

LM386 Bluetooth Speaker Electronic Soldering DIY Kit

1. Introduction:

This is a DC 5V Bluetooth Speaker Electronic Soldering DIY Kit

1>.Usage Method

After power-on, mobile phone search Bluetooth name M18, connected to the Bluetooth can play music, you can also external 3.5 audio cable play music. Bluetooth indicator: Bluetooth is not connected, the indicator flash; Bluetooth connection, the indicator light long light; Bluetooth playback, the indicator flash slowly.

2>.Electronic Circuit: It consists of a simple circuit, making it perfect for beginners to learn soldering

skills and familiarize themselves with electronic components. This DIY kit is ideal for learning circuit

principles through experimental effects. 3>.DIY Hand Soldering: This kit includes various components that require users to install each one by hand. Assembling the kit not only exercises and improves soldering skills but also increases interest in

electronic technology. It's perfect for electronics hobbyists, beginners, and for school and home education purposes

2.Parameter:

1>.Item name:LM386 Bluetooth Speaker Electronic Soldering DIY Kit

2>.Work voltage:DC 5V

3>Audio input: Bluetooth or 3.5 audio cable input

4>Auxiliary function: level indication (spectrum function)

5>Horn: 5W 4 Ω

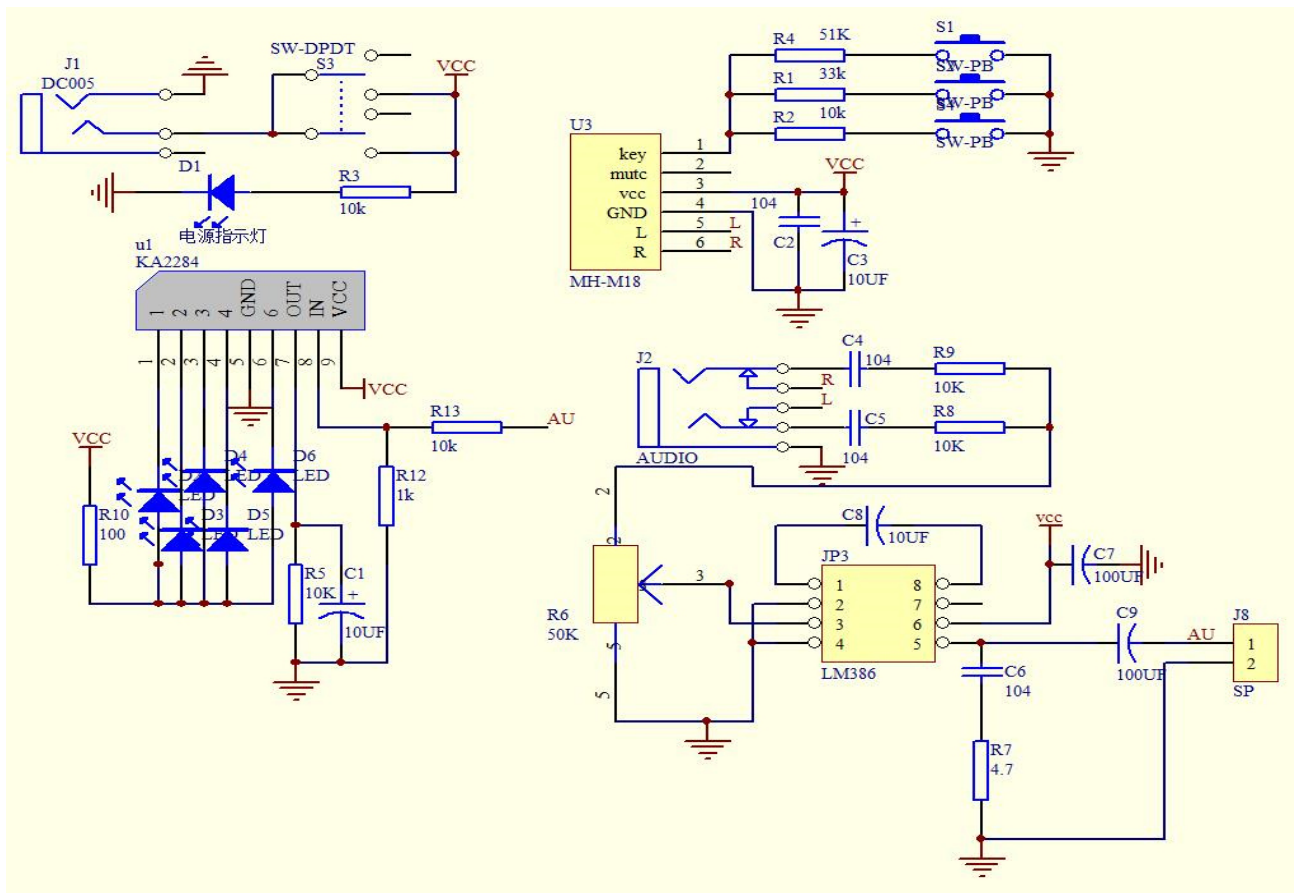
Size(Installed):: 102*61* 70mm

3.Component listing:

NO.	Component Name	PCB Marker	Parameter	QTY
1	Electrolytic Capacitor		100uf	2
2	Electrolytic Capacitor		10uf	2
3	DC-005 Power Socket	DC005		1
4	Monolithic capacitor		104	4
5	Metal Film Resistor		10K	6
6	Metal Film Resistor		4.7	1
7	Metal Film Resistor		100	1
8	Metal Film Resistor		1K	1

9	Metal Film Resistor		33K	1
10	Metal Film Resistor		51K	1
11	5mm Red LED	D1~D6		5
12	KA2284 LED Driver	KA2284	ZIP-9	1
13	50K dial Potentiometer	R6	50K	1
14	3.5 Audio Stand	AUDIO		1
15	IC Socket		DIP-8	1
16	LM386N		LM386	1
17	Side press button			3
18	A03 button switch			1
19	Wire			2
20	PCB			1
21	Acrylic Board			6
22	M3*8mm Screw			15
23	M3*6mm Screw			12
24	Nut			19
25	M3*10 double pass nylon column 3			4
26	4ohm 5W Speaker			1
27	Bluetooth			1
28	USB-DC005 Power Wire			1

4.Schematic Diagram:



5.Application:

- 1>.Training soldering 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 gift

6.Installation Tips:

- 1>.Users need to prepare soldering tools in advance.
- 2>.Please wait patiently for the installation to be completed.
- 3>.The package is DIY kit.It need finish install by user.
- 4>.Do not allow the soldering iron to touch electronic components for extended periods (over 1.0seconds), as it may damage the components.
- 5>.Pay attention to the polarity of the components.
- 6>.Short circuits are strictly prohibited.
- 7>.Install complex components first.
- 8>.Ensure the correct orientation and position of all components.
- 9>.Please wear anti-static gloves or anti-static wristbands when installing electronic components.
- 10>.We highly recommend reading the installation manual before starting the installation!!!

7.Installation Steps(Please be patient

- 1> Step 1: Install a 10k ohm metal film resistor at the marked 10K location on the board, totaling 6 locations.
- 2> Step 2: Install one 100 ohm metal film resistor at 100.
- 3> Step 3: Install one 4.7 ohm metal film resistor at 4.7.
- 4> Step 4: Install a 1K ohm metal film resistor at 1K.
- 5> Step 5: Install one 33K ohm metal film resistor at 33K.
- 6> Step 6: Install one 51K ohm metal film resistor at 51K.
- 7> Step 7: Install a Bluetooth module at MH-M18.

Step 1: Confirm the installation direction of Bluetooth, where the rectangular mesh on the PCB overlaps with the graphics on the Bluetooth module to locate the installation direction.

Step 2: Randomly select a solder pad at the Bluetooth module on the PCB, and then melt the solder onto the pad.

Step 3: Fix the Bluetooth module: Use a soldering iron to melt the tin on the soldering pad just now, and use the other hand to clamp the Bluetooth module with tweezers. Place and press it on MH-M18 to prevent movement. Carefully match and align each pad.

Step 4: Remove the soldering iron, melt the solder joint just now, and then remove the tweezers.

Step 5: Connect the other pads on the Bluetooth module to the pads on the PCB using tin and soldering iron.

8> Step 8: Install four 0.1uF 104 single stone capacitors at 104.

9> Step 9: Install 10uf25V Electrolytic capacitor at two 10uf positions. Pay attention to distinguishing between positive and negative electrodes. Long pin is positive

10>. Step 10: Install 100uf50V Electrolytic capacitor at two 100uf points. Pay attention to distinguishing between positive and negative electrodes. Long pin is positive

11> Step 11: Confirm and identify the installation direction of KA2284. Install one ZIP-9 KA2284 LED driver on KA2284.

12> Step 12: Install one DIP-8 IC socket at LM386. There is a gap mark on one end of the IC socket, and a gap mark on the PCB wire mesh that can accommodate the IC socket. These two markings correspond to each other and are used to specify installation

13> Step 13: Install one DC-005 power socket at DC005.

