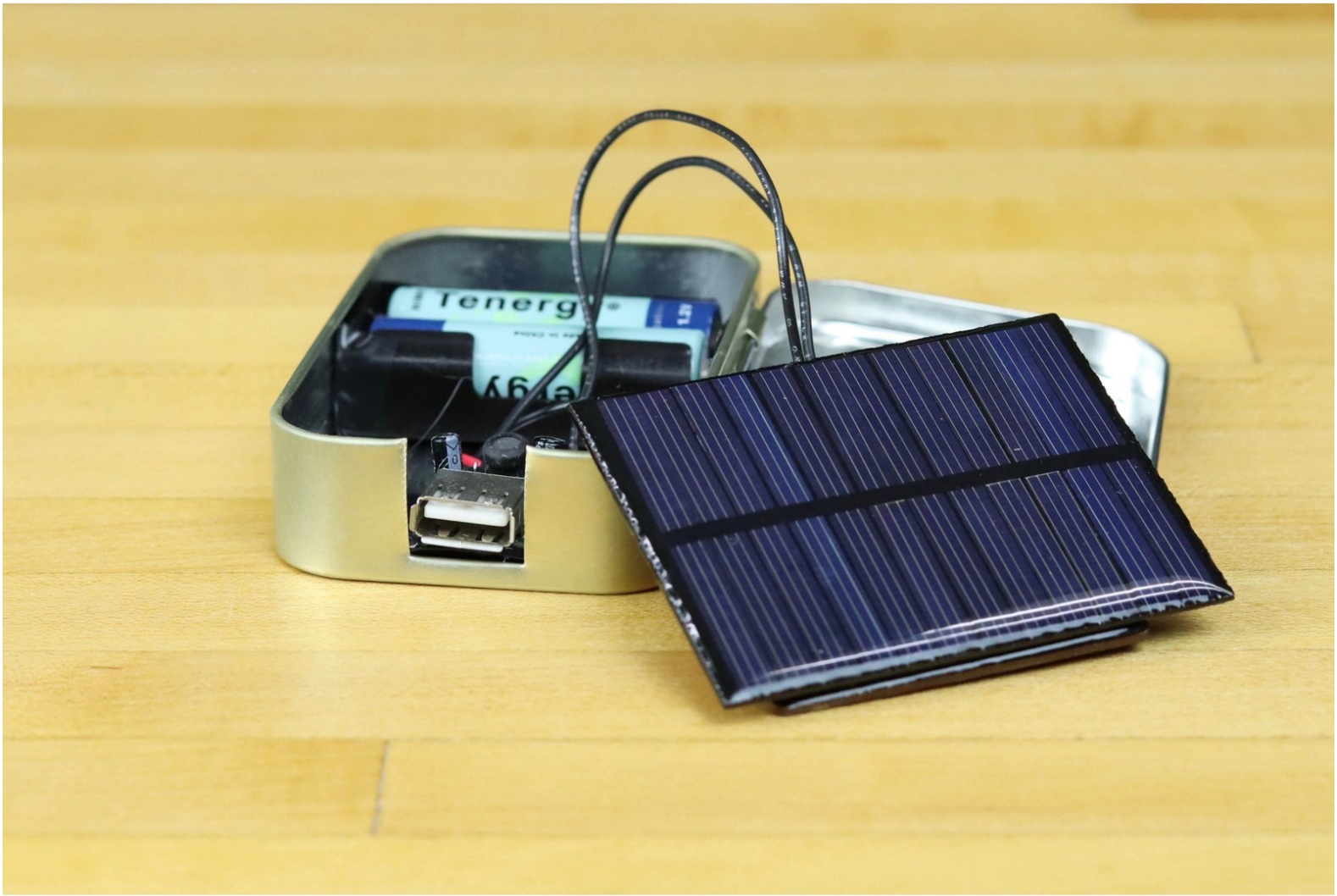
Solar USB 1.0

A guide on how to build the Solar USB 1.0 charger project.

Written By: Joshua



INTRODUCTION

Build a basic Solar USB charger in 15-25 minutes with this simple soldering kit.

- The printable PDF has updated directions to reflect the new USB circuit that we're using.

