TJ-56-515 Desktop RGB LED Rotary Gyro DIY Kit

1.Introduction:

TJ-56-515 is an Desktop RGB LED Rotary Gyro Electronic Soldering DIY Kit. It is a multivibrator circuit composed of a transistor, which drives two groups of LED to flash alternately. When rotating, the vibration switch is powered on, and the circuit starts to work. Because of the phenomenon of visual persistence, patterns appear one by one.

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

2.Feature:

1>.Interesting LED rotary gyroscope
2>.Simple and convenient operation
3>.DIY Hand Soldering

3.Parameter:

1>.Product Name: TJ-56-515 Desktop RGB LED Rotary Gyro DIY Kit
2>.Work Voltage:DC 6V
3>.Color:Red/Green/Blue/Orange
4>.Work Temperature:-40℃~85℃
5>.Work Humidity:5%~95%RH
6>.Size(Installed):52*52*35mm

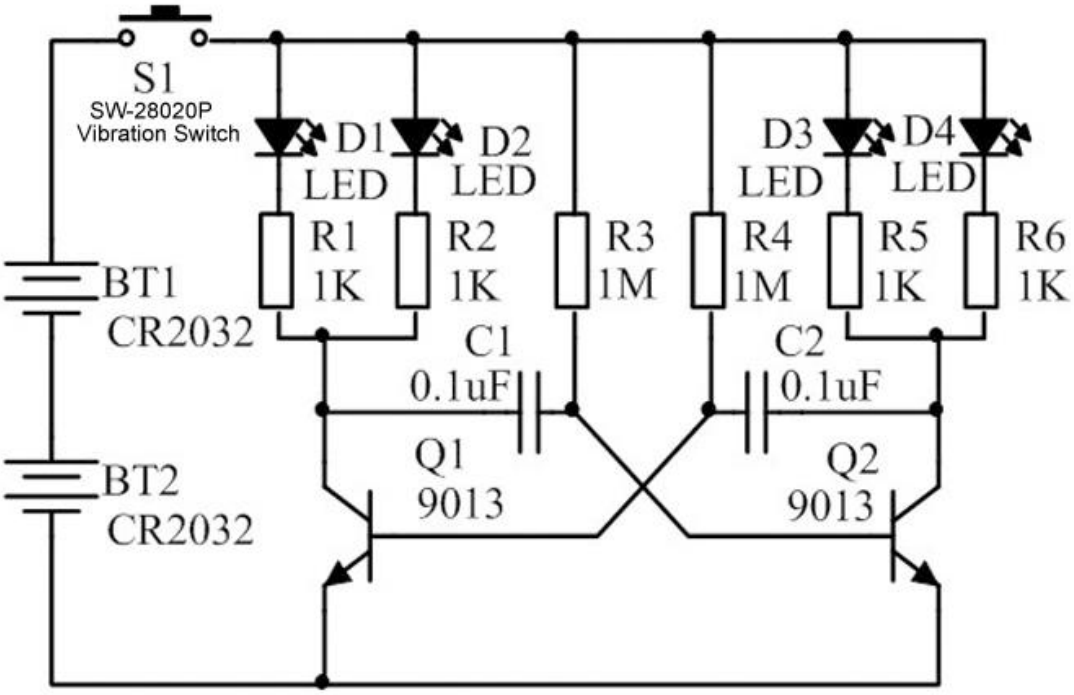
4.Component Listing:

NO.	Component Name	PCB Marker	Parameter	QTY
1	Metal Film Resistor	R1,R2,R5,R6	1Kohm	4
2	Metal Film Resistor	R3,R4	1Mohm	2
3	Ceramic Capacitor	C1,C2	0.1uF 104	2
4	S9013 Transistor	Q1,Q2	TO-92	2
5	Red/Green/Blue/Orange LED	D1-D4	3mm	4
6	SW-28020P Vibration switch	S1		1
7	CR2032 Battery Socket	BT1,BT2		2
8	Copper pillar		M2*24mm	1
9	Copper pillar		M2*4mm	1
10	Screw		M2*10mm	1
11	PCB		D52mm	1
Note:Users can complete the installation according to the PCB silk screen and component list.				

