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Product Name :	**Product Code :**
QAM / DQAM Modulation Trainer	NLAB-ELECTRONICSAB160012

Description :

QAM / DQAM Modulation 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:

On-board Sine-wave generator.

On-board Four Carrier Sine waves of 500Khz.

On board three nos. of 8-bit NRZ-L. Data Simulator.

Clock frequency of 250 Hz.

Dat Format (Coding) is NRZ-L, Tribit encoded and Differential Encoded I & Q bits.

In-Built Power Supply.

LIST OF EXPERIMENTS:

To study the elements of 8-QAM / DQAM system.

Tribit coding technique of NRZ-L data format.

Differential Encoding of Data.

8-QAM Modulation technique.

DQAM Modulation technique.

To study of constellation Diagram of QAM.

To study bandwidth efficiency in QAM techniques.

Effect of Switch faults.

SPECIFICATIONS:

Carrier Sine Wave Generator

Four carrier sine waves Generated onboard.

Provides synchronized Sine waveform output of 500KHz(0deg.) ,500KHz(90 deg.) ,500KHz(180 deg.),500KHz(270 Deg.).

Clock And Data Generator

24 bit variable NRZ-L pattern generated depending on the position of the three nos. of 8-dit Data Switch provided.

Clock Frequency is of 250 Khz.

Data Format (Coding)

Non Return to Zero-Level (NRZ-L)

Tribit encoded data (I ,Q & C)

Differential Encoded I & Q Bits.

Carrier Modulation Techniques

Quadrature Amplitude Modulation

Differentially Quadrature Amplitude Modulation.

On-board features

On board Three Nos. of 8 bit variable NRZ-L pattern Data Simulator

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 programs

Naugralabequipments

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