

**40697** provides an extensive hands on learning on 4-Channel and 2-Channel TDM-PCM Transmitter & Receiver.

### Features

1. Modulator and Demodulator on same board
2. On-board four DDS Signal Generator for standard and Arbitrary signals
3. Selectable Sampling frequencies
4. On board four 2nd order Butterworth Low Pass filter
5. SMD LED indicators
6. Compact and Light Weight
7. Can be issued just like a book for hands-on learning

### Object

1. Time Division Multiplexing & Demultiplexing with Pulse Code Modulation
2. 2 channel & 4 channel Time Division Multiplexing
3. Sample & Hold output at different channel by varying the Sampling as well as Signal frequency.
4. Parallel to Serial conversion by varying the line speed clock at the different channel.
5. Single bit PCM output at different line speed clock at the different channels.
6. Single bit multiplexed PCM output at Modulator side.
7. Single bit demultiplexed PCM output at Demodulator side.
8. Pulse Code Demodulation at the different channel.
9. Serial to Parallel conversion at the Demodulator.
10. Analyze the final demodulated output with Second order Low Pass Butterworth filter .

### Technical Specifications

Modulation & Demodulation Techniques	:	Two channel TDM-PCM Four channel TDM-PCM
Internal Signal Generator	:	Four dedicated Direct Digital Synthesizer Generators for each channel
Types of Signal	:	Sine, Square, Arbitrary signal
Frequency	:	500Hz, 1KHz, 1.5KHz, 2KHz, 3KHz
SMD LED Indicators	:	54 nos for DDS signal selection DDS signal frequency selection Sampling selection Technique selection Interconnect path
Crystal Frequency	:	8MHz
Sampling Frequencies	:	8KHz, 16KHz, 32KHz
TDM techniques based on	:	Bell lab system
Selection Mode	:	Push switches
Number of Test Points	:	40 nos.

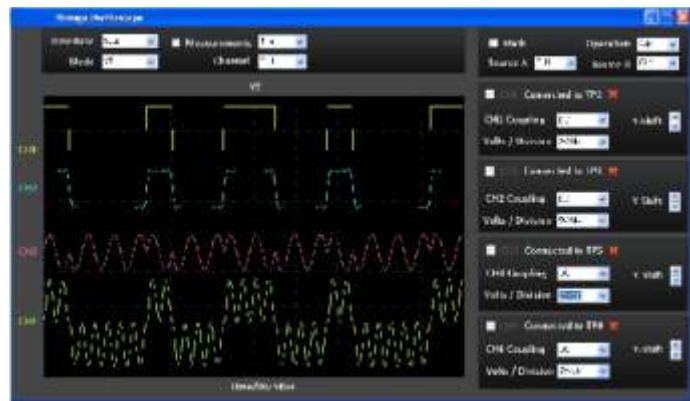
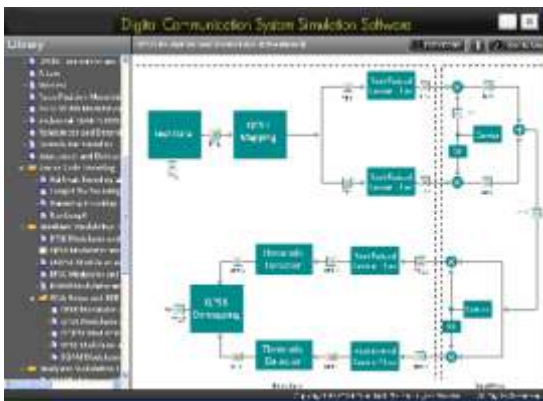
Note: Specifications are subject to change.

Low Pass Filter	:	4nos. Cut-off frequency-5KHz
Dimensions (mm)	:	W326xD252xH52
Power Supply	:	110V <sup>1</sup> - 260VAC, 50/60Hz
Weight	:	1.5Kg (Approximately)
Operating Conditions	:	0-40°C, 85% RH
Included accessory	:	2mm Patch cord - 2nos

**Simtel 11 - Digital Communication Interactive Software (optional)**

**Topics**

1. Source: Signal Source, Pulse Generator, Data Generator, Delay
2. Math Operations: Adder, Subtractor, Multiplier
3. Natural and Flattop Sampling
4. Line Encoding and Decoding
5. Delta Modulator and Demodulator
6. Adaptive Modulator and Demodulator For more details refer Simtel 11 Catalog



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