1.Description:

It is an SMD component soldering practice kit that allows users to practice and skillfully solder by soldering components such as SMD 0805, 0603, 0402, SOT-23 and QFP-44. It is suitable for electronic beginners and enthusiasts.

2.Features:

1>.Multi-type SMD components
2>.Pure manual welding
3>.Integrated practice area and functional test area
4>.LED demonstration exercise results
5>.Easy operation

3.Parameters:

1>.Product Name:SMD-P Components Soldering Practice Board DIY Kit
2>.Work Voltage:DC 4.5V-5.0V
3>.Work Temperature:-40℃~85℃
4>.Work Humidity:0%~95%RH
5>.Size(Installed):91.4*60mm

4.Components Listing:

NO.	Component Name	PCB Marker	Parameter	QTY	Remarks
1	Resistor	0805 J	SMD 0805	10	Just for practice
2	Resistor	0603 I	SMD 0603	14	Just for practice
3	Resistor	0402 H	SMD 0402	12	Just for practice
4	Capacitor	0805 D	SMD 0805	10	Just for practice
5	Capacitor	0603 F	SMD 0603	14	Just for practice
6	Diode	1206 G	SMD 1206	6	Just for practice
7	Transistor	SOT-23	J6 SOT-23	6	Just for practice
8	Network Resistor	8P4R 0603	SMD 0603	6	Just for practice
9	IC	SO-8	SOP-8	1	Just for practice
10	IC	SO-16	SOP-16	1	Just for practice
11	IC	QFP44	QFP-44	2	Just for practice
12	SMD 0805 Resistor	R1,R3	1.2K	2	
13	SMD 0805 Resistor	R2	470K	1	
14	SMD 0805 Capacitor	C3	0.01uF 103	1	
15	SMD 0805 Capacitor	C4	0.1uF 104	1	
16	SMD 0805 Capacitor	C1,C2	22uF	2	
17	S9014 Transistor	Q1	J6 SOT-23	1	
18	NE555	U1	SOP-8	1	
19	HEF4017	U2	SOP-16	1	
20	SMD 0805 LED	D1-D10	Red	10	

21	SMD Button	S1	6*6*4.5mm	1	
22	PCB		91.4*60mm	1	

5.Note:

1>.User needs to prepare the welding tool first.

2>.This DIY installation is more difficult to be installed, 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>.Users can complete installation by PCB silk screen and component listing.

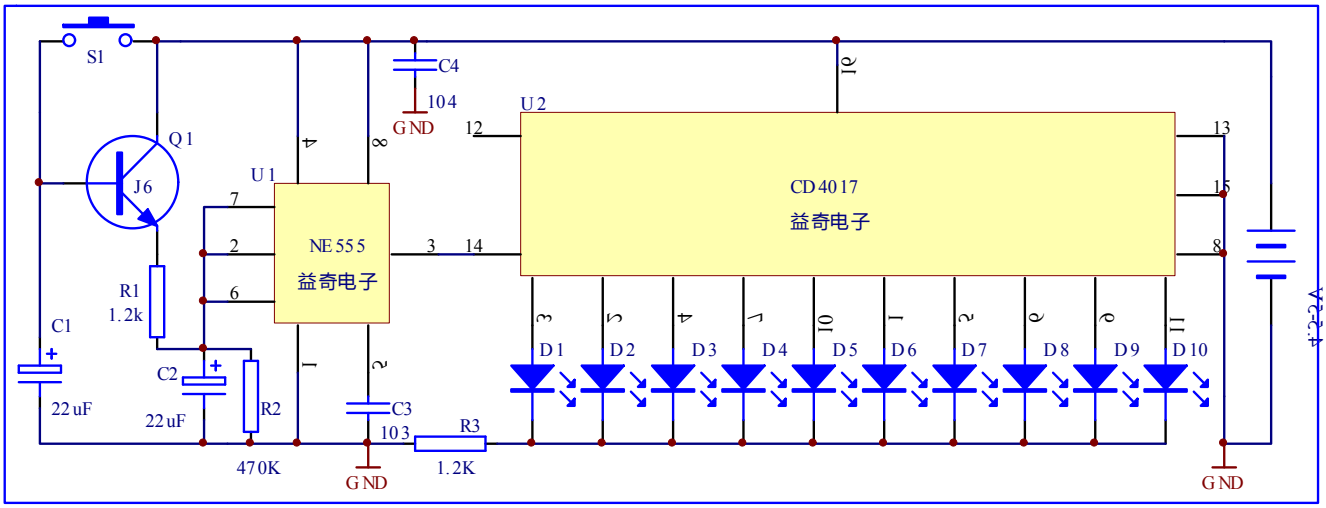
8>.User must install the LED according to the specified rules.Otherwise some LED will not light.

9>.Some components only for practice,No actual function,Can be installed in any suitable location.

10>.The components within circle must finish install it correctly, otherwise it will not work properly.

11>.It is strongly recommended to read the installation manual before starting installation.

6.Schematic:



7.Installation Steps:

Tips:

1>.Install SMD components at first;

2>.Install complex components preferentially;

3>.Pay attention to the installation direction of components.

4>.Make sure the soldering iron does not touch the components for a long

time.Otherwise it is easy to damage the components.

5>.The PCB is divided into a practice area and a function area. The practice area does not participate in the circuit and can be installed arbitrarily to practice welding techniques. The functional area has a complete circuit, which must be properly installed by the schematic diagram and component listing.After the correct installation, user can see the operation of the circuit.

6>.Install the practice area first, and then install the function area after skilled welding techniques.

Step 1:Install 10pcs SMD 0805 Resistor at 0805 J.

Step 2:Install 14pcs SMD 0603 Resistor at 0603 I.

Step 3:Install 12pcs SMD 0402 Resistor at 0402 H.Note:0402 components are very small, please be patient to complete the installation.

Step 4:Install 10pcs SMD 0805 Capacitor at 0805 D.

Step 5:Install 14pcs SMD 0603 Capacitor at 0603 F.

Step 6:Install 6pcs SMD 1206 Diode at 1206 G.Note: Diode distinguishes between positive and negative, can not be installed reverse, otherwise the diode will be damaged and will not work properly. Methods to identify positive and negative:One end of the black mark is the negative.

Step 7:Install 6pcs SMD J6 SOT-23 Transistor at SOT-23.

Step 8:Install 6pcs SMD 0603 Network Resistor at 8P4R 0603.Due to its very small pin pitch, please be patient and install.

Step 9:Install 1pcs SOP-8 IC at SO-8 and 1pcs SOP-16 IC at SO-16 on back side of PCB.Pay attention to the installation direction.

Step 10:Install 2pcs QFP-44 IC at QFP44 on back side of PCB.Pay attention to the installation direction.

Step 11:Start installing the components in the practice area.Install 1pcs 470K SMD 0805 Resistor at R2.

Step 12:Install 2pcs 1.2K SMD 0805 Resistor at R1,R3.

Step 13:Install 1pcs 0.01uF SMD 0805 Capacitor at C3.

Step 14:Install 1pcs 0.1uF SMD 0805 Capacitor at C4.

Step 15:Install 1pcs S9014 SMD J6 SOT-23 Transistor at Q1.

Step 16:Install 1pcs SOP-8 NE555 at U1 and 1pcs SOP-16 HEF4017 at U2.But pay attention to the installation direction.

