

# WIND FAN CHARGER

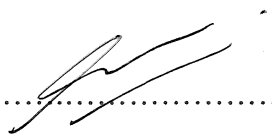
WAN AFIFI BIN WAN ZAIN  
TENGKU MUHAMMAD IZZAT BIN TENGKU MAHMOOD  
WAN MUHAMMAD HARSIFF BIN WAN ZIN

A project report submitted in partial fulfillment of the requirements for the award of the degree of Diploma of Electrical Engineering (**Electronics** / Telecommunications / Instrumentations / Computer)

Faculty of Electrical Engineering

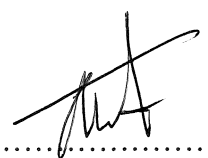
Universiti Teknologi MARA

“It is declare that this report entitled “*Wind Fan Charger*” 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 :  .....

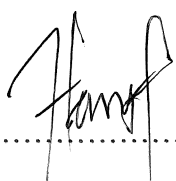
Name : WAN AFIFI BIN WAN ZAIN

Date : 5/4/15 .....

Signature :  .....

Name : TENGGU MUHAMMAD IZZAT BIN TENGGU MAHMOOD

Date : 5/4/15 .....

Signature :  .....

Name : WAN MUHAMMAD HARSIFF BIN WAN ZIN

Date : 5/4/15 .....

## **ACKNOWLEDGEMENT**

Alhamdulillah and thankful to Allah for giving us strength and ideas to finish the project although we faced a lot of problem during making progress of this project. This final report was prepared by students of Electrical Engineering course, Universiti Teknologi Mara (UiTM) at Dungun, Terengganu. This report also is based on methods and knowledge we get from being electrical engineering students.

First of all, we would like to express our deepest thanks to our supervisor, Madam Nuraiza binti Ismail for his guidance and advice when completing this project for this project proposal. We also want to thanks the lecturers and staffs of Electrical Engineering for their cooperation, guidance, and information.

Deepest thanks and appreciation to our families, seniors and society who involve in this project. The last but not least is very special thanks to our entire friends for provide us great assistance in term of materials, effort and ideas. Finally, special thanks also to everyone who involve in directly or indirectly during completing this task. Hopefully, may Allah reciprocating their effort and may always be under His blessing for now and always. InsyaaAllah.

Thank you

## **ABSTRACT**

Wind Fan Charger is a project that uses a concept of generating electricity that is harvested from standing fan rotation. It utilizes natural source from wind energy to operate. When the fan is turned on, wind energy will rotate four blades of motor generator that are converted to an electrical energy. The motor generator produces 12 to 15 volts. The output voltages is designed for three applications; arduino input, DC voltage supply and AC voltage supply. The arduino is used to in order to display an input voltage and percentage charging progress. In order to charge gadget like smartphone, the user can choose both option either to connect to USB port that provide DC voltage or directly plug in to AC source. The advantage of this project is to prevent energy waste if someone forgets to switch off the fan. Besides, it helps to reduce the electricity consumption due to charging process which uses the reusable energy from wind.

## TABLE OF CONTENTS

CONTENTS	PAGE
DECLARATION.....	ii-iii
DEDICATION.....	iv
ACKNOWLEDGMENTS.....	v
ABSTRACT.....	vi
ABSTRAK.....	vii
TABLE OF CONTENTS.....	1
LIST OF FIGURES.....	3
LIST OF SYMBOL.....	5
LIST OF ABBREVIATIONS.....	5
CHAPTER 1 INTRODUCTION.....	6
1.1 Introduction .....	6
1.2 Problem Statement.....	7
1.3 Objective.....	8
1.4 Scopes.....	9
CHAPTER 2 LITERATURE REVIEW.....	10
2.1 Ability.....	10
2.2 Component Used.....	11
CHAPTER 3 METHODOLOGY.....	17
3.1 Operation Circuit.....	17