

FACULTY OF ELECTRICAL ENGINEERING

MARA UNIVERSITY OF TECHNOLOGY

FINAL REPORT OF DIPLOMA PROJECT

ELECTRONICS ANEMOMETER

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1.0 INTRODUCTION

1.1 OBJECTIVES OF PROJECT

- Identify the method to solve a project.
- Choose the correct methodology.
- Group discussion.
- Practical and hand on.
- Preparation for project report.

1.2 APPLICATION

1. To detect speed of wind in the track sport arena such as 100 meter.
2. Applying in job area such as fisherman, sailor and fireman.
3. Also important for fireman that use at fire engine ladder for safety when to safe person.

1.3 PROJECT OVERVIEW

In many application, we use sensor to measure the quantity that they are sensitive to temperature, humidity, strain and etc. In this project we use reflective photosensor to measure the speed of wind. We choose this sensor because it simple to get at market it has many advantages such as low cost, simple to contract , and it suitable to hardware we use.

For the hardware we use cup anemometer because it very suitable compare the weather in Malaysia. These cup anemometer probably the most familiar and operate by the wind blowing four cups around on a spindle. In a variation on the separate cup concept, the cups are replacing by 90 degree arrangement. Cup anemometer suffer from stalling at very low speed due to friction, i.e. they will not start until a particular minimum wind speed.

We had choose this project because it how to measure the wind speed that important for security and safety as fireman, fisherman and sport man. Our project divide by two main part. First the circuit and homemade anemometer assembly. We had choose cup anemometer because it flexible and compactable.

This circuit have five main important part which start from sensor, amplifier, counter, digital to analogue converter and timing circuit.