

RCN-1 IR Control Lamp DIY Kit

I. Introduction:

RCN-1 is a DC 9V-12V Remote Control DIY Kit. User can use any infrared remote controller to control the lamp on or off with 18pcs white LED.

II. Feature:

- 1>.18pcs highlight LED
- 2>.Perfect simple circuit
- 3>.Two position brightness control
- 4>.DIY hand soldering
- 5>.Infrared Remote Control

III. Parameter:

- 1>.Product Name:RCN-1 IR Control Lamp DIY Kit
- 2>.Product Number:RCN-1
- 3>.Work Voltage:DC 9V-12V
- 4>.Work Current:30mA
- 5>.Power Type:5.5mm Power Socket or 9V Battery(Not Included!)
- 6>.Work Mode:Switch or Infrared Remote Control
- 7>.Color:White LED
- 8>.Work Temperature:-40°C~85°C
- 9>.Work Humidity:5%~85%RH
- 10>.Size(Installed):65*65*36mm

IV. Function:

- 1>.S1 black button is used to turn ON or OFF lamp.
- 2>.S2 self-locking switch is used to change led brightness. 12pcs LED turn ON or 18pcs LED turn ON.
- 3>.Any infrared remote controller to control the lamp on or off.

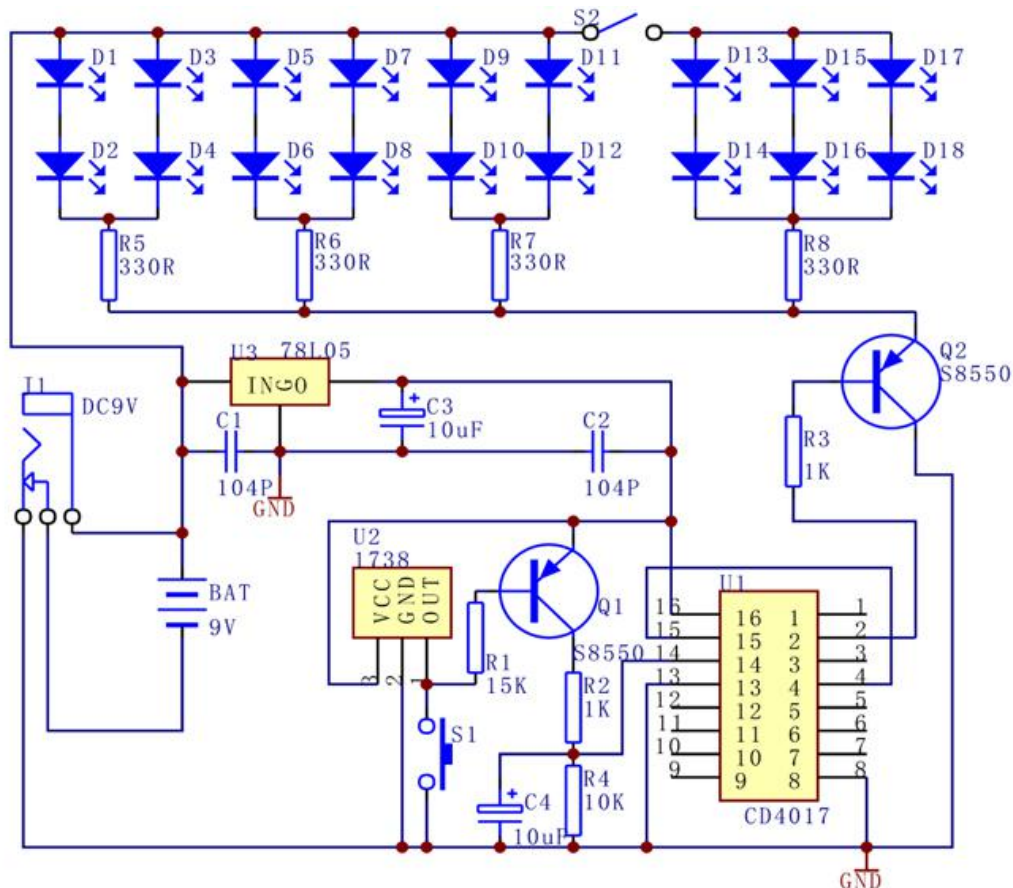
V. Component Listing:

NO.	Component Name	PCB Marker	Parameter	QTY
1	Metal Film Resistor	R5-R8	330ohm	4
2	Metal Film Resistor	R2-R3	1Kohm	2
3	Metal Film Resistor	R4	10Kohm	1
4	Metal Film Resistor	R1	15Kohm	1
5	Ceramic Capacitor	C1,C2	0.1uF 104	2
6	Electrolytic Capacitor	C3,C4	10uF 25V	2
7	Black Button	S1	6*6*10mm	1
8	Self-locking switch	S2	5.8*5.8mm	1
9	S8550 Transistor	Q1,Q2	TO-92	2

10	78L05 Voltage Regulator	U3	TO-92	1
11	White LED	D1-D18	5mm	18
12	IR Receiver	U2	VS1738	1
13	CD4017	U1	DIP-16	1
14	DC Socket	J1	5.5mm	1
15	9V Battery Socket	DC 9V		1
16	Nylon Column		M3*10mm	4
17	Nylon Column		M3*20mm	4
18	Screw		M3*25mm	4
19	Box		65*65*35mm	1
20	PCB		74*74*1.6mm	1

Note:Users can complete the installation according to the PCB silk screen and component list.

