



TDM Pulse code Modulation/Receiver Scientech 2154 demonstrates Pulse Code Demodulation Technique which is the most widely used digital demodulation system. Since analog modulation system is most prone to noise present in the channel and receiver, the digital modulation system is used because it is less sensitive to noise. The basis of digital modulation systems lies on pulse code modulation i.e. a particular characteristic of the pulse is varied in accordance with the information signal. In PCM system the amplitude of the sampled waveform at definite time intervals is represented as a binary code.

Features

- Input accepts two channel multiplexed data
- On board De-multiplexed PCM Receiver
- On board Low pass filters
- Fast & Slow modes for real time operation and data flow examination
- On board PLL for clock regeneration
- On board sync code detector
- Error check code options
- Odd or Even Parity-Single bit error detection
- Hamming code single bit error detection and correction
- Switched faults allow different error check code option

Scope of Learning

Digital Communication System

- Study of error checks codes

D/A Conversion

- Study digital to analog conversion

Digital Transmission

- Study of control signals and their timing

Time Division De-multiplexing

- Study of Time division de-multiplexing
- Study of Pseudo Random sync code detector
- Study of three modes of transmission

Technical Specifications

Input Channel	: Time Division Multiplexed serial Input
Demodulation	: Pulse Code Demodulation
Clock Regeneration	: By Phase Locked loop
Operating Speeds	: Fast - 320 KHz/Channel, Slow 1.9 Hz / Channel
Error Detection (Single bit)	: Off-Odd- Even parity & Hamming code
Error Correction	: Hamming code
Test Points	: 50 nos.
Interconnections	: 2 mm sockets
Power Supply	: 110-220 V \pm 10%, 50/60 Hz
Power Consumption	: 4 VA approximately
Dimensions (mm)	: W 326 \times D 252 \times H 52
Weight	: 1.3 Kg approximately
Included Accessories	: 2mm Patch cords 16":5 nos. Mains cord : 1 no.

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

