DRAWING ROBOT

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DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

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POLITEKNIK MALAYSIA
SEBERANG PERAI

POLITEKNIK SEBERANG PERAI

PULAU PINANG

JABATAN KEJURUTERAAN ELEKTRIK

DRAWING ROBOT

"I / We hereby declare that I have read this thesis and in my / our * opinion this thesis is sufficient in terms of scope and quality for the award of the Diploma in Electronic (Communication Engineering)

Signature:.....

Supervisor: PN NUR HAFIZAH BINTI ZAKARIA

Date: 3/11/17

DRAWING ROBOT

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Certificate Of Authenticity

Certificate is made from 30 September 2017.

i. Recommendation of student :

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DECEMBER 2016

PROJECT REPORTCOMFORMATION

We hereby declare that the work in this report are we except for quotations and summaries which have been duly acknowledged.

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Date: .....

Supervisor : .....

PN. NURHAFIZAH BIN ZAKARIA

Dedicated to,

Thanks to Allah,

For give us a good health and strength while making this report.

My beloved father and mother,.

Who has always been our epitome of love and always pray for our strength to finish up this report.

Our beloved relatives,

Our siblings,

Thank you for your support and pray.

The person who has been very understanding and helpful,

PN.NURHAFIZAH BINTI ZAKARIA

For the support and guidance. Hope that us always be remembered.

Our unforgettable friends,

Our housemate, our coursemate and all DEP students intake June 2015,

Our struggle not yet ends.

Finally, friends that always together during this third years study, Hopefully achieved what we aspired.

ABSTRACT

Rising Colorspace is an abstract art installation. But instead of being painted by a tortured Pollock wannabe, it's made entirely by a finely tuned robot. It has the robot programmed to move up a vertical line and then shift left or right to make a line. Robot are especially desirable for certain place because, unlike humans, the robot will never get tired. World today are becoming smarter and more automated. Home automation delivers convenience and creates more time for people. Domestic robots are entering people's daily lives, but it is yet a relatively new and immature market. However, a growth is predicted and the adoption of domestic robots is evolving.

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The drawing robot can draw in physical conditions that can draw at A4 paper. This project can led a low cost. Therefore human always make an error when drawing. This robot cannot make an error when drawing this. This projects will be implementing using Arduino L293D and C programming

ABSTRAK

Dawing Robot adalah pemasangan seni abstrak. Tetapi bukannya dilukis oleh wannabe Pollock yang diseksa, ia dibuat sepenuhnya oleh robot yang ditala dengan halus. Ia mempunyai robot yang diprogramkan untuk melukiskan garisan menegak dan kemudian beralih ke kiri atau kanan untuk membuat garisan. Robot sangat wajar untuk tempat tertentu kerana, tidak seperti manusia, robot itu tidak akan pernah cepat letih. Dunia hari ini menjadi lebih pintar dan lebih automatik. Automasi rumah memberikan kemudahan dan mewujudkan lebih banyak masa untuk orang ramai. Robot domestik memasuki kehidupan harian rakyat, tetapi ia masih merupakan pasaran yang agak baru dan tidak matang. Bagaimanapun, pertumbuhan dijangka dan penggunaan robot domestik kian meningkat.

Robot lukisan boleh melukis dalam keadaan fizikal yang boleh dilukis pada kertas A4. Projek ini boleh membawa kos yang rendah. Oleh itu manusia sentiasa membuat kesilapan ketika melukis. Robot ini tidak boleh membuat kesilapan ketika melukis ini. Projek-projek ini akan dilaksanakan menggunakan pengaturcaraan Arduino L293D dan C

ACKNOWLEDGEMENT

First and foremost we would like to take this opportunity to express our gratitude to everyone who support we throughout the course of this project. We would like to say gratitude to our supportive supervisor, Pn. Nurhafizah Binti Zakaria for her aspiring guidance, invaluably constructive criticismand friendly advice during the project work. A sincerely grateful to her for sharing her truthfuland illuminating views on a number of issues related to the project.

Other than that, we would like to express gratitude towards our parents, our colleague for kind encouragement, co-operation and their willingness to help we out which help better in completion of this project.

It would not have been possible without the kind support and help of many individuals and google. We would like to extend our sincere thanks to all of them.

CONTENT

CHAPTER 1

INTRODUCTION

1.1 Introduction

A robot can be defined as a programmable, self-controlled device consisting of electronic, electrical or mechanical units. It is a machine that functions in place of living people. Robot are especially desirable for certain place because, unlike humans, the robot will never get tired.

The Drawing Robot can work in physical conditions that are uncomfortable or even dangerous. It can also never be distracted from the task at hand. This project can led to a low cost manufacturing organic fertilizers products as once the robot is implemented it can work repeatedly without any cost. This project will introduce a new era in everywhere to use automated machine and robot for more precise, cost effective and reliable work.

