

FINAL YEAR PROJECT REPORT
DIPLOMA IN ELECTRONIC ENGINEERING
SCHOOL OF ENGINEERING
MARA INSTITUTE OF TECHNOLOGY
SHAH ALAM, SELANGOR DARULEHSAN.

DIGITAL
SCORE DISPLAY BOARD

BY:

JAMALIAH BINTI WARIS

I / C ITM : 88322511

ROSNARINA BINTI YAHYA

I / C ITM : 87321871

MAY 1991

PREFACE

In the study of electronic, it always can be found practical experience to be invaluable stimulant and confidence builder. To build this project, one must first select devices to meet the requirement. There is a need for a clear but concise introduction to such circuits.

This report describes a Digital Score Display Board, implement TTL integrated circuit and each displayed by 7 segment LED. There are four basic sections is dealt according to each function. Industrial are discussed which illustrate the versatility of the design and advantages of the TTL - design, low power and dissipation, low part count and etc.

We hope that this report will be usefull to those who like to proceed their knowledge on Digital Display Score Board. This report contains some informations, theories, circuit of Digital Display Board, and the performance of some electronics components used in the

ACKNOWLEDGEMENT

In the name of Allah, the beneficent, the merciful we pray to Allah for gives us patient in completing our project.

We would like to take this golden oppurtunity to express our most appreciation and heartfelt gratitude to Encik Sham Ghani, as our project adviser, who has encourage and help us a lot from beginning up to the end of our work.

We also would like to forward our special thanks to all lecturers and technicians who gave us valuable informations, various suggestions in improving yhe project and give us full coorperation towards the success of our project without which our project would be doomed to failure.

Last but not least, our special thanks to our parents who give us unrelenting encouragement, to our friends and many others who some how or other had helped us directly and indirectly in successful of project.

TABLE OF CONTENTS	Page
Preface	i
Acknowledgment	ii
Table of contents	iii

CHAPTER

1.0 introduction	
1.10 iNTRODUCTION	1
2.0 THEORY RELATED TO THE SYSTEM	
2.1 Encoder	4
2.2 Decoder	6
2.3 Shift Register	11
2.4 Display Section	17
2.41 BCD - to - Segment	19
2.42 7 - Segment LED Display	1
2.5 Monostable Multivibrator (one- short)	1
3.0 CIRCUIT OPERATION	
3.1 Encoder, decimal to BCD	16
3.2 Digit Controller	20
3.3 Triggered Pulse Generator	21

1.0 INTRODUCTION

This digital scoreboard gives a 4 - digit LED (7 - segment) display of the score in a game being played. The circuit being universal in nature, it can also be used as a token number indicator in hospital and clinics.

Here the score to be displayed is entered through a key board pad which is similar to the one use for a simple calculator. Every time a new score or number is to be displayed, the previous number has to be cleaned first pressing the 'clear' key.

The whole display board should cost around \$150/to build, including power supply. This is a very low price compared to the commercially available similar digital electronic token number indicators or score boards.