

LE CHANT DES Mécanique vivante **SIRÈNES** **STREET PARADES**

**MÉCANIQUE
VIVANTE** 



*A mechanical ride over the amazing mutation of the urban siren into a symphonic instrument.
A wandering urban path, on “locomotrices”¹ flapping their tune.*

STREET PARADES

Spread out over two motorized vehicles, the *Clochard Sirens*² orchestra strides through the city's arteries in search of spaces conducive to resonance.

From the morning when romance gently awakens the neighbourhood, until dinner is announced by the brass band, the Sirens' route creates surprise, spreading the rumour of their imminent arrival.

Running through its major boulevards, snaking through its pedestrian heart, the city becomes the stage of artistic ventures:

Inviting, the great colourful stereophonic spiral transforms the roundabout into a bullring.

Ceremonial, the town square welcomes both the concerto³ and its soloist.

Unrestrained, the architectural modernity lends itself to all the possible variations.



Festival Eclat - Aurillac - juillet 2013

¹ Autonomous motorized vehicles whose dynamic suspensions create a drumming effect and prompt rhythmical and orchestrated movements.

² Named after its inventor, the Clochard Siren is a new musical instrument, it represents a wide gap between the acoustic production principles of the 19th century invention and the digital robotics of today. The Clochard Sirens polyphonic orchestra consist of seven instruments: one piccolo siren, two soprano sirens, two altos, one tenor and a bass.

³ Piece of music interpreted with the Sirenium. The Sirenium is a mechanical “wind” instrument whose functional design acts in real time on the control system that manages the tone, the rhythm and the phrasing of each Siren in the orchestra.

Sharing a unique moment

The Street Parades create a fantasy world intertwining the ordinary and the extraordinary, reality and mystery, and daringly combining invention and emotion.

An energy both sweet and wild, carried by the musical story-telling and the acoustic density, combines with the emotions, impressions and jubilant feelings brought out by the world of machinery.

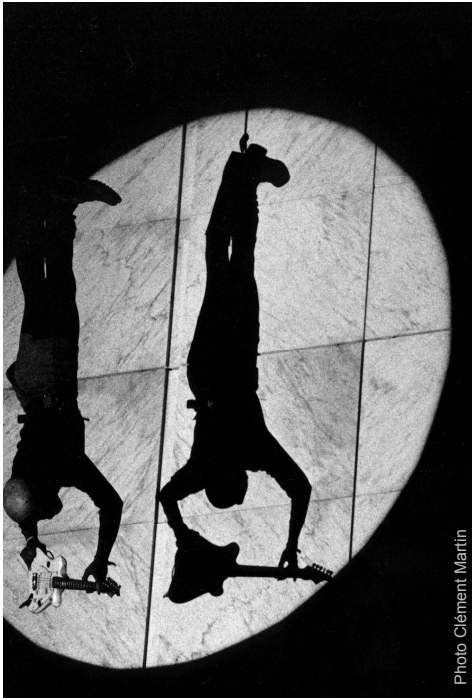


Photo Clément Martin

STREET PARADE AND GUEST SOLOISTS

As if responding the majestic call of the foghorn of the luxury liner "Le France"¹, the show is weaving its own path and is staging its own encounters: trombone duo in the giant horns², Cymbals Virtuoso with Laurence Meisterlin³, Icarian guitar⁴ with Seb Martel.

- ¹ The authentic horn of the luxury liner "Le France", set up amid the urban architectural topography, blows an outstanding A in tune with the musical score.
- ² A mechanical ballet in which two swinging trombones in turn indulge in a sonorous conversation or join in a single blow.
- ³ The encounter of age-old drums with an over-robotised orchestra.
- ⁴ Guitarist performing an Icarian Fall in the middle of a chorus.

