

#### STUDY OF OP-AMP MATHEMATICAL OPERATIONS **OMEGA TYPE ETB-151**



**OMEGA TYPE ETB-151** Experimental Training Board has been designed specifically for the study of OP-AMP and to carry out its Mathematical Operations. This Training Board has been an ideal teaching aid for different types of Electronic Circuits by using OP-AMP.

Practical experience on this board carries great educative value for Science and Engineering Students.

## OBJECT

- 01 Study of Operational Amplifier in the following modes:
  - 1.1 Inverting Amplifier.
  - 1.2 Non-inverting Amplifier.
  - 1.3 Frequency Response of Inverting A.C. Amplifier.
  - 1.4 Frequency Response of Non-inverting A.C. Amplifier.
  - 1.5 High Input Impedance Inverting Amplifier.
  - 1.6 High Input Impedance Non-inverting Amplifier.
- 02 To study the following Mathematical Operations :
  - 2.01 Inverting Summing Amplifier.
  - 2.02 Subtractor & Differential Amplifier.
  - 2.03 A.C. Differential Amplifier.
  - 2.04 Adder Subtractor.
  - 2.05 Multiplication by a Constant.
  - 2.06 Division by a Constant.
  - 2.07 Integrating Amplifier for D.C. Input Signals.
  - 2.08 Integrating Amplifier for A.C. Input Signals.
  - 2.09 Differentiation Amplifier.
  - 2.10 Non-Inverting Differentiation.
  - 2.11 Voltage follower or buffer amplifier using D.C. voltage
  - 2.12 Voltage follower or buffer amplifier using A.C. voltage

# **FEATURES**

The board consists of the following built-in parts :

- 01 ±15V D.C. at 50mA, IC Regulated Power Supply.
- 02 Three 0-2V D.C at 100mA, variable regulated Power Supplies.
- 03 OP-AMPIC741.
- 04 Two SPST switches and adequate no. of other electronic components.
- 05 Mains ON/OFF switch, Fuse and Jewel light.
- 06 The unit is operative on 230VAC ±10% at 50Hz.
- 07 Adequate no. of patch cords stackable from rear both ends 4mm spring loaded plug length 50cm.
- 08 Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/observation of waveforms.
- 09 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.
- 10 Weight 7 : 2.500 Kg. (Approx.)
- 11 Dimension : W 340 x H 125 x D 210

## **OTHER APPARATUS REQUIRED :**

- 01 Sine-Square Wave Generator **OMEGATYPESS-305**
- 02 Digital Multimeter 3<sup>3</sup>/<sub>4</sub> digit **OMEGATYPE DMM-201**
- 03 A.C. Millivoltmeter OMEGATYPEACV-25
- 04 Function Generator OMEGATYPE FG-321
- 05 Dual trace CRO 20MHz OMEGATYPE CRO-20

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

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