1.2 Objective

- To design a robot that can drawing
- To design a robot that can move by using controller

- To design a robot to that can function efficiently
- To design a robot that can function by arduino

1.3 Project Scope

- Our project only can be used to drawing
- Cannot be used to drawing without using the remote
- Reducing manpower

1.4 Problem Statement

- Chasis
- Gripping Mechanism
- Control system

Chapter 2

LITERATURE REVIEWS

2.0 Background Of Project

There are many drawing robot on the market, but they all have shortages in certain points. Nowadays, drawing robot are a high function of most manufacturing industries. So we built this project to help drawaing easily. This project can be better in the near future. We hope this project will reduce the workforce.

2.1 list of component

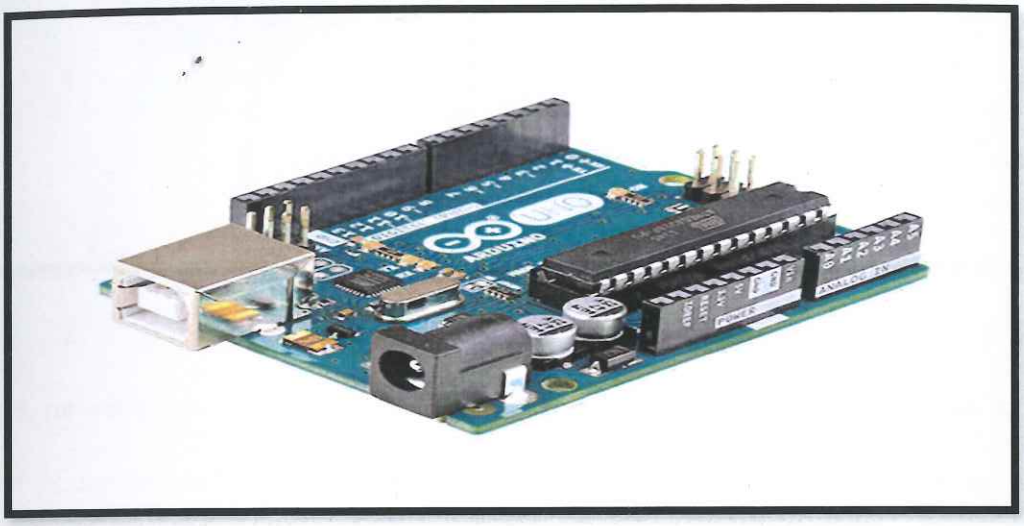

Diagram 2.2.1Arduino uno

Arduino is an open source computer hardware and software company, project, and user community that designs and manufactures single-board microcontrollers and microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical world. The project's products are distributed as open-source hardware and software, which are licensed under the GNU Lesser General Public License (LGPL) or the GNU General Public License (GPL), permitting the manufacture of Arduino boards and software distribution by anyone. Arduino boards are available commercially in preassembled form, or as do-it-yourself kits.

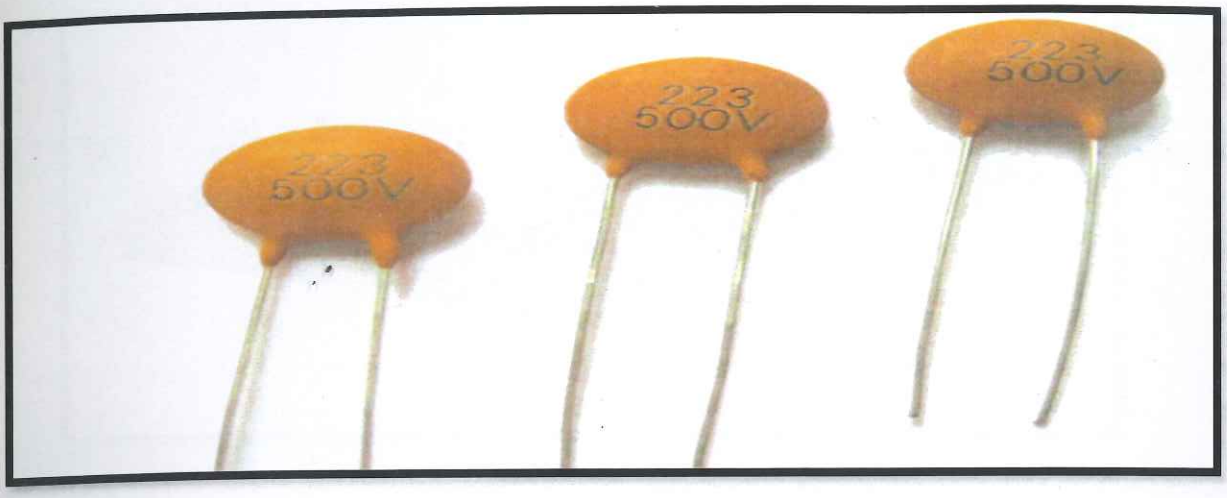

Diagram 2.2.2 Ceramic Capacitor

A ceramic capacitor is a fixed-value capacitor in which ceramic material acts as the dielectric. It is constructed of two or more alternating layers of ceramic and a metal layer acting as the electrodes. The composition of the ceramic material defines the electrical behavior and therefore applications.

