

Two Stage RC Coupled Amplifier using JFET

Model : SD-122

SINCOM SD-122 Two Stage RC Coupled Amplifier using JFET 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 JFET Two stage RC coupled Amplifier in a simple experimental way.

Features

- ❖ Two single stage CS amplifiers using N-Channel JFET BFW10 with voltage divider biasing
- ❖ First stage Output RC Coupled to the second stage Input
- ❖ N-Channel JFET of TO-72 package on board
- ❖ Wide Bandwidth AF Amplifier
- ❖ Resistive Drain 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 \pm 10%, 50Hz
▪ DC Power Supply	: IC Regulated Fixed +12V/500mA
▪ Amplifier Type	: Two Stage RC Coupled CS Amplifier
▪ Transistor Type and Package	: N-Channel JFET, TO-72 Package
▪ JFET Used	: Two BFW10
▪ JFET Configuration	: CS mode
▪ Amplifier Stages	: Two
▪ Amplifiers Inter coupling type	: RC Coupled
▪ Biasing Method	: Voltage Divider Bias
▪ Max. Drain Source Voltage	: 12 VDC
▪ Gate Source Voltage V_{GS}	: 5V
▪ Gate Resistors	: Two No. for each stage
▪ Source Resistor	: One No. with bypass capacitor for each stage
▪ Input Output Coupling Capacitors	: Two No. Electrolytic type
▪ Drain Load	: 10K Ω Fixed Resistive Load for each stage
▪ Input Signal Type	: Sine wave
▪ Max. Input Frequency Range	: 60Hz-500KHz approx.
▪ Output Frequency Response	: 100Hz-20KHz approx.



An ISO 9001:2015 Co.

▪ Weight	: 2.0 kg (approx)
▪ Dimensions (mm)	: L 220 x W 270 x H 110
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-50°C, 80% RH

Learning Scope

- To Study the JFET as Common Source Amplifier.
- To Study the Two Stage RC Coupled Amplifier using JFET.
- 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 $AV = AV_1 \times AV_2$

Other Instruments Required : Oscilloscope, Function Generator 1MHz.

Accessories Included : Set of Patch Cord and Details Instruction Manual