



Swarm sound installation is composed by 250 small speakers, each one reproducing the sound of a flying bee. Suspended in the exhibition space, those sonic devices offer us several listening experiences ranging from the group to the individual. The visitor is invited to approach those small beings and become part of the swarm, in an immersive sonic experience with the bees. It's then possible to listen to those voices as many individual testimonies by these workers that tend to get unnoticed. We listen to their singing, their screaming or their chatting, in the way of an aerial choir.

The bees have been recorded with a sound recording studio specifically designed for them. We've been able to record their flight while they were foraging inside.



Videos of the installation:

Espace Jeanne Barret, Marseille

vimeo.com/felixblume/essaim

Domaine de Kerguéhennec, Bretagne

vimeo.com/felixblume/swarm



CREDITS

Production: D.D.A Contemporary Art (Constance Juliette Meffre)

Co-production: M2F Créations / Lab Gamerz & Domaine de Kerguéhennec

Participation of DICRéAM (CNC)

Collaboration with beekeeper Dominique Hardouin and 250 bees

Design and conception of the recording studio and the sonic devices: Grégoire Lauvin

Design and conception of sonic devices version 2: Guillaume Stagnaro

Assistant: Arthur Thomas

Assistant for the installation: Louis-Marie Ropars

Post-Production Assistants: César González & Alejandro Díaz

Coordination and technical riders: Ana Medina

Many thanks to Luce Moreau, Paul Destieu, Sara Lana, Cleo Verstrepen, Andres Blume, Marie-Christine Cabanas, Guillaume Stagnaro, Thomas Hardouin, Lucas Compagnoni, Louis-Marie Ropars, Eric Mezan & Yoav Yaron.

Photos: Yoav Yaron, Constance Juliette Meffre, Luce Moreau, Arthur Thomas & Félix Blume.

Press : Point Contemporain (Fr), Anonymal TV (Fr), Radio Canal B Rennes (Fr), Meeting with Félix Blume during Maintenant festival at Rennes (Fr), Swarm presented in Kortrijk during the exhibition Sound Art in Public Spaces (Be), We Make Money Not Art (En), Immédiats (Fr), Contemporanéité de l'Art (Fr),

EXHIBITIONS

Jeanne Barret (Marseille, Fr, 2021)
Domaine de Kerguéhennec (Vannes, Fr, 2021)
Festival Maintenant (Rennes, Fr, 2021)
Wilde Westen (Kortrijk, Be, 2021)
Musée des Tapisseries (Aix-en-Provence, Fr, 2022)
Hear Here (Leuven, Be, 2022)
Musée Réattu (Arles, Fr, 2022)
Campo Base Festival (Val d'Ossola, It, 2022)
Sonic Acts (Amsterdam, NI, 2022)
Donau Festival (Krems, Au, 2023)
Sonic Protest (Paris, Fr, 2023)
Abbaye de l'Escaladieu (Tarbes, Fr, 2023)
Contemporary Art Museum of Estonia (Tallinn, Ee, 2023)



Musée Réattu (Arles, Fr, 2022)

THE EXHIBITION SPACE should be at least 4m high



Jeanne Barret (Marseille, Fr, 2021)
height: 12m grid size: 2m x 2m



Wilde Westen (Kortrijk, Be, 2021)
height: 4m grid size: 3m x 3m



Domaine de Kerguéhennec (Vannes, Fr, 2021) height: 4,7m grid size: 4m x 4m



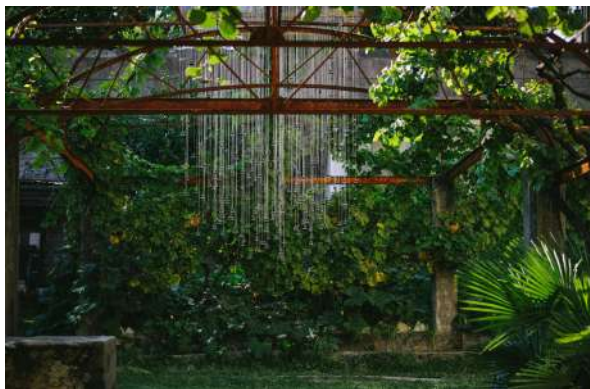
Festival Maintenant (Rennes, Fr, 2021)
height: 3,6m grid size: 4m x 2,6m