- Male and Male Jumpers

A jump wire (also known as jumper, jumper wire, jumper cable, DuPont wire, or DuPont cable – named for one manufacturer of them) is an electrical wire or group of them in a cable with a connector or pin at each end (or sometimes without them – simply "tinned"), which is normally used to interconnect the components of a breadboard or other prototype or test circuit, internally or with other equipment or components, without soldering.Individual jump wires are fitted by inserting their "end connectors" into the slots provided in a breadboard, the header connector of a circuit board, or a piece of test equipmen

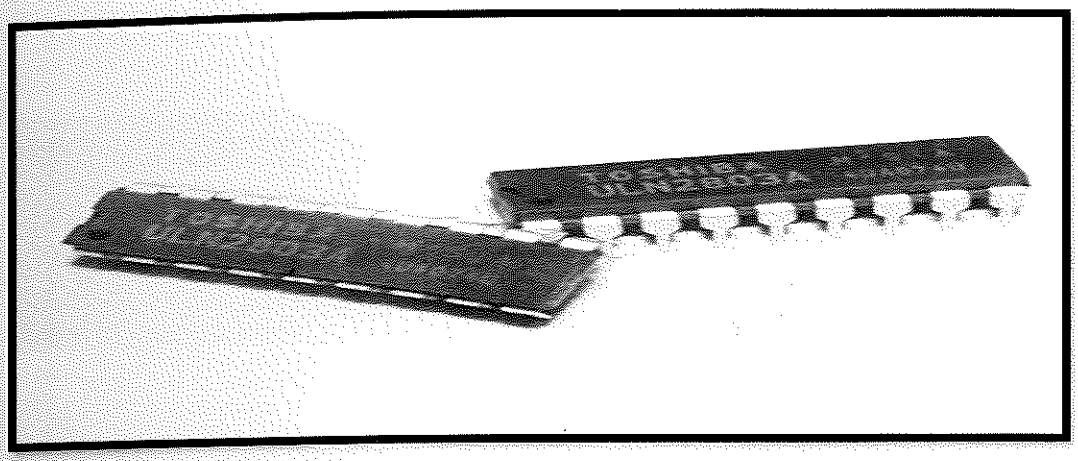

Diagram 2.2.3 IC L293D

L293D is a dual H-bridge motor driver integrated circuit (IC). Motor drivers act as current amplifiers since they take a low-current control signal and provide a higher-current signal. This higher current signal is used to drive the motors.

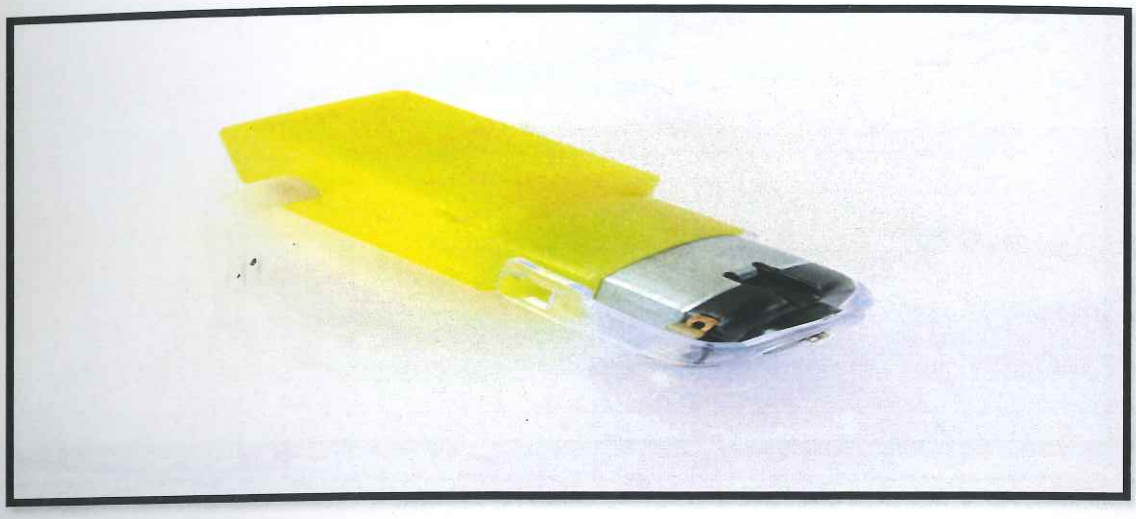

Diagram 2.2.3 DC MOTORS

A DC motor is any of a class of rotary electrical machines that converts direct current electrical energy into mechanical energy. The most common types rely on the forces produced by magnetic fields. Nearly all types of DC motors have some internal mechanism, either electromechanical or electronic, to periodically change the direction of current flow in part of the motor.