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FINAL REPORT OF DIPLOMA PROJECT

CAR VOLTAGE AND TEMPERATURE GAUGE

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Lastly, we hope that this project will works successful without any problems as plan theoretically.

ABSTRACT

Car Voltage and Temperature Gauge is a combination of two projects by the purpose of measuring devices design to measure the temperature of the water in the radiator of car and the voltage of car battery. This project also will keep the driver alert about the condition of their car. It will show the reading of temperature and voltage by the 5 digit seven segment display. The voltage supply of this project is came from the battery of car. The sensor of Car Temperature Gauge is the diode temperature that is placed in the water of car radiator. The resistance or the diode will change when the temperature of water increasing or decreasing. Meanwhile, the sensor of Car Voltage Gauge is the capacitor. It's charged up by the car's voltage. The reading of temperature of this project is in degree Celsius and the reading of voltage is in volts.

However Car Voltage and Temperature Gauge **will not operate** simultaneously. They will separate by the switch that the driver needs to **change the mode** of switch to get the reading needed. The cost of this project is about RM 100.00.

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CHAPTER 1

INTRODUCTION

1.1 Background

Nowadays many vehicle especially car are monitored by digital devices to inform the driver about the condition of their car. The speed of the car and the capacity of oil are the example of information that driver can get from the devices already install onto the car. But the information is not enough to run the car in higher performance and longer period of used. So, we want to provide some additional information about the car, which is voltage and temperature level. To give the information needed by the driver we implement the Car Voltage and Temperature Gauge. This device will monitor voltage and temperature level the car, and presenting the information in digital form to alert the driver.

Car Voltage and Temperature Gauge is the combination of two projects (2 in 1 project/dual mode) that is used to measure car voltage and temperature of the radiator. This project is helpful to anyone who drives on automobile. Actually this project is a separate project, but we found that both project and circuit have a lot of common. The components and circuitry are quite same, so we just have to add several switches to the circuit to change the mode (voltage or temperature measurement). Using switches in this project can save electronic component and minimize the budget to implement the circuit. Although we try to limit the cost for this project we still have to pay around one hundred ringgit to complete this project.

Car Voltage Gauge is an electronic device design to measure voltage of the car battery. It used to warn the driver about the car battery voltage. By knowing the car battery voltage, driver will know whether the voltage of the battery is high enough or need to charge. This information will help driver to avoid their car from having difficulty or cannot start because of low battery power. The Car Temperature Gauge is an electronic device design to measure temperature at the radiator. It used to monitor the temperature of water in the radiator. By knowing the temperature of the radiator, it helped the driver to use the car efficiently and safely. If the water is too hot, it will affect the cooling system and car will not move smoothly. The information will help the car from usually breaking down.