

Sciencetech 2804 provides an extensive hands on learning on 4-Channel and 2-Channel TDM-PCM Transmitter & Receiver.

Features

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

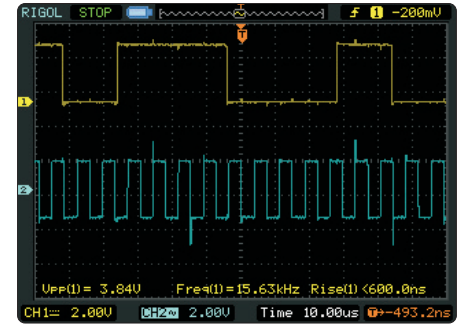
Scope of Learning (Experimentation)

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

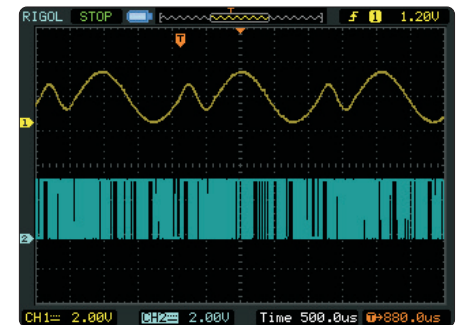
Technical Specifications

Modulation & Demodulation

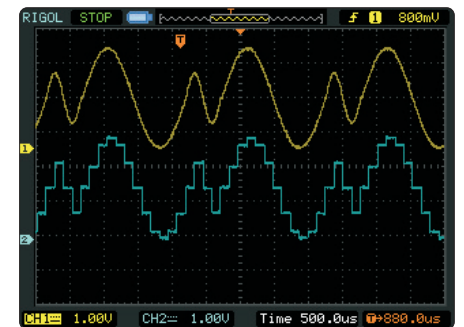
Techniques	:	Two channel TDM-PCM
	:	Four channel TDM-PCM
Internal Signal Generator	:	Four dedicated Direct Digital Synthesizer Generators for each channel
Types of Signal	:	Sine, Square, Arbitrary signal
Frequency	:	500Hz, 1KHz, 1.5KHz, 2KHz, 3KHz
SMD LED Indicators	:	54 nos for DDS signal selection 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.
Low Pass Filter	:	4nos. Cut-off frequency-5KHz
Product Tutorial	:	Online on www.SciencetechLearning.com
Dimensions (mm)	:	W 326 x D 252 x H 52
Power Supply	:	110V - 260V AC, 50/60Hz
Weight	:	1.5Kg (Approximately)
Operating Conditions	:	0-40°C, 85% RH
Included accessory	:	2mm Patch cord - 2nos



PCM output w.r.t clock



TDM PCM output



Sampled & hold

Simtel 11 - Digital Communication Interactive Software (optional)

Topics

- Source: Signal Source, Pulse Generator, Data Generator, Delay
- Math Operations: Adder, Subtractor, Multiplier
- Natural and Flattop Sampling
- Line Encoding and Decoding
- Delta Modulator and Demodulator
- Adaptive Modulator and Demodulator

For more details refer Simtel 11 Catalog

