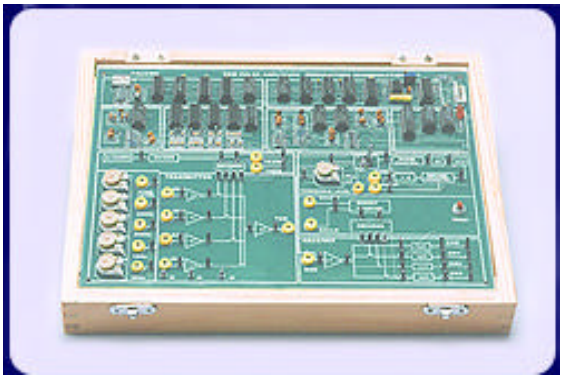
TLD-02: TDM PULSE AMPLITUDE MODULATION / DEMODULATION



This module provides facilities to students for experimentation in the areas of Pulse Amplitude Modulation, Demodulation and Time
Division Multiplexing of those signals. It provides the students a facility to examine Sampling, Multiplexing, Demultiplexing and Signal Re-construction.

Features :

- 4 channel analog samplers and multiplexing.
- 4th order Butterworth filter for reconstruction.
- Transmiter and receiver synchronized through PLL.
- On board variable sinewave & DC level generator.
- Various test points provided on board

Technical Specifications :

- Input channels **:** 4 numbers
- Switching **:** Time Division Multiplexing
- Modulation **:** Pulse Amplitude Modulation
- Sampling rate **:** 16 KHz
- Maximum signal BW **:** 2 KHz
- Onboard sinewaves **:** 2 kHz, 1 kHz, 500 Hz, 250 Hz
- Synchronization pulse **:** Using (variable) DC level generation
- Phase lock loop **:** Generates receiver clock and channel information
- Low Pass Filter Type **:** 4th order Butterworth Filter
- Cut Off frequency **:** 3.4 KHz
- Interconnection **:** 2mm standard banana socket
- Power Supply **:** +5V, +/-12V

List of Experiments :

- Study of 4 Channel Division Multiplexing and Demultiplexing.
- Study of TDM Pulse Amplitude Modulation and Demodulation with Transmitter
- Clock, Channel Identification Information and data connected directly to the Receiver.
- Study of TDM Pulse Amplitude Modulation and Demodulation with Channel Identification Information and data connected directly to the Receiver using Phase Locked Loop Circuiting.
- Study of TDM Pulse Amplitude Modulation and Demodulation with data connected directly to the receiver using the Threshold Level Comparator and Phase Locked Loop Circuiting.