List of FIGURES

1.1a)Spectrum of wideband FM and

b)Spectrum of Narrow band FM

1.2.ASK Modulated waveform

1.3.ASK modulator block diagram

1.4.Asynchronous ASK detector block diagram

1.5.Synchronous ASK detector

1.6.FSK modulated signal

1.7.FSK transmitter block diagram

1.8.FSK detector block diagram

1.9.Synchronous FSK detector block diagram

1.10.PCM output signal

1.11.PCM block diagram

1.12.PCM transmitter block diagram

1.13.PCM transmission path block diagram

1.14.PCM receiver block diagram

1.15.Amplitude modulated signal

3.1. Modulation Screen of FM simulator

3.2. Message signal parameters input

3.3. Carrier signal parameters input

3.4. Control buttons of FM simulator

3.5. Result of FM simulator

3.6. Flowchart of FM simulator

3.7. Modulation Screen of ASK simulator

3.8. Message signal parameters input

3.9. Carrier signal parameters input

3.10. Control buttons of ASK simulator

3.11. Result of ASK simulator

3.12. Flowchart of ASK simulator

3.13 Modulation Screen of FSK simulator

3.14. Message signal parameters input

3.15. Carrier signal parameters input

3.16. Control buttons of FSK simulator

3.17. Result of FSK simulator

3.18. Flowchart of FSK simulator

3.19 Modulation Screen of PCM simulator

3.20. Sampling frequency input

3.21. No of bits as input

3.22. Control buttons of PCM simulator

3.23. Result of PCM simulator

3.24 Modulation Screen of AM simulator

3.25. Message signal parameters input

3.26. Carrier signal parameters input

3.27. Control buttons of AM simulator

3.28. Result of AM simulator

3.29. Flowchart of AM simulator

4.1.Structure of program file

4.2. Functional blocks of modulation screen

4.3. Functional blocks of demodulation screen

LIST OF abbreviation and special Symbols

FM-Frequency modulation

ASK-Amplitude shift keying

FSK-frequency shift keying

PCM-Pulse code modulation

AM-Amplitude modulation

PM-phase modulation

DR-Deviation ratio

WFM Wideband

NBFM Narrow band

LPF-Low Pass Filter

BPF-Band pass filter

**SPECIAL CHARACTERS**

**δ -**

**fmax  -**

Am is the maximum amplitude of message signal,

Ac is the maximum amplitude of carrier signal,

Fc is the frequency of the carrier and

Fm is the frequency of the message signal.

is the modulation index,

is the frequency of message signal

is the

F(t) is the FSK signal

is the maximum amplitude of carrier signals,

is the high frequency of carrier signal,

is the low frequency of carrier signal,

Fc is the frequency of the carrier,

Fm is the frequency of the message signal,

**Δ** is the frequency deviation

A(t) is the ASK signal

is the maximum amplitude of carrier signal,

is the frequency of carrier signal,

μ is the modulation index,