

LED Flashing Christmas Tree DIY Kit

1.Introduction:

It is a flash Christmas tree kit consists of circuit board, allows 16 LED flash alternately, showing a Christmas tree in the space of two-dimensional profile (the night environment has better viewing).

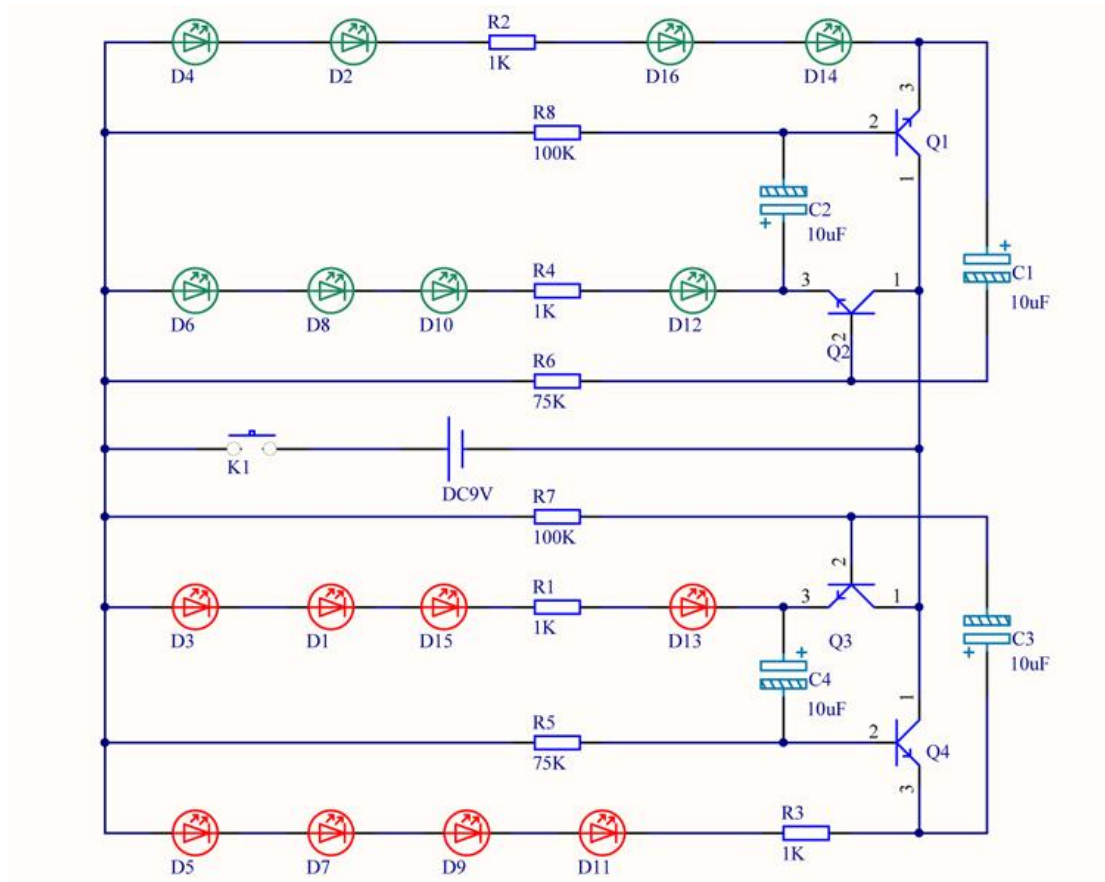
2.Parameter:

- 1>.Work Voltage:DC 9V
- 2>.Work Current:100mA
- 3>.Power Type:Battery Box
- 4>.Work Module:Switch Control
- 5>.Color:Red+Green LED
- 6>.Work Temperature:-40℃~85℃
- 7>.Work Humidity:0%~95%RH
- 8>.Size(Installed):110*80*35mm

3.Component List:

