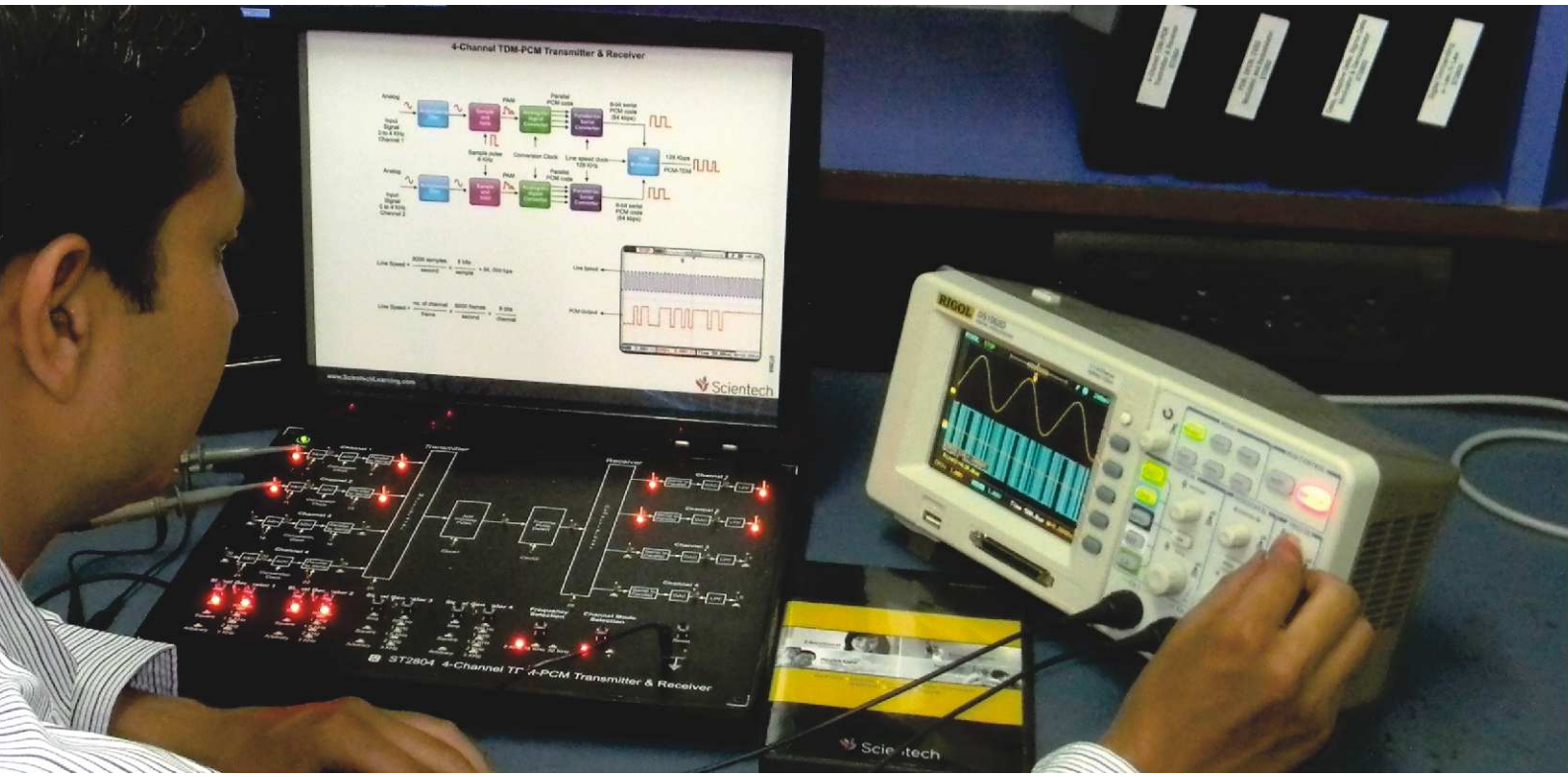
Scientech

4-Channel TDM-PCM Transmitter & Receiver

Scientech 2804

TECHBOOK



Scientech TechBooks are compact and user friendly learning platforms to provide a modern, portable, comprehensive and practical way to learn Technology. Each TechBook is provided with detailed Multimedia learning material which covers basic theory, step by step procedure to conduct the experiment and other useful information.

Scientech TechBook 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 .

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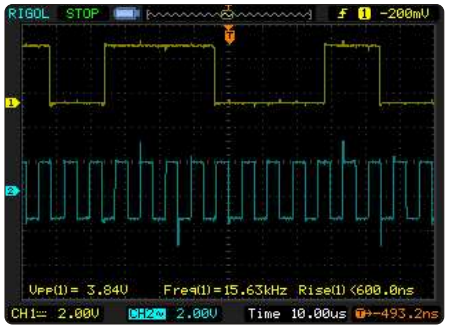
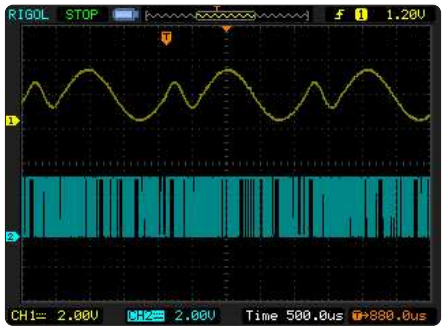
Technical Specifications

Modulation & Demodulation

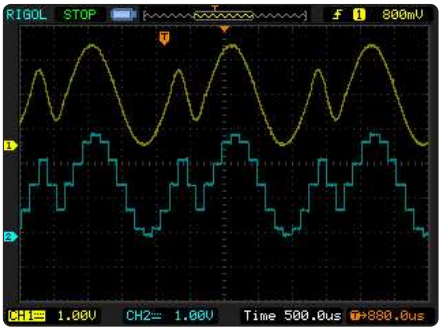
Techniques	:	Two channel TDM-PCM
	:	Four channel TDM-PCM
Internal Signal Generator	:	Four dedicated Direct Digital Synthesizer Generators for each channel
Types of Signal	:	Sine, Triangle, Arbitrary signal
Frequency	:	500Hz, 1KHz, 1.5KHz, 2KHz, 3KHz
SMD LED Indicators	:	54 nos for
		DDS signal selection
		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.ScientechLearning.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

Subject to Change

Designed and Manufactured in India by -

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