



OMEGA TYPE DB-12 Dynamic Demonstration Board has been designed specifically for the study of Digital Multimeter, built around versatile IC 7107. Various controls and test points have been brought out on the panel for thorough study of the circuit. Some controls which are normally hidden inside a multimeter have been fitted on the panel of this demonstration board for studying their effect on the working of the circuit. Training on this board will give a thorough understanding of techniques used for measurements of Voltage, Current and Resistances in digits.

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

OBJECT

- 01 To calibrate a Digital Multimeter.
02. To study the operation of a Digital Multimeter.
- 03 To study the effect of the following parameters on the accuracy of the Multimeter :
 - 3.1 Reference (DC) Voltage.
 - 3.2 'SETAC' Voltage.
 - 3.3 Clock frequency.
- 04 To study the following :
 - 4.1 Clock Signal.
 - 4.2 Signal on Integrating Capacitor.
 - 4.3 Decoded outputs to display.
- 05 To study the auto polarity and auto zero features.

FEATURES

The board has the following features :

- 01 +5V D.C. at 300mA, I.C. Regulated Power Supply.
- 02 -5V D.C. at 10mA, I.C. Regulated Power Supply.
- 03 Seven segment displays, 3½ digit bright red, for read-out.
- 04 Various controls spread over the panel at appropriate places.

- 05 Complete circuit schematic drawn on the front panel.
 - 06 Test points provided for study of important signals.
 - 07 Apart from its utility as a training board this Demonstration Board can be used as a full fledged Digital Multimeter with the following specifications :
 - 7.1 Three AC/DC voltage ranges 2V, 20V & 200V (b) Three AC/DC current ranges 2mA, 20mA and 200mA
 - 7.2 Three resistance ranges, 2K ohms, 20K ohms and 200K ohms (d) Auto Zero, Auto Polarity and over range facility. (e) High input impedance of the order of 10M ohms
 - 08 Mains ON/OFF switch, Fuse and neon indicator.
 - 09 The unit is operative on 230V ±10% at 50Hz A.C. Mains.
 - 10 Adequate no. of patch cords stackable from rear both ends 4mm spring loaded plug length ½ metre.
 - 11 Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/observation of waveforms.
 - 12 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.
 - 13 Weight : 5 Kg. (Approx.)
 - 14 Dimension : W415 x H165 x D315
- OTHER APPARATUS REQUIRED:**
- 01 Variable power supply (High Voltage) OMEGA TYPE ICV-300/01
 - 02 FET Volt-Ohm-Meter OMEGA TYPE FETM-21
 - 03 Single Phase Variac Input 0-230V Output 0-270V at 2Amp
 - 04 Step Down Transformer (Pri = 230V, Sec = 0-6V A.C. at 100mA)
 - 05 Dual trace CRO 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.

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