Musée Réattu (Arles, Fr, 2022)
height: 6m grid size: 2,20m x 2,20m



Festival Hear Here (Leuven, Be, 2022)
height: 4m grid size: 3m x 3m



Campo Base Festival (Domodossola, It, 2022)
height: 3,9m grid size : 3m x 2m



Biennale une 5e Saison (Aix en Pr., Fr, 2022)
height: 5,4m grid size: 3m x 3m

IN ORDER TO PRESENT THE INSTALLATION, THE ORGANIZER ASSUMES THE FOLLOWING EXPENSES:

- **Shipment cost** of the installation: roundtrip from France of 2 boxes of 50x70x40cm approx. Each one containing 30kg and 15kg (exact weight and dimensions should be communicated on each exhibition)
- **Travel costs and accommodation** for 1 or 2 persons: Félix Blume and/or the installer. The installer is the person in charge of the building-up of the sound installation with a detailed knowledge of the installation's functioning. When coming in representation of the artist, the installer is generally traveling from Marseille (south of France).
- **Building the grid** on site, which takes around 8 hours of work and around 250€ of material expenses (to buy on site). Details of this construction are given on page 7.
- When it's not possible to reuse the cables from a previous installation, it will also be necessary to bear the **cost of the cables** (which is used to suspend each sound device) of approximately 250€ (depending on the height of the installation) as well as **alligator clips** of around 80€. Details are on page 10.
- Proper **illumination** for the installation, to be defined together with the artist.
- **Insurance of the installation** from its dispatch until its return: €5,000 (production value, without set-up costs of the installation in the exhibition space).
- **Artist fee** to be defined by mutual agreement with Félix Blume, depending on the place and the duration of the exhibition.

AS WELL AS THE FOLLOWING WORKING DAYS:

- 1 day of work for 1 local technician to prepare the grid prior to the arrival of the person in charge of the installation.
- 3 days of work for 2 local technicians for setting up (it can be a professional and one non-expert person) and 1/2 day for dismantling (which is done by the team of the venue, without the presence of the person in charge of the installation).
- 3 working days for the person in charge of the installation. Exact work time and schedule can be discussed depending on the specificities of the venue.

AND THE FOLLOWING EQUIPMENT:

- 1 Genie lift or 1 Scaffolding with wheels (depending on the height of the installation).
- 2 Ladders of 3,5 meters approx.
- Table and chairs for working during the building-up.
- Electric power extension cord to connect the tools during the building-up.
- Electric power extension (220V, 16A) at maximum 1 or 2 meters from the grid, for the powering of the power supply needed for the installation (during the whole period of the exhibition).

PLANNING FOR BUILDING-UP AND DISMANTLING

- Before the arrival of the installer :
 - Shipping of the installation
 - Building of the grid and installation in the space
- Together with the installer:
 - Day 1 : preparation of the cables, check of the grid
 - Day 2 and 3 : installation of the sonic disposals
 - Day 3 : illumination of the installation
- Dismantling:
 - ½ working day: dismantling and boxing for shipping back the installation.

EQUIPMENT PROVIDED BY THE ARTIST (together with the installation)

3 Soldering Irons	3 Cutting pliers
Solder wire 1mm	3 Flat pliers
3 soldering iron stands	1 Measuring meter 8m long
3 soldering sponges	1 Multimeter + batteries
3 cleaning wools, 3 Helping hand stands	2 cable testers
2 Glue gun 11mm with black sticks	2 USB charger to test the sonic devices
2 Cutters (Blade Knife), 2 Scissors	Mounting tape 3M
3 Wire Strippers for cable	Electrical tape (black)
3 Phillips screwdrivers	Extra cable (when needed)

2 boxes of an approximate size of 50x70x40cm to keep sound devices, tools and cables, in order to ship them back.



Tools provided with the installation for setting up and dismantling.

CONSTRUCTION OF THE GRID (to build in advance)

The installation is composed of **250 sonic devices** each one reproducing the sound of one specific bee. The devices are hung using a **double metalgrid** at the top (close to the ceiling), which permits them to hang in the space, and to give them some electricity power (5Volt). The grid is composed of 2 metal grids built-in a **wooden frame** whose dimensions may change between 2m x 2m and 4m x 4m (see references from page 4). Each grid is done with mash wire of 50mm, separated from one another by at least 6 cm. Each grid is connected to one polarity of the power supply (-/+ 5 Volt) via a screw terminal wired up to the power supply.

The grid should disappear as much as possible in the exhibition space. The grid can be hung in the space using webbing, straps, steel chains or cables. When it's possible, it is preferable to re-use the grid from a previous installation.

The grid should be built on site and it represents around 8 working hours (including purchasing materials) and about 250€ cost of material.



Welded mesh fencing with a 50mm mesh and a minimum wire diameter of 1.8mm.

(Generally available in pieces of 2m x 1m).

