



An ISO 9001:2015 Co.

## Astable Multivibrator using Transistor

### Model : SE-117

**SINCOM SE-117 Astable Multivibrator using Transistor** is a remarkable useful trainer with two CE mode NPN Transistors and RC positive feedback to provide Astable Multivibrator Output with facility to vary the Switching Time and Frequency of Oscillations in a simple experimental way.

### Features

- ❖ Silicon NPN BJT of TO-92 package on board
- ❖ Two NPN Transistor as CE switching Amplifier with resistive capacitive feedback elements.
- ❖ Resistive Identical collector load
- ❖ Wide range of oscillation frequency
- ❖ Facility to vary output frequency
- ❖ In-Built Fixed regulated DC Power Supply
- ❖ User friendly Design
- ❖ Very Easy for Operation
- ❖ Multi color Circuit Diagram is printed on the front panel of the white acrylic board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ Facility to connect external Oscilloscope and Digital Meters.
- ❖ 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/300mA
▪ Multivibrator type	: Astable (Free Running)
▪ Transistor Type and Package	: Two BJT Silicon NPN BC548, TO-92 Package
▪ Amplifier Type	: Base Biased CE Switching Amplifier
▪ Feedback Elements	: Two Resistors and Two Capacitors
▪ Collector load	: Identical Resistive load of 10K $\Omega$
▪ Output waveform	: Square / Rectangular
▪ Output Frequency	: Variable from @ 100 Hz to 100KHz
▪ Output Frequency Control by	: Two Resistors, one Dual Potentiometer and four Capacitors
▪ Max. Collector Emitter Voltage	: 12 VDC
▪ 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 operation of Astable (Free-running) Multivibrator using transistor.
- To Observe & Note the switching waveforms at the base & collector of two transistors.
- To Observe & Note Change in Switching Time & Frequency of Oscillation w.r.t. change in RC feedback Components.
- Compare the Theoretical & Practical values.

**Other Instruments Required :** Oscilloscope

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