# POWER OUTFLET INDEPENDENCE PROGRAM



(No Model.) No. 512,340. Patented Jan. 9, 1894.

Inventor Mikola Testa

Thank you for trusting our product. Because you trust us, I'd like to return the favor by presenting you a project based on Tesla's visionary invention. This invention was ment to I hope this project will mean a lot in terms of mobility, reliability and independence, regarding your energy independence.

Adam Bernard

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# **CHAPTER 1. INTRODUCTION**

### a. NIKOLA TESLA – A GENIUS BORN UNDER A BAD SIGN

July 10, 1856 – in the small village of Smiljan (Croatia today) ... from a father priest and a mother artist Nikola Tesla was born, on a stormy night. His mother



From early childhood the boy proved to a genius. Before going to elementary school Nikola amazed his parents: the obsession for making home craft tools, mechanical appliances and the ability to memorize Serbian epic poems were things that he was doing all day long at the age of 6.

In school, he was always learning from 3 AM to 11 PM. No weekend or holidays... and concerned even the professors that he might die from exhausting.

For Nikola it was normal... and he was having the time of his life.

Soon he quits on school because he felt that he was not progressing... and decides to come to the US and work for the great Thomas Edison in design and improvement to electrical equipment. Tesla makes his genius remarked shortly and tells Edison that he could redesign Edison's motors and generators... making an improvement in both service and economy.

Edison laughed and said:

### "There's fifty thousand dollars in it for you... if you can do it" (In 1882 ... \$50, 000 was the equivalent of \$1.3 Million today).

Tesla did it ultimately... Edison refused to pay him... saying

### "Tesla, you don't understand our American humor".

Tesla resigned and founded his own company "Tesla Electric Light & Manufacturing".

The company installed electrical arc light based illumination systems and also had the designs for dynamo electric machine commutators, the first patents issued to Tesla in the US.

Tesla proposed that the company should go on to develop his ideas for alternating current transmission system and motors. The investors (big banks connected with the energy world at that time) disagree and fired him from his own company... leaving him penniless.

Tesla was forced to work as a ditch digger for \$2 per day. Later he said about that period that was **"terrible headaches and bitter tears"**.

One year later, with the help of some attorney friend Tesla formed the Tesla Electric Company.

Over the next years his company constructed an alternating current induction motor based on a rotating magnetic field. He received patent for the motor in May 1888.

X-ray experimentation was next... and then the radio waves. So next time you listen radio, or you go to your doctor for an x-ray... or even when you're using the electrical stove or the microwave unit... make sure you know it comes from TESLA.

But things were far from running smoothly... and the day that was about to change everything come.

January 9, 1894. Nikola Tesla wakes up in the morning takes all the documentation of a secret invention and heads to the US Patent Office.

Four hours later he's getting out with a big smile on his face. Rumors say that he yelled

### "This will change the energy world forever".

For the next period he worked day and night to fulfill his dream... to make this genius invention applicable for all people.

He needed funds and he invited in his laboratory 5 potential investors for a demonstration of his discovery. Among these five people there were: two bankers, two energy investors... and one president of a very powerful power company at that time.

The "mad man scientist" took out of his bag a weird little device. He turned on a light bulb... and right next to it he put his little device... Then from this little device he plugged in another 15 more light bulbs. The result was incredible. From the same source of energy that was lighting one bulb... he managed, through his weird invention, to give power to 15 more light bulbs.

Bottom line was that for every 100 watts consumed he was able to get at least 500 free watts.

The assistance was in shock. They even searched the device to see if there are any gimmicks.

Tesla said:

"Gentlemen, finance me and help me improve this and all the planet will afford energy".

Although at the first sight they all looked interested... this invention hit them in the back of their head.

March 13, 1895 – On the 5<sup>th</sup> Avenue... at Tesla Laboratory a big fire started... In less than 2 hours the entire building burnt to the ground. Nikola Tesla barely escaped...





Much of Tesla's early research—hundreds of invention models, plans, notes, laboratory data, tools, photographs, valued at \$50,000—was lost in the 5th Avenue laboratory fire. Tesla is quoted by <u>The New York Times</u> as saying,

### "I am in too much grief to talk. What can I say?"

This devastated him.. and although he was pretty sure from where that fire came from... he didn't go to police to press charges. He quit on everything ... didn't care about science anymore...started to gamble and almost got broke.

For the next period... He went in his natal village in Smiljan (Croatia) with all the papers that he could save and started a new life.

The truth is that Tesla never recovered mentally from this event...and even he continued his projects and research... he decided to quit on the project that was about to give very cheap energy to people.

On January 7 1943 Tesla dies alone in a hotel room in New York.

# Nikola Tesla Dies At 85 Alone in His Hotel Suite

# Celebrated Inventor, Born in Yugoslavia, An Electrical Wizard

Nikola Tesla, 85, inventor of the Tesla coil, the induction motor and hundreds of other electrical devices, died last night in his suite at the Hotel New Yorker. According to hotel officials, he had been in failing helath for two



Power companies made sure that his name was forgotten and became popular again in the 1990's.

#### b. Patent no 512340 January 9, 1894

(No Model.)

N. TESLA. COIL FOR ELECTRO MAGNETS.

No. 512,340.

Patented Jan. 9, 1894.



