Transistor Class A,B & C Amplifier

Model : SD-108

SINCOM SD-108 Transistor Class-A,B & C Amplifier is All-In-One remarkable simply designed trainer for the purpose to study the concept, operation, Frequency response and determine the Bandwidth, Voltage gain and other parameters of a Class-A,B & C Amplifier in a simple experimental way.

Features

- User friendly Design
- Separate Modules of Class-A,B & C Amplifier
- Class-A amplifier circuit using BJT NPN BC548 with Self base biasing
- Class-B Push Pull amplifier circuit using two NPN BJT wired with Input and Output Driver Transformers
- Class-C amplifier circuit using BJT NPN BC548 with Self base biasing and Output coupling Transformers
- Silicon NPN BJT of TO-92 package on board
- Wide Bandwidth AF Amplifier
- Resistive Collector Load
- Input and Output Driver Transformers for Class-B
- Output Coupling Transformer for Class-C
- 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

- DC Power Supply : IC Regulated Fixed +12V/500mA
- Amplifier Type : Class-A, Class-B and Class-C Amplifier
- Transistor Type and Package : Bi-Polar Silicon-NPN, TO-92 Package
- Transistor Used : Three BC548
- Transistor Configuration : CE mode
- Biasing Method : Self Bias for Class-A & C, Fixed Bias for Class-B
- BJT Junction Voltage : 0.7V
- Max. Collector Emitter Voltage : 12 VDC
- Emitter Base Voltage V_{BE} : 5V
- Base Resistors : Two No. for Class-A and C
- Emitter Resistors : One No. for Class-A and C
- Input Output Coupling Capacitors : Two No. Electrolytic type
- Collector Load : 10KΩ Fixed Resistive Load

- Class-B Coupling Transformer : 6V AF Driver Transformer secondary centre tap
- Class-C Output Coupling Transformer : 6V AF Driver Transformer
- Input Signal Type : Sine wave
- Max. Input Frequency Range : 60Hz-500KHz approx.
- Output Frequency Response : 100Hz-20KHz approx.
- AC Mains Power Supply : 230V ±10%, 50Hz
- Weight : 3.0 kg (approx)
- Dimensions (mm) : L 270 x W 390 x H 130
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50^{0}C, 80% RH

Learning Scope

- To study Class-A Power Amplifier circuit. To Observe & Note change in O/P w.r.t. change in I/P Freq.
- To study Class-B Power Amplifier circuit. To Observe & Note change in O/P w.r.t. change in I/P Frequency. To observe and note the Cross Over Distortion.
- To Plot the frequency response & To Determine Bandwidth, Voltage Gain, Efficiency of class-A & B amplifier.
- To Study Class-C Power Amplifier circuit. To Observe & Note change in O/P w.r.t. change in I/P Frequency. To Plot frequency response & To Determine Resonance frequency, 3-dB Bandwidth and effective Q, Voltage Gain of class-C Power amplifier.

Other Instruments Required : Oscilloscope, Function Generator 1MHz.

Accessories Included : Set of Patch Cord and Details Instruction Manual

Subject to Change