OSEPP USA, INC.
2105 S Hardy Dr., Unit # 19
Tempe, Arizona, 85282
USA

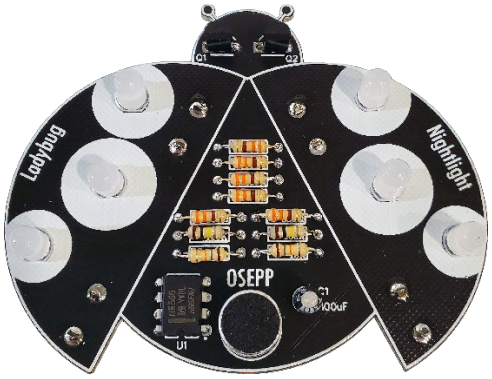
Bug Lovers DIY Solder Kit

Cat #: DIY-201

Learn to solder with easy-to-follow instructions. Idea for hobbyists and education institutes.

Housefly

- ✓ Light activated night light
- ✓ On/Off switch
- ✓ 33 solder points
- ✓ 2 x AAA power (not incl.)
- ✓ Size: 70 x 80 mm



Ladybug

- ✓ Sound activated night light
- ✓ 58 solder points
- ✓ Auto-off
- ✓ 2 x AAA power (not incl.)
- ✓ Size: 70 x 80 mm

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Kit Contents: Housefly

Component Name	Value	Qty	Designator	Important Info	Image Reference
LED 5mm	Bright White	2	LED1, LED2	Watch the polarity. Long leg is positive (+)	
Resistors	33K	1	R1	No polarity	
Resistors	330 ohms	2	R2, R3	No polarity	
Photocell	GL5516	2	R5, R6	No polarity	
On/Off Switch	CR1220	1	SW1	No polarity	
NPN Transistor	S9013 H	1	Q1	Watch the position	
Potentiometer	10K	1	R4	Watch the position	
Battery Clips	AAA	4	BT1 – B4	Watch the position	

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PCB	70 x 80 mm	1	n/a		
Desoldering Braid	6” long (2.5mm width)	1	n/a	For removing solder when correcting mistakes	

Kit Contents: Ladybug

Component Name	Value	Qty	Designator	Important Info	Image Reference
LED 5mm	Bright White	6	LED1 – LED6	Watch the polarity. Long leg is positive (+)	
Resistors	330 ohms	6	R1 – R6	No polarity	
Resistors	100K	2	R7, R8	No polarity	
Resistors	18K	2	R9, R10	No polarity	
IC	NE555P	1	U1	Watch the position of the notch	
NPN Transistor	S9013 H	2	Q1, Q2	Watch the position	
Capacitor	100uF	1	C1	Watch the polarity. Long leg is positive (+)	

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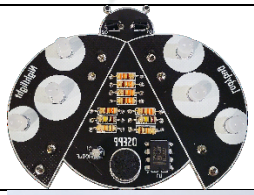
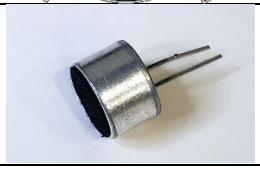
Battery Clips	AAA	4	BT1 – B4	Watch the position	
PCB	70 x 80 mm	1	n/a		
Sound Sensor	GM1976P-34DB	1	MIC1	Watch the position	
Desoldering Braid	6” long (2.5mm width)	1	n/a	For removing solder when correcting mistakes	

