

# Audio Amplifier

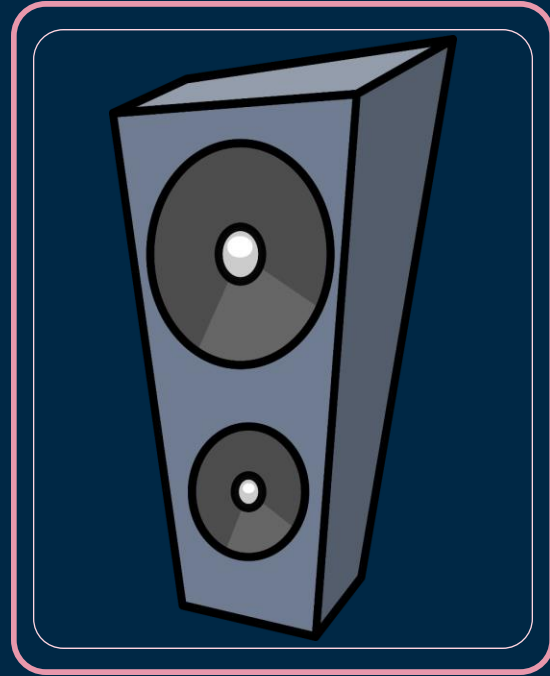
Under the supervision of Dr. Said Emam  
and Eng. Engy Georgy

# Our Team

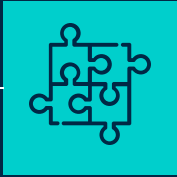
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# The Project's Objectives

is to faithfully, effectively, and with minimal distortion recreate input audio signals at sound-producing output elements at required volume and power levels.



# PROJECT STAGES



01

**Design** the project by deciding on its constituent parts and assigning them appropriate values.



02

**To test it**, place our circuit on one of the simulator programmers, proteus.



03

**The practical** process then begins.

# TABLE OF COMPONENTS



Switch

It's value and number used in the project: ON/OFF Rocker Switch, 1 Switch.



Capacitor

It's value and number used in the project: 10nf, 1000uf, 10uf (2), 0.1uf (2), 100uf, 7 Capacitors.



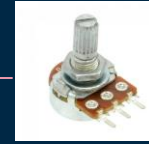
Resistor

It's value and number used in the project: 1.2K ohm, 10 ohm, 1K ohm (2), 4 Resistors.



Speaker

It's value and number used in the project: 4ohm 3w, 1 Speaker.



Potentiometer

It's value and number used in the project: 10K ohm, 1 Potentiometer.



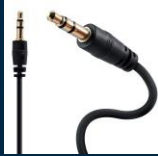
Terminal Connectors

It's value and number used in the project: 3-pin, 2-pin, 2 Terminal Block Connectors.

# TABLE OF COMPONENTS



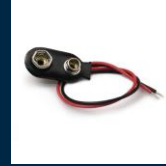
LM386



AUX Cord



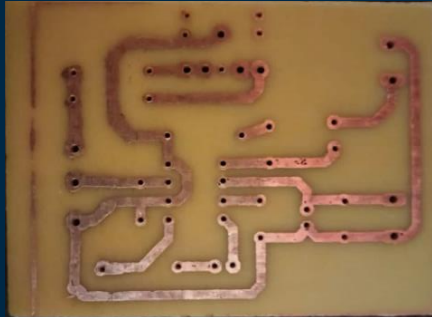
Female AUX Jack



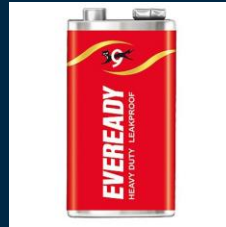
Battery  
Connector



Wires



PCB Board



Battery

It's value and number used in  
the project: 9V, 1 Battery.



Soldering Iron

# SMALL HINT ON EACH COMPONENT

## LM386

It is an integrated circuit for a low-voltage audio power amplifier. And it is thought to be among the most popular and fairly priced integrated circuits (ICs) that function as speakers..



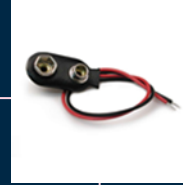
## Speaker

It creates sound waves from the analogue or digital inputs it receives from computers or audio players. It can be used in many situations where space is limited because of its tiny size.

# SMALL HINT ON EACH COMPONENT

## Battery

It immediately transforms the chemical energy contained in its active components into electric energy.

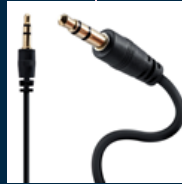


## Battery Connector

The purpose of battery connectors is to connect a battery in a small electronic product.

## AUX Cord

The cord that you used to use to connect your phone to the speakers.



## Female AUX Jack

It is a little phone jack that links any portable music player to the amplifier and speakers of the car.



# SMALL HINT ON EACH COMPONENT

## Switch

It is a tool for opening and closing electric circuits.



## Capacitor

It is a passive electronic component with the ability to store electrical charge-based energy.

## Resistor

It is a two-terminal passive electrical component used to control the amount of current flowing through electrical circuits.



## Potentiometer

It is a three-terminal resistor with a spinning contact that functions as a passive electrical component to provide a voltage divider that is programmable.

# SMALL HINT ON EACH COMPONENT

## Wires

An electrical part used to connect appliances to a power source or utility is a power cord.

