



ANALOG COMMUNICATIONS LAB

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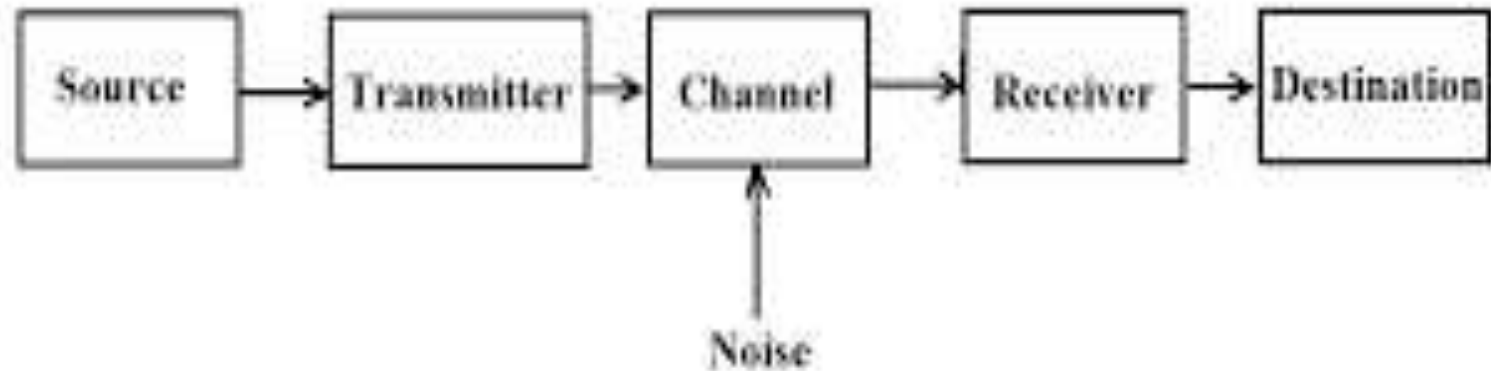
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CONTENTS

- ▶ Block diagram
- ▶ Circuit diagram
- ▶ Input/output waveforms
- ▶ Advantages and Disadvantages
- ▶ Applications

BLOCK DIAGRAM




* Basic Block diagram of Analog Communication system

PULSE AMPLITUDE MODULATION & DEMODULATION

AIM:

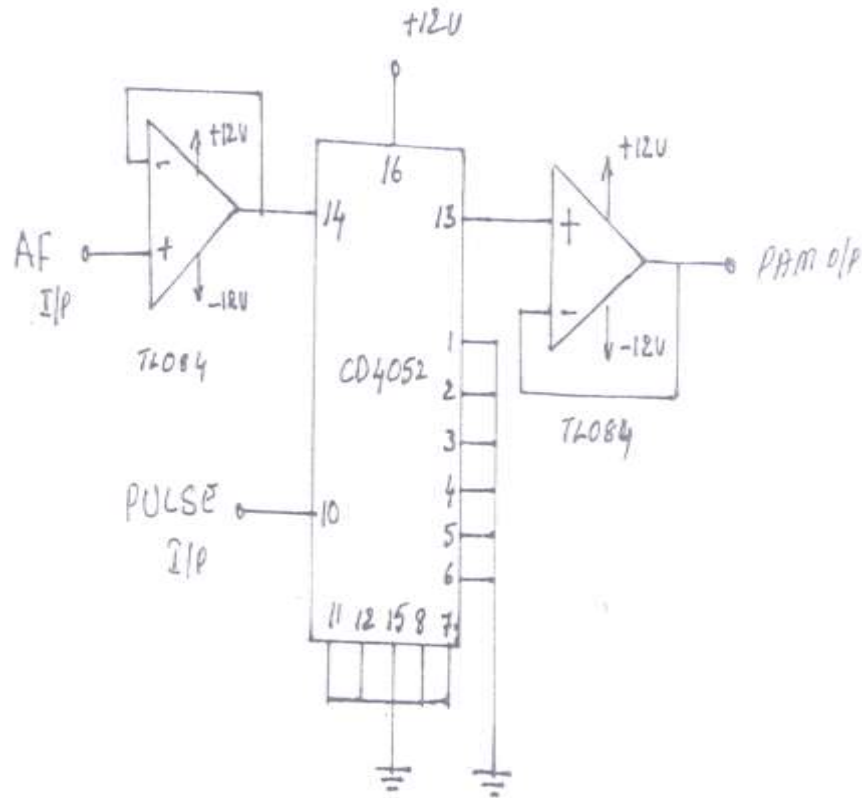
To study the characteristics of Pulse amplitude modulation & Demodulation

APPARATUS:

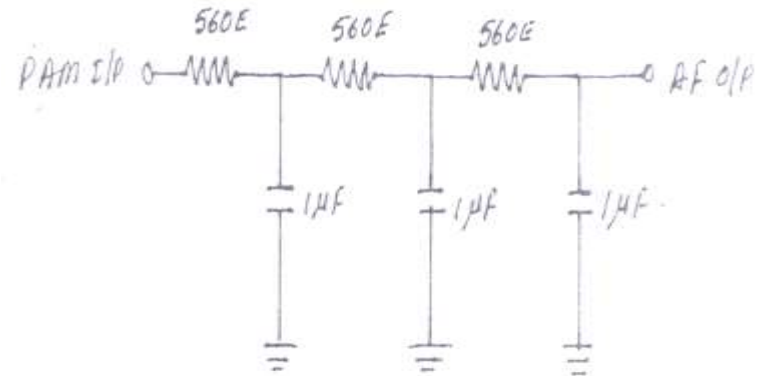
- ▶ Pulse amplitude modulation & Demodulation trainer kit.
 - ▶ C.R.O (20MHz)
 - ▶ Connecting chords & probes.
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CIRCUIT DIAGRAM