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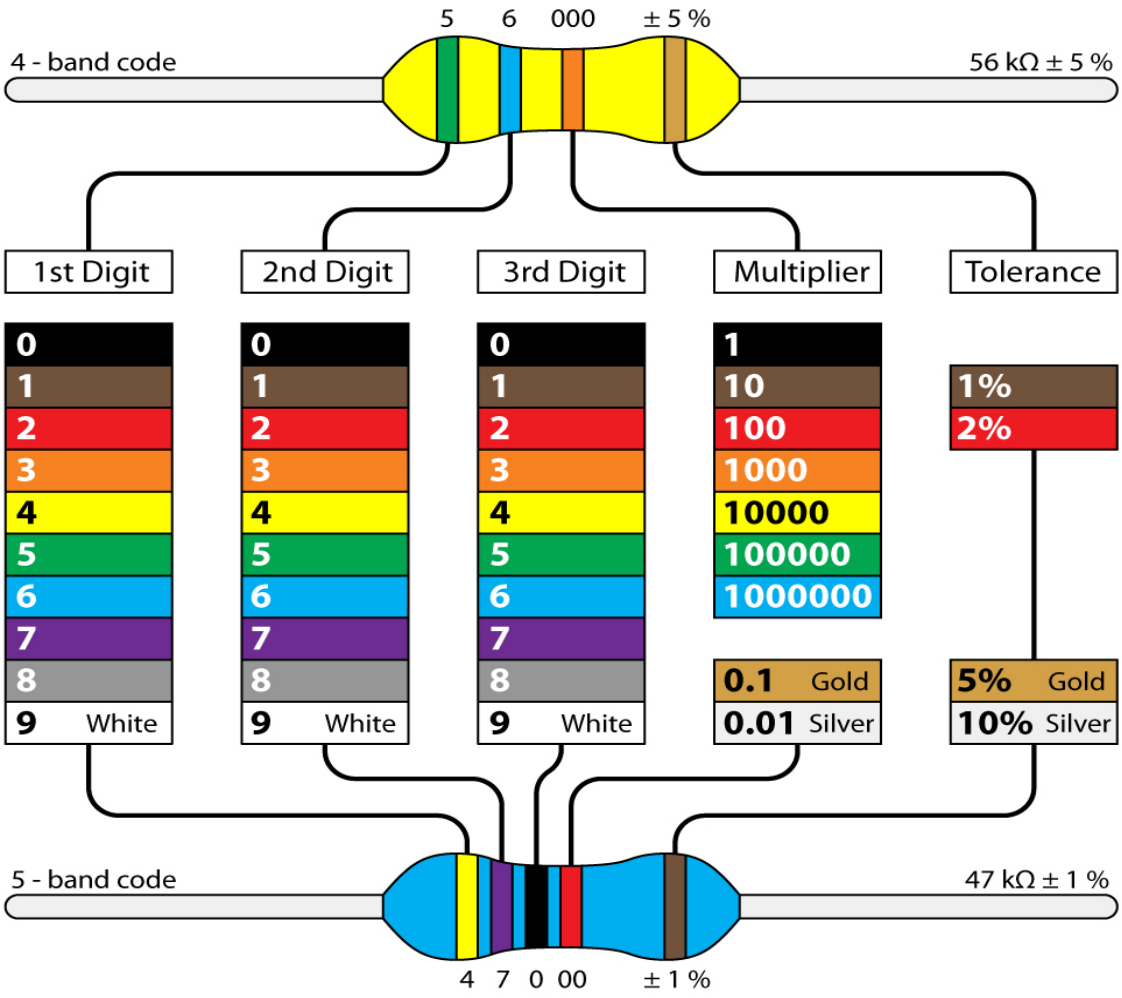
Resistor colour code



100 ohms Brown/Black/Brown/Gold	**1K ohms** Brown/Black/Red/Gold	**1 MEG** Brown/Black/Green/Gold
300 ohms Orange/Orange/Brown/Gold	**10K ohms** Brown/Black/Orange/Gold	

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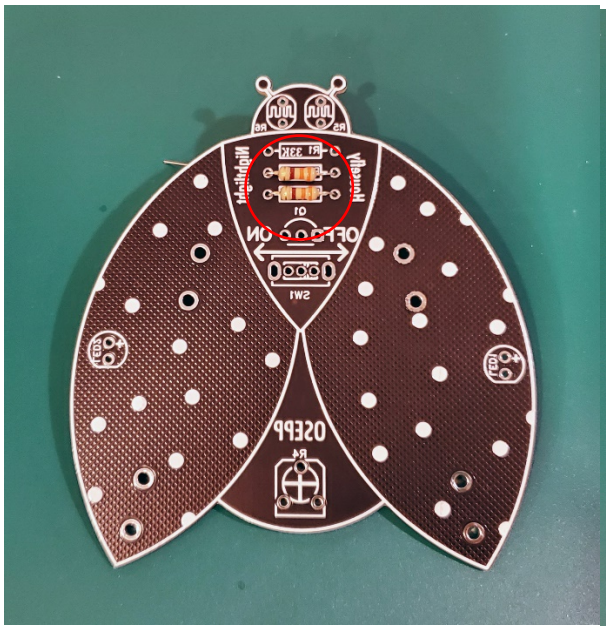
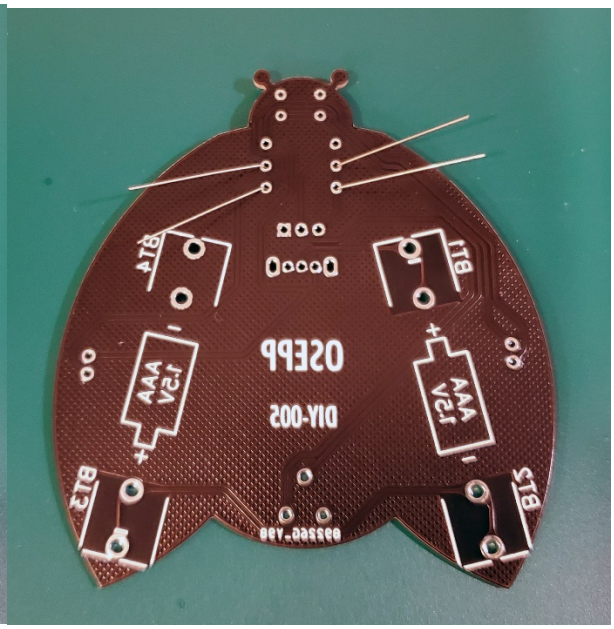
Step-by-Step Instruction: Housefly

STEP 1: Place and solder the 330-ohm resistors into place.

