Two Stage RC Coupled Amplifier using Transistor

Model : SD-121

SINCOM SD-121 Two Stage RC Coupled Amplifier using Transistor is very useful simply designed trainer to study the concept, operation, Frequency response and determine the Bandwidth, over all Voltage gain and other parameters of a BJT Two stage RC coupled Amplifier in a simple experimental way.

Features

- Two single stage CE amplifiers using NPN Transistor BC548 with Self base biasing
- First stage Output RC Coupled to the second stage Input
- Silicon NPN BJTs of TO-92 package on board
- Wide Bandwidth AF Amplifier
- Resistive Collector Load for each stage
- Input and Output Coupling Capacitors
- Facility to study each stage separately
- 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 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 ±10%, 50Hz
DC Power Supply	: IC Regulated Fixed +12V/500mA
Amplifier Type	: Two Stage RC Coupled CE Amplifier
Transistor Type and Package	: Bi-Polar Silicon-NPN, TO-92 Package
Transistor Used	: Two BC548

Office : 8, Shantiniketan Colony, Pratap Nagar, Nagpur- 440 022 (MS) INDIA, Phone: 91-712-2287174, 2293303
Mobile : 09372153411, E-mail: info@sincomindia.com, sincom22@hotmail.com, Web: www.sincomindia.com

- Transistor Configuration : CE mode
- Amplifier Stages : Two
- Amplifiers Inter coupling type : RC Coupled
- Biasing Method : Self Bias
- BJT Junction Voltage : 0.7V
- Max. Collector Emitter Voltage : 12VDC
- Emitter Base Voltage V_{BE} : 5V
- Base Resistors : Two No. for each stage
- Emitter Resistors : One No. with bypass capacitor for each stage
- Input Output Coupling Capacitors : Two No. Electrolytic type
- Collector Load : 10KΩ Fixed Resistive Load for each stage
- Input Signal Type : Sine wave
- Max. Input Frequency Range : 60Hz-500KHz approx.
- Output Frequency Response : 100Hz-20KHz approx.
- Weight : 2.0 kg (approx)
- Dimensions (mm) : L 220 x W 270 x H 110
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50^{0}C, 80% RH

Learning Scope

- To Study the Transistor as a CE Amplifier.
- To Study the Two Stage RC Coupled Amplifier using Transistor.
- To Observe & Note change in O/P of second stage w.r.t. change in I/P Freq. of first stage.
- To Plot the frequency response & Determine Bandwidth.
- To Calculate Voltage gain of each stage & Overall Voltage Gain of circuit & to verify AV = AV1 x AV2

Other Instruments Required : Oscilloscope, Function Generator 1MHz.

Accessories Included : Set of Patch Cord and Details Instruction Manual

Subject to Change