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Product Name :	**Product Code :**
DSB and SSB-SC Amplitude Modulation and Demodulation Trainer	NLAB-EDUSCHOOLEQ198001

Description :

DSB and SSB-SC Amplitude Modulation and Demodulation Trainer

Technical Specification :

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 300 x 400mm.

Object:

To Study of

Amplitude Modulation & Demodulation:

Generate AM signal by modulation with audio signal generator

Measure modulation index of A.M. signal

Demodulate AM signal using diode detector(envelope detector)

Generate voice signal AM modulation and demodulation using Mic.

Observe the effect of DC signal input on AM output

Demodulate AM signal by square law detection

DSB-SC Amplitude Modulation & Demodulation:

Generate DSB-SC AM signal

Demodulate DSB-SC signal using product detector

SSB-SC Amplitude Modulation & Demodulation:

Generate SSB-SC AM signal

Demodulate SSB-SC signal using product detector

Feature:

The board consists of the following built-in parts:

IC Regulated Power Supply:

± 15 DC and +5V DC at 100mA.

AF Modulation signal generator:

Sine wave

Frequency Range:

300 Hz to 3.4 KHz

Amplitude:

0 to 5 Vpp.

RF carrier signal oscillator.

Frequency Range:

100 KHz to 1 MHz.

Amplitude:

0 to 10 Vpp.

Local Oscillator:

400 KHz to 500 KHz.

Band Pass Filter:

452 KHz to 458 KHz.

DC Source Variable power supply to see the effect of DC on the output waveform:

-5 to + 5 VDC

Output Audio amplifier with Volume Control.

Input Audio amplifier for modulating external signal from Mike or Tape recorder.

Double Balanced Amplitude modulator

Diode detector.

Product detector

Low pass filter.

Power supply requirement 230V AC, 50 Hz.

Mains ON/OFF switch, fuse and jewel light.

Dynamic Microphone with 4mm Jack Pin.

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

Naugralabequipments

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