# **Electronics Lab Training Modules**



## **Amplifier**

## ME 618 - Common Emitter Transistor Amplifier

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#### Objective:

- Common Emitter Transistor Amplifier apparatus with and without Negative Feed Back has been designed to study the following:-
- A. Frequency Response/ Output Voltage Gain & Change in Critical Frequency with & without Feedback Capacitor (Miller effect).
- · B. Input Impedance.
- · C. Output Impendence.
- D. Effect of Negative Feed Back on Output Gain.

## **Technical Specifications:**

### Inbuilt Fixed DC Regulated Power Supply

Output Voltages :-12VDC

### Transistor, Potentiometer & Components Provided

Transistor : CK-100 (PNP)

Potentiometer : 1 Nos.

- Biasing Resistances
- Capacitors
- SPDT Switch
- High quality Aluminum used as front panel of 270 mm x 170mm & mounted on light weight shock proof plastic cabinet
- Symbol diagram printed on Aluminum Front Panel & all important test Points Are brought out on front panel
- Power requirement: 230 VAC 10%, 50Hz.
- Weight : 1.0Kg Approx.
- Dimensions (mm) : 300(L) x 175(B) x 75(H)

#### Standard Accessories:

• Power chord, Patch chords & Instruction manual.

## Optional Accessories:

- Dual Trace Cathode Ray Oscilloscope 20MHz (ME 3020)
- AF Function Generator (ME 250)

## ME 619 - Two Stage RC Coupled Amplifier

#### Objective:

- Two Stage RC Coupled Amplifier circuit has been designed to study the:
  - A. Voltage Gain & Frequency response of First Stage Amplifier
  - B. Voltage Gain & Frequency response of Second Stage Amplifier
  - C. Voltage Gain & Frequency response of RC Coupled Amplifier
  - D. Voltage Gain & Frequency response of Direct Coupled Amplifier



#### **Technical Specifications:**

## Inbuilt Fixed DC Regulated Power Supply

Output Voltages :-12VDC

## Transistor, Potentiometer & Components Provided

Transistor : CK-100 (PNP) 2 Nos.

Potentiometer : 1 Nos.Biasing Resistances

- Capacitors
- High quality Aluminum used as front panel of 270 mm x 170mm & mounted on light weight shock proof plastic cabinet
- Symbol diagram printed on Aluminum Front Panel & all important test Points Are brought out on front panel
- Power requirement: 230 VAC 10%, 50Hz.
  Weight :1.0Kg Approx.
- Dimensions (mm) : 300(L) x 175(B) x 75(H)

#### Standard Accessories:

· Power chord, Patch chords & Instruction manual.

### Optional Accessories:

- Dual Trace Cathode Ray Oscilloscope 20MHz (ME 3020)
- AF Function Generator (ME 250)

## ME 619D - Two Stage RC Coupled Amplifier with builtin Sine Wave Oscillator

#### Objective:

Two Stage RC Coupled Amplifier circuit has been designed to study the:
 A. Voltage Gain & Frequency response of First Stage Amplifier
 B. Voltage Gain & Frequency response of Second Stage Amplifier

## **Technical Specifications:**

### Inbuilt Fixed DC Regulated Power Supply

Output Voltages :-12VDC

## Inbuilt Sine Wave Oscillator

• Frequency range : 1Hz to 100KHz (selectable using Band switch)

## On Board Digital AC Millivoltmeter

Millivoltmeter : 20mV, 200mV, 2V & 20VAC

Accuracy :+ (0.5 % + 1 Digit)Freq. Response : upto 100 KHz

## Transistor, Potentiometer & Components Provided

Transistor : CK-100 (PNP) 2 Nos.

• Potentiometer : 1 Nos.

Resistance

- Capacitors
- SPST Switch
- High quality Aluminum used as front panel of 270 mm x 170mm & mounted on light weight shock proof plastic cabinet
- Symbol diagram printed on Aluminum Front Panel & all important test Points Are brought out on front panel
- Power requirement: 230 VAC 10%, 50Hz.
  Weight :1.0Kg Approx.
- Dimensions (mm) : 300(L) x 175(B) x 75(H)

#### Standard Accessories:

• Power chord, Patch chords & Instruction manual.