



#TeslaCoil

Le Clair Obscur

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*An interactive audio-visual installation*

**#TeslaCoil** emits magnetic fields, rendering them visible and driving them to a high voltage peak (up to 45,000 volts). The coil resonates today in all our consciousnesses — in literal as well as the figurative sense — it acts like a blazing antenna, sending data into the air, which attracts a certain technophile interest (by sculpting lightning in a hacking exercise defying the laws of nature) as well as technophobic dread: it makes these electromagnetic fields tangible (WiFi, 3G ...), the ones surrounding us on a daily basis.

The fluorescent tubes surrounding the coil are powered only by the electromagnetic energy it emits. They react in complete synesthesia with the sound produced by the coil. The sound is generated by an electrical arc (a spark gap or output) which is modulated in the moment.

## **The Tesla coil**

The Tesla transformer is a high frequency electrical machine running on alternating current, which allows it to reach very high voltages. It carries the name of its inventor, Nikola Tesla, who developed it in 1891. The equipment consists of two, perhaps three circuits of coupled coils, tuned by resonance. It doesn't have a metal core like a classical electrical transformer: instead it has an air core.

The Tesla coil, as a unit producing high voltages, is used in one form or another in all radio and television receivers. It is also used in every university research lab and in various medical applications.

## **Le Clair Obscur // DYS\_LAB**

Located in Caen (France), le Clair Obscur, led by Frédéric Deslias, is a group of artists and developers working at the crossroads of performing and digital arts.

The question of the human being in a computational environment is the focus of our research. We explore, through hybrid forms and laboratories, sometimes in our pieces, performance pieces or installations, addressing the question of man in the 21st century as well as the future of the forms of performance. Form is essential.

October 2015 - E-Fest - Tunis - © Marie Poussy



The Tesla coil is run with a MIDI controller by a computer which generates sequences which replicate recordings of electromagnetic pulses in the immediate vicinity. It reacts to the presence of the audience. The sound is run via the spark outputs. A MIDI sequence of 30 seconds is triggered by the approach of a spectator, every 5 minutes. 8 to 10 fluorescent tubes hung on stands are placed around the space, and the fluorescents are powered by the electromagnetic fields coming from the coil.

The entire installation and its interactivity are flexible and can be adapted to the context of a particular venue (check with us).

**Necessary space:**

- Exhibition space of 5m x 5m minimum with spike marks (frontal/ bifrontal/ quadrifrontal ...)
- Dim lighting.

**Materials brought by the company:**

- 1 Tesla Coil + 1 Variac
- 1 MacBookPro (AbletonLive+Max/Msp)
- 1 MIDI firewire card MOTU
- Antenna sensor + presence sensor
- 8 wide mic clamps (for the fluorescents)
- 2 sets of noise-cancelling headphones
- 10 fluorescent tubes (check with us)
- 1 inverter module (check with us)

**Touring equipment:** 1 flight case (20kg - 80cm/40/50) + 1 cylindrical tom tom cover (5kg - 60cm/40/40).

**We will need:**

- 4 large black mic stands
- 4 small black mic stands
- 10 standard fluorescent tubes T10 cool white (if we cannot bring them)
- 1 inverter module for the booth (if we cannot bring ours)
- 4 sets of noise-cancelling headphones for the audience (as necessary)
- 1 fan
- Power supply: 2 x 220v/ 16A

**Staff on tour: 1 person** (Frédéric DESLIAS - writer, composer, plastician)

**Security (please check with us):**

- A marked out security perimeter of at least 5m (16') around the coil: There is a minor risk of electrocution
- NO electrical machines allowed inside that perimeter, including iPhones, other cell phones, cameras, and especially **NO pacemakers**.
- The Tesla coil produces a small amount of ozone and leaves a residual odor: please ventilate the area regularly.
- The Tesla coil makes a LOUD but short sound; we offer 4 sets of noise-cancelling headphones or earplugs for the comfort of the audience.

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# CONTACT

**Le Clair Obscur**

82, rue de la Seine  
14 000 CAEN  
FRANCE

**Artistic and technical contact:**

Frédéric Deslias  
[leclairobscur@gmail.com](mailto:leclairobscur@gmail.com)  
+33 (0)6 80 57 38 37

**Administration contact, *Les Indépendances***

Mathieu Hillereau  
[production@lesindependances.com](mailto:production@lesindependances.com)  
+33 (0)1 43 38 23 71

Florence Bourgeon  
[bourgeon.f@free.fr](mailto:bourgeon.f@free.fr)  
+33 (0)6 09 56 44 24



**[www.leclairobscur.net](http://www.leclairobscur.net)**