DEPARTMENT OF ELECTRICAL ENGINEERING
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PROGRESS REPORT OF DIPLOMA PROJECT

LCD DISPLAY OF TEMPERATURE

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ACKNOWLEDGEMENT

Assalamualaikum wrh.wbt.

By the name of Allah SWT the most gracious and merciful and to our prophet Muhammad SAW. We love to wish 'Alhamdulillah' for giving us life and good healht to finish this project report due to the time given.

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The precious experience and knowledge that we have gained while we were finishing our project will help us to face the real challenge and competition in working field although there are many problems that we have to face due to finish this project report. Without all the help, guidance from each one above we do not know whether our project will give the bad or good performance.

ABSTRACT

This final project is one of the parts of course structure for student in this final year as a compulsory. The purpose of doing this project of 'LCD Display Temperature' is to produce student main electronic with avery high skills and able to handle a responsibility that have been given like this project. We should be prepare to deliver a creativity ideas and good interpersonal image to our future employer. By doing this project, student can apply all their knowledge, capability, creativity and skills to purpose, create and trobleshoot the project. It is because all of a the theory and skills that we learned from this project will be used in the future. This project is valueable and acceptable for an even use, despite it can be used daily.

We present a ' LCD Display Temperature' that have two different stages. First stage is the PIC programming, and second stage is the printed cicuit. In the circuit, we have used the PIC 16F84 because it is a self- contained serial terminal. This microcontroller is a microprocessor. It contain Internal RAM (68 byte), ROM (EEPROM Data Memory -64 byte), FLASH Memory (1024 byte), and 13 I/O pins (direction controlled individually). Another component that play important part in this circuit is a LCD (2x16). The LCD display shows a Farenheit temperature reading and we have chose an LED backlight display to suit our circuit.

This project most probably being target to all users that need to make their life more convenient and with this temperature controller their dreams will come true.

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CHAPTER 1 : INTRODUCTION

1.1 BACKGROUND THEORY

The LCD display temperature is a control by peripheral devices using PIC16F84 microcontroller chip, an LCD character display and very little else. As we all know that LCD or liquid crystal display is almost seen everywhere ranging from digital watches to microwave ovens, from audio systems to PDA's and even some high end servers. This LCD is a 4 line by 16 character intelligent LCD display. Displays from 1x 8 to 4 x 16, and anything in between are compatible.

PIC or known as Peripheral Interface Controller is the IC which was develop to control peripheral devices, alleviating the load from the main CPU. Compared to a human being, the brain is the main CPU and the PIC is equivalent to the autonomic nerves system. The PIC has calculation functions and memory, and is controlled by the software. However, the through output and the memory capacity are low. Depending of the kind of PIC, the maximum clock operating frequency is about 20MHz and the memory capacity (to write the program) is about 1K to 4K words.

Programming 'in circuit' means the PIC is progarmmed while installed in the project board (or target board) under development. If you simply want to progarm a 16F84 you don't even need these components and all the target board must do in these case is supply the PIC with 4.5 volts, all oher PIC pins should be connected as required by the project.

The cicuit requires the 4.5 volts DC power supply at a few miliamps. Although the PIC16F84 can run from 4 to 6 volts, the LCD contras various wildly with voltage. Timing is based on the crystal but it can be replaced by ceramic resonator to get a more adequate accuracy.