



# SOLAR WIRELESS ELECTRIC VECHICLE CHARGING SYSTEM

INTERNAL GUIDE

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# INTRODUCTION

- With the growing demand for electric vehicles (EVs) and the increasing emphasis on sustainable transportation solutions, the development of efficient and eco-friendly charging infrastructure has become paramount.
  - aims to address the challenges associated with traditional EV charging methods by leveraging wireless charging technology and integrating solar panel backup systems.
  - to create a versatile and sustainable charging solution that offers convenience, efficiency, and environmental benefits.
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# PROBLEM STATEMENT

- While conventional plug-in chargers have been effective, they often lack efficiency, convenience, and sustainability.
- As there less number of EV charger stations the users are facing problems and the usage of these vehicles reduced.
- Energy losses in the form of heat is another problem of using wired chargers .
- To address these challenges, there is a need to develop a Wireless Electric Vehicle Charger (WEVC) integrated with a Solar Panel Backup System.

# OBJECTIVES

- Develop a user-friendly wireless electric vehicle charging system integrated with solar panels to enhance convenience and reduce reliance on non-renewable energy sources, contributing to sustainable transportation solutions.
- To optimize charging efficiency and promote environmental sustainability by integrating solar panel backup systems into wireless electric vehicle chargers, ensuring reliable and eco-friendly charging operations for electric vehicles.

# PROPOSED SYSTEM(Algorithm)

1.Start

2.Position of the car

3. Position is correct :

    If battery is not full

        Then wireless charging is done

4.If battery is full

    it will stop

5.If battery=0v

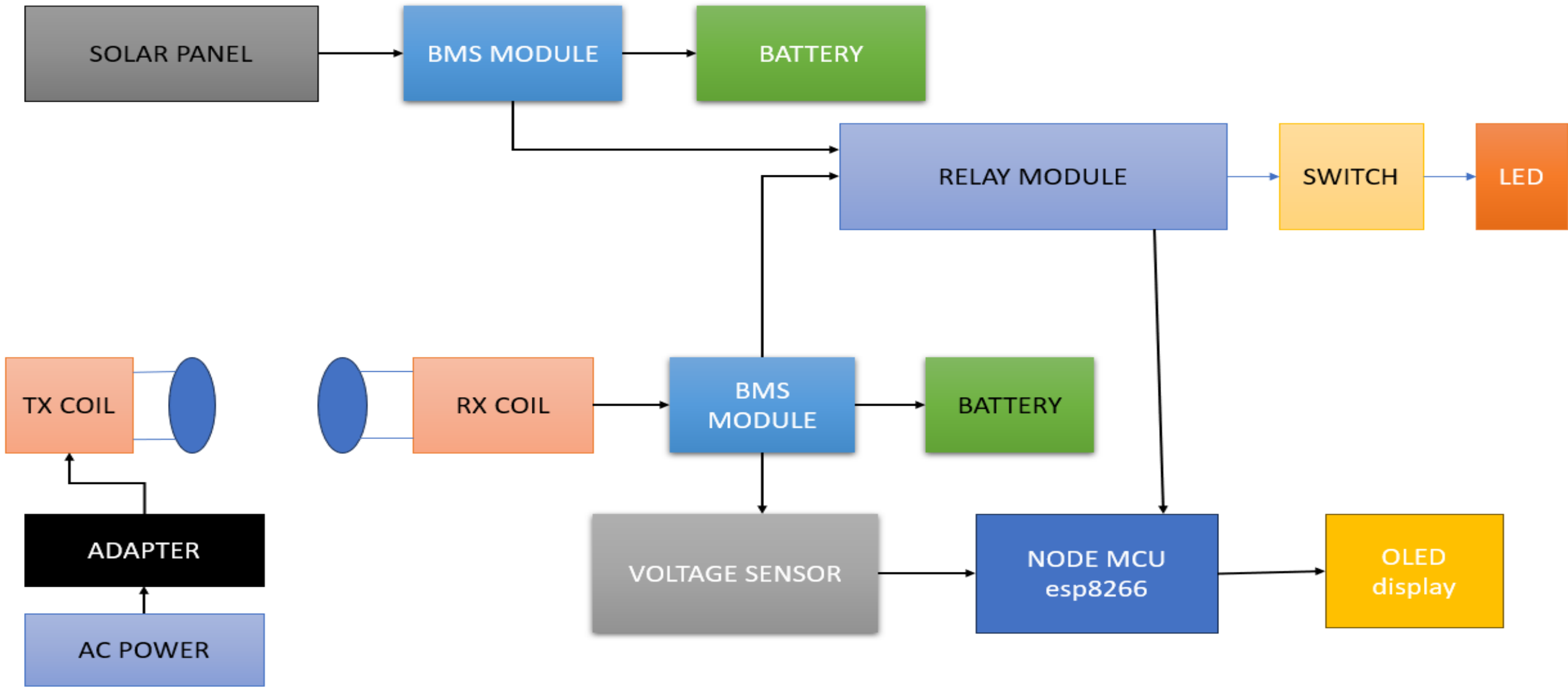
    Then solar battery active

# EXISTING SYSTEMs

- Traditional Plug-In Chargers
- Wireless Charging Systems
- Solar Charging Solutions
- Hybrid Charging Systems



