Funny Game Machine Electronic Soldering DIY Kit

1.Introduction:

It is a Funny Game Machine Electronic Soldering DIY Kit that users can install it by themselves to play games. It contains 4 games: Tetris/Snake/Plane/Racing. Users can not only learn circuits and practice welding skills, but also enjoy the fun of the game.

It is a very interesting DIY electronic product which enables users to understand the circuit more clearly and learn welding skills.

2.Feature:

1>.Built-in 5 classic games
2>.Built-in game background music
3>.Adjustable display brightness
4>.Real-time game scores
5>.Perfect simple circuit
6>.DIY hand soldering

3.Parameter:

1>.Product Name:Funny Game Machine Electronic Soldering DIY Kit
3>.Work Voltage:DC 5V
4>.Power Type:3.5mm Power Socket
5>.Color:Red
6>.Work Temperature:-40℃~85℃
7>.Work Humidity:5%~85%RH
8>.Size(Installed):135*95*20mm

4.Function:

1>.Switch 4kinds games: Tetris/Snake/Plane/Racing: Press left/right button to switch games and press OK button to enter selected game.

2>.Adjust display brightness: Press left/right button to switch selected brightness adjustment and than press UP/DOWN button to change display brightness.

3>.ON/OFF Music: Press left/right button to switch selected music adjustment and than press OK button to turn ON/OFF music.

5.Component Listing:

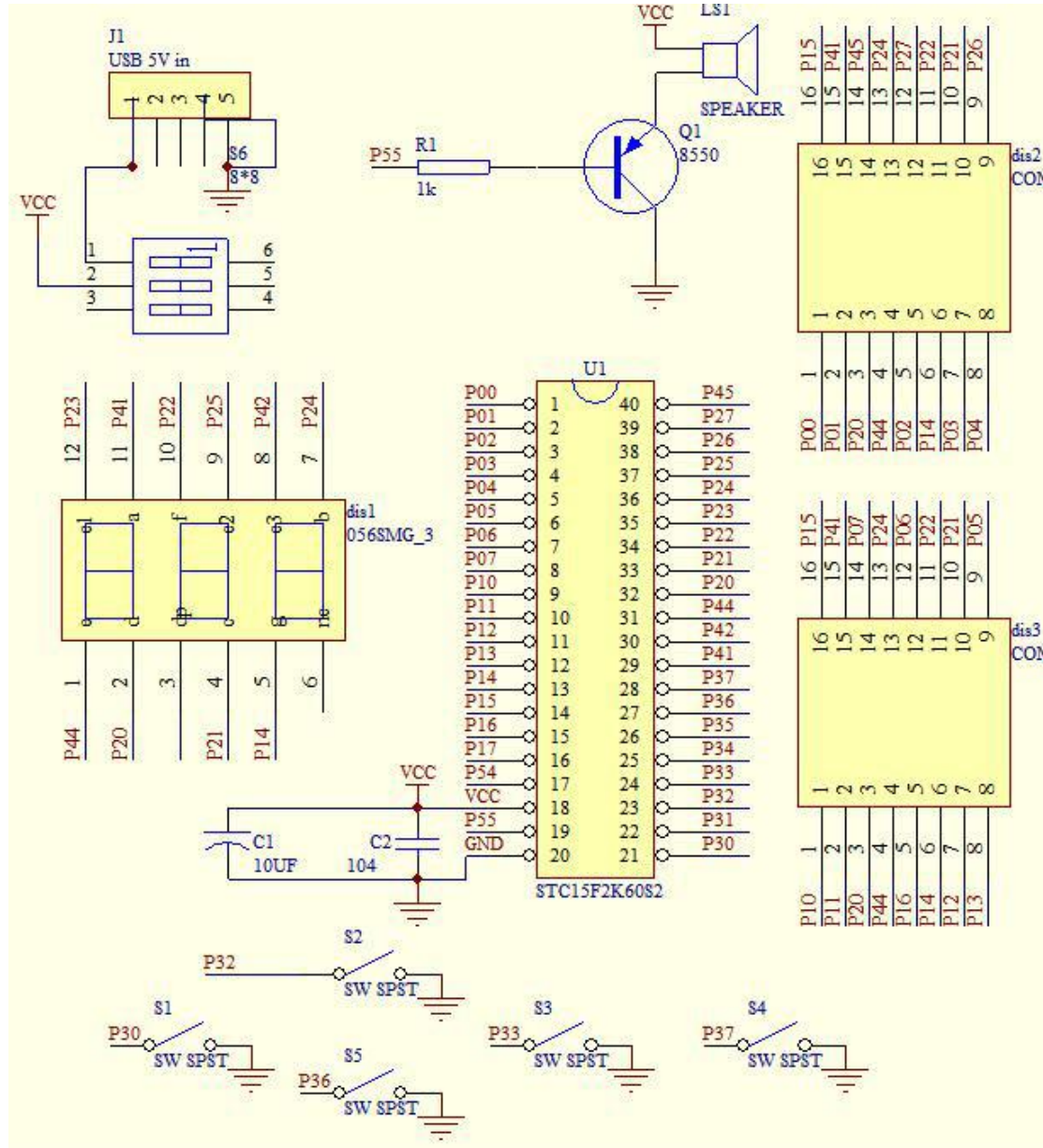| NO.	Component Name	PCB Marker	Parameter	QTY
1	Metal Film Resistor	R1	1Kohm	1
2	Buzzer	LS1		1
3	S8550 Transistor	Q1	TO-92	1
4	Toggle Switch	S6		1
5	Power Socket	DC5.0		1
6	STC15W2K48S2	U1	DIP-40	1
7	IC Socket	U1	DIP-40	1
8	8*8 Common Anode Dot Matrix	dis2,dis3	Red	2
9	0.56" 3Bit Digital Tube Common Cathode	dis1	Red	1
10	Black Button	S1-S5	12*12*5mm	5
11	Button Cap	S1-S5	Blue	5
12	Monolithic Capacitor	C2,C4	0.1uF 104	1
13	Electrolytic Capacitor	C1	10uF	1
14	Acrylic Board			1
15	Nylon Column		M3*10mm	4
16	Nylon Screw		M3*6mm	8
17	PCB		110*80*1.6mm	1

