



**MI-BA01 Discrete Component Trainer** is designed to cover all the experiments related to basic, linear and digital circuits using discrete components. A very useful component trainer to show all the components use in electronics circuits / laboratory. It is also low-cost, multi-purpose, mini-lab for linear & digital circuits.

### Features

- User friendly front panel
- Easy to use
- Built-in useful resources
- On-board Resistance Bank
- On-board Capacitor Bank
- On-board Inductor Bank
- On-board Power Electronics Component Bank
- 20 Pin ZIF Socket for solderless IC mounting
- Power ON switch with indicator
- Attractive ABS Plastic Cabinet
- Symbols and Diagram are printed on glass epoxy PCB

### Learning's

- **Basic Electrical Laws:**  
Study of Ohm's Law  
Study of KVL & KCL
- **Components V-I Characteristics:**  
Diode, BJT, MOSFET, SCR, IGBT, DIAC, TRIAC & UJT.

#### Study of Circuits:

##### Rectifier-

Half wave Rectifier

Full wave Rectifier

Bridge Rectifier

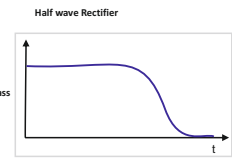
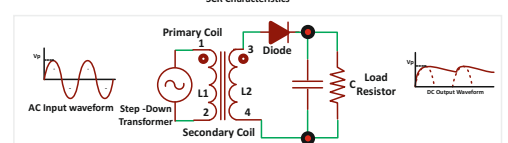
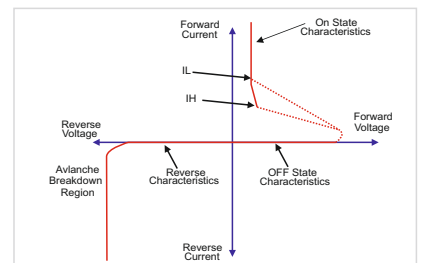
##### Filters-

Low Pass Filter


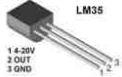
High Pass Filter

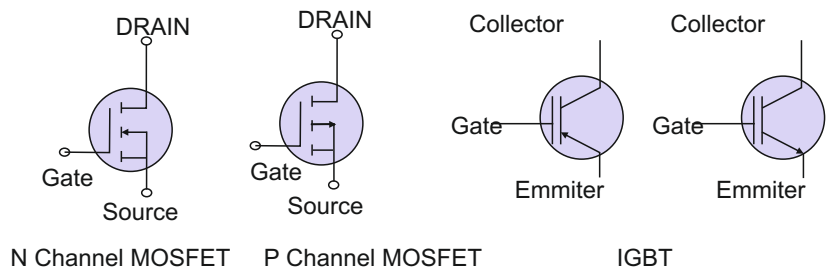
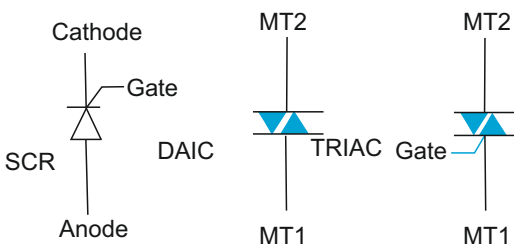
Band Pass Filter

- Study of CB, CE & CC mode of transistors.



## Technical Specifications

- On board DC Power Supply :  $\pm 5V/250mA$  | |  $\pm 12V/250mA$
- On board Variable DC Power Supply : 0 to  $+15V/250mA$
- On-board AC Power Supply : 9V-0-9V,0-9V  $\pm 10\%$
- DC Voltmeter : 0-20V
- DC Ammeter : 0-999mA
- On-board ZIF Socket : 20Pin
- On-board Breadboard : 840 Tie Points
- On-board Bank : Resistor Bank | | Inductor Bank | | Capacitor Bank | | Variable Resistor Bank | | Diode Bank | | Transistors NPN(Bc547) & PNP (BC557) Bank
- On-board ICs : IC741(Op-Amp) & IC555(Timer)
- On-board Relay
- On-board Sensors : LDR (Light Dependent Resistor)  LDR Temperature Sensor  LM35 Temperature Sensor LM35
- On-board Power Electronics Component Bank:



- Logic Level Inputs : Four independent logic level input switches with High / Low indicator
- Logic Level Indicators : Eight independent buffered logic level indicators for High / Low status
- Input Line Voltage : 230V AC  $\pm 10\%$  , 50Hz
- Dimensions (mm) : 340 (L) x 250 (W) x 62 (H) (Approx).
- Weight : 3.5Kg. (Approx)

## Package Contents



Power Cable



Patch Cord



User Manual

## Mine Instruments Pvt. Ltd. An ISO 9001:2015 Certified Company

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