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Product Name :	**Product Code :**
Base Band Transmission Reception Trainer	NLAB-ELECTRONICSAB160013

Description :

Base Band Transmission Reception Trainer

Technical Specification :

Advance Digital Communication Trainer System that helps one under stand various Digital Modulation and Demodulation Techniques. Various functional block diagrams are provided on-board as an aid for Teaching/Training. These Kits are provided with various Test Points to visualize the signals on Oscilloscopes.

FEATURES:

The board consists of the following built-in parts :

On-board Noise Generator.

On-board PRBS Generator.

On-board Bit Error Rate Meter.

Switch faults are provided to study its effects on circuits

Block Description screen printed on PCB

In-Built Power Supply

LIST OF EXPERIMENTS:

Study of pulse amplitude modulation of digital datas for base band transmission.

Study of data extraction and recovery in base band digital transmission.

Study of transmission and reception of band limited pulse train in base band digital transmission system.

Study of eye pattern.

Observation and calculation of noise margin percentage.

Measurement of bit error rate using binary data.

Study of message Scramblers and Unscramblers.

Effect of Switch Faults.

SPECIFICATIONS:

Noise Generator

Provides White Noise Source output

Amplitude of 0 - 4Vp-p

Provision for Amplitude adjustments provided.

PRBS Generator

16 Bit switch selectable

Jumper selectable clock rate of 16, 32, 64, 128, 256, 512 KHz, and 1.024

BIT ERROR RATE Meter

Four digit counter displayed on seven segment

Four digit seven segment counting up to 9999

LED for terminal count indication provided

Digital Modulation Technique

Pulse Amplitude Modulation technique is used

Internal sampling clock: of 16 KHz to 1MHz

50 % duty cycle

16 bit data pattern for scrambler

16 bit data pattern for unscrambler

On-board features

Switch Selectable first order Butterworth Transmitter filter (Five Bands)

Switch Selectable first order Butterworth Receiver filter (Five Bands)

Switch Faults are provided on board to study different effects on circuit

Block Description Screen printed on glassy epoxy PCB

Interconnections

All interconnections are made using 2mm banana Patch cords

Test points are provided to analyze signals at various points.

All ICS are mounted on IC Sockets.

Bare board Tested Glass Epoxy SMOBC PCB is used.

In-Built Power Supply of +5V/1.5A, ±12V/250mA with Power ON indication

Attractive enclosure

Set of 2mm Patch cords for interconnections

User's Manual with sample experiments

Naugralabequipments

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