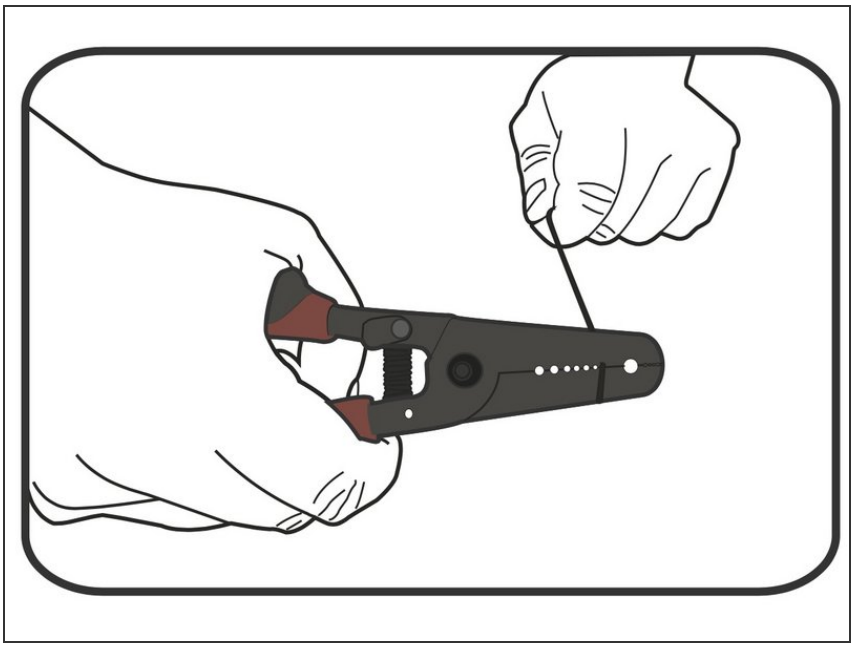
TOOLS:

- Soldering Iron (1)
- Wire Stripper (1)
- Hot Glue Gun (1)

PARTS:

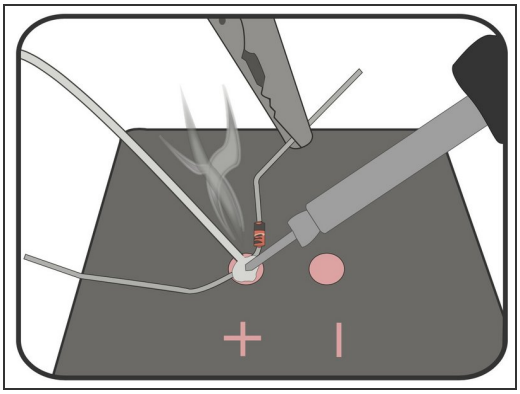
- Solar USB 1.0 Kit (1)

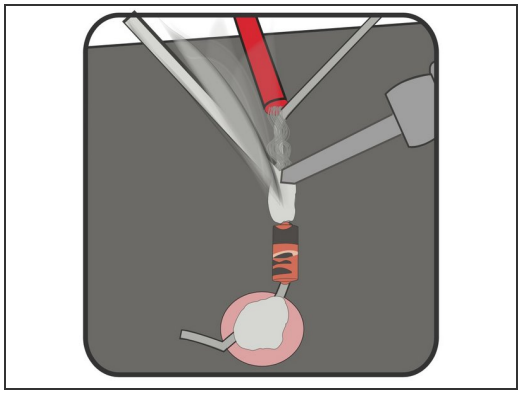
Step 1 — Strip The Wires

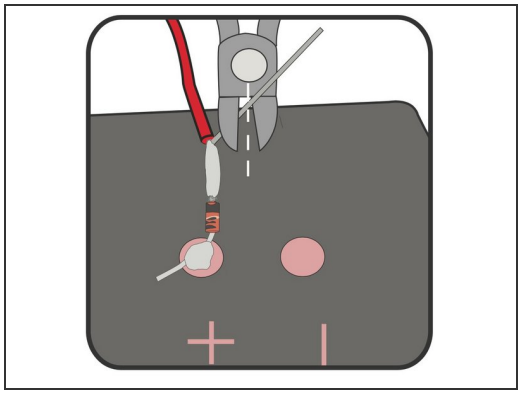


- Strip the ends of all wires, including the Battery Holder.

