



An ISO 9001:2015 Co.

## 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 $\Omega$ Fixed Resistive Load for each stage
▪ Input Signal Type	: Sine wave
▪ Max. Input Frequency Range	: 60Hz-500KHz approx.
▪ Output Frequency Response	: 100Hz-20KHz approx.



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- 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