14> Step 14: Install one pink 3.5 audio socket at the AVDIO5 location.

15> Step 15: Install an A03 red power button at C3

16> Step 16: Install 3 side push buttons at the bottom.

17> Step 17: Identify the positive (anode) and negative (cathode) leads of the LED

The LED must be installed correctly, otherwise it cannot be turned on. The following are four methods:

17.1>Distinguish based on the length of LED leads. Long pin positive lead. The shorter pin is the negative (cathode) lead.

17.2>. Identifying the negative electrode (cathode) of an LED is to observe the plastic casing, where it can be seen that the negative electrode (anode) inside the plastic casing is much larger than the anode lead.

17.3>. Identify through the edges of the plastic casing. The negative (cathode) lead of the LED should be the pin closest to the plane on the plastic housing

17.4>. Use a 3V battery or multimeter for testing. If the LED can

light up after connecting to a 3V power supply, then connect to a 3V positive lead. (LED should not be directly powered by 3V in a short period of time: less than 0.5 seconds)

17.5>. It is the positive electrode (anode), with a white mark "+" pointing towards the PCB. It needs to be placed horizontally, with a distance of 5mm between the LED and PCB, and the pins need to be bent. Install 6 5mm RGB LEDs at D1-D6.

18> Step 18: Install one DIP-8 ICLM386N. There is a gap mark on one end of the IC, and a gap mark on the DIP-8 IC socket that can accommodate the IC. These two markings correspond to each other and are used to specify the installation direction of the IC.

19> Step 19: Connect the horn to the SP on the PCB through a wire. The speaker does not distinguish between positive and negative.

20> Step 20: Remove the protective film from the surface of the plastic shell.

21>Step 21: Install the speaker acrylic board with 3 M3 * 6mm screws and 3 M3 nuts.

22> Step 22: Fix the bottom acrylic board and PCB board onto the nylon column with 3pcs M3 * 6mm screws.

23> Step 23: Fix the base plate and horn surface with 1 M3 * 8mm screw and 1 M3 nut

24> Step 24: Assemble other acrylic surfaces with M3 * 8mm screws and nuts

Step 25: Connect the power, search for the Bluetooth module on your phone, and after successful connection, play music to enjoy the effect.

8. Install shown steps:

Step 1: Install a 10k ohm metal film resistor at the marked 10K location on the board, totaling 6 locations.

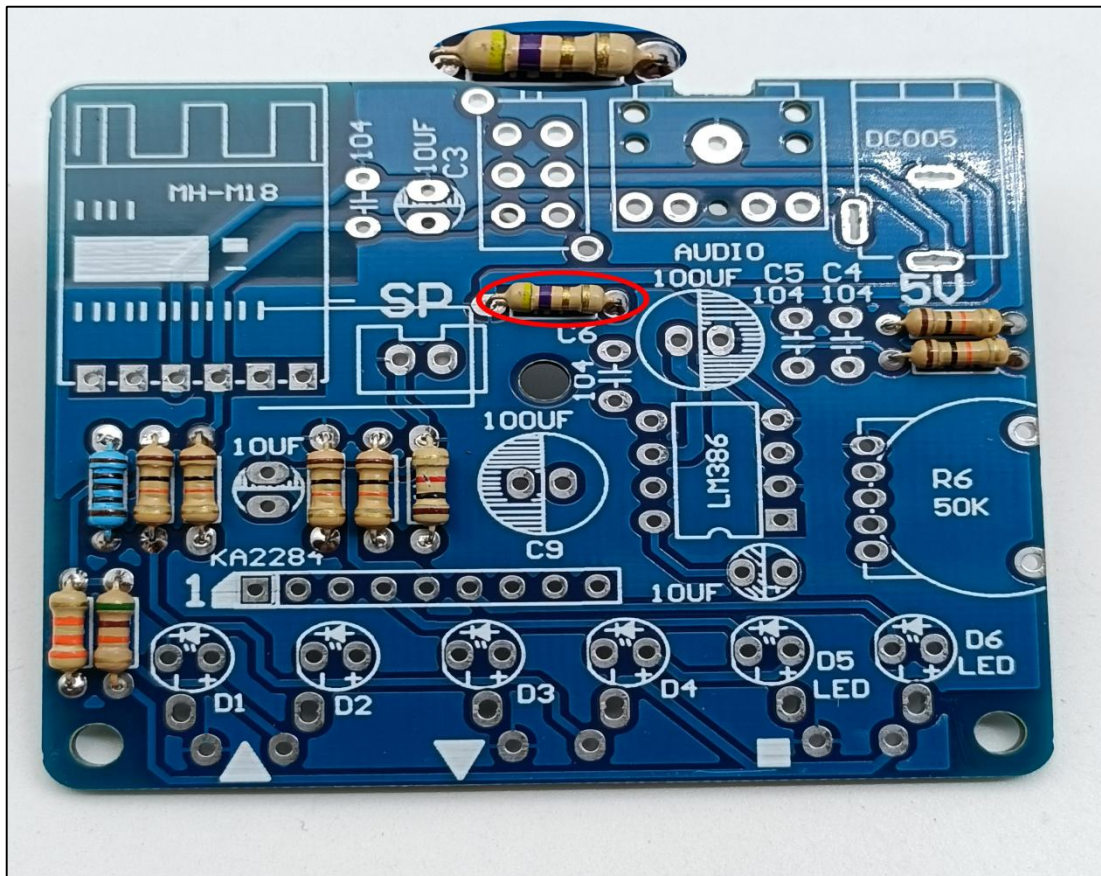
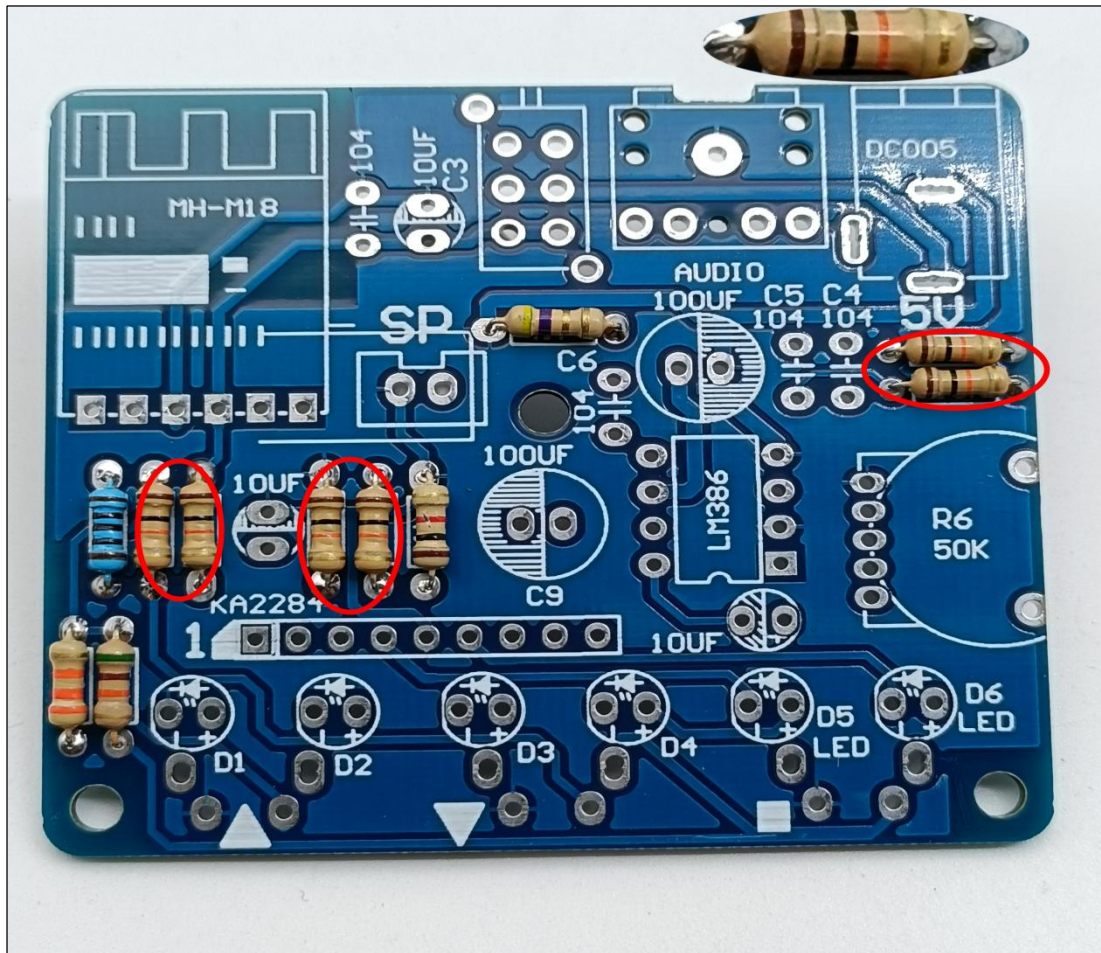
Step 2: Install one 100 ohm metal film resistor at 100.

