



Wellcome to our Presentation

Project Title : Wireless Power Transmission Circuit
Course Title: Mobile and wireless communication sessional
Course code: CSE 416

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Introduction :

What is WPT ?

- **The Transmission of energy from one place to another without using wires.**
- **Conventional energy transfer is using wires**
- **But, the wireless transmission is made possible by using various technologies**

Components Required :

- 2N2222A transistor
- LED light
- 27k resistors
- Insulated copper wires
- 9v battery
- Battery clip

Why WPT

- Reliable
- Efficient
- Fast
- Low maintenance cost
- Can be used for short range or long range

Circuit Diagram :

It has two parts, Transmitter, and the receiver.

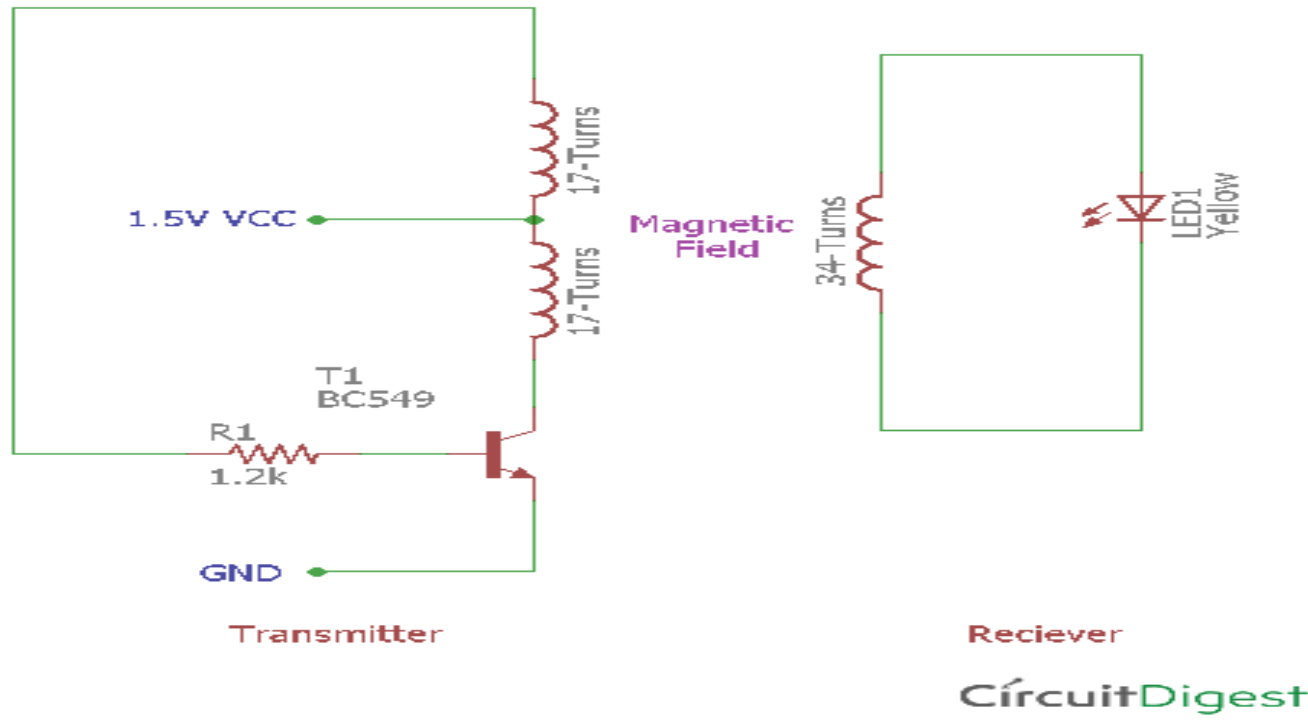


Figure : Circuit Diagram

Construction of the Wireless Power Transmission Circuit :

The transistor is NPN Transistor, any basic NPN transistor can be used BC547.

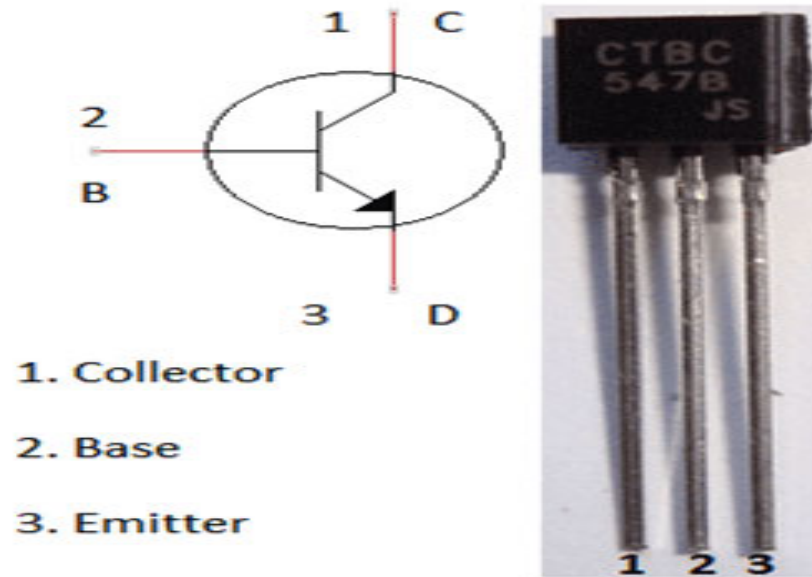


Figure : NPN Transistor

Working of the Wireless Power Transmission Circuit :

Both the circuits are constructed on the breadboard and powered using a 9V battery. The circuit can't be used for more than 1.5 volt power supply as transistor may heat up for excessive power dissipation. However, for more rating, additional driving circuits are needed.

