VOLUTE
VOLUTE 1: AU CLAIR DE LA LUNE

BY RAFAEL LOZANO-HEMMER
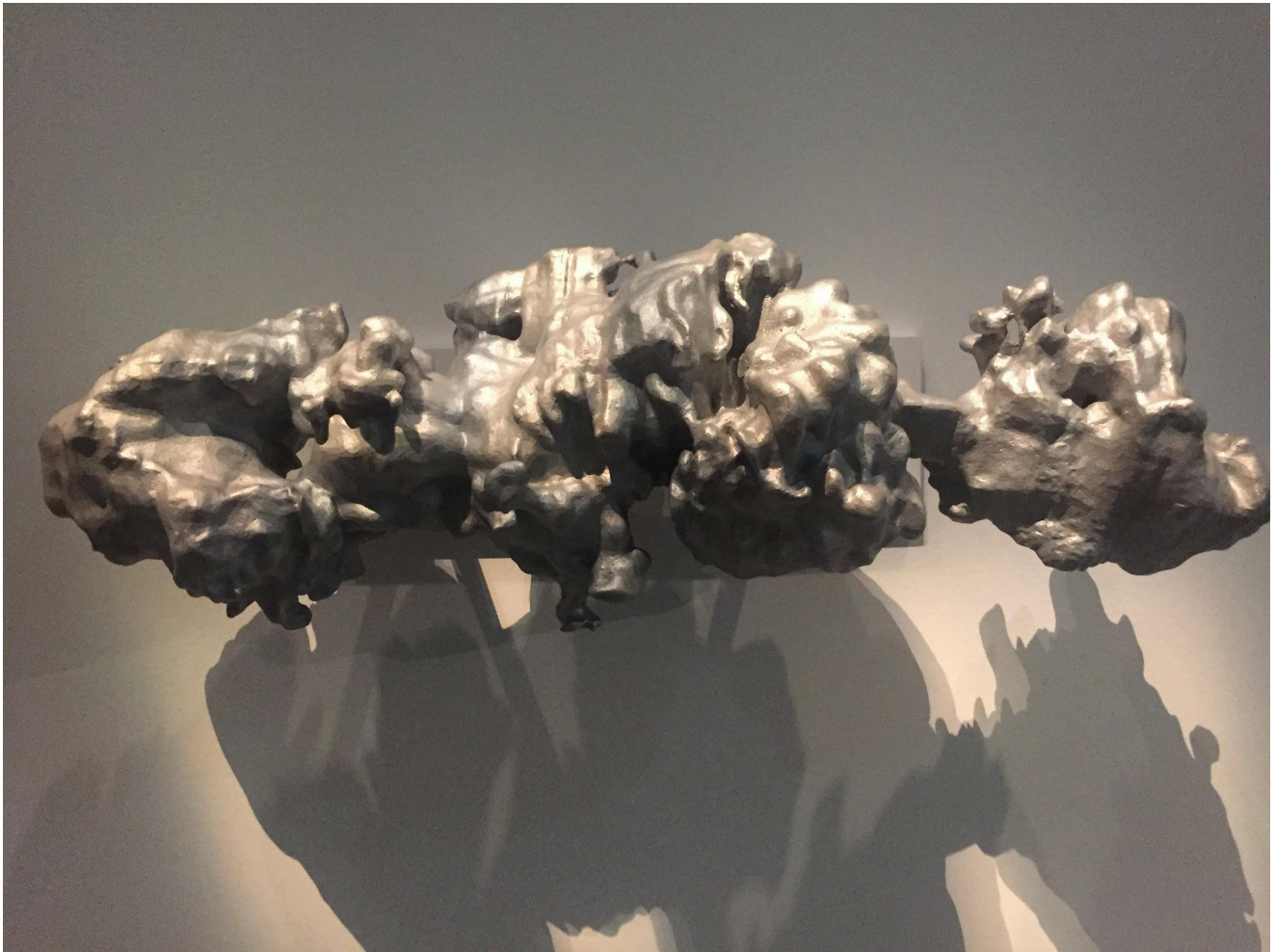
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GENERAL IMPORTANT INFORMATION

This short section must be read for proper operation.

VOLUTE (2016)

BY RAFAEL LOZANO-HEMMER

Technique

3D-printed polished aluminum, 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.

Operation

If a computer is in use, turn it **On/Off** via its power button. The associated display or projector should be set to turn **On** while receiving a video input.

If a Raspberry Pi or video playback device is in use, turn the device on by plugging it into its power supply. The video playback should begin within two or three minutes.

Interacting with the Artwork

      Visitors to the artwork can stand at the narrow end of the sculpture and face the length of it. This is the orientation of the original speech bubble as spoken in the phrase "Au Clair de la Lune". 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 using a display please do not clean its surfaces with Windex or soap. Instead, use a lint-free cloth and a LCD screen liquid cleaner, such as Kensington Screen Guardian found in most computer stores.

      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 should be mounted vertically centered at 150cm (59" or 1500mm) from the ground. The same applies to the display, if the tomography video is presented: in such a case, there should be at least 1 metre between the two, however the spacing/layout will depend on the specific site in question. If using a projector consult the artist for placement of the projection.

For reference, in the image above, the right end of the volute is the "au" sound, and the left end is the "lune" sound.

The volute and its bracket have a specific orientation: the bracket's longest rod should be on the left side, because the volute sculpture is wider on one end, which necessitates a longer hanging element. There is also a screw on the long side that holds the volute securely in place.

The image below on the bottom illustrates the height placement and spacing of a display, in relation to the volute. The image on the top is the custom bracket.

Well placed Volute

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:

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APPENDIX I - INSTALLATION

Description of Components

This artwork requires the following components:

Component	Description
Sculpture	Artwork itself.
Wall Mount Bracket	Secures the artwork to the wall.
Display or Projection	Optional - Displays the tomography video.
Playback device	Optional - Required to play back the tomography video.

APPENDIX II - TECHNICAL DATA SHEETS

Wall Mount Bracket

An aluminum plate built to secure the sculpture to the wall. The bracket is typically painted with matte white metal paint, however the color can be modified to match the hosting wall color, to ensure the focus is onto the sculpture, not its bracket.
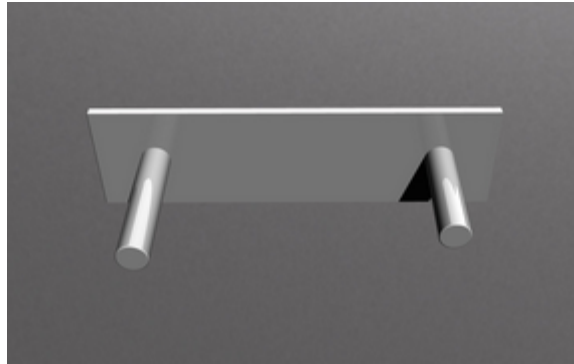
Bracket; long side on left, with set screw.