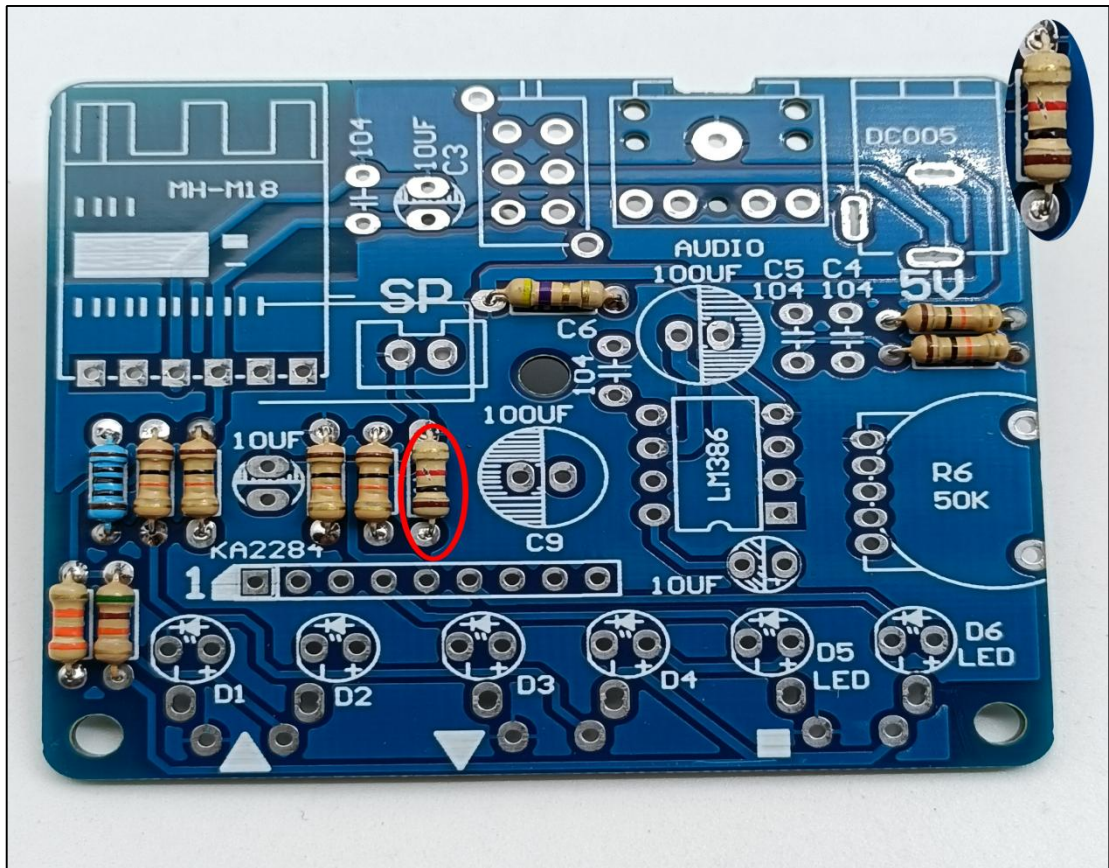
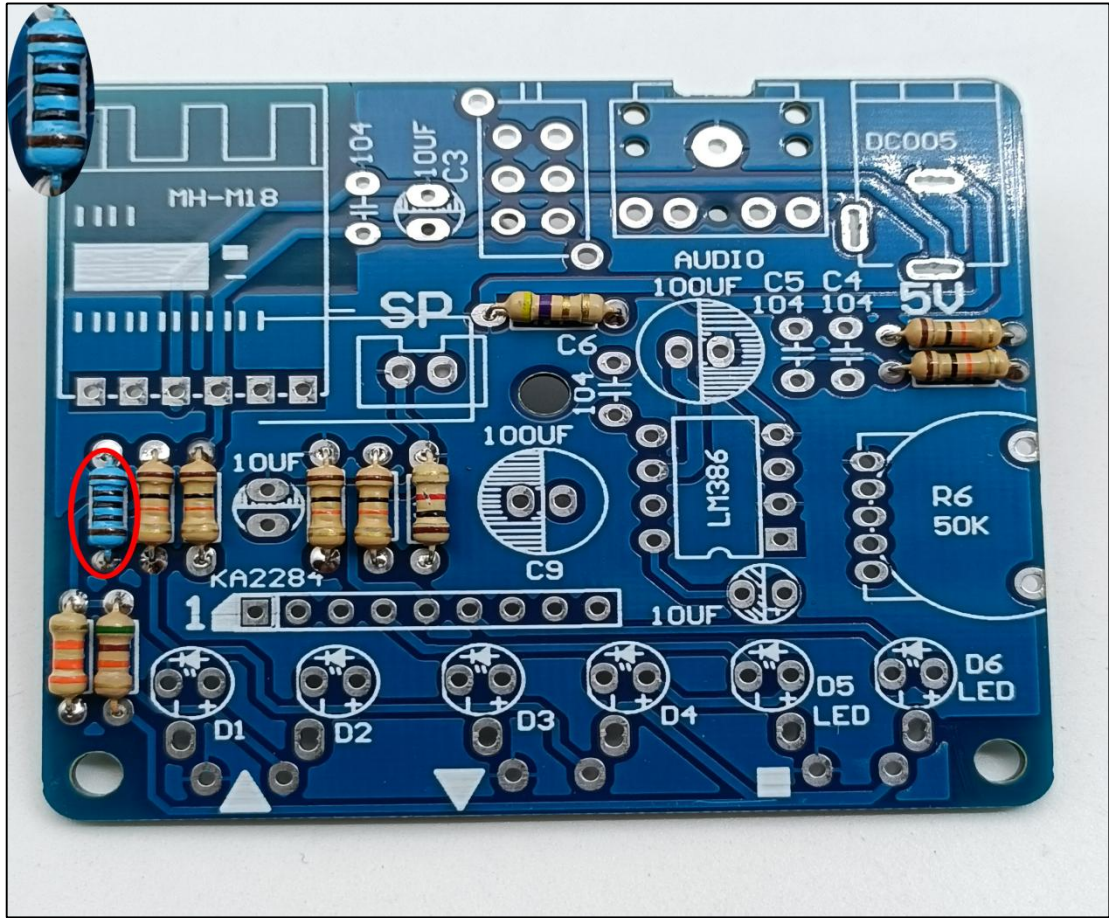
Step 3: Install one 4.7 ohm metal film resistor at 4.7.

