Electric Motor model DIY Kit

1. Introduction:

This is a simple DC motor model to demonstrate the DC electric motor working principle. It can be taken apart and reassembled, when powered with DC 3-6V voltage. It will rotate like a real electric motor ideal for school scientific projects or physics teaching.

2. Features:

1>Easy installation;
2>Rare accessories;
3>Experimental display;
4>Obvious effect;
5>Wide applicability.

3. Parameter:

1>Product name: Electric Motor model DIY Kit;
2>Model: J24018;
3>Working voltage: DC 3.0V-6.0V;
4>Material: plastic + metal;
5>Use: To study magnetic lines of force;
6>Magnet size: 22*20*20mm (0.86*0.79*0.79 inch);
7>Magnetic flux density: >=72mT;
8>Operating Temperature: -20℃~70℃;
9>Operating Humidity: 5%-90%RH;
10>Installed size:14*9*10cm (5.51*3.54*3.94 inch).

4. Function:

1>Manual installation allows the user to understand the main structure of the electric motor.

2>Verify the relationship between rotor rotation and current direction and magnetic lines.

3>Master the principle of motor operation.

5. Component listing

NO.	Component Name	Parameter	QTY
1	Plastic Casing	14*9*1.8cm	1
2	Rotor	Installed	1
3	Switch Commutator	Installed	1
4	Armature Coil	Installed	1
5	Rotor bracket	White	2
6	Pulley	White	1
7	Magnet Bracket	Installed	1
8	Permanent Magnet	22*20*20mm	1
9	Electric Brush	Copper sheet	2
10	Terminal	Red + Black	2
11	M3 Screw	M3+12mm	10
12	M3 Nut	D3mm	10
13	M4 Screw	M4+12mm	2
14	M4 Nut	D3mm	2
15	Mini Spanner	White	1
16	Wiring	15mm Red + Blue	2

6. Use steps:

1> Finish install as following install manual;
2> Connect to DC 3.0V-6.0V at two cable;
3> Observe the work situation;

7. Application:

1>Education;
2>School;
3>Manual DIY;
4>Gift.

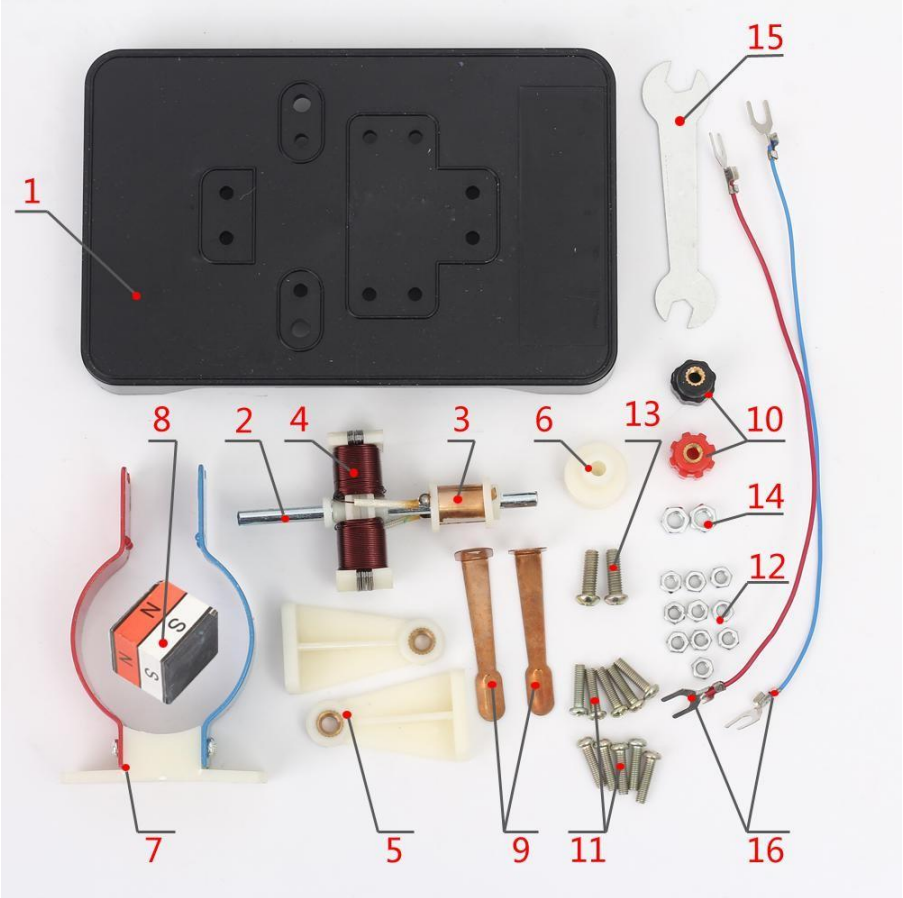
8. Note:

