

CONTENTS

CHAPTER NO.	TITLE	PAGE
I	INTRODUCTION TO DAS	
1.1	History	1
1.2	Introduction	2
1.3	Tasks Performed by DAS	7
1.4	Basic Characteristics of DAS	9
1.5	Optional Units of DAS	10
1.6	Designation of DAS	13
1.7	Applications	14
1.8	Block Diagram of DAS	15
1.8.1	Working	24
1.9	Types of DAS	26
1.9.1	Comparison of Different Types of DAS	32
1.10	Selection of DAS	33
1.11	Design Factors of DAS	37
1.12	Sampling	39
II	PC HARDWARE OVERVIEW AND INTERFACING CONSIDERATIONS	
2.1	Introduction	45
2.2	Hardware-BIOS-DOS Interaction	45
2.3	Functional Units in the Motherboard	48
2.4	I/O Port Addresses	51

contd.

CONTENTS

CHAPTER NO.	TITLE	PAGE
	2.5 I/O Channel	54
	2.5.1 I/O Channel Description	54
	2.6 Interfacing Considerations	60
	2.6.1 Device Selection and Data Transfer	61
	2.6.2 Absolute Versus Linear-Select Decoding	62
III	HARDWARE DETAILS	
	3.1 Introduction	64
	3.2 Block Diagram	65
	3.3 Main Specifications	67
	3.4 Circuit Diagram	67
	3.5 Working	74
	3.6 System Timing	77
IV	SOFTWARE DETAILS	
	4.1 Introduction	80
	4.2 A Multichannel DAS	80
	4.2.1 Features	81
	4.3 Flowcharting and Listing of the Program	82
	4.4 Automatic Editing of Recorded Data	99
V	SUMMARY AND CONCLUSIONS	108