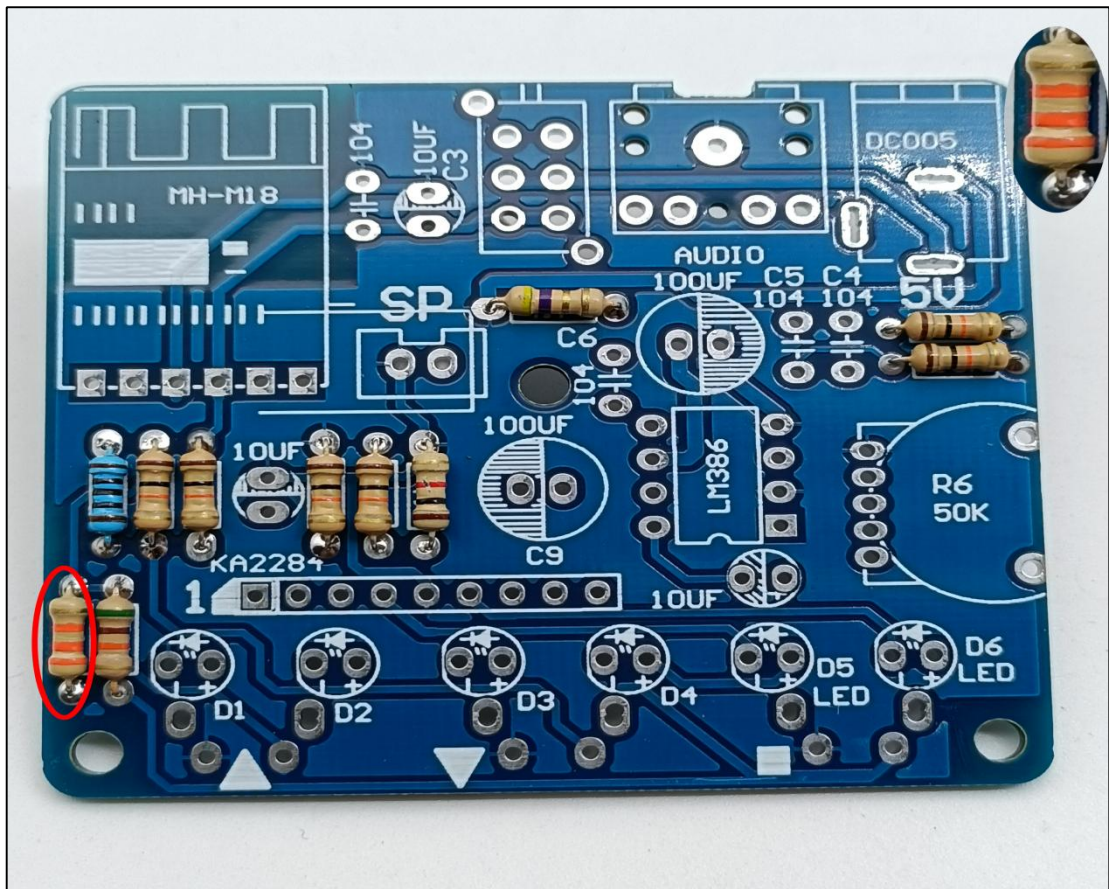
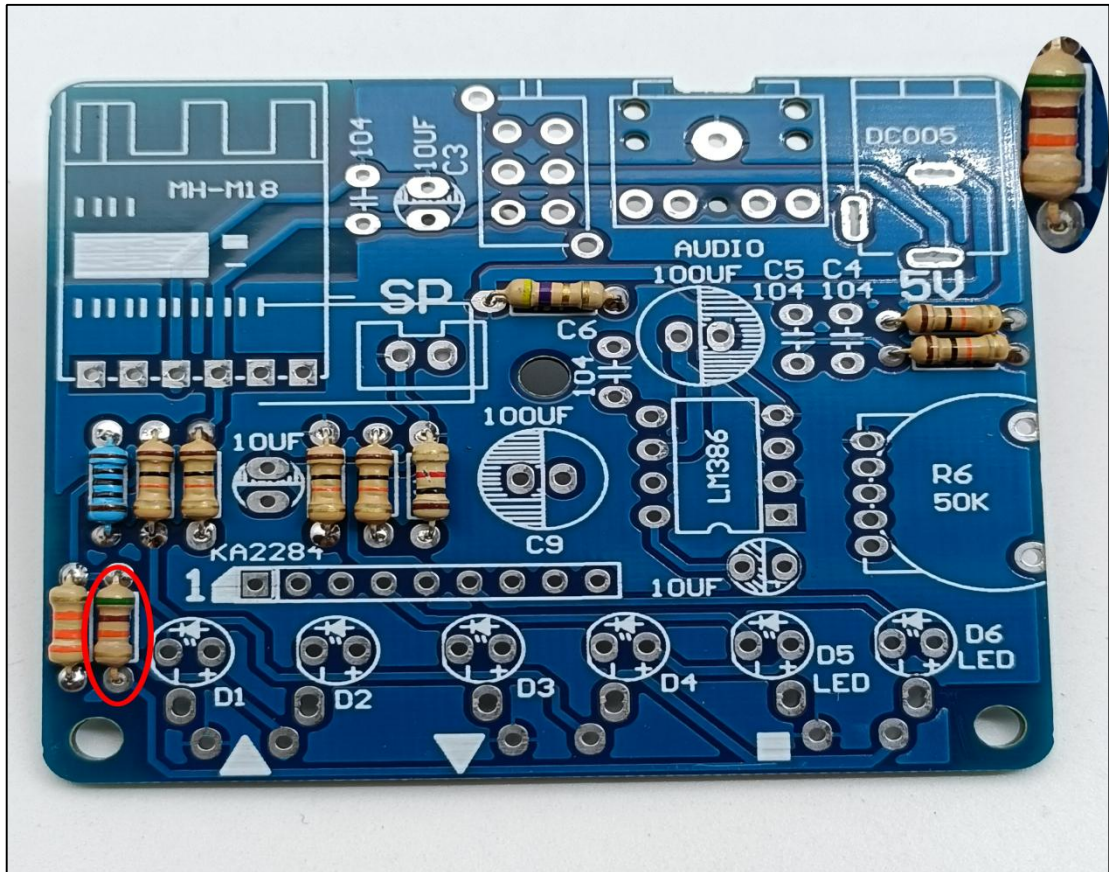
Step 4: Install a 1K ohm metal film resistor at 1K.

Step 5: Install one 33K ohm metal film resistor at 33K.

Step 6: Install one 51K ohm metal film resistor at 51K.







7> Step 7: Install a Bluetooth module at MH-M18.

Step 1: Confirm the installation direction of Bluetooth, where the rectangular mesh on the PCB overlaps with the graphics on the Bluetooth module to locate the installation direction.

Step 2: Randomly select a solder pad at the Bluetooth module on the PCB, and then melt the solder onto the pad.

Step 3: Fix the Bluetooth module: Use a soldering iron to melt the tin on the soldering pad just now, and use the other hand to clamp the Bluetooth module with tweezers. Place and press it on MH-M18 to prevent movement. Carefully match and align each pad.

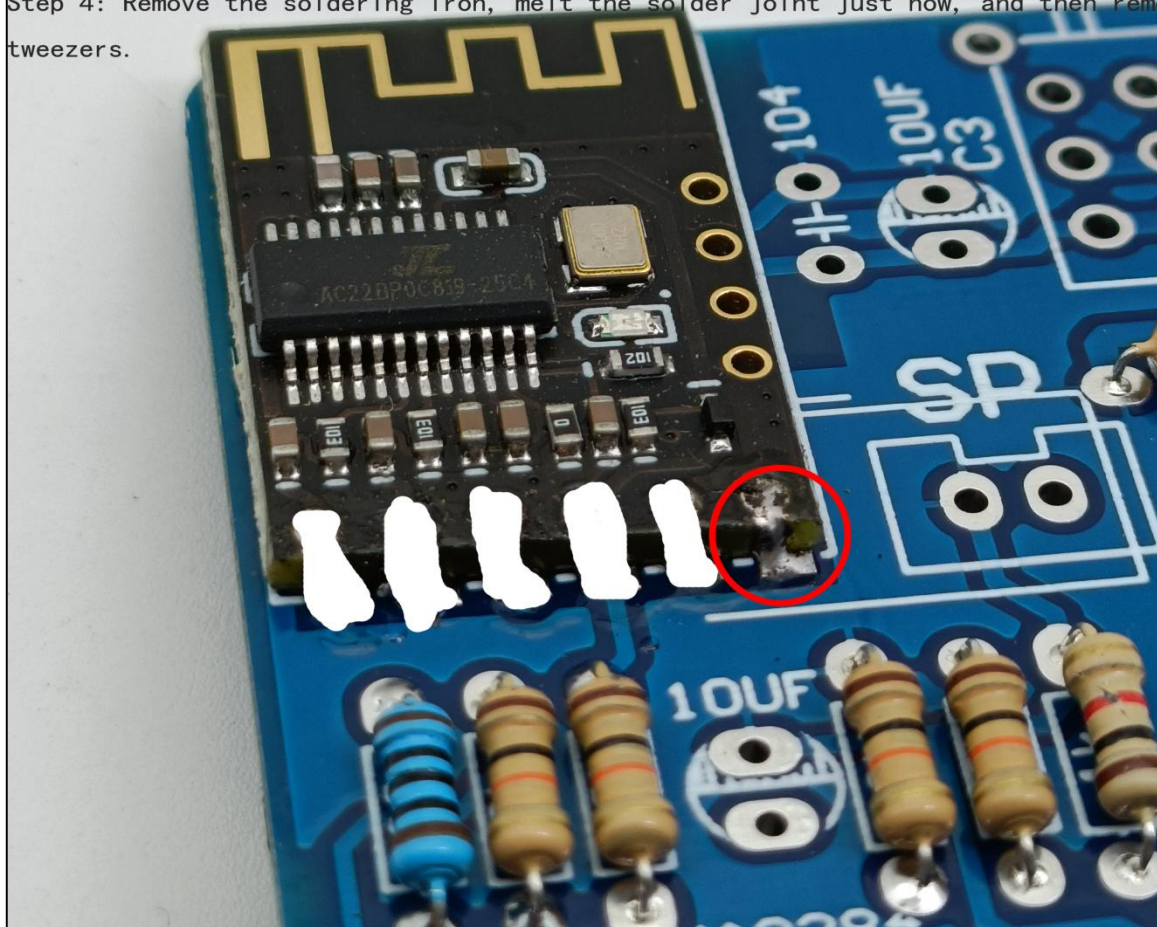
Step 4: Remove the soldering iron, melt the solder joint just now, and then remove the tweezers.