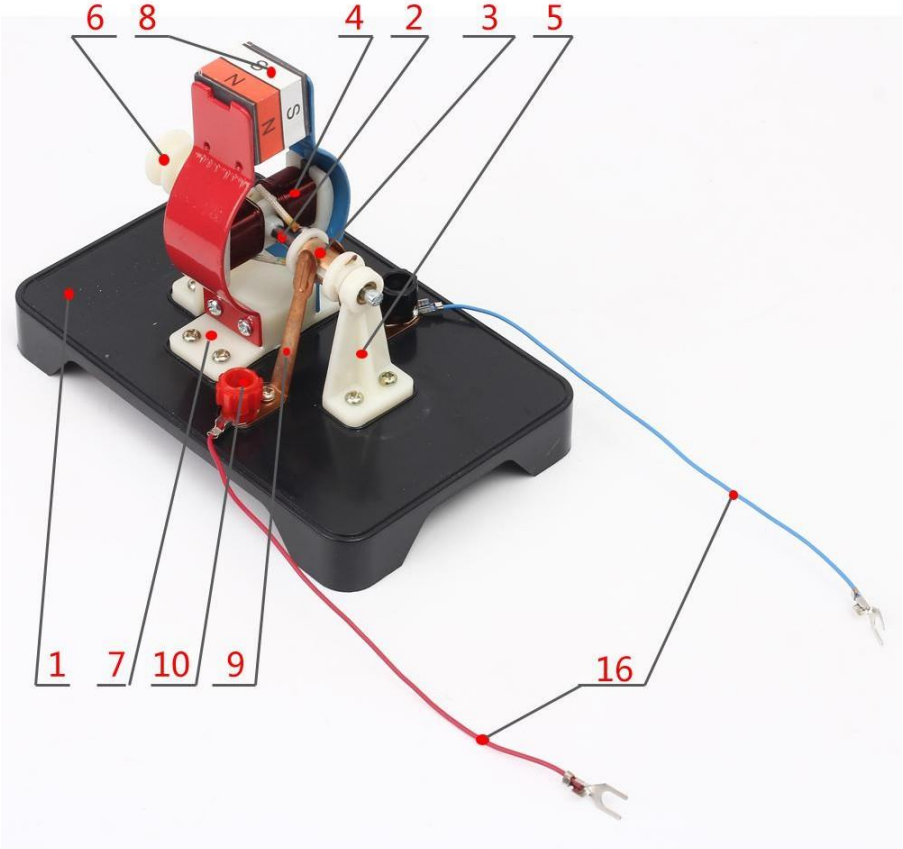
1> DC electric motor experiment: input 3V - 6V DC through wires and terminals, the coil will be rotating, and speeds up when voltage is increased.

2> To avoid a short circuit, the two electric brushes should never touch the commutator segment.

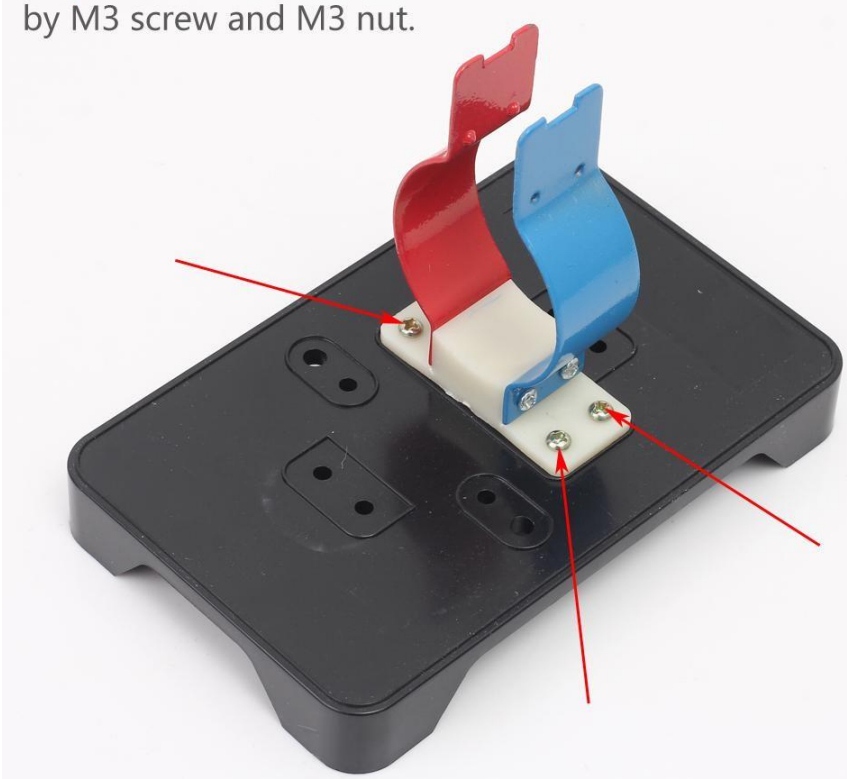
3> Its working voltage is DC 3.0V-6.0V. **And DC12V is not recommended.**

