

# LSD-73

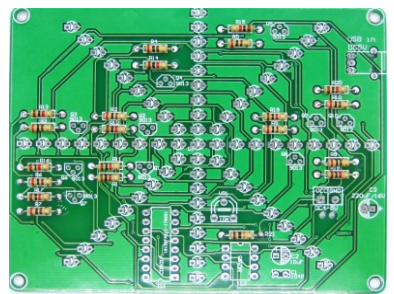
Rev. 1.0

Starlight water kit instructions  
June 6, 2017 Produced by yiqi

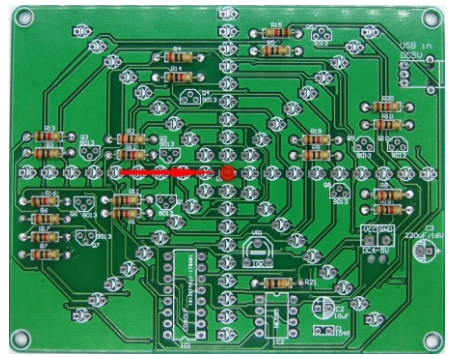
- Tools you need:
- ① Iron (30W)
  - ② Solder wire
  - ③ Multimeter
  - ④ Tweezers
  - ⑤ Wire cutters

- Precautions:**
- ① Check part values & quantities against part list
  - ② Always meter resistor values before soldering
  - ③ Understand all part polarities and orientations

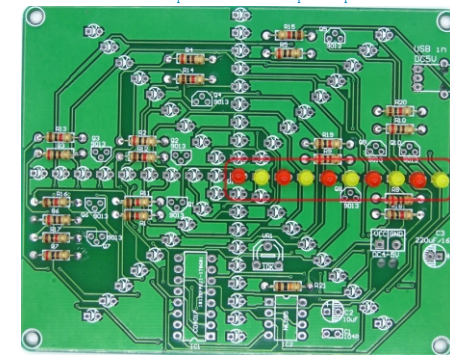
1. Install RES:200 ohm resistor install on R2--R10 pad  
1K ohm resistor installed to R1, R2--R10 pad.  
10K ohm resistor installed to R21 pad.



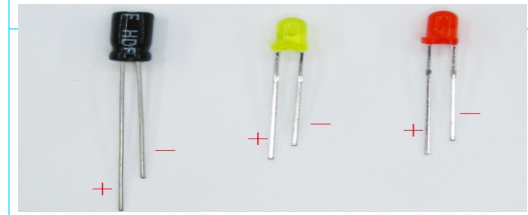
2. Install a red LED to D1



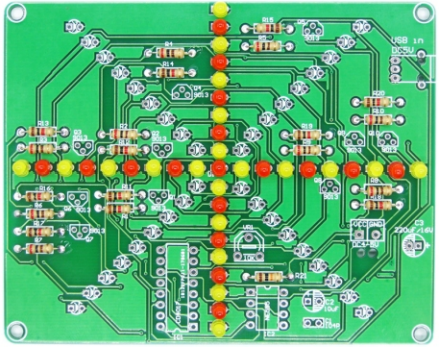
3. Left to right, red, yellow, red, yellow in order Install LED  
The LED's anode corresponds to the square pad



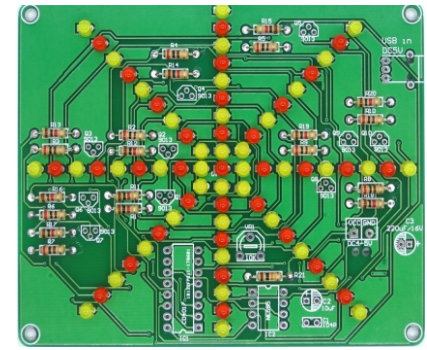
Warning  
polarity parts, for example LED, Electrolytic capacitor diodes, anode Pin welding rectangle Pad.:



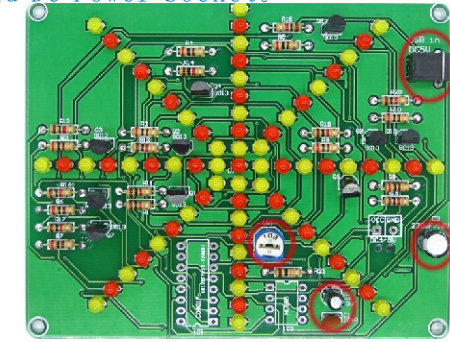
4. Red - yellow - red - yellow - continues to install LED



5. installation completes all LED



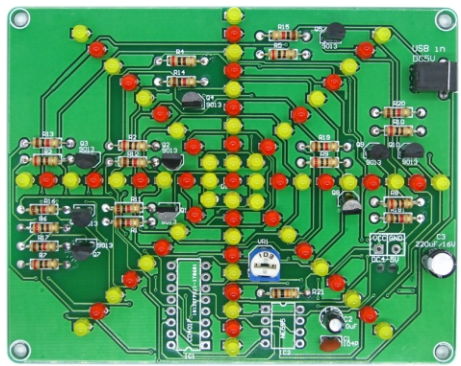
6. Install adjustable resistance, cap, Electrolytic capacitor and DC Power Socket.



