

tindie RCN-1 IR Control Lamp DIY Kit Instructions

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tindie

tindie RCN-1 IR Control Lamp DIY Kit



Product Information

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

Product Usage Instructions

1. S1 black button is used to turn ON or OFF the 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 can be used to control the lamp on or off.

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	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 TO-92	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	1
16	Nylon Column	M3*10mm	4	4
17	Nylon Column	M3*20mm	4	4
18	Screw	M3*25mm	4	4
19	Box	65*65*35mm	1	1
20	PCB	74*74*1.6mm	1	1

Note:

Users can complete the installation according to the PCB silkscreen and component list.

Schematic Diagram:

[Insert the schematic diagram here]

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

Installation Tips:

[Provide installation tips here]

Installation Steps:

[Provide installation steps here]

Install Shown Steps:

[Provide install shown steps here]

Introduction

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

Feature

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

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

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.

Component Listing

NO.	Component Name	PCB Marker	Parameter	QTY
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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.				

Schematic diagram

5. Pay attention to the positive and negative of the components.
6. Strictly prohibit short circuits.
7. The user must install the LED according to the specified rules. Otherwise, some LEDs will not light.
8. Install complex components preferentially.
9. Make sure all components are in the right direction and right place.
10. Check that all of the LEDs 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.

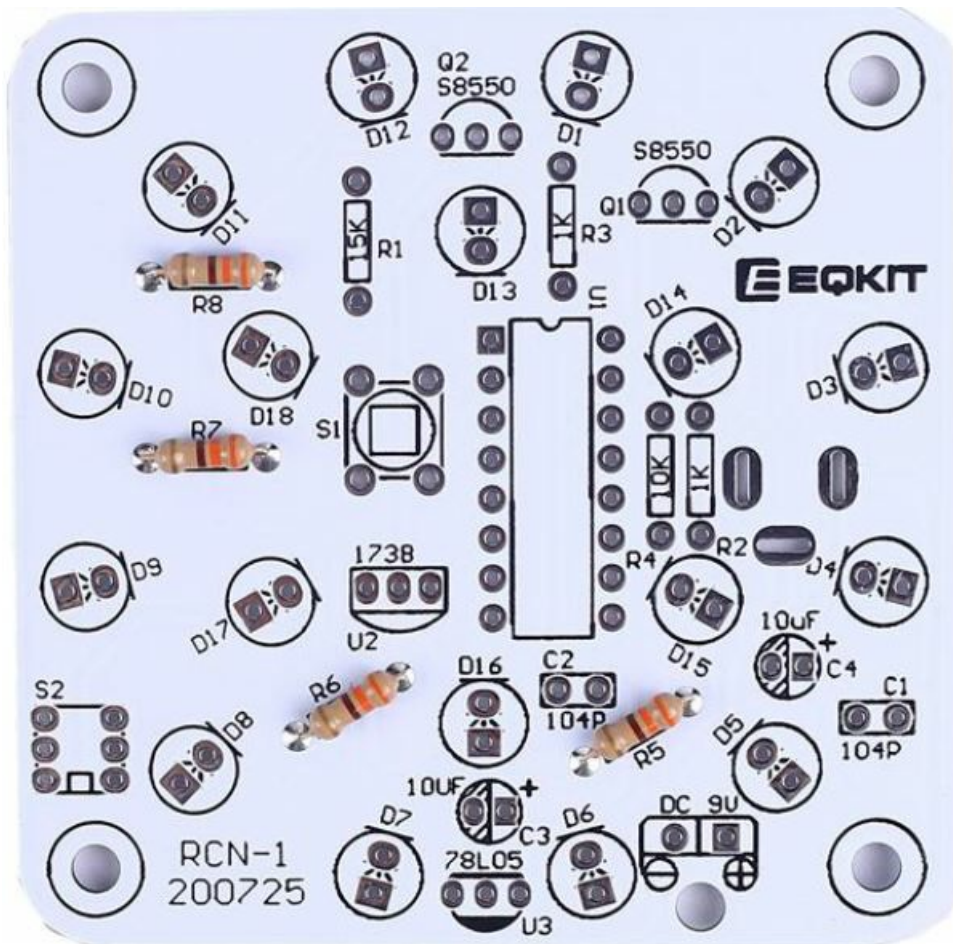
Installation Steps

(Please be patient install!!!)

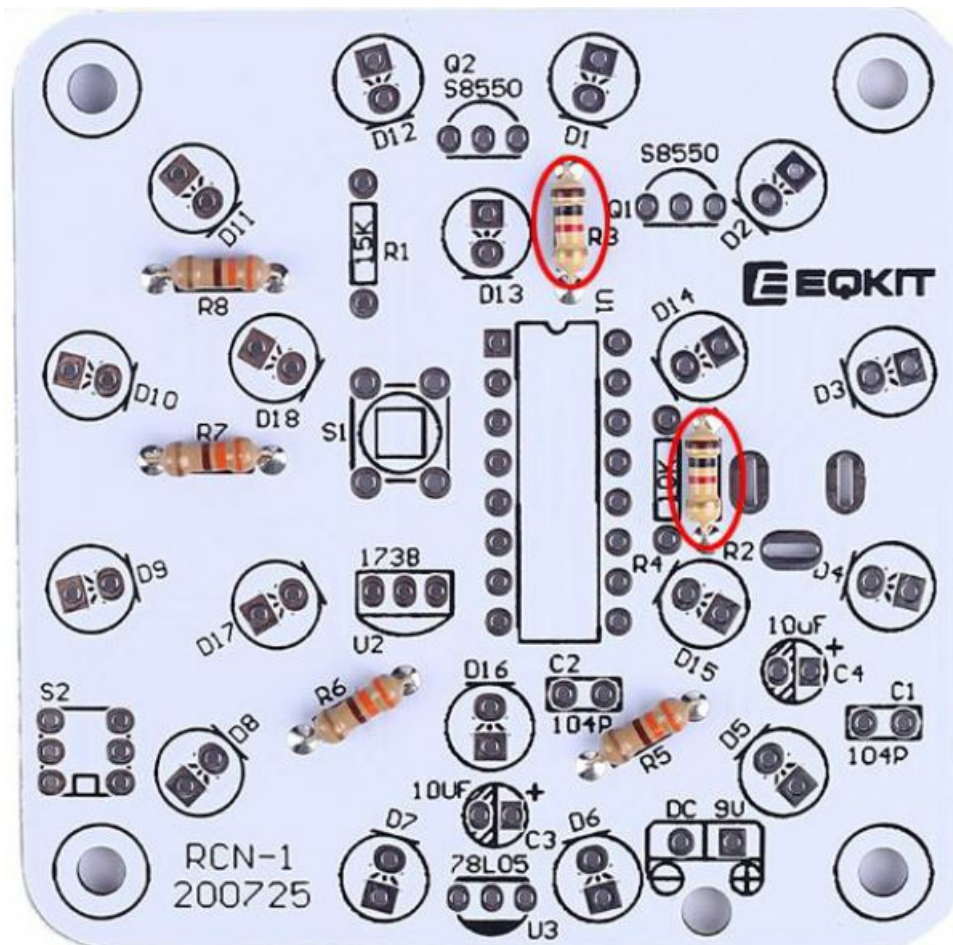
1. **Step 1:** Install 4pcs 330ohm Metal Film Resistor at R5-R8.
2. **Step 2:** Install 2pcs 1Kohm Metal Film Resistor at R2,R3.
3. **Step 3:** Install 1pcs 10Kohm Metal Film Resistor at R4.
4. **Step 4:** Install 1pcs 15Kohm Metal Film Resistor at R1.
5. **Step 5:** Install 18pcs LED at D1-D18.The longer 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 distinguishing between positive and negative. The Longer pin is a 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 Columns on PCB. 16>.Step 16: Install 1pcs 9V Battery socket at DC 9V. Note: Red wire connects to ' + '.
16. **Step 17:** Install a 9V battery(not included) and then place a lamp on a plastic shell. Then press the button to switch the lamp.