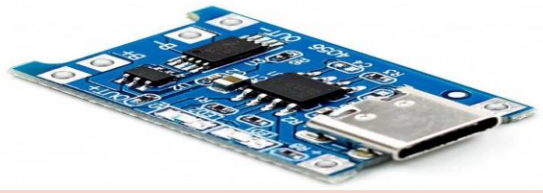

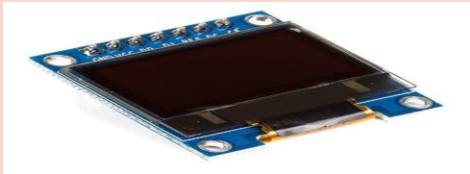


# BLOCK DIAGRAM





# COMPONENTS

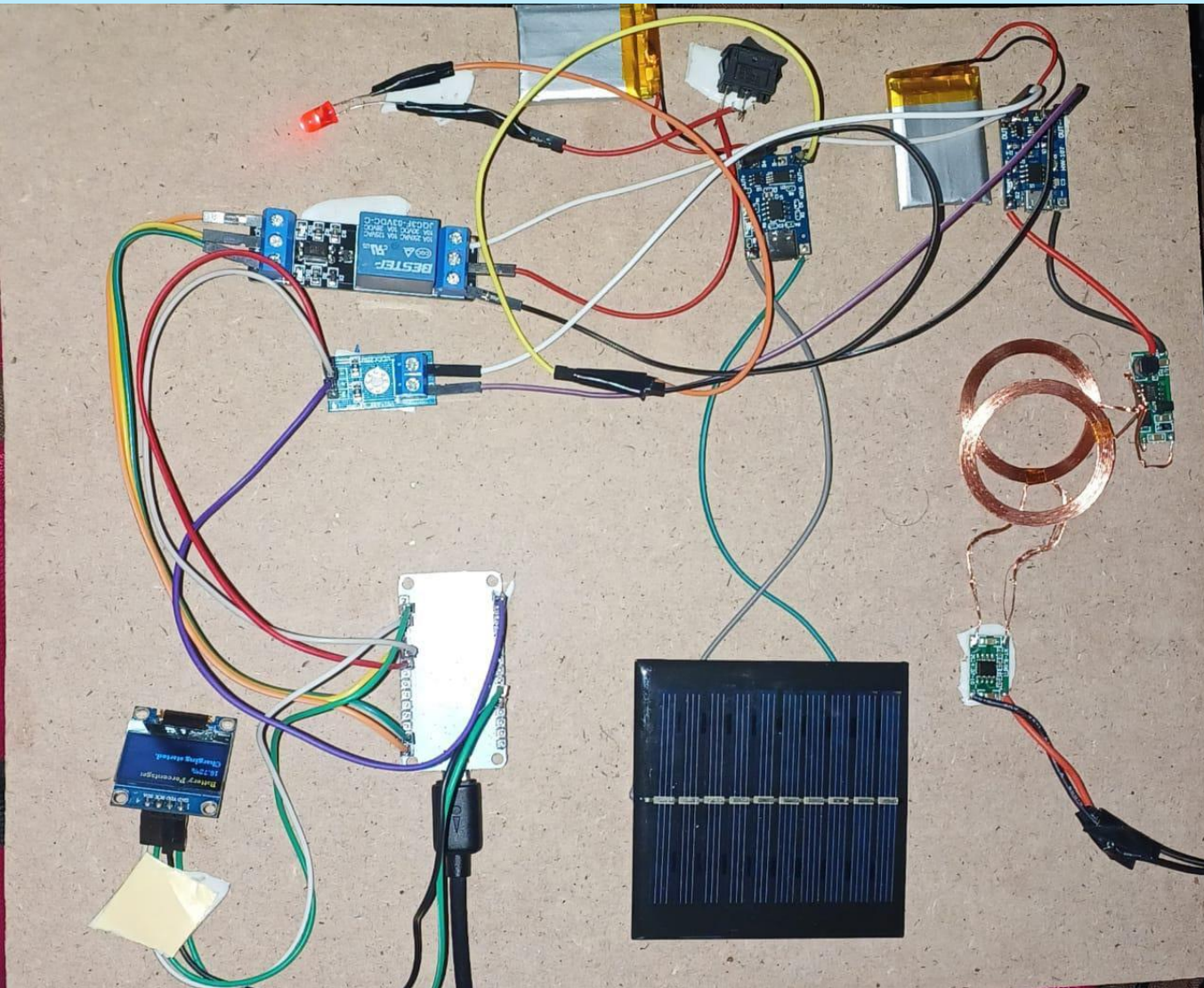
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Materials	Model Specifications	Model Pictures
Nodemcu	esp8266	
Power Transfer Module	5V	
OLED display	0.96inch	
Lithium Battery	5V	
Solar Panel	5v	

BMS MODULE	5v	
VOLTAGE SENSOR		
RELAY MODULE		
LED	10	
SWITCH		
CONNECTING WIRES		

# OUTPUT

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# ADVANTAGES

- Convenience and User-Friendly
  - Improved Safety
  - Renewable Energy Source
  - Environmental Benefits
  - Accessibility
  - Innovation and Future-Proofing
  - Seamless Integration with Infrastructure
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# DISADVANTAGES

- Higher Costs
- Heat Generation
- Limited Charging Range
- Positioning and Alignment
- Lower Efficiency

# APPLICATIONS

- Residential Charging
  - Commercial and Workplace Charging
  - Public Infrastructure
  - Transportation Hubs
  - Emergency Services and Public Safety
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# Reference

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THANK YOU