Examples: [Brico Dépôt](#), [Leroy Merlin](#)



Wooden rafter (pine tree) with a minimal height of 60mm and a length of 3m or 6m.

Example: [Leroy Merlin](#)



Flat corner braces, size and model should be defined depending on the size of the installation.



Screws matching the corner braces in order to fix the rafters with each other.

Note: Be careful not to touch the screws with each other within the rafters, in order to ensure the electrical insulation of the lower and upper grid.



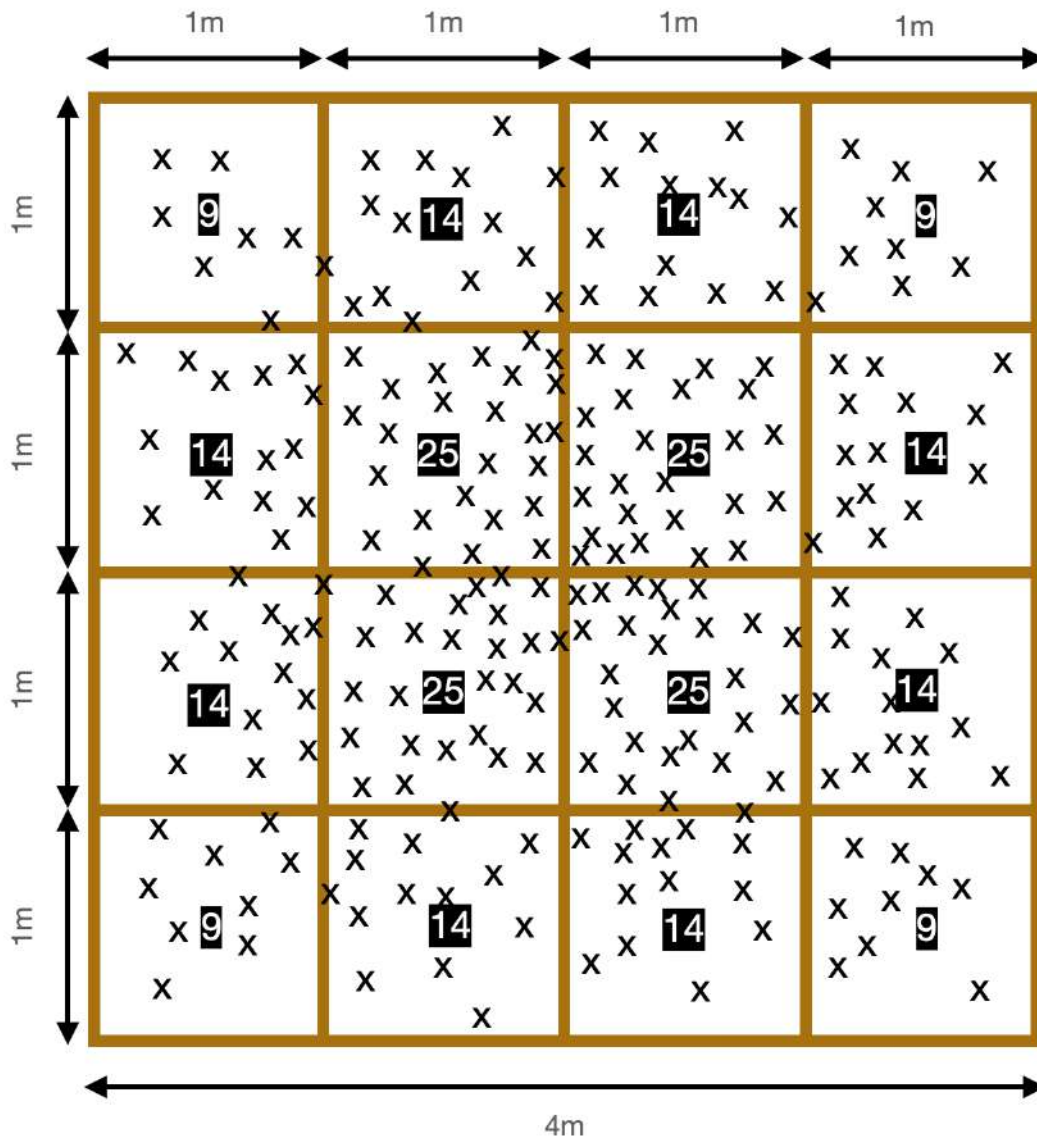
U Shaped Nails to fix the mesh fences on the rafters.



Galvanized wire to secure the mesh pieces together and ensure electrical contact between the grids.



Paint or varnish for painting the chevrons in a color that matches the color of the space.