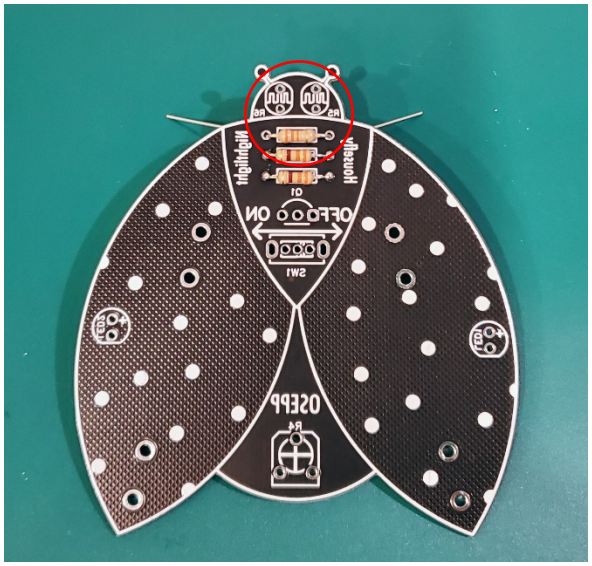
- There is no polarity with the resistors.
- Bend the component leg to the side to hold the resistor in place for soldering.
- A diagonal cutter is required to cut the component legs once soldering has been completed.





STEP 2: Place and solder the 33K resistor into place.

- There is no polarity with the resistors



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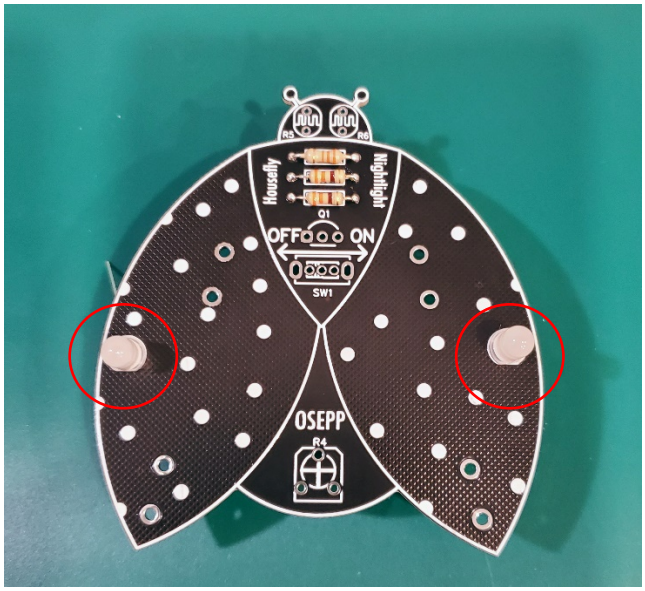
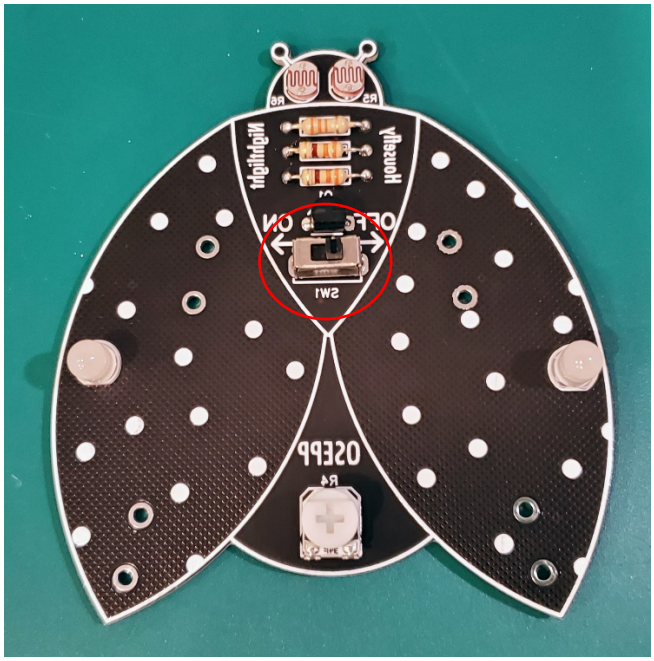
STEP 3: Place and solder **LEDs** into place

- The longer lead on the LED is positive (+).
- To hold the LED in place to solder, bend the lead on the back of the PCB.
- A diagonal cutter is required (not Incl.) to cut off the leads after soldering.