Install shown steps

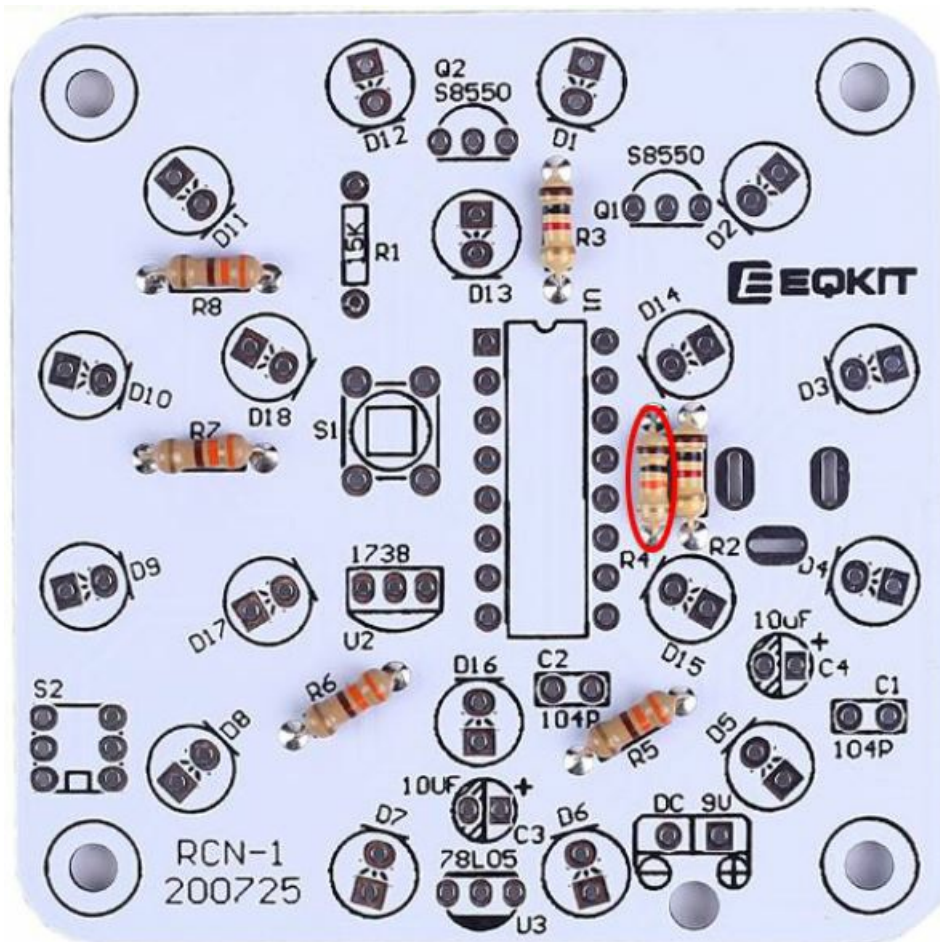
- **Step 1:** Install 4pcs 330ohm Metal Film Resistor at R5-R8.



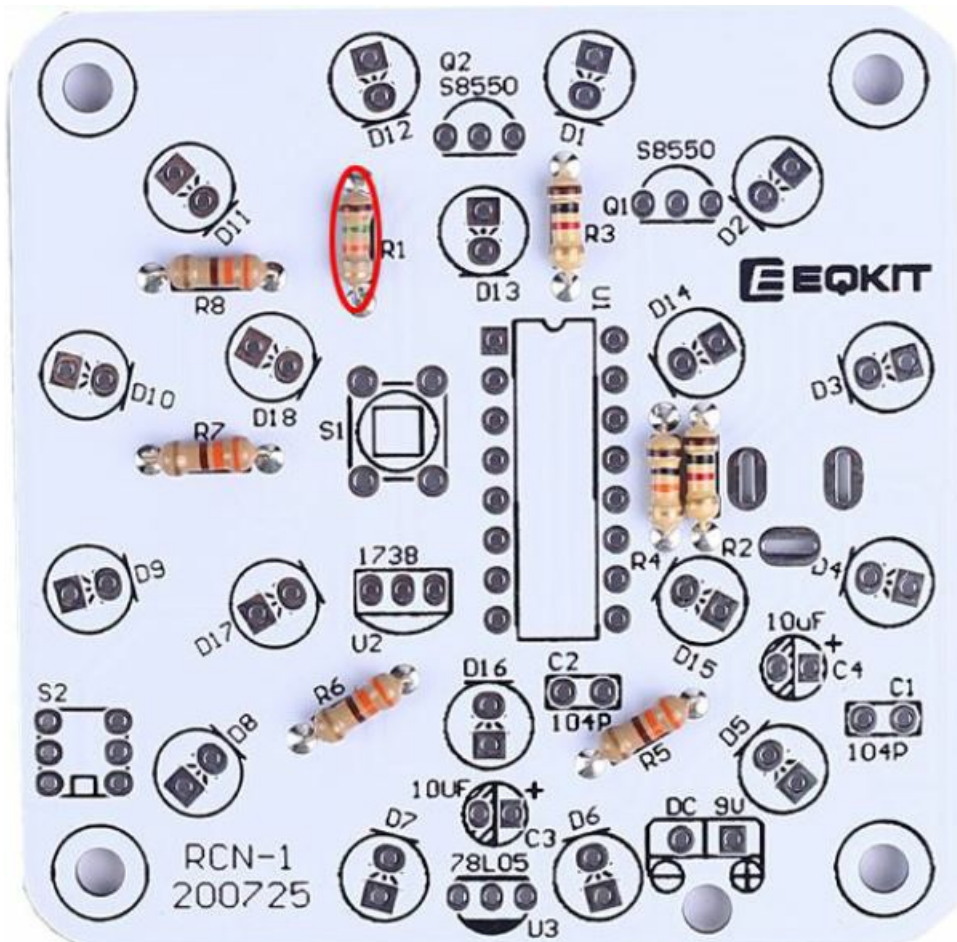
- **Step 2:** Install 2pcs 1 Kohm Metal Film Resistor at R2,3.