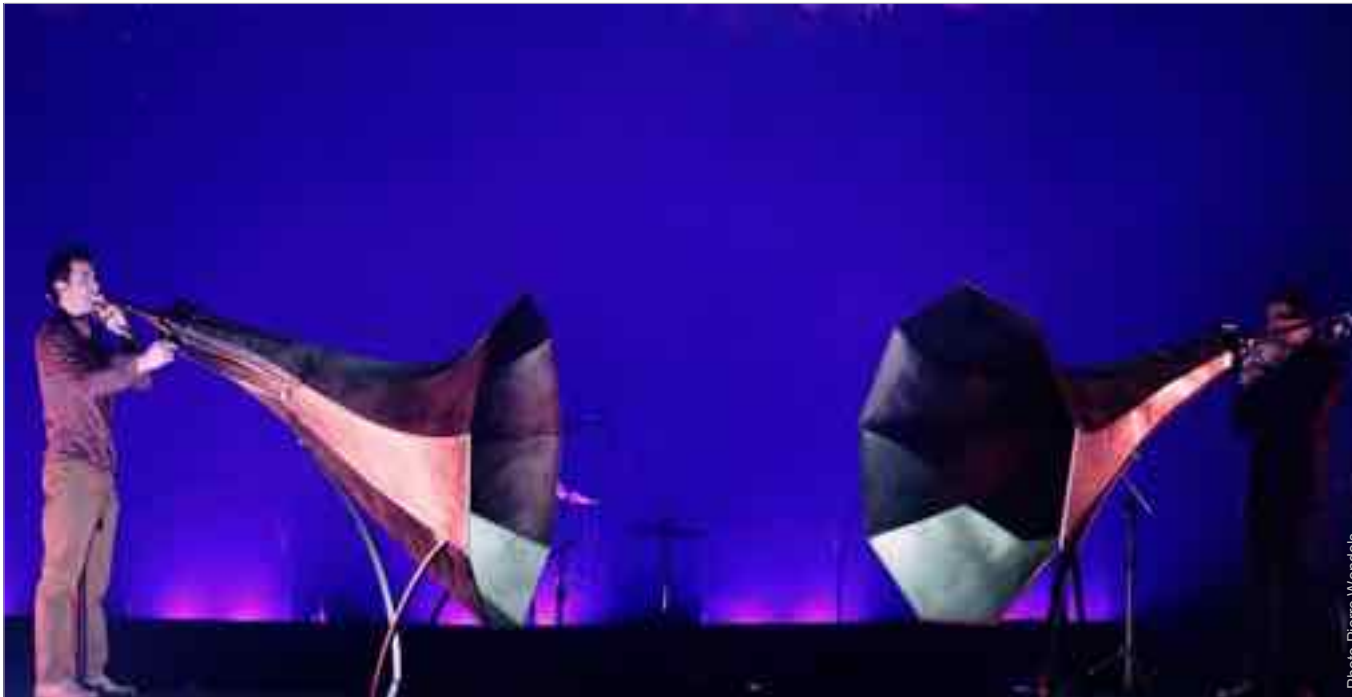


Photo Pierre Wendels



Photo Homework production

History and operation of a new musical instrument

THE CLOCHARD SIREN

Since the French engineer and physicist Charles Clochard de la Tour invented it some 200 years ago, the siren has been a rather subjugating object.

Though initially created to measure acoustic frequencies, it has mainly proven its ability to save populations from imminent danger.

Yet, having gone through Franck Clochard's hands, it turned out to be also an enchanting musical instrument.

HISTORY OF A NEW MUSICAL INSTRUMENT

At that time, Franck Clochard came across his first sirens, amazing machines with a peculiar sound.

He is subjugated by their ability to produce the entire frequency scale and immediately started to imagine polyphonies.

From that moment on started a long and winding technological and artistic voyage, marked by enriching experimentations, encounters and journeys.

Presently, the Sirens Orchestra consists of seven instruments: one piccolo siren, two soprano sirens, two altos, one tenor and a bass.

The orchestra's robotics count 71 auxiliary mechanical systems. They are run by a set of 105 processors that meet the requirements of the musical score.

And that is not all!

In order to fine-tune the polyphonic balance, the company is currently developing a double bass siren.