9. Installation Steps:

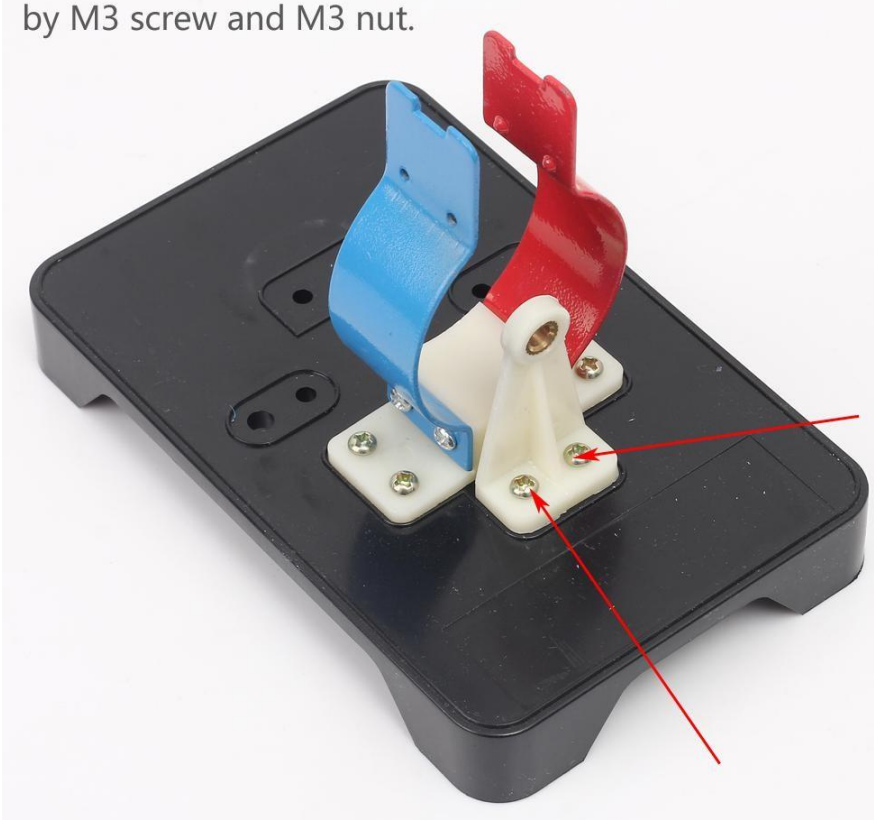




Step 1: Install Magnet Bracket on Plastic Seat and fixed by M3 screw and M3 nut.