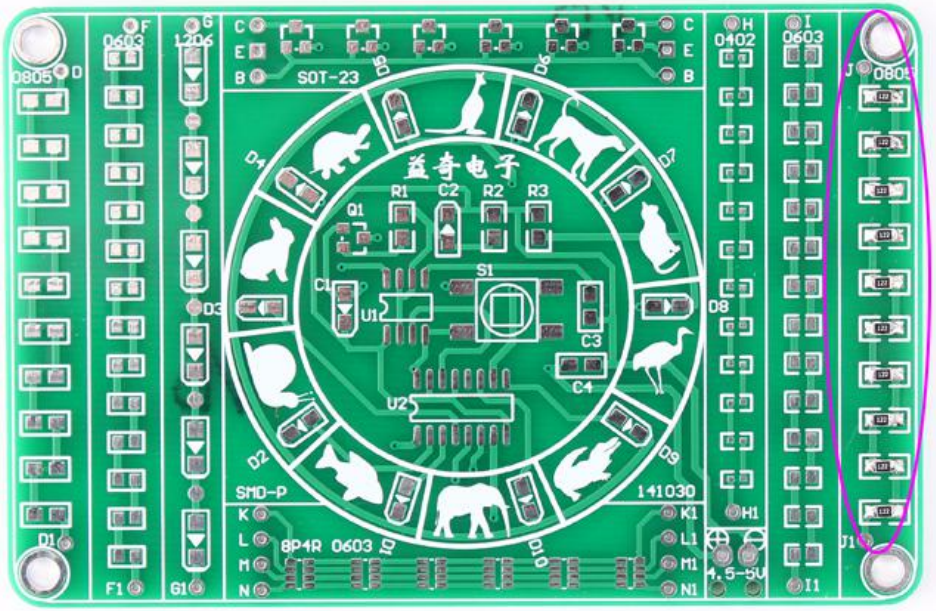
Step 17:Install 10pcs Red SMD 0805 LED at D1-D10. Note: LED distinguishes between positive and negative, can not be installed reverse, otherwise the LED will be damaged and will not work properly. Methods to identify positive and negative:One end of the green mark is the negative. Or test positive and negative by multimeter.

Step 18:Install 1pcs 6*6*4.5mm SMD Button at S1.

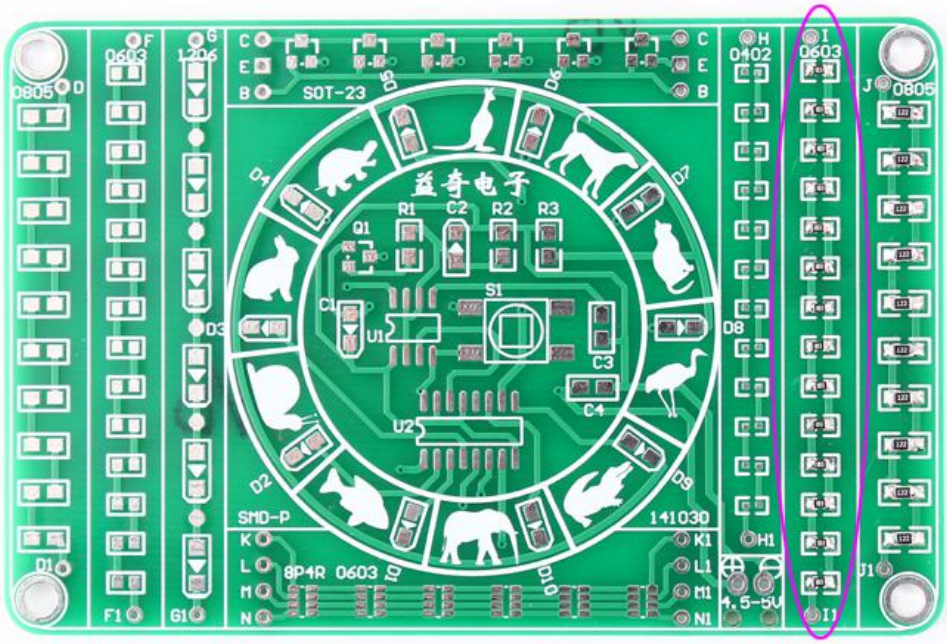
Step 19:Install 2pcs 22uF SMD 0805 Capacitor at C1,C2.

Step 20:Connect DC 4.5V-5.0V to do a test.

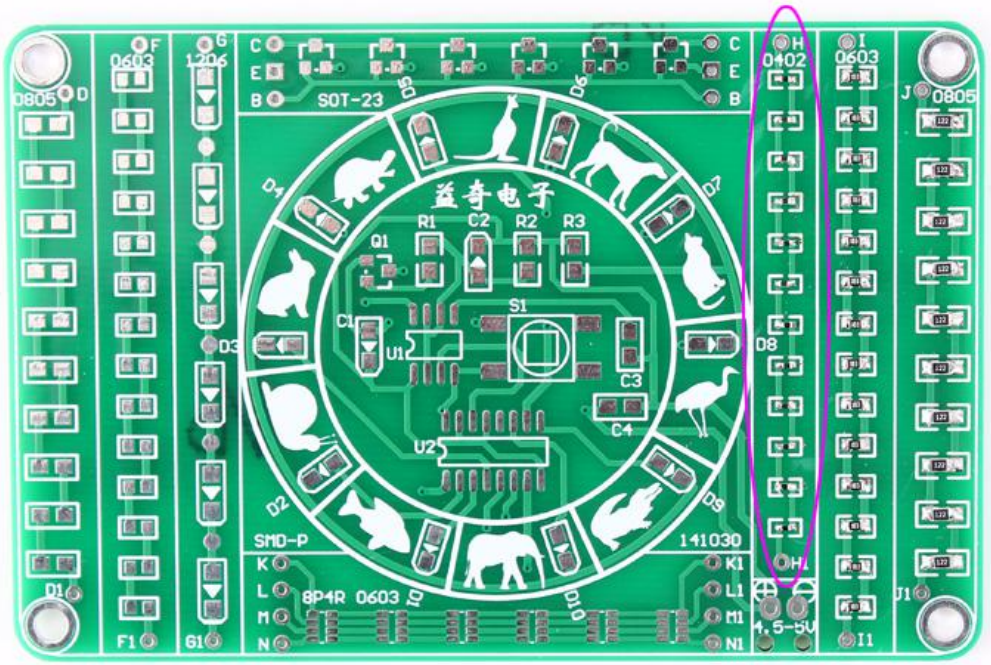
Step 1:Install the practice area first.
Install 10pcs SMD 0805 Resistor at 0805 J.



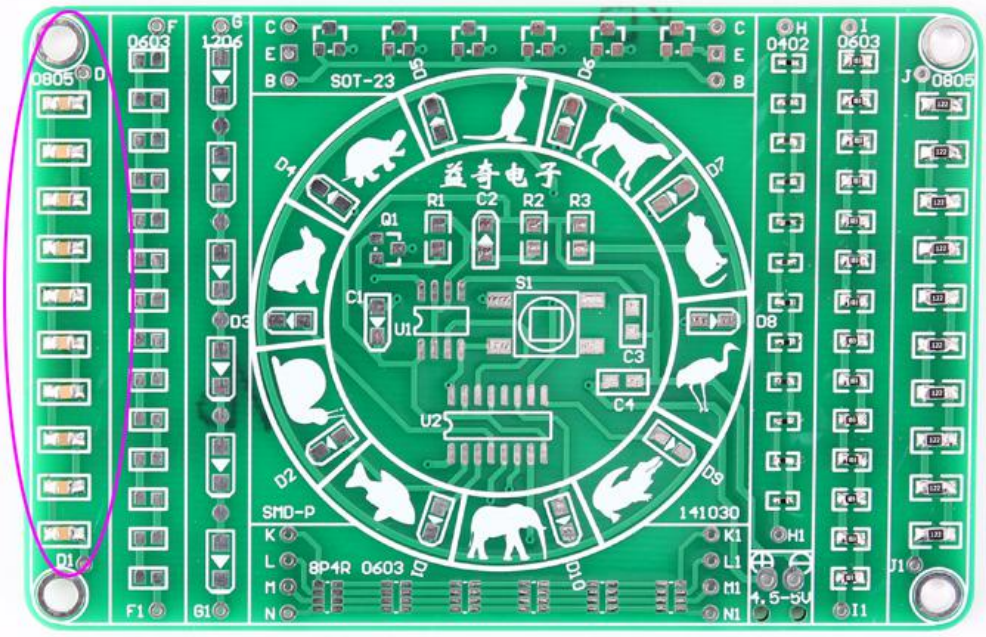
Step 2:Install 14pcs SMD 0603 Resistor at 0603 I.