Step 4: Place and solder the **On/Off switch** into place.

- There is no polarity with the on/off switch



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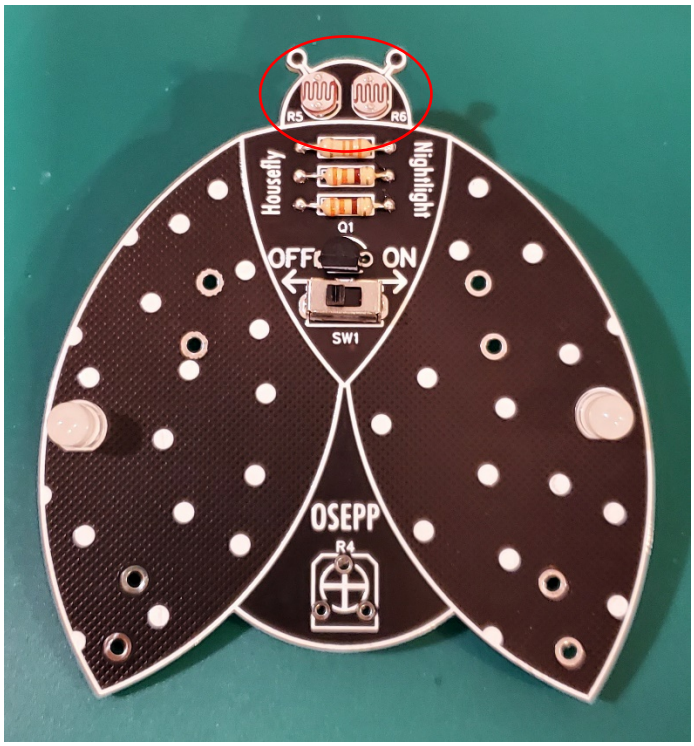
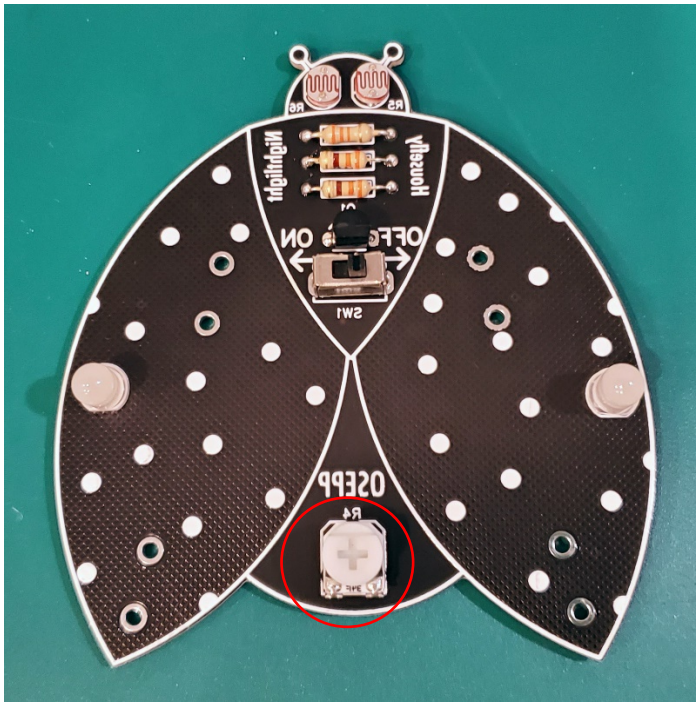
Step 5: Place and solder the **photo cells** into place.

- No polarity



Step 6: Place and solder the **potentiometer** into place.

- Watch the position.



