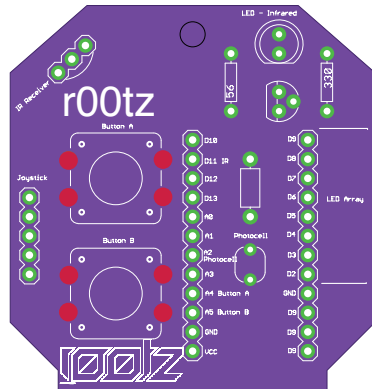# r00tz Badge Soldering Guide
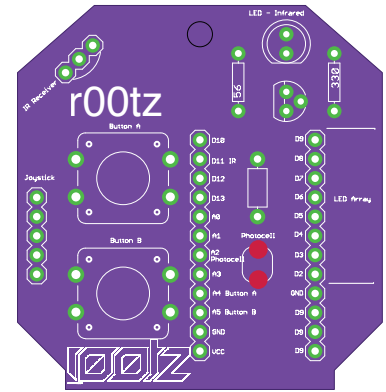
1: Place both push buttons through the top side of the r00tz PCB. Solder the legs on the back side of the r00tz PCB. Note: All components will be placed top side of PCB and solder on the back side.
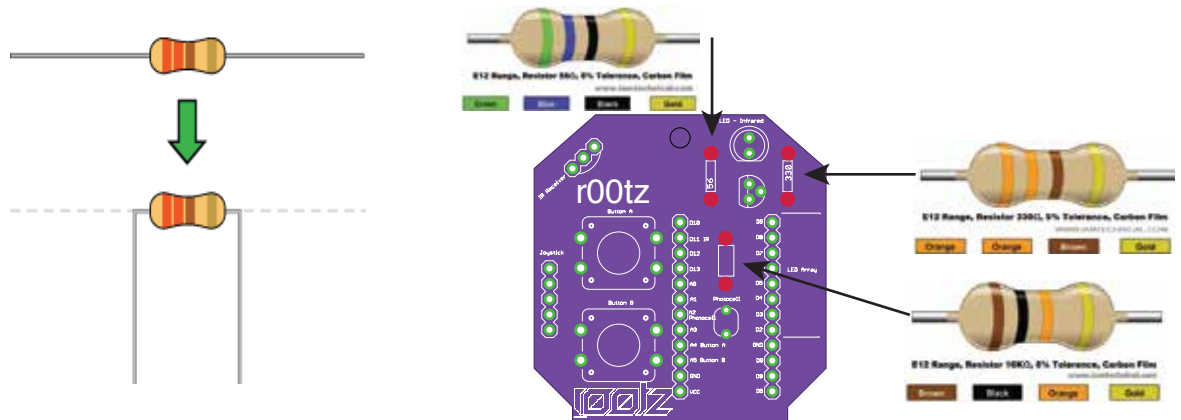
2: Insert photocell through the top side of the r00tz PCB.

