

**ACT-03**  
**TDM Pulse Amplitude Modulation & Demodulation Trainer Kit**



**ACT-XX** is a Digital Communication Trainer System to understand various digital Modulation and Demodulation Techniques. Various functional block diagrams are provided on-board for Teaching/Training. This Kit provides with various Test Points to visualize the signals on Oscilloscopes.

**Features**

- On-board 250Hz, 500Hz, 1KHz, 2KHz Sine-wave generator
- Sampling rate of 32 KHz/Channel.
- Channel Identification Signal of 8 KHz.
- 4 Nos. of Analog Input Channel for multiplexing & De-multiplexing
- Clock regeneration at receiver using PLL
- On-board 4th order Butter-worth Low pass filter with cut off frequency of 3.4kHz
- In-Built Power Supply

**Specifications**

- **Sine Wave Generator**
  - ✓ Provides Sine waveform output of 250Hz, 500Hz, 1 KHz, and 2 KHz.
  - ✓ Amplitude adjustments possible
- **DC Source**
  - ✓ Separate DC source Available.
  - ✓ Amplitude adjustments possible
- **Pulse Generator**
  - ✓ Sampling rate of 32 KHz/channel.
  - ✓ 8KHz. Channel Identification Signal
  - ✓ 6.144 MHz. Crystal Controlled Pulse Generator.

Note : Specifications can be altered without notice in our constant efforts for improvement.

- **On-board features**
  - ✓ Four Analog Input Channels for Multiplexing/De-multiplexing
  - ✓ Clock regeneration at receiver using PLL.
  - ✓ 4<sup>th</sup> order Butterworth Low pass filter with cut off frequency of 3.4 KHz.
  - ✓ Block Description Screen printed on glassy epoxy PCB
- **Interconnections**
  - ✓ All interconnections are made using 2mm banana Patch cords.
- Test points are provided to analyze signals at various points.
- All ICs are mounted on IC Sockets.
- Bare board Tested Glass Epoxy SMOBC PCB is used.
- In-Built Power Supply of +5V/1.5A, ±12V/250mA with Power ON indication
- Attractive ABS Plastic enclosures.
- Set of 2mm Patch cords for interconnections
- User's Manual with sample experimental programs

**LIST OF EXPERIMENTS**

- ☞ Study of Time Division Multiplexing and De-multiplexing using Pulse Amplitude modulation and demodulation
- ☞ Study of TDM Pulse Amplitude modulation and demodulation With Channel Identification Information
- ☞ Study of TDM Pulse Amplitude modulation and demodulation using PLL method