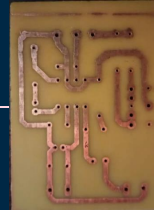


## Soldering Iron

It is a hand-held instrument for soldering. It provides the heat necessary to melt the solder and allow it to flow into the joint between two workpieces.

## Terminal Connectors

A connector is a component that connects two pieces of machinery, wiring, or piping.

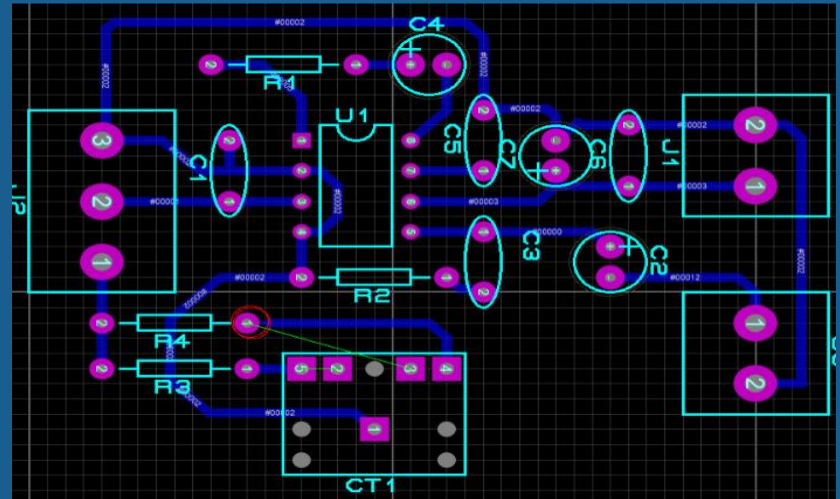


## PCB

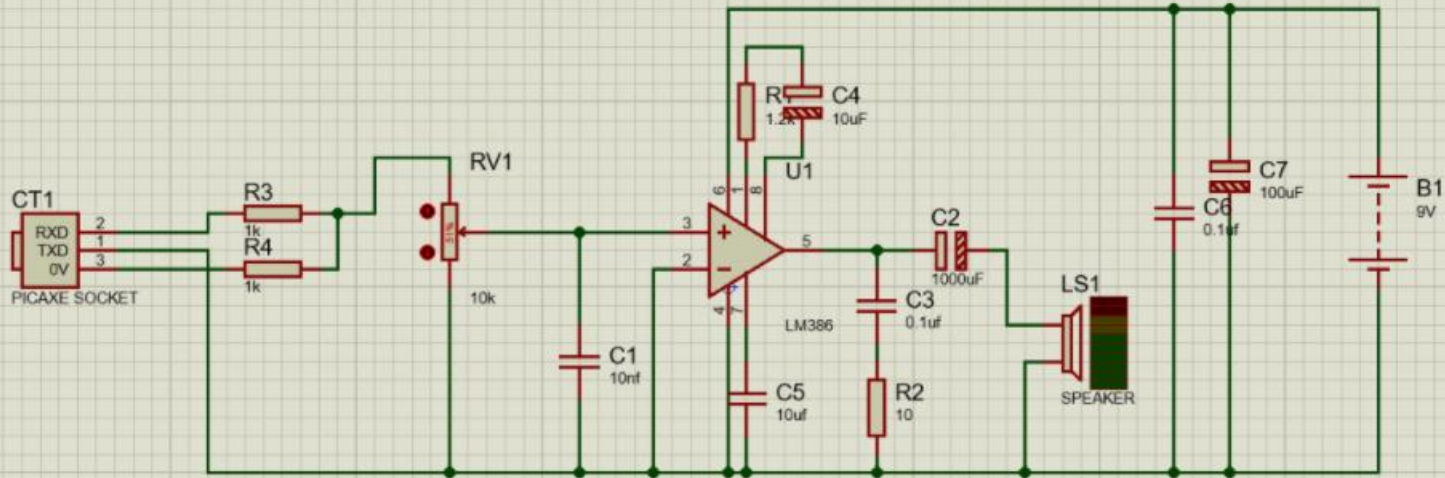
It is a method used in electrical and electronic engineering to safely link electronic parts to one another.

# THE DESIGN ON PCB

After designing the circuit and placing it on the Proteus simulator tool, we printed our design on the PCB.



# THE DESIGN ON PROTEUS



## FOLLOWING THAT

We went on and purchase our components.

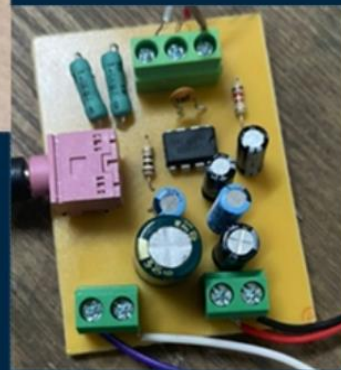
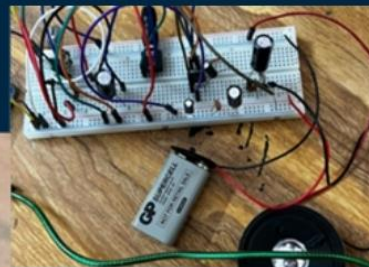
FIRST

SECOND

After that, we used a soldering iron to connect the components on the PCB.

Then using the aux to connect the phone to the speakers to play a song to make sure it works.

THIRD





THANKS!

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