

## Tuned Collector Oscillator

### Model : SE-112

**SINCOM SE-112 Tuned Collector Oscillator** is a useful trainer to study the concept and operation of Tuned Collector Oscillator with LC tuned circuit positive feedback to generate RF Output Frequency using BJT with facility to select multiple radio frequencies in a simple experimental way.

### Features

- ❖ BJT Transistor circuit of a self bias CE Amplifier mode with LC Feedback elements.
- ❖ Collector LC Tuned circuit Feedback components
- ❖ Capacitor Bank to provide Two output frequency in RF range.
- ❖ Facility to select the two output frequencies.
- ❖ 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 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
▪ Transistor Type and Package	: BJT Silicon-NPN BC548, TO-92 Package
▪ Amplifier Type	: BJT Single Stage CE Amplifier in a Self Bias mode
▪ Feedback Type	: Positive
▪ Feedback Elements	: One Inductor and one Capacitors
▪ Output Control	: By two capacitors
▪ Output Frequencies	: Two RF O/Ps in KHz
▪ 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

### Learning Scope

- To Study operation of Tuned Collector Oscillator Circuit.
- To Determine the Quiescent Operating Point of Transistor.
- To Observe & Note Change in Frequency of Oscillation w.r.t. change in feedback elements.
- Compare the Theoretical & Practical values.

**Other Instruments Required :** Digital Multimeter and Oscilloscope

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