

# HORMONIUM, TEXT STREAM 8

BY RAFAEL LOZANO-HEMMER



# TABLE OF CONTENTS

<b>GENERAL IMPORTANT INFORMATION</b>	<b>2</b>
Technique	3
Description	3
Operation	3
General Artwork Behaviours	4
Maintenance	4
Placement Instructions	4
<b>DETAILED TECHNICAL INFORMATION</b>	<b>5</b>
Normal Software Operations	6
Manual Software Operations	6
Preliminary Troubleshooting Steps	8
Remote Access to Artwork's Computer	10
Troubleshooting Assistance	11
Support (Contact Us)	12
<b>APPENDIX I - INSTALLATION</b>	<b>13</b>
Description of Components	13
Wiring Diagram	14

## **GENERAL IMPORTANT INFORMATION**

This short section must be read for proper operation.

# HORMONIUM, TEXT STREAM 8 (2022)

BY RAFAEL LOZANO-HEMMER

## Technique

custom-generative code, computer, 4K display

## Description

“Hormonium” (Text Stream 8) is a generative artwork that presents sequences of ocean waves crashing and releasing airborne text particles. The text represents acronyms of hormones that are released in accordance with human time-cycles, illustrating chronobiology.

The piece exhibits circadian rhythms (one cycle every 24 hours), hence releasing more cortisol, progesterone and testosterone in the morning, FSH and LH in the afternoon, and oestradiol and prolactin at night.

“Hormonium” also exhibits ultradian rhythms (cycles shorter than a day, but longer than an hour) which are described by changes in the levels of leptin and ghrelin, for example; and infradian rhythms (cycles longer than a day) that cause fluctuations in oestrogen, FSH, progesterone and LH over a period of 28 days. Finally, the piece ages over an 80-year cycle, charting a decrease, for example, in the levels of aldosterone, calcitonin, GH, and renin, and a rise in cortisol.

## Operation

Please refer to [Appendix I - Installation](#) for detailed system information and wiring diagram.

1. To turn the piece ON, press the power button of the computer for a second then release it. *Important notes: Please do not push the button again as this will shut down the piece. Wait at least 2 minutes before pressing it again as the computer might take that long to boot. After 2 minutes (maybe faster), you should see the piece. The display might require to be turned on, for this use it's remote or the button at the back of the display.*
2. To turn the piece OFF, press the computer's button all the way down until you've seen the “Shutting down...” screen appearing and fading to a black screen (shouldn't be required for more than 2 seconds).
3. If the piece doesn't start within 2 minutes, try to turn on the piece again. If it still doesn't turn on, then hold the power button all the way down for 10 seconds. Then, wait at least 3 seconds and press the power button all the way down for 1 second and you should be up and running again.

## General Artwork Behaviours

The piece should show endless fluidly moving waves with floating acronyms of hormones: as many different waves patterns are used by the artwork, fade in/out between different waves pattern will happen. The piece exhibits circadian rhythms (one cycle every 24 hours) and shows different hormone productions at different times of day.

