ADCT-02
QPSK/DQPSK MODUALTION KIT

ADCT-XX is an 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:

- *Onboard synchronized 500 KHz Sine-wave generator.*
- *Dibit Pair, Differential Encoding type Data Format*
- *On-board crystal controlled Pulse Generator*
- *On board 8 bit Data Simulator*
- *Block Description screen printed on PCB*
- *In-Built Power Supply*

Specifications

- **Sine Wave Generator**
  - Provides synchronized Sine waveform output of 500KHz (0°), 500KHz (90°), 500KHz(180°), 500KHz (270°)
  - Amplitude of 0 - 4Vp-p
  - Provision for Amplitude adjustments provided.
- **Data Format (Coding)**
  - Dibit Pair (I & Q), Differential Encoding of I & Q Bits.
- **Carrier Modulation Techniques**
  - DPSK modulation
  - DQPSK modulation
- **Pulse** Generator
  - Clock frequency of 250 KHZ BIT, BIT Clock, Word Clock.
  - Crystal Controlled Pulse Generator.
- **On-board features**
  - On board 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:

- Principles of advance digital modulation and Demodulation techniques.
- Dibit pair data coding technique of NRZ-L data format.
- Differential Encoding of I & Q Bits.
- Observation of constellation diagram.
- Quadrature Phase Shift Keying Modulation and Demodulation technique.
- Differential Quadrature Phase Shift Keying Modulation and Demodulation technique.
- Effect of Switch Faults.

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

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