

BlueStamp Engineering

Build Plan

Name: Ethan Z.

Location: San Francisco

Instructor: Tamir Amitai

Starter Project: #1, Minty Boost

Main Project: #107 Solar-powered and battery backup USB charger

Major Steps to complete the project:

1. Gather all parts needed for the project.
2. Create a schematic/drawing that depicts each part being connected via wires.
3. Research what the Arduino does, what everything does.
4. Assemble the LiPo battery, the solar LiPoly Charger v2, and the solar panel together using wires.
5. Connect solar LiPo charger v2 to the boost converter.
6. Test if working properly using my phone.
7. ***This is a milestone. Save all design files, record a video, and post to the website.***
8. Gather materials needed to make voltage reader.
9. Test Arduino and write code needed to display voltage.
10. ***This is a milestone. Save all design files, record a video, and post to the website.***
11. Create a video describing the project, write a blog post describing function and how it works, and post pictures/schematic, materials, etc. onto website.

Potential Modifications:

1. Create a case for the solar powered USB charger.
2. Construct a way for charger to get more solar energy. (make charger more efficient)
 - a. Solar Tracking
3. Make lights to display how much solar energy there is. (solar energy level)
 - a. Weak and dim light = very little solar energy going into solar panels
 - b. Very bright light = alot of solar energy