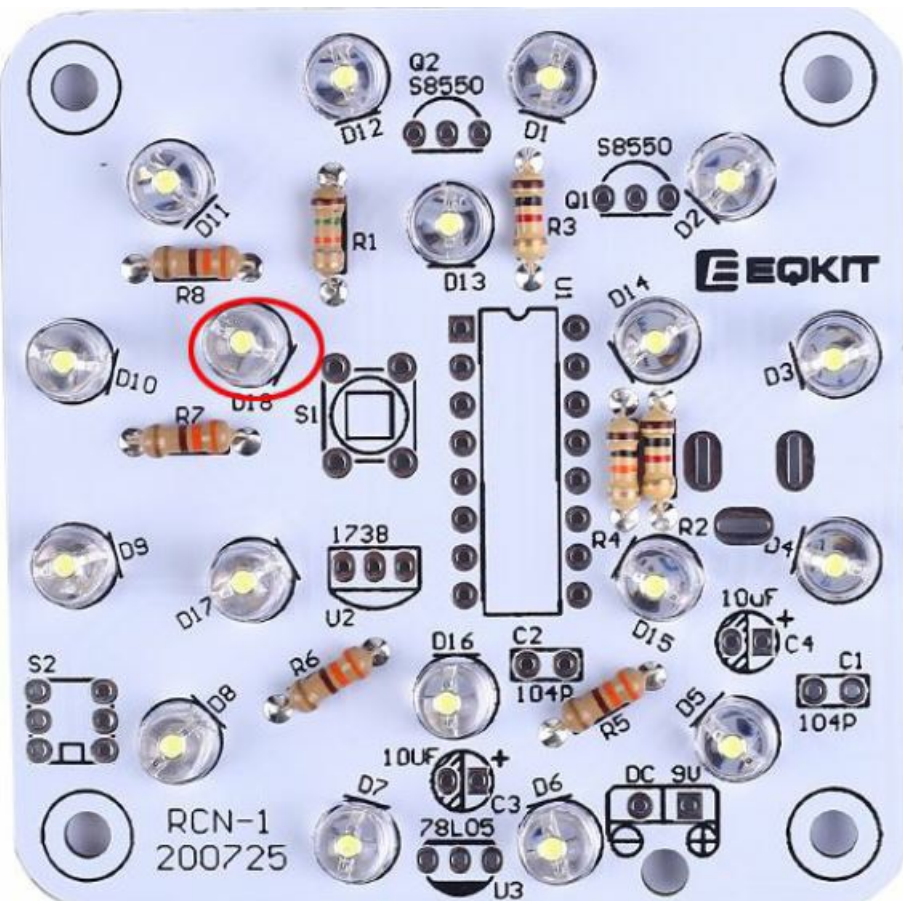
- **Step 3:** Install 1pcs 10Kohm Metal Film Resistor at R4.



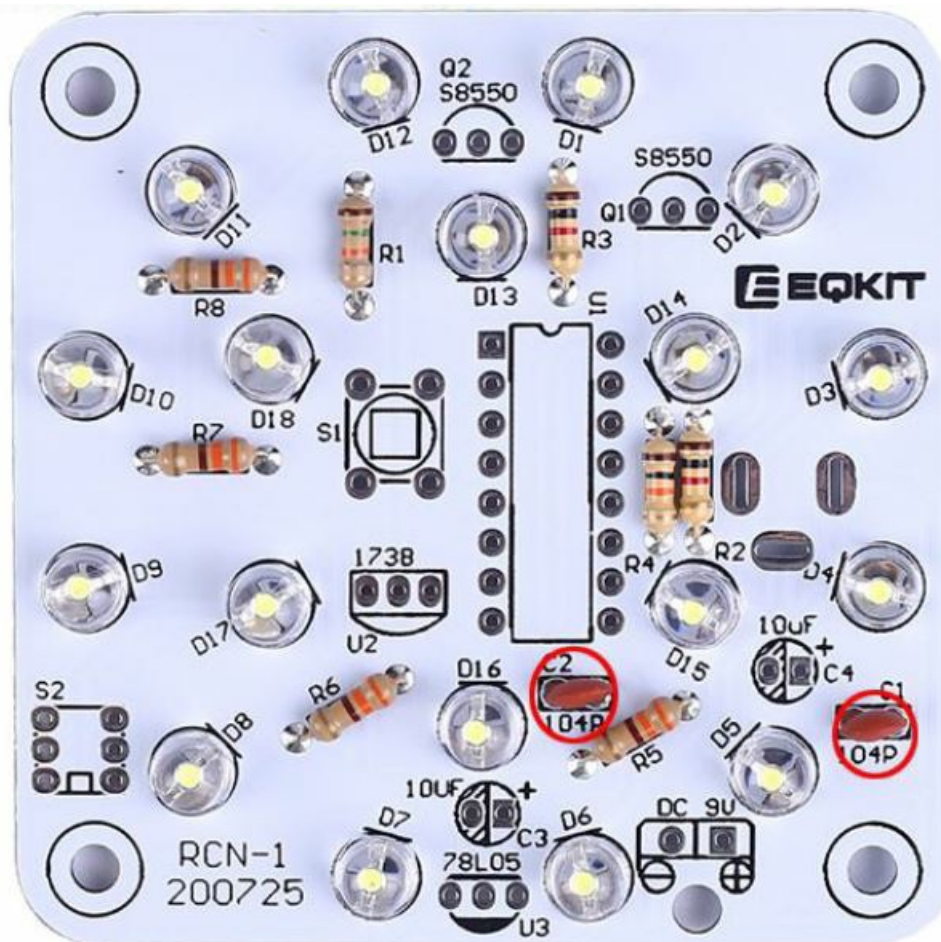
- **Step 4:** Install 1pcs 15Kohm Metal Film Resistor at R1.



