PIC16F84 BASED MORSE CODE READER

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Abstract

The principle objective of this thesis is to design Micro controller Based Morse Code Reader (MBMCR) using a Programmable Interface Controller (PIC) from Microchip. The PIC controller simplifies the overall task by providing a useful used because it is the only one supported with an EEPROM. Also, it provides the necessary functions that are associated with the system design.

The system design is an integration of both hardware and a program element. The hardware portion consists of four main parts that is transistor amplifier, NE 567 Tone Detector, PIC 16F84 and LCD HD 44780. The software occupies more important part in this project which is supported by a PIC micro controller assembly language. This interfacing devices is included in the PIC micro controller that make communication possible between the PIC micro controller and the computer when programming. Though software program can be written using Basic or C- language, the assembly language supported by the PIC is chosen because It uses less program space of the already limited memory space.

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CHAPTER 1

INTRODUCTION

1.0 Overview of project

This report represents the project in designing a Micro controller Based Morse Code Reader (MBMCR) using Programmable Interface Controller (PIC) from Microchip. The PIC controller simplifies the overall tasks by providing a useful used because it is the only one supported with an EEPROM, also it provides the necessary functions that are associated with the system design. It is easy programmable, even when installed in the system.

1.1 Objectives

Very often in many designs, designers do not use all of the available resources of a micro controller. What a typical design needs is sufficient memory, parallel and serial input/output lines to communicate with the external devices.

PIC has being used as the micro controller in many industrial designs such as servo controller, LCD interface driver, sine wave generator, radio control system, PWM generator and etc. This PIC is slowly replacing the microprocessor as the CPU because of its cost, size and the speed.

The principal objectives of this project are to design a PIC16F84 Based Morse Code Reader using PIC as its Central Processing Unit (CPU). It was designed to operate as a training kit to assist the new beginner to learn about Morse Code easier and faster. This trainer can be additional source of learning to assist them during the learning session.