



An ISO 9001:2015 Co.

BJT LC and RC Oscillator

Model : SE-141

SINCOM SE-141 BJT LC and RC Oscillator is a Two-In-One Trainer to study the concept and operation of LC-Hartley and RC Phase Shift Oscillator with LC/RC positive feedback to generate RF/AF Output Frequency using BJT with facility to select multiple radio/audio frequencies in a simple experimental way.

Features

- ❖ Separate modules of LC-Hartley and RC Phase Shift Oscillator
- ❖ BJT Hartley Oscillator consists of a self bias CE Amplifier with two Inductors & one Capacitor as LC Feedback elements.
- ❖ BJT RC Phase shift Oscillator consists of a Fixed base bias CE Amplifier with three RC network as Feedback elements.
- ❖ Separate Capacitor Bank to provide Two output frequency in RF range.
- ❖ RC Network Bank to provide Two output frequency in AF 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
▪ Oscillator Types	: LC-Hartley and RC Phase Shift Oscillator
▪ Transistor Type and Package	: Two BJT Silicon-NPN BC548, TO-92 Package
▪ Amplifier Type	: Two BJT Single Stage CE Amplifier in a Self Bias mode
▪ Feedback Type	: Positive
▪ Feedback Elements	: LC-Hartley - two Inductors & One Capacitor, RC Phase Shift- RC Network of 3 Resistors and 3 Capacitors
▪ Output Control	: LC-By two capacitors and RC-By two RC Networks
▪ Output Frequencies	: LC-Two RF O/Ps in MHz , RC-Two AF O/Ps in Hz.
▪ Max. Collector Emitter Voltage	: 12 VDC
▪ Weight	: 3.0 kg (approx)
▪ Dimensions (mm)	: L 245 x W 320 x H 115
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-50°C, 80% RH



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Learning Scope

- To Study operation of Hartley Oscillator Circuit.
- To Study operation of RC Phase Shift 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.