

## Study of Op-Amp Characteristics Scientech 2322



**Scientech 2322** enables students to study the basic functions and characteristics of operational amplifiers. The opamps are use in mathematical operations such as addition, subtraction, integration, differentiation and so on. However, an ideal operational amplifier is an extremely versatile circuit element, with many applications beyond mathematical operations and to understand and perform those application, it is necessary to have better understanding of its basic operation. Scientech 2322 has been divided into different blocks for the ease of user to understand the various operations of operational amplifier. A Function Generator, generating Sine wave, Square wave and triangular wave, and two variable DC Supplies are provided on board.

#### **Features**

- Self contained easy to operate 2322
- On board Function Generator
- Functional blocks indicated on board mimic
- Built in DC Power Supplies
- Online Product Tutorial
- Compact size

## **Scope of Learning**

#### Study and:

- Observe Open-Loop Gain as a function of frequency Measure CMRR
- Op-amp gain in voltage series feedback configuration Observer the functioning of voltage follower i.e. buffer
- Op-amp gain in voltage shunt feedback configuration
- Op-amp as a differential amplifier and observe its output Observe Op-amp as I-V Converter
- Observe Op-amp as V-I Converter
- Observe Op-amp as Inverting Summer
- Observe Op-amp as Inverting Averager
- Observe Op-amp as Inverting Scaler
- Observe Op-amp as a non-inverting Averager
- Observe Op-amp as non-inverting Summer
- Observe Op-amp as an Integrator
- Observe Op-amp as Differentiator



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### **Technical Specifications**

#### **Function Generator**

Outputs : Sine, Square and Triangle

Frequency : 10 Hz, 100 KHz

DC Power Supplies : 0 - 5 V variable, 2 Nos.

Test Points : 28 nos

**Power Supply** : 110-220 V ±10%, 50/60 Hz

Power Consumption:4 VA approximatelyDimensions (mm):W  $326 \times D 252 \times H 52$ 

Weight : 2 Kg approximately

**Operating Conditions** : 0-40°C, 80% RH

Product Tutorial : Online on www.ScientechLearning.com

**Included Accessories:** 

Patch cord 16" (Red ) 2mm : 4 nos.
Patch cord 16" (Black ) 2mm : 2 nos.
Mains cord : 1 no.