Solar USB 1.0

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

Written By: Joshua

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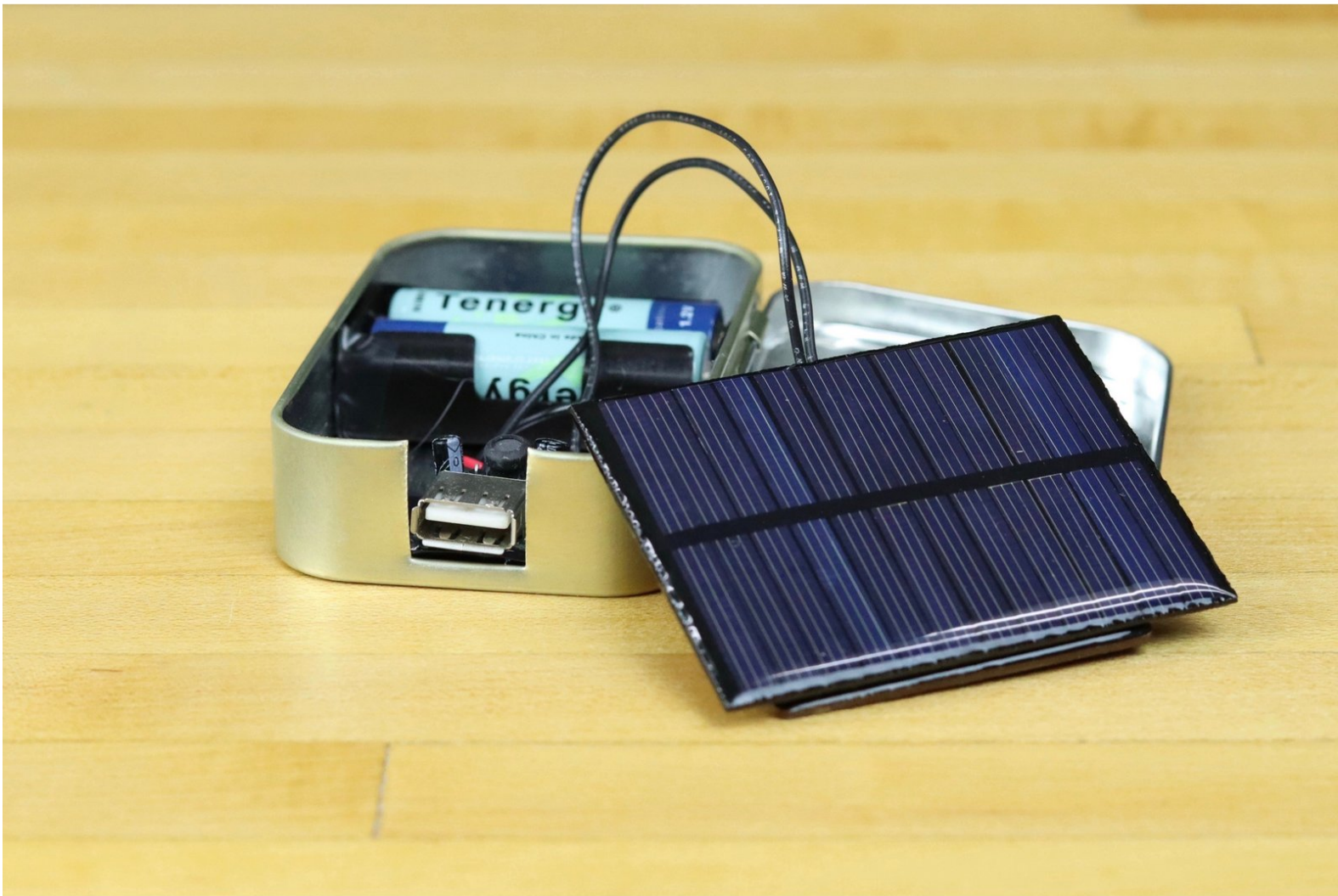
INTRODUCTION

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.

