



The trainer provides all necessary inputs and connections for students to study Pulse Amplitude Modulation/ Demodulation techniques. Time Division Multiplexing & Demultiplexing of Signals and Signal Reconstruction.

Technical Specifications

| | |
|--------------------------------|--|
| Crystal Frequency | : 8 MHz |
| Analog Input Channels | : 4 |
| Multiplexing | : Time Division Multiplexing |
| Modulation | : Pulse Amplitude Modulation |
| On Board Analog Signal | : 500 Hz, 1 KHz, 2 KHz and 4 KHz (Sine wave synchronized to sampling pulse) Adjustable amplitude and separate variable DC level) |
| Sampling Rate | : Four sampling signals 4 KHz / 8 KHz / 10 KHz / 20 KHz per channel (switch selectable) |
| Sampling Pulse | : With duty cycle variable from 0-90% in decade steps. |
| Clock Regeneration at Receiver | : Using PLL |
| Test points | : 50 |
| Interconnections | : 2 mm Sockets |
| Power Supply | : 220 V \pm 10%, 50 Hz / 60 Hz on request |
| Power Consumption | : 4 VA (approx.) |
| Dimensions (mm) | : W 340 \times D 240 \times H 105 |
| Weight | : 1.3 Kg (approx.) |

- Crystal controlled clock
- On-board sine wave generator (synchronized)
- On-board pulse generator
- 4 Analog input channels sampled and time division multiplexed
- Four switch selectable sampling frequencies
- Pulse duty cycle selectable
- Internal/External sampling selectable 4 Channel De-multiplexer
- Generation of clock at receiver by PLL System
- 4th Order Butterworth L.P. Filter

Experiments that can be performed

- Pulse Amplitude Modulation technique
- Time Division Multiplexing and Demultiplexing
- PLL as Frequency Multiplier to generate clock from sync signal
- 3 modes of operation to regenerate original signal
 - a) 3 connections between transmitter & receiver (Clock, sync & information)
 - b) 2 connections (information, sync) Clock regenerated at receiver
 - c) 1 connection (information only) Clock and sync derived at receiver
- Effect of varying duty cycle of Sampling Pulse on signal reconstruction
- Effect of different sampling frequencies on TDM-PAM & Demod technique

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tesca.in