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

6.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

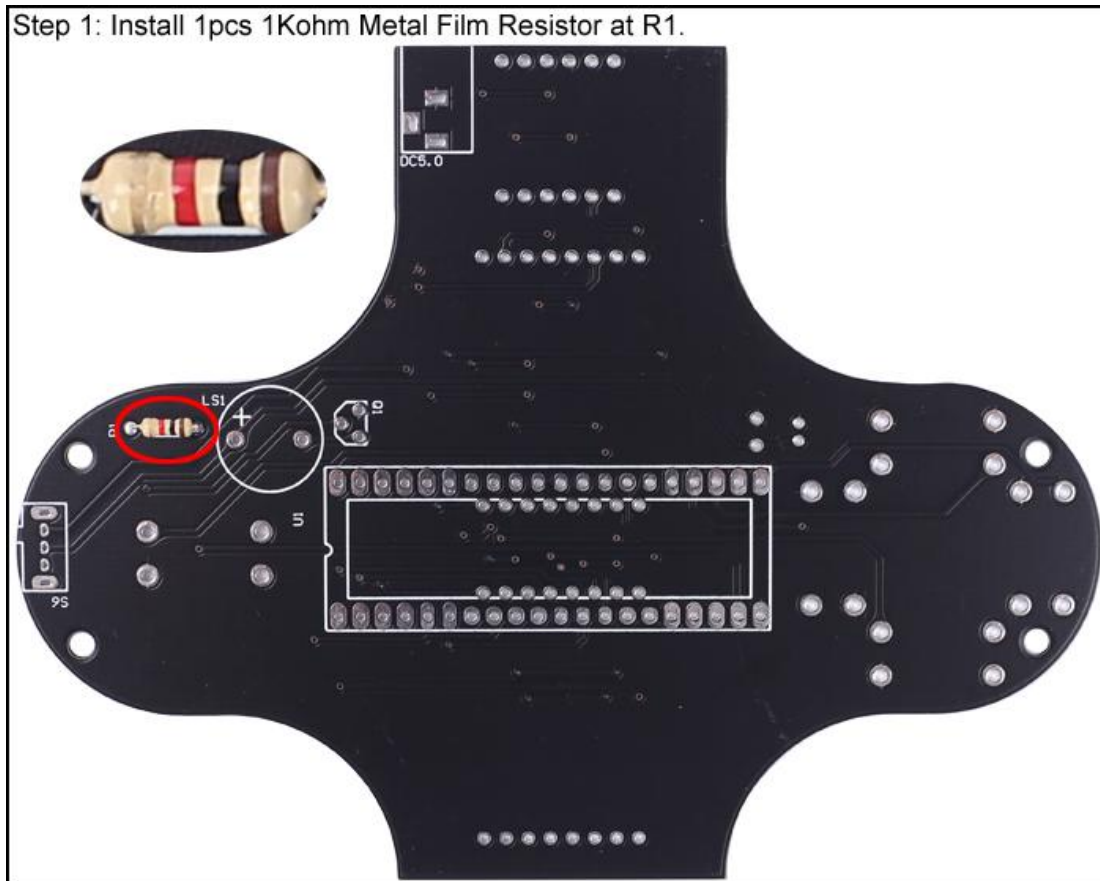# 7.Schematic:

8.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>.Philips screwdriver
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!!!

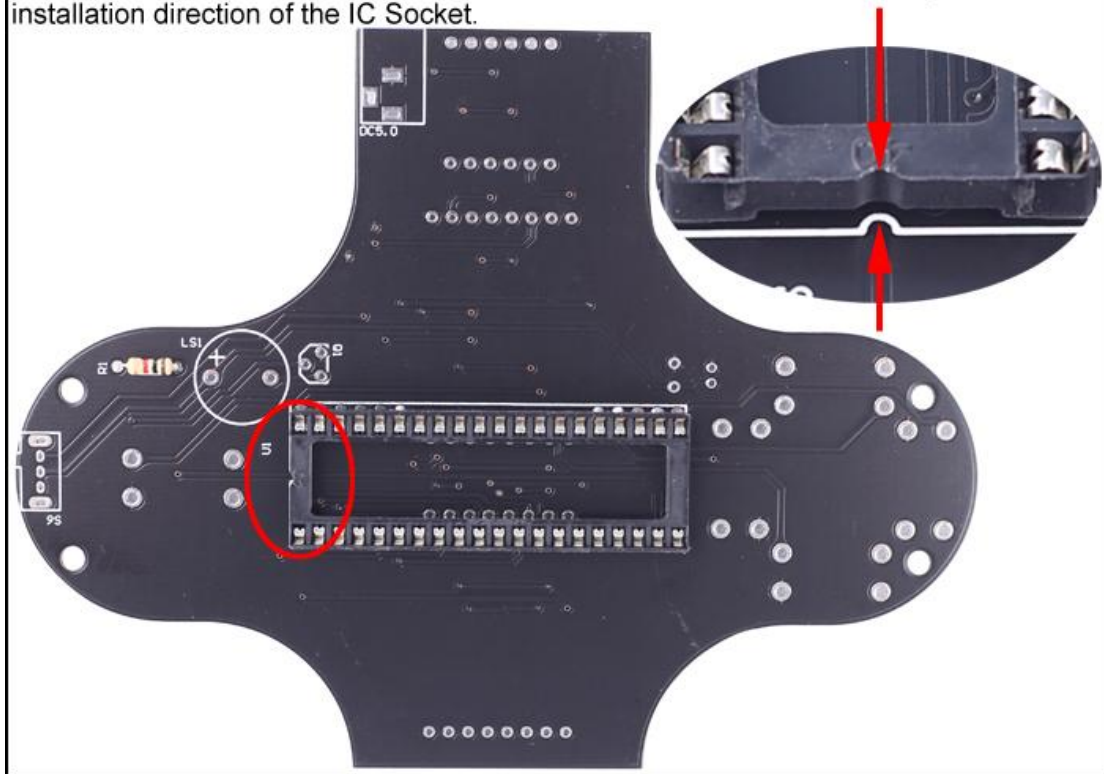12>.Please wear anti-static gloves or anti-static wristbands when installing electronic components.