Step 2 — Solder The Diode



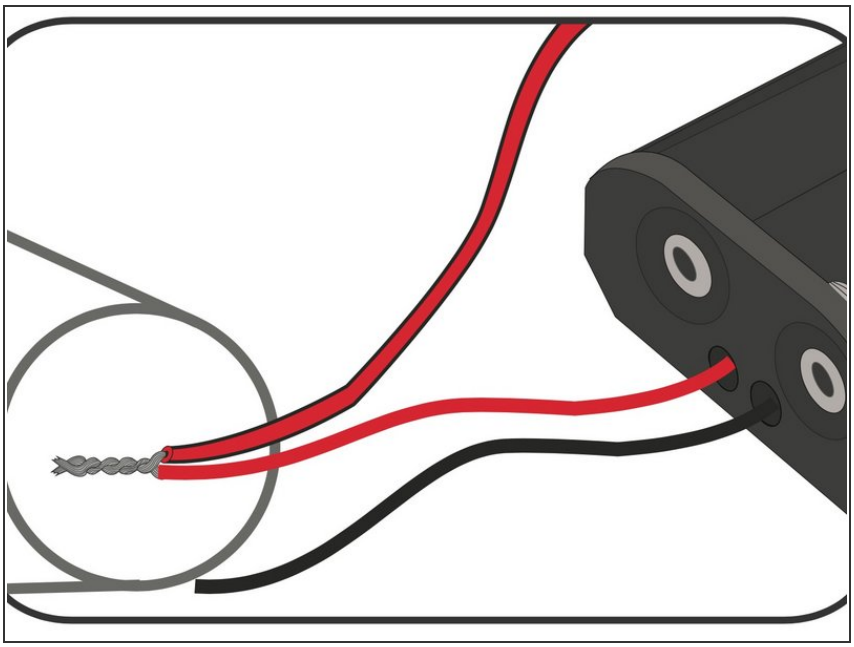




- Solder the Diode to the + (Positive) solder point on the solar cell.
- Note: The Diode has a black bar on it. That side is soldered to the Red wire, and the non black bar side is soldered to the solar cell.
- Solder the Red wire to the other side of the diode.
- Cute excess Diode leg lengths.

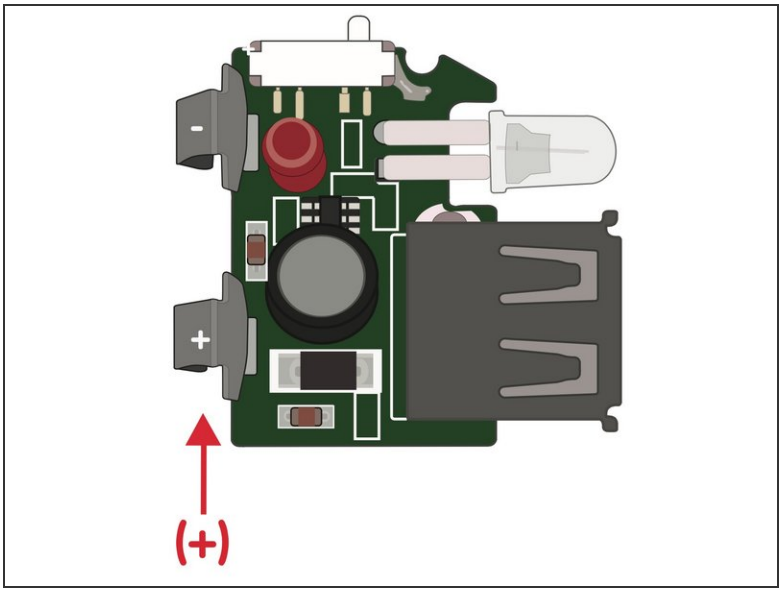
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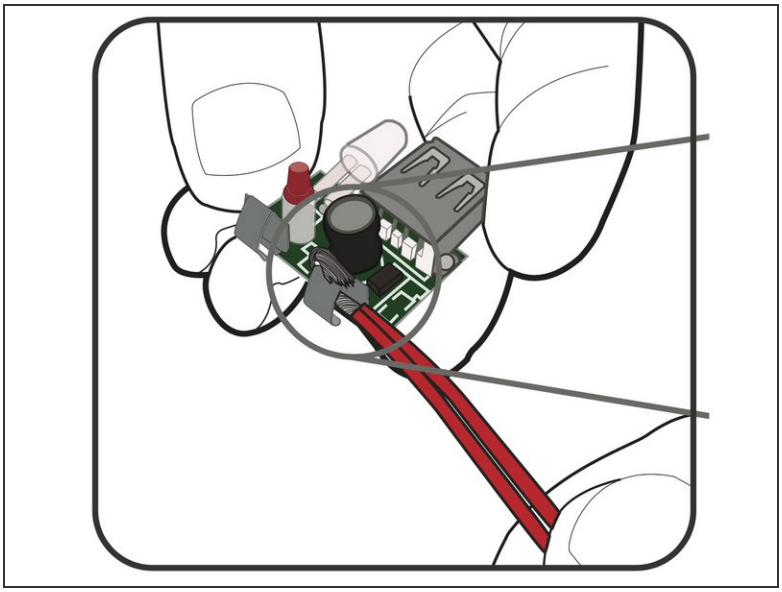
Step 3 — Twist The Red Wires