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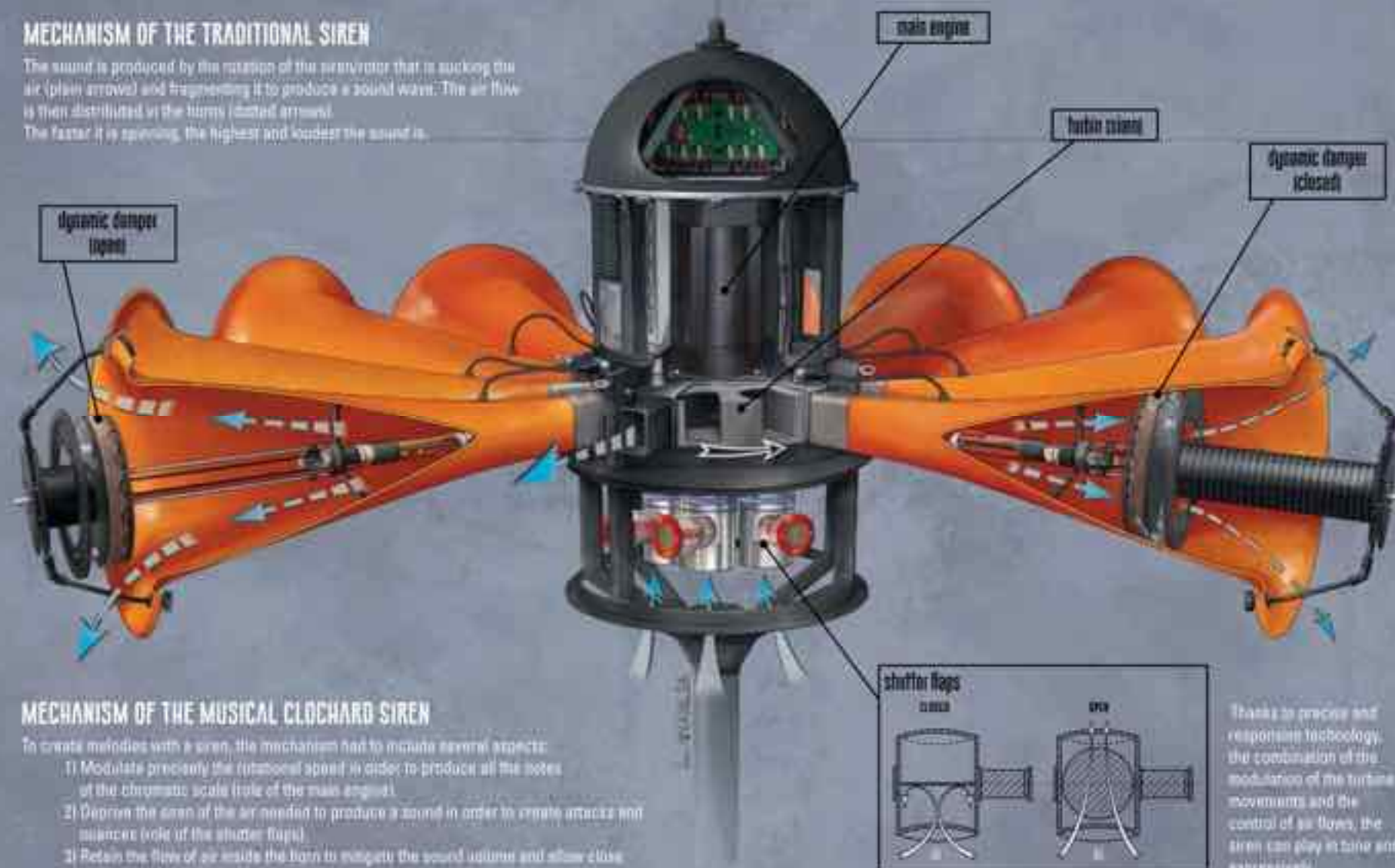
ACOUSTIC INSTRUMENT

MECHANICAL INSTRUMENT

MECHANISM OF THE TRADITIONAL SIREN

The sound is produced by the rotation of the wye/vortex that is sucking the air (plain arrows) and fragmenting it to produce a sound wave. The air flow is then distributed in the horns (dotted arrows).

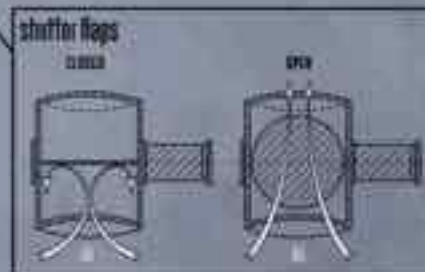
The faster it is spinning, the highest and louder the sound is.