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

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

2>.Step 2: Install 1pcs DIP-40 IC Socket at U1.There is a gap mark on one end of the IC Socket and there is a gap mark on PCB silk screen where the IC Socket can place on.These two marks are corresponding to each other and are used to specify the installation direction of the IC Socket.

3>.Step 3: Install 1pcs Toggle Switch at S6.

4>.Step 4: Install 1pcs Power Socket at DC5.0.

5>.Step 5: Install 1pcs TO-92 S8550 Transistor at Q1. Pay attention to the installation direction. The arc on the PCB corresponds to the arc of the components.

6>.Step 6: Install 1pcs Buzzer at LS1. Pay attention to distinguish between positive and negative pole.

7>.Step 7: Install 1pcs 0.1uF 104 Monolithic Capacitor at C2 on PCB another side.

8>.Step 8: Install 5pcs 12*12*5mm Black Button at S1-S5.

9>.Step 9: Install 1pcs Red 0.56" 3Bit Digital Tube Common Cathode at dis1. Pay attention to the installation direction.

10>.Step 10: Install 1pcs Red 8*8 Common Anode Dot Matrix at dis2. Pay attention to the installation direction. Note that the pins need to be pressed hard.

11>.Step 11: Install 1pcs Red 8*8 Common Anode Dot Matrix at dis3. Pay attention to the installation direction. Note that the pins need to be pressed hard.

12>.Step 12: Install 1pcs 10uF Electrolytic Capacitor at C1. Pay attention to distinguish between positive and negative. The Longer pin is positive pole.

13>.Step 13: Install 5pcs Black Button Caps on buttons.

14>.Step 14: Install 1pcs DIP-40 IC STC15W2K48S2 at U1.There is a gap mark on one end of the IC and there is a gap mark on IC socket 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.

15>.Step 15: Remove the protective film from the acrylic board.