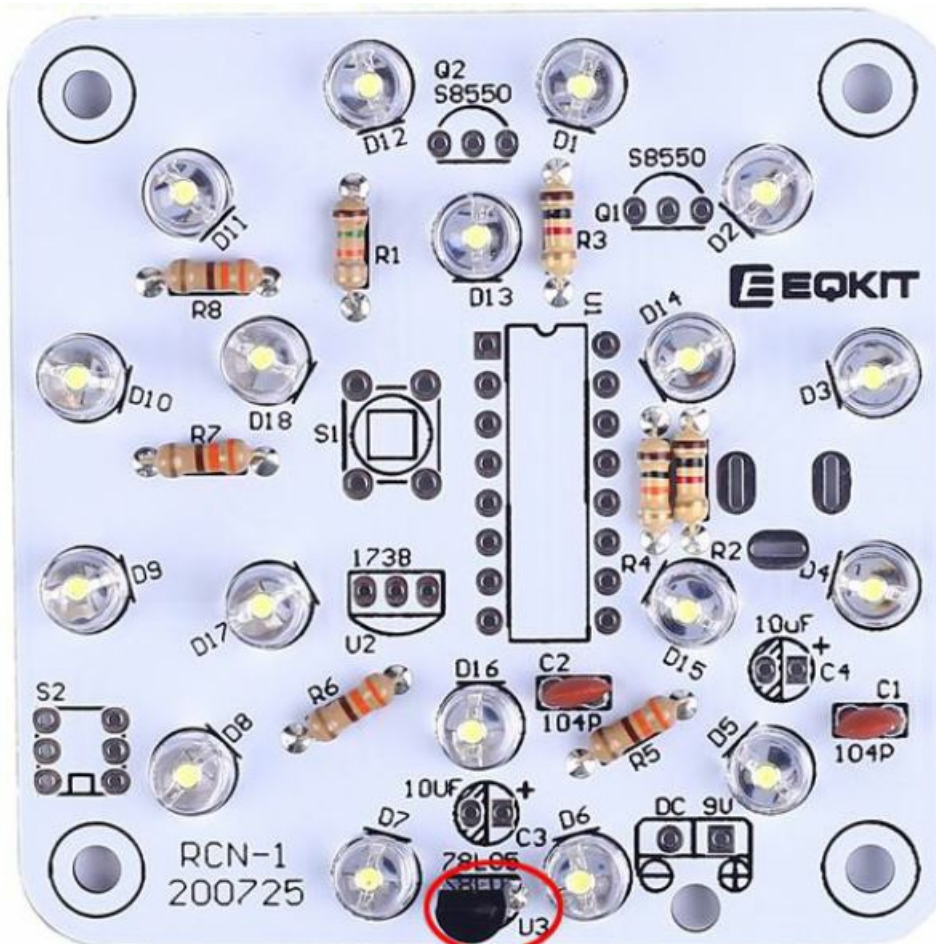
- **Step 5:** Install 18pcs LED at D1-D18. The longer pin is inserted into the rectangular pad (positive pole). The shorter pins are inserted into the round pads.



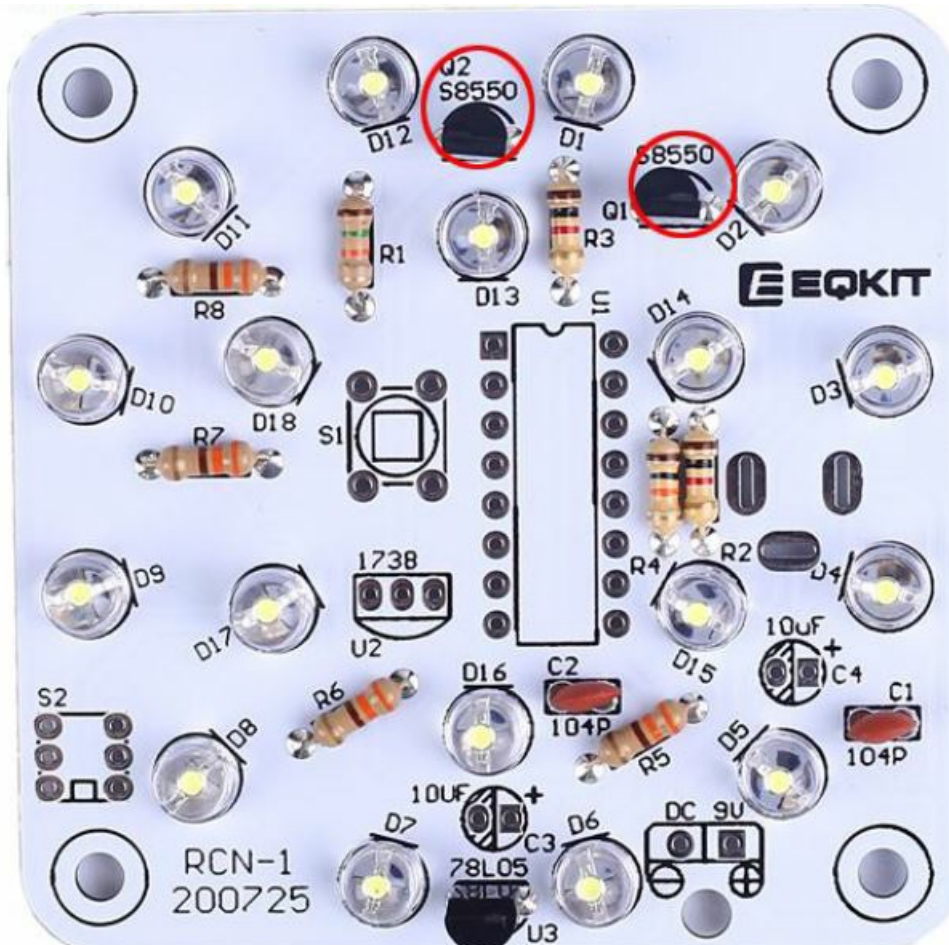
- **Step 6:** Install 2pcs 0. 1uF 104 Ceramic Capacitor at C1,C2.