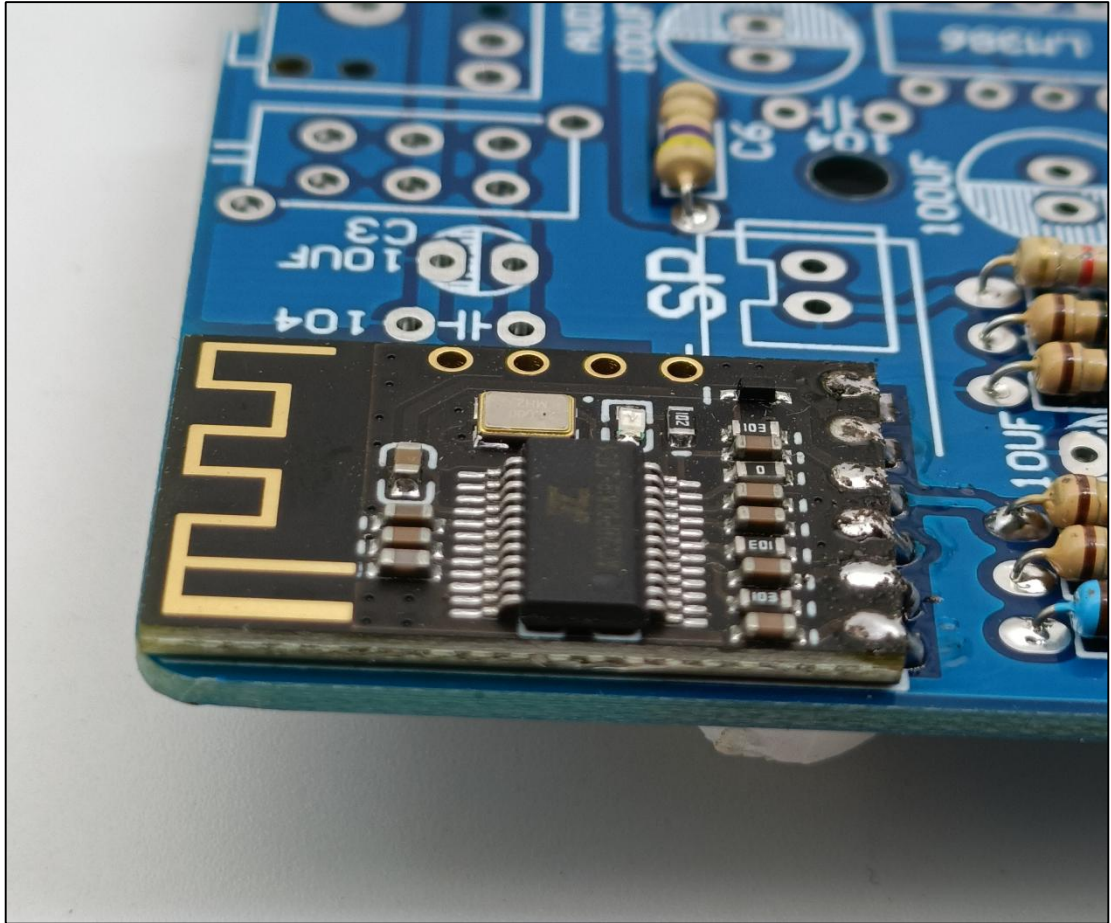
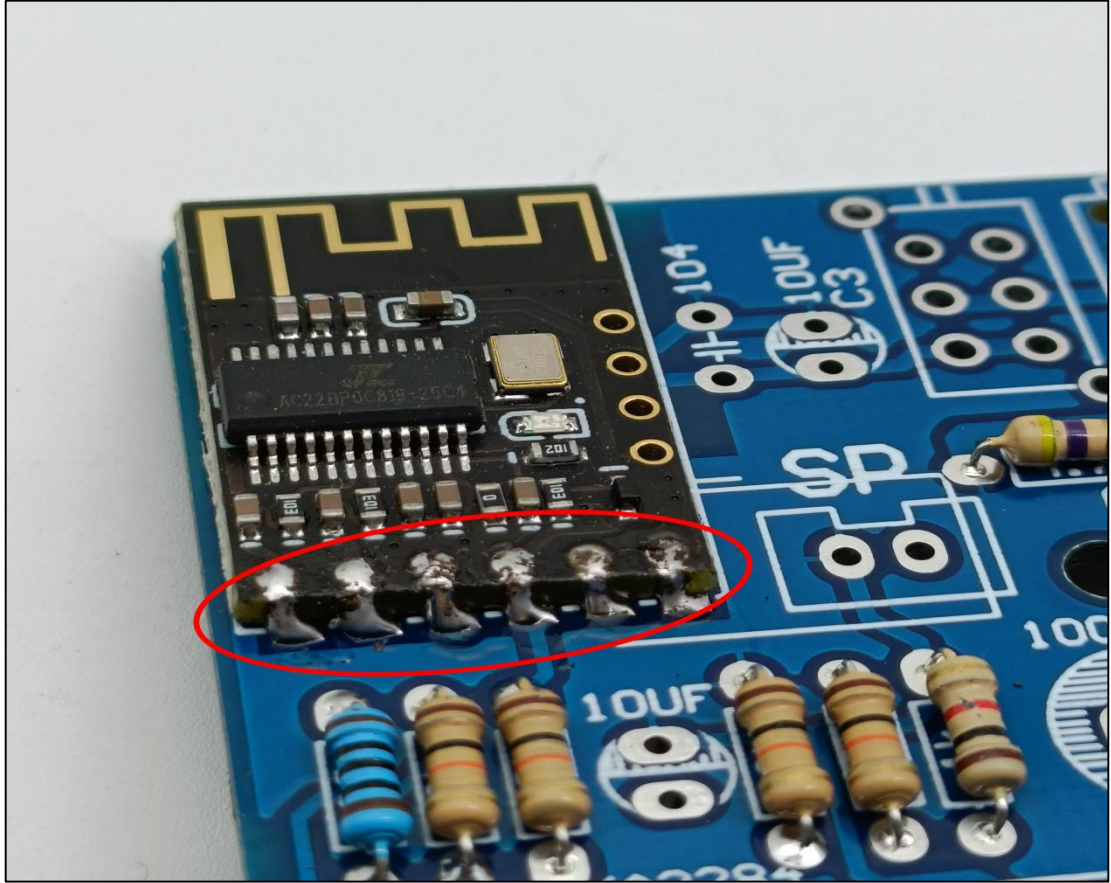
Step 5: Connect the other pads on the Bluetooth module to the pads on the PCB using tin and soldering iron.

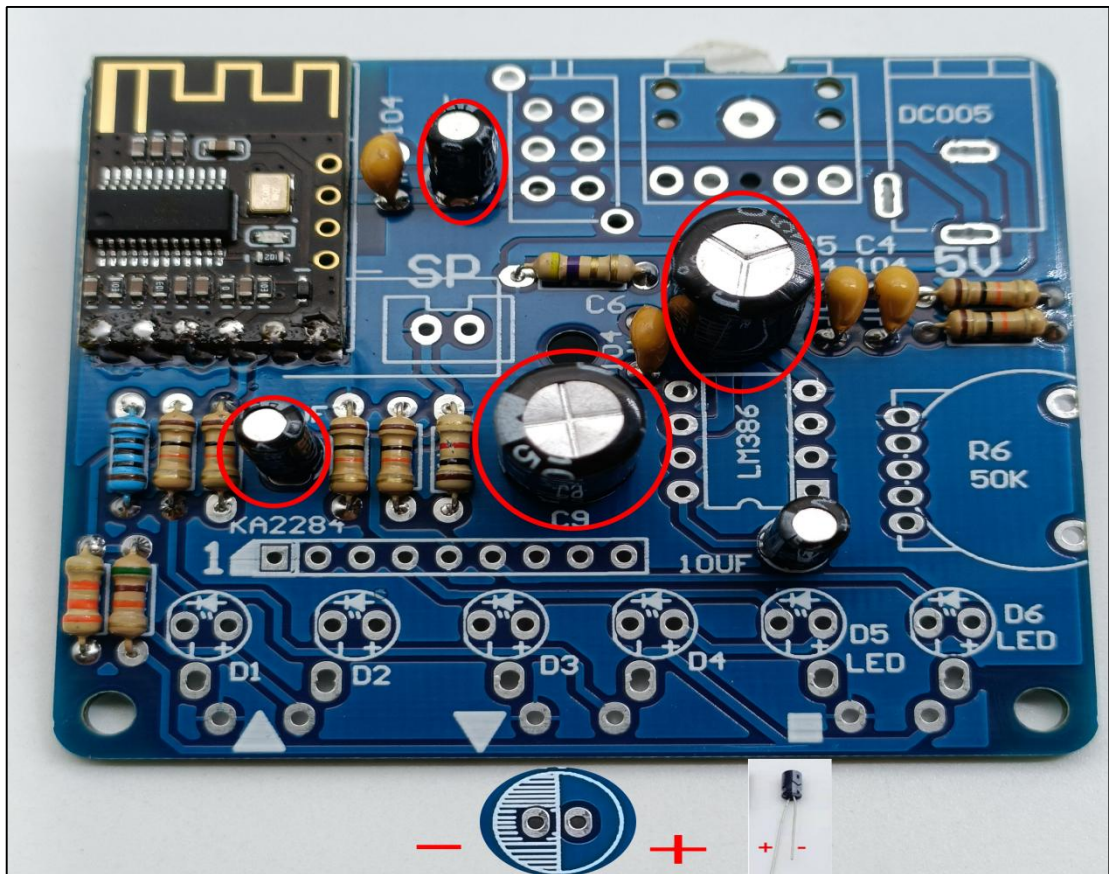
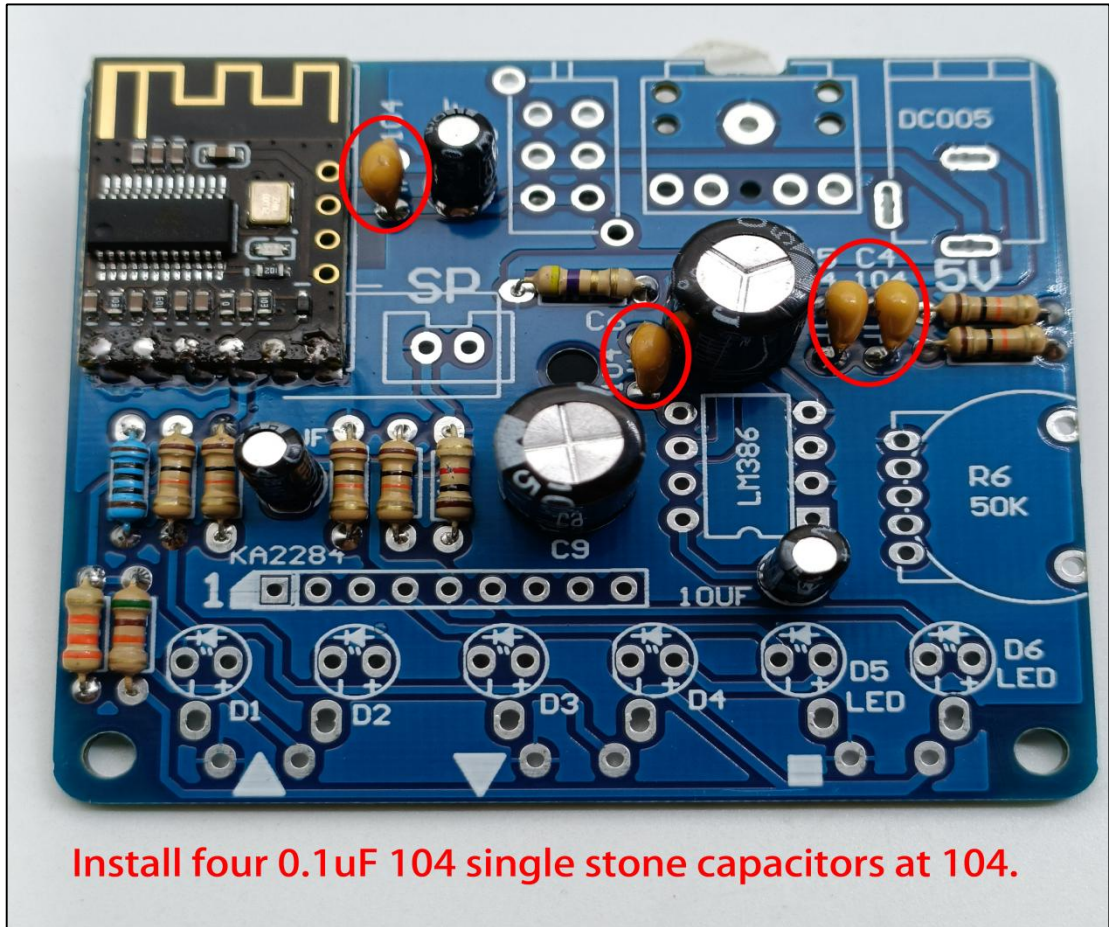
Step 2: Randomly select a solder pad at the Bluetooth module on the PCB, and then melt the solder onto the pad.

