

**Product Name :**  
Frequency Modulation and Demodulation Trainer

**Product Code :**  
NLAB-EDUSCHOOLEQ198002



**Description :**

Frequency Modulation and Demodulation Trainer

**Technical Specification :**

Frequency Modulation and Demodulation Trainer

FM Transmitter and Receiver Trainer has been designed with a view to provide practical and experimental knowledge of Frequency Modulation & Demodulation Trainer technique as practically implemented in Analog Communication system on a SINGLE P.C.B. of size 300 x 400 mm.

Object:

To Study Theory of Frequency Modulation & Demodulation:

Frequency Modulation via varactor / reactance Modulation

Frequency Demodulation via Detuned Resonant/Ratio/Quadrature/Foster - Seeley/Phase locked loop detector

Separate VCO circuit to demonstrate FM waveform

Feature:

The board consists of the following built-in parts:

POWER SUPPLY:

$\pm 12$ DC IC Regulated power supply

FM Modulating signal generator:

Sine wave

Frequency Range:

300 Hz to 3.4 KHz

Amplitude Range:

0 to 5 Vpp.

Modulator Type:

Varactor modulator (With carrier frequency adjustment):

Reactance Modulator (With carrier frequency adjustment)

Demodulator (Detuned resonant detector):

Quadrature detector

Foster - Seeley Detector

Ratio Detector

Phase locked loop Detector

Mixer/Amplifier:

1 No. (With gain adjustment) Allows FM input signal to be amplitude modulated by a noise input to demodulation.

Low pass Filter:

3.4 KHz. Cut of frequency Amplifier (with adjustable gain)

VCO Circuit:

FM Wave form demonstrate

Test Point: 78

Power supply requirement:

230V AC, 50 Hz.

On Board Switched Faults:

8 Nos.

On Board Amplitude limiter with Amplitude control.

Input - Output and Test points provided on board.

A self contained Trainer.

Effect of noise on the detection of FM signal may be investigated.

Best Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/ observation of waveforms.

Supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.

Other Apparatus Required:

Cathode Ray Oscilloscope 20MHz.

Patch Cords

## Naugralabequipments

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