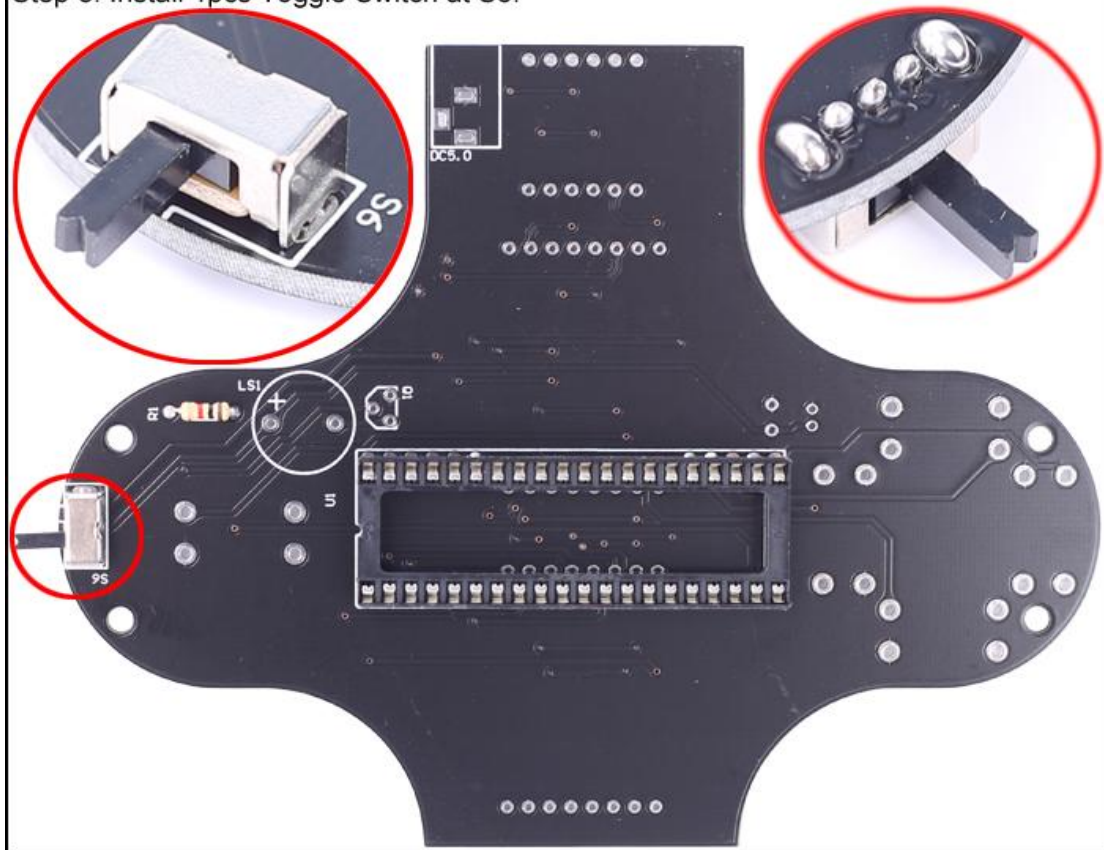16>.Step 16: Fix acrylic board on PCB by 4pcs M3*10mm Nylon Column and 8pcs M3*6mm Nylon Screw.
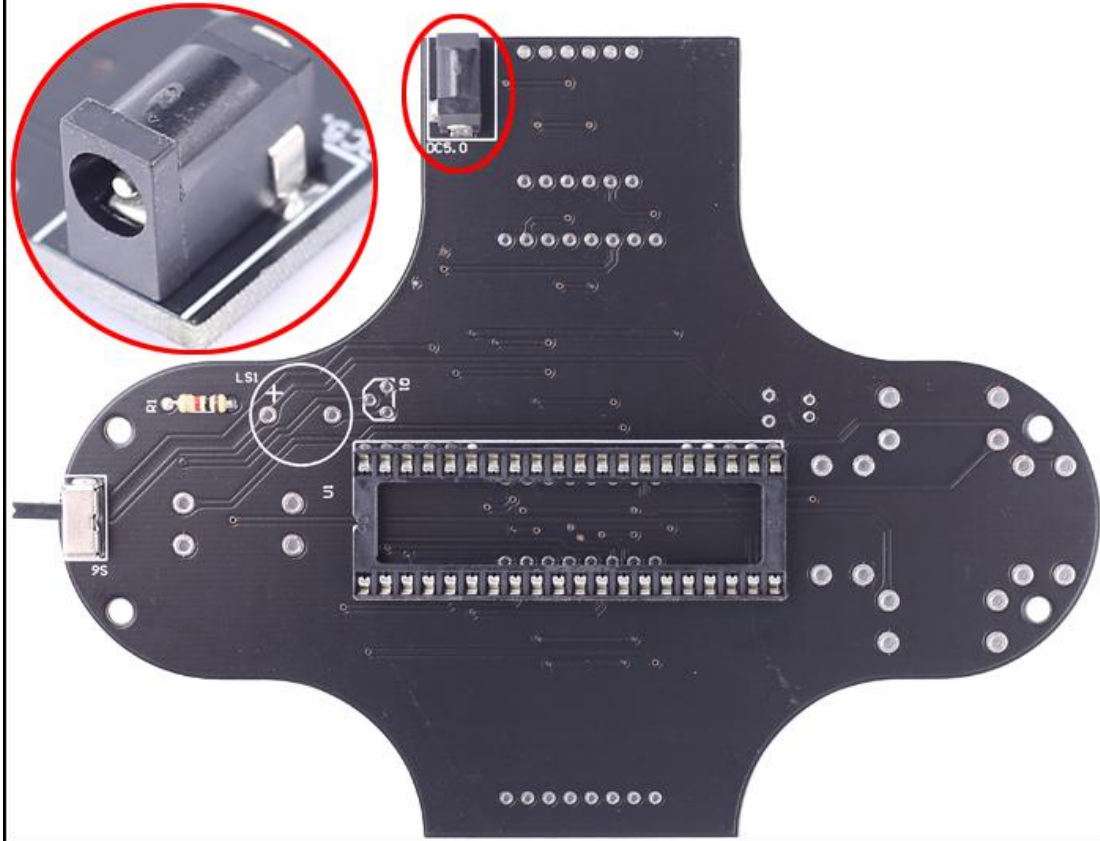
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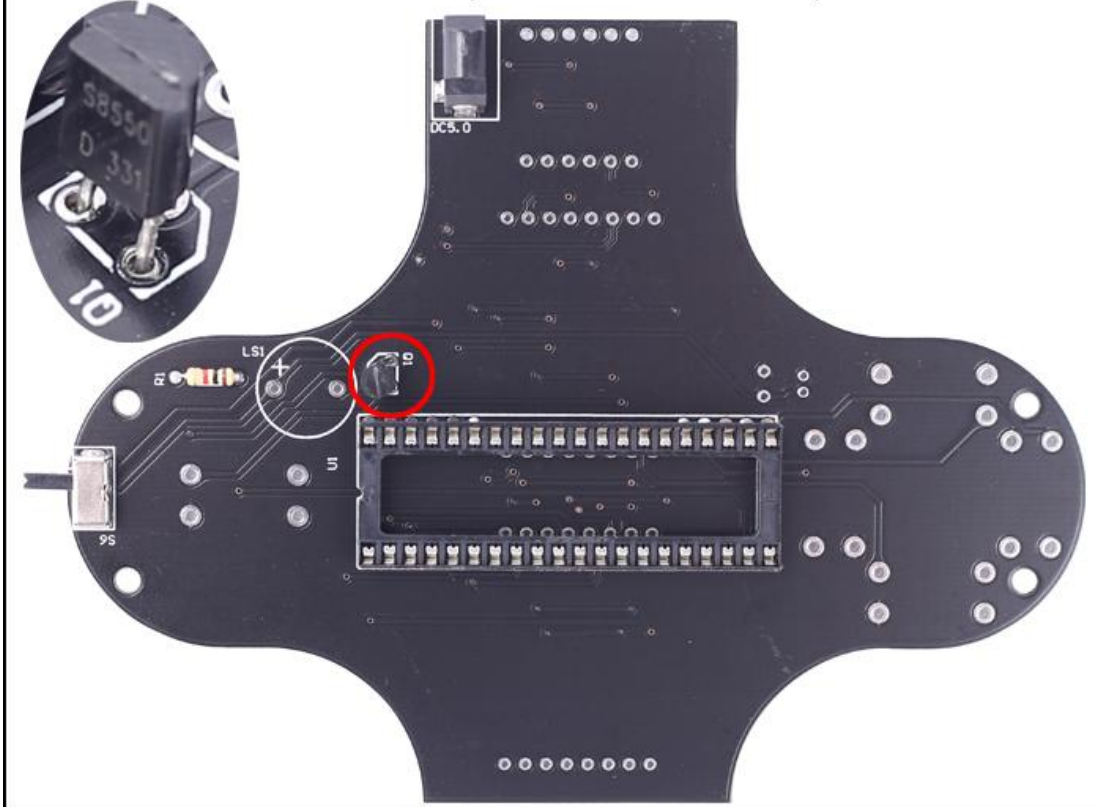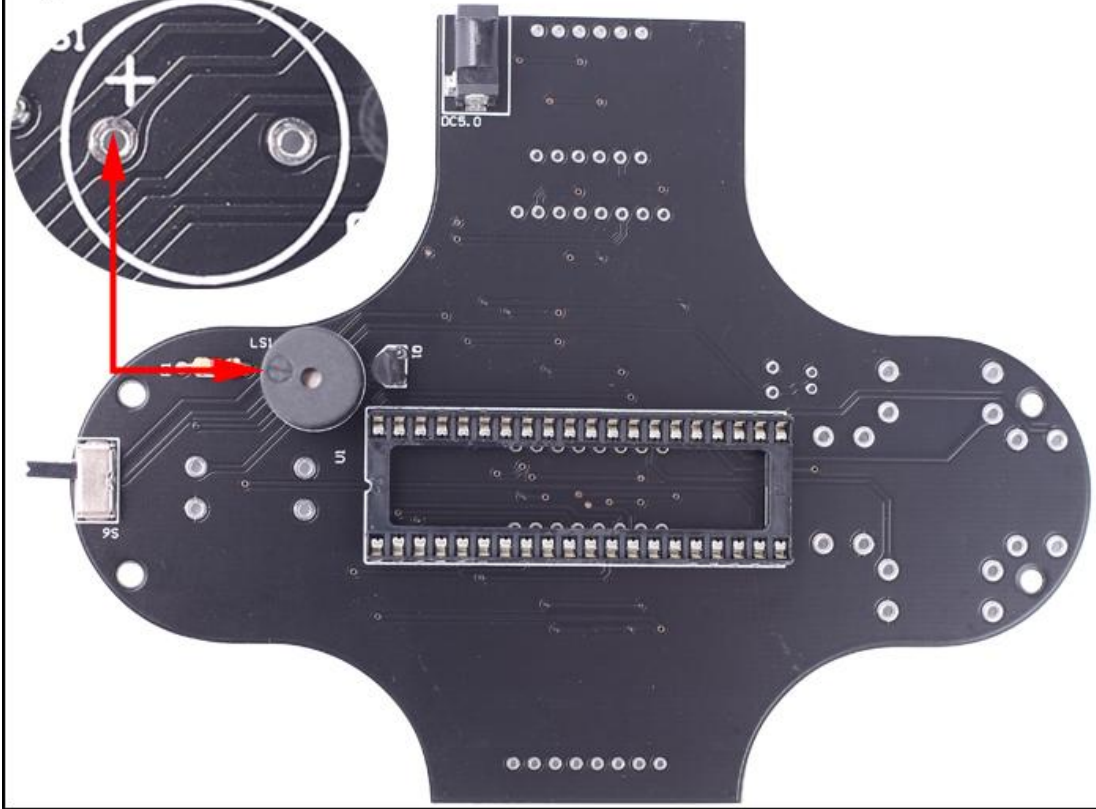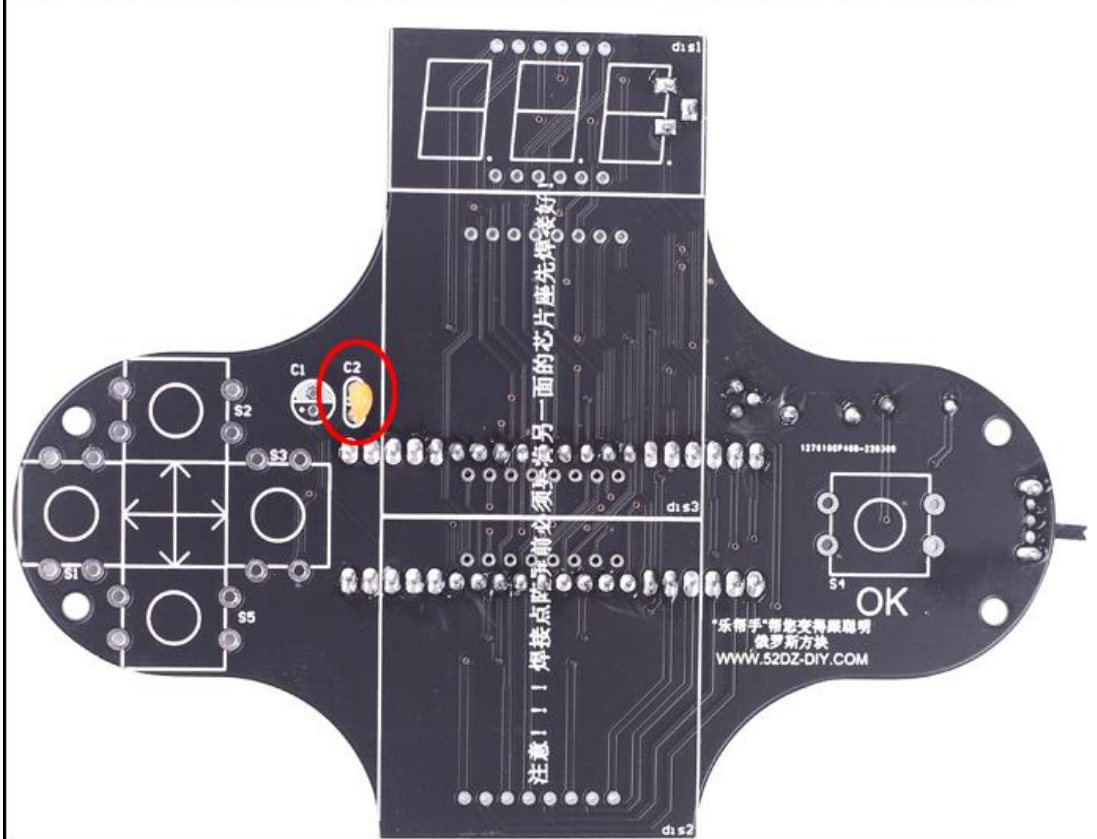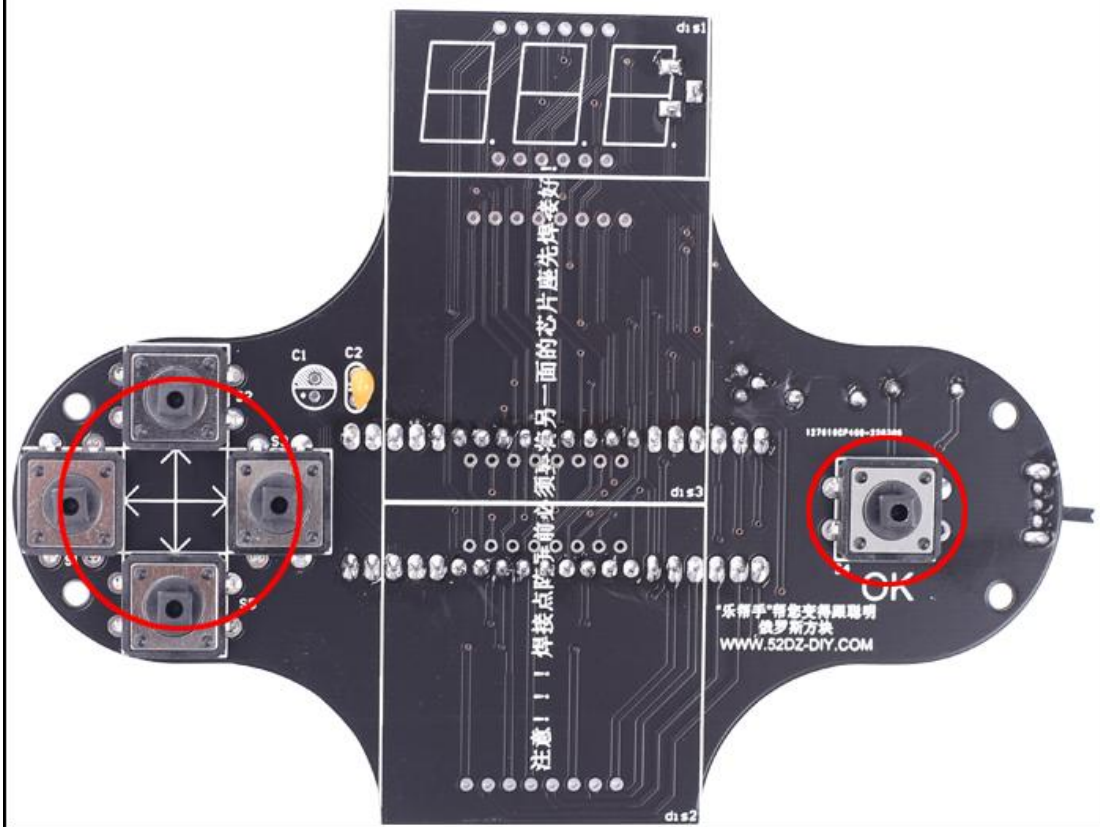