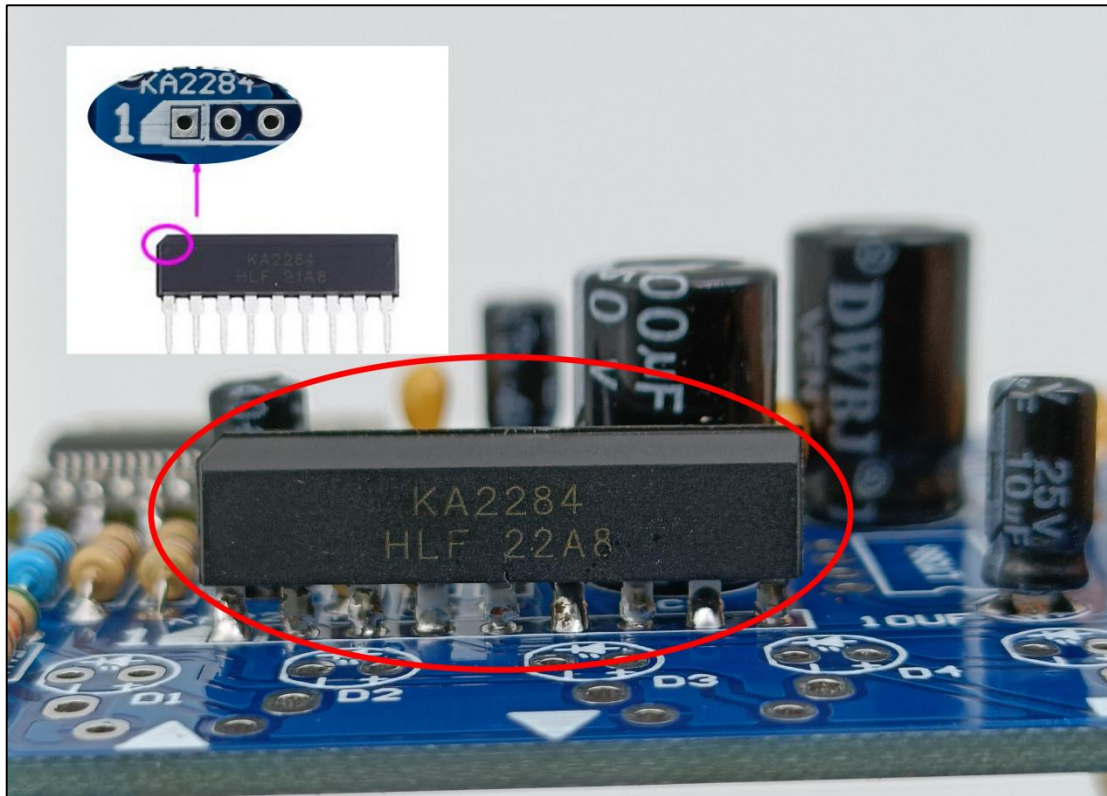
Step 3: Fix the Bluetooth module: Use a soldering iron to melt the tin on the solder pad just now, and use the other hand to clamp the Bluetooth module with tweezers and press it on MH-M18 to prevent movement. Carefully match and align each pad.

Step 4: Remove the soldering iron, melt the solder joint just now, and then remove the tweezers.

