

DSB/SSB-SC Amplitude Modulation & Demodulation Trainer has been designed with a view to provide practical and experimental knowledge of Amplitude Modulation / Demodulation technique as practically implemented in Analog Communication system on a SINGLE P.C.B. of size 300x400mm.

Object:

To Study of

01. Amplitude Modulation & Demodulation.

- 1.1 Generate AM signal by modulation with audio signal generator
- 1.2 Measure modulation index of A.M. signal
- 1.3 Demodulate AM signal using diode detector(envelope detector)
- 1.4 Generate voice signal AM modulation and demodulation using M
- 1.5 Observe the effect of DC signal input on AM output
- 1.6 Demodulate AM signal by square law detection

02. DSB-SC Amplitude Modulation & Demodulation.

- 2.1 Generate DSB-SC AM signal
- 2.2 Demodulate DSB-SC signal using product detector

03. SSB-SC Amplitude Modulation & Demodulation

- 3.1 Generate SSB-SC AM signal
- 3.2 Demodulate SSB-SC signal using product detector



Feature:

The board consists of the following built-in parts:

01. IC REGULATED POWER SUPPLY : ± 15 DC and +5V DC at 100mA.
02. AF Modulation signal generator : Sine wave
Frequency Range : 300 Hz to 3.4 KHz
Amplitude : 0 to 5 Vpp.
03. RF carrier signal oscillator.
Frequency Range : 100 KHz to 1 MHz.
Amplitude : 0 to 10 Vpp.
04. Local Oscillator : 400 KHz to 500 KHz.
05. Band Pass Filter : 452 KHz to 458 KHz.
06. DC Source Variable power supply to see the effect of DC on the output waveform : - 5 to + 5 VDC
07. Output Audio amplifier with Volume Control.
08. Input Audio amplifier for modulating external signal from Mike or Tape recorder.
09. Duple Balanced Amplitude modulator
10. Diode detector.
11. Product detector
12. Low pass filter.
13. Power supply requirement 230V AC, 50 Hz.
14. Mains ON/OFF switch, fuse and jewel light.
15. Dynamic Microphone with 4mm Jack Pin.
16. Loud Speaker with baffle fitted in a box with two metre wire and 2mm Banana pins for connections.
 - 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.

Other Apparatus Required:

- Cathode Ray Oscilloscope 20MHz.

Note: Specifications are subject to change.