Possible distribution of sonic devices in a grid of 4m x 4m
distribution should be adapted according to each place and grid dimensions

Grid and installation security

The grid should be secure and hung by a local technician having some steel cable as security (like rigging sling rope) in different points. The total weight won't be more than 100kg but we recommend having at least this resistance within the security system.

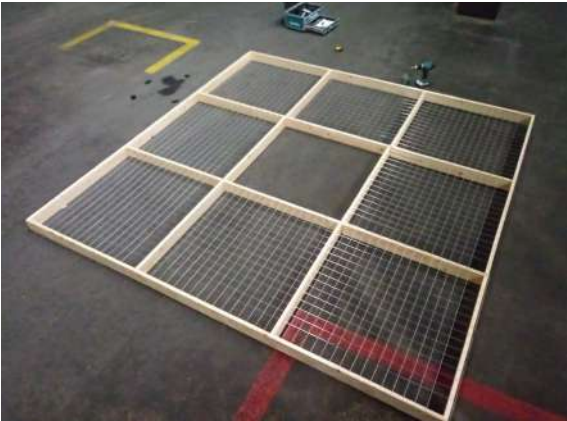
Grid and installation security is under the responsibility of the exhibition place.



Rigging Sling Rope example



Building and fixing of the grid in the exhibition place (4m x 4m, September 2021)



Building and fixing of the grid in the exhibition place (3m x 3m, October 2021)



Building and fixing of the grid in the exhibition place (3m x 3m, March 2022)



Detail of the flat corner brace at the frame corner. Building of the grid (3m x 3m, March 2023)

The cables are hooked to the grid using two alligator clips (one for each polarity) and the sonic devices are screwed to it. The length of each cable depends on the dimensions of the installation, the ceiling height and the dimensions of every venue. The sonic devices should be “floating” in the space between 1,3m and 3,5m height approx.



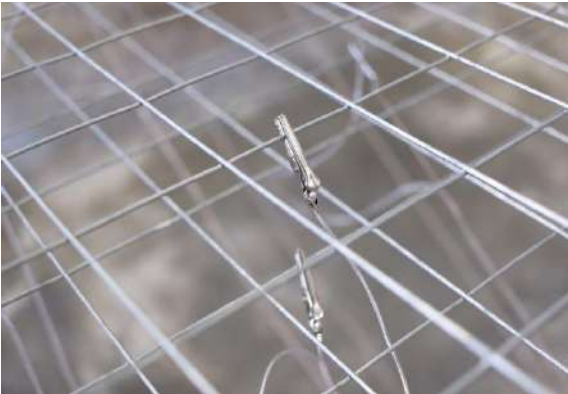
Silver or transparent **parallel wire** 26awg



Alligator clips 36mm x 9mm



Connecting the alligator clips at Jeanne Barret (Marseille, Fr, June 2021)



Alligator clips on the grid (detail)



Alligator clips on the grid (detail)

OTHER TECHNICAL CONSIDERATIONS

On / Off

The whole installation is connected to one electrical plug of 220 Volt (with an earthed socket). The power supply (included as part of the installation) transforms the 220V into 5V, 60 Amperes. The maximum power consumption is 300 Watts which is 1,4 Amperes in 220V. The main electrical outlet should be connected to power on the installation and disconnected to power off.



Detail of the power supply included with the installation

Illumination

It depends a lot on the space, the natural light and the opening hours (night/day). In general, it's nice to have at least 4 spots to enlighten the sonic devices, from above, in order to create some shadows on the ground, and to make the grid disappear. The illumination should be defined depending on each space and should be provided by the exhibition space.

Electrical Risks

The electricity going into the cable is only 5 Volt (same as for a USB charger). There is no risk of electrocution at all, but a short circuit could happen, and provoke some heat. It's better to have someone in the space at all times when the installation is on (and to power it off when there is no one). The installation has been shown 13 times so far, for periods of a few weeks to a few months and we never had any problems.

The approximate weight of the whole installation is :

17Kg approx. for the 250 sonic devices

7,5Kg approx. for the 250 cables (for a height of approx. 4m)

2 Kg approx. for the power supply and its cable

The weight of the grid and wooden frame depend on the space dimensions and used materials.