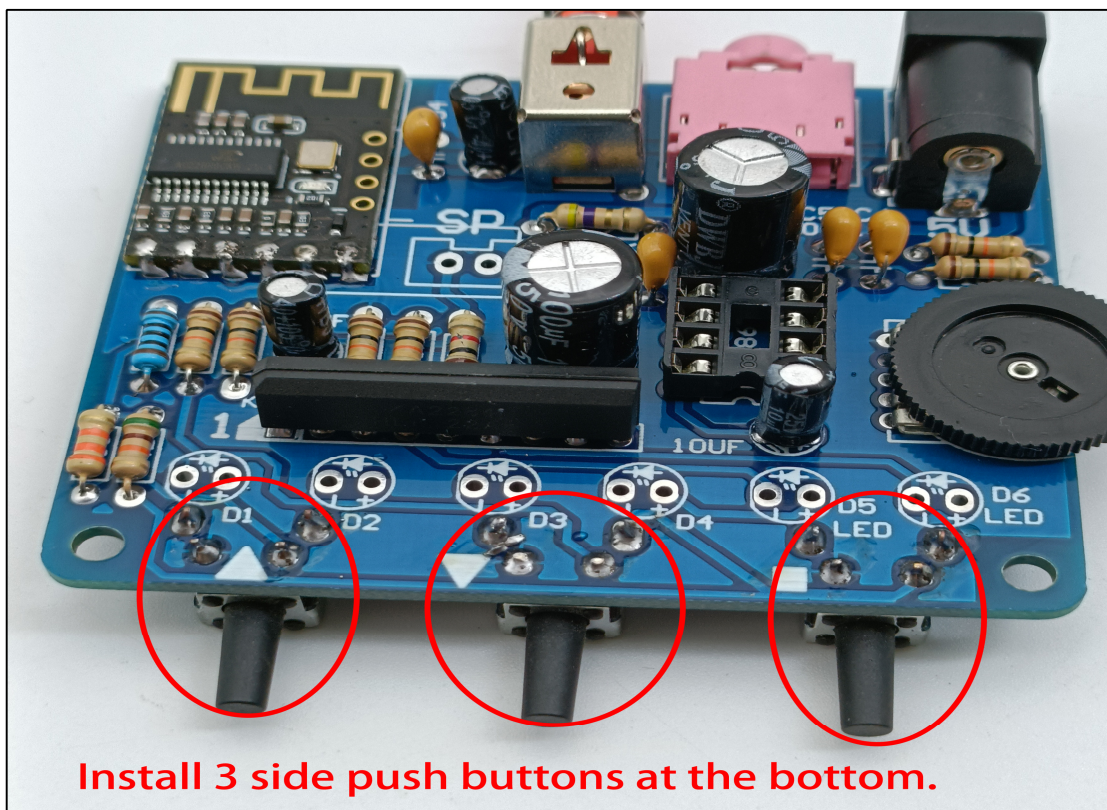






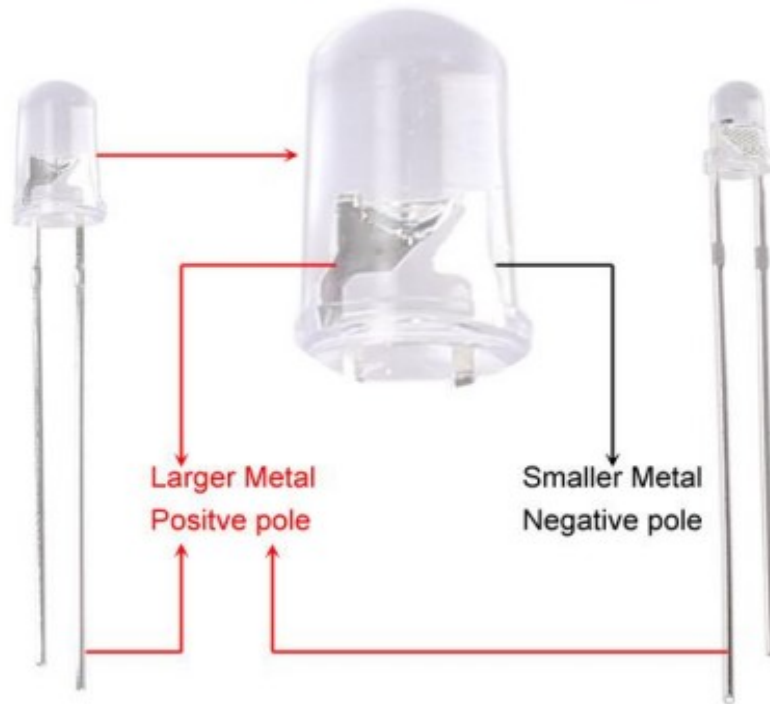


**Confirm and identify the installation direction of KA2284.
Install one ZIP-9 KA2284 LED driver on KA2284.**

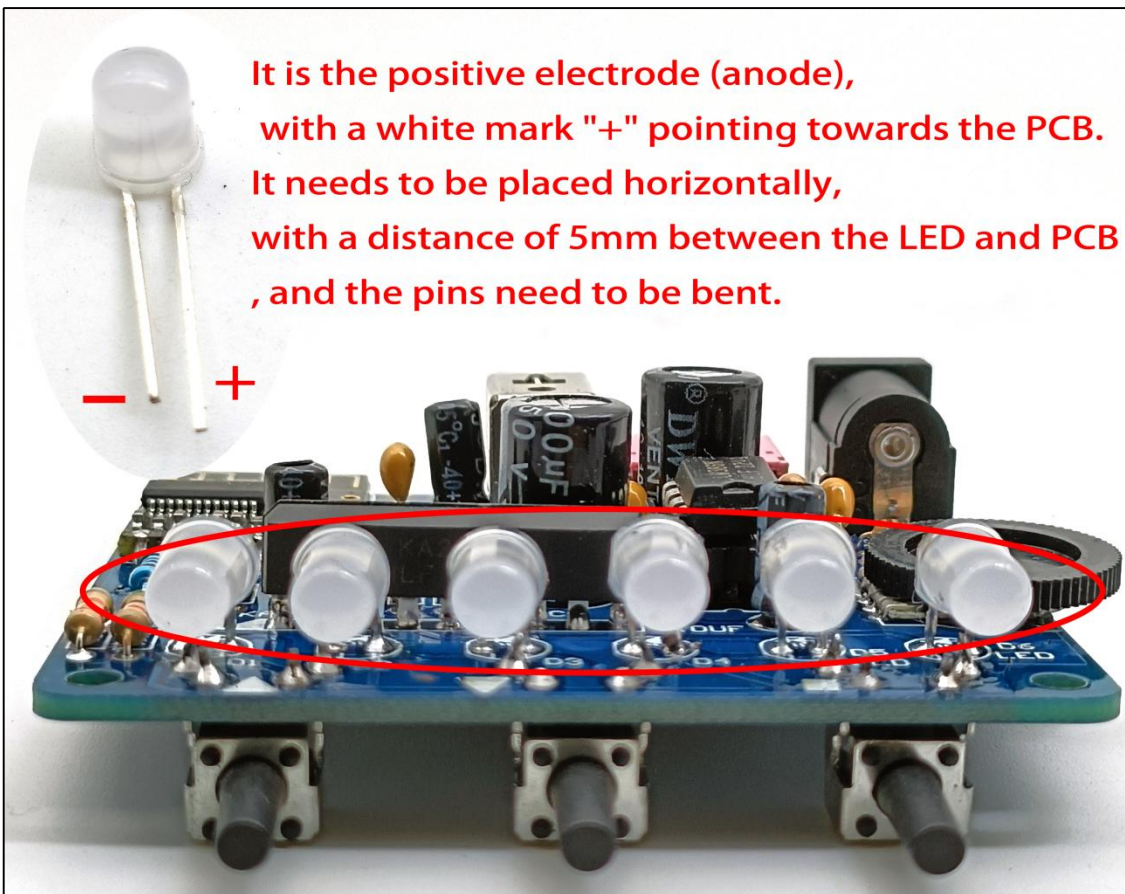


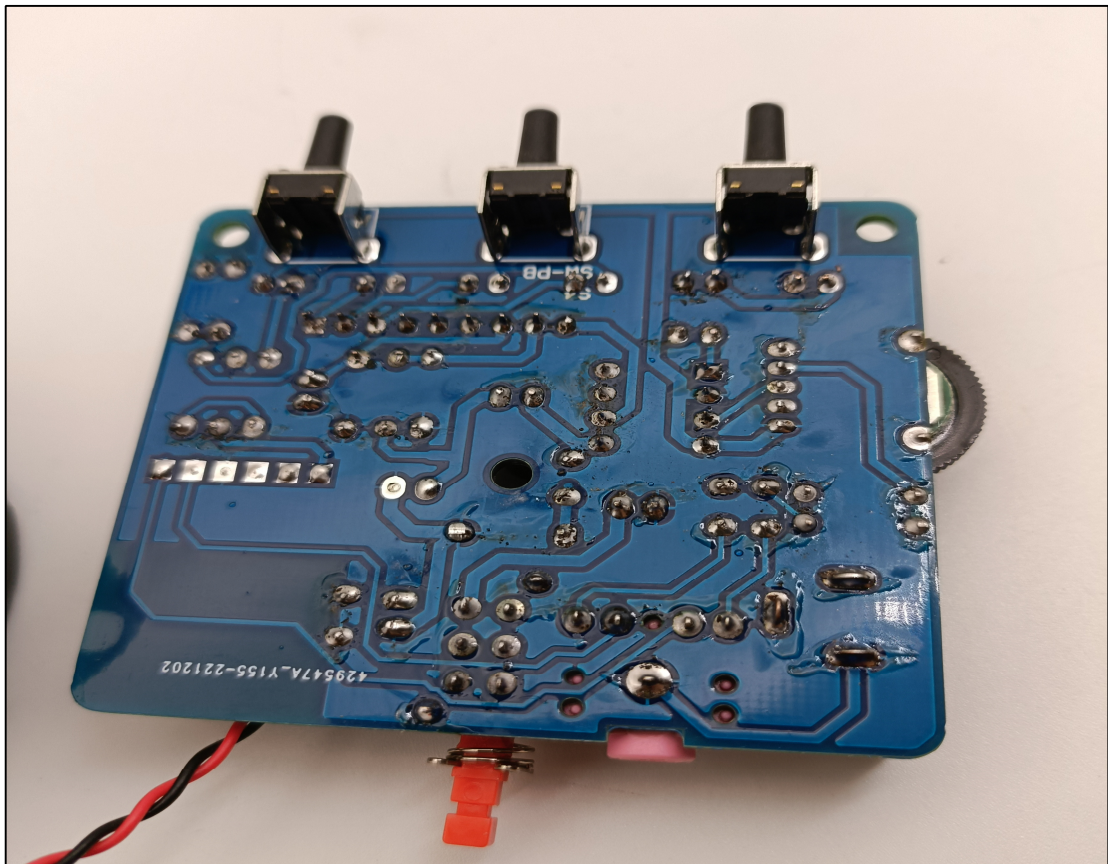
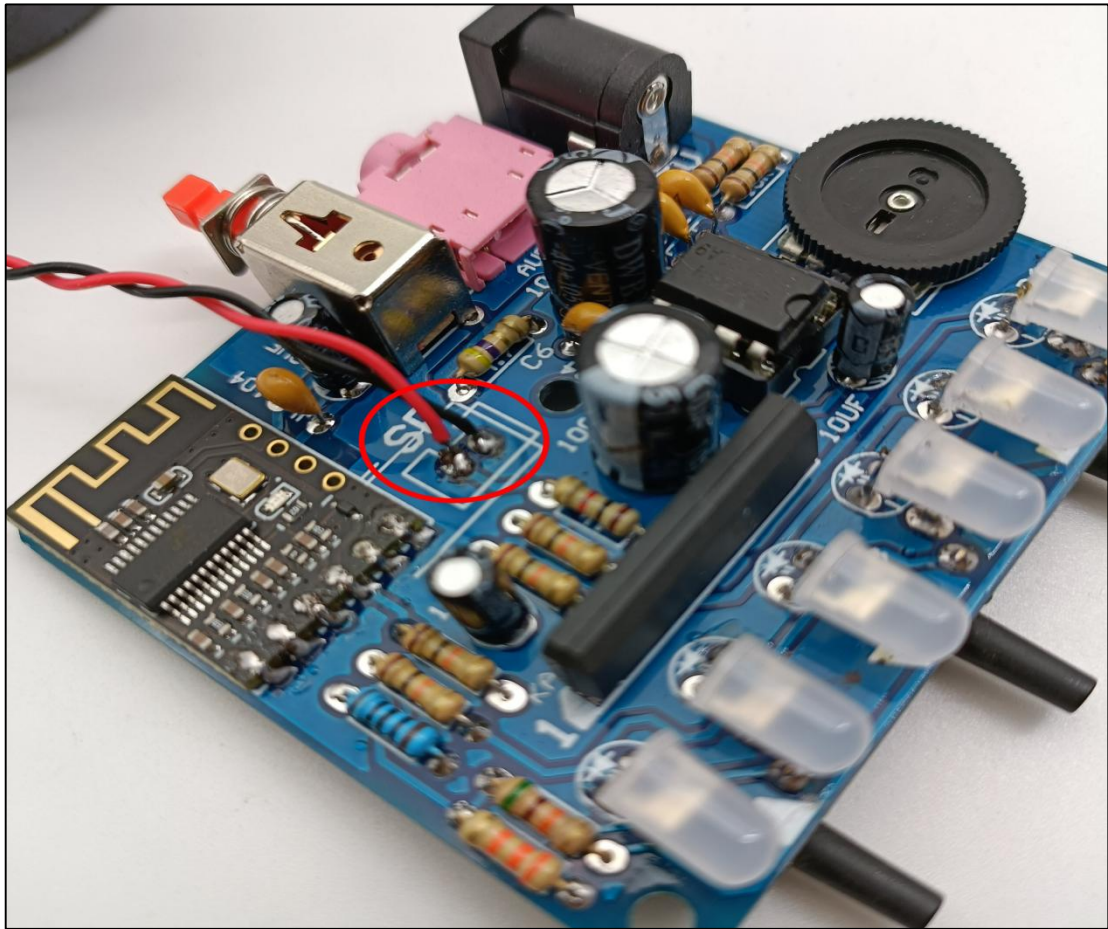
Install 3 side push buttons at the bottom.