VI. Schematic diagram:



VII. Application:

- 1>.Training welding skills
- 2>.Student school
- 3>.DIY production
- 4>.Project Design
- 5>.Electronic competition

- 6>.Gift giving
- 7>.Crafts collection
- 8>.Home decoration
- 9>.Souvenir collection
- 10>.Graduation design
- 11>.Holiday gifts

VIII. Installation Tips:

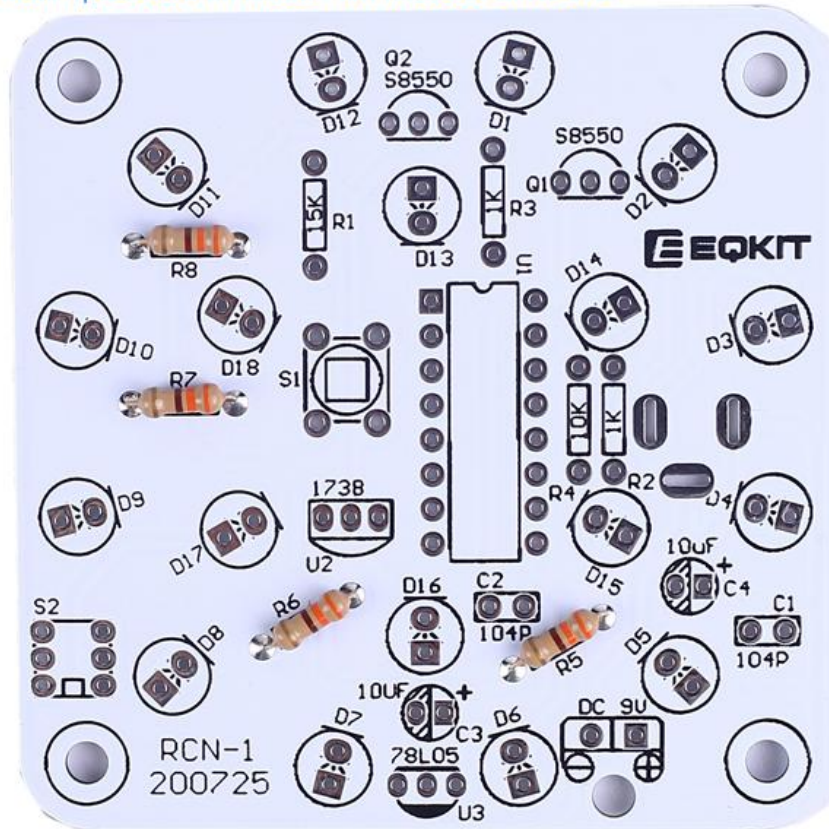
- 1>.User needs to prepare the welding tool at first.
- 2>.Please be patient until the installation is complete.
- 3>.The package is DIY kit.It need finish install by user.
- 4>.The soldering iron can't touch the components for a long time(1.0 second), otherwise it will damage the components.
- 5>.Pay attention to the positive and negative of the components.
- 6>.Strictly prohibit short circuit.
- 7>.User must install the LED according to the specified rules.Otherwise some LED will not light.
- 8>.Install complex components preferentially.
- 9>.Make sure all components are in right direction and right place.
- 10>.Check that all of the LED can be illuminated.
- 11>.It is strongly recommended to read the installation manual before starting installation!!!
- 12>.Please wear anti-static gloves or anti-static wristbands when installing electronic components.