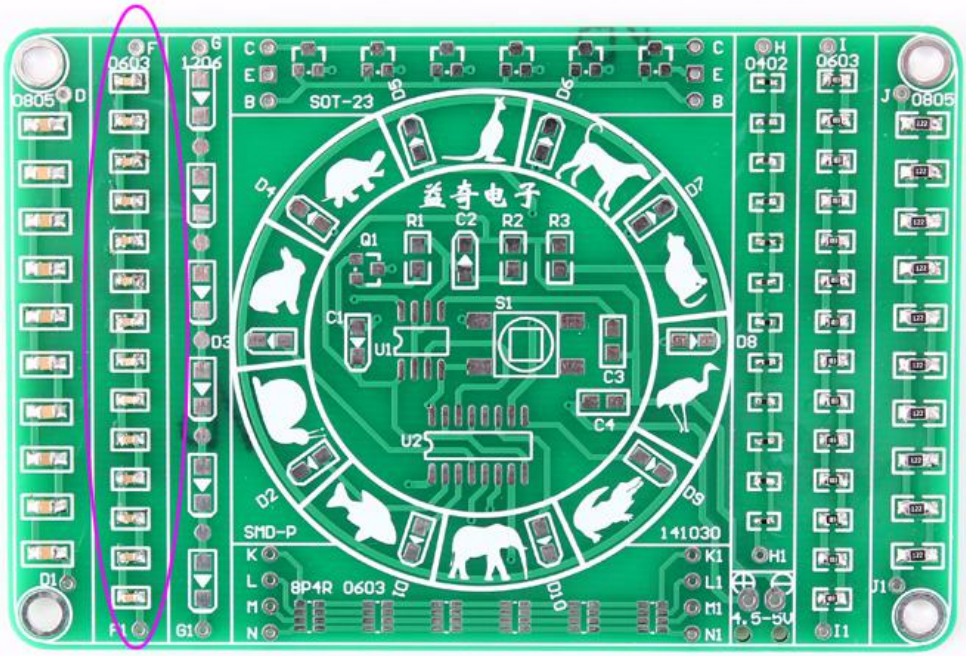
Step 3:Install 12pcs SMD 0402 Resistor at 0402 H.
Note:0402 components are very small, please be patient to complete the installation.



Step 4:Install 10pcs SMD 0805 Capacitor at 0805 D.

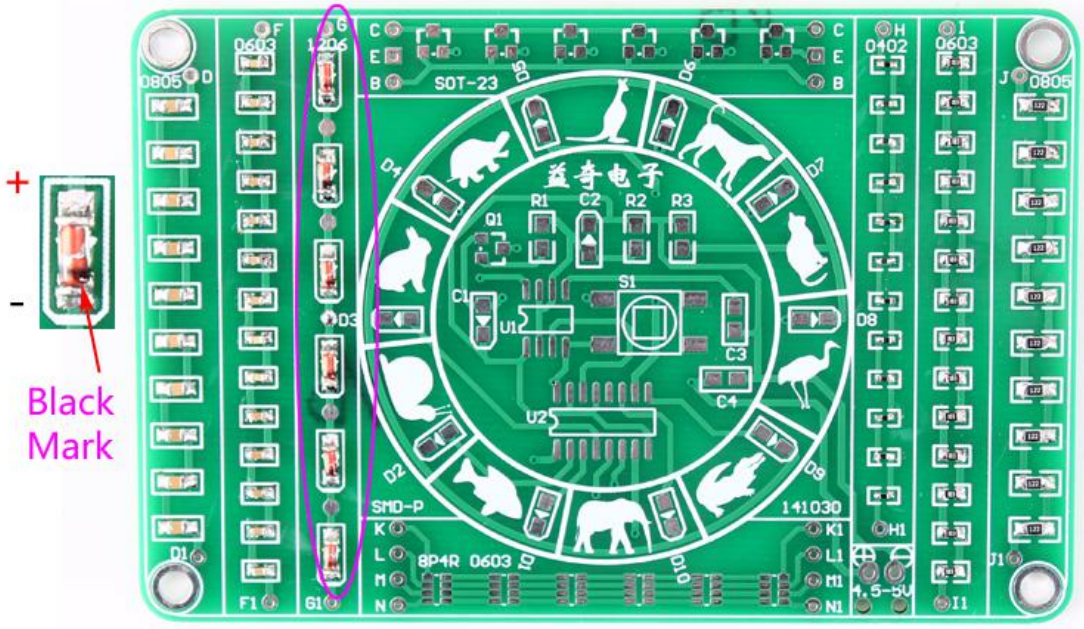


Step 5:Install 14pcs SMD 0603 Capacitor at 0603 F.

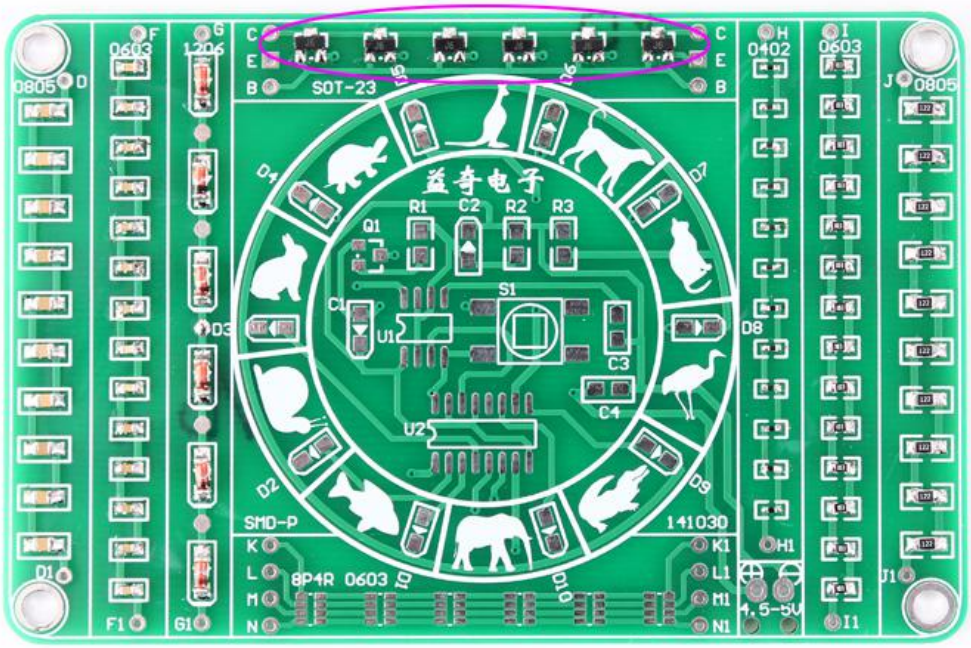


Step 6:Install 6pcs SMD 1206 Diode at 1206 G.

