



**Order Code-40620** 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:

- 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.

#### 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.

#### SPECIFICATIONS:

- **Sine Wave Generator**
  - Provides synchronized Sine waveform output of 500KHz (0 deg.), 500KHz(90 deg.), 500KHz (180 deg.), 500KHz(270deg.)
  - 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 enclosure
  - Set of 2mm Patch cords for interconnections
  - User's Manual with sample experiments programs.

Note: Specifications are subject to change.

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