

TLD-09: STUDY OF FRAMING AND MARKER WITH VOICE CODING

This module provides to students for experimentation in the area of Framing and Marker time division multiplexing, PCM voice coding using telephone handset, and frequency response of CODEC.

An exhaustive manual has been provided with the system provides detailed experimental procedure and complete circuit diagram of the system.

Features :

- 32 channel time division multiplexing
- Framing and Marker concept
- PCM Voice coding and decoding
- CODEC Response

Technical Specifications :

- Data Clock : 2.048MHz
- Switching : Time Division Multiplexing
- No. of Channels : 32-One for marker channel, One for Audio Channel, 30 Channel for Data Switch with LED indication.
- Voice communication : using dynamic mike and speaker.
- Frame Maker : Two 8 bit user selectable markers in alternate frames
- Frame Frequency : 8 KHz
- Modulation Technique : Pulse code modulation using CODEC chip Motorola MC145502
- Voice communication : Using Telephone handsets or External analog signal
- Interconnection : 4mm standard banana socket
- Power Supply : +/-5V
- Cut-Off Frequency

List of Experiments :

- Study of 32-channel time division multiplexing
- Study of framing in time division multiplexing
- Study of marker in time division multiplexing
- Study of PCM voice coding
- Frequency response of CODEC

TLD-10: AUDIO INPUT / OUTPUT

This module provides facility for interfacing audio signal to any of the TLD-00 series Digital Communication Trainer modules. The input module accepts audio input signal microphone. The signal after amplification is connected to Digital Communication Trainer module (TLD-00 Series) which accepts external analog signal.

The output module accepts analog input signal from Digital Communication Trainer modules. The built in power amplifier output drives a speaker providing the output. A volume control knob is provided to adjust the volume.

Technical Specifications :

Audio Input Module :

- Input Impedance : 600 Ohms
- Voltage Gain : 1 to 100
- RC Filter : 3.4 KHz Cut-off
- Max. Output Voltage : 5 Volts
- Power Supply : 9 V

Audio Output Module :

- Input Impedance : 47 Kohm
- Output Voltage : Adjustable
- Sound Speakers : 8 Ohms, 0.3 W
- Power Supply : 9V