Two Stage Transformer Coupled Amplifier using Transistor

Model : SD-123

SINCOM SD-123 Two Stage Transformer 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 Transformer coupled Amplifier in a simple experimental way.

Features

- Two single stage CE amplifiers using NPN Transistor BC548 with Self base biasing
- First stage Output Transformer 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
- 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 Transformer Coupled CE Amplifier
Transistor Type and Package	: Bi-Polar Silicon-NPN, TO-92 Package
Transistor Used	: Two BC548
Transistor Configuration	: CE mode
Amplifier Stages	: Two
Amplifiers Inter coupling type	: Transformer Coupled
Inter Coupling Transformer	: 6V AF Driver Transformer
Output Coupling Transformer	: 6V AF Driver Transformer primary centre tap
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
Resistive Load	: 10KΩ Fixed Resistive output Load

- Input Signal Type : Sine wave
- Max. Input Frequency Range : 60Hz-500KHz approx.
- Output Frequency Response : 100Hz-15KHz 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 Two Stage Transformer Coupled Amplifier using Transistor.
- To Observe & Note change in output 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