Step 3: Identification LED. The Longer pin is positive pole.



It is the positive electrode (anode), with a white mark "+" pointing towards the PCB. It needs to be placed horizontally, with a distance of 5mm between the LED and PCB, and the pins need to be bent.

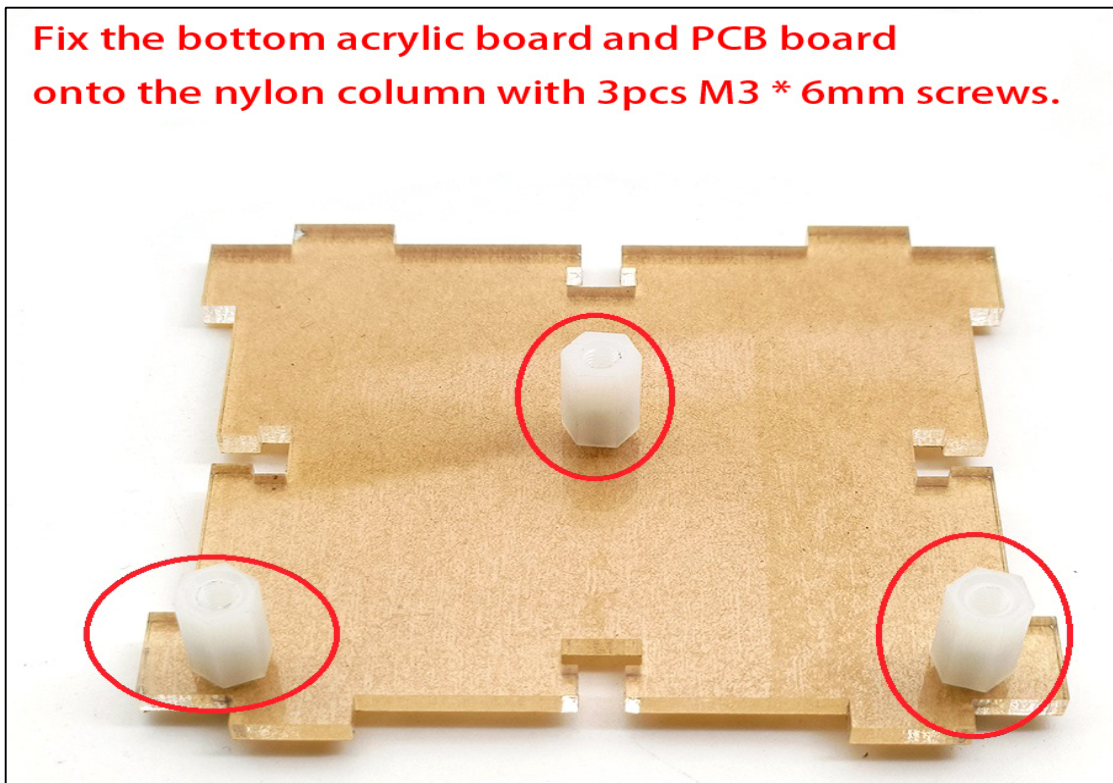




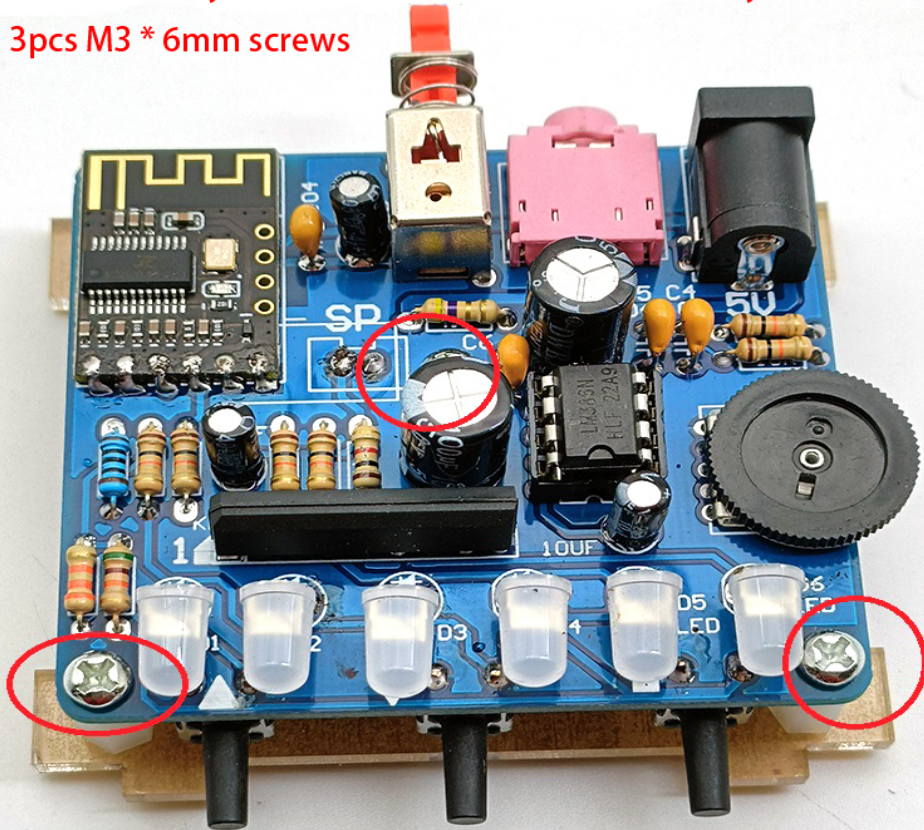
Before installing the casing, please test whether the function is implemented.



Fix the bottom acrylic board and PCB board onto the nylon column with 3pcs M3 * 6mm screws.



Fix the bottom acrylic board and PCB board onto the nylon column with 3pcs M3 * 6mm screws



Install the speaker acrylic board with 3 M3 * 6mm screws and 3 M3 nuts.





**If the pause sign is not on the right,
then the horn is installed backwards**

Fix the base plate and horn surface with 1 M3 * 8mm screw and 1 M3 nut

