ICs & Robot Gadgets
Easy Deal Easy Fun

3D Mini Xmas Tree Music Player DIY Kit

1.Introduction:

It is a mini Christmas tree DIY kit. Three different PCB are combined into a 3D Christmas tree model. Built-in 7 LED gradient modes and 7 different Christmas music. It can be powered by a button battery and can be free from the power supply.

2.Feature:

- Mini PCB Christmas tree design.
- 3 different PCB combinations with snowflake patterns.
- 7 different Christmas music.
- 7 kinds LED flashing effect.
- Automatically switch LED flashing status by re-start power switch .
- Automatically switch Christmas music by re-start music switch.
- ON/OFF Christmas music playing.

3.Parameter:

1>.Work Voltage:DC 6V
2>.Power Type: CR2025 or CR2025 Battery (NOT Included)
2>.Work Temperature:-40℃~85℃
3>.Work Humidity:5%~95%RH
4>.Size(Installed):51*49*64mm

4.Music:

1>.I wish you a merry Christmas
2>.Santa Claus Is Coming To Town
3>.When a child is born
4>.O Christmas Tree
5>.It Came Upon A Midnight Clear
6>.Joy To The World
7>.Jingle Bells

5.Use Methods:

1>.Install 2pcs CR2025 or CR2025 batteries.
2>.Turn ON/OFF the bottom Toggle Switch can turn ON/OFF work power, and switch next LED Flashing Status and next music at the same time.
3>.Turn ON/OFF the another Toggle Switch can turn ON/OFF music and switch next music.

6.Component Listing:

1>.1pcs DIP-16 STC8G1K17 IC Controller
2>.1pcs S9012 2T1 SOT-23 Transistor
3>.1pcs Active Buzzer
4>.2pcs Toggle Switch
5>.4pcs SMD 0805 Red LED
6>.4pcs SMD 0805 Green LED
7>.4pcs SMD 0805 Yellow LED
8>.1pcs SMD 0805 472 4.7Kohm Resistor
9>.4pcs SMD 0805 471 470ohm Resistor
10>.1pcs CR2032 Battery Socket

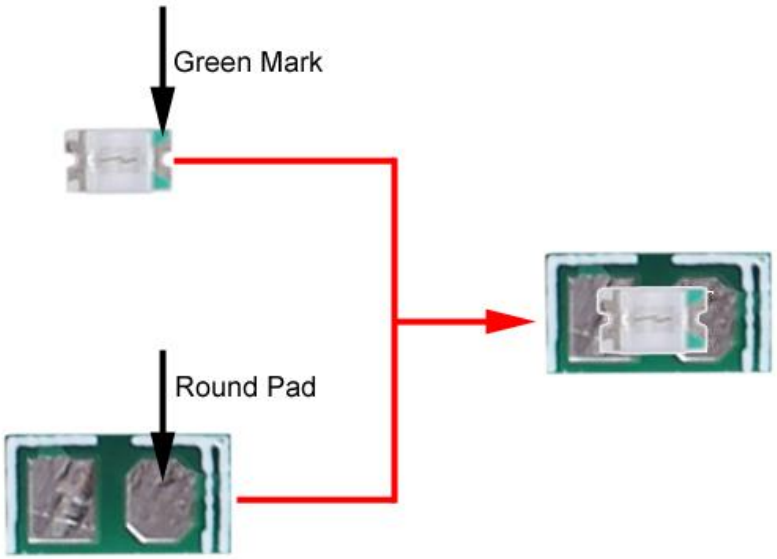
11>.2pcs 4Pin Male Pin
12>.3pcs PCB Circuit Board
Note: It does not include batteries, users need to prepare their own batteries

7.Installation Tips:

