



Experimental Training Board has been designed specifically for the study of Discrete Electronic Components. It contains a wide selection of discrete components and A.C. & D.C. Power Supplies. The capabilities of this trainer extend far beyond the experiments described. Although only a finite number of experiments have been described yet other circuits as per individuals requirements can also be designed using the available components and power supplies.

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

Features

The board consists of the following built in parts:

01. ± 0 -15V D.C. at 50 mA, IC Regulated Power Supply.
02. ± 12 V D.C. at 100 mA, IC regulated and short circuit protected Power Supply.
03. 5V D.C. at 100mA, IC Regulated Power Supply.
04. 9-0-9V A.C. at 100 mA, Power Supply.
06. 4 Transistors, FET, UJT, MOSFET, SCR, Triac, Diac, LDR, 20 Resistors, 20 capacitors, 6 Diodes, Photo Diode, 2 Zener diodes, 2 LED, 2 Drum Coil, Speaker, Audio O/P Transformer, 3 Potentiometers, Vero Board.
08. 12 V, Relay with one change over contacts rated at 6 Amp. for resistive and 3 Amp. for inductive Load at 230V.
09. Mains ON/OFF switch, fuse and Neon Indicator are provided.
10. The unit is operative on 230V $\pm 10\%$ at 50Hz A.C. Mains.
11. Adequate no. of patch cords stackable from rear both ends 2mm spring loaded plug length $\frac{1}{2}$ metre.
12. Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections & observation of waveforms.
13. Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.

On Board Sections

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|--------------------|-------------------|
| 01. DC Supplies | 11. Zener Diodes |
| 02. Transistors | 12. LED's |
| 03. FET/UJT/MOSFET | 13. Drum Coil |
| 04. SCR | 14. Speaker |
| 05. TRIAC/DIAC | 15. AC Supplies |
| 06. LDR | 16. Audio O/P TX |
| 07. Resistors | 17. Potentiometer |
| 08. Capacitors | 18. Relay |
| 09. Diodes | 19. Vero Board |
| 10. Photo Diodes | |

Note: Specifications are subject to change.

Experiments

01. Verification of ohm's law
02. Verification of kirchoff's current law
03. Verification of kirchoff's voltage law
04. Verification of superposition theorem
05. Verification of thevenin's theorem
06. Verification of reciprocity theorem
07. study of diode characteristics
08. study of Zener diode characteristics
09. study of Zener diode as voltage regulator
10. study of Zener diode and transistor as series voltage regulator
11. Study of basic gates using diodes & transistor
12. Oscillator multivibrators
13. Study of U.J.T. Relaxation Oscillator
14. Study of SCR characteristics
15. Study of TRIAC characteristics
16. Study of TRIAC as switch
17. Study of LED characteristics
18. Study of LDR characteristics & its applications
19. Study of photo diode characteristics & its applications
20. Common Base Configuration of a Transistor
21. Power Amplifier
22. FET Characteristics & Source Follower
- 22.1. Study of static characteristics of an FET
- 22.2. Application Of an FET as a Source Follower
23. Application Of LED in Constant Current Sources

Optional Experiments

24. Verification of low pass RC circuit & find out its cut-off frequency
25. observation of low pass RC circuit as an integrator
26. Verification of high pass RC circuit & find out its cut-off frequency
27. observation of high pass RC circuit as an Differentiator
28. Implementation of low pass RL circuit & find out its cut-off frequency
29. Implementation of High pass RL circuit & find out its cut-off frequency
30. Study of Diode as Clipper Circuit
- 30.1. Diode as Clipper Circuit
- 30.2. Diode as biased Circuit
31. Study of diode as clamping circuit
32. Study of diode as voltage doubler
33. Study of diode as rectifiers
34. Study of transistorized amplifier with different configuration

Other Apparatus Required

01. Function Generator Digital, 1 MHz., 3.5 Digit, Sine, Square, Triangle, TTL
Order Code – FG-1001 (Optional)
02. Cathode ray Oscilloscope 20MHz Order Code - CRO-5020 (Optional)

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