- Twist the Red Solar Cell wire together with the Red wire from the Battery holder.

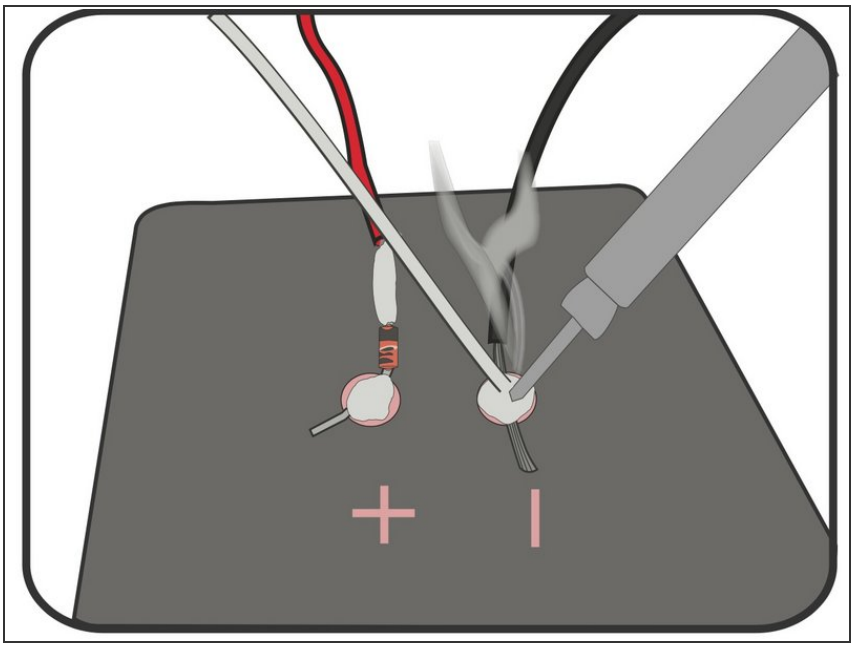
Step 4 — Solder The USB Circuit





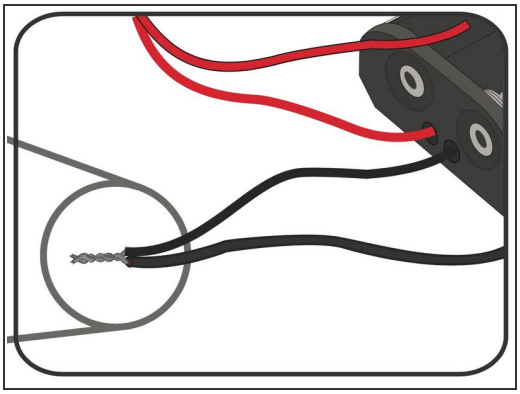
- Solder the Red wires to the Positive terminal on the USB Circuit.

