

Steina

*Borealis*, 1993

2-channel video and 4-channel sound installation

color, sound (10 minute cycle)

4 translucent screens, 2 video projectors, 2 videodiscs, 2 videodisc players,

2 mirror beam-splitters, synchronizer, 2 audio amplifiers, 4 audio speakers,

2 projector tables with mirror holders

Steina has concentrated over the last decade on the use of video to restructure geography and landscape. Her projects often use the video medium to combine disparate geographies, such as New Mexico and Iceland, into hybrid or synthetic environments. In *Borealis*, one of these constructed environments, the force of water is electronically transposed to demonstrate how the elements can be reconstructed through video in defiance of their materiality. Steina's video animates water, vapor, and mist into new choreographies by changing the water's direction and rhythm and interspersing its many forms. The work's title refers to the ephemeral nature of the north to invoke their illusory qualities of fluidity, luminosity, and illusion.

## BOREALIS 1993

## Theme:

"Steina's means are simple. She takes stunningly beautiful yet turbulent clips of nature in her native Iceland, en-larges them, then turns them on end, literally and figuratively, so that they may be experienced as living abstractions on a scale equal to that of the human body. The effect is to tear them from their entrenchment in the cliché so they may be perceived free from the drag of representational history. Nature, having somehow survived the twentieth century onslaught of archaic industrial insults, speaks in the only way it can, through stormy electronic images made by an artist with roots both in urban culture and in a remote land still precariously preserved in ice." Lane Barden

## Operation:

Borealis is a two video/four audio channel installation on a 10 minute repeated loop. Each of the two video players (tape or disk) provides one video and two audio sources to two projectors and four speakers.

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Borealis is a two channel video laserdisk installation with four channels of sound, operating in a pre-programmed continuous cycle.

In front of each projector, which is turned 90 degrees on its side, is a half way mirror arrangement, which splits the image/beam two ways. The four translucent screens, show the video image on both sides.

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A video synchronizer aligns the two channels of video (Disk or Tape) for a synchronous playback. At the end of each cycle the program automatically returns and re-synchronizes for a repeat performance.

Each synchronizer is custom built for a specific hardware (Sony U-Matic, Pioneer, etc) and not interchangeable. Using other media or manufacturer requires a different synchronizing device. The Vasulka disk synchronizer works with Pioneer industrial disk players (LD-V2200 to LD-V8000 series).

## Space requirement:

Active Space (see drawing/floor plan Room #005-E)  
One half of Fountain Room divided with a sound proof wall built along the diagonal as indicated on drawing. [provided by Roma]

## Video:

2 video NTSC projectors [provided by Roma]  
2 Pioneer video laser disk players ATT:110 VAC  
[provided by Vasulkas]  
1 Synchronizer [provided by Vasulkas]  
4 translucent screens in frame [provided by Vasulkas]  
Cables [provided by Roma]

**Installation notes:**

The two projectors turned on their side are placed on Table  
[provided by Vasulkas]  
There is a custom built beam splitter. [provided by Vasulkas]

**Audio:**

2 Stereo Audio Amplifiers (4 audio channels) [provided by Roma]  
4 Speakers [provided by Roma]  
4 Speakers stands [provided by Roma]  
Cables [provided by Roma]

**Projector description:**

Split Beam description. [provided by Vasulkas]

**Platforms:**

Two platforms/tables for the two projectors  
[provided by Vasulkas]

**Power outlets: 7**

Two projectors, two players, two amplifiers and one synchronizer  
(disk).

**Maintenance:**

The projection lenses need dusting once a week

**Daily Operations:****Start up:****Video Laser Disks:**

Power up projectors, Disk players and synchronizer  
After a short wait the program self-starts

Verify that the installation is starting synchronously.

**Shut down:****Video Laser Disks:**

Power down the \*projectors, Disk players and synchronizer

**\*Att: the projectors may only be turned off by the power  
switch and never by pulling out the cable as the unit needs  
to be cooled down (approximately two minutes) by the internal  
fan.**

**Trouble shooting:**

- 1) repeat above procedure
- 2) check appropriate cable connection

**Media:**

Program exists on two video laser disks in NTSC format.