This wireless electricity transmission is based on the Inductive coupling technique. The circuit consists of two parts- Transmitter and Receiver.

How it Works :

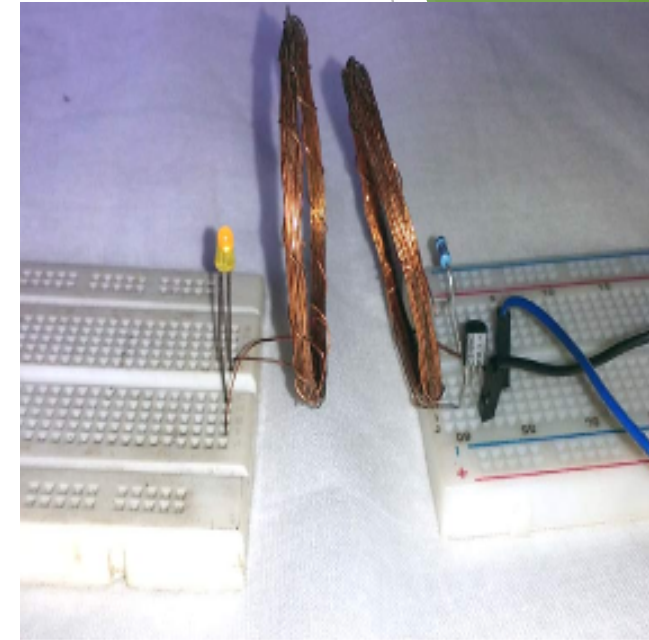


Figure : working Process

Output of the Project :

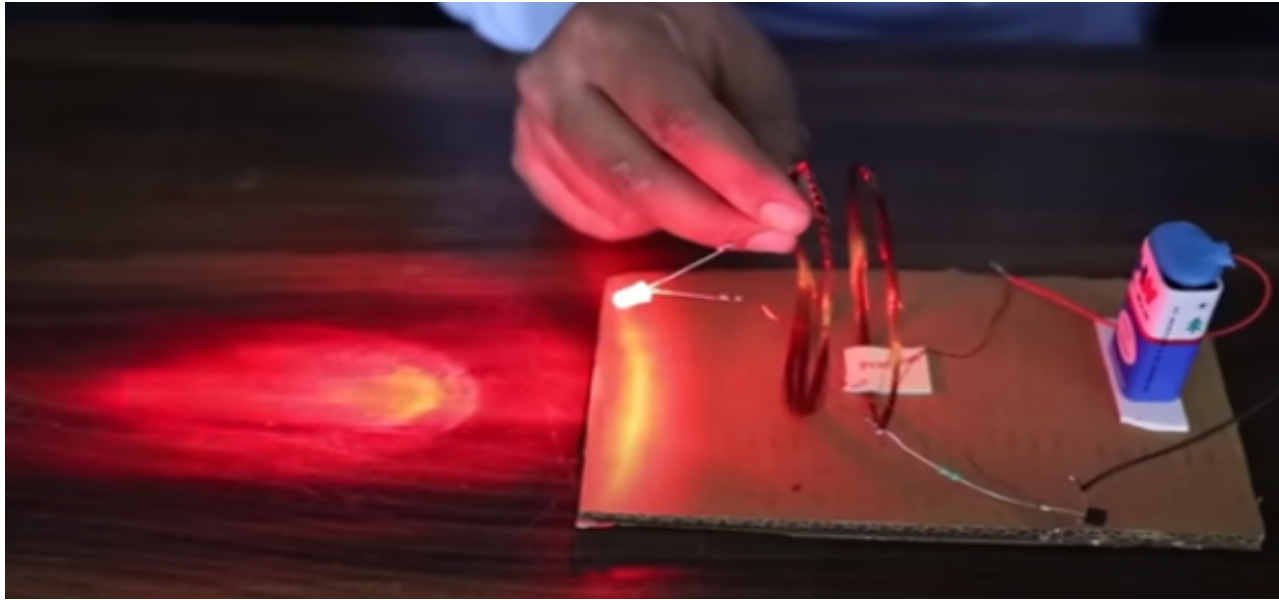


Figure : OutPut of Project

Applications of Wireless Power Transmission :

- Consumer Electronics
- Medical Devices
- Electric Vehicles
- Robotics
- Wireless Sensors
- Smart Home Devices
- IoT Devices
- Smartphones
- Laptops and Tablets

Advantages of WPT:

Wireless Power Transmission (WPT) offers several advantages across various applications, contributing to enhanced convenience, efficiency, and flexibility. Some of the key advantages include:

- **No Physical Connections**
- **Flexibility in Placement**
- **Less Mechanical Stress**
- **Increased Safety**
- **Efficiency and Scalability**
- **Environmental Impact**
- **Increased Design Flexibility**
- **User-Friendly**

Limitation of wireless power transmission:

- Energy Losses
- Limited Range
- Environmental Factors
- Power Limitations
- Safety Concerns

Conclusion of WPT:

The basic aim of this project is to transmit electric power wirelessly. Wireless Power Transfer (WPT) or wireless energy transmission is the transmission of electrical power from a power source to a consuming device without using solid wires or conductors.

Thank you