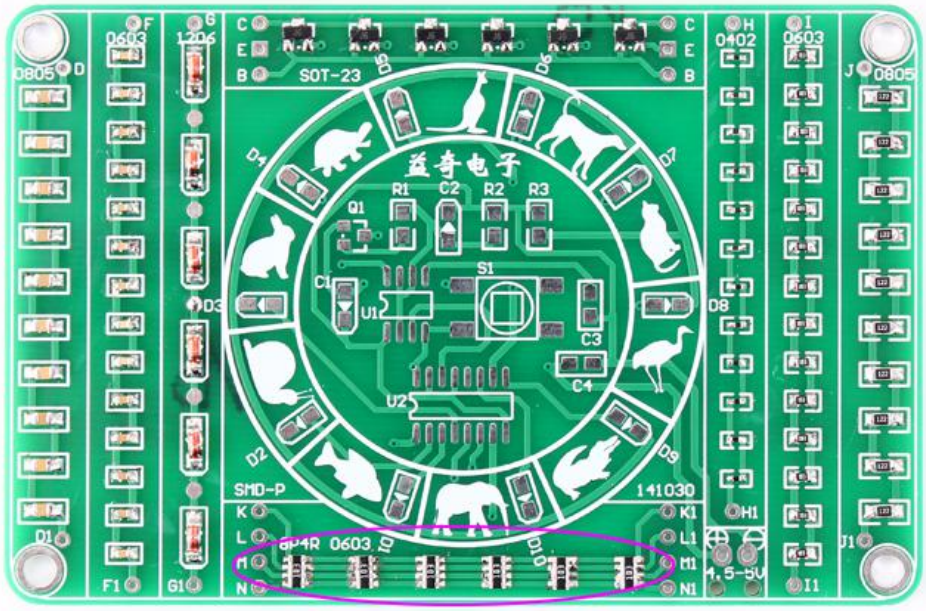
Note:Diode distinguishes between positive and negative, can not be installed reverse, otherwise the diode will be damaged and will not work properly. Methods to identify positive and negative:One end of the black mark is the negative.



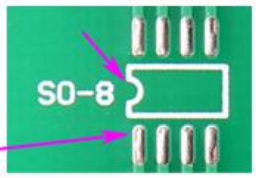
Step 7:Install 6pcs SMD J6 SOT-23 Transistor at SOT-23.

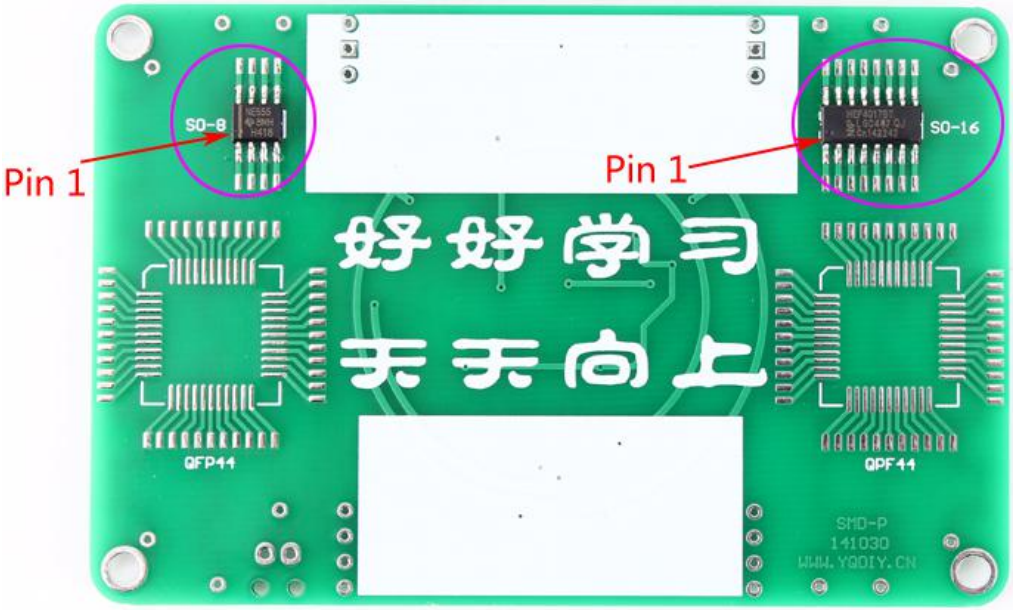


Step 8:Install 6pcs SMD 0603 Network Resistor at 8P4R 0603.Due to its very small pin pitch, please be patient and install.

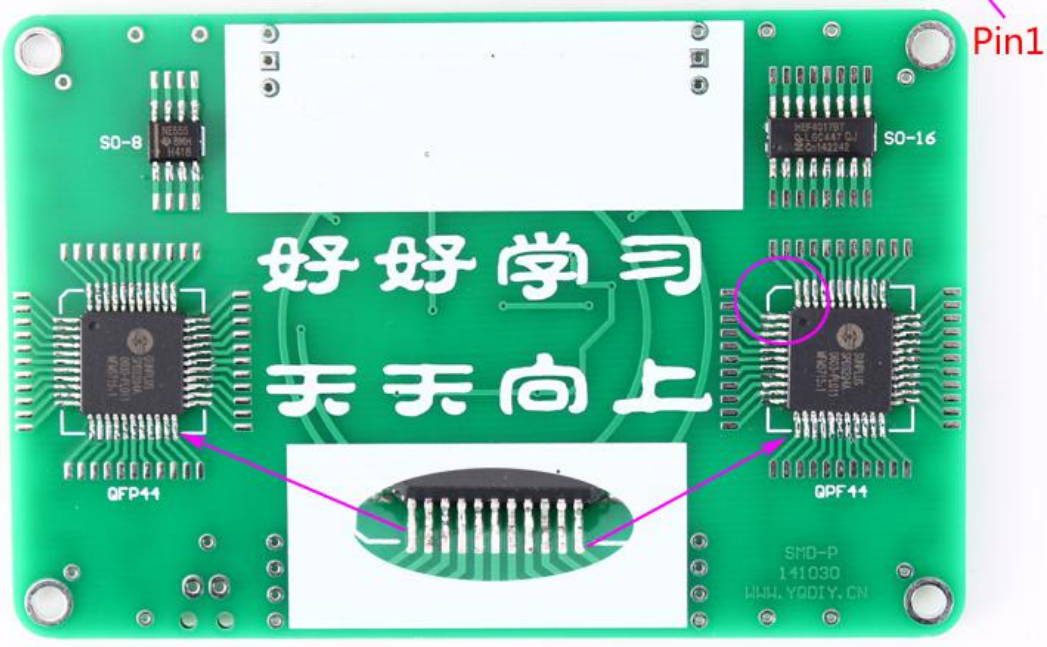


Step 9:Install 1pcs SOP-8 IC at SO-8 and 1pcs SOP-16 IC at SO-16 on back side of PCB.Pay attention to the installation direction.

