DIGITAL CLOCK WITH AZAN READER

HANISAH BT. MOHAMED NADZAR
2002496559

SITI FARAH BT. HAJI AHMAD FADZIR
2002416596

DEPARTMENT OF ELECTRICAL ENGINEERING
UNIVERSITY TEKNOLOGI MARA
CAWANGAN PULAU PINANG
ACKNOWLEDGMENT

We would like to express our gratitude to the Almighty for giving us opportunity to seek wisdom and knowledge of the universe and can be a good caliph to manage and explore the mysterious world.

We feel very grateful because we are able to finish this project until this stage. Without cooperation from those that involve in this project, maybe it cannot reach this level.

Firstly we would like to thank Cik Norhayati Bt. Mohamad Noor, our supervisor and instructor who give her full support to this project. She is actually the person who gives all the information and idea, after that, we need to construct it ourselves.

Not forgotten also to all our group members who kindly help us to find and searching the circuit, thought us on how to produce it, and also gave some ideas on how to do the project. Without their support, we cannot to finish it on time.

We also would like to thank our parents who for their encouragement and support on this project. Lastly, there are stills many people that involve in this project directly or indirectly that we cannot mention their name here, thank you very much.
ABSTRACT

The advancement of technology has given many benefits to human being and universe as a whole. We can see obviously the changes in the engineering and medical field. The evolution of electrical engineering knowledge has give create many changes to the world. The creation of transistor in the middle of 20th century by three scientists has a very big impact to the revolution of computer, communications, and digital.

One of the technologies of digital, this project that use the digital system is converted. Digital azan clock is similarly like the alarm clock but is produced an azan when the set of time is triggered. Besides, it must set on five different times to produce an azan on five times that are Subuh, Zuhor, Asar, Maghrib, and Isha’. Then using software sets the time of prayer.
# TABLE OF CONTENTS

Acknowledgement  
Abstract  

CHAPTER

1 INTRODUCTION  
1.1 Overview  
1.2 Scope Of Work  
1.2.1 Gantt Chart  
1.2.2 Flow Chart  
1.3 Objective Of The Project  

2 PROJECT IMPLEMENTATION  
2.1 Project Description  
2.2 Project Flow Work  
2.2.1 Operation of Johnson Counter  
2.2.2 BCD-to-7 Segment Decoder  

3 CIRCUIT DESIGN AND OPERATIONS  
3.1 Circuit Design  
3.1.1 Block Diagram  
3.2 Circuit Programmable Software  
3.2.1 Circuit Maker Software  
3.2.2 Circuit with Seven-Segment Display.  

4 HARDWARE CONSTRUCTION  
4.1 Hardware Construction Procedures  
4.1.1 PCB Making  
4.1.2 Etching  
4.1.3 Different Method of PCB Construction  
4.1.4 Component Soldering  
4.1.5 Really Clean  
4.1.6 Temperature  
4.1.7 Solder Coverage  


CHAPTER 1

INTRODUCTION

1.1 Overview

The Digital Azan Clock is design for every Muslims to know the time for praying by hear the Azan when it triggered the azan reader at the specific time. It triggered five times a day, for Subuh, Zuhor, Asar, Maghrib, and Isha'. The device also can be set as a talking clock, with a large time display and an Azan system that provided verbal as well as visual alarms and prompting. It is essential to a group of family that needs to know the Azan time without checking to a calendar, hearing the message from radio or television and etc. A family will sets the time alarms, reminder configurations, and prompting messages themselves.

A substantial number of its clients, when they lived independently in their own apartments, or home need to be remind about pray times. The residents do not like to be a bother and generally seek technology and strategies to remain as independent as possible.

The Digital Azan Clock was design for high reliability. While it may have been possible to write a custom application to run on commercially available Pocket PCs or PDAs these devices are neither reliable nor consistent enough used to be for this application and they often cannot produce audio messages with sufficient volume. The Digital Azan Clock overcomes these limitations by utilizing dedicated electronics designed specifically to meet project requirements. The Digital Azan Clock was design based on staff and resident input. It is a relatively sophisticated device and was schedule as a two-semester project.