NO.	Component Name	PCB Marker	Parameter	QTY
1	Metal Film Resistor	R1-R4	1Kohm	4
2	Metal Film Resistor	R5-R6	75Kohm	2
3	Metal Film Resistor	R7-R8	100Kohm	2
4	Red LED	D1,D3,D5,D7,D9,D11,D13,D15	5mm	8
5	Green LED	D2,D4,D6,D8,D10,D12,D14,D16	5mm	8
6	Electrolytic Capacitor	C1-C4	10uF 50V	4
7	S8050 Transistor	Q1-Q4	TO-92	4
8	KF-301-2P Connect Terminal	J1	5.08mm	1
9	Self-locking Switch	K1	6*6mm	1
10	9V Battery Box			1
11	Screw		M3*6mm	3
12	PCB		105*70*1.6mm	3

4.Schematic:



5.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.

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

Step 1: Install 4pcs 1Kohm Metal Film Resistor at R1-R4.

Step 2: Install 2pcs 75Kohm Metal Film Resistor at R5-R6.

Step 3: Install 2pcs 100Kohm Metal Film Resistor at R7-R8.

Step 4: Identification LED. The Longer pin is positive pole. The longer pin is inserted into the pad which has marked ' + '.

Step 5: Install 8pcs 5mm Red LED at D1,D3,D5,D7,D9,D11,D13,D15. Bend the LED at the same time.

Step 6: Install 8pcs 5mm Green LED at D2,D4,D6,D8,D10,D12,D14,D16. Bend the LED at the same time.

Step 7: Install 4pcs TO-92 S8050 Transistor at Q1-Q4.

Step 8: Install 4pcs 10uF 50V Electrolytic Capacitor at C1-C4. Pay attention to distinguish between positive and negative. The Longer pin is positive pole. The longer pin is inserted into the pad which has marked ' + '.

Step 9: Install 1pcs KF-301-2P 5.08mm Connect Terminal at J1. (KF-301-2P does not need to be installed if provide by battery box)

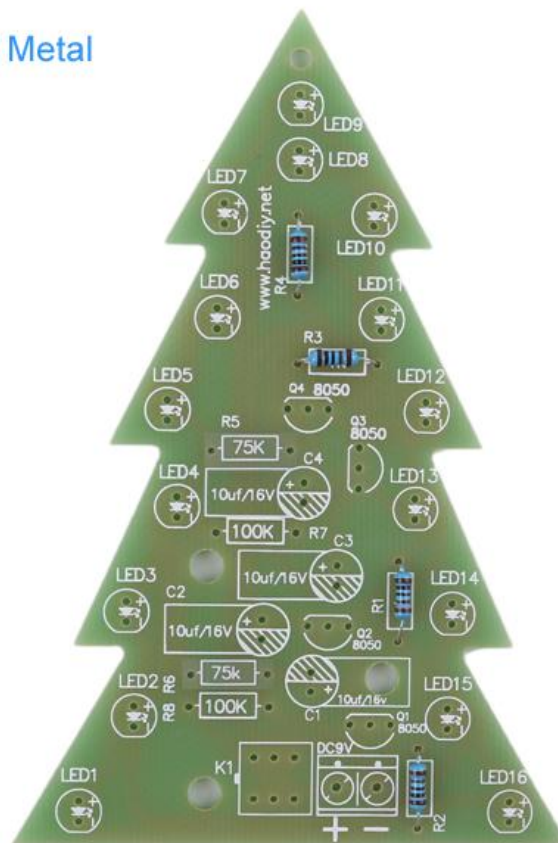
Step 10: Install 1pcs Self-locking Switch at K1. Pay attention to the installation direction.

Step 11: Install 1pcs 9V Battery Box.