Slightly bend the legs outward to hold the photocell in place.
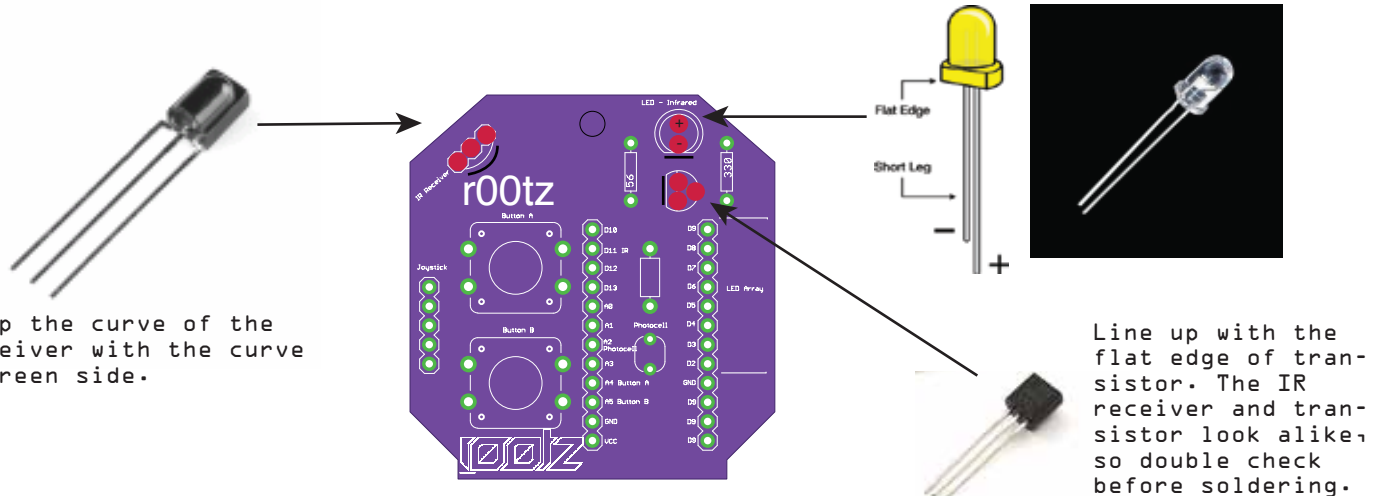
Solder the legs on the back side of the r00tz PCB. After soldering cut the long legs (leads) off with the wire cutters.
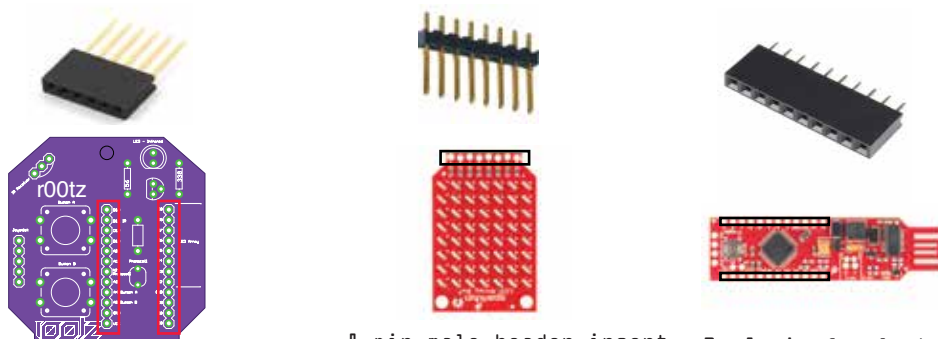
3: Bend resistor legs into 90° angles and place 3 resistors. Each resistor has different color bands. Make sure that each resistor is in the right spot. Cut away excess legs.

4: Insert through the top and solder the IR receiver, IR LED, and transistor. EACH component needs to be placed in the correct direction. Polarized components only be connected to a circuit in one direction, so follow the silkscreen on how to place the component. Cut away excess legs.

Line up the curve of the IR receiver with the curve silkscreen side.

Line up with the flat edge of transistor. The IR receiver and transistor look alike, so double check before soldering.

Flat Edge

Short Leg

5: Place and Solder headers. Do NOT cut legs off of the headers.
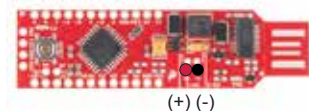
4x stackable headers insert through TOP side and solder on the BOTTOM.

8 pin male header insert short leg side through the BOTTOM of LED array and solder the TOP side.

2x 8 pin female header insert through the TOP side of Redstick and solder the BOTTOM side.

BONUS Joystick add-on (Limited qtys): Insert male header short leg side through bottom. Then, solder to top side. Place on the TOP side of r00tz PCB where it says joystick. Then, solder the bottom side.

Battery Pack: Solder RED wire to (+) and BLACK wire to (-).

(+) (-)

CONGRATS You are all done! You can now place the r00tz shield on the redstick. Then, add the LED array. Make sure that the r00tz shield (Logo being right side up) is above the USB part on the redstick like the photo shows.