# Instructions for the Use of YSCZ-18 Tesla Coil

#### **Product introduction:**

This is a small music Tesla coil. It not only has a variety of functions to play, but also an exquisite electronic handicraft, which can be used for decoration and decoration.

## matters needing attention!

Tesla coil will generate high-frequency and high-voltage electric field when working, which may interfere with some sensitive electrical appliances and lines. Therefore, it is best to put Tesla coil away from sensitive electrical appliances and lines. In addition, the arc at the top of Tesla coil belongs to high-temperature plasma, so you need to stay away from inflammables and explosives. At the same time, don't try to touch the arc and coil with your hands. Although you won't get an electric shock, you may burn your hands.

### Usage method

**Step 1:** Open the package and check the products and accessories, which include Tesla coil, switching power supply, 3.5mm audio line, discharge needle, ion windmill accessories, ion wreath accessories, neon lamp and two instructions.

**Step 2:** Test the music playing function, install discharge needle on Tesla coil, plug in power supply, connect Tesla coil, open power switch, Tesla coil starts to work. One end of the audio line is plugged in Tesla coil, and the other end is connected to a music output device (mobile MP3 computer, etc.). Play music on the device, and the music will be emitted from the arc.

If you purchased a Bluetooth version, when the coil is powered on, turn on the Bluetooth settings of the mobile phone, search for a Bluetooth device named yskj-18a, and then make a pairing link. After the link is successful, you can use the music playback function within a certain range. Note: the audio cable cannot be inserted when using Bluetooth function.

**Step 3:** Test the spacer lighting. Hold the metal foot of the neon lamp in your hand and slowly approach the Tesla coil. When the neon lamp reaches a certain distance, the neon lamp will glow. If you have other gas-containing lamps (such as fluorescent incandescent lamp, part of the rare gas lamp), you can also do the same with the open-air lighting experiment. When the top of Tesla coil is not placed with any accessories, it will not generate arc, and can improve the distance and effect of the lighting, but it is not recommended to use this operation for a long time!

**Step 4:** Test the ion windmill, turn off the power switch and stop the Tesla coil. Remove the top discharge needle and put on the ion windmill accessories. Then turn on the power switch and the Tesla coil works. The arc will eject from both ends of the ion windmill accessories and start to drive the windmill to rotate.

**Step 5:** Test the ion wreath, turn off the power switch and stop the Tesla coil. Remove the ion windmill accessories and install the ion wreath accessories. Then turn on the power switch, the Tesla coil works, the arc sprays from the top of the ion wreath, and because of the instability of the thin wire of the ion wreath, it begins to shake and scratch. If we start the delayed shooting function when the ion wreath starts to eject arc (the delay is set to about 3 seconds), then we will take a cool picture.

#### Principle introduction

- 1. Principle of plasma loudspeaker: Audio signal modulates the working voltage of Tesla coil through circuit. When music signal is input, the working voltage of Tesla coil will change with the rhythm of music, thus affecting the intensity of air heated by arc, resulting in the vibration of air along with music signal, which produces music sound wave.
- **2.Principle of insulating lighting:** Tesla coil will produce a high-voltage and high-frequency pulsed electric field. When the gas lamp enters this electric field, the gas in the lamp will be broken down by the high-voltage electric field and flow through the weak current, so as to emit light. The distance and effect of lighting are related to the intensity of electric field and the density of gases in lamps.
- **3. Ion windmill ion wreath principle:** arc heating air will make air flow, thus generating thrust, make windmill rotation, make the wreath shake.