basically is a modification from the previous keypad system for locker which they used magnetic to lock the door. Unfortunately, the system is hackable which when there is no supply, the magnetic will not functioning which will make the door unlocked. Thus this project modified version by using stepper motor to lock the door which if there is no supply, the door is still locked.

## TABLE OF CONTENTS

<b>CONTENTS</b>	<b>PAGE</b>
<b>DECLARATION</b>	ii-iv
<b>DEDICATION</b>	v
<b>ACKNOWLEDGEMENTS</b>	vi
<b>ABSTRACT</b>	vii
<b>ABSTRAK</b>	viii
<b>TABLE OF CONTENTS</b>	ix-x
<b>LIST OF TABLES</b>	xi
<b>LIST OF FIGURES</b>	xii
<b>LIST OF SYMBOLS</b>	xiii
<b>LIST OF ABBREVIATIONS</b>	xiv
<b>LIST OF APPENDICES</b>	xv
<b>CHAPTER</b>	
<b>1.0 INTRODUCTION</b>	
<b>1.1 INTRODUCTION</b>	1
<b>1.2 PROBLEM STATEMENT</b>	1
<b>1.3 OBJECTIVE</b>	2
<b>1.4 SCOPES</b>	2
<b>2.0 LITERATURE REVIEW</b>	
<b>2.1 ABILITY</b>	3
<b>2.2 CIRCUITS DESCRIPTIONS AND OPERATIONS</b>	4-7
<b>2.3 PIC16F877A</b>	8
<b>2.4 LIQUID CRYSTAL DISPLAY (LCD)</b>	9
<b>2.5 STEPPER MOTOR</b>	10
<b>2.6 KEYPAD</b>	11
<b>2.7 ULN2003</b>	12
<b>2.8 2N3906 PNP SWITCHING TRANSISTOR</b>	13
<b>3.0 METHODOLOGY</b>	
<b>3.1 SOFTWARE</b>	14-17
<b>3.2 CIRCUIT IMPLEMENTATION</b>	17-20