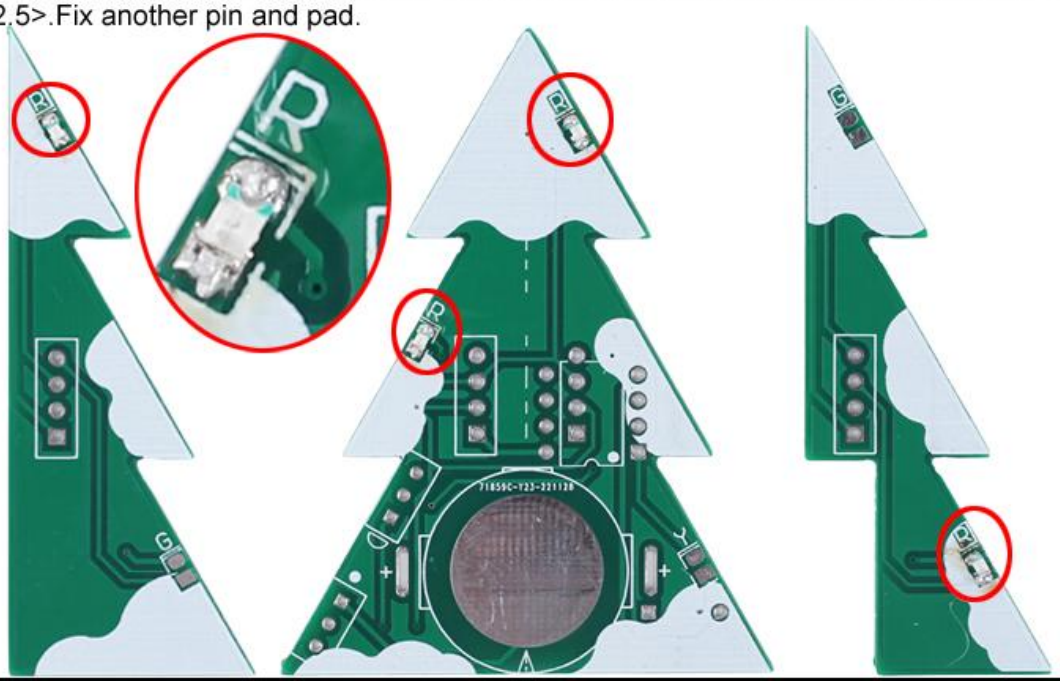
1>.User needs to prepare the welding tool at first.
1.1>.Soldering iron (<50 Watt)
1.2>.Rosin core ("radio") solder
1.3>.Wire cutters
1.4>.Wire strippers
1.5>.Screwdriver
2>.Please be patient until the installation is complete.
3>.The soldering iron can't touch the components for a long time(1.0 second), otherwise it will damage the components.
4>.Pay attention to the positive and negative of the components.
5>.Strictly prohibit short circuit.
6>.User must install the LED according to the specified rules.Otherwise some LED will not light.
7>.Install complex components preferentially.
8>.Make sure all components are in right direction and right place.
9>.It is strongly recommended to read the installation manual before starting installation!!!
10>.Please wear anti-static gloves or anti-static wristbands when installing electronic components.

8.Installation Steps (Please be patient):

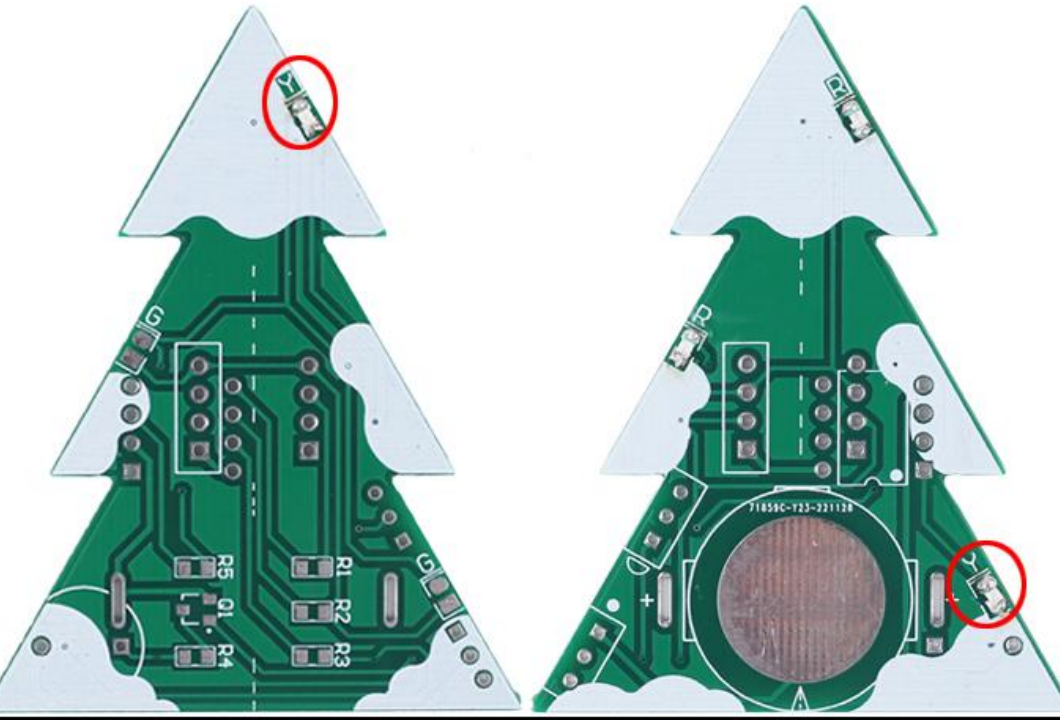
Step 1: Identify the positive and negative poles of the LED.
1.1>.LED front: It is the negative pole where there is a greed mark.
1.2>.PCB mark: It is the negative pole where the round pad on.



