HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN & CONSTRUCTION OF AN ELECTRONIC TIMER

E/1361

BY: KTORIDES LAZAROS

JUNE 2004

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Development of a Countdown Timer

By

Ktorides lazaros

Supervisor: Mr. M. Kassinopoulos

Project Report Submitted to

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SUMMARY

Title: Development of a Countdown Timer
Author: Ktorides Lazaros
Supervisor: Kassinopoulos Marios

This project deals with the development of a Timer System (a Countdown timer) suitable for any kind of presentation and be visible to the speaker with some kind of indication-display (light indicator) in order to know when it is time for the current speaker to sit down and let the next person speak and with an optional loud warning beeper gives an audible indication when the time is up. A number of different circuits were carefully studied and considering our objectives and their specifications we concluded. After the selection the positive film and the P.C.B.were developed, the components were located in the appropriate locations and a test was followed to carry out all the different response of the circuit.

The project also includes:

- The appropriate explanations and specifications of each different kind of timers
- A briefly explanation for the components used in our circuit
- A flowchart of the main program running inside the IC and the structure of the interrupt routine

It is almost certain that if someone reads this project will gain a lot of information about timers and have an overall idea about what there is in the market about timers.

INTRODUCTION

In the last few years an increment at the Electronic industry has taken place for the advanced timers in order to provide reliable accurate time.
This increment at the Electronic industry is affected by the advance of the technology and we can set eyes on the new timer inventions that are based on it.

As I was working to the local channel MEGA, and as I was wandering around the different audio sections, then suddenly I was in front of a live presentation of different debaters that it was in progress. While the presenter was watching the audience and the debater was speaking, the monitoring timer (a countdown timer) reached zero and the presenter didn't notice that the time was overtaking of the ordinarily and until he understand what happened they got out of programmable time. The other debaters noticed what happened and they started complaining for this unfairness.

This event given me the idea in order to built a Timer System (a Countdown timer) suitable for any kind of presentation, such as timing public speakers, at meetings and conferences. Also to be visible to the speaker with some kind of indication-display (light indicator) in order to know when it is time for the current speaker to sit down and let the next person speak in order to be fair timing presentation to all the speakers. An optional loud warning beeper gives an audible indication when the time is up, for the case that the speaker haven't noticed that the time is finished it will hear a smooth beep.

With this presentation timer system we can vanish the problem we have seen at the station. This kind of timer may be used in several ways for the needs of the user.