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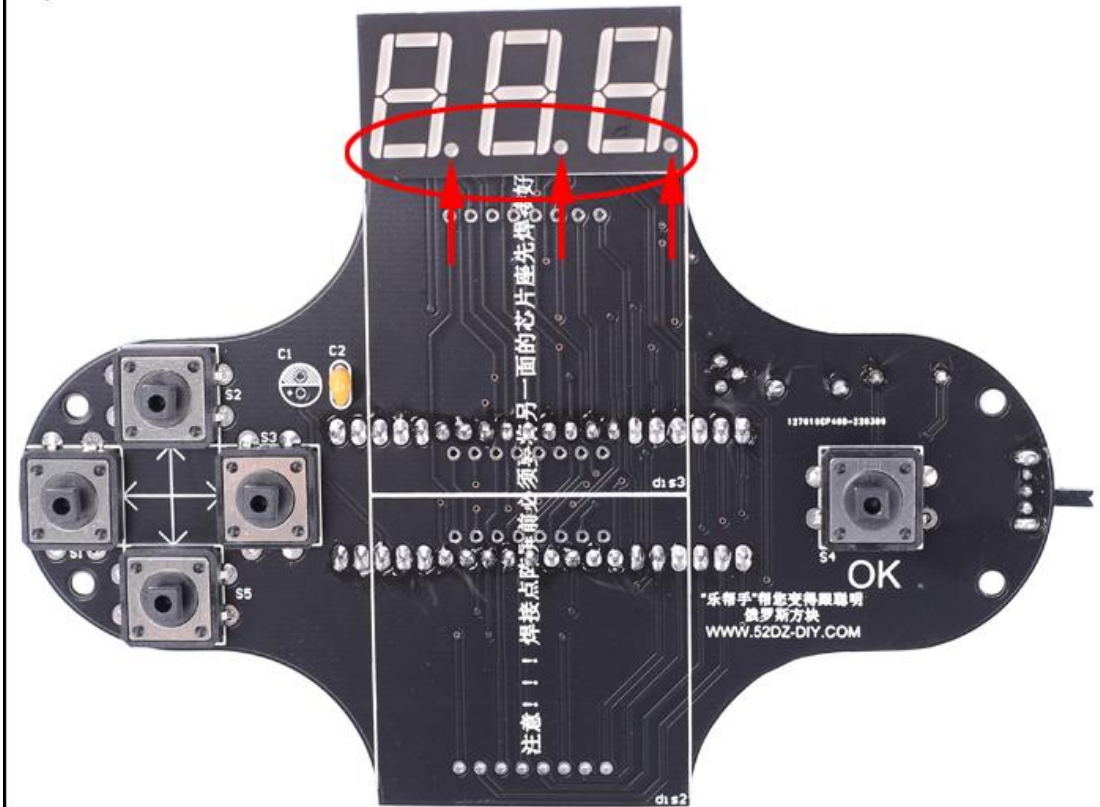Step 6: Install 1pcs Buzzer at LS1. Pay attention to distinguish between positive and negative pole.

