

Automatic Solar Street Light With Bluetooth Module

Komal Subhash Shinde *, Sarika Maruti Shendge **,
Priyanka Bhalchandra Bhore***, Vaishnavi Sambhaji Sakhare****,
Mrs Kanchan Patil*****.

*(Computer engineering, Rajarshi Shahu College of Engineering , pune (India)
sirsatkomal1991@gmail.com)

** (Computer engineering, Rajarshi Shahu College of Engineering, pune (India)
sarikashendge123@gmail.com)

***(Computer engineering, Rajarshi Shahu College of Engineering, pune (India)
priyanka_bhore800@gmail.com)

****(Computer engineering, Rajarshi Shahu College of Engineering, pune (India)
vaishnavisakhare9709@gmail.com)

***** (Computer engineering, Rajarshi Shahu College of Engineering, pune (India)
kaminipatil0@gmail.com)

Abstract:-

Automatic solar street light is used to save the electricity. In that solar panel consume the electricity in daytime. The Solar Street Light work on the Principle of Solar cells. The solar cell convert the solar energy into electrical energy. The converted energy is stored in the battery. When the direct current from the battery passes through the light, then it gives the light. The arduino uno microcontroller is used to show the status of battery percentage charge by the solar panel and used by the led lights to glow. The Bluetooth module is used to connectivity between hardware and software.

Keywords: Solar ,led, street light ,Bluetooth connectivity.

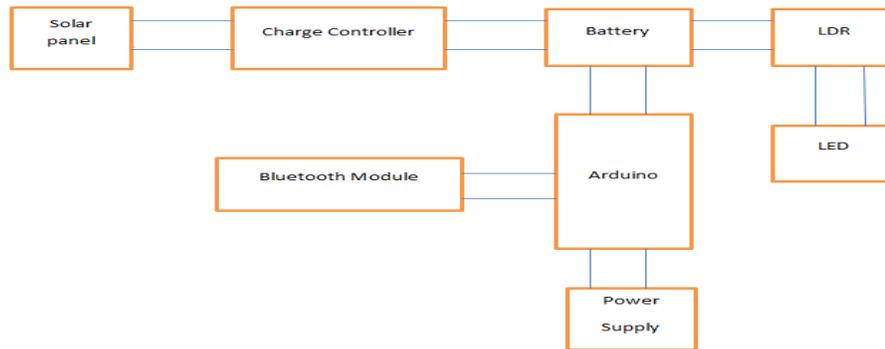
I.INTRODUCTION

We need to save energy because of most of the energy sources we depend on, like coal and natural gas can not be replaced. The proposed system is an automatic solar street light using Bluetooth module, developed to create electricity from renewable source. Solar street lights are raised outdoor light sources, which are powered by PV (photovoltaic) panels. PV panels have a rechargeable battery, providing power to the fluorescent or LED lamp during the entire night. Most of the solar panels automatically sense outdoor light through a light source. Here automation of street lights is done by LDR sensor.

II. Literature Survey

It was first developed in US on March 2 1949 but they have used electric light gas or oil lamps. Sukam sunway is india's best and most innovative solar street light system. Use of automatic solar street light system will reduce the use of electricity. Normal street light is produce lot of carbon dioxide which is harmful the environment.

III. System Architecture



IV. Component Description

IV.A.1.1 Arduino uno:

IV.A.1.2 Solar panel: is used to produce electricity.

IV.A.1.3 battery: is used to store electricity.

IV.A.1.4 Bluetooth module : it is used to communicate with the Arduino with the help of serial communication.

IV.A.1.5 LED: It is used as a street light.

IV.A.1.6 Solar charge Controller: A solar controller is an electronic device that controls the system from overheating.

IV.A.1.7 resistor: A resistor is an electrical component that limits or regulates the flow of electrical current in an electronic circuit.

IV.A.1.8 LDR Sensor: It is used to detect the sunlight to LED bulb should on/off.

IV.A.1.9 Jump wire: It is used to establish a connection

V. Conclusion

This project of ‘ Arduino based solar street light with Bluetooth module’ is a cost effective, partial , ecofriendly and the safest way to save energy.

By using this system we can save more electrical energy that is now consume by the highway.

VI. Future scope

In the future it can be Automatic solar street lights that glow on detecting night and object using Arduino. We can also use the Wi-Fi or SIM card to show the percentage of battery.

VII. Acknowledgment

We express our thanks to our project Guide prof. Mrs. Kanchan patil for his motivation.