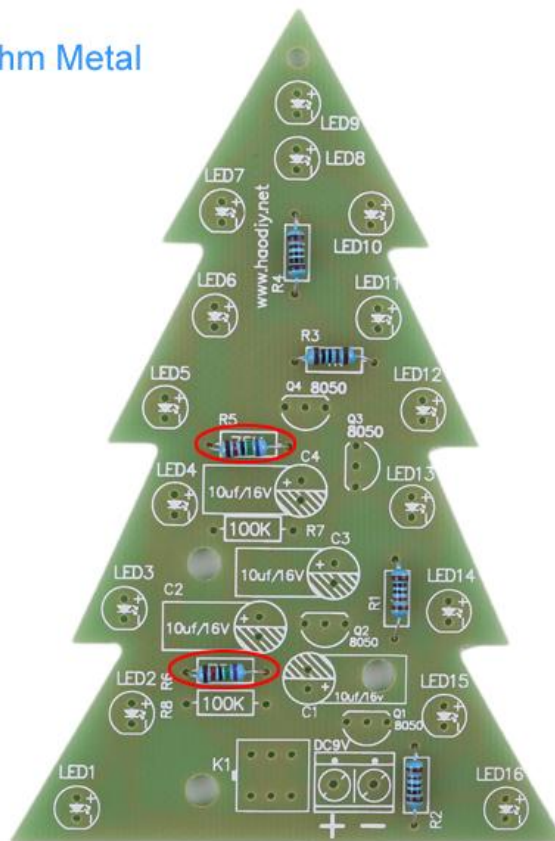
Step 12: Fix battery box by 3pcs M3*6mm screw.

Step 13: Connect to power supply and enjoy the effect.

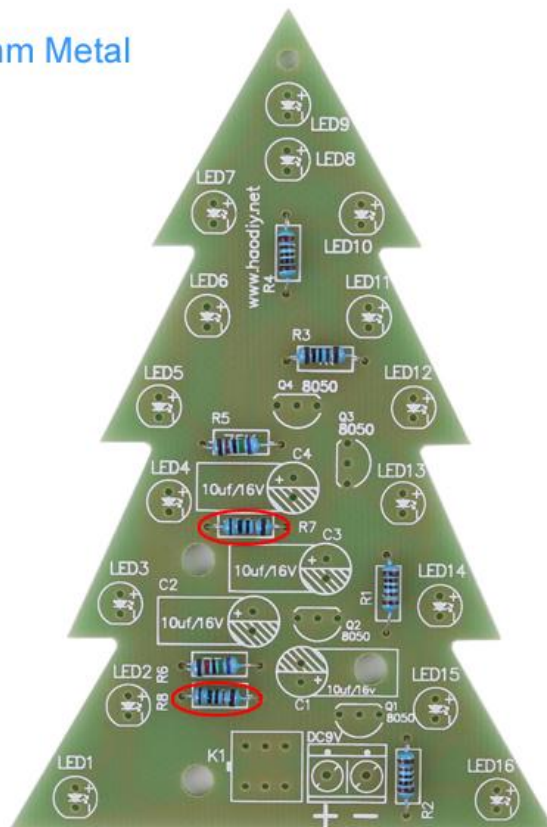
Step 1: Install 4pcs 1Kohm Metal Film Resistor at R1-R4.

