Intro:

How Do You Feel? -- for custom 4.1 digital audio multichannel format is a fixed media composition with video for Bose SoundWear™ Companion® speaker and Quadraphonic audio multichannel intermedia listening environment. It is an experimental intermedia composition, focusing on sounds' 3-dimensional spatialization design. The sound design is completed in Symbolic Sound Kyma system. The composition uses Ableton Live for live playback.

A description of each of the files can be find in "Project Contents. 6 pages.pdf" contained in the archive folder.

The folder titled "Ableton Live Timeline Archive" is the Ableton Live archive file.

The folder titled "Kyma Timeline Archive for Quad and SoundWear" is the Kyma Timeline Archive file for quad speaker .

The folder titled "Kyma Timeline Archive for Stereo" is the Kyma Timeline Archive file for stereo only listening environment .

The folder titled "Send_Receive_OSC_To_From_Kyma" is the Processing file for visual representation generation

This piece is design to play directly from the Ableton Live. Files from the Kyma and Processing folder are to demonstrate the sound design processing and visual content production.

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What you need in order to perform this piece:

Hardware:

1). a computer that runs ***macOS*** *High Sierra* 10.13.6 and has Bluetooth 4.2(or higher) installed.

2). a quad multi-channel speaker system and a Bose "SoundWear" or similar type of speaker. The channel setting follows the file "Quadraphonic and SoundWear Speaker Placement.jpg" contained in the archive folder.

3). a professional audio interface that supports discrete 4 channels outputs (For example, Roland OCTA-CAPTURE)

4). a projector (or use the computer screen)

Software:
1). Ableton Live Suite 10.0.6 (or higher)

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What you should do to perform this piece:

1). Connect the Bose “SoundWear” with your computer. See the instruction at https://www.bose.com/en_us/support/article/pairing-with-a-bluetooth-device-soundwear.html

2). Build an aggregate device in the computer system that includes your Bose “SoundWear” speaker and your audio interface so that they can be used as a single audio device. In Mac, you can go to the *Spotlight* search the *Audio MIDI setup* to build an aggregate device. In the aggregate device, make sure to set the soundwear as the main clock source, and check the “Drift Correction” for the other device. See the aggregate device building instruction at https://support.apple.com/en-us/HT202000
Make sure the audio interface’s 1,2,3,4 channels are use as the 1,2,3,4 channels of the aggregate and use the SoundWear as the 5,6 channels.

3). Open the file “Ableton Live Timeline.als” contained in the folder titled “Ableton Live Timeline Archive”.
(You will see a video window titled “Visual_Guidance.mov” right after you open the the file, this is the visual representation of the moving sound object of the music content.)

4). Configure the aggregate device as the sound output of the Ableton Live, turn on the 1,2,3,4,5,6 mono outputs and the 1/2, 3/4, 5/6 stereo outputs, change the buffer size to 2048 samples and the In/Out sample rate to 44100.

5). Put on the SoundWear, (see “How to wear the SoundWear.jpg” in the archive folder). Start the calibration. Find the testing sound is in the session view of the Ableton file “Master Degree Terminal Project,” and start to play it. First, adjust the volume of the quad speaker system to the ideal loudness, then, adjust the SoundWear volume use the buttons on the right side until you can hear the sound playing from both the wall speaker and the SoundWear.
(All track’s volume in the Ableton Live is set equal to keep the volume balance as same as in Kyma system. However, due to the difference in sensitivity of the human ear, let each audience adjust the volume setting on the SoundWear is necessary. The testing sound is designed based on the loudness of the actual composition, if the testing sound’s loudness sounds comfortable to you, the composition’s loudness should also sounds comfortable to you too)

6). Fullscreen the video window, start to play the piece.

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Glossary

Quadraphonic: the quadraphonic in this piece is a 4-channel speaker configuration that are positioned at the four corners of a listening space. It is capable of simulating sounds from 360 degrees.

Sample rate: Sample rate is the number of samples of audio carried per second, measured in Hz or kHz (one kHz being 1000 Hz).

Bose SoundWear™ Companion® speaker: Bluetooth wearable speaker. More info please see https://www.bose.com/en_us/products/speakers/portable_speakers/soundwear-companion.html

Ableton Live: A digital audio workstation(DAW). https://www.ableton.com/en/

Symbolic Sound Kyma system: A powerful sound design work station. https://kyma.symbolicsound.com

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Education and qualifications (1)

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