IX. Installation Steps(Please be patient install!!!):

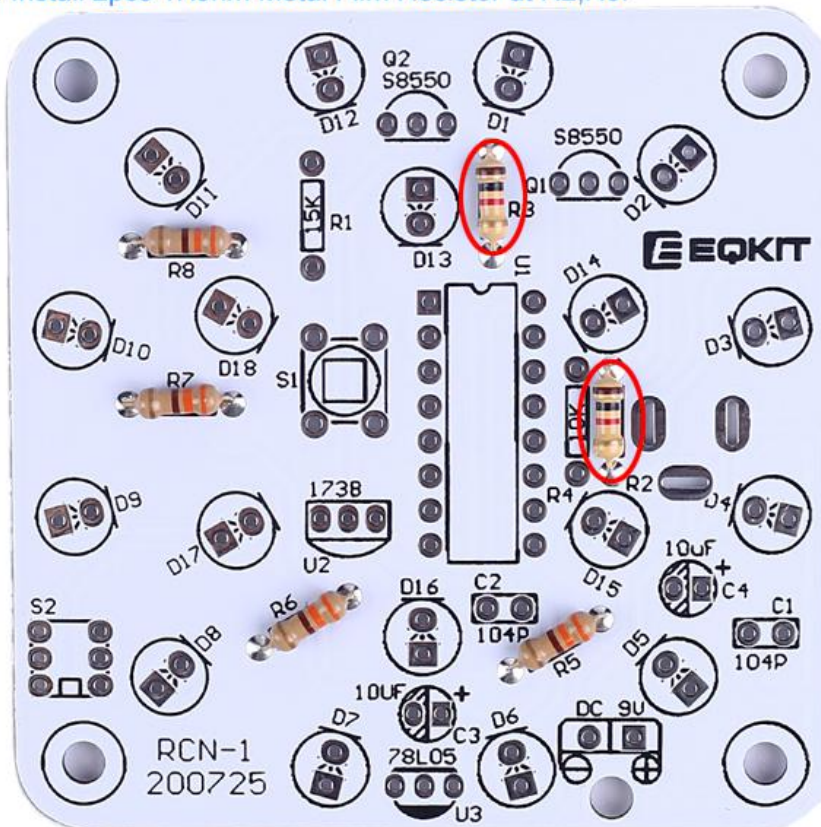
- 1>.Step 1: Install 4pcs 330ohm Metal Film Resistor at R5-R8.
- 2>.Step 2: Install 2pcs 1Kohm Metal Film Resistor at R2,R3.
- 3>.Step 3: Install 1pcs 10Kohm Metal Film Resistor at R4.
- 4>.Step 4: Install 1pcs 15Kohm Metal Film Resistor at R1.
- 5>.Step 5: Install 18pcs LED at D1-D18.The longer pin is inserted into the rectangular pad(positive pole). The shorter pins are inserted into the round pads.
- 6>.Step 6: Install 2pcs 0.1uF 104 Ceramic Capacitor at C1,C2.
- 7>.Step 7: Install 1pcs TO-92 78L05 Voltage Regulator at U3.
- 8>.Step 8: Install 2pcs TO-92 S8050 Transistor at Q1,Q2.
- 9>.Step 9: Install 1pcs DIP-16 CD4017 IC at U1.There is a mark on one end of the IC and there is a mark on PCB where the IC can place on.These two marks are corresponding to each other and are used to specify the installation direction of the IC.
- 10>.Step 10: Install 2pcs 10uF 25V Electrolytic Capacitor at C3,C4.Pay attention to distinguish between positive and negative.The Longer pin is positive pole.The longer pin is inserted into the rectangular pad.
- 11>.Step 11: Install 1pcs 6*6*10mm Black Button at S1.
- 12>.Step 12: Install 1pcs VS1738 Infrared receiver at U2.
- 13>.Step 13: Install 1pcs 5.8*5.8mm Self-locking switch at S2.
- 14>.Step 14: Install 1pcs 5.5mm DC Socket at J1 on another side.
- 15>.Step 15: Install 4pcs M3*10mm and 4pcs M3*20mm Nylon Column on PCB.
- 16>.Step 16: Install 1pcs 9V Battery socket at DC 9V. Note: Red wire connect to ' + '.
- 17>.Step 17: Install 9V battery(not included) and then place lamp on plastic shell.Then press button to switch lamp.

X. Install shown steps:

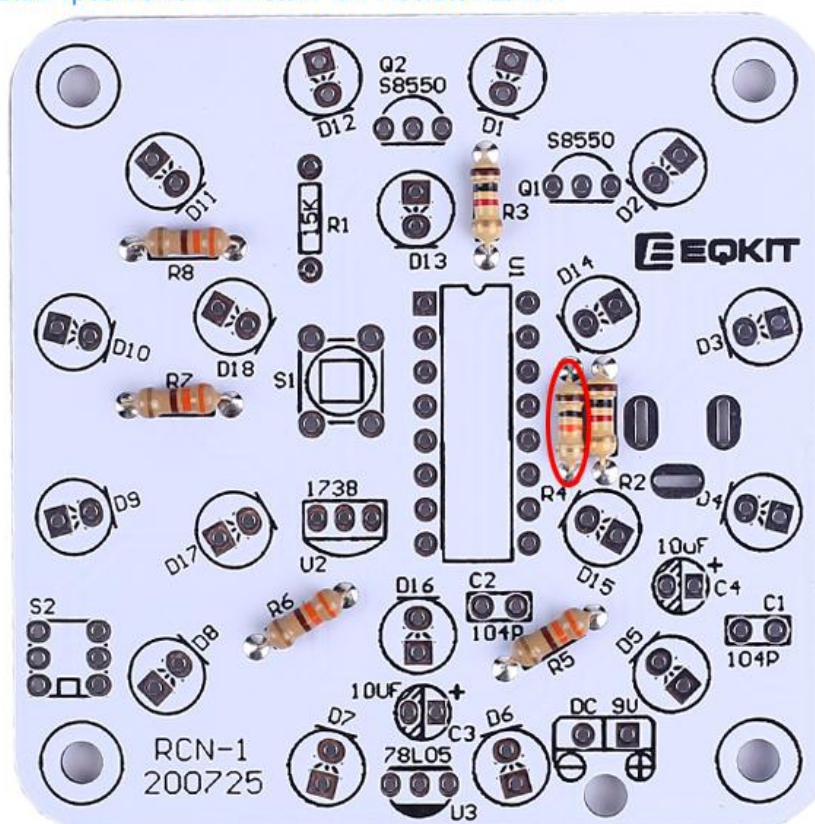
Step 1: Install 4pcs 330ohm Metal Film Resistor at R5-R8.