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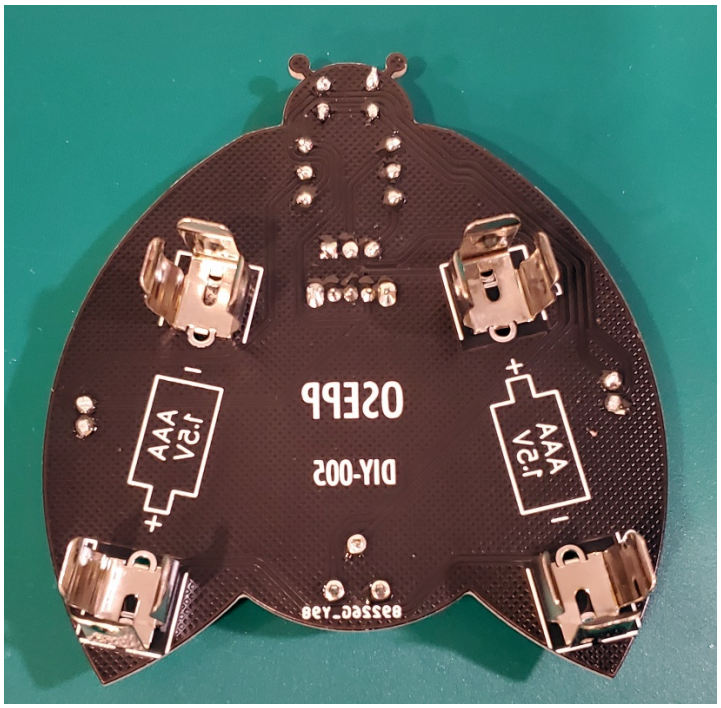
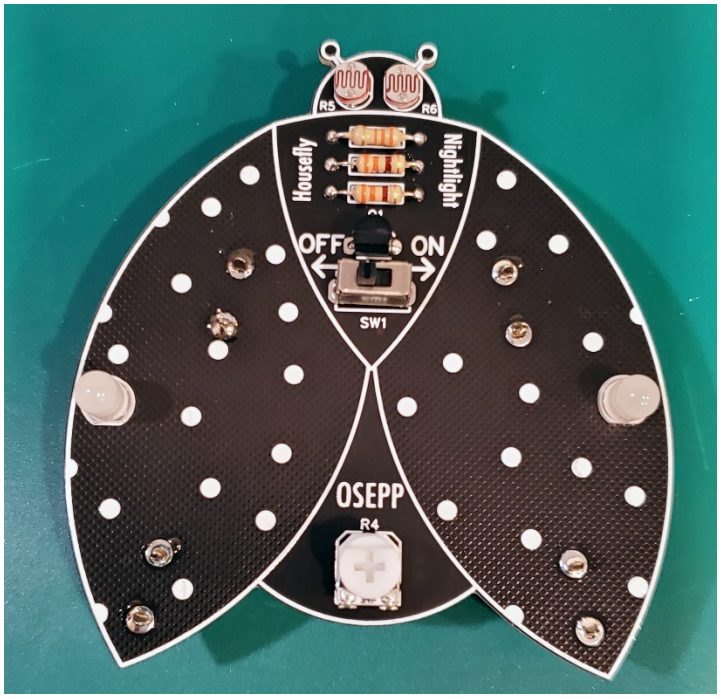
Step 7: Place and solder the **battery clips** into place.

- Watch the position.



Completed Reference Image:



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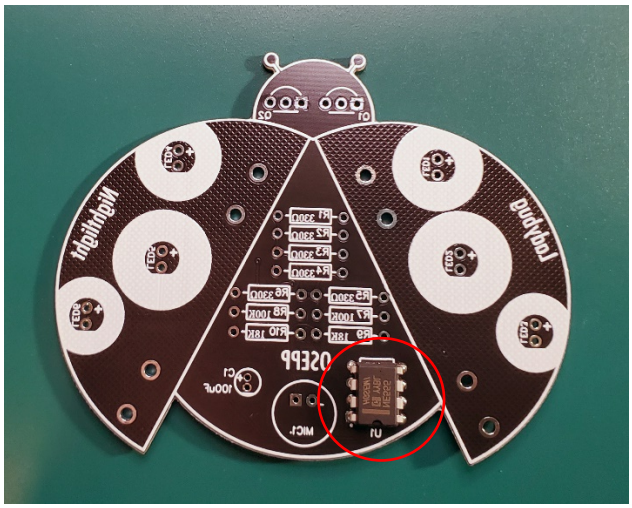
Step-by-Step Instruction: Ladybug

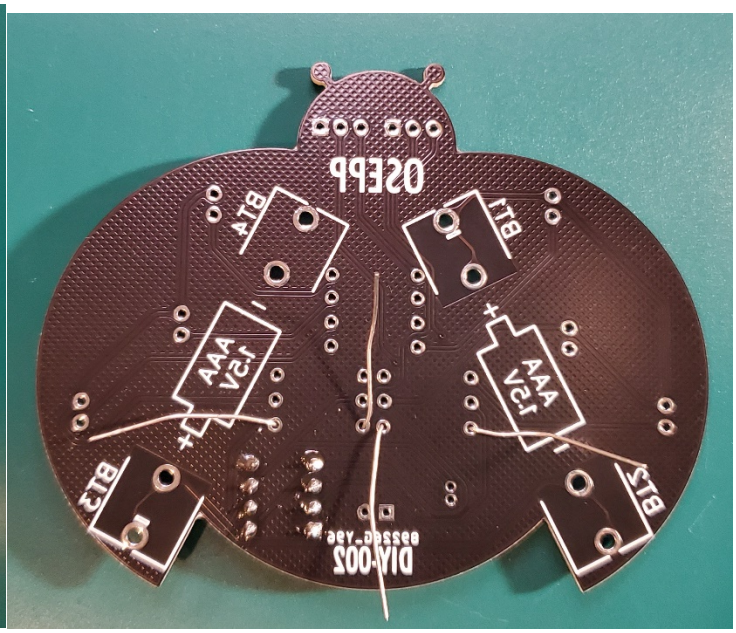
STEP 1: Place and solder the **IC** into place.