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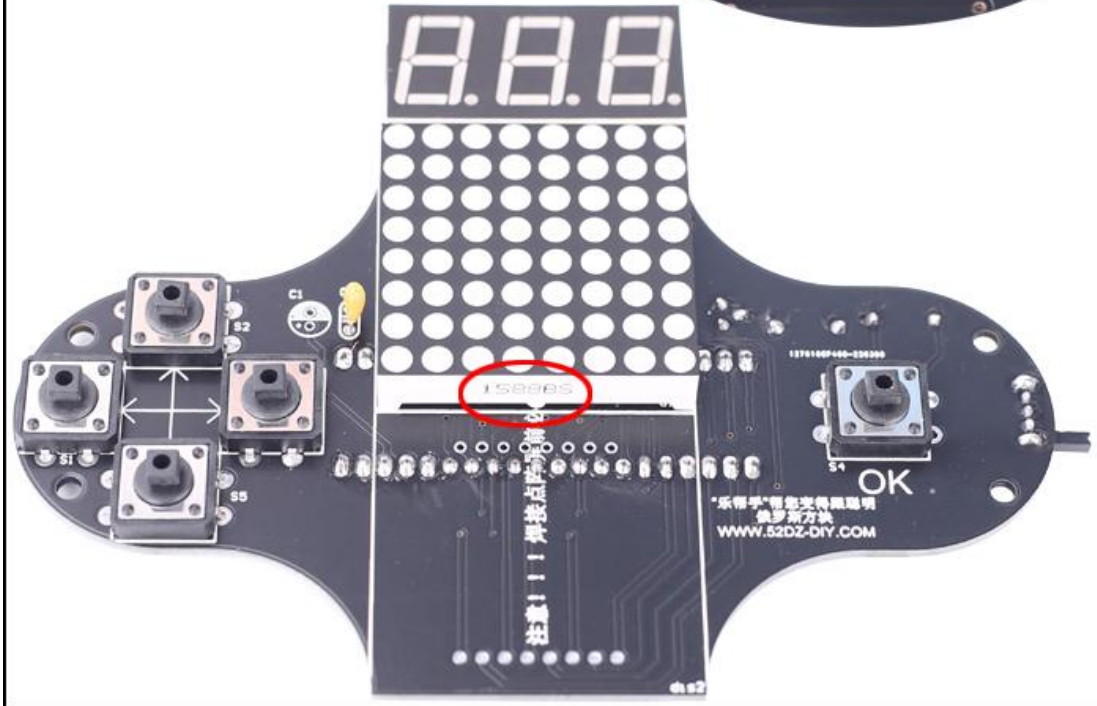
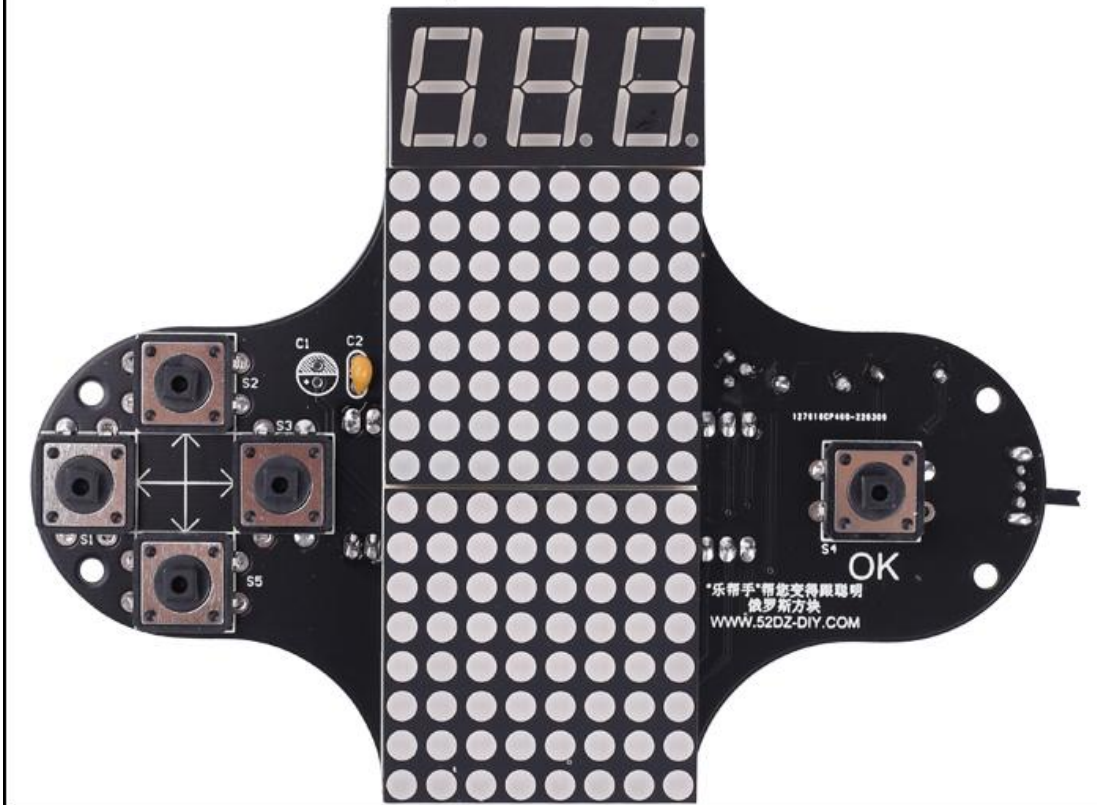Step 8: Install 5pcs 12*12*5mm Black Button at S1-S5.