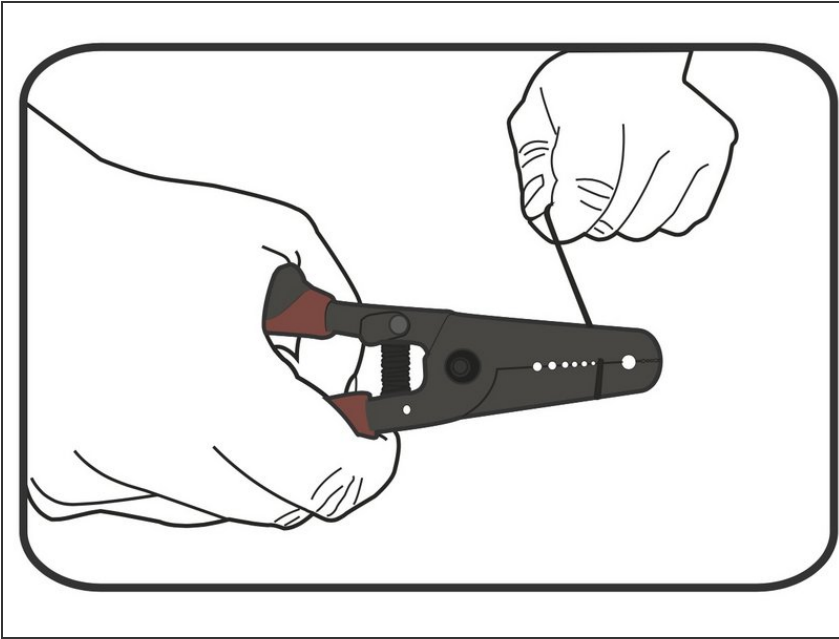## 🔧 TOOLS:

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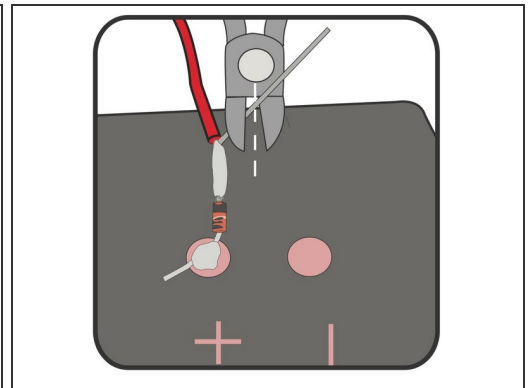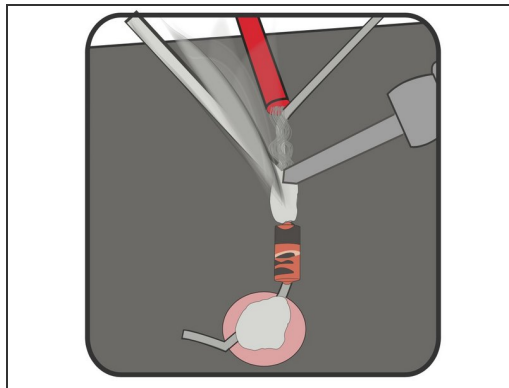- Hot Glue Gun (1)
- Wire Strippers (1)

⚙ PARTS:

- Solar USB 1.0 Kit (1)

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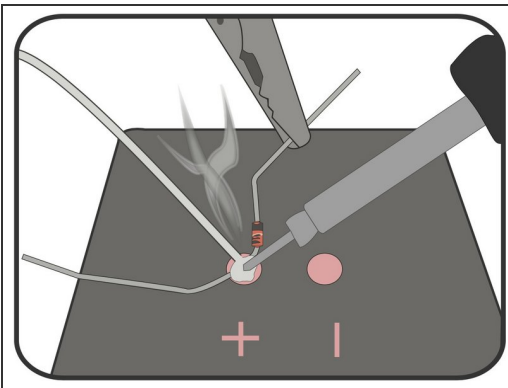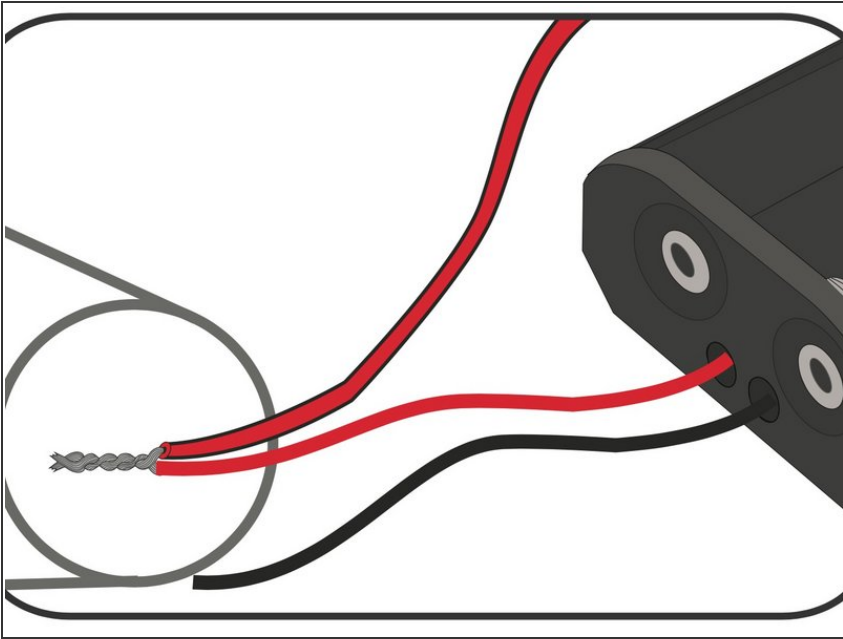
Step 1 — Strip The Wires