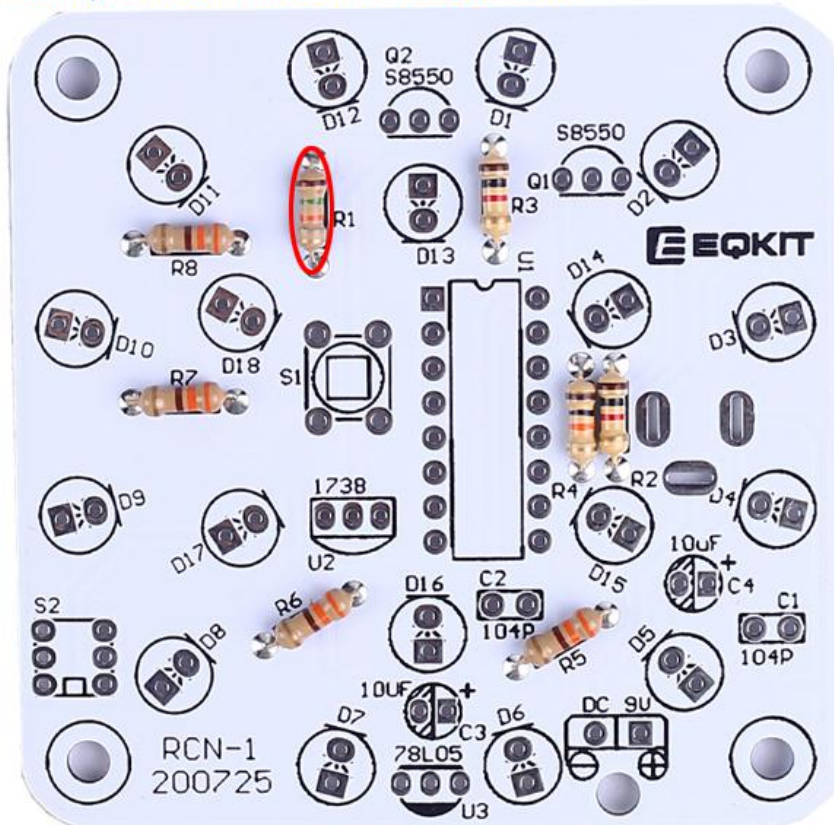
Step 2: Install 2pcs 1Kohm Metal Film Resistor at R2,R3.



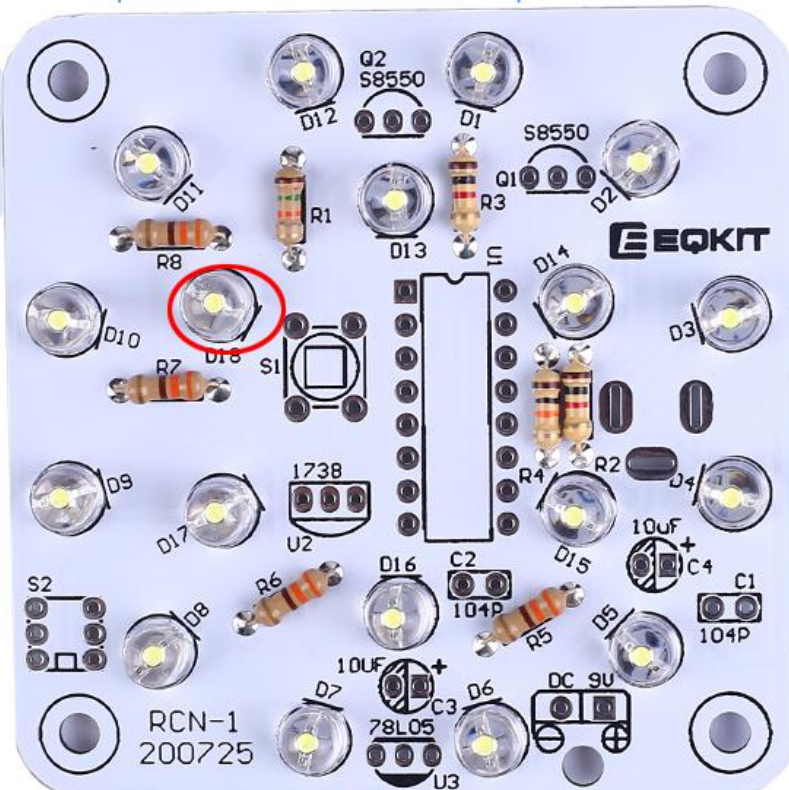
Step 3: Install 1pcs 10Kohm Metal Film Resistor at R4.



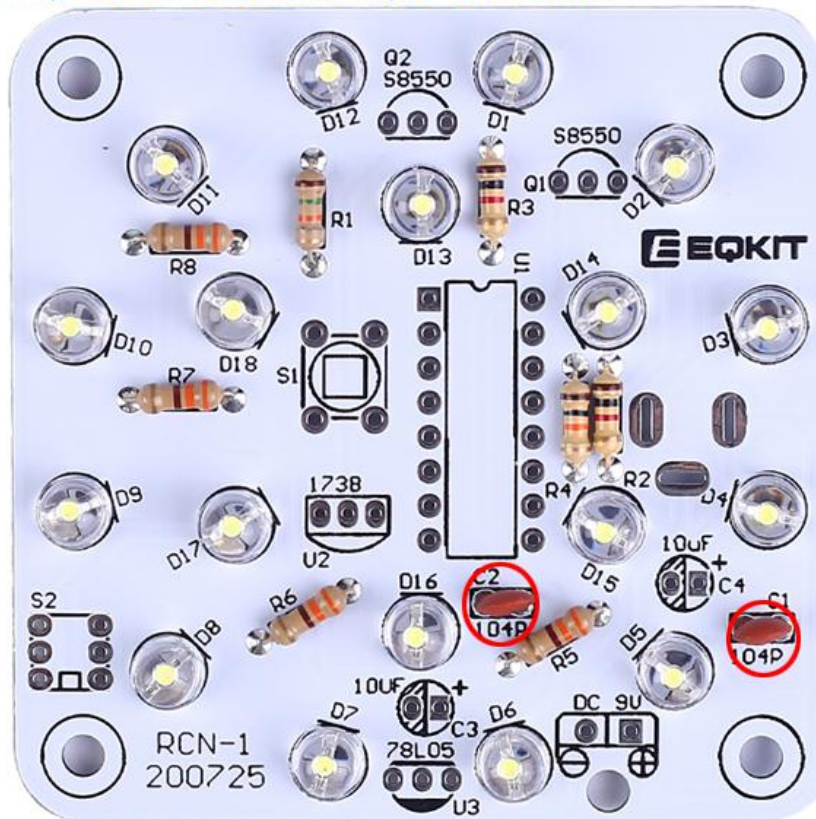
Step 4: Install 1pcs 15Kohm Metal Film Resistor at R1.