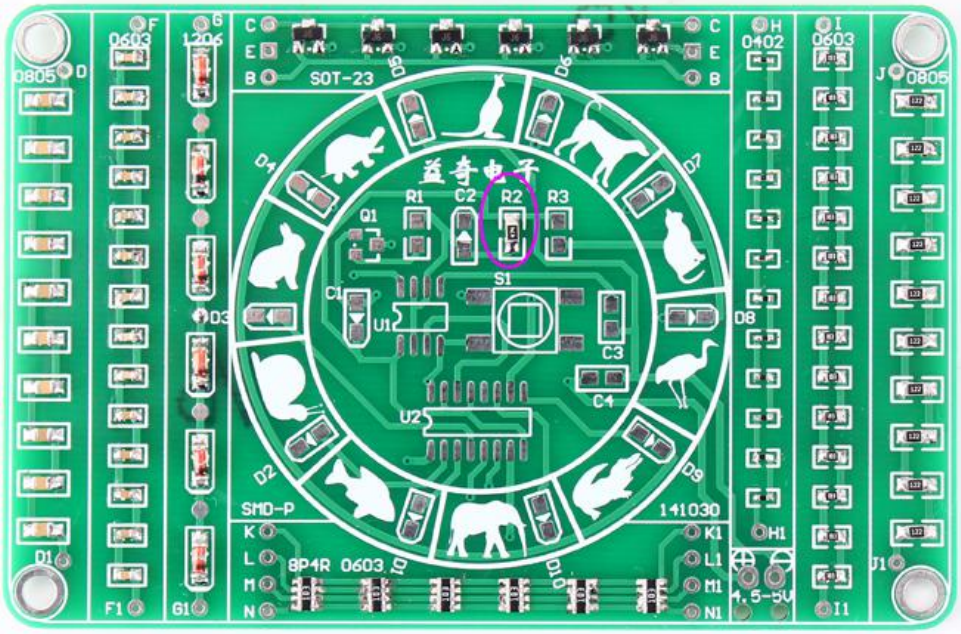




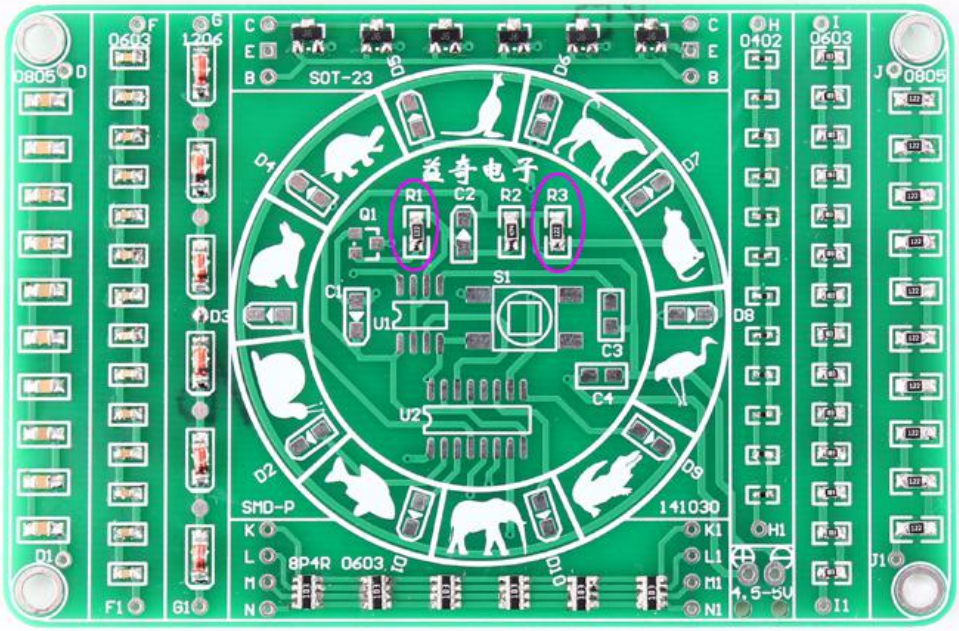
Step 10:Install 2pcs QFP-44 IC at QFP44 on back side of PCB.Pay attention to the installation direction.



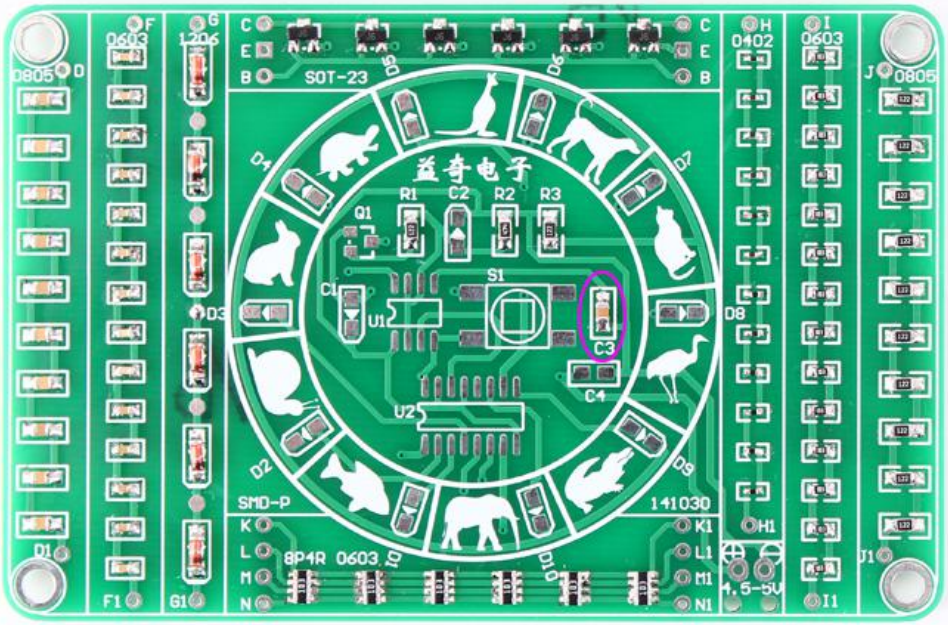
Step 11:Start installing the components in the practice area.Install 1pcs 470K SMD 0805 Resistor at R2.



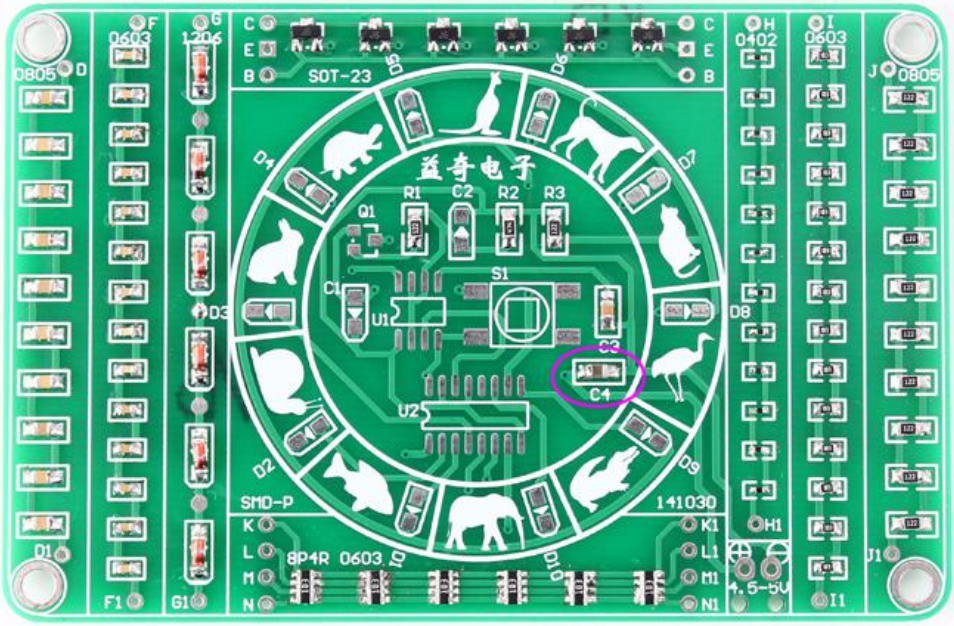
Step 12:Install 2pcs 1.2K SMD 0805 Resistor at R1,R3.



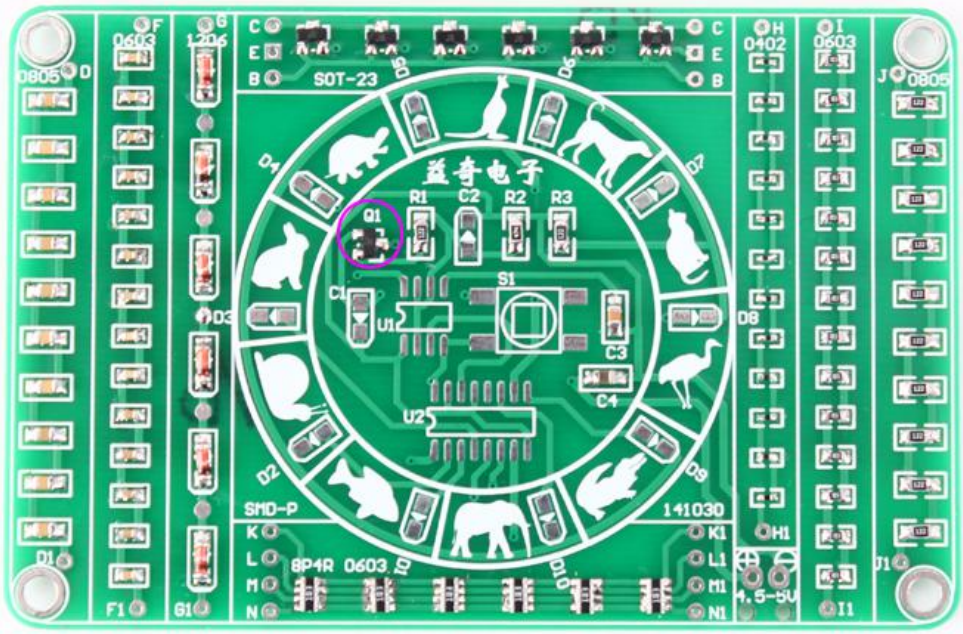
Step 13:Install 1pcs 0.01uF SMD 0805 Capacitor at C3.