## Maintenance

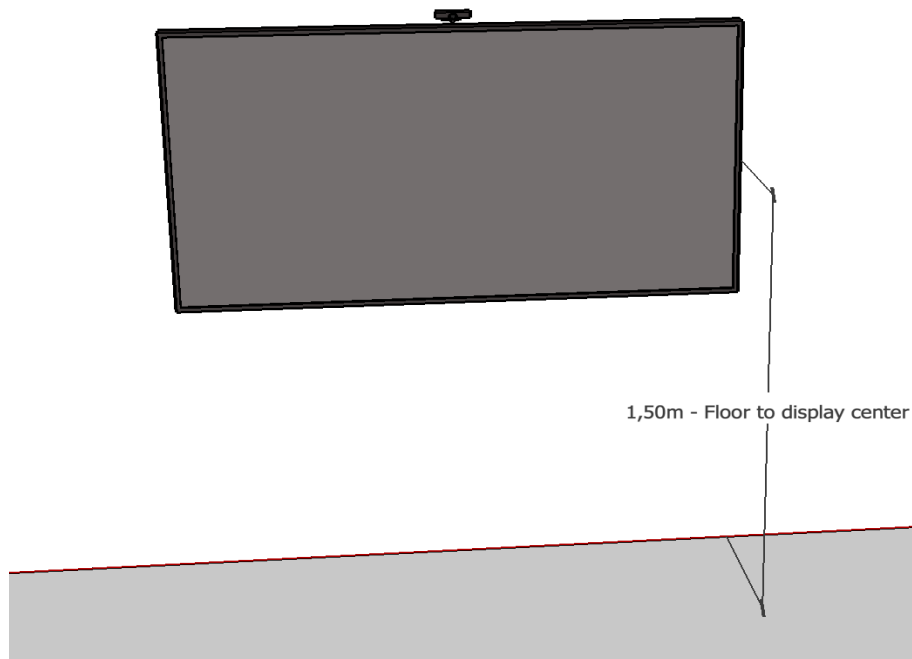
Please do not clean the display with Windex or soap. Use a lint-free cloth and a LCD screen liquid cleaner, such as Kensington Screen Guardian found in computer stores. We recommend cleaning the piece at least every two months.

## Placement Instructions

This artwork is made up of 2 components: the display and the computer. You should begin by screwing your display mount into the wall, ensuring a stable mount for the weight listing.

The display should be mounted to the wall so that there is 1.5 metres (59") from the floor to the centre of the screen.

While setting your display on the mount, ensure you have access to the power cable and HDMI ports, then connect these to your computer.