## Borealis (1993)

"Steina's means are simple. She takes stunningly beautiful yet turbulent clips of nature in her native Iceland, enlarges them, then turns them on end, literally and figuratively, so that they may be experienced as living abstractions on a scale equal to that of the human body. The effect is to tear them from their entrenchment in the cliché so they may be perceived free from the drag of representational history. Nature, having somehow survived the twentieth century onslaught of archaic industrial insults, speaks in the only way it can, through stormy electronic images inside by an artist with roots both in urban culture and in a remote land still precariously preserved in ice." - Lane Barden

### Description:

Borealis is a projected video environment with two video and four audio channels of presentation. The projectors are laid on their sides for an upright ratio of the video frame. Two half-transparent mirrors are placed in the projected pathways splitting each beam into two additional images, filling four screens. The screens are made of a translucent material that shows images with equal intensity on both front and rear surfaces. The result is eight vertically viewed large images, dispersed in the exhibit space. The program is in the form of a ten minute repeated loop. Each of the two video laser disc players provides one video and two audio sources to the two projectors and four speakers. At the end of each cycle, a laser disk synchronizer aligns the two video players for a repeat performance.

### Synchronizer:

The Laser Disk Synchronizer used by the Vasulkas is custom built and interfaces with Pioneer Industrial Disk Players (2200 to 8000 series) It is not interchangeable with other manufacturers of Laser

Disk Players. [Other brands (Sony, Phillips) require a different (commercially available) synchronizing device.]

#### Screens:

The characteristic of the translucent screens is to show the image in equal intensity front or rear. They are either hung from the ceiling or placed on the floor in self-standing frame assemblies, arranged in a semi-random pattern, avoiding explicit symmetry or parallel positioning. As there is no singular point of view, the environment must be constructed for the audience to feel encouraged to enter the room, walk around, cast their shadows on the screens or sit down.

[There is a general floor plan drawn to show the placing of the screens and a bench or a couple of chairs, but since exhibition spaces vary in size and characteristics, it is preferable to involve a person familiar with the procedure.]

#### Projectors:

○ There are two classes of video projectors available: single lens, or three lens projectors. It is possible to use four projector instead of two, avoiding the hassle of the split mirror alignment altogether.

⌋ [The three gun projectors needs professional alignment and a larger size beam splitter assembly. The throw distance and the size of screens varies also, but they must be able to deliver sufficient amount of light/image.]  
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#### The space:

Minimal Active Space (see drawing/floor plan):

10 meters by 7.5 meters by 3.5 meters high

35 feet by 25 feet by 12 feet high

The major consideration of space is the total avoidance of ambient light. The space should be painted in non-reflective black and no light source other than the one that emanates from the projectors themselves should exist. The entrance must be well isolated for light and sound. Most ideal is a double trap door with sound insulating material (see drawing).

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Technical notes for installing, setting up, operating and maintaining the exhibit

Itemized Equipment List for Borealis:

- 2 Video Projectors
- 2 Projector Stands with Mirror Assembly Attachment
- 2 Pioneer Video Laser Disk Players LD-V Series
- 2 Program Video Laser Disks NTSC, Color
- 2 Beam Splitters in Frame Assemblies
- 1 Two Channel Synchronizer
- 4 Translucent Screens in Frame or with Hanging Harnesses
- 2 Stereo Audio Amplifiers (4 audio channels)
- 4 Speakers
- 4 Speakers Stands or Wall Mounts
- 1 Four level equipment stand (rack)
- 2 Video Cables (long)
- 2 Pairs of Stereo Cables (short)
- 4 Speaker Cables (long)
- 7 Power Outlets

This equipment except the two projectors and mirrors should be located outside the exhibition space (in a small adjacent tech area)

### Projector stand:

The construction of the projector stand depends on the type, shape and weight of the projector. It is essential that the single or center lens of the projector is on the level with the center of the screen (see Drawing). The stand must be constructed to hold the projector on its side, presenting the image vertically. The beam splitter (mirror) assembly must be securely mounted on the platform (squared to the base of the projector) at exactly 90 degrees to the platform.

[Place the projectors according to the drawing and measure the throw distance (single gun projector often have a zoom feature) versus the size of the screen. ETC.]

### The Mirrors:

[The mirrors are in fact 50% beam splitters dividing the direct and the deflected light/image from a single projector in equal amount to the two screens. They are a custom made assemblies that attach to the projector stands. The positioning of the mirrors is critical and requires some knowledge of optics. The mirrors can deflect the secondary beam anywhere from 30 to 120 degrees, but a positioning close to 90 degrees is the most efficient.]