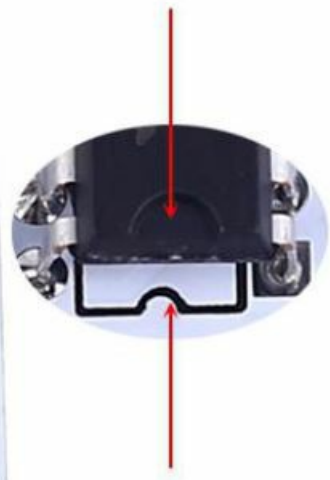
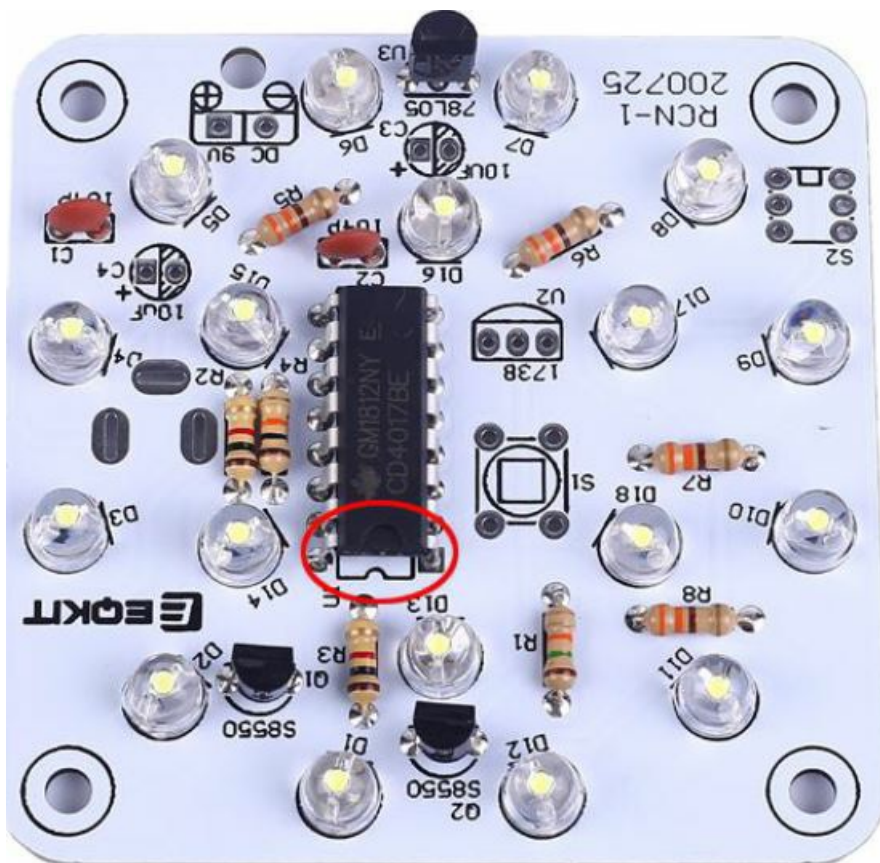
- **Step 7:** Install 1pcs TO-92 78L05 Voltage Regulator at U3



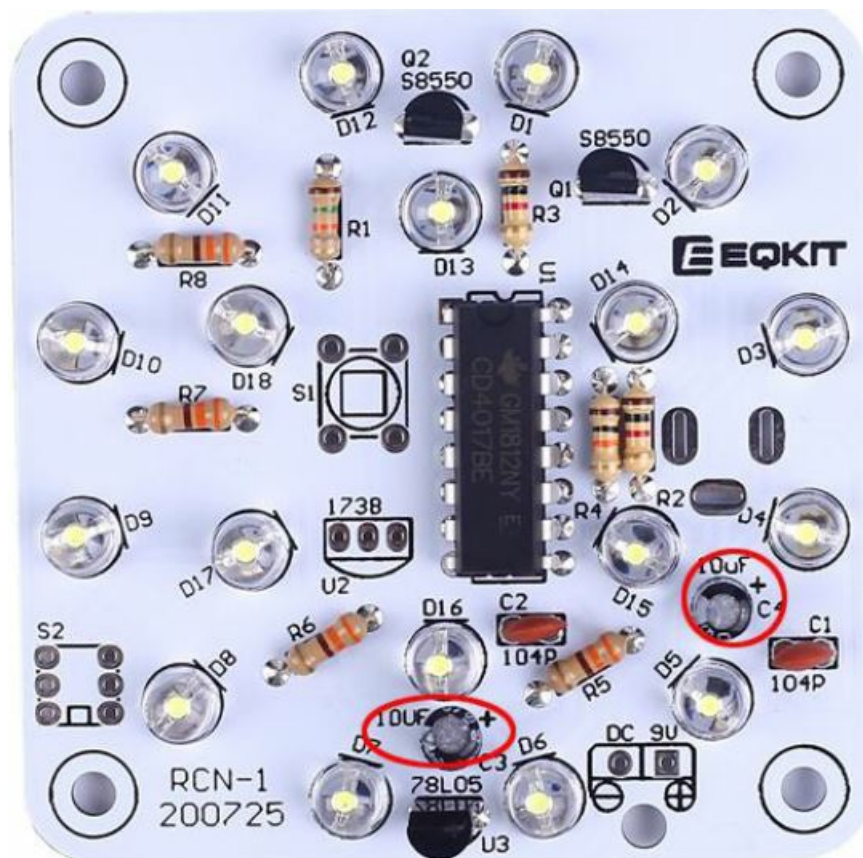
- **Step 8:** Install 2pcs TO-92 S8050 Transistor at Q1,Q2.



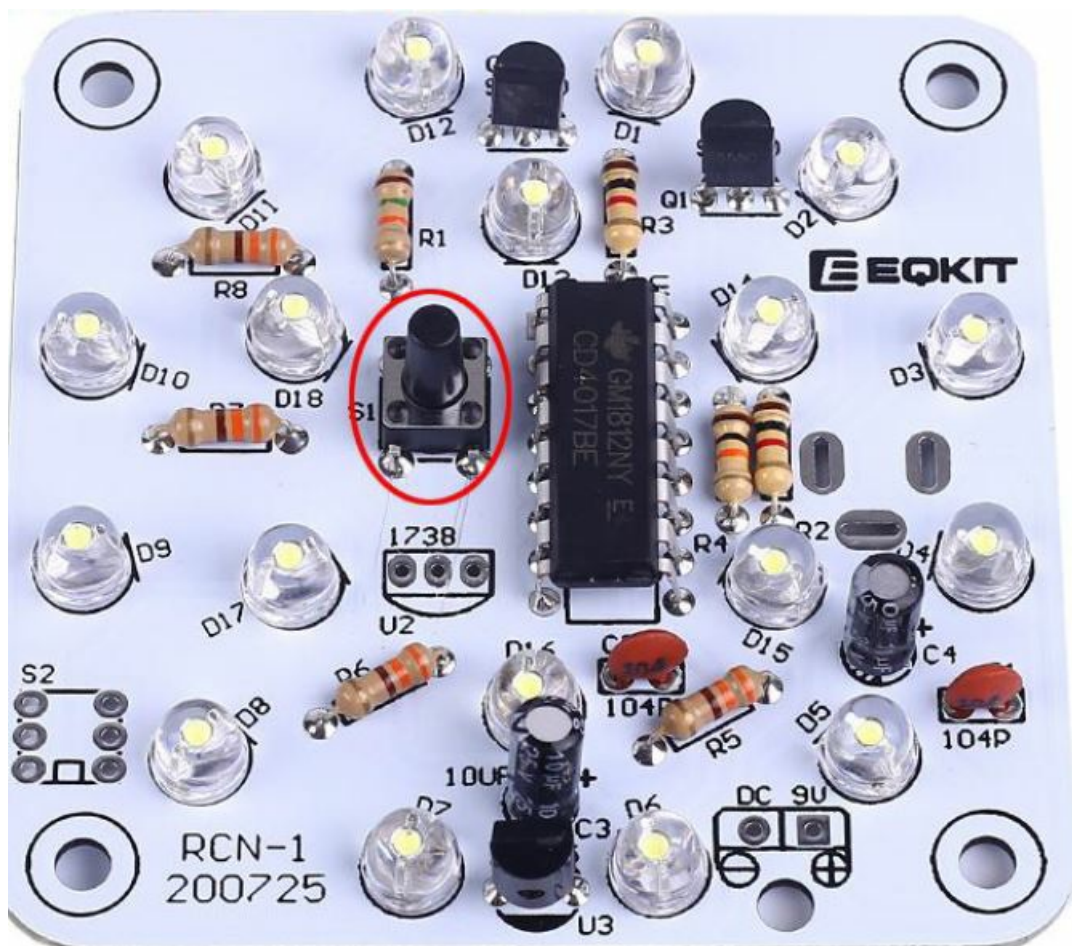
- **Step 9:** Install 1pcs DIP-16 CD4017 IC at U1. There is a mark on one end of the IC and there is a mark on PCB where the IC can place on. These two marks are corresponding to each other and are used to specify the installation direction of IC.