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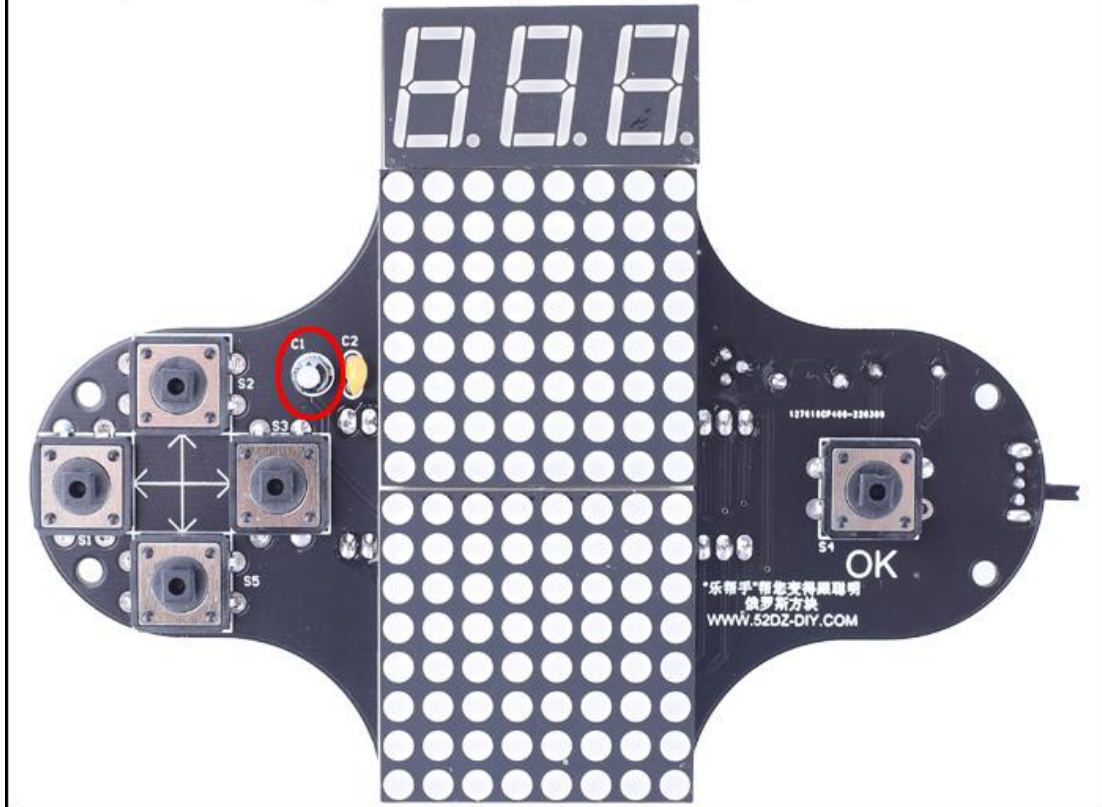Pay attention to the installation direction.