### Sound and image alignment (tuning):

#### Video:

Contrast: maximum

Brightness: half way between minimum and the middle\*

#### Sound:

Treble: normal

Base: maximum

\*The basic rule here is to set up the proper and deep color black as a reference to the maximum contrast and brightness. With that the other components (hue, color saturation) can be assigned. But in final the persons installing the environment must use their esthetic judgment as to the proper settings and visual impact of the exhibit.

#### Daily Operations:

##### Start up:

1. Power up Disk players and synchronizer
2. Turn the projectors on (verify green lamp)

Wait a short while to verify that the installation is starting synchronously. If not, turn power off and on again for the Players and synchronizer NOT THE PROJECTOR. If problem persists notify Steina by phone, fax or e-mail.

##### Shut down:

1. Turn the power on the projectors off locally (the fan will keep going until the units have sufficiently cooled down).
2. After the fans stop, turn off power distributors for the Projectors, Disk players and Synchronizer

Att: the projectors may only be turned off by the power switch on the units and never by pulling the cable out, as the unit needs to be cooled down (ca one minute) by the internal fan.

##### Maintenance:

The projection lenses and the mirrors need to be cleaned with a soft cloth at least once a week

Power requirement (depending on equipment used):

Video projectors:	Sharp XG-2000U	230 watts
	Sharp XV- P10U	175 watts
Stereo Amplifiers:	Technics/Sony	150 watts
Video Disk Players:	Pioneer 2200	70 watts
	Pioneer 8000	100 watts
Synchronizer:	Gritzo 1	40 watts

Outside USA, a Power Transformer 220 to 110, 1000w

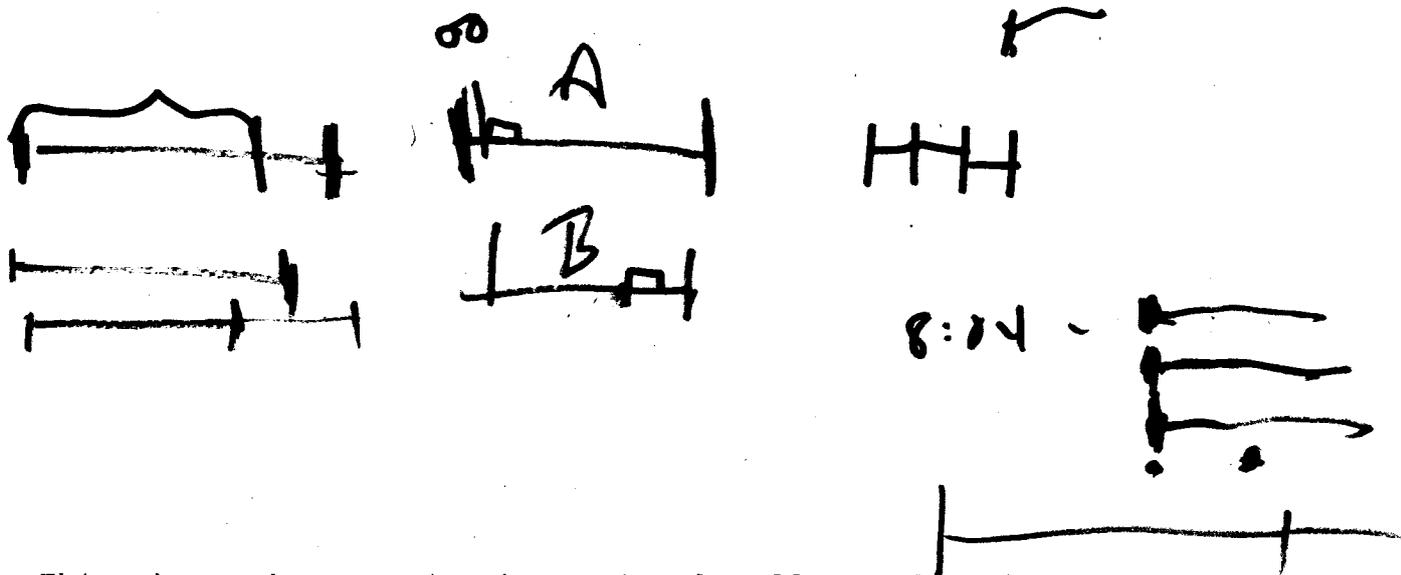
Shipping information:

Number of crates: 3

Box 1: Projector 1

Box 2: Projector 2

Box 3: 2 Disk players, 2 Stereo Amps, 1 Sync Box, AC box,  
All Cables.



This shows the room in the National Gallery of Iceland, where the installation "Borealis" premiered in May of 1993.

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