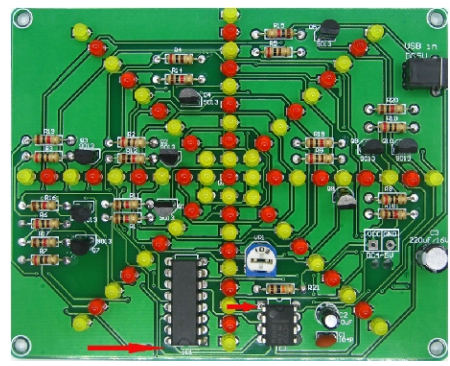
## LSD-73 Component list

NO.	Name	Model	QTY
C1	Cap	104pF	1
C2	E. C	10uF	1
C3	E. C	220uF	1
—	LED	Red/3mm	33+7
—	LED	Yellow/3mm	40
Q1-Q10	Triode	9013	10
R1, R11-R20	RES	1K	11
R2-R10	RSE	200R	9
R21	RSE	10K	1
IC1	I. C	CD4017	1
IC2	I. C	NE555	1
VR1	Potentiometer	10K	1
—	USB TO DC Line	0.8M	1
DC in	Socket	3.5mm	1
—	PCB	100mm*80mm	1
—	Battery BOX (Choice)	1.5V*4	1

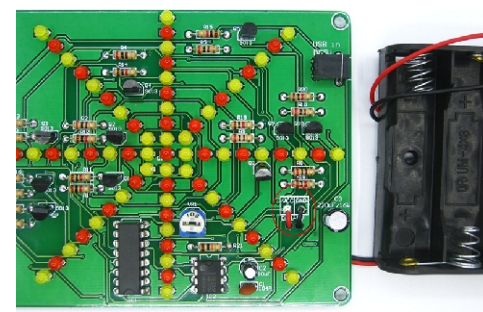
7. Install S9013 triode To Q1--Q10 position Pads.



8. Install integrated circuit. Be careful Pin direction

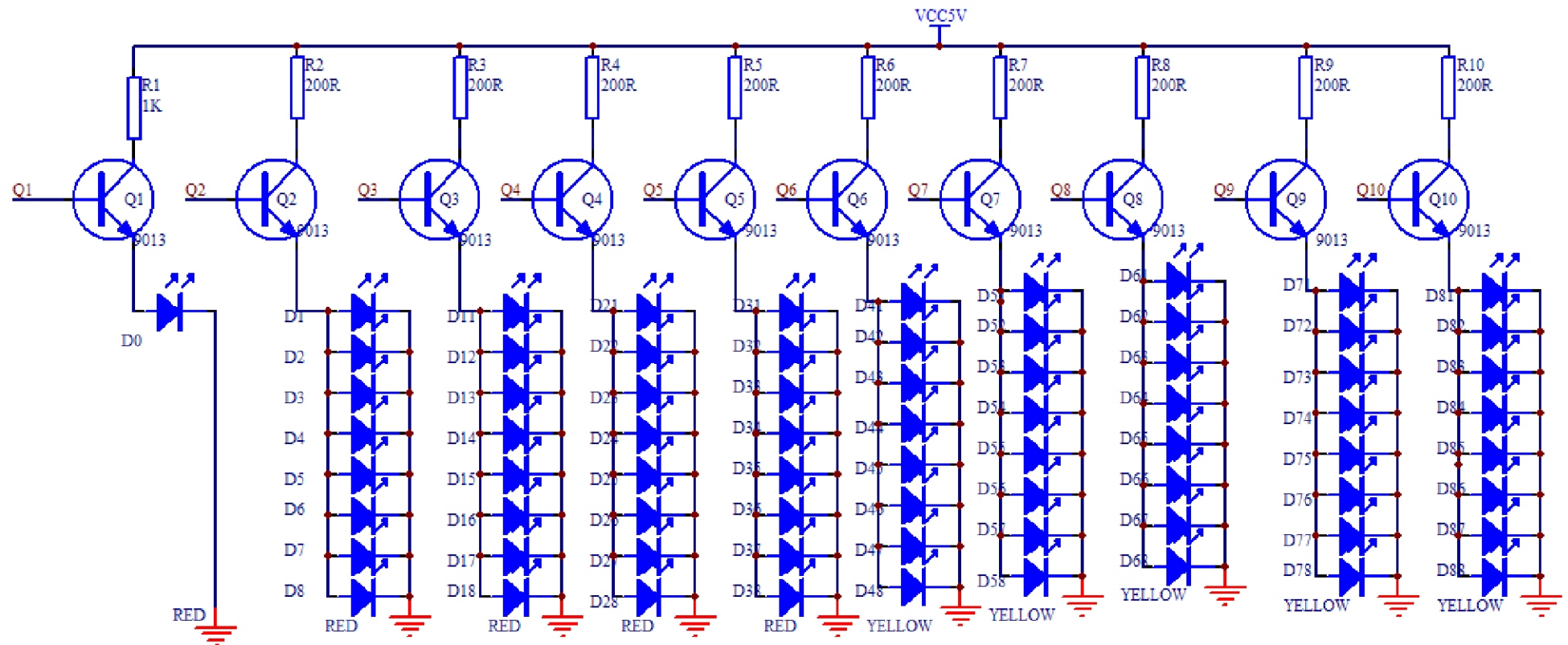


9. Solder the battery box red line on the VCC.  
The black line is welded to the GND  
Check the direction of the PCB capacitor



PS: Give 7 LED.

# Schematic



益奇电子