Step 2: Install any 4pcs SMD 0805 LED on ' R ' pads on 3pcs PCB.
You can choose to install in any of the three LED colors.Tips:
2.1>.Place tin on one pad.
2.2>.Hold LED with tweezers,melt tin just now with a soldering iron at the same time.
2.3>.After aligning each pad and pin, use tweezers to place the capacitor on PCB.
2.4>.Remove iron and hold LED by tweezers for about 5 second to waiting for fix pin.
2.5>.Fix another pin and pad.



Step 3: Install another 4pcs SMD 0805 LED on ' Y ' pads on 3pcs PCB by the same methods.



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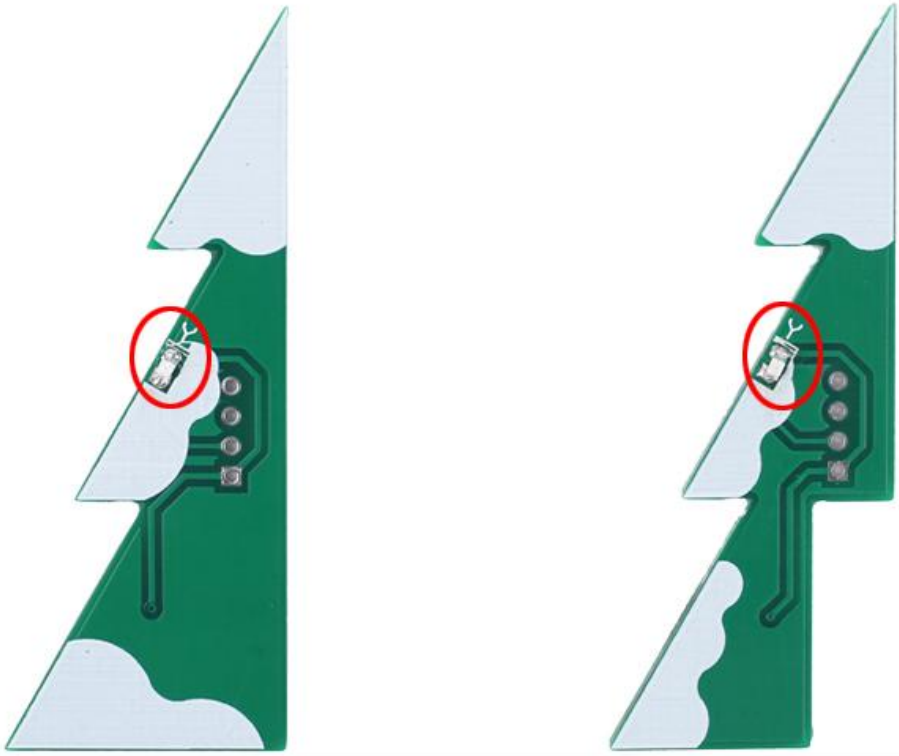
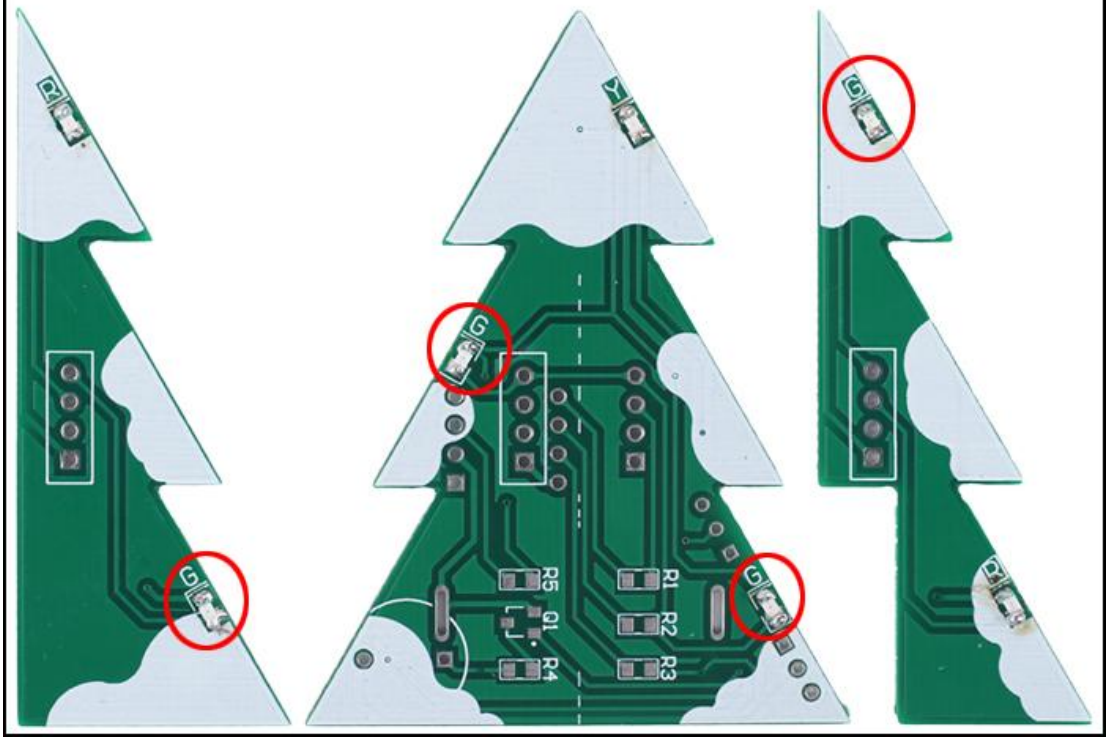
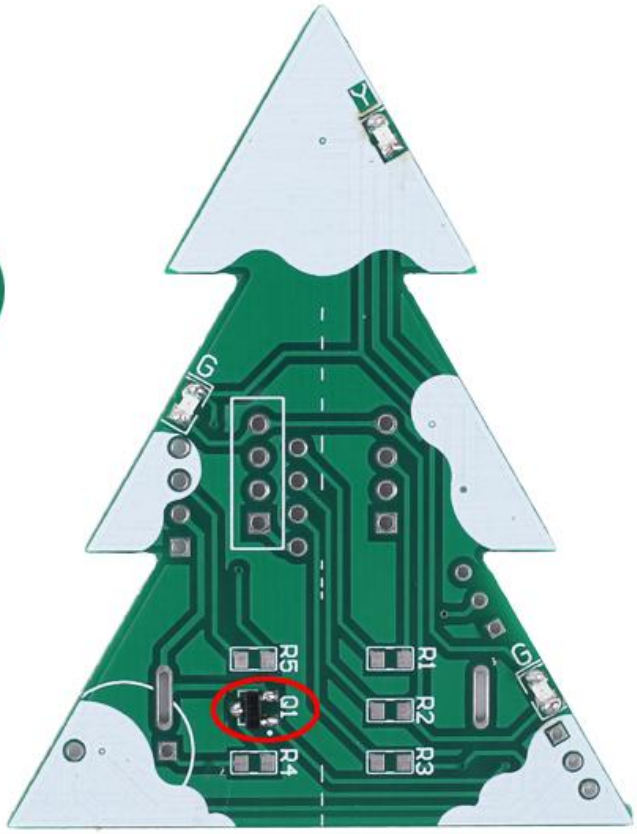


