Transistor Amplifier (Single Stage CE,CB,CC) Trainer

Model : SD-104

SINCOM SD-104 Transistor Amplifier (Single Stage CE,CB,CC) is All-In-One simply designed trainer for the purpose to study the concept, operation, Frequency response and determine the Bandwidth, Voltage gain and other parameters of BJT as Single Stage CE,CB,CC Amplifier with a gain control in a simple experimental way.

Features

- User friendly Design
- Separate Modules of Single Stage CE,CB and CC Amplifier
- BJT NPN BC548 with Self, Fixed base biasing operates as a Single stage CE,CB,CC amplifier circuit
- Silicon NPN BJT of TO-92 package on board
- For CE Amplifier- Resistor Bank at Emitter to control the gain and Resistive Collector Load
- For CB Amplifier- Resistive Collector Load
- For CC Amplifier- Resistive Emitter Load
- In-Built Fixed Dual regulated DC Power Supply
- Very Easy for Operation
- Multi color Circuit Diagram is printed on the front panel of the white board
- Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- Facility to connect external Function Generator and Oscilloscope
- Interconnections by 2mm high quality banana sockets and pins
- Maximum Test points to explore all the corners of experiment
- 1 Year Warranty

Technical Specifications

AC Mains Power Supply	: 230V ±10%, 50Hz
DC Power Supply	: IC Regulated Fixed +12V,-12V/500mA
Amplifiers Types	: Single Stage CE,CB and CC Amplifier

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- Transistor Type and Package : Bi-Polar Silicon-NPN, TO-92 Package
- Transistor Used : Three BC548
- Transistor Configuration : CE, CB and CC mode
- Biasing Method : Self Bias for CE and CC, Fixed bias for CB amplifier
- BJT Junction Voltage : 0.7V
- Max. Collector Emitter Voltage : 12 VDC
- Emitter Base Voltage V_{BE} : 5V
- Base Resistors : Two No. for CE and CC, One No. for CB
- Input Output Coupling Capacitors : Two No. Electrolytic type for CE,CB & CC
- Gain Control Emitter Resistor Bank : Two- MFR 1KΩ and 2.2KΩ, ±5% for CE
- Collector Load : 10KΩ Fixed Resistive Load for CE and CB
- Emitter Load : 10KΩ Fixed Resistive Load for CC
- Input Signal Type : Sine wave
- Max. Input Frequency Range : 60Hz-500KHz approx.
- Output Frequency Response : 100Hz-30KHz approx.
- Weight : 3.0 kg (approx)
- Dimensions (mm) : L 270 x W 390 x H 130
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50^{0}C, 80% RH

Learning Scope

- To study Single Stage CE Amplifier & Observe change in O/P w.r.t. change in I/P Frequency.
- To study the Single Stage CB Amplifier and Observe the change in O/P w.r.t. change in I/P Frequency.
- To study the Single Stage CC Amplifier and Observe the change in O/P w.r.t. change in I/P Frequency.
- To Plot the frequency response & To Determine Bandwidth of CE/CB/CC amplifier circuit.

Other Instruments Required : Oscilloscope, Function Generator 1MHz.

Accessories Included : Set of Patch Cord and Details Instruction Manual

Subject to Change