



## Single Stage CB Amplifier

### Model : SD-102

**SINCOM SD-102 Single Stage CB Amplifier** is simply designed trainer for the purpose to study the concept, operation, Frequency response and determine the Bandwidth, Voltage gain and other parameters of a BJT as Single Stage CB Amplifier in a simple experimental way.

### Features

- ❖ User friendly Design
- ❖ BJT NPN BC548 with Self base biasing operates as a Single stage CB amplifier circuit
- ❖ Silicon NPN BJT of TO-92 package on board
- ❖ Resistor Bank at Emitter to control the gain
- ❖ Resistive Collector Load
- ❖ In-Built Fixed 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 $\pm$ 10%, 50Hz
▪ DC Power Supply	: IC Regulated Fixed +12V, -12V/500mA
▪ Amplifiers Type	: Single Stage CB Amplifier
▪ Transistor Type and Package	: Bi-Polar Silicon-NPN BC548 , TO-92 Package
▪ Transistor Configuration	: CB mode
▪ Biasing Method	: Fixed Bias
▪ BJT Junction Voltage	: 0.7V
▪ Max. Collector Emitter Voltage	: 12 VDC
▪ Emitter Base Voltage $V_{BE}$	: 5V
▪ Emitter Resistor	: One No.
▪ Input Output Coupling Capacitors	: Two No. Electrolytic type
▪ Collector Load	: 10K $\Omega$ Fixed Resistive Load
▪ Input Signal Type	: Sine wave
▪ Max. Input Frequency Range	: 60Hz-500KHz approx.
▪ Output Frequency Response	: 100Hz-30KHz approx.
▪ Weight	: 2.0 kg (approx)
▪ Dimensions (mm)	: L 220 x W 270 x H 110
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-50 $^{\circ}$ C, 80% RH



An ISO 9001:2015 Co.

## Learning Scope

- To study the Single Stage CB Amplifier .
- To Observe & Note the change in O/P w.r.t. change in I/P Frequency.
- To Plot the frequency response & To Determine Bandwidth of circuit for the different Values of emitter resistor RE.

**Other Instruments Required :** Oscilloscope, Function Generator 1MHz.

**Accessories Included :** Set of Patch Cord and Details Instruction Manual