DESIGN AND DEVELOPMENT OF INDOOR PLANT WATERING SYSTEM USING PIC MICROCONTROLLER

AHMAD MANZUM BIN SANUSI

2009812498

A report submitted in partial fulfillment of the requirement for the award of degree of Bachelor of Engineering (Hons) Electronics (Instrumentation)

FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITY TEKNOLOGI MARA

MALAYSIA

JULY 2012

ACKNOWLEDGEMENT

First of all, I would like to thank to ALLAH S.W.T for blessing and granting to conduct and finally finished my project.

I also like to extent our sincerest appreciate to my project supervisor, Dr. Rosidah Sam, who has given me much strong logistic support while implementing the project given. She has always assisted me when I handling my project. Besides, I would like to express my sincere appreciation for his valuable advices, guidance and encouragement. This has inspired me to become more confident in trying new things. With her supervision, this project had accomplished its prescribed objectives and goals.

Thirdly, I would like to thank to my family members especially to my beloved mother for giving me their loves and supports through my three years of studies in University Teknologi MARA (UiTM).

Special thanks to staff FKE, who had given me a great help in accomplishing this project.

At last but not least, I would like to say a lot of thanks to all my course mates and those who has lending me their helping hand.

Thank you.

ABSTRACT

Automatic indoor plant watering is applied for indoor plant or trees. This system principle is based on water level sensing technique. The main controller for this project is PIC16F876A. The system can be separated into three parts there are input, controller and output part. The input part is the component that detects the water level in the system. For this project, water from the watering process will act as the switch to the water level sensor to determine the water level for the plant watering. The output part is water pump. If the input part give information/ signal to the controller that the plant ground need to be watering the output device will take action, the water pump will pump the water into watering tube until the water reach the plants or trees. The controller will receive information or signal from input part and will send action information or signal to the output part to do the task needed.

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CHAPTER 1

INRODUCTION

1.1 INTRODUCTION

Everyone knows that world today facing a serious problem that is 'Global Warming' or 'Green House' phenomena. Research showed that the main course of the phenomena is the drastic increasing of carbon dioxide release in the air. To overcome the carbon dioxide release we need an element that can absorbs the gases without any side effect to surrounding and human life. So the answer for the problem is by planting a tree, because tree is a natural carbon dioxide absorbs element. But to plant trees it also needs a big space, so indoor plant is the solution.

Many researches showed that the indoor plant consist of several advantages or benefit for human life. Indoor plant is the important keys to achieve the 'Green Building' concept that is needed for nowadays life. From literature reviewed, it is shown that indoor plant provides a natural solution to cleaner indoor air. When plants transpire water vapor from their leaves, they pull air down around their roots. This supplies the roots microbes with oxygen. The root microbes also convert other substances in the air, such as toxic chemical into a source of food and energy.

Research also showed that indoor plants can reduced the heat in the building. The plants possess a natural ability to draw their system towards a light source, which can act as an indoor awning while producing a beautiful fluid effect across the space.