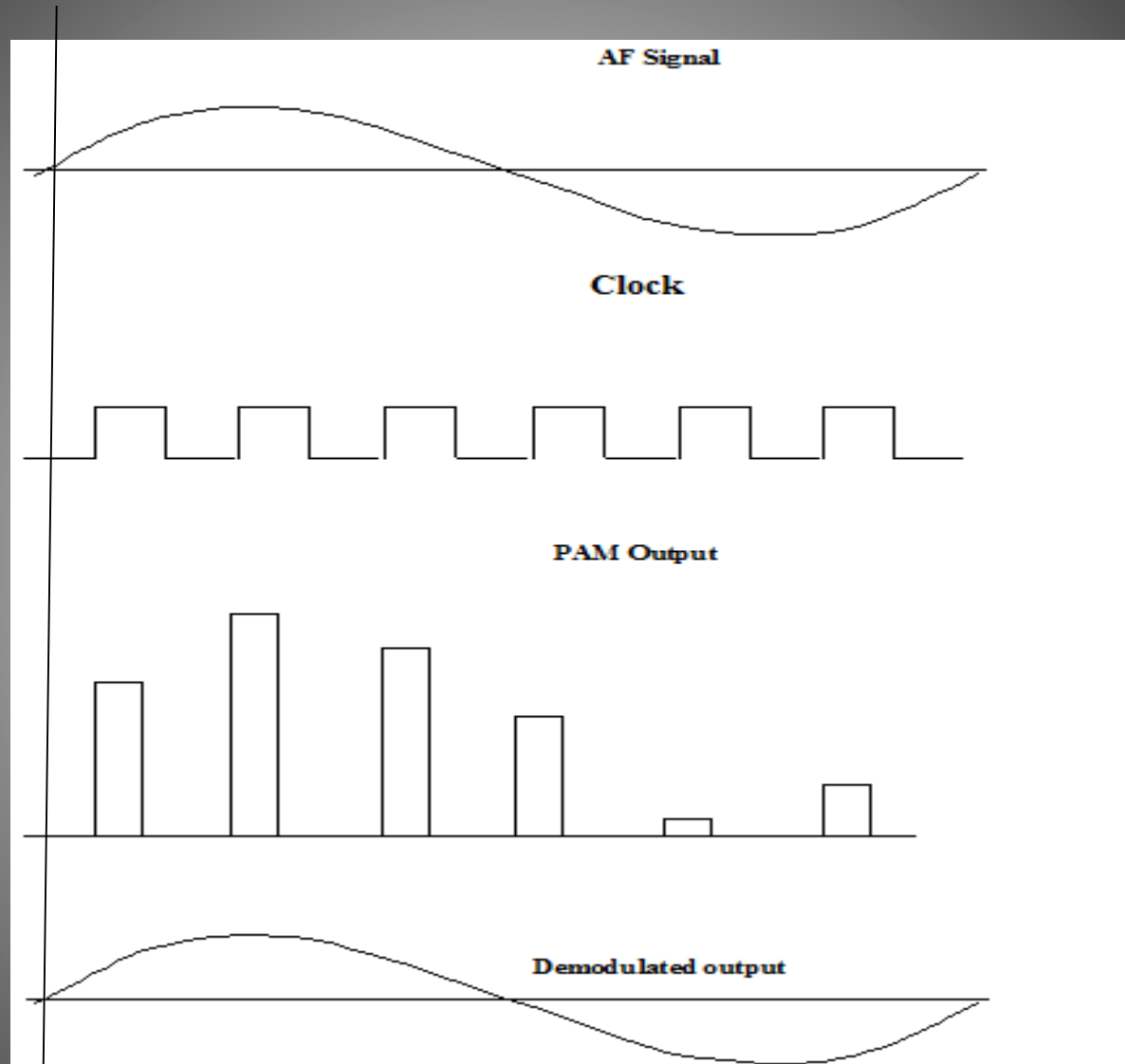
Modulator



Demodulator



Input and Output Waveforms




Advantages and disadvantages of PAM

Advantages of PAM

- ▶ Noise immunity, because pulses are evaluated based on precise time interval and amplitude compared with reference level
- ▶ Multiplexing is possible
- ▶ Generation and detection is easy
- ▶ Simpler to measure and evaluate

Disadvantages of PAM

- ▶ Added noise cannot be removed easily as it has impact on amplitude which carries information
 - ▶ Transmission bandwidth is too large
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APPLICATIONS

- ▶ It is mostly used in digital data transmission with non baseband applications.
 - ▶ It is used in the popular Ethernet communication standard.
 - ▶ It is used in many micro-controllers for generating the control signals.
 - ▶ It is used as an electronic driver for LED lighting.
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