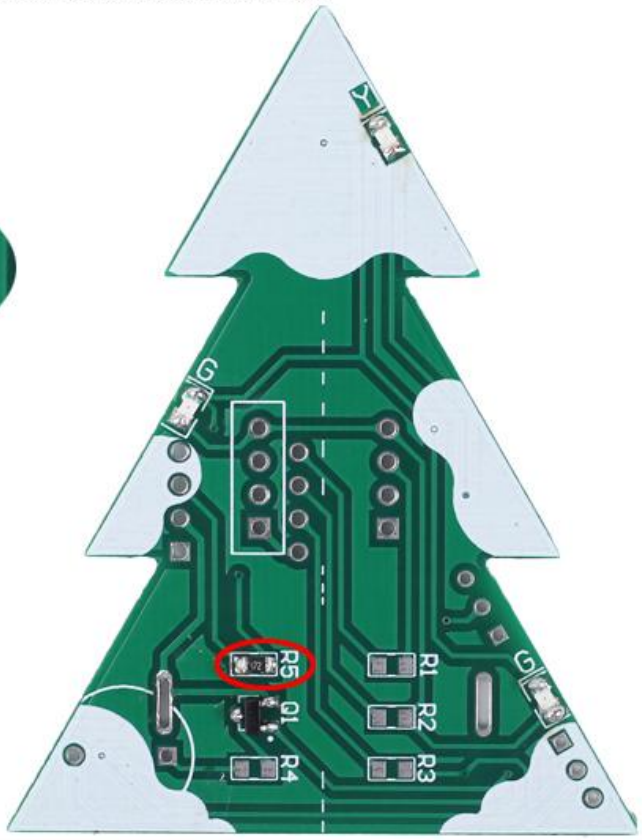
Step 4: Install the last 4pcs SMD 0805 LED on ' G ' pads on 3pcs PCB by the same methods.



