



Order Code-40615 is a Digital Communication Trainer System to understand various digital Modulation and Demodulation Techniques. Various functional block diagrams are provided on-board for Teaching/Training. This Kit provides with various Test Points to visualize the signals on Oscilloscopes.

FEATURES:

- On-board 250Hz, 500Hz, 1KHz, 2KHz Sine-wave generator.
- Sampling rate of 8KHz, 16KHz, 32KHz, 64KHz.
- On-board Compressor & Expander.
- On-board Gain integration setting.
- On-board 4th order Butter-worth Low pass filter with cut off frequency of 3.4kHz
- In-Built Power Supply.

LIST OF EXPERIMENTS:

- Study of delta modulation and delta demodulation.
- Study of Slope Overload and Increased Integration Gain in Delta Modulation.
- Study of Adaptive Delta modulation and CVSD.
- Study of companding systems.
- Study Voice modulation and Demodulation (Delta) **OPTIONAL.**
- Study Voice modulation and Demodulation (CVSD) **OPTIONAL.**
- Study Voice modulation and Demodulation (Companding) **OPTIONAL.**

Note: Specifications are subject to change.

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SPECIFICATIONS:

- **Sine Wave Generator**
 - Provides Sine waveform output of 250Hz, 500Hz, 1 KHz, and 2 KHz.
 - Amplitude of 0 - 4Vp-p
 - Amplitude adjustments possible.
- **Pulse Generator**
 - Switch selectable sampling clock of 8KHz, 16KHz, 32 KHz, 64 KHz.
 - Crystal Controlled Pulse Generator.
- **On-board features**
 - Unipolar to Bipolar, Integrator for Modulation & Demodulation.
 - CVSD Modulator and demodulator.
 - Input and Output buffer are provided.
 - 2nd order Butter-worth Low pass filter with cut off frequency of 3.4 KHz.
 - 4th order Butter-worth Low pass filter with cut off frequency of 3.4 KHz.
 - Compressor and Expander are provided.
 - Block Description Screen printed on glassy epoxy PCB
- **Modulation Techniques**
 - Delta modulation & demodulation.
 - Adaptive/CVSD modulation & demodulation.
- **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.
 - 315mm x 245mm x 105mm (L x W x H).
 - Weight 3 Kgs.