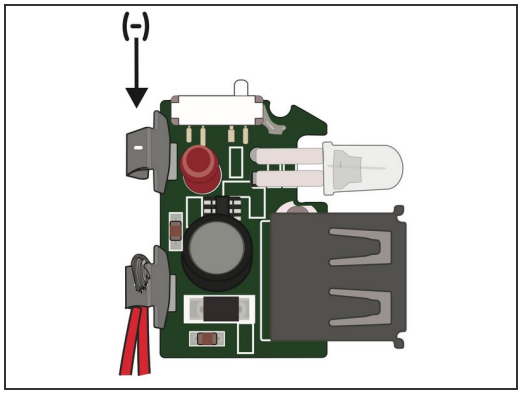
Step 5 — Solder The Solar Cell

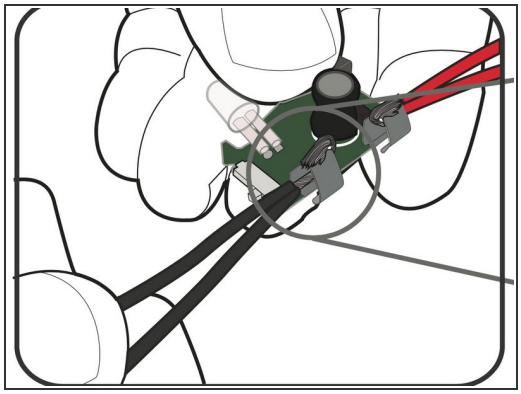


- Solder the loose Black wire to the Negative side of the Solar Cell.

Step 6 — Twist and Solder

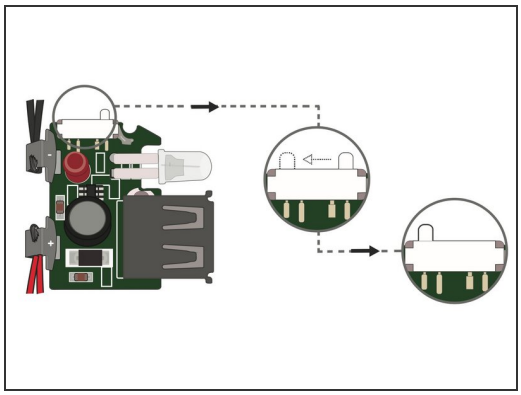


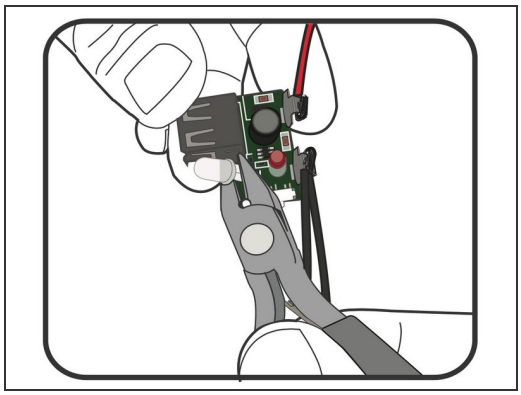


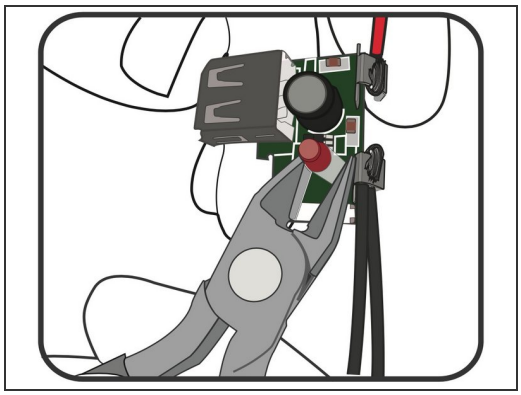


- Twist the Black Solar Cell wire together with the Black wire from the Battery Holder.
- Solder the Black wires to the Negative terminal on the USB Circuit.