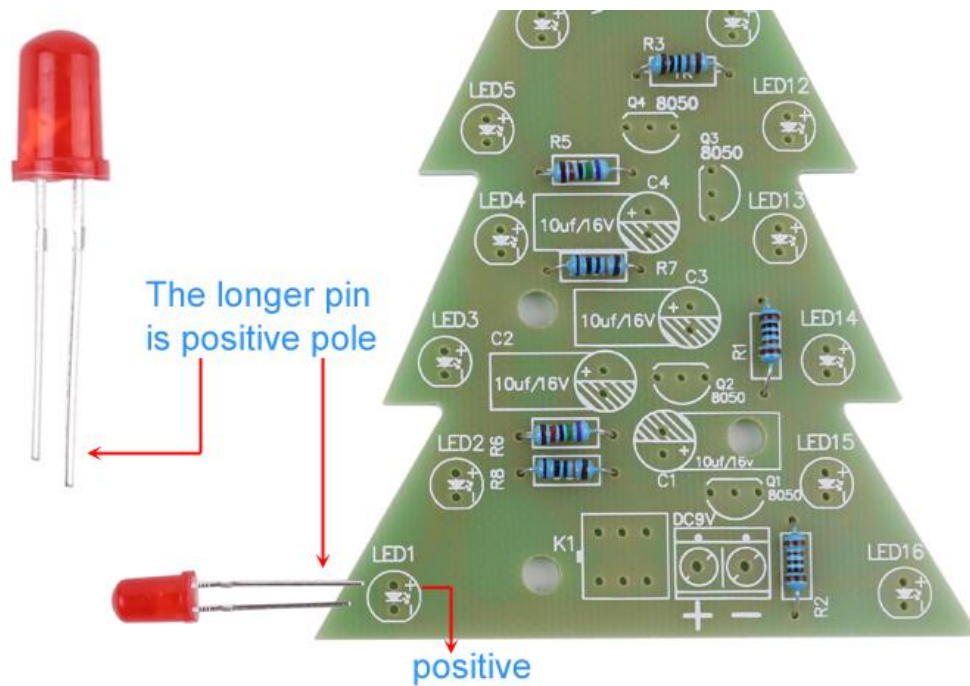


Step 2: Install 2pcs 75Kohm Metal Film Resistor at R5-R6.



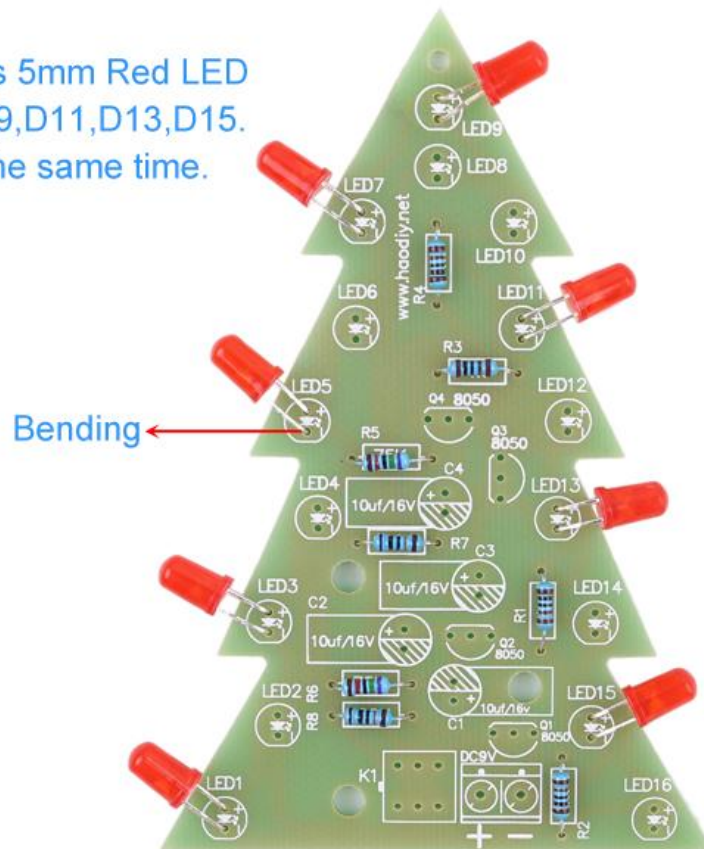
Step 3: Install 2pcs 100Kohm Metal Film Resistor at R7-R8.



