

ADCT-05 QAM / DQAM MODULATION KIT



ADCT-XX is an Advance Digital Communication Trainer System that helps one understand 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

Specifications

- **Carrier Sine Wave Generator**
 - Four carrier sine waves Generated onboard
 - Provides synchronized Sine waveform output of 500KHz (0°), 500KHz (90°), 500KHz (180°), 500KHz (270°)
- **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 ABS Plastic enclosures.
 - Set of 2mm Patch cords for interconnections
 - User's Manual with sample experimental programs

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.

Note : Specifications can be altered without notice in our constant efforts for improvement.