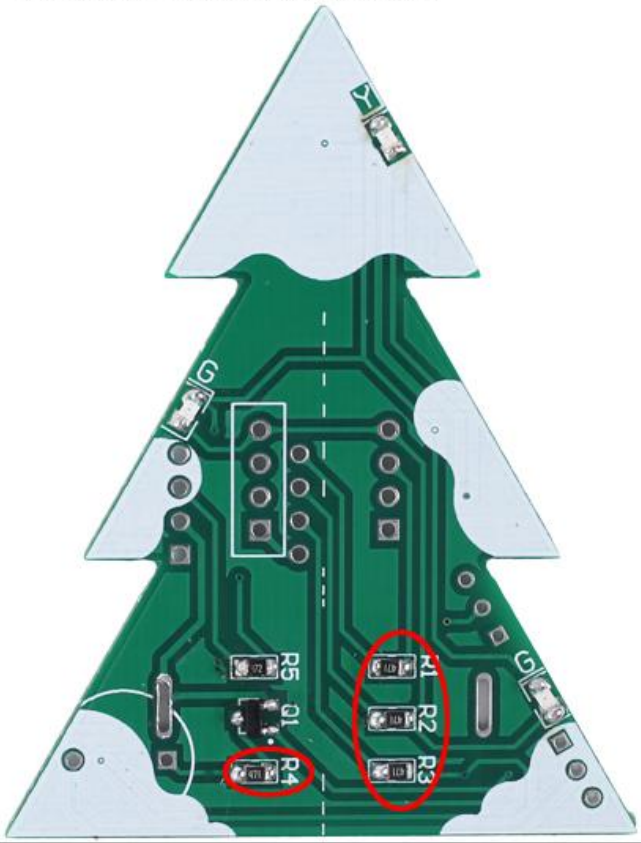
Step 5: Install 1pcs S9012 2T1 SOT-23 Transistor at Q1.



Step 6: Install 1pcs SMD 0805 472 4.7Kohm Resistor at R5.



Step 7: Install 4pcs SMD 0805 471 470ohm Resistor at R1,R2,R3,R4.

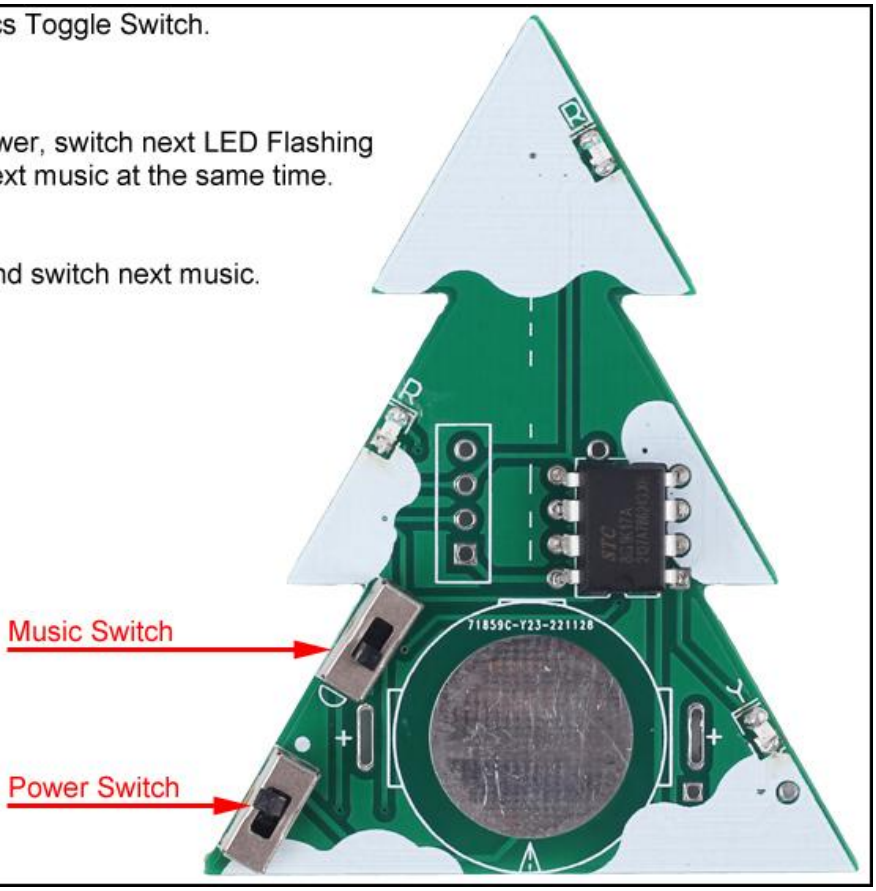


Step 8: Install 1pcs DIP-16 STC8G1K17 IC Controller.There is a dot mark on one end of the IC and there is a gap mark on PCB silk screen where the IC can place on.These two marks are corresponding to each other and are used to specify the installation direction of the IC.

