

# Instructions for the Use of Tesla Coil

## Product introduction

This is a multi-functional small Tesla coil, Tesla coil can produce a high frequency and high voltage electric field, and through the discharge end to generate arc. High-frequency and high-voltage electric field can excite some lamp containing gas, so that the lamp can light up, which is to light the lamp separately from the sky. At the same time, this Tesla coil adds audio modulation to the circuit, so when a music signal is input, the arc will emit music sound and become a plasma loudspeaker. The top of this coil is designed with different discharge terminals which can be replaced, thus achieving the effect of ion wreath of ion windmill.

## 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.

**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.

*Thank you for your appreciation of the product! If you have any questions, please contact Sales Customer Service.*

## FCC Warning

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.