- Match the notch on the IC to the silkscreen on the PCB.



STEP 2: Place and solder the 2 x **18K resistors** into place.

- There is no polarity with the resistors.
- Bend the component leg to the side to hold the resistor in place for soldering.
- A diagonal cutter is required to cut the component legs once soldering has been completed.



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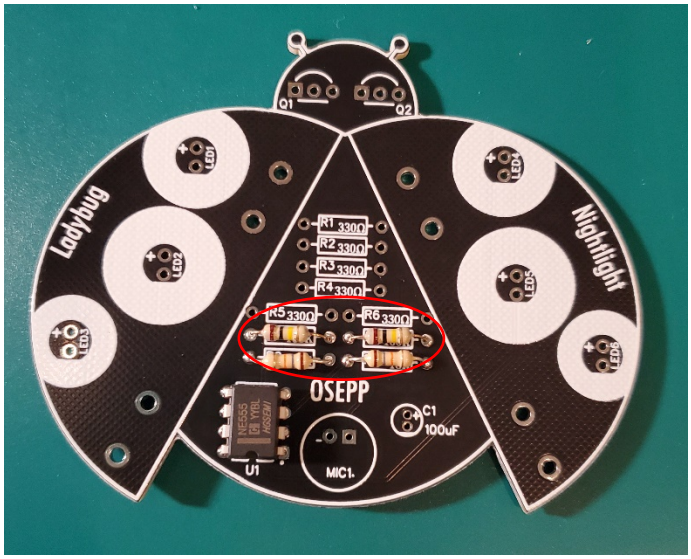
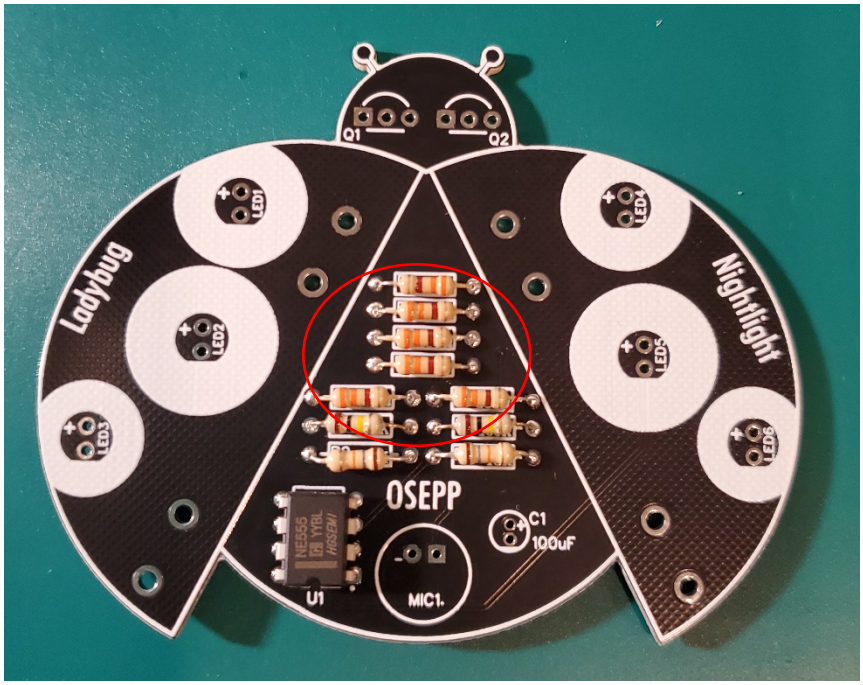
STEP 3: Place and solder the 2 x 100K resistors into place.

- There is no polarity with the resistors



STEP 1: Place and solder the 6 x **330-ohm resistors** into place.

- There is no polarity with the resistors.