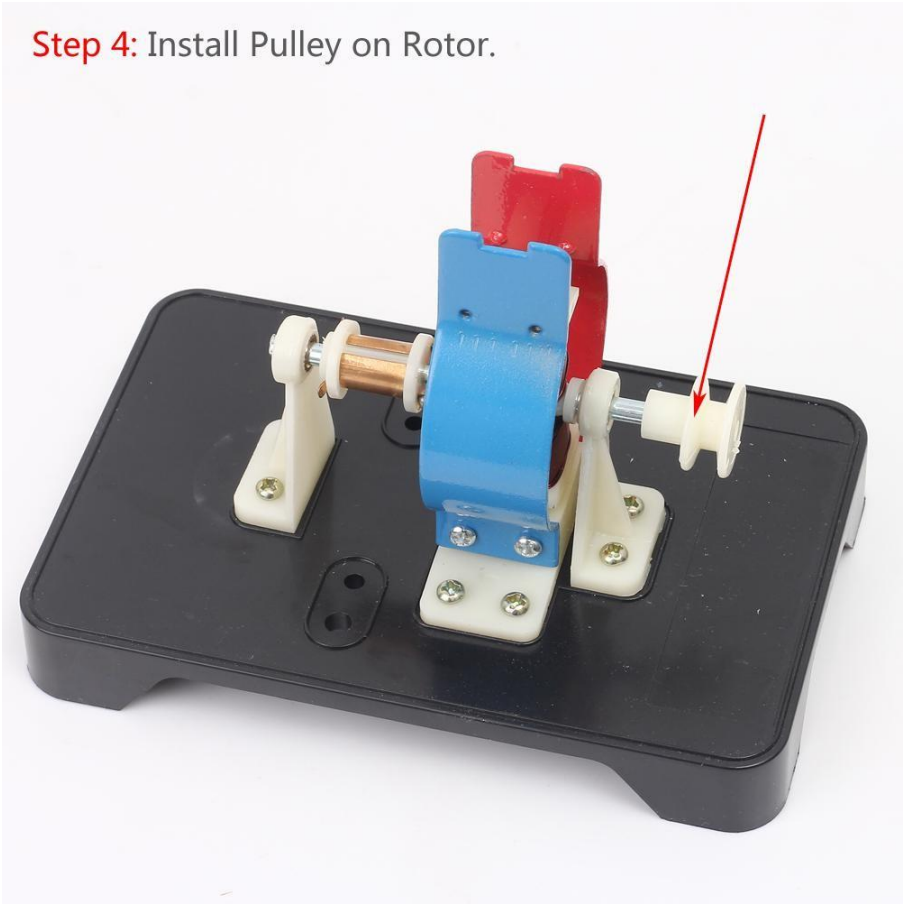


Step 2: Install 1pcs Rotor bracket at first and fixed by M3 screw and M3 nut.



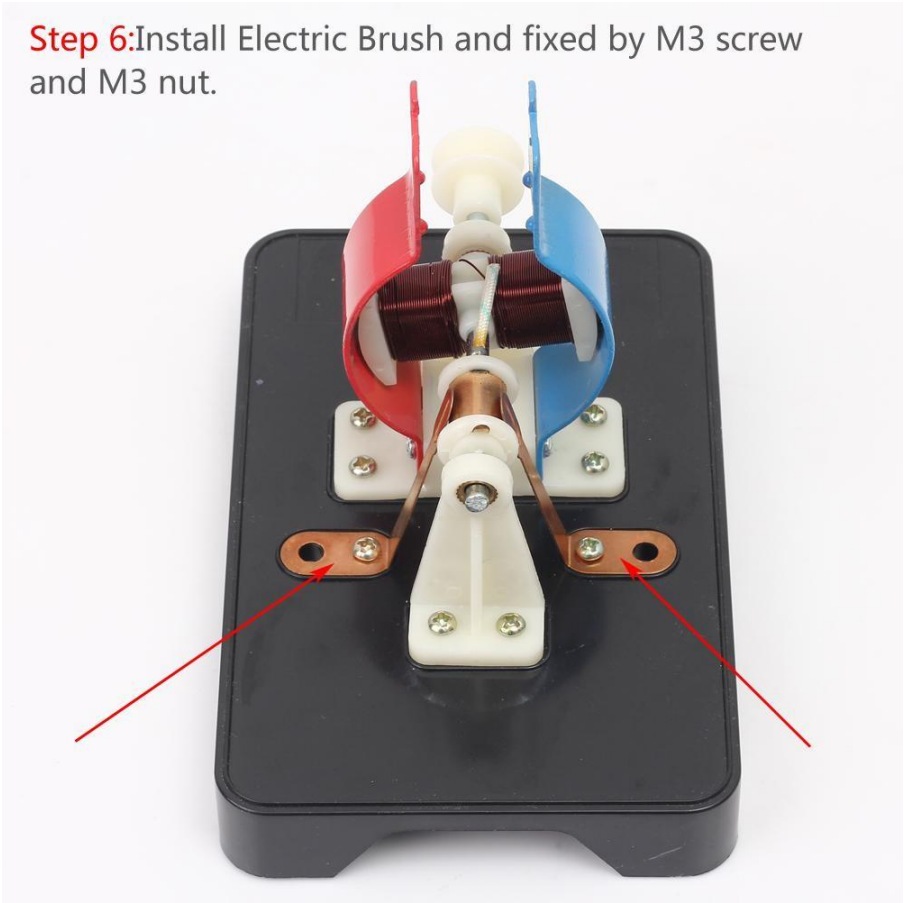
Step 3: Install another Rotor bracket and Rotor/Commutator/Armature Coil and fixed by M3 screw and M3 nut.

