UiTM

MARA UNIVERSITY OF TECHNOLOGY

BUKIT MERTAJAM CAMPUS

FINAL PROJECT

DIPLOMA IN ELECTRICAL ENGINEERING

FACULTY OF ELECTRICAL ENGINEERING

PROJECT TITLE: MUSICAL DOOR-BELL

SUPERVISOR: CIK TANIZA BINTI TAJUDDIN

NAME: MOHD AZUAN BIN ABDUL AZIZ

UiTM NUMBER: 98137647

NAME: ROSLAN BIN BAKAR

UiTM NUMBER: 98133721

TABLE OF CONTENTS

NO.	TITLE	PAGE
	ABSTRACT	i
	ACKNOWLEDGEMENT	ii
1.	INTRODUCTION	1
2.	OBJECTIVES	2
3.	CIRCUIT DIAGRAM	3
4.	CIRCUIT OPERATIONS	5
5.	IC TIMER 555	7
6.	IC 7493	10
7.	RESISTOR	15
8.	CAPACITOR	18
9.	SPEAKER	23
10.	HARDWARE DEVELOPMENT	
	➢ Printed-circuit board construction	25
	➢ Planning and layout	26
	➢ Printing and etching technique	27
	➢ Soldering process	28
	➢ Gantt chart (project 1)	30
	➢ Gantt chart (project 2)	31
	➢ Implementation for project 1	32
	➢ Implementation for project 2	33
11.	CONCLUSION	35
12.	REFERENCES	36
13.	DATA SHEETS	37

ABSTRACT

A MUSICAL DOOR-BELL

The musical door-bell generates 16 different notes in three seconds and repeats the cycle for about ten seconds when the 'press switch' is pushed momentarily. This circuit consists of clock oscillator using the popular timer IC 555, 4 bit-binary counter 7493 and digital-to-analogue converter using four resistors. Basic audio oscillator is using a timer and an electronic delay switch. The clock oscillator is construct around IC 555. This clock output is fed to the 'clock in' of the 4 bit-binary counters or divide-by-sixteen counter. Whenever the pulse is applied at clock input, it produces a 4 bit-binary equivalent code at its four output lines. A small 8-ohm speaker connected across the output of this audio oscillator produces the musical tones.

ACKNOWLEDGEMENT

With the name of Allah s.w.t the most gracious and most merciful, and to our prophet Muhammad s.a.w and his family. Thanks to Allah s.w.t for giving us an opportunity to complete this project successfully. We would like to express our deep sense of gratitude and appreciation to our project advisor, Cik Taniza Binti Tajuddin and to all of our lecturers fro their help, guidance and patience during the period the completing this project.

We are grateful to all of them and we will never forget what they have done to us. Only Allah s.w.t could pay back their kindness and we will appreciate it until the rest of our life.

Lastly, also thanks to our friends and to our lovely parents for giving us moral support and financial to do our project. Without them, we can't complete this project...thank you very much...

Azuan – roslan UiTM Penang...

Introduction

A musical door-bell is actually circuit that some people use for their house to knowing the people who come to their house. It easy to use and so cheap. It has function when the 'press switch' is pushed momentarily. If you fed up with the single-tone alarm from your digital clock, you can slightly modify the circuit and use it as a musical for your clock. This unit does not require a separate power supply as it can run off the digital clock supply.