



UNIVERSITI TEKNOLOGI MARA

PORTABLE POWER SUPPLY VERSION 2

MOHD FAROQ BIN MOHD ROSNI	2008410612
AMIR HAMIZAN BIN AHMAD SHAHIMI	2008276458
ABDUL HALIM BIN ANUAR	2008234234

SUPERVISOR: MADAM RINA BT ABDULLAH

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
University Technology of MARA

APR 2011

"I declare that this report entitled "*PORTABLE POWER SUPPLY VERSION 2*" is the result of my own group research except as cited in the references. The report has not been accepted for

CONTENTS

CHAPTERS	LIST	PAGE
	ACKNOWLEDGEMENT	i
	ABSTRACT	ii
1	INTRODUCTION	1
1.1	PROBLEM STATEMENT	2
1.2	OBJECTIVES	3
1.3	SCOPE OF WORK	4
2	LITERATURE REVIEW	5
2.1	RESEARCH	5
2.1.1	How to produce electricity by wind turbine	5-13
2.1.2	Advantage of wind power	14
2.1.3	Disadvantage of wind power	14
3	METHODOLOGY	15
3.1	FLOW CHART	15
3.2.1	IMPLEMENTATION OF THE CIRCUIT	16
3.2.2	PORTABLE POWER SUPPLY CIRCUIT	17
3.2.3	CIRCUIT OVERVIEW	18-19
4	PROJECT RESULT AND DISCUSSION	20
4.1	RESULT	20-21
4.2	DISCUSSION	22
5	ACTIVITIES	23-25
6	FUTURE	26
7	CONCLUSION	27
8	REFERENCE	28
9	APPENDIX	29
9.1	Data sheet of transistor BC547	29-30
9.2	Data sheet of LED	31
9.3	Data sheet of transistor BD140	32-34
9.4	Data sheet of IN4007	35-36
9.5	Data sheet of LM317	37-42

CONTENTS

FIGURE	LIST	PAGE
<i>Figure 1.0</i>	Example of a blade	4
<i>Figure 1.1</i>	Diagram of a dynamo	4
<i>Figure 1.2</i>	Battery	4
<i>Figure 3.1</i>	Flowchart	15
<i>Figure 3.2</i>	Fan as the input	16
<i>Figure 3.3</i>	Circuit	17
<i>Figure 3.4</i>	Testing circuit(ISIS)	18
<i>Figure 3.5</i>	Actual circuit (ISIS)	18
<i>Figure 3.6</i>	All the circuit	19
<i>Figure 3.7</i>	All the circuit	19
<i>Figure 4.0</i>	Soldering the component	20
<i>Figure 4.1</i>	Testing the connection	20
<i>Figure 4.2</i>	Testing circuit	21
<i>Figure 5.0</i>	Soldering	23
<i>Figure 5.1</i>	Checking the connection	23
<i>Figure 5.2</i>	Making the hardware	24
<i>Figure 5.3</i>	Making the hardware	24
<i>Figure 5.4</i>	Attaching the blade	25
<i>Figure 5.5</i>	Complete Hardware	25

ACKNOWLEDGEMENT



Alhamdulillah, thanks to Allah with His blessing we are able to complete this final year project just in time. We had gone through many obstacles and frustration as well as joy along us doing this project. With Allah always by our side, we are to finish this project.

A very special thanks to our supervisor, Madam Rina bt Abdullah that guide us a lot in order to make this project came to true. Madam Rina always gives hers commitment and advice to us. We had owed her so much. Although we always see her if we have any problem regarding this project, she always gives his hand without any problem. We had taken a lot of her free time, and for that we are thankful.

Last but not least, we would like to dedicate our thanks to our beloved parents and all of our family that also contribute to the success of this project. They had given us moral support as well as their money to help us to accomplish this project. We also would like to say a very thank you to others group members that had given pretty much dedication and a helping hand for us to completed this project.

ABSTRACT

Nowadays, electricity is the most important energy in our daily life. Electricity applied in daily life for most product to make life easier. There are many ways to generate electricity. For example by using hydro power, solar generator and wind turbine.

In this project, our group will explain and execute this project to generate electricity by Portable Power Supply using wind turbine. Wind turbine is an easy way to generate electricity and give a lot of benefit to mankind and this kind of method of generating electricity is more nature's friendly. Sometimes when the users of an electronic gadgets or devices wanted to use their stuff but they are far away from the place that provides the electric power supply, they will have a big problem. Especially in the case of emergency, for example they want to make a call using their mobile phone for an accident or incident that never been expected, but the mobile phone cannot be used because of the battery is empty. In this case will bring a big problem for the users to find the power supply to charge their mobile phone

The Portable Power Supply is a wind power center, it can handle all power functions for a battery charged 6V DC. It can be used at anywhere we are especially at the beach. For our PPSV2 have one input and three outputs where the three outputs is connected to dummy, load, and battery charger. By using this PPSV2 as a wind turbine devices, long battery live is ensure. As we know, the wind is a renewable source. PPSV2 we can also carry along wherever we are, especially for outdoor activities. Besides, we used wind energy to replace ac power supply. In other word, we can say that our project can reduce cost and nature's friendly.