



**OMEGA TYPE ETB-87** Experimental Training Board has been designed specifically for thorough understanding of Three Terminal Voltage Regulators of 78XX and 79XX series. Although these two series of regulators are designed for fixed voltage regulation, this training board explores various methods of raising the output voltage and also to continuously vary their output voltage.

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

#### OBJECT

- 01 To study the effect of capacitors at input and output of the regulator.
- 02 To study the effect of ground reference level on the output voltage.
- 03 To study the minimum voltage differential required for proper working of regulator.
- 04 To measure load regulation.
- 05 To study various ways to increase the output voltage.
- 06 To use as a continuously variable regulator.
- 07 To use external power transistor for increasing the current capacity of the regulator.
- 08 To use two regulators for dual polarity output.

#### FEATURES

The board consists of the following built-in parts :

- 01  $\pm 12V$  D.C. at 500mA, unregulated Power Supply.
  - 02 D.C. Ammeter, 65mm rectangular dial to read 0-1A.
  - 03 D.C. Voltmeter, 65mm rectangular dial to read 0-20V.
  - 04 Zener diode.
  - 05 Regulator IC 7805.
  - 06 Regulator IC 7905.
  - 07 PNP Power Transistor.
  - 08 NPN Low Power Transistor.
  - 09 Potentiometer
  - 10 Two Load Resistance.
  - 11 Two Rectifier Diodes.
  - 12 Adequate no. of other electronic components.
  - 13 Mains ON/OFF Switch, Fuse and Jewel light.
  - 14 The unit is operative on 230V AC  $\pm 10\%$  at 50Hz.
  - 15 Adequate no. of patch cords stackable from rear both ends 2mm spring loaded plug length 50cm.
  - 16 Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/ observation of waveforms.
  - 17 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.
  - 18 Weight : 1.5 Kg. (Approx.)
  - 19 Dimension : W 340 x H 125 x D 210
- OTHER APPARATUS REQUIRED :**
- 01 Dual trace CRO 20MHz OMEGA TYPE CRO-20

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

## OMEGA ELECTRONICS

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