

Simple Solar Battery Charger

Electronic Design Realization

March 2023

A simple solar charger is a small, portable compact device that uses solar panels to convert sunlight energy into electrical energy and which is used to charge a rechargeable battery for later usage at outdoor activities. Solar panels are new to us and today are used extensively in all sectors and now it is considered as a future solution for all electrical power crisis and shortages. Due to the variation in the intensity of the sunlight, temperature, shading, and other environmental conditions, voltage and current produced by the solar panel vary, which makes the charging voltage and current of battery unpredictable and in some scenarios which can lead to dangerous, to avoid these issues very effectively using LM338 or LM317 as solar controller. Here we implemented 2 LEDs to indicate battery charge level. If the battery is fully charged the red LED will be lit and if the battery is partially charged or charging, the green LED will be lit. This is a simple and effective way to monitor the battery charge level and ensure that it's being charged properly.

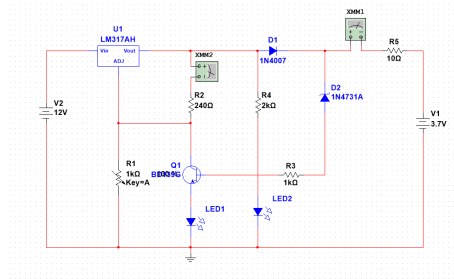


Figure 1: Circuit Diagram

Link for the product: Solar battery charger.