

## YSKJ-18A Bluetooth Plasma Music Tesla Coil

### 1.Introduction:

YSKJ-18A is a Bluetooth Plasma Music Tesla Coil. Every time the Tesla coil discharges, the air vibrates. When the frequency of the discharge changes, the frequency of the vibration also changes, resulting in different tones which the ordinary spark gap Tesla coil can't do it. Generally, solid-state Tesla coil is used. There is an arc extinguishing circuit board that controls the Tesla coil inside. Through that circuit board, the frequency of discharge can be controlled. If the music signal is input, the music will be released. It not only has a variety of functions to play, but also an exquisite electronic handicraft which can be used for decoration and funny.

### 2.Feature:

1>.Plasma Speaker Play Music: It can not play music in any format from Bluetooth but also from AUX audio input socket which combined amplifier circuit and Tesla circuit. The audio signal control the discharge arc, so that the air vibrates to produce different music, forming a plasma amplifier speaker.

2>.Continuous Discharge Arc: Secondary coils are epoxy coated for greater durability and beauty. Built-in cooling fan and large aluminum heat sink ensure that it can work continuously discharge arc for a long time.

3>.Multi-Function & Multi-Funny: Removable secondary coil. Different accessories can be placed on top of the coil to achieve different effects.Plasma music speaker, Plasma Wreath, Plasma Circles, Plasma windmill, Non-contact turn ON light and so on to get a variety of very gorgeous effects.

4>.Easy Operate: You will receive a finished Tesla coil and accessories. The accessories include a power cord and so on which you just need to connect the power, so that you can have a very interesting and cool desktop toys.

5>.Prefect for Gift: This musical Tesla coil is perfect for your desktop toy, and the Bluetooth music sound quality is perfectly suited to your daily needs. It's also perfect as a gift for friends, colleagues, etc. They will be happy to have such a fun gift.

### 3.Parameter:

1>.Item name: YSKJ-18A Bluetooth Plasma Music Tesla Coil

2>.Work voltage:DC 30V 3A(Include AC 100V-240V to DC 30V adapter)

3>.Work power:90W(Max)

4>.Work Temperature:-40℃~85℃

5>.Work Humidity:0%~95%RH

6>.Tesla Coil Size(Installed in Highest):85\*85\*220mm

### 4.Function:

1>.Non-contact turn ON light. Tesla coil can generate a high-frequency high-voltage electromagnetic field. The gas inside the lamp receives the magnetic field and starts to glow when the lamp containing inert gas is close, thus achieving the effect of switching and controlling the brightness. The closer the lamp is, the higher the brightness.It can light neon lamp, energy-saving lamp, Fluorescent lamp, flash tube.It can do wireless transmission experiment and can create rotating arc.

2>.Plasma speaker play music. It combines amplifier circuit and Tesla circuit. The audio signal control the discharge arc, so that the air vibrates to produce different music, forming a plasma amplifier speaker.

3>.Plasma windmill. The arc is a high temperature plasma, which can discharge from both ends of the metal discharge electrode, thus heating the air and thus generating thrust to make it rotate, thus forming the effect of a plasma windmill.

4>.Plasma Wreath/Circles.We provide a thin elastic metal wire as the discharge electrode. When the coil starts to work, the top of the metal wire starts to spray an arc to generate thrust, causing the wire and the arc to shake and rotate, forming an plasma wreath or circle. Start the delay photography function of your phone to get very gorgeous photos.

5>.Plasma Arc. It can discharge directly through the discharge needle to form a plasma flame.

### 5.Operation Method:

Step 1: Open the package and check the products and accessories, including 1 Tesla coil, 1 power supply (including power cord), 1 audio cable, 1 metal ball, 1 incandescent lamp, 1 discharge needle, 1 ion windmill, 1 ion wreath, 2 neon lamps.

Step 2: Test the music playing function. Install a metal ball and a discharge needle on the Tesla coil,

first connect the power adapter, then connect the output end of the power adapter with the Tesla coil, and the Tesla coil starts to work. One end of the audio cable is plugged into a Tesla coil, and the other end is plugged into a music output device (mobile phone, MP3 computer, etc.) to play music on the device. At this time, the arc will make music sound. If you test in Bluetooth function, 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. After the pairing 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.

Step 4: Test the ion windmill, unplug the output line of the power adapter and stop the Tesla coil. Remove the top metal ball and discharge needle, and put on the ion windmill accessories. Then plug the Tesla coil into the power supply. When the Tesla coil works, the arc will be ejected 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 garland accessories. Then turn on the power switch, the Tesla coil works, and the arc is ejected from the top of the ion rosette. Due to the instability of the thin line of the ion rosette, it begins to shake and circle. If we start the long exposure shooting function (the exposure time is set to about 2 to 4 seconds) when the ion garland starts to emit an arc, we will take a cool picture.

## 6.Principle:

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.

## 7.Application:

- 1>.Student school
- 2>.DIY production
- 3>.Project Design
- 4>.Electronic competition
- 5>.Graduation design
- 6>.Artwork decorations

## 8.Note:

1>.NOT touch arc or circuit when working!

2>.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.

3>.The arc at the top of Tesla coil belongs to high-temperature plasma, so you need to stay away from inflammable 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.

4>.Tesla coils work in a strong magnetic field and strong electric field so that the surrounding metal objects, including wires, cables, and nearby electronic equipment will generate an induced current and maybe generate strong electromagnetic radiation. As a result, the start-up experiment may lead to life-threatening failure of these devices as they are carried by implantable/non-implantable electronic medical devices. Those with pacemakers are not allowed. Those with pacemakers please stay away from the equipment.

## 9.Package:

- 1>.1pcs YSKJ-18A Bluetooth Plasma Music Tesla Coil

- 2>.1pcs AC 100V-240V to DC 30V 3A Power Adapter
- 3>.1pcs Power Supply Plug Wire
- 4>.1pcs 3.5mm AUX Male to Male Audio Wire
- 5>.1pcs Discharge Needle
- 6>.2pcs Neon bubble
- 7>.1pcs Plasma Windmill
- 8>.1pcs Plasma Wreath
- 9>.1pcs Metal Ball
- 10>.1pcs Incandescent lamp