MECHANISM OF THE MUSICAL CLOCHARD SIREN

To create melodies with a siren, the mechanism had to include several aspects:

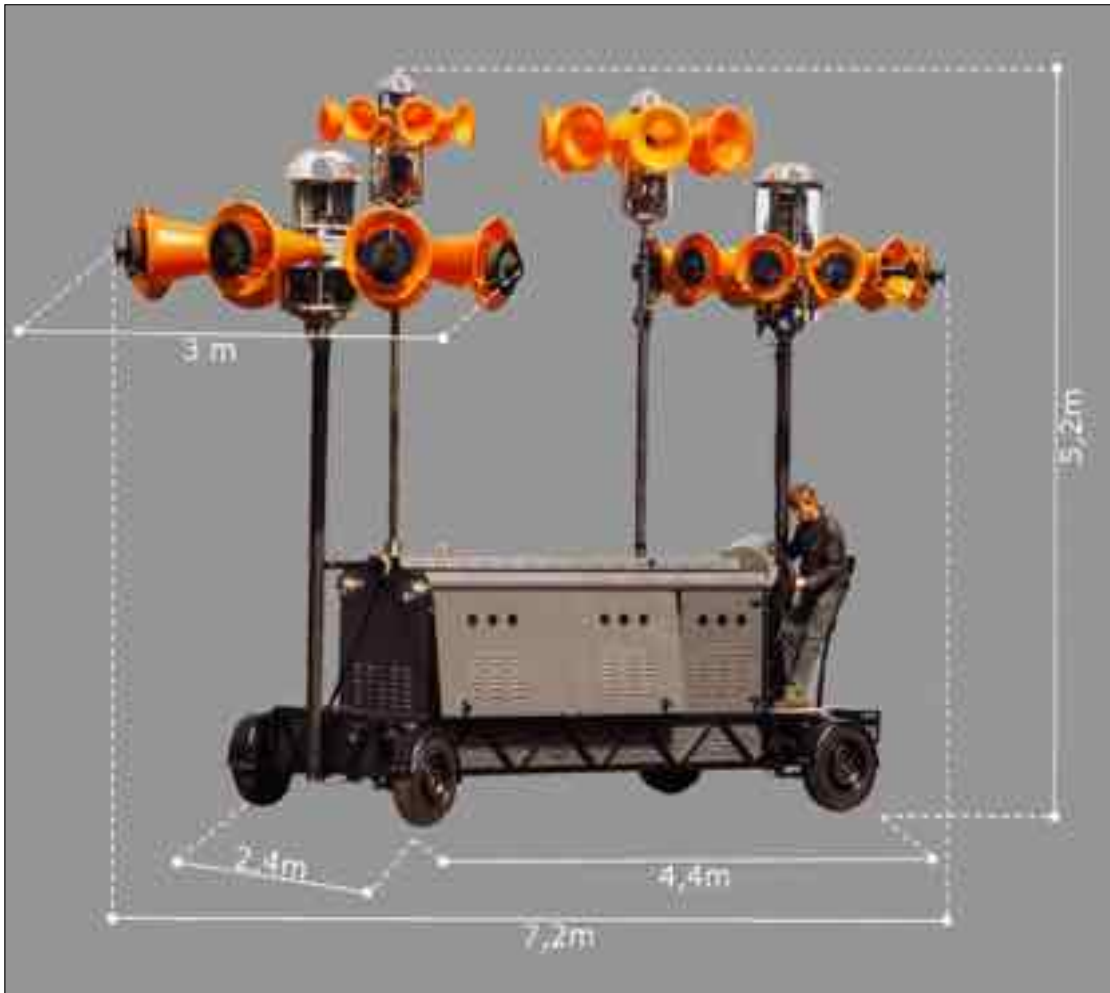
- 1) Modulate precisely the rotational speed in order to produce all the notes of the chromatic scale (role of the main engine).
- 2) Deprive the siren of the air needed to produce a sound in order to create attacks and nuances (role of the shutter flaps).
- 3) Retain the flow of air inside the horn to mitigate the sound volume and allow close listening (role of the dynamic dampers).



