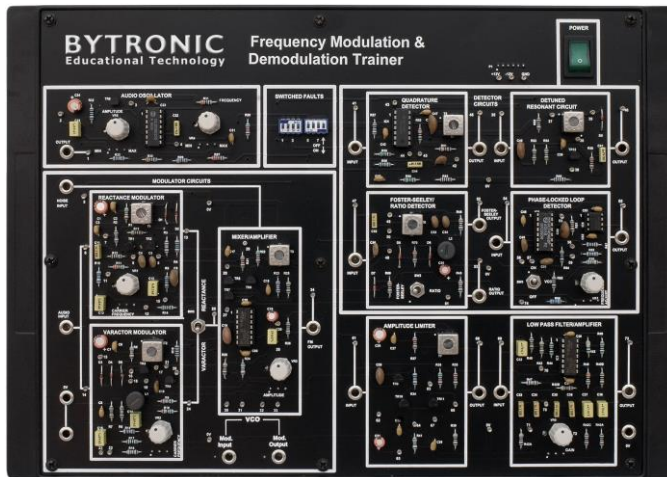


## 7503 – Frequency Modulation/Demodulation



### Key Features:

- Functional Blocks indicated via on board mimics
- Test points
- Switched Faults
- On board audio oscillator, modulators, demodulators, amplitude limiter, filters and mixer/amplifier.

The 7503 Frequency Modulation and Demodulation trainer is part of an analogue communication range which provides all necessary inputs, test points and connections for experimentation. The 7503 trainer provides the students with an introduction into frequency modulation/demodulation and various experiments can be performed to teach the students the process of FM generation and detection. The students will interact with the trainer by observing the waveforms and signals via various on board test points.

### Experiments

- Frequency Modulation using Varactor Modulator
- Frequency Modulation using Reactance Modulator
- Operation of Detuned Resonant Circuit
- Operation of Quadrature Detector
- Operation of Phase-Locked Loop Detector
- Operation of Foster - Seeley Detector
- Operation of Ratio Detector

### Specification

Audio Oscillator	Sine Wave (10Vpp adjustable) Frequency (300Hz – 3.4KHz)
FM Modulator	x 3 Reactance Modulator: Carrier Frequency 455KHz ( $\pm 3$ KHz) Varactor Modulator (Carrier Frequency 455KHz ( $\pm 2$ KHz) VCO Based Modulator: Carrier Frequency 10KHz – 200KHz adjustable
Mixer / Amplifier	Allows FM input signal to be amplitude modulated by a noise input prior to demodulation with Gain adjustment
Transmitter output Freq.	455 KHz
FM Demodulator	1) Detuned Resonant Detector 2) Quadrature Detector 3) Foster -Seeley Discriminator 4) Ratio - Detector 5) Phase Locked Loop Detector
Low Pass Filter/Amplifier	3.4 KHz. Cut off Frequency with adjustable gain
Amplitude Limiter	1
Switched Faults	12
Test points	40
Power	230V $\pm$ 10% , 50/60Hz
Dimensions (mm)	W326, H52, D252
Weight	2 Kgs (approx.)

## Ordering Information

**Model Number:**

**7503**

*Consists of:*

FM Transmitter Receiver Trainer

Manual

Power Cord

Set of patch cables

*Notes.*

1. *Specification is subject to change without notice.*

2. *All dimensions are in mm unless otherwise stated*

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