Step 4: Install Pulley on Rotor.

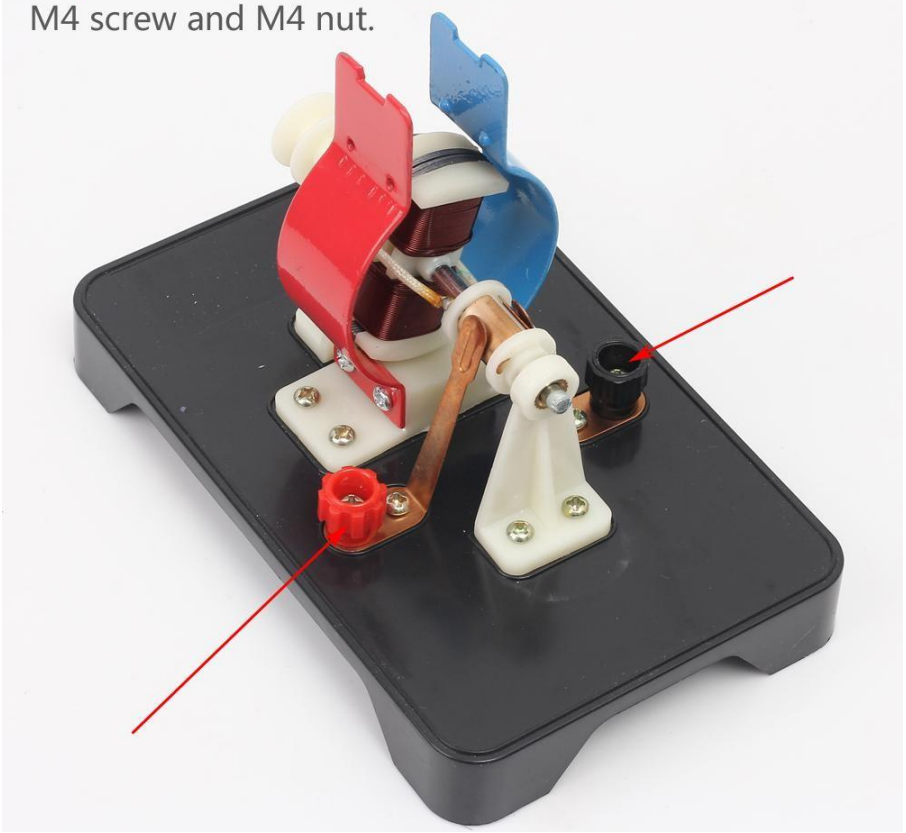


Step 5:Bend the angle of the Electric Brush.

