



**40523** Study of FM Communication is a comprehensive learning solution specifically designed to provide conceptual and step by step understanding of Frequency Modulation and Demodulation techniques through observation of waveforms at various test points and measurement of parameters like Frequency deviation and Modulation index. Block wise modular organization of functional circuits with symbolic representation makes it easy to understand the process of FM generation, FM detection and study of FM Spectrum. The exercises provide a practical approach to the subject and will guide the students to understand each function.

#### Features

- A self contained platform on FM Communication
- Functional blocks with symbols indicated on mimic
- Onboard adjustable controls for various functional blocks
- Compact size

#### Experiments

1. Study of Observation of Frequency Modulation
2. Study of Calculation of Frequency deviation and Modulation index
3. Study of Phase Locked Loop detector
4. Study of Quadrature detector
5. Study of Foster-Seeley and Ratio detector
6. Study of Marker insertion to evaluate frequency deviation
7. Study of Spectrum of FM signal

#### Technical Specifications

##### Function Generator

Waveform	: Sine wave
Amplitude	: Adjustable from 0 - 4Vpp
Frequency	: 0.1 to 10 KHz

##### VCO 1:

Waveform	: Sine wave
Frequency	: 400 KHz to 1500 KHz
Amplitude	: Adjustable from 0-2Vpp

##### VCO 2:

Waveform	: Sine wave
Frequency	: 400 KHz to 1500 KHz
Amplitude	: Adjustable from 0- 2Vpp
Sweep Depth	: Frequency 7 Hz (Adjustable-Depth)

RF Detector	: Input level adjustable
Balanced Modulator	: Adjustable amplitude & carrier null

Ceramic Band Pass Filter	: Center frequency 455 KHz
Bandwidth	: $3 \pm 1$ KHz
FM Detectors	: Phase Locked Loop detector Quadrature detector Foster-Seeley and Ratio detector

Interconnections	: 2mm banana sockets
Test Points	: 8 nos.
Weight	: 2.5 Kg approximately
Power Supply	: 230 V $\pm 10\%$ , 50 / 60 Hz
Power Consumption	: 2.5 VA approximately
Operating Conditions	: 0-40°C, 80% RH
Dimensions (mm)	: W 340 x D 240 x H 100

#### Included Accessories

Patch cord 16"	: 8 nos.
Mains cord	: 1 no

Note: Specifications are subject to change.

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