Step 10: Install 1pcs Red 8*8 Common Anode Dot Matrix at dis2.
Pay attention to the installation direction.
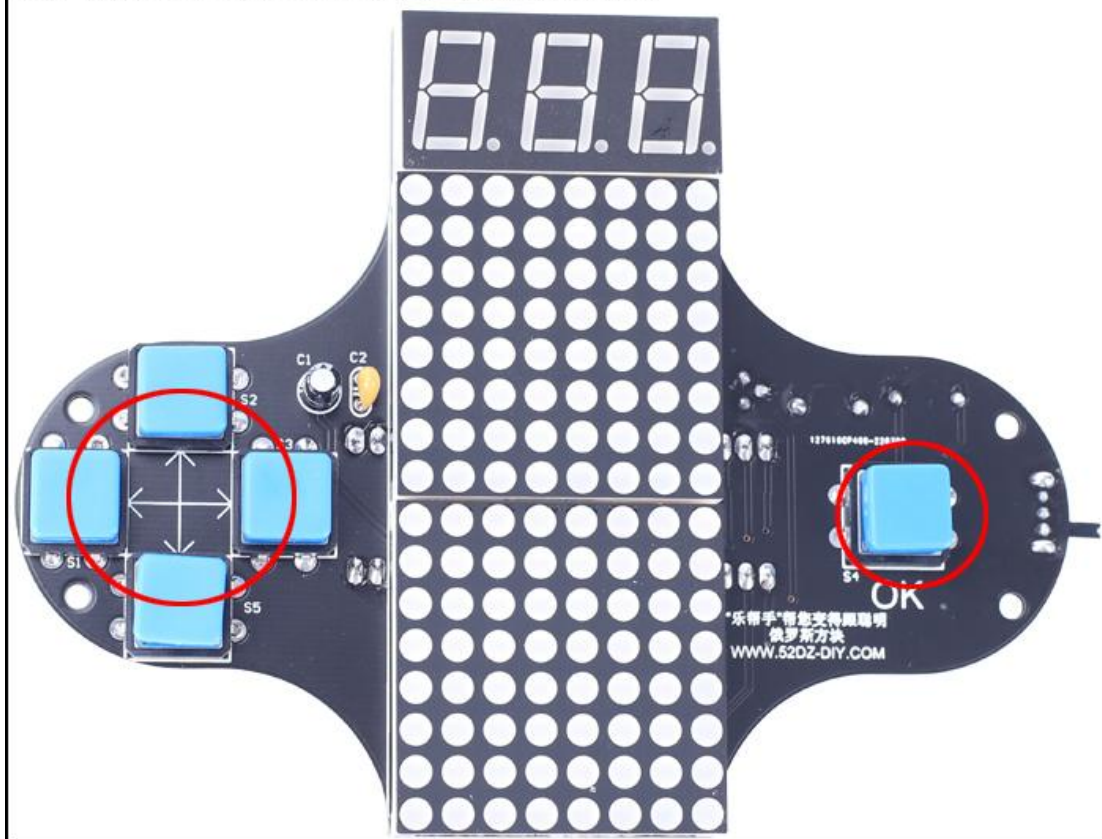Note that the pins need to be pressed hard.

Step 11: Install 1pcs Red 8*8 Common Anode Dot Matrix at dis3. Pay attention to the installation direction. Note that the pins need to be pressed hard.
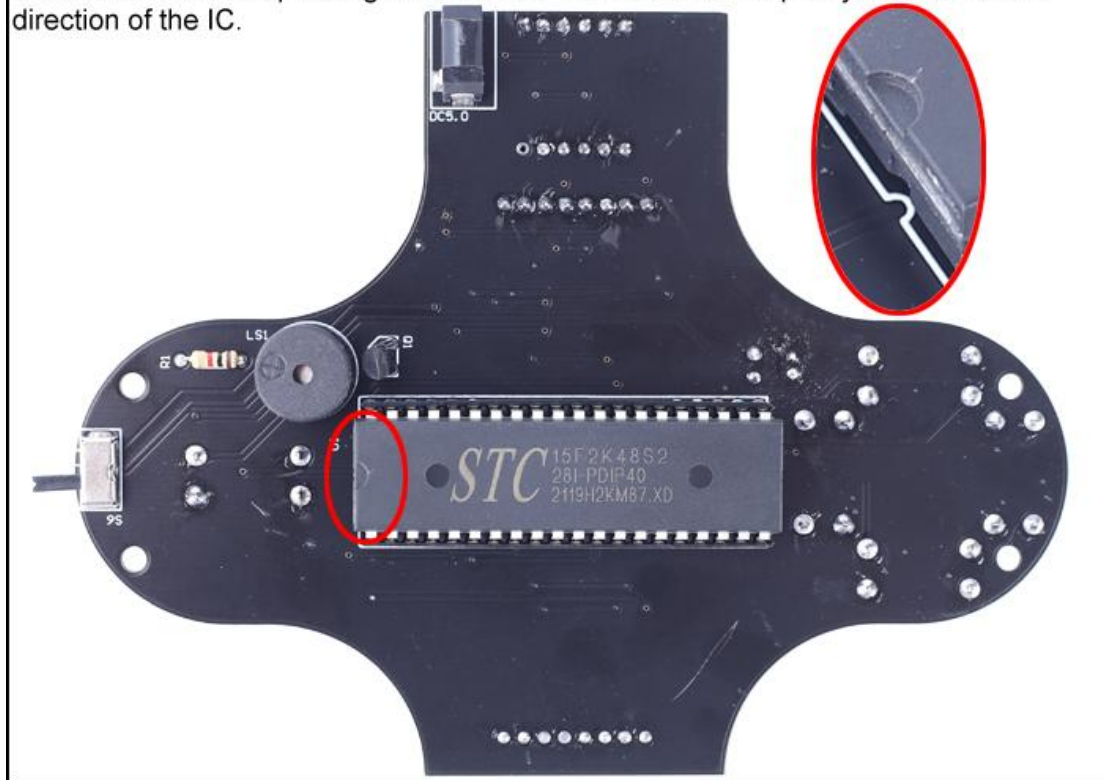
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