- 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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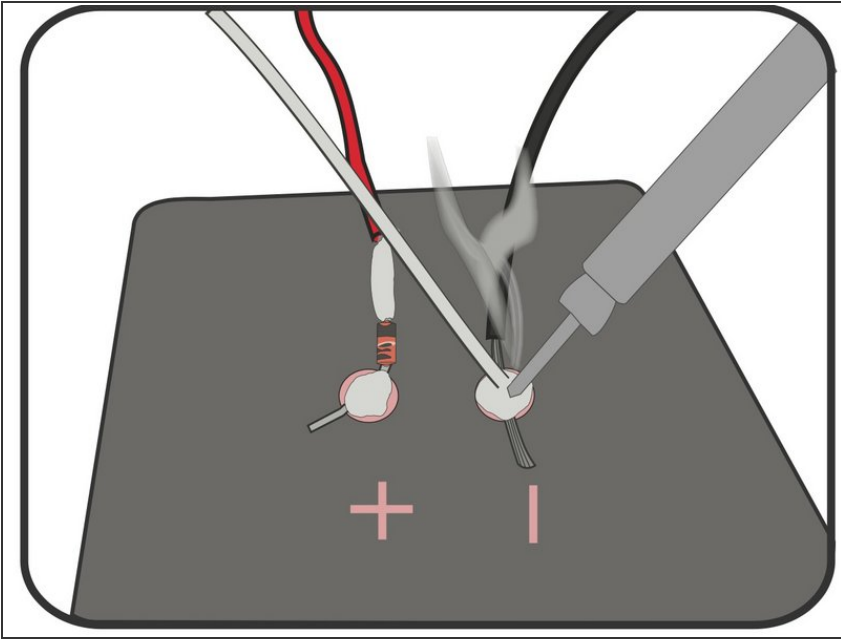
Step 3 — Twist The Red Wires

