

## Jain Laboratory Instruments





Product Code . JL-CT-1496



# Frequency Modulation and Demodulation Trainer

## **Description**

### **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.

Frequency Modulation and Demodulation Trainer Manufacturer India, Frequency Modulation and Demodulation Trainer Exporters, Electronics Frequency Modulation and Demodulation Trainer, Buy Frequency Modulation and Demodulation Trainer Online India, Educational Equipments for School Lab, Communication Laboratory Equipment Suppliers, Didactic, Didactic Frequency Modulation and Demodulation Trainer, Communication Trainers Exporters, Scientific Instrument and Equipment Manufacturer.

## 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:**

• ± 12DC 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.
- Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/ observation of waveforms.
- Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.

## Weight:

• 6 Kg. (Approx.)

#### **Dimension:**

• W 412 x H 150 x D 310

## Other Apparatus Required:

- Cathode Ray Oscilloscope 20MHz.
- Patch Cords

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