VOLUTE
VOLUTE 0: AU

BY RAFAEL LOZANO-HEMMER

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GENERAL IMPORTANT INFORMATION

This short section must be read for proper operation.

VOLUTE (2016)

BY RAFAEL LOZANO-HEMMER

Technique

3D-printed polished steel, tomography video.

Description

In the "Volute" series —words, phrases, and songs—are rendered into turbulent clouds containing layers of complex folds and vortices, with a method developed by Lozano-Hemmer's studio in conjunction with fluid dynamic scientists from Georgia Institute of Technology, Auburn University, and NYU. A custom-made laser tomograph scans the breath exhaled while spoken, then converts it into a 3D shape using photogrammetry. This shape gets printed in high-definition stainless steel. Charles Babbage's 1837 statement: "The atmosphere is a vast library that contains all the words that have been spoken in the past," inspired the series.

At the same time, the series intones a vastly different tradition, that of the "speech-scroll" (also called a speech-bubble, banderole, phylactery or volute), an illustrative device similar to those used by Olmec, Mayan, Mixtec and other Pre-Columbian cultures to represent spoken words or song.

In 1860, Édouard-Léon Scott de Martinville recorded the phrase "Au clair de la lune" on his phonautograph, making the first known recording of human speech. In "Au Clair de la Lune, Volute 1," the exact phrase was materialized. In "Au, Volute 0," just the word "Au," was made from the previous phrase.

Interacting with the Artwork

Advise the public not to touch the artwork or bump it as marks can be left as well as damage to the surface.

Maintenance

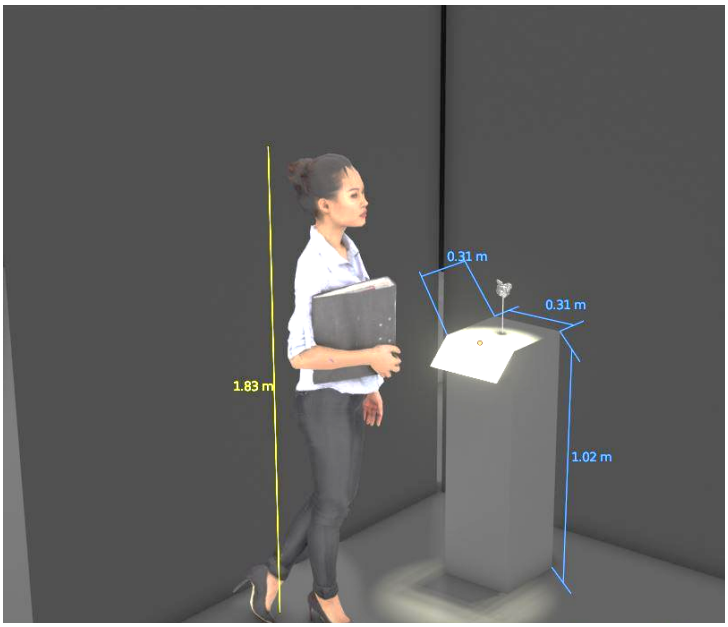
If the volute becomes dirty from dust, fingerprints, or otherwise, it should be cleaned with a mild soap diluted with lots of water. We recommend cleaning the piece at least every two months.

Placement Instructions

The volute is supported by a mounting pin, via a hole in the volute which has a circumference of 5 millimetres.

The volute can be mounted, sitting on the rod, in the center of a plinth or a flat surface so the volute is vertically centered at about 125 centimetres (49” ¼) from the ground. The volute could alternatively be displayed on a wall 150 centimetres (59”) from the ground as seen in the image below.

If using a display or a projector for the tomography video playback consult the artist for placement.



Sitting on a flat surface.


Hanging from the wall.

DETAILED TECHNICAL INFORMATION

Troubleshooting Assistance

Prior to contacting the Antimodular Studio with a problem about your artwork, please ensure that you went through the preliminary troubleshooting steps outlined in the previous section.

The troubleshooting process will vary depending on the problem. In order to make the process easier, it is recommended that you collect and send the following information to the studio:

- Date and time when the problem first happened;
- Description of the problem;
- Actions taken so far and conclusions;
- Detailed photographs (or videos) displaying the problem;
- Detailed photographs (or videos) of the suspected faulty component;
- Detailed photographs (or videos) of the whole artwork and its surroundings;
- Personnel involved.

Support (Contact Us)

If you would like support for the piece, please feel free to call Lozano-Hemmer's studio in Canada:

Antimodular Research
4462 rue Saint-Denis
Montréal, Québec, Canada
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Tel 1-514-597-0917
info@antimodular.com
www.antimodular.com

APPENDIX I - INSTALLATION

Description of Components

This artwork requires the following components:

Component	Description
Sculpture	Artwork itself.
Mounting Pin	Secures the artwork to the wall or an horizontal surface.
Video Playback Device	Optional to the display of the artwork, this component is used to display the tomography video.

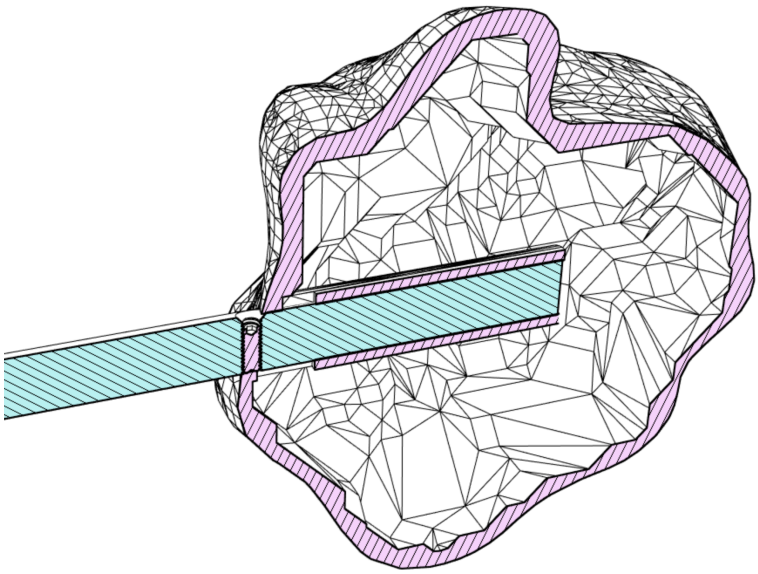
APPENDIX II - TECHNICAL DATA SHEETS

Mounting Pin

A stainless steel pin is used to secure the volute to its mounting surface (wall or horizontal surface).

As the volute has an aperture measuring 5mm in diameter, the mounting pin has a slightly smaller diameter to fit it. If the mounting pin isn't provided by the artist's studio, please confirm the aperture size before building the mounting pin so it fits the sculpture properly.

The following method is a way to build a mounting pin that would hold and secure the volute in place. Note how the pin has a setscrew (M2, 0.4mm pitch, 4mm long) to lock the volute in position and prevent it from spinning on the pin: it is solely applying a small pressure within the inside part of the volute's mounting aperture.



The pin length as shown below is showing how long the pin should enter within the volute. The tip of the pin may be adapted if the available stainless steel rod are too thick for the volute's aperture. The length of the whole pin and the surface plate size may differ depending on your final setup and we highly suggest hiding the plate behind the hosting wall or horizontal surface. The floating washer is a potential method to hide the hole done in the surface.