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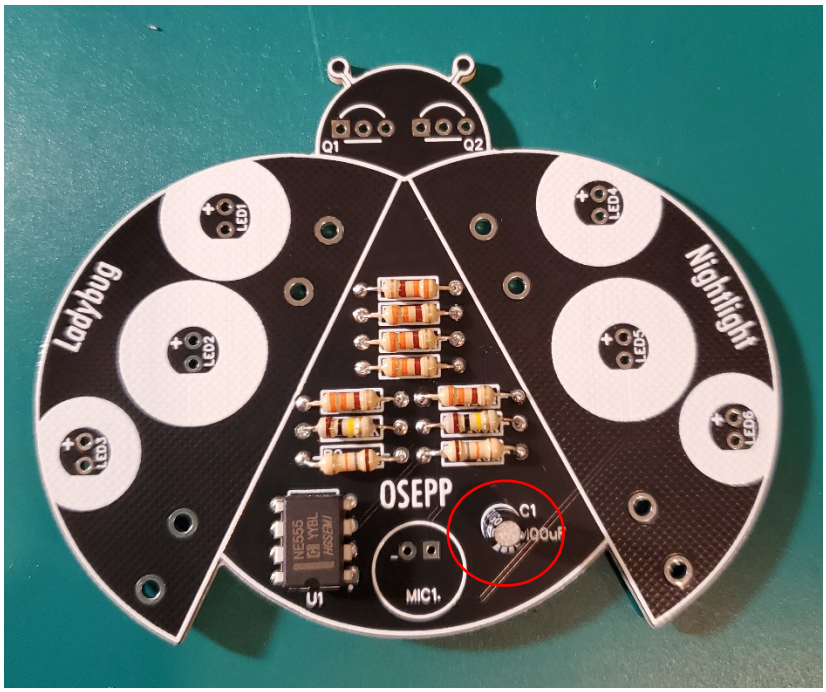
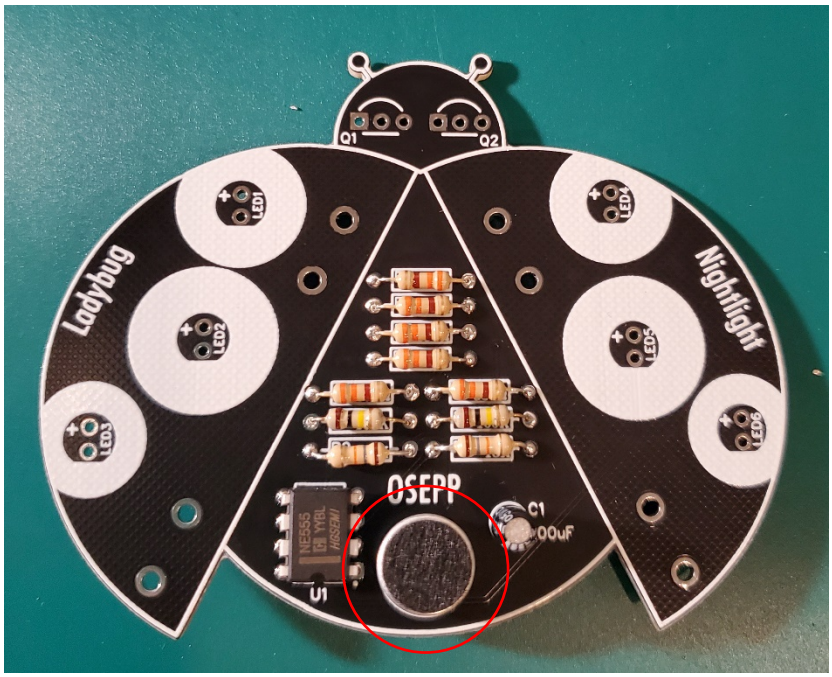
STEP 3: Place and solder **capacitor** into place

- Watch the position. The long leg is positive.



Step 4: Place and solder the **sound sensor** into place.