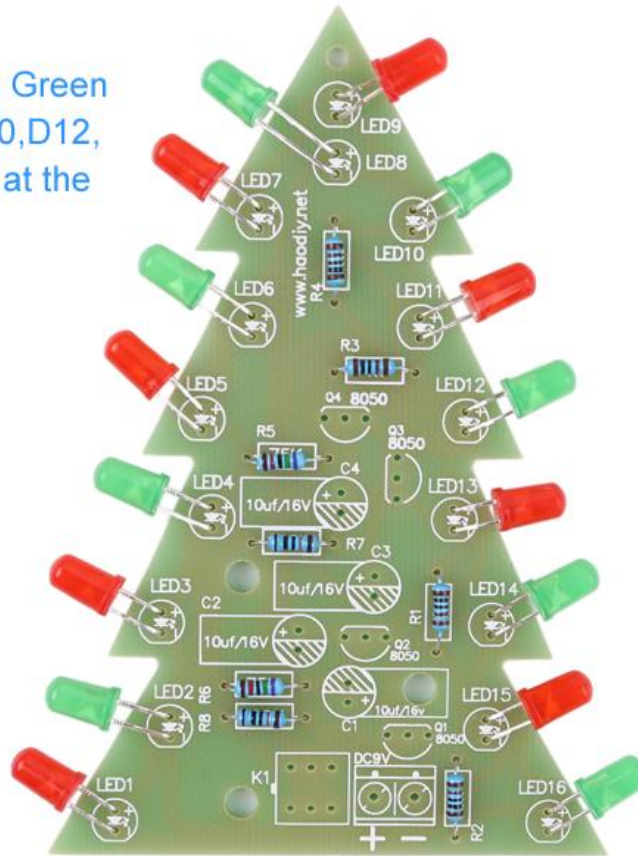


Step 4: Identification LED. The Longer pin is positive pole. The longer pin is inserted into the pad which has marked ' + '.

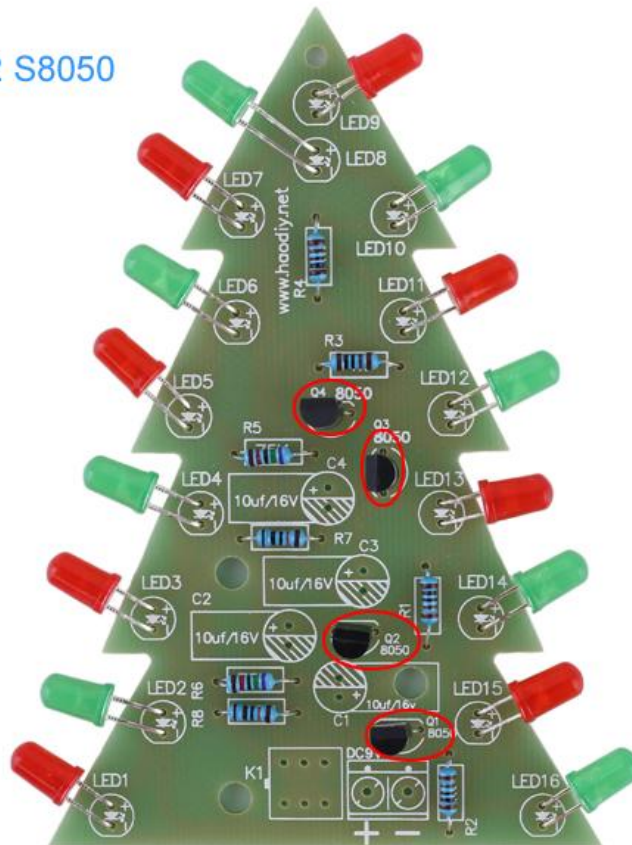
Step 5: Install 8pcs 5mm Red LED at D1,D3,D5,D7,D9,D11,D13,D15. Bend the LED at the same time.



Step 6: Install 8pcs 5mm Green LED at D2,D4,D6,D8,D10,D12,D14,D16. Bend the LED at the same time.



