INTELLIGENT HOME APPLIANCES CONTROL SYSTEM (IHAC)

Project Ilmiah is presented in partial fulfillment for the award of the Bachelor in Engineering (Honour) (Electrical)
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ABSTRACT

The arrival of the next millennium requires the home appliances to become more intelligent and sophisticated. This paper describes an Intelligent Home Appliances Control System (IHAC) which uses microcontroller to perform the controlling process and decode the signal transmitted from the Infrared (IR) remote control (RP420) via parallel port. A simple microcontroller i.e. PIC16F84 from Microchip Corporation has been chosen to implement the decoding process, as it is suitable for the project and easy to use. A simple appliance i.e. light dimmer has been chosen to illustrate the application of the system. Each modules of the system had been tested successfully.

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CHAPTER 1: INTRODUCTION

1.0 Objectives

The objective of this project is to design and develop an Intelligent Home Appliances Control System. The development stages includes a study on various types of microcontroller, control scheme and the design of IR receiver for remote control, the interfacing circuitry and application circuit to illustrate the operation of the Intelligent Home Appliances Control System.

1.1 Introduction to the Project

The rapid increase in the utilization of consumer electronic products in the home and other establishment demands on the installation of an automatic control system, which can control the switching and operation of various home appliances. Commonly the control system is fixed for certain purpose only, such as for lamps, fans, TV, garden lamps and others. The capabilities of commercially available timers and switching are also limited.

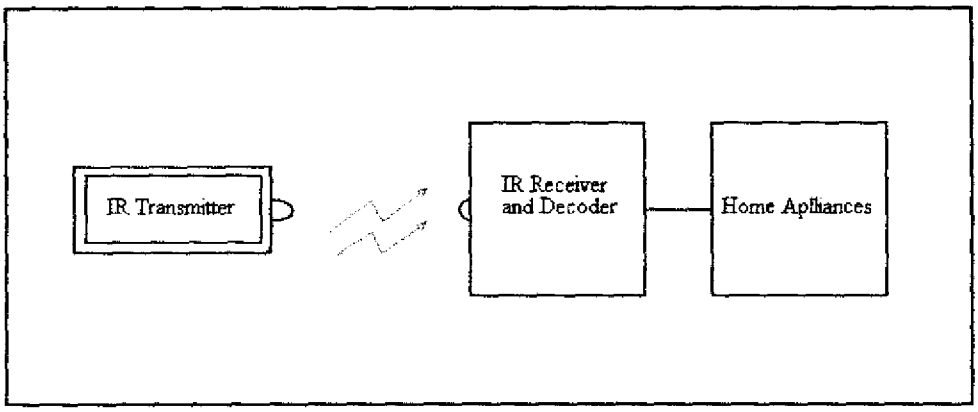

Figure 1: The block diagram of the Intelligent Home Appliances Control system (IHAC).

The proposed Intelligent Home Appliances Control System (IHAC) shown in figure 1 comprises of remote control, infrared receiver and microcontroller. The system uses