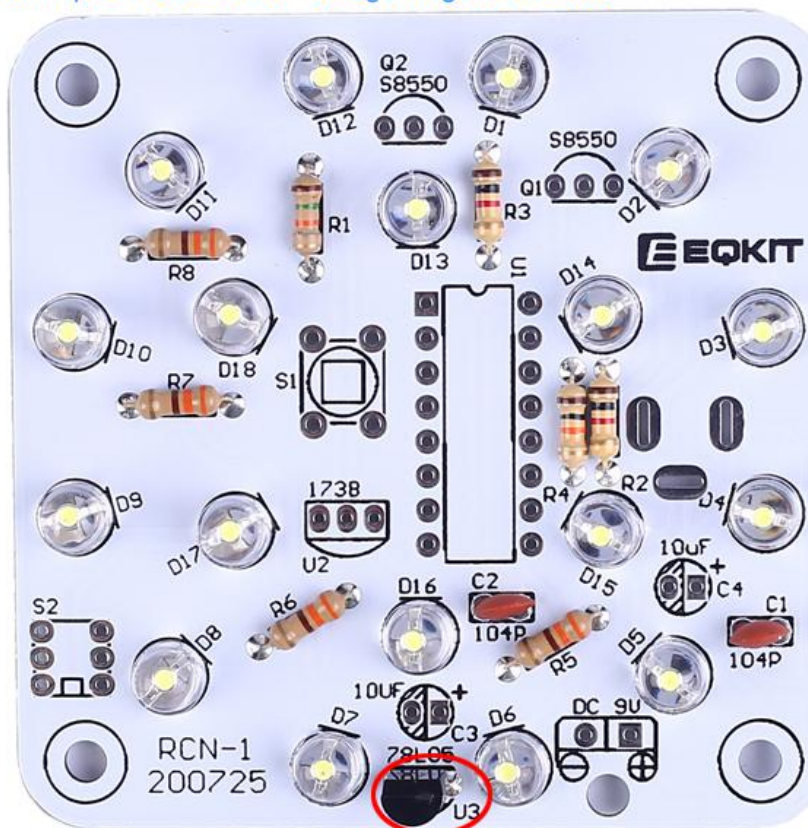
Step 5: Install 18pcs LED at D1-D18. The longer pin is inserted into the rectangular pad(positive pole). The shorter pins are inserted into the round pads.



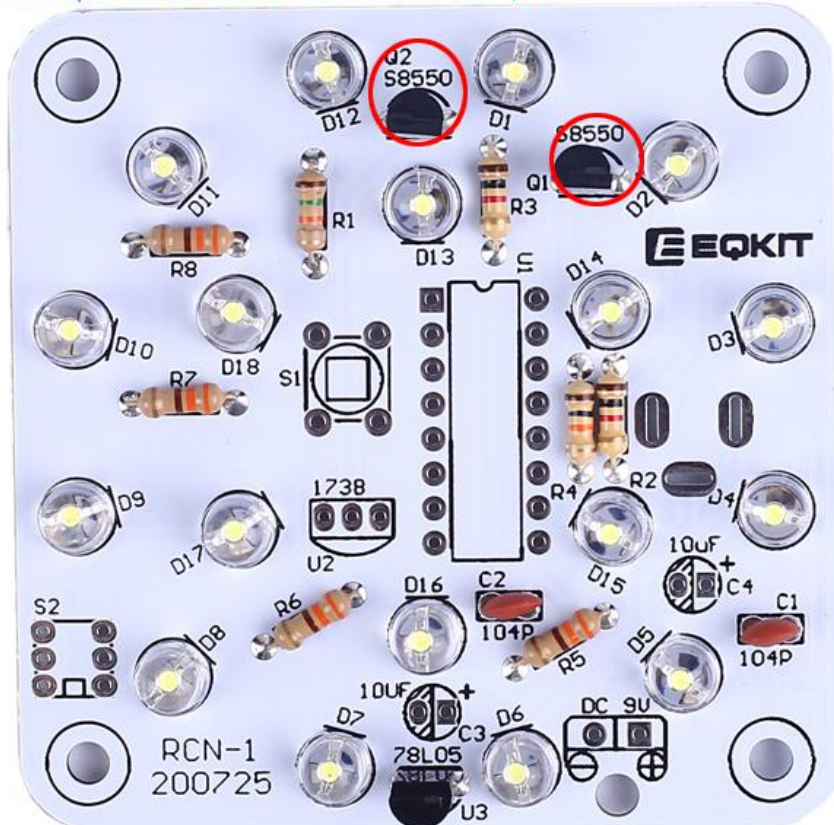
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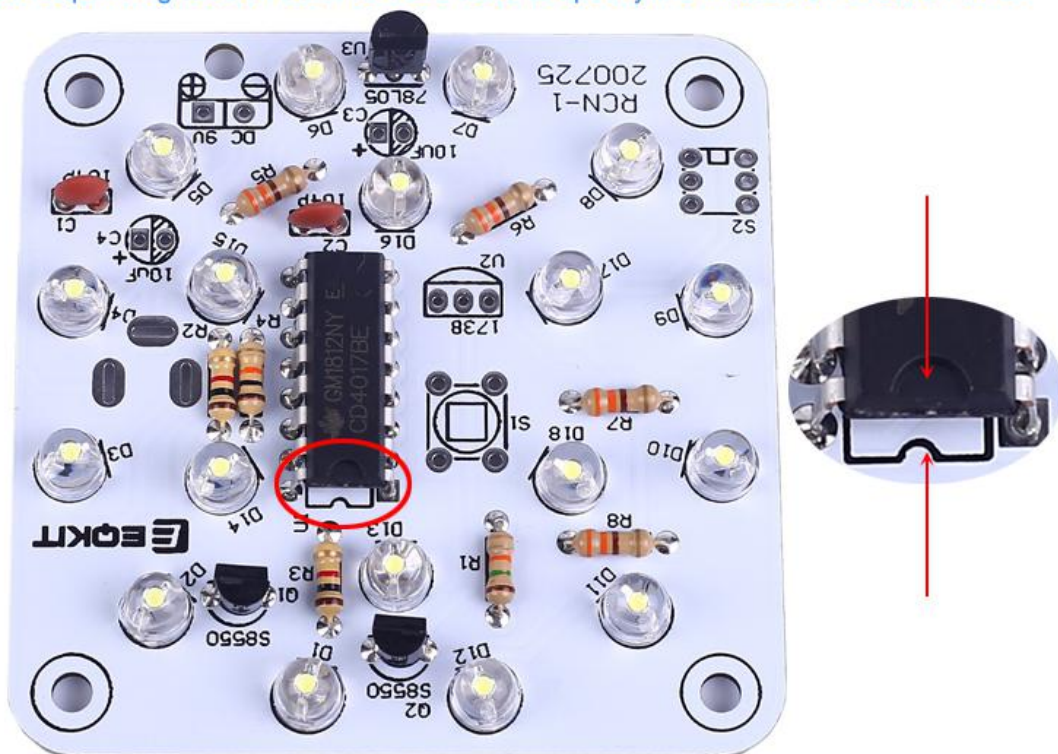
Step 7: Install 1pcs TO-92 78L05 Voltage Regulator at U3.



