

**FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA TERENGGANU**

FINAL REPORT OF DIPLOMA PROJECT

**AUTOMATIC WATERING PLANT USING SOLAR
SEP 2012**

STUDENTS

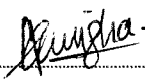
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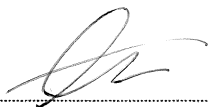
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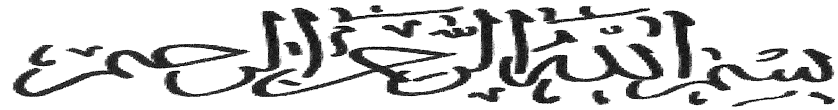
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“I declare that this report entitled “AUTOMATIC WATERING PLANT USING SOLAR” is the result of my own group research except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.”

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ABSTRACT

Solar watering plant is using solar rather than power supply, and it is function automatically. It was invented after analyzing the normal process of watering plant is not effective and cause difficulty, time consuming and water inefficacy. This project is attempted to overcome all the problems. It consist of three main circuits, Solar Charger Controller, Soil Moisture Sensor, timer.

The heat from the sun light is absorbed and being converted into electrical energy in the solar cells which will be stored in a 12V rechargeable battery to provide power to the whole system. Solar cells or photovoltaic cells are arranged in grid like pattern on the surface of the solar panel. These solar voltaic cells collect sunlight during the daylight hours and convert it into electricity. The purpose of using solar charger controller is because of it is designed as to take a DC charge within a range of amperage and voltage, and uses the power to charge a battery. A charge controller is very similar to a battery charger except that it uses AC power input rather than DC power input when used in this manner.

Charger controllers are often seen in grid tied arrangements as a solar, DC array battery charger. Soil moisture sensor is the sensor that control the watering process based on the dampness of the soil.

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