

Solar Energy Lab & Audio Player Lab

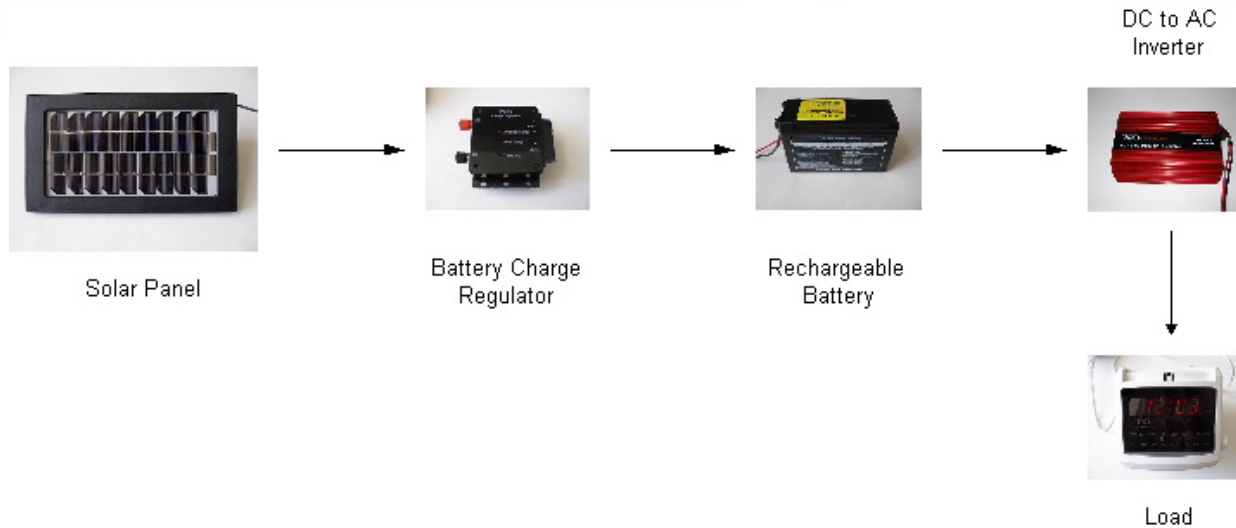
A Systems Approach



A presentation of eSyst.org



Solar Energy Lab



Objective:

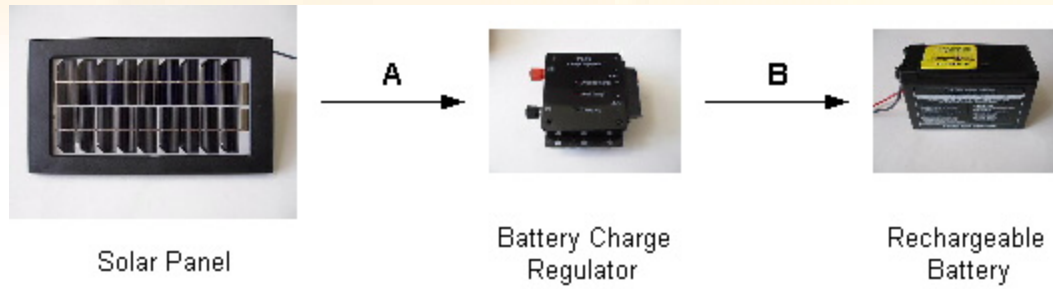
- To calculate and measure.
- To determine efficiencies.
- To show a form of alternative energy.

Solar Panel



- Series and parallel configurations.
- Voltage and Current Measurements

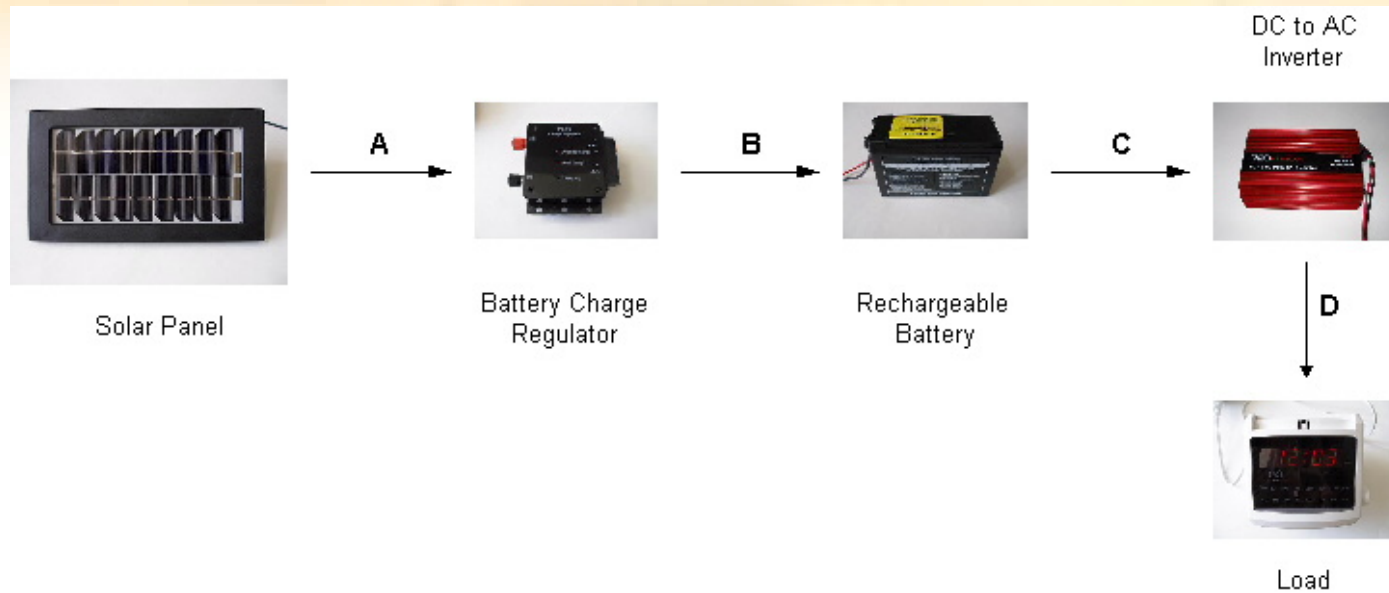
Efficiency of the Battery Charge Regulator



$$\text{Efficiency \%} = \frac{\text{Power}_{\text{out}} \text{ (in Watts)}}{\text{Power}_{\text{in}} \text{ (in Watts)}} \times 100\%$$

- Power in.
- Power out.

Efficiency of the DC-to-AC Inverter with a Load



- Measure DC and AC Voltage
- Measure DC and AC Current
- Calculate the efficiency.

Demo of Solar Energy Project