Step 7 — Clean Up The USB Circuit

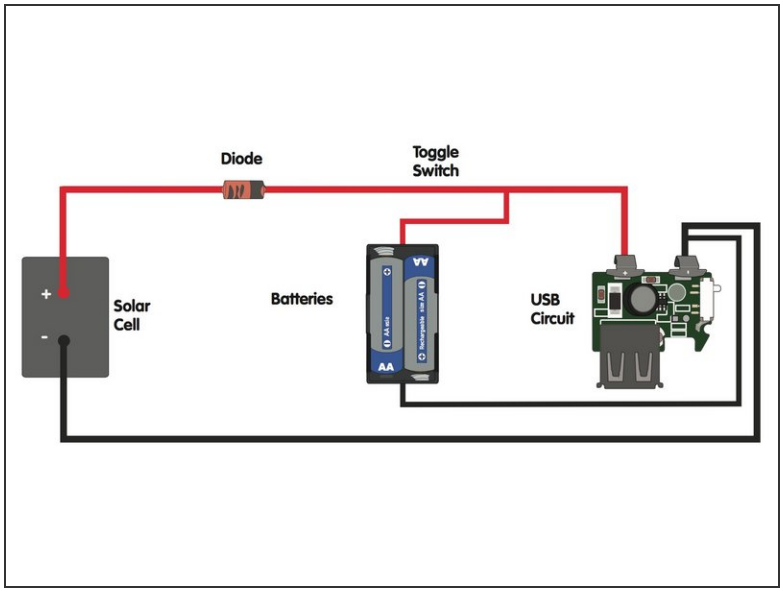


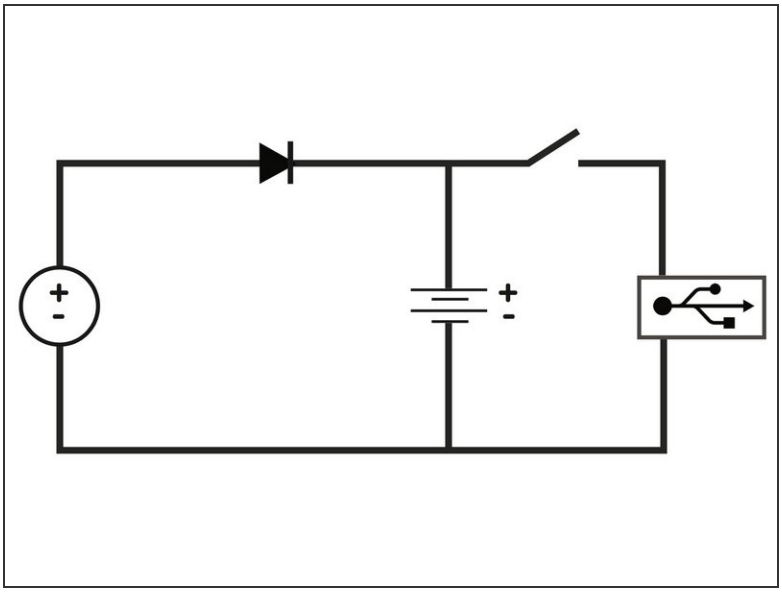




- Move the white switch back towards the Negative terminal. (That sets the USB circuit to the "on" position.)
- Clip the red and white LEDs off the USB Circuit. They're not used in this project.

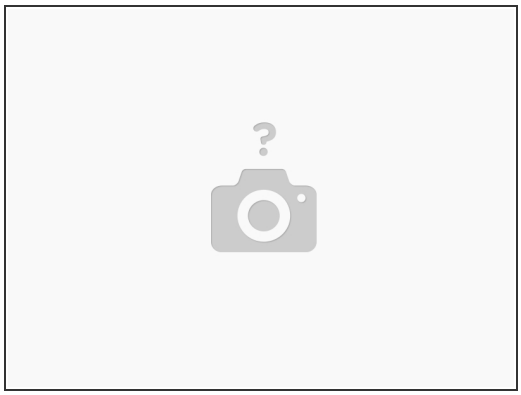
Step 8 — Troubleshooting





- The rechargeable AAs may be dead, charge them up quickly with a wall AA charger.
- In a pinch, use regular AAs for a quick test. NEVER try and solar charge regular AAs.
- When in doubt, try a different USB device.

Step 9 — Enclosures



- While an Altoids tin works well, it is metal and conductive.
- Using a $1 Store plastic food container or cheap wooden box is always a good solution.

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