5.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

6.Schematic:



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

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

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

1>.Step 1: Install 4pcs 1Kohm Metal Film Resistor at R1,R2,R5,R6.

2>.Step 2: Install 2pcs 1Mohm Metal Film Resistor at R3,R4.

3>.Step 3: Install 4pcs 3mm Red/Green/Blue/Orange LED at D1-D4. Note: The longer pin connect to square pad.LED can be installed at any position without distinguishing colors.

4>.Step 4: Install 2pcs CR2032 Battery Socket at BT1,BT2.

5>.Step 5: Install 2pcs 0.1uF 104 Ceramic Capacitor at C1,C2.

6>.Step 6: Install 2pcs TO-92 S9013 Transistor at Q1,Q2. Pay attention to the installation direction. The arc on the PCB corresponds to the arc of the components.

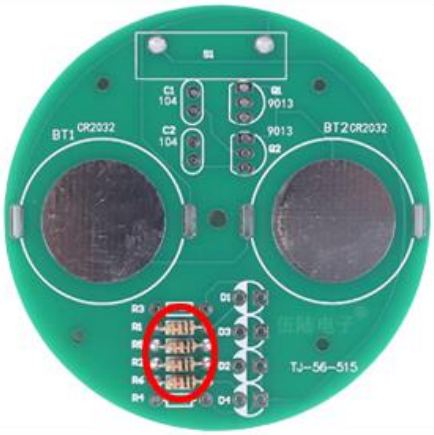
7>.Step 7: Install 1pcs SW-28020P Vibration Switch at S1.

8>.Step 8: Install 2pcs CR2032 Battery on batter socket. Positive pole up. Note:user needs to prepare the battery in advance.

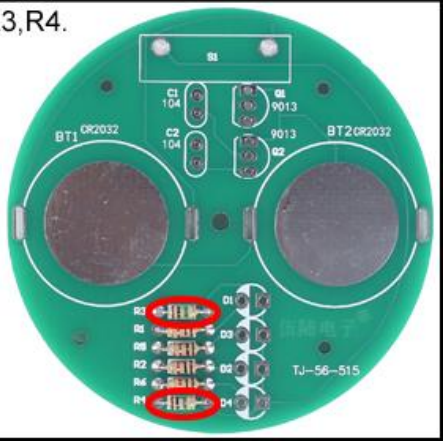
9>.Step 9: Fix M2*4mm Copper pillar on M2*10mm Screw and then Fix M2*24mm Copper pillar on PCB.

9.Install shown steps:

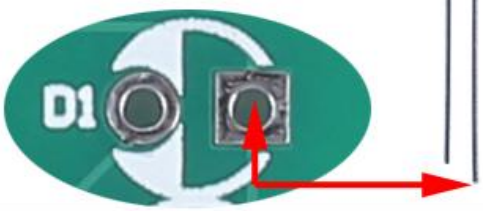
Step 1: Install 4pcs 1Kohm Metal Film Resistor at R1,R2,R5,R6.

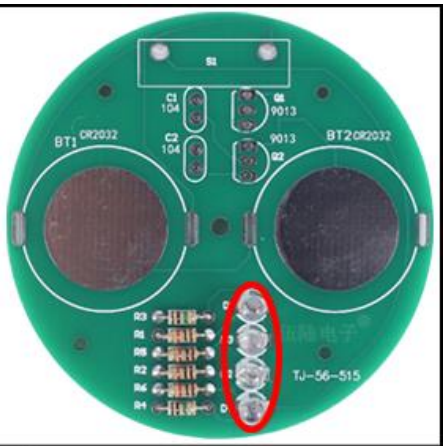


Step 2: Install 2pcs 1Mohm Metal Film Resistor at R3,R4.

