

اوَيْبُوْرَسِيْتِيْ UNIVERSITI TEKNOLOGI MARA

## **ELECTRONIC POT LIFTER**

# MUHAMAD HISHAMUDDIN BIN OMAR MUHAMMAD NURAFIQ BIN MOHD KHIR JAMRI BIN MUHAMAD

.

## FACULTY OF ELECTRICAL ENGINEERING UNIVERSITI TEKNOLOGI MARA (TERENGGANU)

**APRIL 2013** 

"I declare that this report entitled "*ELECTRONIC POT LIFTER*" 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 NURAFIQ BIN MOHD KHIR
Date	:	14APRIL 2013

Signature	:.	multure.
Name	:	MUHAMAD HISHAMUDDIN BIN OMAR
Date	:	14 APRIL 2013

Signature	:.	Hound i.
Name	:	JAMRI BIN MUHAMAD
Date	:	14 APRIL 2013

#### ACKNOWLEDGEMENT

Alhamdulillah thanks a lot to Allah S.W.T. because finally this already finished the project to fulfill the syllabus of EEE368 (final year project). The project was finished because there was supervisor named Mr.Mohamad Taib Bin Miskon that always lends his hand anytime to help his students especially to settle any problem that occurs.

As a supervisor, he also taught his students on how to make the report more creative, simple and perfect. During etching process, the technicians were very kind to give their hand in order to complete the etching process.

Furthermore, families and friends also important because they encouraged as supporter and give plenty of support till this project were finished. Insha'Allah, this project will be done completely according what has been planned.

#### ABSTRACT

Nowadays, there are many work in this life is used a big force to solve it. Therefore, there are many technology have been created to make life being easier and practical. Because of that, this useful device which called "Electronic Pot Lifter" is created. This device technology is included in home category, but it also can be used in industry. The purpose of this project is to avoid the risk of getting back pain, especially for the older people and people with disabilities. This project is used to lift and move pots from one place to another place in a flat surface. In addition, this project uses three transwheels to move. The circuit of this project is divided into two, namely motor driver and controller. The motor driver circuit is used to transmit signals to control the movement of the device. The device can lift up to ten kilogram pots. The device is able to grip and lift the pots from one place to another. Besides, it also has the ability to move forward, back, right, left, clockwise rotation, counterclockwise rotation,  $30^\circ$ ,  $150^\circ$ ,  $210^\circ$  and  $330^\circ$ . Hopefully, the device would be useful to people with disabilities and the older people.

#### **TABLE OF CONTENTS**

CHAPTER **CONTENTS** PAGE **DECLARATION** 1-3 DEDICATION 4 **ACKNOWLEDGEMENTS** 5 ABSTRACT 6 ABSTRAK 7 **TABLE OF CONTENTS** 8-10 LIST OF TABLES 11 LIST OF FIGURES 12-14 LIST OF SYMBOLS 15 LIST OF ABBREVIATIONS 15 LIST OF APPENDICES 16

#### 1 INTRODUCTION

1.1	Background	17
1.2	Objectives	18
1.3	Scopes of project	18
1.4	Limitation of Project	18

### 2 LITERATURE REVIEW

2.1	Literature Review	19
	2.1.1 PR19 Flexibot-Using Transwheel	19
	2.1.2 Holmac Gyro Transplant	20-21
	System	