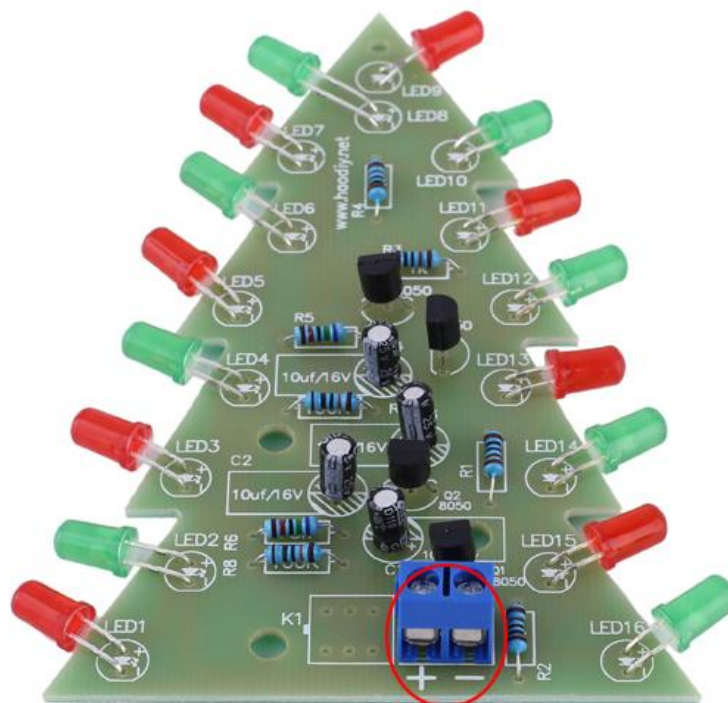
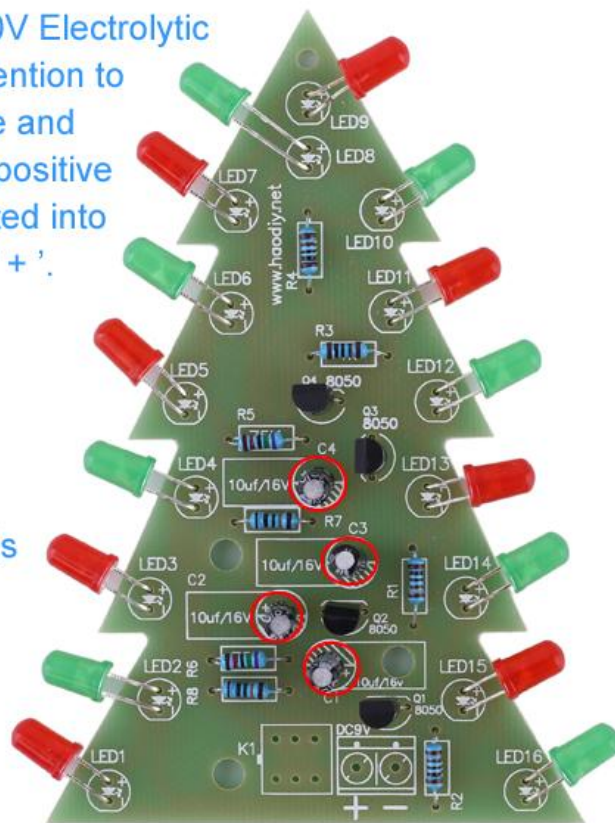
Step 7: Install 4pcs TO-92 S8050 Transistor at Q1-Q4.



Step 8: Install 4pcs 10uF 50V Electrolytic Capacitor at C1-C4. Pay attention to distinguish between positive and negative. The Longer pin is positive pole. The longer pin is inserted into the pad which has marked '+ '.