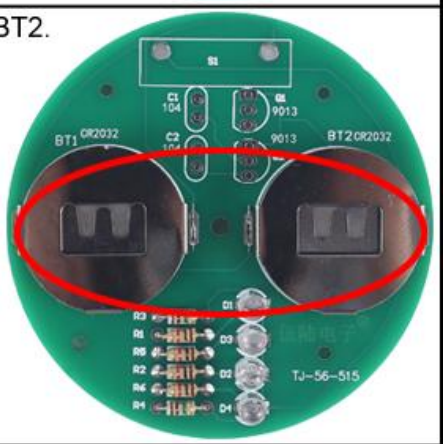


Step 3: Install 4pcs 3mm Red/Green/Blue/Orange LED at D1-D4.
Note: The longer pin connect to square pad.
LED can be installed at any position without distinguishing colors.

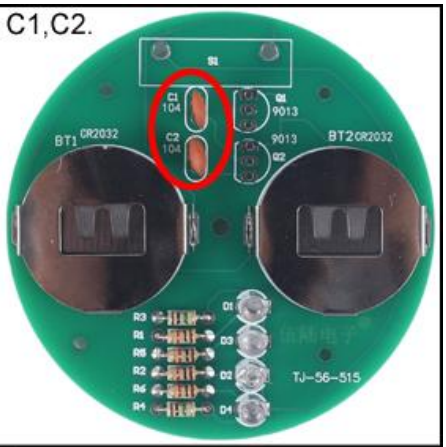




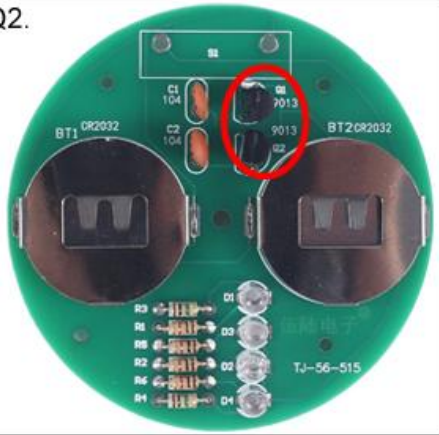
Step 4: Install 2pcs CR2032 Battery Socket at BT1,BT2.



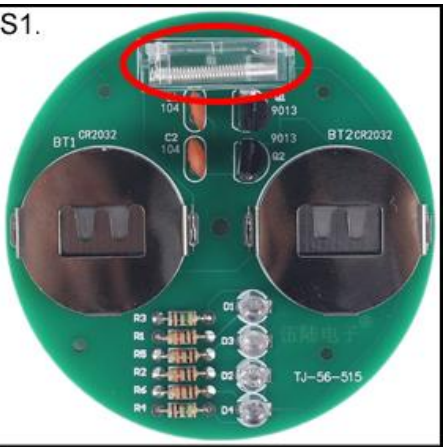
Step 5: Install 2pcs 0.1uF 104 Ceramic Capacitor at C1,C2.



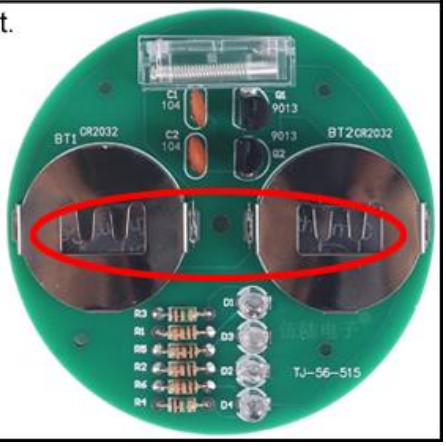
Step 6: Install 2pcs TO-92 S9013 Transistor at Q1,Q2.
Pay attention to the installation direction.
The arc on the PCB corresponds to the
arc of the components.



Step 7: Install 1pcs SW-28020P Vibration Switch at S1.



Step 8: Install 2pcs CR2032 Battery on batter socket.
Positive pole up.
Note:user needs to prepare the battery in advance.



Step 9: Fix M2*4mm Copper pillar on M2*10mm Screw and then Fix M2*24mm Copper pillar on PCB.