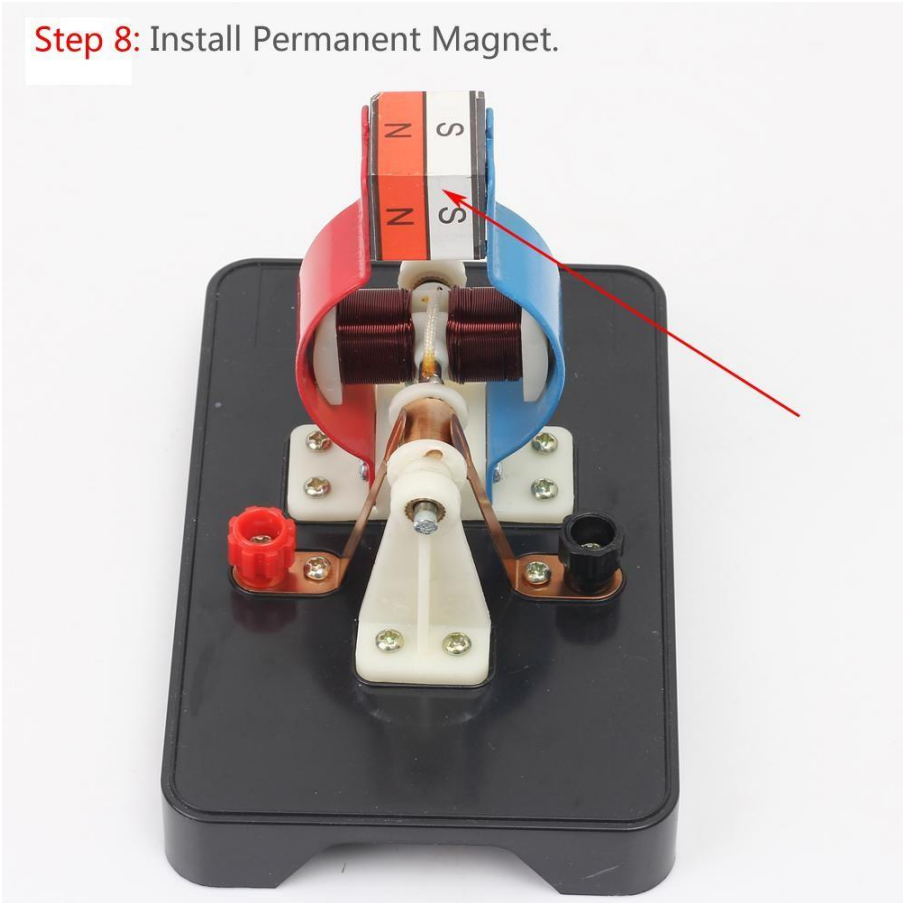
Step 6:Install Electric Brush and fixed by M3 screw and M3 nut.

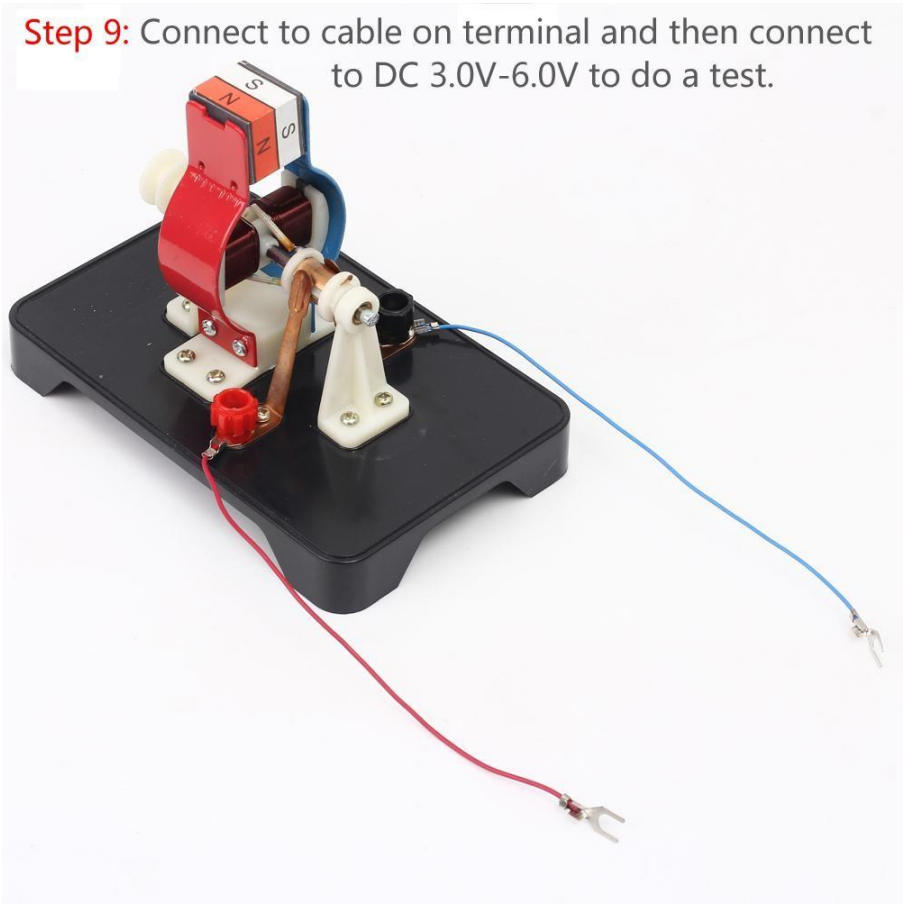


Step 7:Install Red+Black Terminal and and fixed by M4 screw and M4 nut.



Step 8: Install Permanent Magnet.




Step 9: Connect to cable on terminal and then connect to DC 3.0V-6.0V to do a test.
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