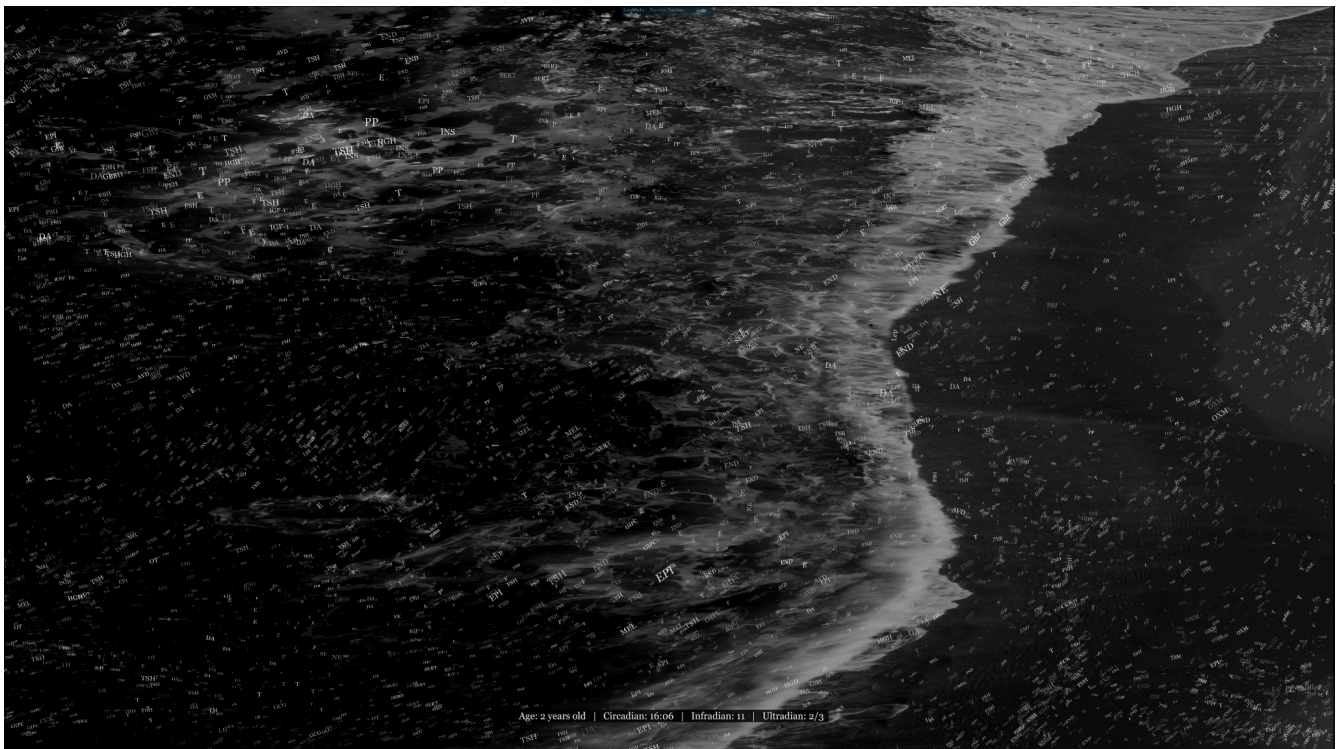


**DETAILED TECHNICAL INFORMATION**

## Normal Software Operations

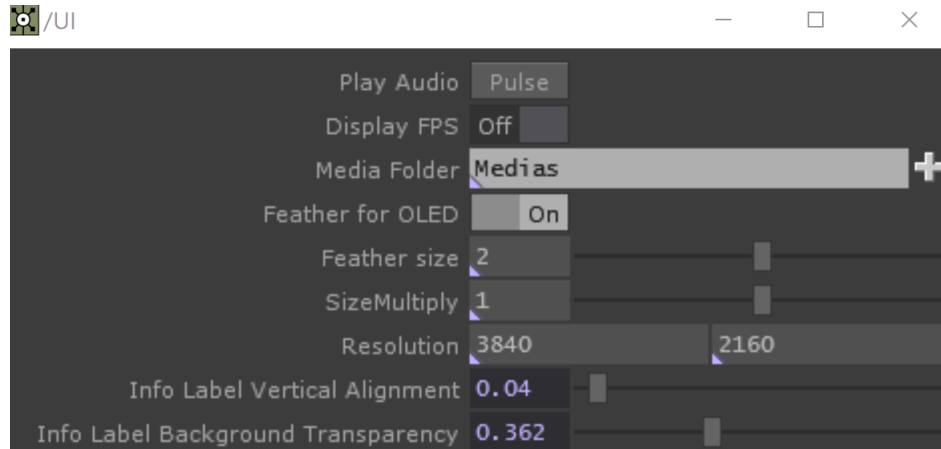
This piece uses Touchdesigner 099 by Derivative as its primary software. By default, none of the artwork's software can be edited or manipulated, as it is running on TouchPlayer Commercial licence, which allows the playback of content at resolutions above up to 4K, but disables the usage of the TouchDesigner coding environment. Any software changes should be made by the studio.

The artwork is set to automatically start when the computer is powered on and is set to reboot daily, at night. We do recommend turning off the artwork when you don't plan to look at it for a longer period, to extend the lifetime of the components.



## Manual Software Operations

Few controls are available to adjust this software. To pull up the GUI for the piece press the **ALT+G** key at the same time. To exit the menu, simply press on the **X** button on the top right corner of the newly opened window. If settings are changed, press **CTRL+S** to save them to the system.



Setting	Description
Play Audio - Pulse button	The audio feature is only activated within the Treatment version of the artwork. In such a case, this button could help “kick starting” the audio output, in case of an issue.
Display FPS	When turned On, this allows the system to show the FPS of the software. Used for debug purposes only, this should remain Off.
Media Folder	This setting allows you to pick the folder containing the media files (videos) used to generate the waves. It shouldn’t be modified, unless discussed with the studio.
Feather for OLED	This option should be activated only if the monitor used is high quality and generates deep blacks. In such a case, we like to activate the feather option to get the edges to gradually fade to black. When activated, we ensure the Info Label Background Transparency is set to a lower value, otherwise, set it to 1.
SizeMultiply	Affects the size of the particles (text) flowing. Default value is 1 and shouldn’t be modified, unless discussed with the studio.



Setting	Description
<b>Info Label Vertical Alignment</b>	This allows to move the circadian cycles information label located at the bottom of the display: increasing the value would move the label up, decreasing would move it down. A value of 0.04 is generally placing the text properly.
<b>Info Label Background Transparency</b>	This allows to remove or add strength to the black background behind the circadian cycles information label text located at the bottom of the display: increasing the value would make the black background darker, decreasing would make it more transparent.