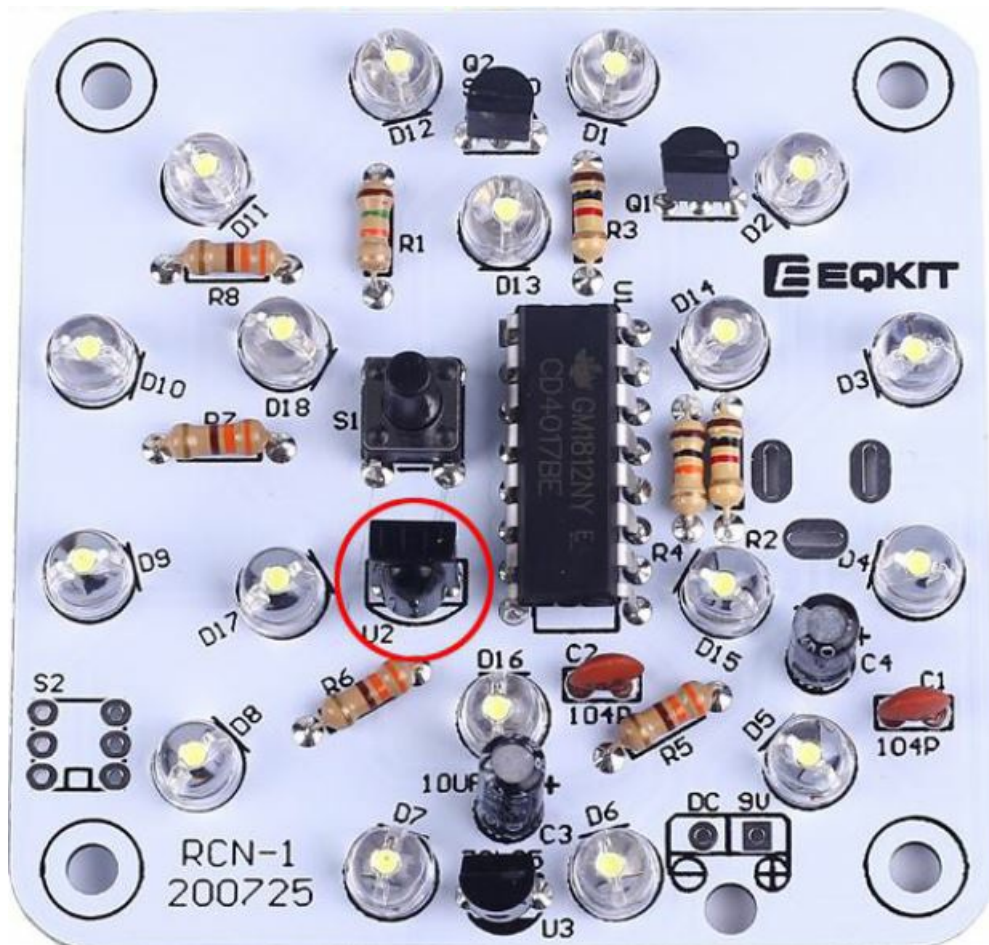
- **Step 10:** Install 2pcs 10uF 25V Electrolytic Capacitor at C3,C4. Pay attention to distinguishing between positive and negative. The Longer pin is a positive pole. The longer pin is inserted into the rectangular pad.



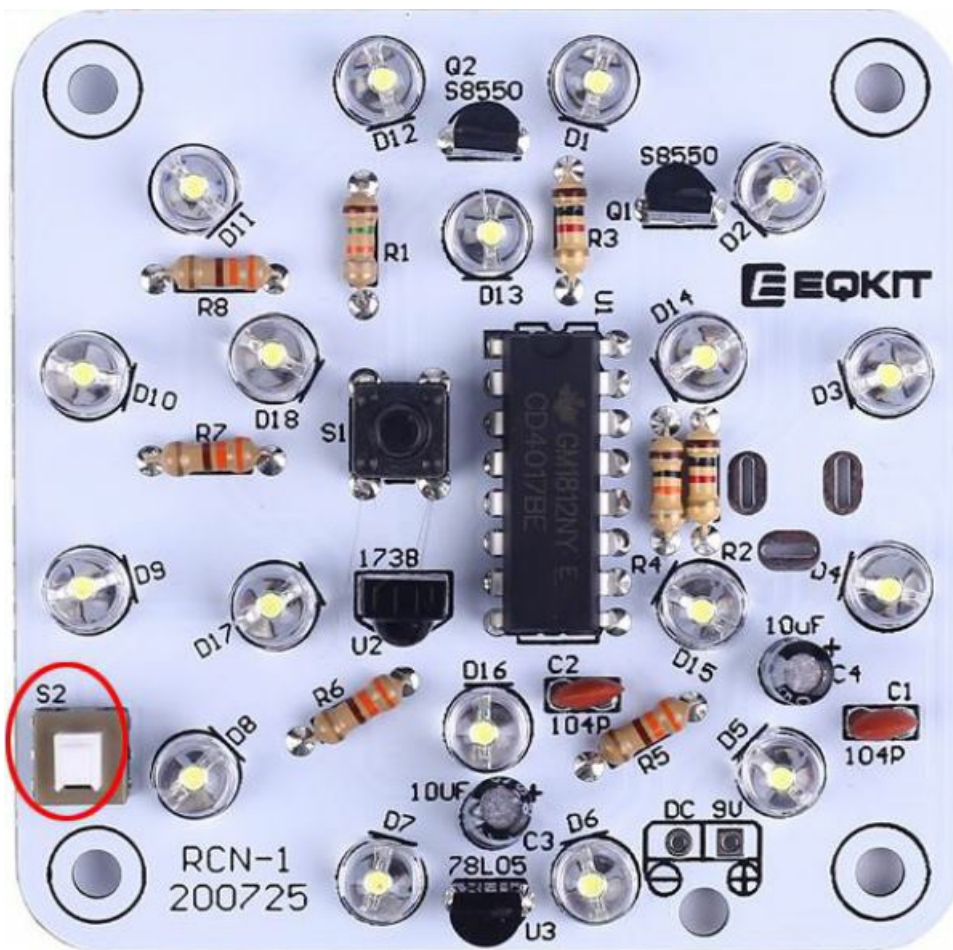
- **Step 11:** Install 1pcs 6*6*10mm Black Button at S1.