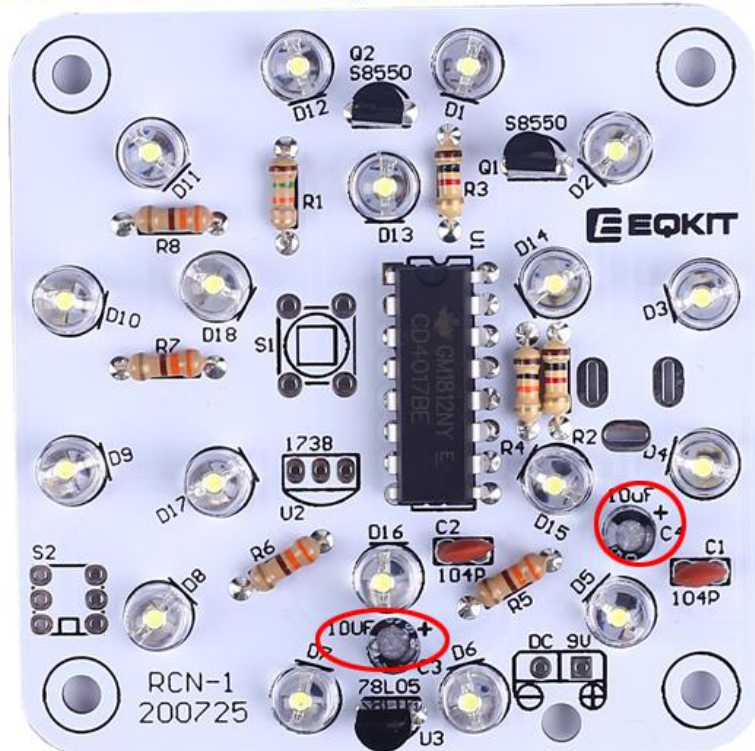
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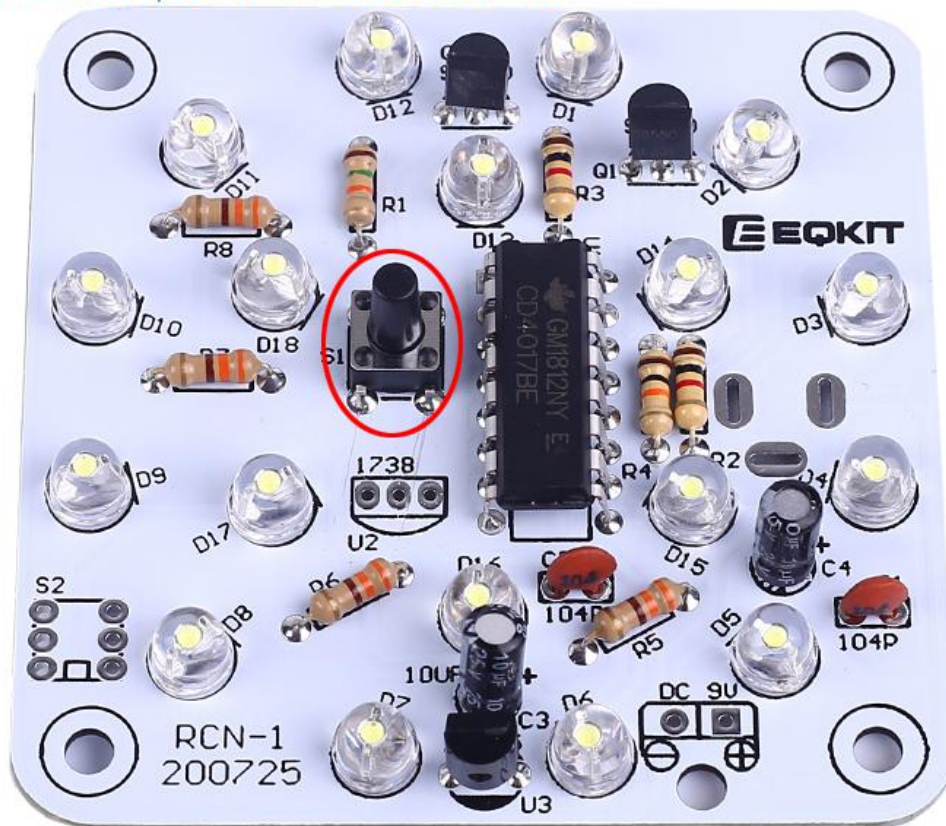
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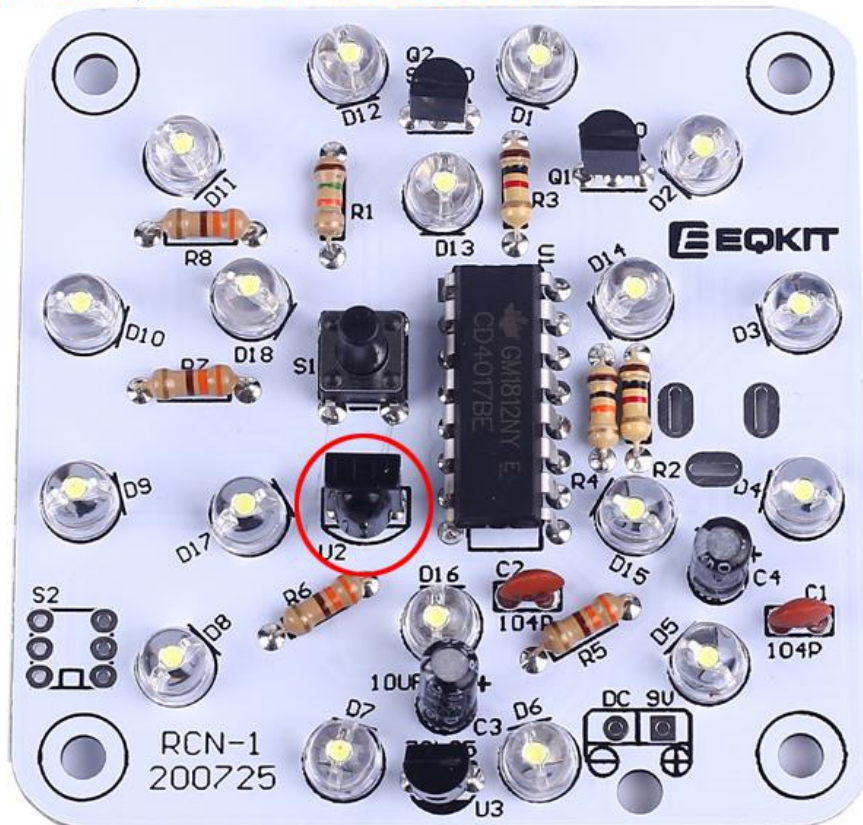
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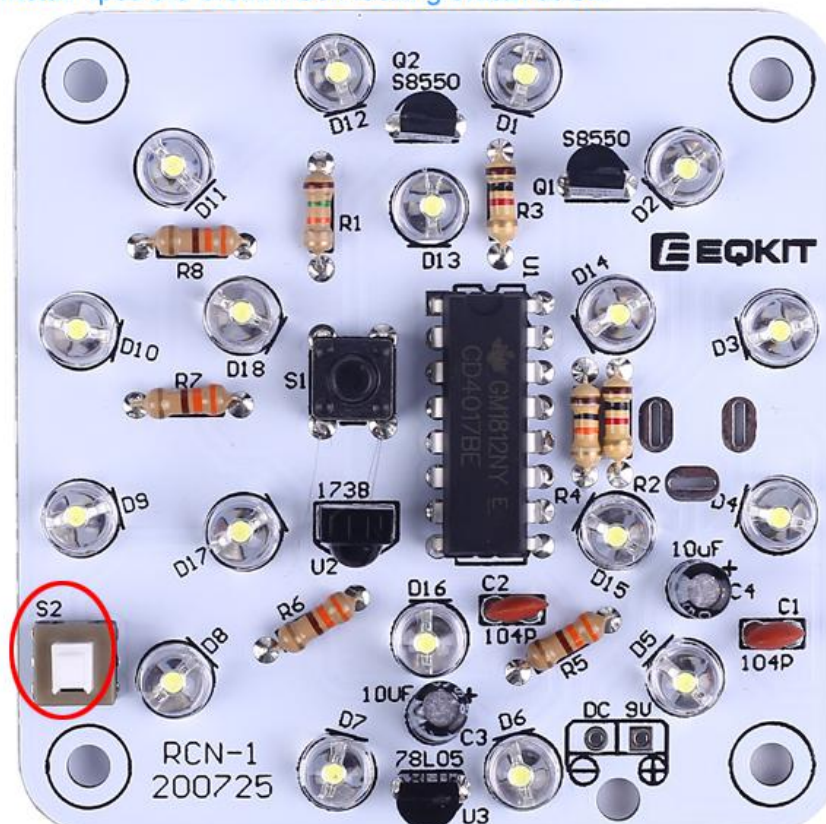
Step 11: Install 1pcs 6*6*10mm Black Button at S1.