- Twist the Red Solar Cell wire together with the Red wire from the Battery holder.
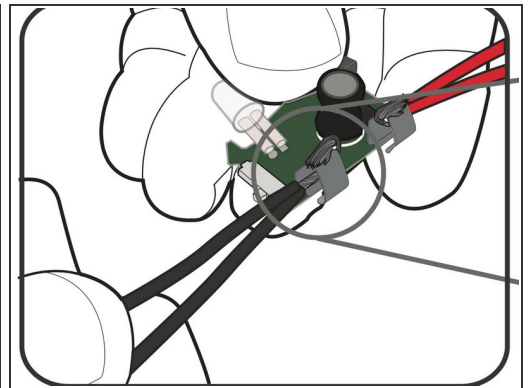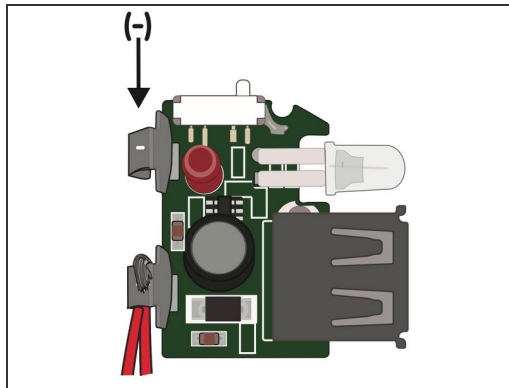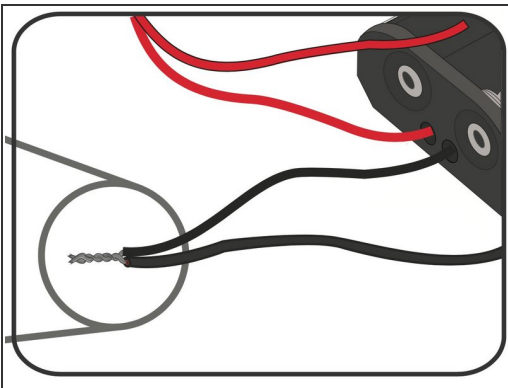
Step 4 — Solder The USB Circuit
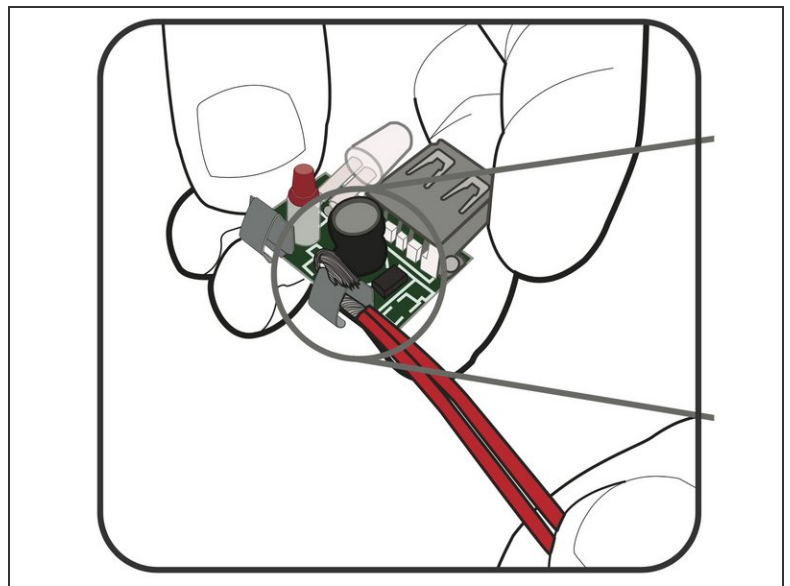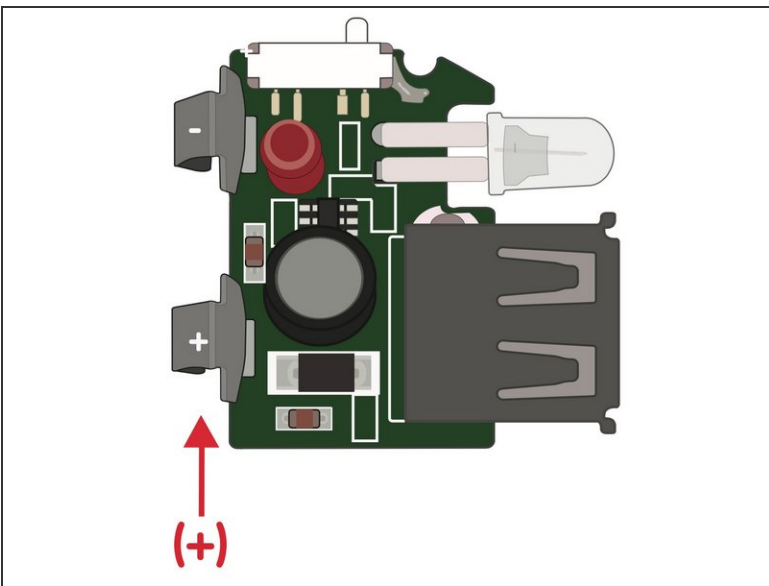
- Solder the Red wires to the Positive terminal on the USB Circuit.