The longer pin is positive pole

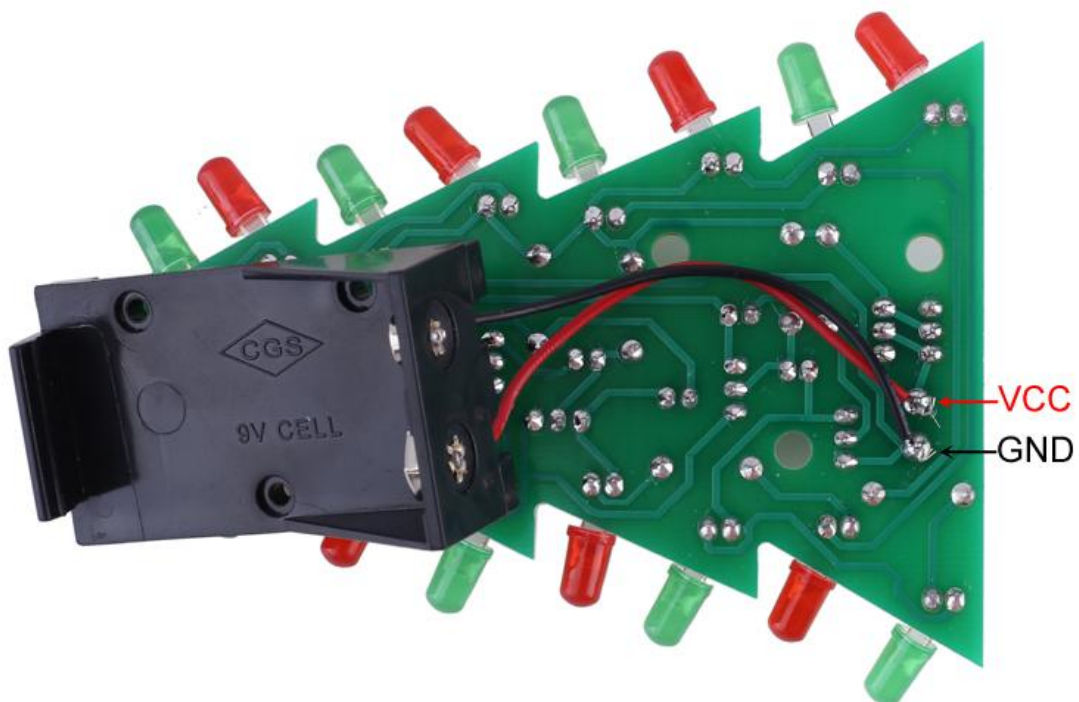


Step 9: Install 1pcs KF-301-2P 5.08mm Connect Terminal at J1. (KF-301-2P does not need to be installed if provide by battery box)

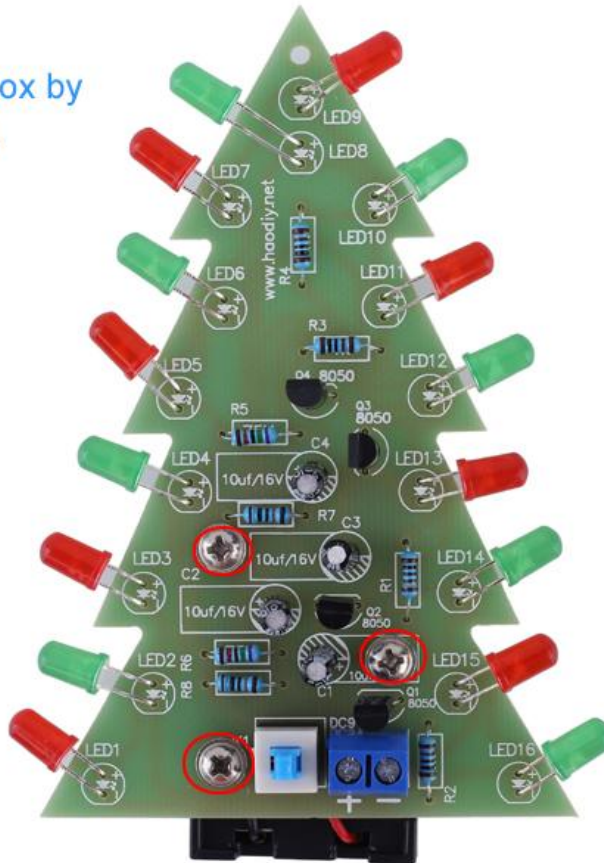
Step 10: Install 1pcs Self-locking Switch at K1. Pay attention to the installation direction.



Step 11: Install 1pcs 9V Battery Box.



Step 12: Fix battery box by
3pcs M3*6mm screw.



Step 13: Connect to power
supply and enjoy the effect.