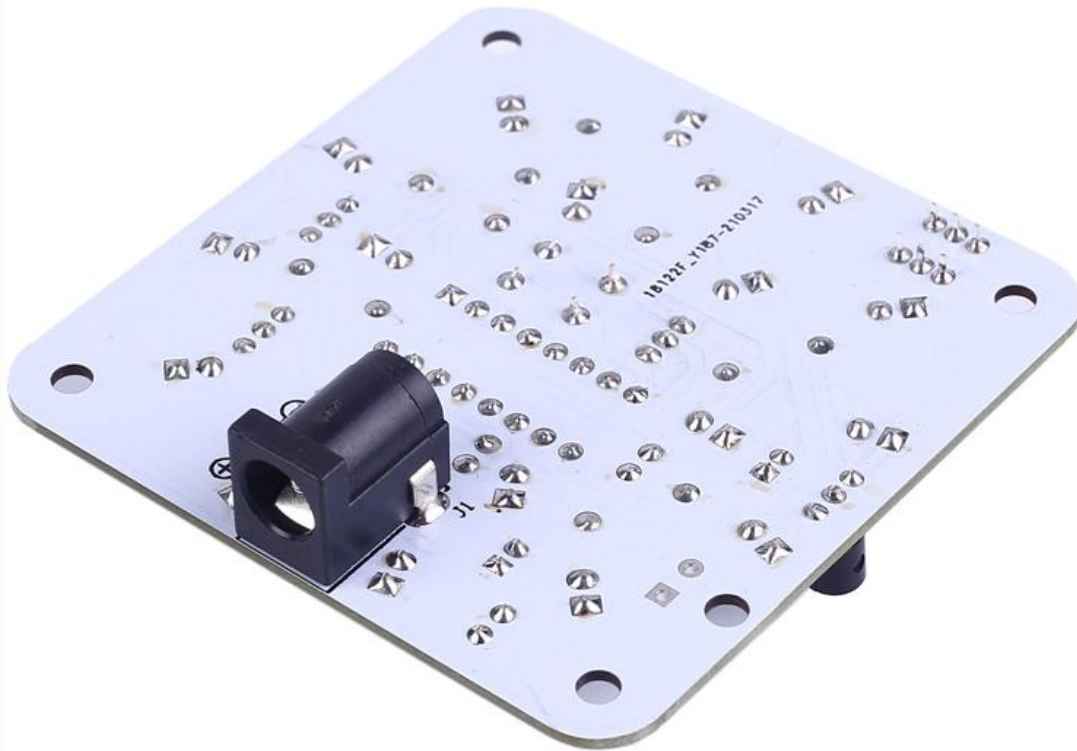
Step 12: Install 1pcs VS1738 Infrared receiver at U2.