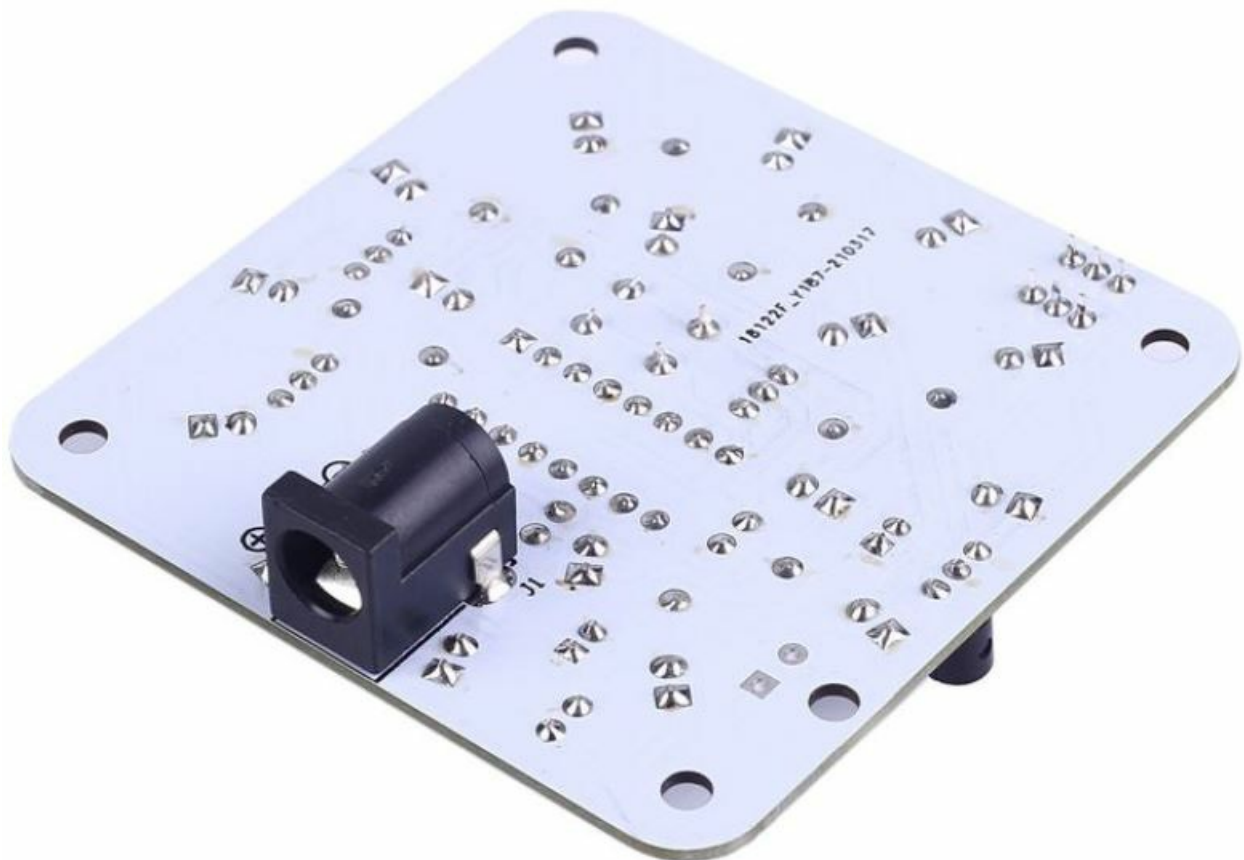
- **Step 12:** Install 1 pcs VS1738 Infrared receiver at U2.



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



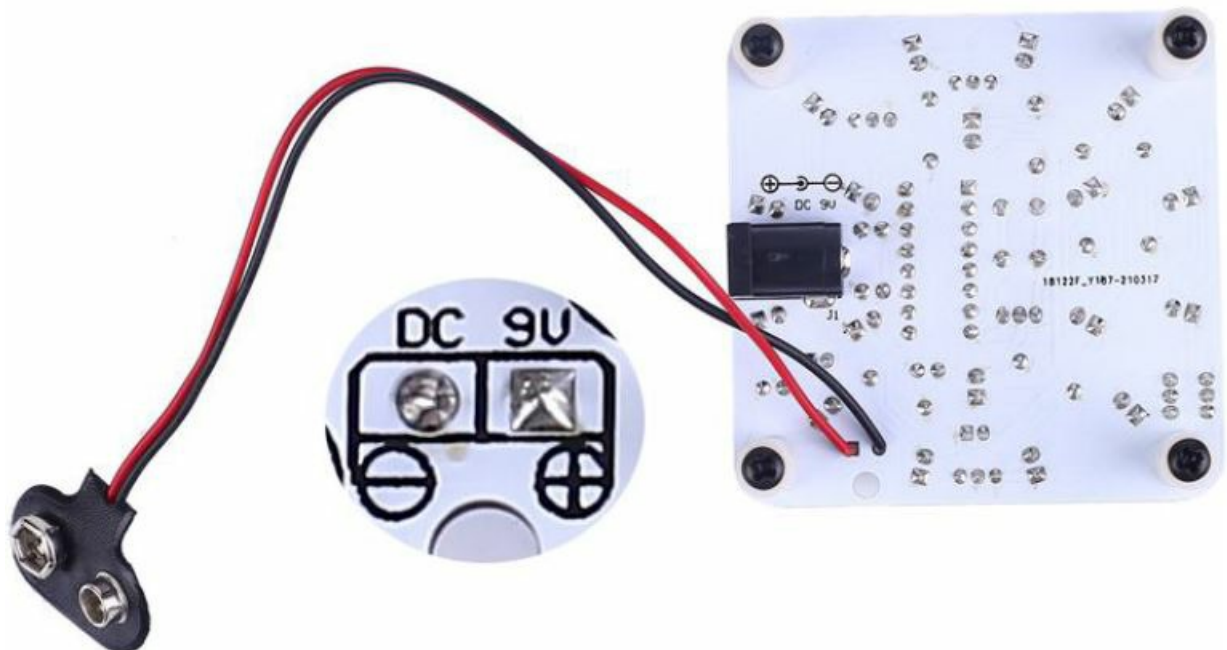
- **Step 14:** Install 1pcs 5.5mm DC Socket at J1 on another side.



- **Step 15:** Install 4pcs M3*10mm and 4pcs M3*20mm Nylon Columns on PCB.



- **Step 16:** Install 1pcs 9V Battery socket at DC 9V. Note: Red wire connects to ' + '.



