DEVELOPMENT OF THE HARDWARE OF A COMPUTER AIDED MUSICAL INSTRUMENT LEARNING SYSTEM

Project Report Submitted by:

CHARALAMBOUS CHRISTIANA

In Part Satisfaction of the Award of Diploma of Technician Engineer in Electrical Engineering of the Higher Technical Institute CYPRUS

Department of Electrical Engineering HTI

June, 1994

ACKNOWLEDGMENTS

I wish to express my sincere thanks to my project supervisor Dr CC Marouchos, lecturer at HTI, for always being willing to help me and guide me, throughout this project.

I would also like to thank my mother for her support, and all the persons, who helped me in any way throughout this project, especially my classmate Odysseas Odysseos, for his valuable help.

Finally I would like to thank Sophie and Dinos for their assistance.

CHARALAMBOUS CHRISTIANA

3rd year electrical engineering student, HTI

SUMMARY

The objective of this project is to enable somebody to play a song on a musical instrument without having a previous experience.

This is achieved by connecting the output port of a computer to a musical instrument where LEDs' are inserted at the touch points.

The project is based on the design of the necessary interface hardware between the computer and the system.

The components used were TTL and High Speed CMOS integrated circuits. All components are available in local market.

<u>CONTENTS</u>

Pages

ACKNOWLEDGMENTS

SUMMARY

CHAPTER	1 1.1 1.2	INTRODUCTION Block Diagram Description of Computer Output Connector	1 1 3
CHAPTER	2 2.1 2.2 2.3 2.4 2.5	INFORMATION ON COMPONENTS USED Some basics of TTL Printed Circuit Board Representing Intergrated Circuits Computer Output Connector High speed CMOS	6 8 10 15 18
CHAPTER	3 3.1 3.2	DESCRIPTION OF OPERATIONS Operation of the Circuit Operation of the IC's used	20 20 22
CHAPTER	4	DISCUSSION-CONCLUSIONS	27

APPENDICES

REFERENCES