

**Product Name :**  
DPCM / ADPCM Modulation Demodulation Trainer

**Product Code :**  
NLAB-ELECTRONICSAB160011



**Description :**

DPCM / ADPCM Modulation Demodulation 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:**

Receiver Clock generated by PLL method.

Demodulation is done using PLL and Envelop Detector Method.

Switch faults are provided to study its effects on circuits.

Block Description screen printed on PCB.

In-Built Power Supply.

#### LIST OF EXPERIMENTS:

- To study DPCM modulation and Demodulation.
- To study ADPCM modulation Demodulation.
- To study Quantization Error.
- To study voice communication for DPCM / ADPCM (Optional).
- To study Effect of Switch faults.

#### SPECIFICATIONS:

##### Sine Wave Generator

Provides Sine waveform output using IC 74164.

Frequency of Sine wave is 500 Hz with variable Amplitude of max.0-4Vp-p

##### Data Clock Generator

Jumper selectable clock with amplitude of 5V.

Clock of frequencies 64 KHz, 128 KHz, 256 KHz and 512KHz.

##### Sampling Clock

Sampling Clock is generated using IC 4016.

Sampling Clock Frequency of 16 KHz and Amplitude of 5V.

##### On-board features

DPCM modulation using sampler, quantizer and linear predictor.

Onboard Buffer is provided using Lf353.

DPCM demodulation using linear predictor, Integrator and Low pass Filter.

On-board Low pass filter using TI084.

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/150mA,  $\pm 12V/250mA$  with Power ON indication

Attractive enclosure.

Set of 2mm Patch cords for interconnections.

User's Manual with sample experiments programs.

## Naugralabequipments

**Website:** [www.naugralabequipments.com](http://www.naugralabequipments.com), **Email:** [sales@naugralabequipments.com](mailto:sales@naugralabequipments.com)

**Address:** 6148/6, Guru Nanak Marg, Ambala Cantt, Haryana, India. **Phone:** +91-9896600003