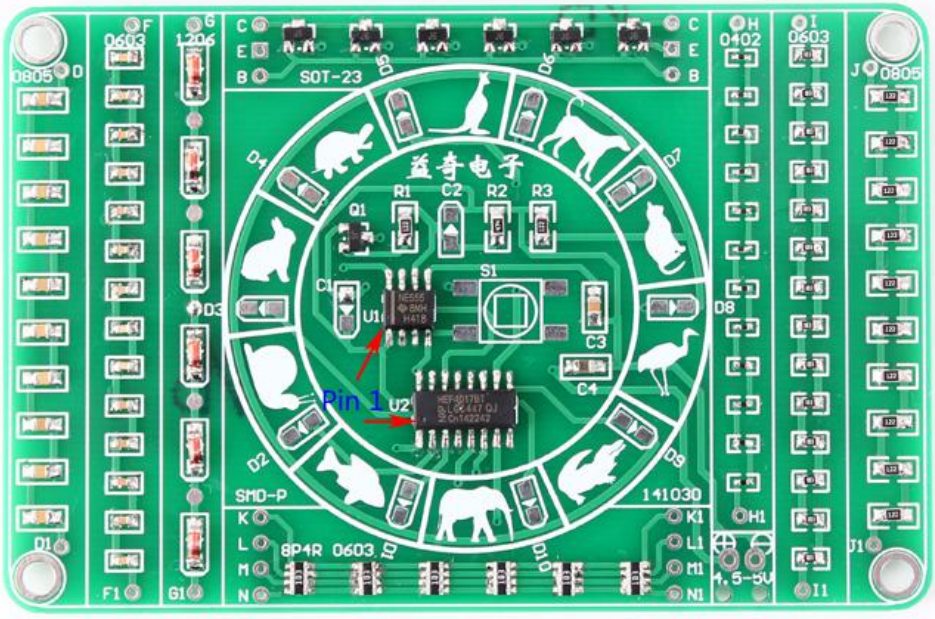
Step 14:Install 1pcs 0.1uF SMD 0805 Capacitor at C4.



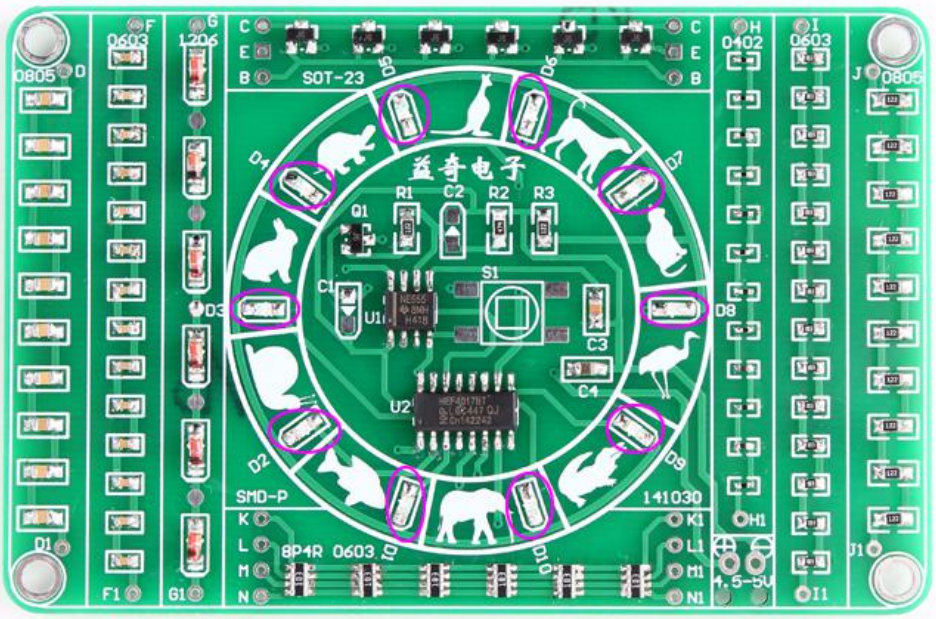
Step 15:Install 1pcs S9014 SMD J6 SOT-23 Transistor at Q1.



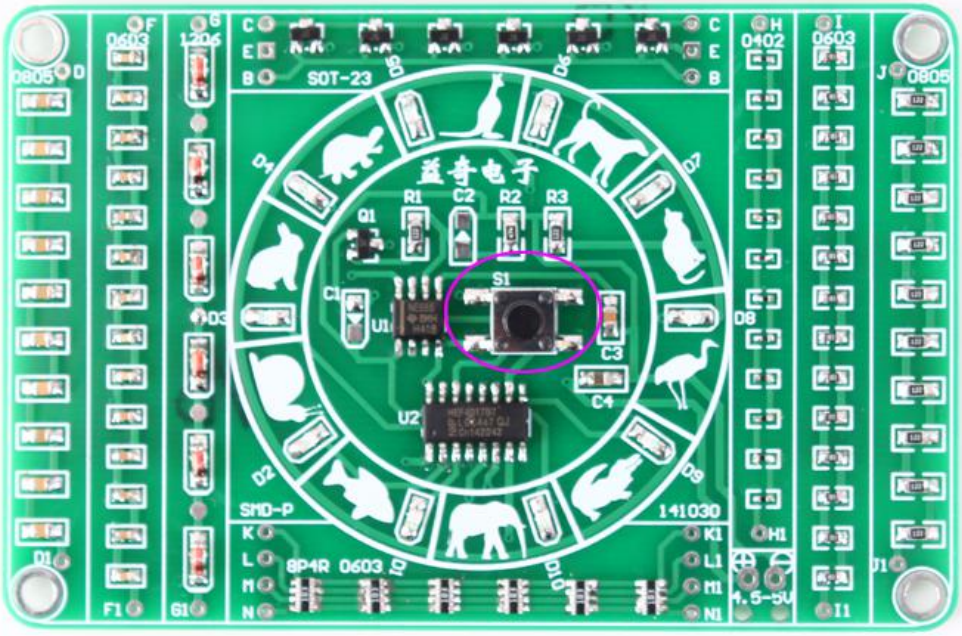
Step 16:Install 1pcs SOP-8 NE555 at U1 and 1pcs SOP-16 HEF4017 at U2.But pay attention to the installation direction.



