

Solar and Piezo Hybrid Power Charging with Automatic Street Light Control System

About This Project:

The Solar & Piezo Dual Charging project aims at charging a 12VDC Battery with the help of a Solar Panel and few piezoelectric transducers. With the help of Solar energy and footsteps on the transducer energy can be generated to charge the battery. The system smartly switches between these two energy sources and lets the battery to charge through the source which would provide adequate amount of power to charge the battery at any instant. A relay is used for the switching purpose. The power from solar and Piezo will store through a charger controller to battery. This board will have an LCD that will display the information related to charging to the user who wishes to monitor the charging process. Both side boards will have an ATmega family microcontroller for controlling purposes.

Block Diagram:

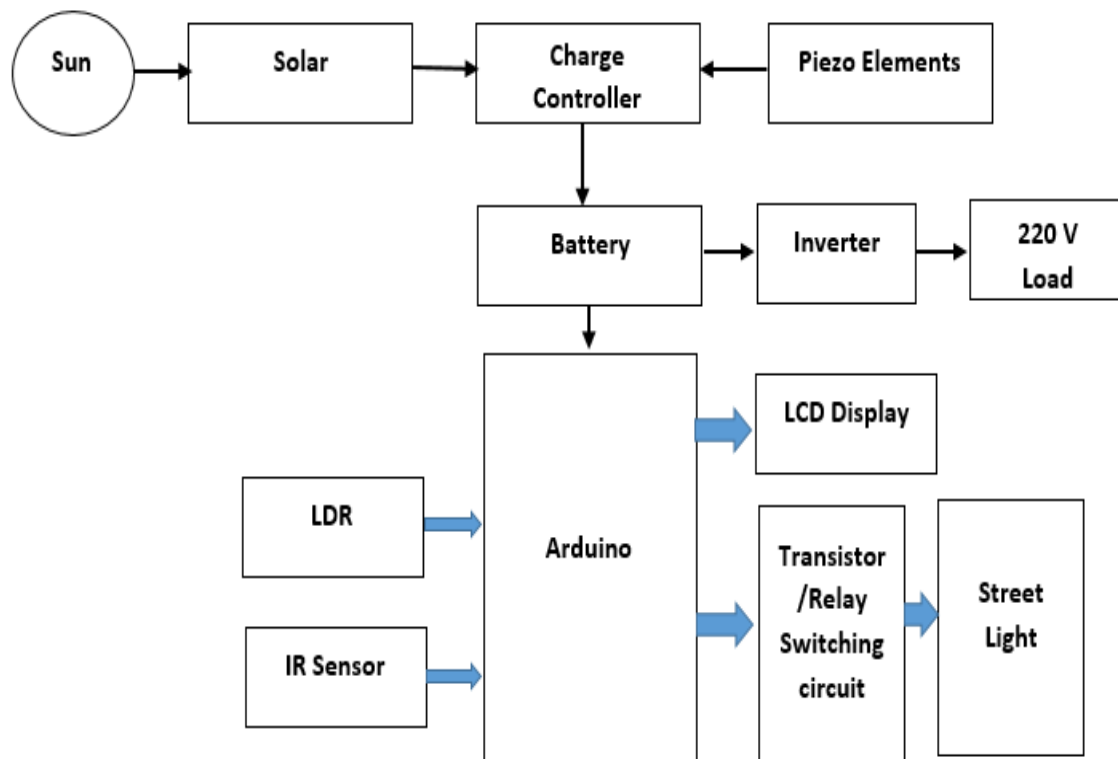


Figure: Block Diagram of Solar & Piezo Hybrid Power Street Light Control System.

Required Instruments:

- Solar.
- Charge Controller.
- Battery.
- Piezo.
- LDR.
- Arduino.
- LCD Display.
- CD4047.
- Transformer.
- Mosfet
- Relay. /Transistor.
- Capacitor.
- Resistor.

Advantages:

There are many advantages of our project because of its accuracy. Some of the advantages are pointed out below:

- The power source is natural and the battery are rechargeable.
- Less power consumptions with best utilization to use power
- LED light consume much low power
- Automatic Turn off on day light
- Using Relay minimum power can be providing to initialize the lights, when no one there on road
- Can generate the AC power also.

Applications:

The application areas for this project in this modern and practical world are huge and some of these are given below:

- This project can be widely used in our country for street light That is why a lot of energy will be saved.

N.B: Any modification of this project can be done as per your requirement. We will make the project according to your needs. Contact us with your any innovative engineering projects idea. We will help you to implement your project.

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