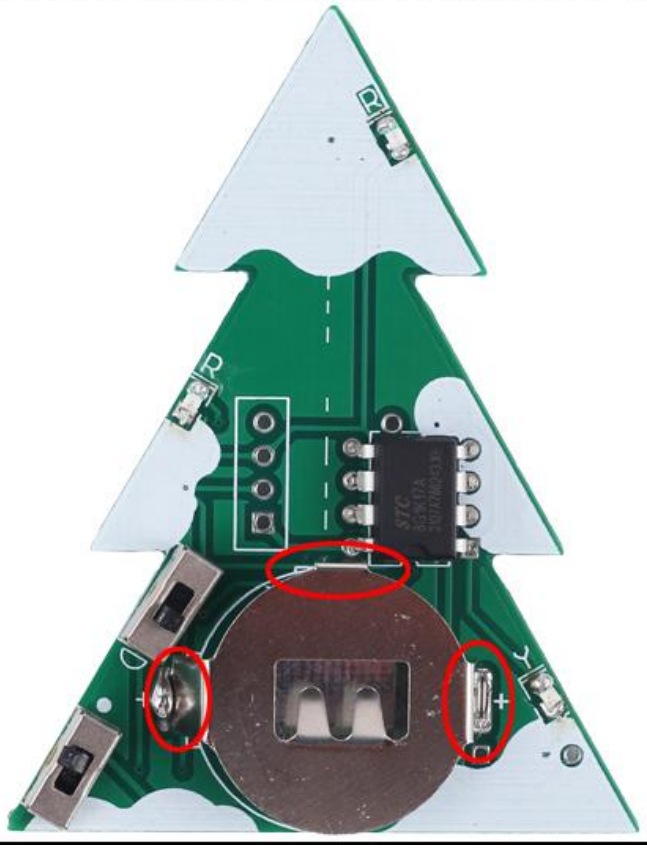
Step 9: Install 2pcs Toggle Switch.

Power Switch:
ON/OFF work power, switch next LED Flashing Status, playing next music at the same time.

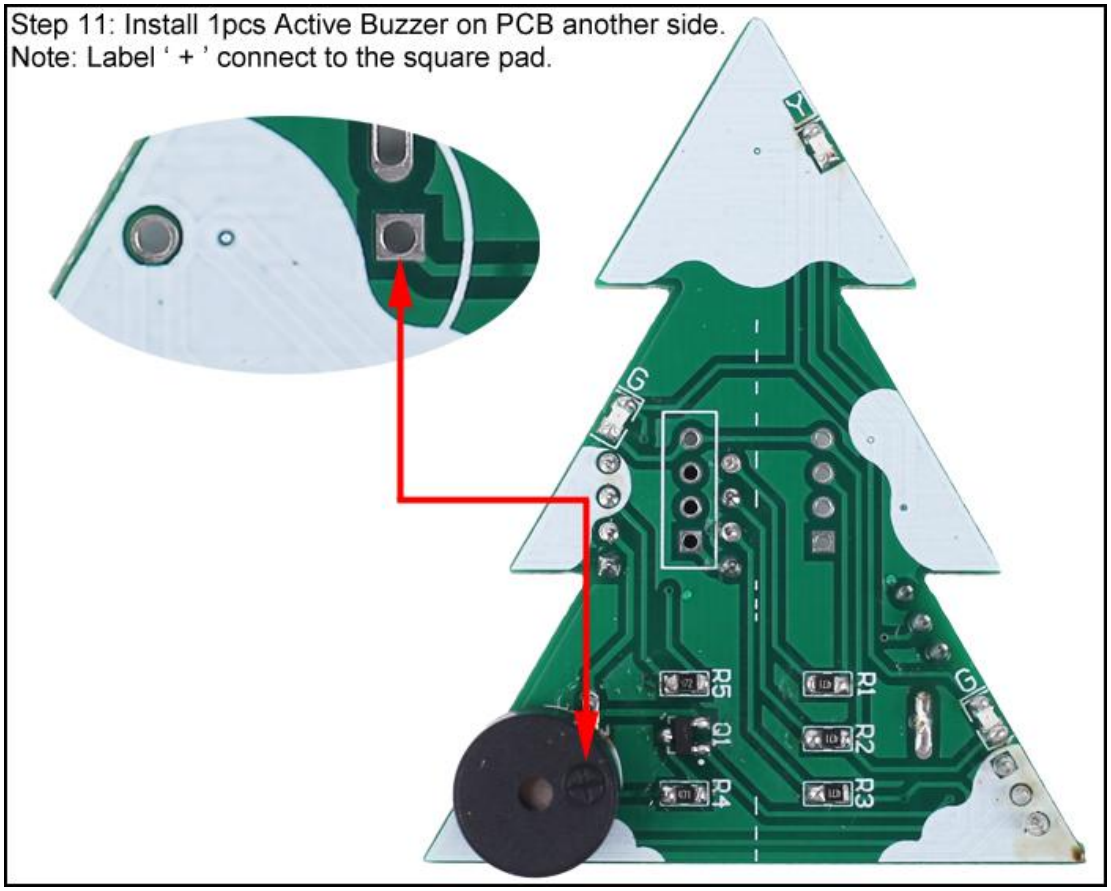
Music Switch:
ON/OFF music and switch next music.