Step 13: Install 1pcs 5.8*5.8mm Self-locking switch at S2.



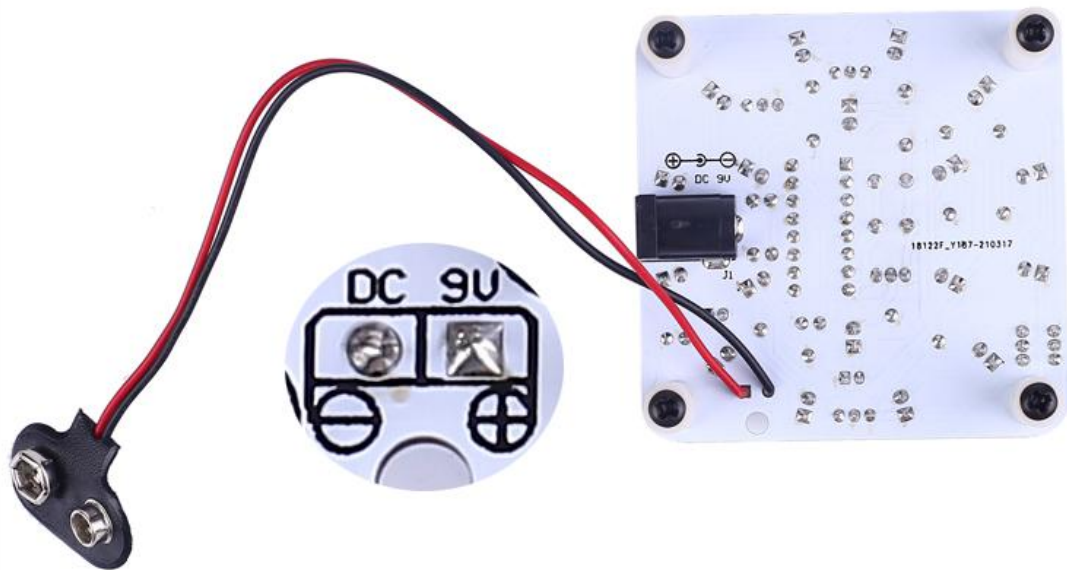
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