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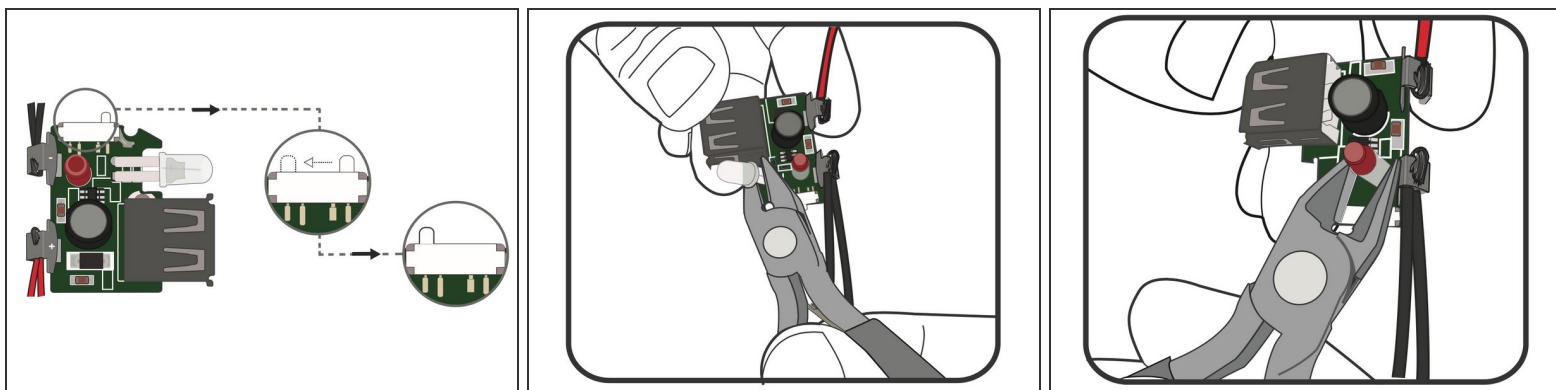
Step 5 — Solder The Solar Cell

- 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.

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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
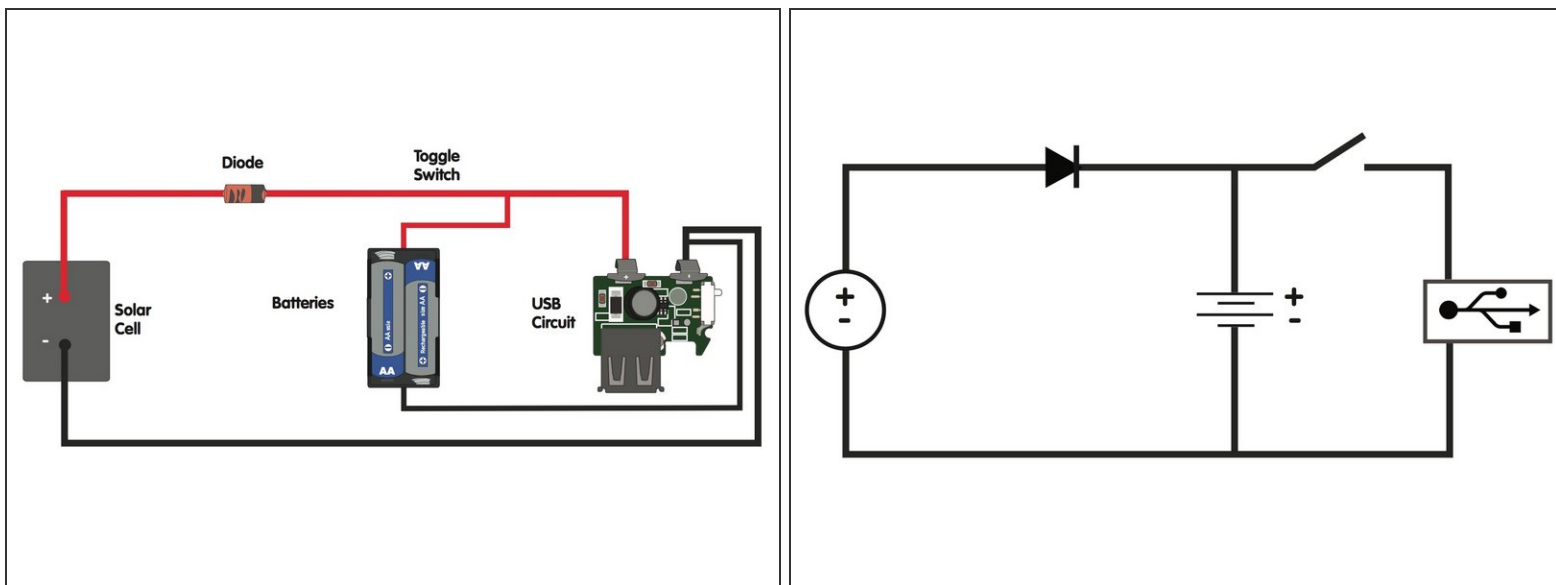
- The rechargeable AAs may be dead, charge them up quickly with a wall AA charger.

- 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.

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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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