AUTOMATIC FISH FEEDING SYSTEM DESIGN USING PIC MICROCONTROLLER

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ABSTRACT

This paper describes the design of an automatic fish feeder [1] and light controller for an aquarium using Peripheral Interface Controller (PIC). This paper will cover both hardware and software part. The feeder must dispense food twice a day; once in the morning and once in the evening at specified times [2]. The lights of the aquarium must be turned on at a preset time in the morning and then turned off at night. This project was applied to feed certain kind of fish food only. The program is composed by three main parts: the initialization part, work mode setting part, and feeding part. All simulation and test was done using the MPLAB IDE version 7.41 programming.

Keyword

Automatic Fish Feeder, PIC Microcontroller, PIC16F84A, MPLAB IDE programming.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Fish petting is one of the famous hobbies all around the world that people would like to do during their free time. Fish needs to be fed at least once a day and not more than twice a day. Some people are too busy doing other work and have no time to feed their fish, or sometimes even forgot about it. Some of them have to pay someone else to come to their home and feed their fish while they are away.

The main purpose of designing an automatic fish feeding system is to solve these people's problems in feeding fish on time, especially those whom often away. The automatic fish feeder is used to automatically feed the fish everyday in time. Normally, fish is fed twice a day; once in the morning and once in the evening at specified time.

1.2 Problem statement

Automatic Fish Feeding system is used to automatically feed fish everyday to solve the feeding time of the fish if one's is not available. Many existing automatic fish feeders sold in market today normally are using a switch and analog watch to set the time to feed the fish daily. A DC motor will be used to spin the feeder food box to drop the food into the water. However, the available system cannot adjust the amount of fish food to be fed to the fish in the aquarium.