

SMART BUS STOP

AHMAD ZAKWAN BIN MOHD NOR

FAIQ IZZUDDIN BIN ISADIN

A project report submitted to the Faculty of Electrical Engineering,
Universiti Teknologi MARA in partial fulfillment of the requirements for the award
of Diploma of Electrical Engineering.

FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA
MALAYSIA

SEPTEMBER 2015

ACKNOWLEDGEMENT

Alhamdulillah, praise to Allah for giving us the chance to gain our experience and professional skills from this final year project which is usually called as FYP. This final year project is meant a lot for us so that we could see how an electronic project does actually. Thank to the Universiti Teknologi Mara (UiTM) for having this final year project for us to improve our practical and skills for the future ahead.

Next, would like to thank the lecturers who have been helping us before and until the end of the final year project end. Lecturers have helped us on the form and flow project that would be present for the final presentation. They also giving us advise so that we could make a suitable and correct project for this final year project. With the help of the lecturers the project we could done correctly and properly by according to the flow.

Besides that, we also would like to thank our parents and siblings for support us from the start of the final year project until the end of it. They always had been there when we needed them. They have been motivating us to always focus and patient while doing the project.

Furthermore, would like to thank my friends which have helped us to make a correction while doing the report and hardware which is for the final presentation. We had made a good teamwork to complete all of the work and settle it before the deadline.

ABSTRACT

Bus stop is a place where people use to wait for any transportation to arrive. Typical design of a bus stop is not very comfortable for people. It doesn't have any proper fan and lighting. Sometime people don't notice transportation is arriving at the bus stop. At night without any lighting the bus stop will be so dark and crime rate can increase at bus stops. Thus this project is created to ease and give comfortable for people who are waiting for the public transportation at the bus stop. When people come to the bus stop, ultrasonic sensor will detect and activate LDR sensor and temperature sensor. LDR sensor will switch on the lamp during night time. Next, temperature sensor will activate the fan during in hot condition. Fan and lamp will automatically switch off when there are no people at the bus stop. Besides that, the arrival of the bus can be detects by using transceiver. When the bus is near the bus stop, transceiver will activate the buzzer so that people will notice the bus that will arrive. It is hope that this project can create comfortable surroundings to people that is using the bus stop to wait for any public transportation.

TABLE OF CONTENTS

APPROVAL SHEET	ii
DECLARATION OF ORIGINAL WORK	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF FIGURE	viii
LIST OF TABLES	ix
CHAPTER 1	1
INTRODUCTION.....	1
1.0 INTRODUCTION.....	1
1.1 BACKGROUND STUDY.....	1
1.2 PROBLEM STATEMENT.....	2
1.3 OBJECTIVES.....	2
1.4 SCOPE OF STUDY.....	2
1.5 PROJECT CONTRIBUTION.....	3
CHAPTER 2	4
LITERATURE REVIEW.....	4
2.0 LITERATURE REVIEW.....	4
CHAPTER 3	11
METHODOLOGY.....	11
3.0 INTRODUCTION.....	11
3.1 Circuit Operation.....	13
CHAPTER 4	22
RESULT AND DISCUSSION.....	22

CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

Smart bus stop is design to ease and distribute people who are using bus stop while waiting for public transportations.

1.1 BACKGROUND STUDY

This project is called Smart Bus Stop. Bus stop is a place for people to wait for public transportation such as taxis and bus. Normally, society prefers to use their transportation rather than using public transportation because of the comfortableness while using their own transportation.

In this project, Arduino microcontroller is use as data processing center. Sensors are used to detect people at the bus stop to activate fans and lamp automatically depends on its condition. Furthermore, this project also uses transceiver to activate buzzer when the bus is near the bus stop.