Thanks to precise and responsive technology, the combination of the modulation of the turbine movements and the control of air flows, the siren can play in tune and expressively.

Hosting the Street Parades

The scenography installation consists of two autonomous “locomotrices”, motorized vehicles officially authorized to use the roads. Their maximum speed is 20 Km/h. Their easy handling allows to circulate in pedestrian zones providing streets have a minimum 3.6 meter-wide. The clearance to circulate the streets should be at least 5,2 meter-high.



PLANNING / TEAM

D-1 noon: arrival of the team - 5 persons
D-1 afternoon: assembling (4 h)/check out of the site
D: Show and dismantling
D+1 morning: departure

TECHNICAL REQUIREMENTS

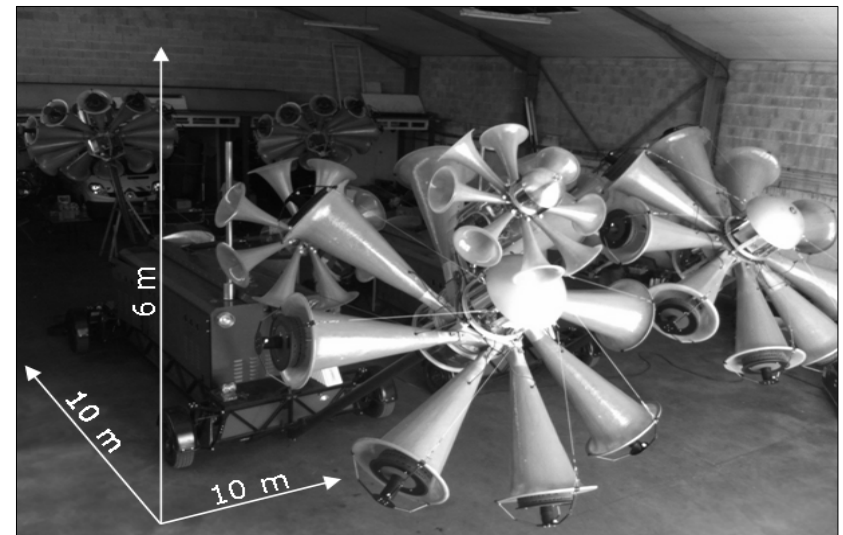
- 1 general operator to welcome the team
- 2 persons escorting the vehicles to ensure public safety
- A lockable secure room for the assembling/ dismantling and storage of the 2 “locomotrices”.

Inside dimensions

Width: 10m - Length: 10m - Height of ceiling: 6m
Height of doors: 3.5m

Room equipment

Three-phase power supply 380V/63A
A parking place nearby to park a trailer



Hosting the Street Parades and the guest soloists

As if responding the majestic call of the foghorn of the luxury liner "Le France"¹, the show is weaving its own path and is staging its own encounters: trombone duo in the giant horns², Cymbals Virtuoso with Laurence Meisterlin³, Icarian guitar⁴ with Seb Martel.

Description of scenography installation and technical requirements

- **Foghorn of the liner "Le France"**: set up at the highest point and strategically located on the itinerary, it rotates on its axis and creates a 360° resonance.
Set up: on a building or at the boom of a lifting machine equipped with telescoping arm.
Technical: Manuscopic-like lifting machine, three-phase powered 32A, 8 safety fences.
- **The Sirenium**: autonomous, set on the "locomotrices", no specific technical requirements.
- **Trombone duo in the giant horns**: requires 2 stages set up on each side of the street, the horns and the soloists spin round according to choreographed movements.
Technical: sound system, three-phase power supply 32A, cable passageway, security.
- **Cymbals Virtuoso with Laurence Meisterlin**: 5 orchestra cymbals on a lifted stage with a soloist.
Technical: sound system, single-phase power supply 10/16A, security.
- **Icarian guitar with Seb Martel**: Icarian Fall in the middle of a chorus.
Set up: on a building or on a lifting machine equipped with telescoping arm.
Technical: sound system, Manuscopic-like lifting machine, single-phase power supply 10/16A, 8 safety fences.



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