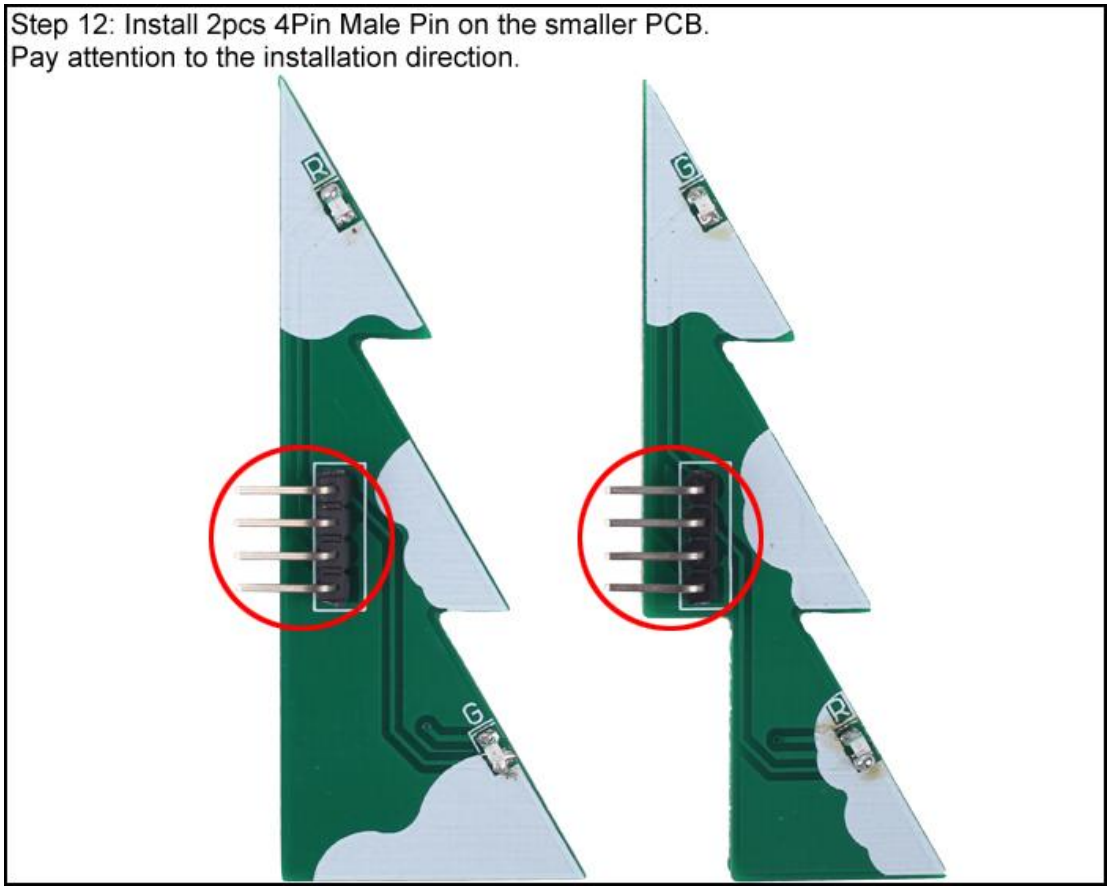
Step 10: Install 1pcs CR2032 Battery Socket. Pay attention to the installation direction.