Additionally to the previous settings, there is 2 keyboard shortcuts available that are useful for video debugging:

Shortcut	Description
<b>CTRL + 1</b>	This shortcut will reload videos from the Media Folder. If videos are frozen after a reload request, you might have to pause and play the videos.
<b>CTRL + 2</b>	This shortcut will toggle the video playback to a pause/play state.

Like many of the settings, these shortcuts shouldn't be used, unless it has been discussed with the studio.

## Preliminary Troubleshooting Steps

### For any issue.

The first thing to try is to reboot the computer as in most cases, it would fix the issue. Turn Off the computer (wait until the screen is completely black or says a no signal -or similar-message). Wait 15 seconds and turn the computer On again. If this reboot didn't fix the problem, continue to the next steps.

### After pressing the power button, nothing seems to happen.

If you press the power button and the piece does not start within two minutes, try turning on the piece again. If it still doesn't turn on, then hold the power button all the way down for 10 seconds. Then, wait at least three seconds and press the power button all the way down for one second and you should be up and running again.

Do not worry if you see a window that reads: "Your PC encountered a problem and had to restart". Simply click: "Don't send details" and then the piece will playback normally. Any error like this can usually be fixed by restarting the computer: using the keyboard, press the **Windows key** in the bottom left of the keyboard (next to the **CTRL** button) and then navigate to the power icon at the top right of the screen, and, finally, click **RESTART**.

### The image displayed is in the wrong orientation/format.

If the piece appears to have the wrong orientation, press **ESCAPE** to exit the software's perform mode, then head to the desktop. Then right click anywhere on the background and from the menu click **SCREEN RESOLUTION**. Here you can adjust the **RESOLUTION** and **ORIENTATION**: ensure it is in Landscape mode and either 3840x2160 or 7680x4320 resolution. Then, returning to the TouchDesigner application, pressing **F1** will put the artwork back into Perform Mode. Alternatively you can follow the steps above to restart the computer and the piece should open properly.

### If the artwork does not show up, or still displays in an unusual way.

Hit the keyboard **ESC** key to stop the artwork. You can navigate to the windows 'start' icon, on the power button icon, select 'restart' and let your computer turn off then on again. It should come on and start the artwork again; if it does not come back on, you may need technical support from our team.

**If the keyboard does not react.**

If the keyboard is not working, turn over the keyboard and check to see if the keyboard is turned ON (there is a button that shows red or green; green is ON.) Also, check that the USB dongle is in the computer, and try putting it in different USB ports. You can also open the bottom of the keyboard and check if the batteries are dead, and replace them if necessary.

## **Remote Access to Artwork's Computer**

There is a software installed on the computer running this artwork that allows the studio to connect remotely to the artwork. This feature is helpful when you require assistance from the studio, as we can remotely connect to it, do a quick inspection, and do a debugging session of your components, if needed. In order to enable this feature, the computer has to be connected to the internet at all times. Depending on the computer's operating system (Windows 7/8/10, OSX), the procedure to set the computer online will vary. Please look online for tutorials, if necessary.

## 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  
H2J 2L1  
Tel 1-514-597-0917  
[info@antimodular.com](mailto:info@antimodular.com)  
[www.antimodular.com](http://www.antimodular.com)