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### **CHAPTER 2. TOOLS AND COMPONENTS**

We present you the power amplifier based on Tesla's Patent from 1894.

In order to build this, you'll need the following tools:

- Soldering gun
- Solder
- Pickling paste
- Plug
- Wire strip pliers
- Normal pliers
- Screwdrivers
- Scissors
- Isolation tube
- Superglue adhesive
- Power monitor outlet
- 1,2 1,5mm stranded wire approximately 10m
- Ruler
- Pen

### Others:

- 500-1800Watts Induction Cooktop
- Cardboard Pieces

# **CHAPTER 3. CONSTRUCTING THE COIL**

In order to assemble the coil, we will use the markings on the induction cooktop. Therefore, the size of the coil mustn't exceed the maximum mark (the lines positioned on the top exterior sides of the markings).

We measure the outside diameter (in this case it's 25cm). We will use a coil with the diameter of 20cm. Then we'll mark on the cardboard, the necessary 20cm for the coil's diameter. Next, we'll cut out this cardboard support in a square shape, using the scissors. After spotting the center of this square, we mark it with a pen.

We will now take the stranded wire and after leaving out 20-30cm of it, we start winding the wire, as seen in the picture of this tutorial. Following, we'll fix the wire with a fast adhesive. Please be patient, until the adhesive has come into effect. Then, continue winding the wire and use the adhesive to fix it. The winding is done the moment we get to the 20cm diameter that we initially considered.

**HINT**: For high efficiency, the size of the coil must be equal to the size of the one inside the induction cooktop. In this case, our goal is to overamplify the absorption power 2-3 times.

After fixing the first spires, you can rotate the cardboard support, for higher efficiency when winding. Make sure the spires are positioned right next to each other and fixed with fast adhesive.

Warning: Try not to touch the adhesive with the tip of your fingers. In case this happens, make sure you have a wet cloth on hand.

Also, keep the same color you used for the outside (in this case, black).

As the coil's diameter increases, for an easier handle, first fix the last spires, advancing to the center, where there is no adhesive.

For the last layer, make sure you apply enough adhesive to keep everything together. In the end, we'll have a nice circular coil.

After the adhesive has dried and the coil is fixed, we will release the wires from the cable, as seen in the video.

The inside black wire will be connected to the outside red wire. Make sure you cut the ends to a reasonable size and strip the ends which need to be connected. We will use a contracting tube for better isolation. Be sure to use this before connecting the two wires.

First twist the wires and then use the soldering gun to connect them.

For higher adhesion, we will use pickling paste and then do the soldering. Then, use the isolation tube as a cover, which you'll warm up with a lighter or the soldering gun. You can also use insulating tape, but make sure the insulating layer is thick enough.

The other 2 ends will be connected to a dismountable plug. They will be attached as seen in the picture. Then, they'll be fixed with bolts. Make sure everything is well secured.

We will then fix the wires to the plug's case and remount the bolts of the cover.

To secure the assembly, we will use insulating tape.

This is all surprisingly simple, right? Our device is now ready.

The other induction coil is positioned inside the induction cooktop. As you can see, this is a new one with no signs of usage and it will secure the second component of our amplifier.

## **CHAPTER 4. MEANS OF OPERATION**

So, we now have the assembly with the coil (to which we have connected a plug) and the induction cooktop. The induction cooktop with be plugged into the power monitor outlet.

For testing, we used a 10 bulb x 100W assembly connected in parallel and another assembly with 3 halogen bulbs, 500W each. We will also use 2 electric water heaters, as consumers.

When you want to buy an induction cooktop, you will find 2 versions: one where the induction starts automatically when the induction cooktop is on and another one, where the induction starts the moment a metallic vase is place on the induction cooktop (to protect children). We used the second version and therefore we need the metallic vase.

As soon as the induction starts, we will remove the metallic vase and place the coil that we previously built.

Please notice that at this point, the induction cooktop consumes 1680W and at the other end, we have 3500W consumed power. Also notice that the bulbs are at their normal capacity and in the water vase, we can already see the babbles, as the consumers are heated. If we try to decrease the power consumption of the induction cooktop (decreasing its absorption power to 1400W), you will notice that the light of the bulbs will also lose intensity.

As you can see, the induction cooktop does not get hot on the edges, so the assembly can be touched with no problem. Also, all contacts are in sight.

**Observation:** <u>The best efficiency will be obtained</u> when connecting on the coil's output, <u>consumers with internal resistance</u>: bulbs, cooktops, AC units, refrigerators, electric stove, electric heaters. You can use other types of consumers as well, but the efficiency will be lower.

Thank you for your attention and your trust. We hope you'll use this device for as long as you need.

# **CHAPTER 5. FINAL THOUGHTS**

Warning: This device is electric hazard. That's why all contacts must be properly isolated.

This assembly is working properly for both 220V and 110V, the difference being given by the induction cooktop and its voltage.

In order to increase the efficiency of this assembly, consider the following:

- Make sure the size of the coil is as close as possible to the one inside the induction cooktop
- Make sure you use high quality and high power induction cooktop

Tesla's original patent was for an assembly which included 2 coils and an induction circuit. Nowadays, we can use the induction cooktop as part of the original assembly, because it has the necessary functionality, initially thought up by the great inventor, **Nikola Tesla**.