- Watch the position



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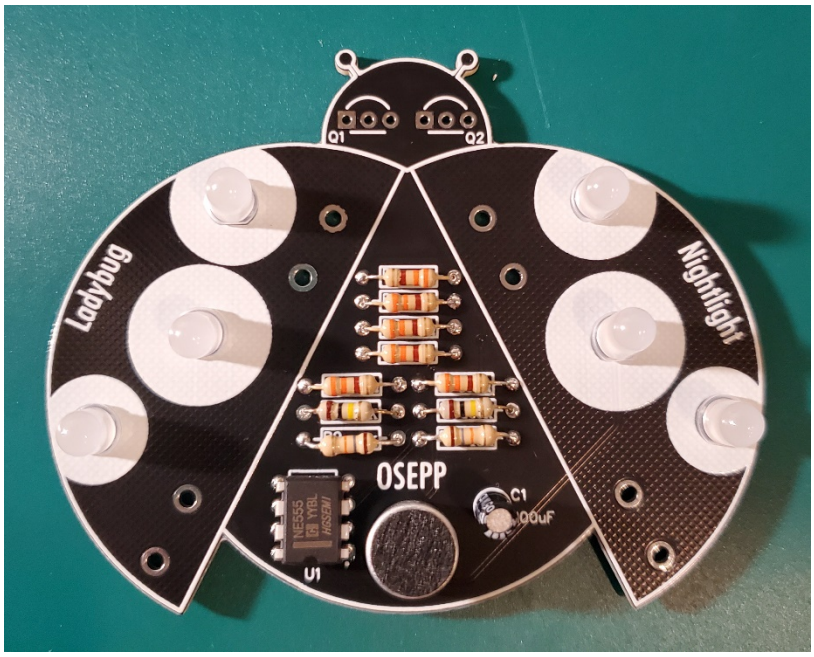
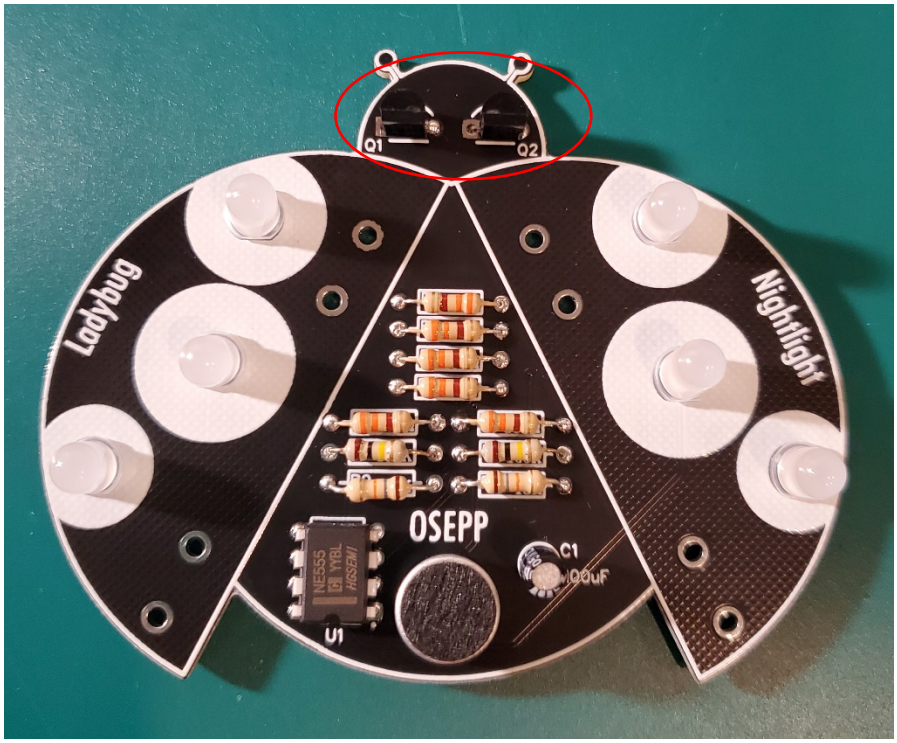
Step 5: Place and solder the **LEDs** into place.

- Watch the polarity. The long leg is positive (+)



Step 6: Place and solder the **2 x NPN transistors** into place.

- Watch the position.



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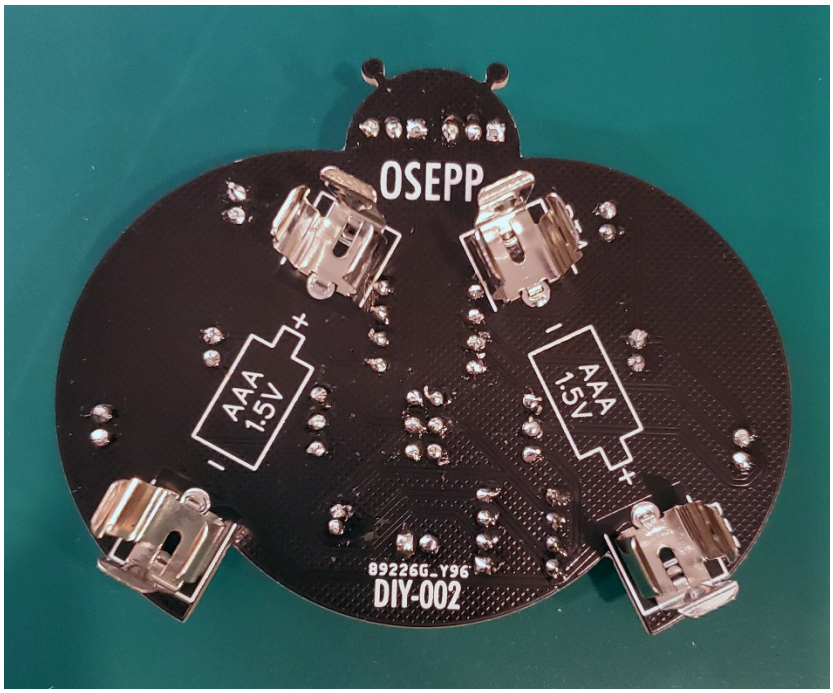
Step 7: Place and solder the **battery clips** into place.

- Watch the position.



Completed Reference Image: