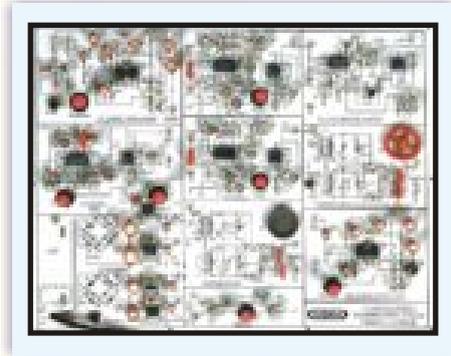# SIGMA

FREQUENCY MODULATION/ DEMODULATION SYSTEM TRAINER

MODEL- COM104**BIG**

This trainer has been designed with a view to provide practical and experimental Knowledge of Frequency Modulation / Demodulation technique on a SINGLE PCB.

SPECIFICATIONS

1. Power supply requirement : 230V AC, 50 Hz.
2. Built in IC based power supply.
3. On Board AF Modulating signal generator - Sine wave
   Frequency Range : 300Hz to 3.4 KHz
   Amplitude : 0 to 5 Vpp.
4. On Board RF carrier signal generator (VCO) - Two No.
   Frequency Range : 50 KHz to 150 KHz.
5. On Board variable DC power supply to see the effect of DC on the output waveform
6. On Board Input Audio amplifier with Volume control for modulating external signal from Mike or Tape Recorder.
7. On Board Output Audio amplifier with speaker & Volume Control.
8. Modulator Type : VCO (Voltage controlled oscillator) type. - 2 Nos
9. Demodulator Type : Ratio detector.
   Foster-Seeley detector.
   Phase lock loop (PLL) detector.
10. All parts are soldered on single pin TAGS on single PCB of size 14" x 11" with complete circuit diagram Screen-printed in multi colour.
11. Standard Accessories : 1. A Training Manual
   2. Connecting Patch cords

EXPERIMENTS

1. To study theory of Frequency Modulation & Demodulation.
2. To generate FM signal using VCO.
3. To generate FM signal using Varactor modulator.
6. To demodulate FM modulated signal using Ratio detector.
7. To demodulate FM modulated signal using Foster-Seeley detector.
8. To demodulate using Phase lock loop (PLL) detector.
9. To see the effect on FM modulated output by varying the amplitude and frequency of modulating Signal.
10. To see the effect on FM modulated output by varying the frequency of carrier signal.