DISMANTLING INSTRUCTIONS

- The installation should be turned OFF during the dismantling.
- Disconnect the sonic disposals from the cables, using the screwdriver. It's possible to cut the cable too, but make sure to take out the small part of the cable from the sonic disposals before the next step.
- Store the sonic disposals in the box, using the compartment for it (42 disposals per floor)
- The cables should be untied from the top, taking the alligator clips off from the grid, one by one (try not to break the alligator clip if possible)
- Then roll a group of 5 cables into rolls of approx. 25 cm diameter. You can then attach the cables with electrical tape.
- Disconnect the 5 Volts power supply from the installation by unplugging the electrical connectors that connect its cable to the grid (taking out the "dominos" and the cables) and unscrewing the cable from the power supply.
- Everything must be organized in the boxes and cardboard in the same way as when material arrived. Some cables can be placed on top of sound devices to help to keep them in place and apply pressure to the case.
- The remaining tools, equipment and cables can be stored in the second box or case.
- The grid stays on site (unless it can be reused for a future exhibition nearby).
- Both boxes should be returned to the following address via a carrier (prefer UPS if possible):

Félix BLUME
Lieu dit Calot, Route de Minerve
34210 Azillanet
FRANCE
Tél: +33 6 37 36 00 74
Email : felix.blume@gmail.com



Cable organization



Organization and storage of sonic devices



Installation cables for shipping



Sonic devices in a shipping box



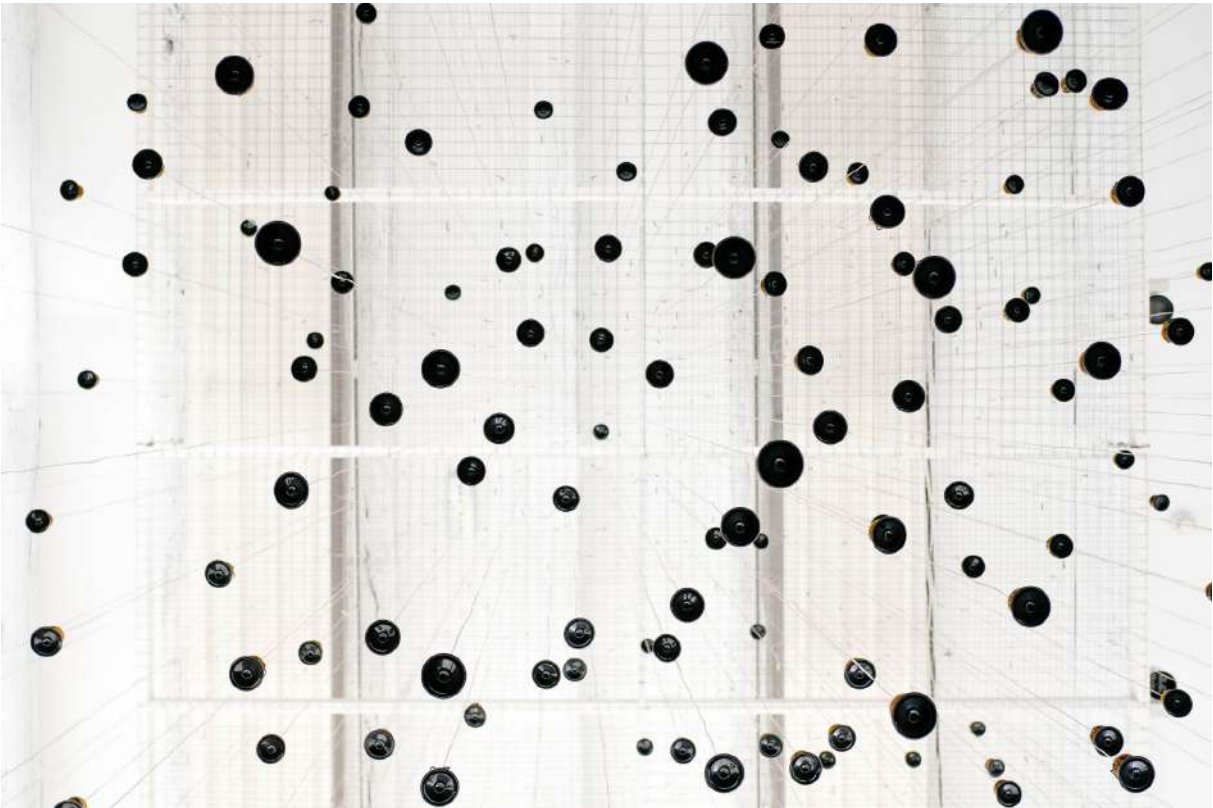
Case and cardboard box for shipping (NI, 2022)



Cable 26AWG used for the installation



Domaine de Kerguéhennec (Vannes, Fr, 2021)



Domaine de Kerguéhennec (Vannes, Fr, 2021)



Festival Maintenant (Rennes, Fr, 2021)



Campo Base Festival (Domodossola, It, 2022)