- **Step 17:** Install a 9V battery (not included) and then place a lamp on a plastic shell. Then press the button to switch the lamp.



Documents / Resources

<p>RCN-1 IR Control Lamp DIY Kit</p> <p>I. Introduction</p> <p>RCN-1 is a DIY kit for building a remote control system. It is designed to be easy to use and to provide a good learning experience for hobbyists and students.</p> <p>II. Features</p> <ul style="list-style-type: none"> 1. Easy to use 2. Good learning experience 3. High quality components 4. Compact size <p>III. Components</p> <ul style="list-style-type: none"> 1. RCN-1 IR Control Lamp DIY Kit 2. RCN-1 IR Control Lamp DIY Kit 3. RCN-1 IR Control Lamp DIY Kit 4. RCN-1 IR Control Lamp DIY Kit 5. RCN-1 IR Control Lamp DIY Kit 6. RCN-1 IR Control Lamp DIY Kit 7. RCN-1 IR Control Lamp DIY Kit 8. RCN-1 IR Control Lamp DIY Kit 9. RCN-1 IR Control Lamp DIY Kit 10. RCN-1 IR Control Lamp DIY Kit <p>IV. Pinouts</p> <p>RCN-1 has two main sections: the RCN-1 IR Control Lamp and the RCN-1 IR Control Lamp. The RCN-1 IR Control Lamp has 18 pins, and the RCN-1 IR Control Lamp has 18 pins. The pinouts for each section are as follows:</p> <p>RCN-1 IR Control Lamp:</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> </tr> </thead> <tbody> <tr><td>1</td><td>VCC</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>VCC</td></tr> <tr><td>4</td><td>GND</td></tr> <tr><td>5</td><td>VCC</td></tr> <tr><td>6</td><td>GND</td></tr> <tr><td>7</td><td>VCC</td></tr> <tr><td>8</td><td>GND</td></tr> <tr><td>9</td><td>VCC</td></tr> <tr><td>10</td><td>GND</td></tr> <tr><td>11</td><td>VCC</td></tr> <tr><td>12</td><td>GND</td></tr> <tr><td>13</td><td>VCC</td></tr> <tr><td>14</td><td>GND</td></tr> <tr><td>15</td><td>VCC</td></tr> <tr><td>16</td><td>GND</td></tr> <tr><td>17</td><td>VCC</td></tr> <tr><td>18</td><td>GND</td></tr> </tbody> </table> <p>RCN-1 IR Control Lamp:</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> </tr> </thead> <tbody> <tr><td>1</td><td>VCC</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>VCC</td></tr> <tr><td>4</td><td>GND</td></tr> <tr><td>5</td><td>VCC</td></tr> <tr><td>6</td><td>GND</td></tr> <tr><td>7</td><td>VCC</td></tr> <tr><td>8</td><td>GND</td></tr> <tr><td>9</td><td>VCC</td></tr> <tr><td>10</td><td>GND</td></tr> <tr><td>11</td><td>VCC</td></tr> <tr><td>12</td><td>GND</td></tr> <tr><td>13</td><td>VCC</td></tr> <tr><td>14</td><td>GND</td></tr> <tr><td>15</td><td>VCC</td></tr> <tr><td>16</td><td>GND</td></tr> <tr><td>17</td><td>VCC</td></tr> <tr><td>18</td><td>GND</td></tr> </tbody> </table> <p>V. Connections</p> <p>RCN-1 has two main sections: the RCN-1 IR Control Lamp and the RCN-1 IR Control Lamp. The RCN-1 IR Control Lamp has 18 pins, and the RCN-1 IR Control Lamp has 18 pins. The connections for each section are as follows:</p> <p>RCN-1 IR Control Lamp:</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> </tr> </thead> <tbody> <tr><td>1</td><td>VCC</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>VCC</td></tr> <tr><td>4</td><td>GND</td></tr> <tr><td>5</td><td>VCC</td></tr> <tr><td>6</td><td>GND</td></tr> <tr><td>7</td><td>VCC</td></tr> <tr><td>8</td><td>GND</td></tr> <tr><td>9</td><td>VCC</td></tr> <tr><td>10</td><td>GND</td></tr> <tr><td>11</td><td>VCC</td></tr> <tr><td>12</td><td>GND</td></tr> <tr><td>13</td><td>VCC</td></tr> <tr><td>14</td><td>GND</td></tr> <tr><td>15</td><td>VCC</td></tr> <tr><td>16</td><td>GND</td></tr> <tr><td>17</td><td>VCC</td></tr> <tr><td>18</td><td>GND</td></tr> </tbody> </table> <p>RCN-1 IR Control Lamp:</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> </tr> </thead> <tbody> <tr><td>1</td><td>VCC</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>VCC</td></tr> <tr><td>4</td><td>GND</td></tr> <tr><td>5</td><td>VCC</td></tr> <tr><td>6</td><td>GND</td></tr> <tr><td>7</td><td>VCC</td></tr> <tr><td>8</td><td>GND</td></tr> <tr><td>9</td><td>VCC</td></tr> <tr><td>10</td><td>GND</td></tr> <tr><td>11</td><td>VCC</td></tr> <tr><td>12</td><td>GND</td></tr> <tr><td>13</td><td>VCC</td></tr> <tr><td>14</td><td>GND</td></tr> <tr><td>15</td><td>VCC</td></tr> <tr><td>16</td><td>GND</td></tr> <tr><td>17</td><td>VCC</td></tr> <tr><td>18</td><td>GND</td></tr> </tbody> </table>	Pin	Function	1	VCC	2	GND	3	VCC	4	GND	5	VCC	6	GND	7	VCC	8	GND	9	VCC	10	GND	11	VCC	12	GND	13	VCC	14	GND	15	VCC	16	GND	17	VCC	18	GND	Pin	Function	1	VCC	2	GND	3	VCC	4	GND	5	VCC	6	GND	7	VCC	8	GND	9	VCC	10	GND	11	VCC	12	GND	13	VCC	14	GND	15	VCC	16	GND	17	VCC	18	GND	Pin	Function	1	VCC	2	GND	3	VCC	4	GND	5	VCC	6	GND	7	VCC	8	GND	9	VCC	10	GND	11	VCC	12	GND	13	VCC	14	GND	15	VCC	16	GND	17	VCC	18	GND	Pin	Function	1	VCC	2	GND	3	VCC	4	GND	5	VCC	6	GND	7	VCC	8	GND	9	VCC	10	GND	11	VCC	12	GND	13	VCC	14	GND	15	VCC	16	GND	17	VCC	18	GND	<p>tindie RCN-1 IR Control Lamp DIY Kit [pdf] Instructions</p> <p>RCN-1, RCN-1 IR Control Lamp DIY Kit, IR Control Lamp DIY Kit, Control Lamp DIY Kit, Lamp DIY Kit, DIY Kit</p>
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