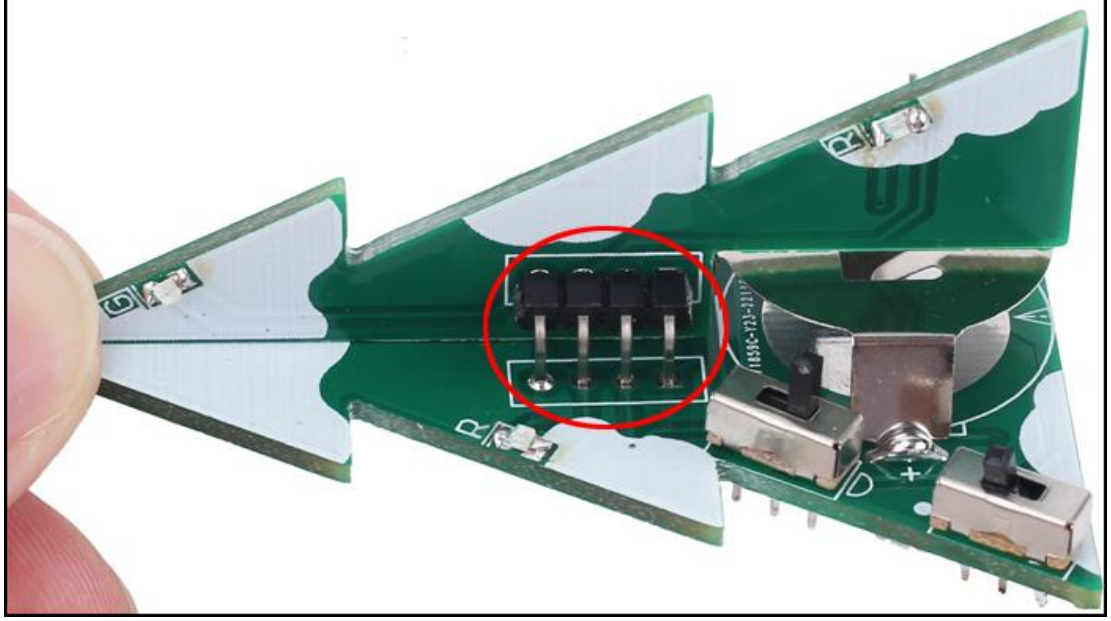
Step 11: Install 1pcs Active Buzzer on PCB another side.
Note: Label ' + ' connect to the square pad.



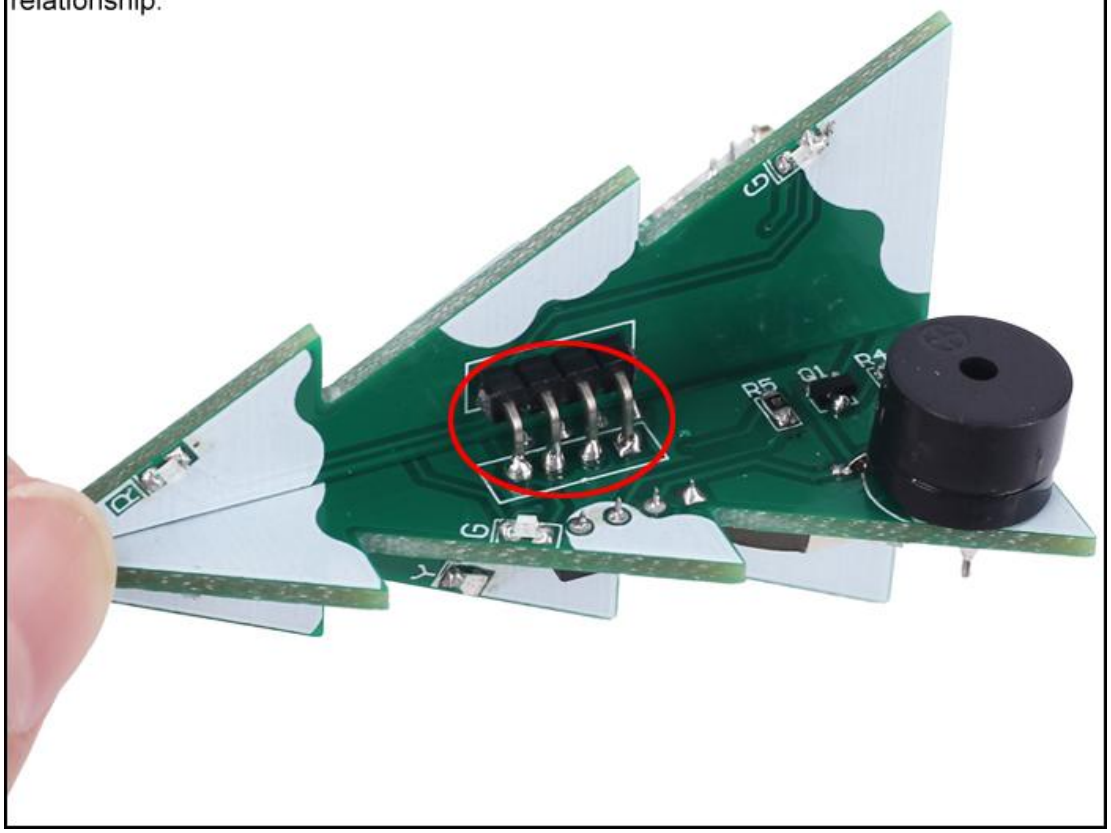
Step 12: Install 2pcs 4Pin Male Pin on the smaller PCB.
Pay attention to the installation direction.



Step 13: Fix one on the biggest PCB. Note that two PCBs are in a vertical relationship.



Step 14: Fix another on the biggest PCB. Note that the two PCBs are in a vertical relationship.



Step 15: Install 2pcs CR2032 or CR2025 batteries as shown. Note: The positive electrode of the battery contacts the metal spring of the battery holder.
It does not include batteries, users need to prepare their own batteries.