# APPENDIX I - INSTALLATION

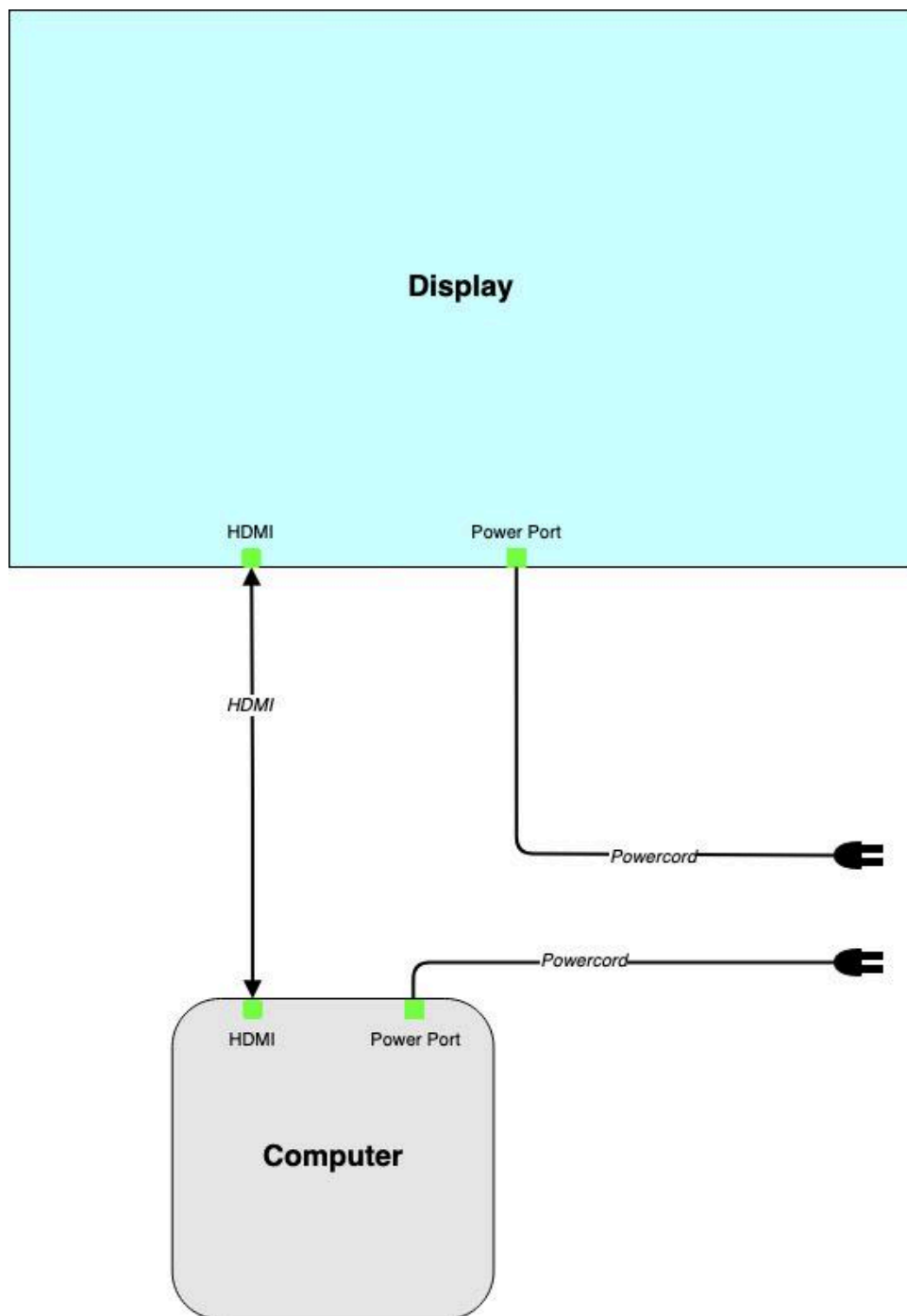
## Description of Components

This artwork requires the following components:

Component	Description
Computer	Computer running on at least Windows 10, with an NVidia graphics card (at least RTX 3060). Hard drive should be a very good quality SSD.
Video cable	Connects the computer to the display. This is typically a HDMI cable, able to carry at least a 4K@60Hz video signal (3840x2160).
Display	A 16:9-ratio display placed in a landscape orientation. 3840x2160 resolution - some editions are using a 7680x4320 resolution. Ideally, the monitor would be as matte (non-reflective) as possible, as slim as possible and with bevels as small as possible.
Keyboard	While not required for normal use of the artwork, it allows you to troubleshoot the artwork.

## Wiring Diagram

In order for the piece to run properly, the computer should be connected according to the following diagrams. Note: at the time of writing this manual, a DisplayPort cable can also be used to connect the camera to the computer instead of the HDMI cable pictured: the cable selection will depend on the selected display specs and the provided computer.





Images of components typically provided, for consultation:

