



An ISO 9001:2015 Co.

## To Study Positive & Negative Feedback in Amplifier

### Model : SE-101

**SINCOM SE-101 To study Positive & Negative Feedback Amplifier** is simply designed trainer for the purpose to study the concept, operation, Frequency response, Bandwidth and voltage gain of a Positive Feedback in RC Oscillator and Negative Feedback in CE Amplifier using BJT.

### Features

- ❖ User friendly Design
- ❖ Positive Feedback amplifier using NPN Transistor BC548 with RC Feedback banks operates as RC Phase Shift Oscillator.
- ❖ Negative Feedback amplifier using NPN Transistor BC548 in self bias CE mode with emitter feedback resistors operates as CE amplifier.
- ❖ Resistor Bank
- ❖ 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/500mA
▪ Positive Feedback Amplifier	: Single Stage CE Amplifier with gain control
▪ Negative Feedback Amplifier	: RC Phase Shift Oscillator
▪ Feedback Elements	: Resistive and Capacitive
▪ Transistor Type and Package	: Bi-Polar Silicon-NPN BC548, TO-92 Package
▪ Output Control	: Two ranges for each amplifier
▪ Max. Collector Emitter Voltage	: 12 VDC
▪ Load	: 10K $\Omega$ Fixed Resistive Load
▪ Input Signal Type	: Sine wave
▪ Negative F/B Output Frequency Range	: 100Hz-30KHz approx.
▪ Positive F/B Output Frequency Range	: Two fixed frequencies
▪ Weight	: 2.0 kg (approx)
▪ Dimensions (mm)	: L 270 x W 39 x H 130
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-50 $^{\circ}$ C, 80% RH



An ISO 9001:2015 Co.

## Learning Scope

- To study the Positive and Negative feedback concept.
- To study Single stage CE Amplifier as a negative feedback. To Plot the frequency response.
- To study RC Phase shift oscillator as a positive feedback. To Observe & Note frequency of oscillation.

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

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