

MEMBRANE

Algorithmic performance for transparent materials

PUSH 1 STOP & WIKLOW

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push1stop.com
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DESCRIPTION OF THE WORK

Membrane is a digital artwork that merges audio-visual performance with installation art.

Three-dimensional, volumetric creations hover between the performers, caught in a haze of rising smoke and data-reactive lighting. A three meter transparent screen captures the shadows of these holograms, connecting audiences to virtual entities realized in physical space.

A short-throw projector is placed behind the screen. As light is projected onto the screen, it passes through the vapor produced by smoke machines. Three-dimensional images appear in the vapor (a method known as “volumetric projection”). The work explores a space between perception and illusion using psychovisual and psychoacoustic effects.

The projections mimics the texture of the transparent screen: the ‘membrane’. The screen appears to twist and vibrate in unison with the sound. Low-frequency sine tones create synchronicity between the physical bodies of the audience, the movement of the projections, and the frequency of the tone. This idea is inspired by ‘biosynchronicity’, where biological systems fall into rhythm with one another.

In *Membrane*, audio-visual composition is made from generative systems. The sound affects the visuals while simultaneously the visuals manipulate the sound. The performance becomes unified, rather than being two separated mediums. Glitched-out rhythms and deep sonic vibrations are generated from the same data as the fabric-like imagery.

Membrane is an “algorithmic performance for transparent materials”. The work represents an alternative form of projection art, an exploration of tangible digitalism.

Project Images: <https://bit.ly/2PBS5eV>

Video Excerpt: <https://vimeo.com/294229797>

<http://www.push1stop.com>

<https://vimeo.com/push1stop>

<http://www.wiklowmusic.com>

<https://soundcloud.com/wiklow>

PERFORMANCE SETUP

A transparent screen is placed on a low stage, ideally 40cm off the ground. A short-throw projector is hung from the ceiling approximately 3-5m away, depending on the projector. **Rear-projection set-up** (see stage plot diagram). Alternate projector/screen configurations may also be discussed, depending on the venue.

A fog machine fills the area between the screen and the projector with occasional bursts of smoke. It is controlled by the video artist. There should not be a haze already in the room before the performance.

The performance space must be dark (blacked out). Projections must not be affected by any lighting.

Two performing artists are positioned on stage:

VIDEO: Push 1 stop (Cadie Desbiens-Desmeules)

AUDIO: Wiklow (Michael Dean)

Each performer is set up on a small table. One performer is placed on either side of the screen. The two performers are facing each other.

Audio artist and video artist are connected via Ethernet and a network switch. Messages are sent between performers.

See diagrams on last two pages for reference.

VENUE REQUIREMENTS

The venue must be able to support the following:

Screen of 2.74m high x 3.66m wide.

Ceiling of 2.9m or higher (from the surface of the stage).

Ceiling truss. Used to hang an ultra short-throw projector.*

Performance area with at least 3.6m from front to back.

** The screen can be configured to be hung from ceiling truss. However, the free-standing screen is the preferred set-up.*

The following items must also be provided to the artists:

First-class sound system with high powered subwoofers. *Stereo or quadraphonic configuration.*

Two stage monitors. *Volume must be adjustable by the audio artist.*

2 tables. 1.0m x 0.5m of table space for either performer.

15 North American style 120VAC power outlets. At least 25A.

Additional cabling. Long distance HDMI and/or DVI. All necessary audio cables.

EQUIPMENT PROVIDED BY THE VENUE

Ultra short-throw video projector (6000-10000 lumens) *
Fog machine. *With control available for video artist.*

** An Optoma EH515TST (5000 lumens) may be provided by the artist for small venues.*

Projections are in rear-projection set-up (see stage plot diagram).

EQUIPMENT PROVIDED BY ARTISTS

Transparent screen (2.74m high x 3.66m wide) with aluminum frame.

Video artist's performance set-up is as follows:

Laptop computer. *14" Razer Blade.*
MIDI controller. *FaderFox UC3.*
Sound card and MIDI interface.

Audio artist's performance set-up is as follows:

Laptop computer. *15" Apple MacBook Pro.*
MIDI controller. 8 faders. *Evolution UC-33e.*
Sound card and Ethernet interface. *Focusrite RedNet AM2.*

VIDEO CONFIGURATION

Visual projections for *Membrane* are generated live using TouchDesigner software. Fog machine is controlled by the video artist.

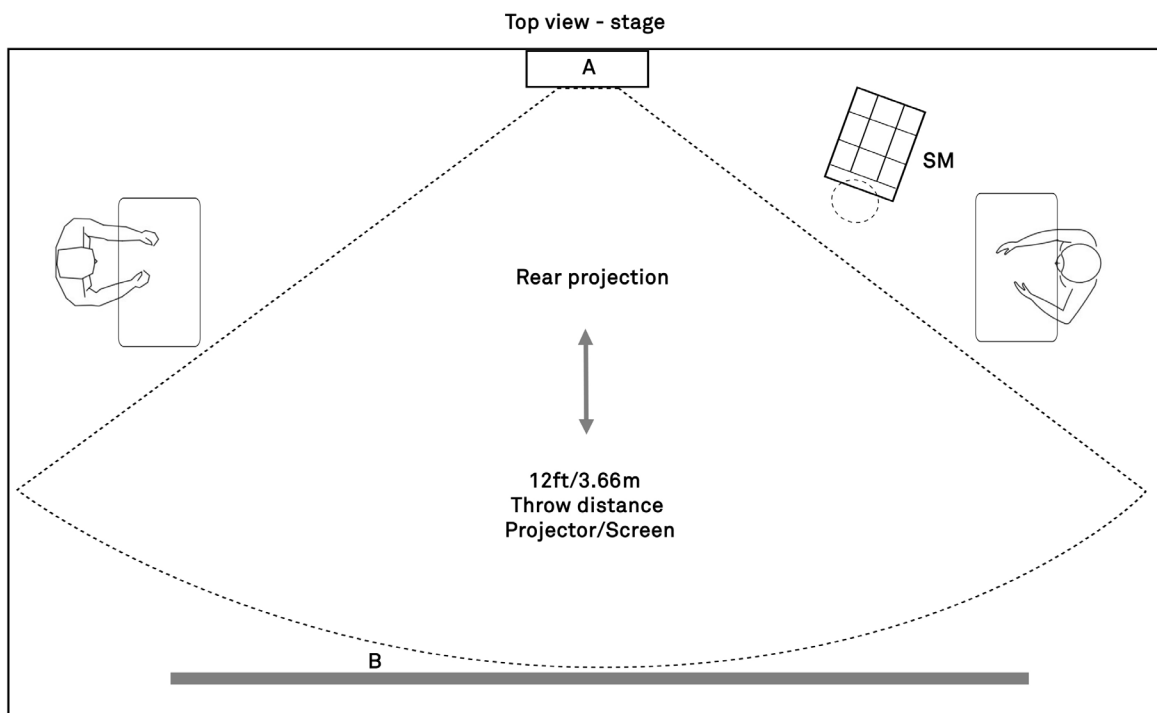
Additional LED lighting and scenography may be discussed with the venue. Long-distance cables for HDMI connections are required.

AUDIO CONFIGURATION

Audio artist connects a laptop computer to the venue sound system from a stereo soundcard.

1 - Venue Left. *XLR.*
2 - Venue Right *XLR.*

The audio artist must be able to control the level of the monitors.



A - Ultra short throw projector
(throw distance may vary)

B - Translucid scrim
9ft Tall x 12ft Large

SM - Smoke machine

Artists - 2 tables
facing each other