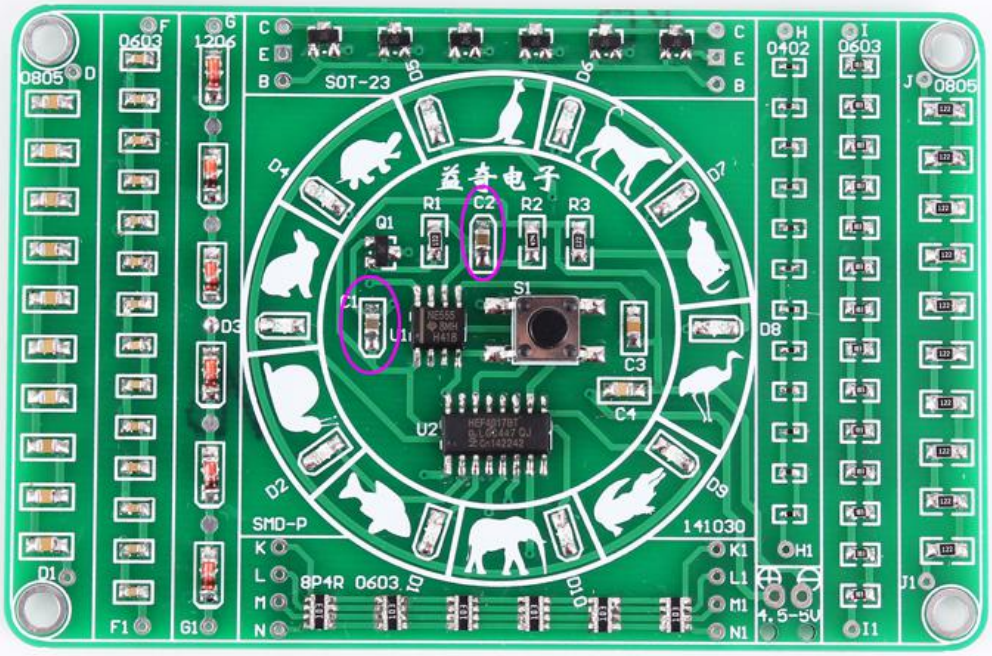
Step 17:Install 10pcs Red SMD 0805 LED at D1-D10.
Note: LED distinguishes between positive and negative, can not be installed reverse, otherwise the LED will be damaged and will not work properly. Methods to identify positive and negative:One end of the green mark is the negative. Or test positive and negative by multimeter.



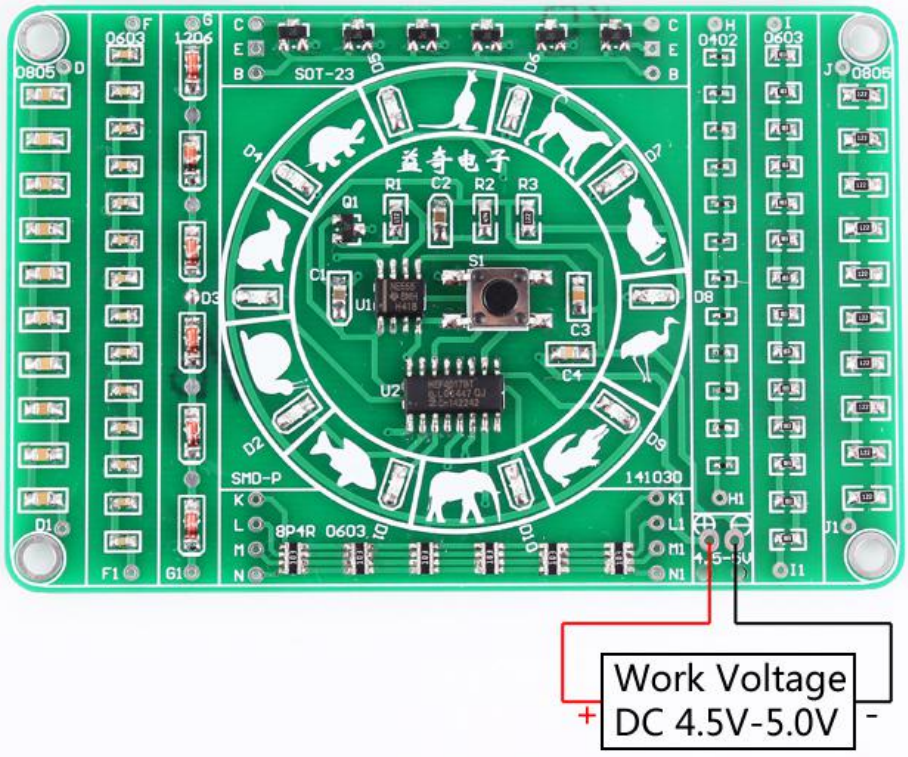
Step 18:Install 1pcs 6*6*4.5mm SMD Button at S1.

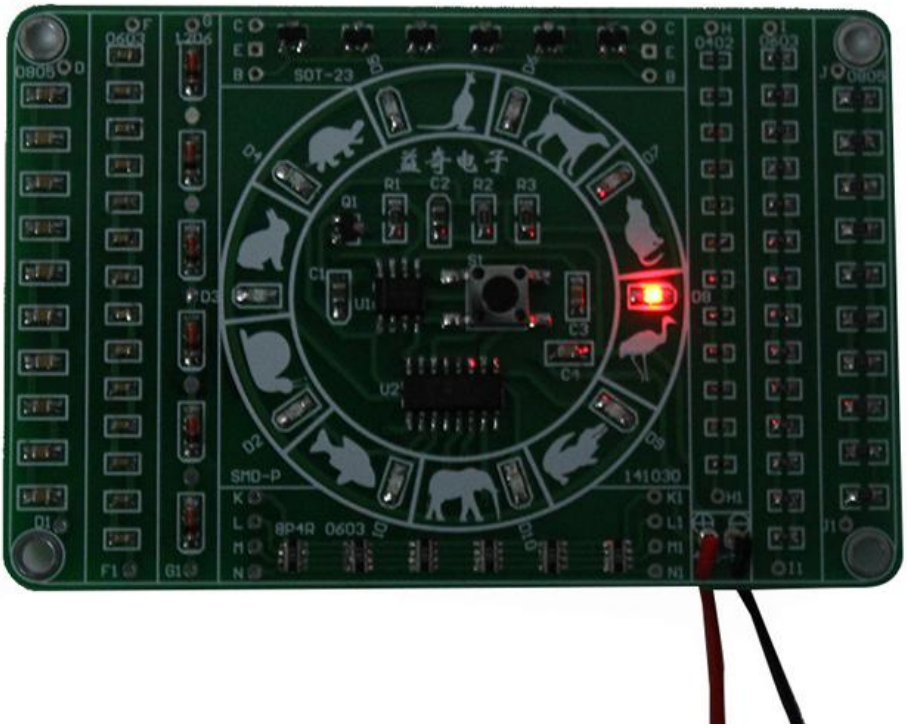


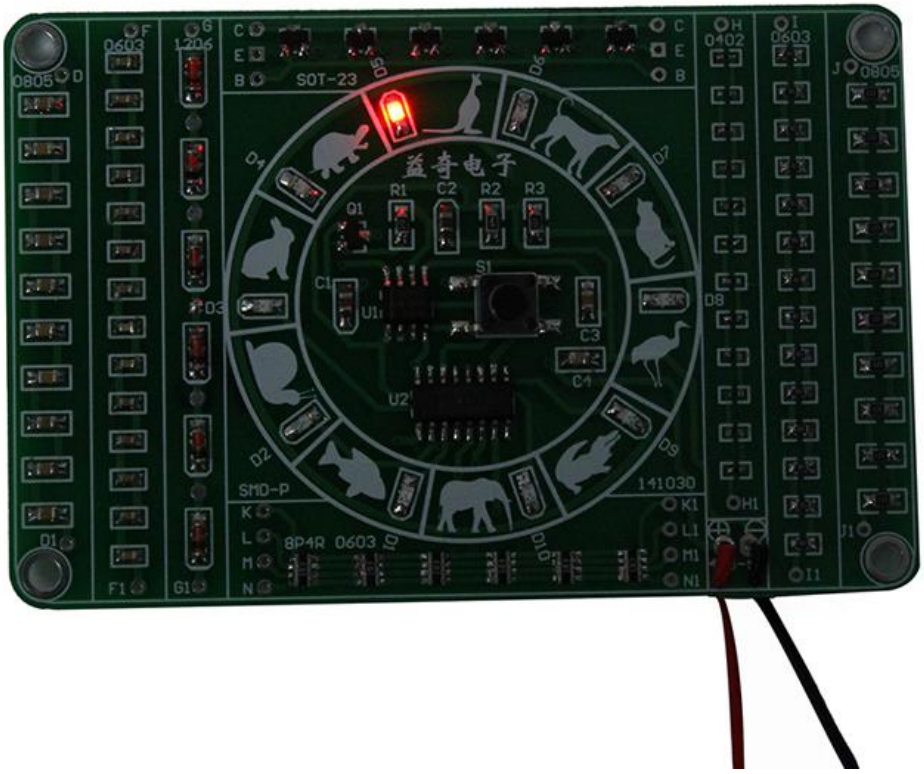
Step 19:Install 2pcs 22uF SMD 0805 Capacitor at C1,C2.



