

Data Formatting & Carrier Modulation Transmitter Sciencetech 2156 is complete digital communication Platform which efficiently explains all communication processing steps involved in digital transmission. Various digital modulation techniques viz. ASK, FSK, PSK, DPSK, QPSK etc. can be implemented using Sciencetech 2156.

Features

- On-board Carrier generation circuit (Sine waves synchronized to transmitter data).
- On-board in phase and quadrature phase carrier for QPSK modulation.
- Different data conditioning formats NRZ (L), NRZ (M), RZ, Biphasic (Manchester), Biphasic (Mark), AMI, RB.
- FSK, PSK, DPSK ASK, QPSK, DQPSK Carrier modulation.
- On-board Unipolar to Bipolar conversion.
- On-board Data Inverter.
- On-board 8-bit Data source
- On-board Clock source

Scope of Learning

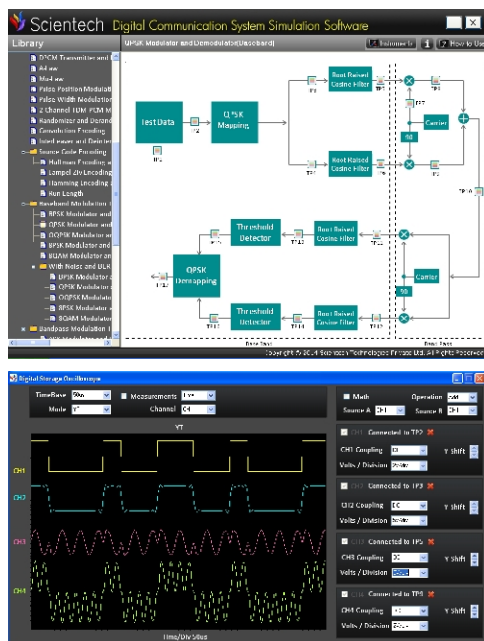
Study of:

- Data Formats
- Amplitude Shift Keying
- Frequency Shift Keying
- Phase Shift Keying
- Differential Phase Shift Keying
- Quadrature Phase Shift Keying
- Differential Quadrature Phase Shift Keying

Technical Specifications

Crystal Frequency	:	4.096 MHz
Data formats	:	NRZ (L), NRZ (M), RZ, AMI, RB, Biphase (Manchester), Biphase (Mark).
Carrier modulation	:	ASK, FSK, PSK, DPSK, QPSK
On-board carrier	:	Sine waves synchronized to transmitted data at 1.6 MHz, 960 KHz, (0 deg. phase) 960 KHz, (90 deg. phase)
Test Points	:	43 nos
Power Supply	:	110-220V, 50/60 Hz
Power Consumption	:	4VA (approximately)
Interconnections	:	2 mm sockets
Product Tutorials	:	Online
Dimensions (mm)	:	W 326 x D 252 x H 52
Weight	:	2 Kg. (approximately)
Operating Conditions	:	0-40°C, 85% RH
Included Accessories	:	
2mm Patch Cord 16"	:	30 nos.
2mm Patch Cord 32"	:	4 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 Flat-top Sampling
- Line Encoding and Decoding
- Delta Modulator and Demodulator
- Adaptive Modulator and Demodulator
- Sigma Delta Modulation and Demodulation
- PCM Transmitter and Receiver
- DPCM Transmitter and Receiver
- DPCM Transmitter and Receiver
- A-Law and MU-Law
- Pulse Position Modulation and Demodulation
- Pulse width Modulation and Demodulation
- 2-Channel TDM-PCM Multiplexer

For more details refer Simtel 11 Catalog