



وزارة التعلم العالي والبحث العلمي

جامعة المستقبل

كلية الهندسة والتقنيات الهندسية

GLP – F020

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سجل التجارب للعام الدراسي 2024 - 2025

Experiment number: 8

Experiment name : transistor as an amplifier

Devices and equipment : Using computer – Multisim program

Objective: -

In the previous Transistor experiment, you learned the theory. Now you will apply it and build your own simple amplifier circuit from scratch using transistor and some various resistors/capacitors

Circuit elements:

DC power

AC power

Capacitor

Resistor

Oscilloscope

Transistor

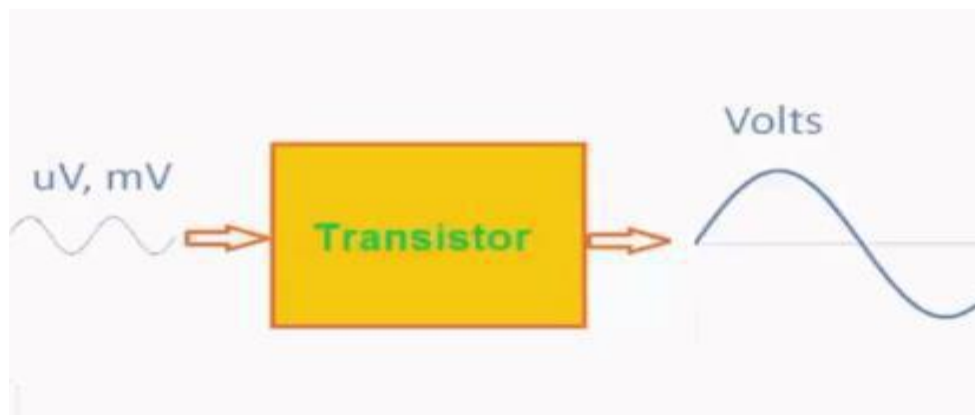
Millimeter

Theory

How do we use the transistor as an amplifier?

- First, we must connect it appropriately to the supply voltages, input signal, and load, so it can be used
- A useful mode of operation is the common-emitter configuration.

There are multiple configurations using NPN transistors, but we will use the "common emitter configuration" because it allows us to have high voltage gain. Why is it called a "common emitter amplifier?" - Because the base is the input, the collector is the output, and the "common" or ground is the emitter.



Procedure:

Connect the circuit shown in the figure