Step 20:Connect DC 4.5V-5.0V to do a test.




SOT-23
益奇电子
R1
C2
R2
R3
Q1
S1
C1
U1
C3
C4
U2
SMD-P
141030
8P4R 0603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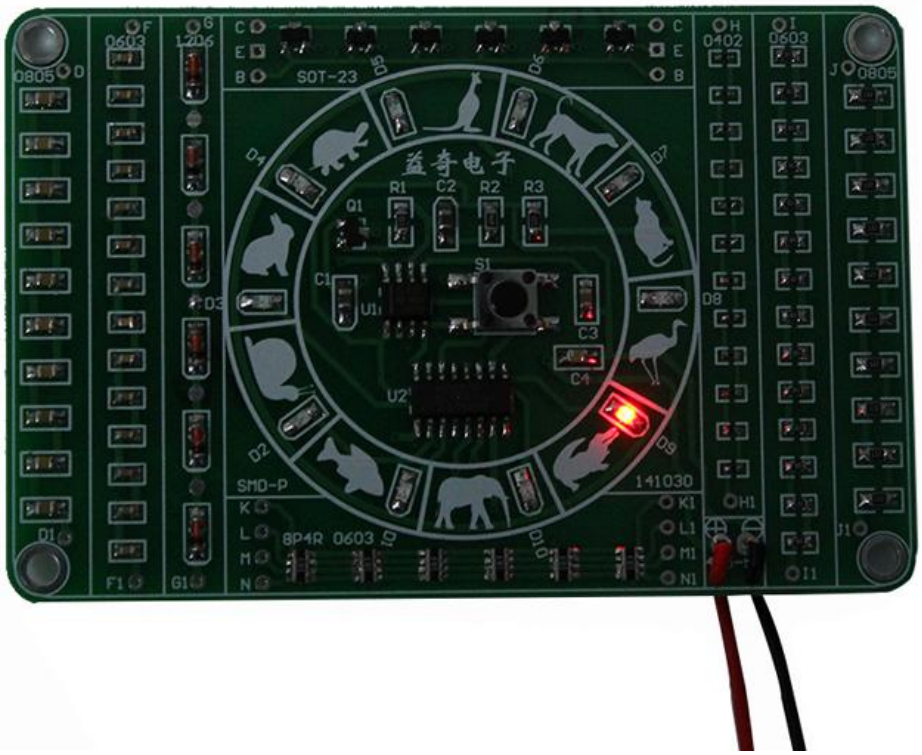
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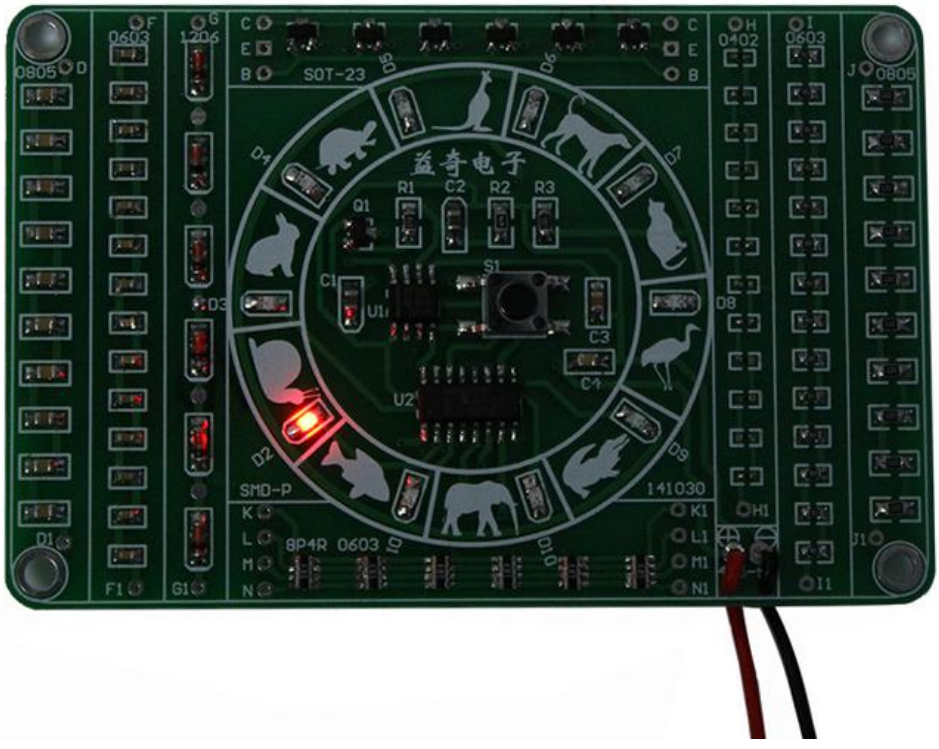
SOT-23
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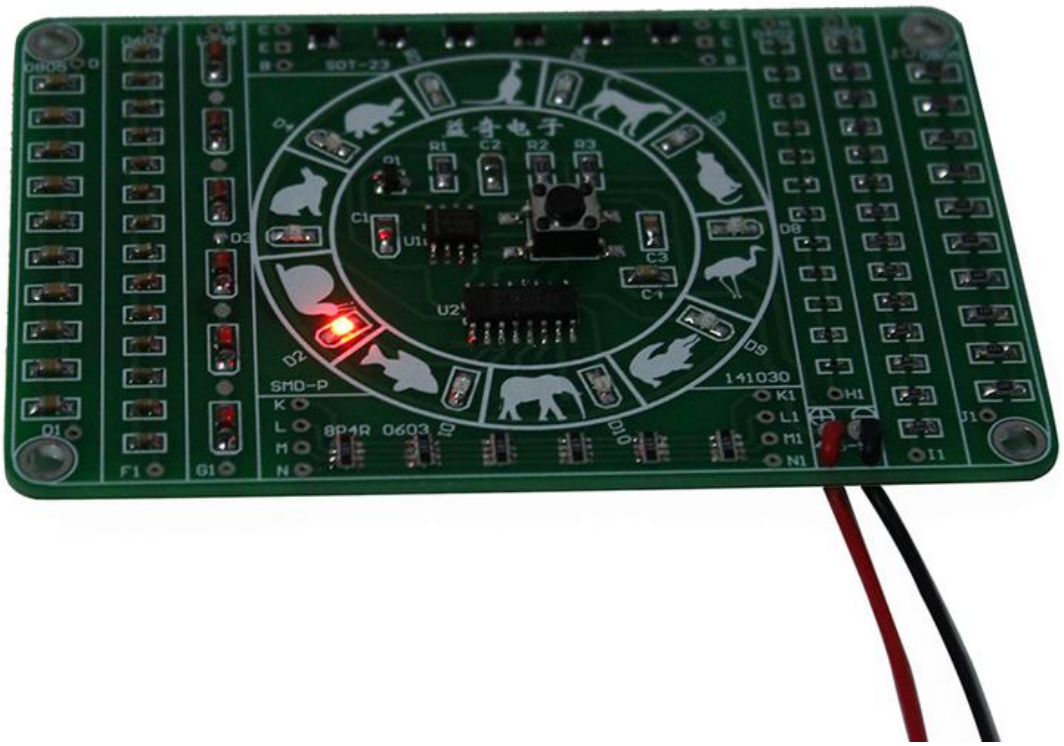
SOT-23
R1
C2
R2
R3
C1
U1
C3
C4
U2
D2
D9
D10
SM0-P
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141030
K1
L1
M1
N1
H1
J10
I1
D1
F1
G1
D3
D8