

Hear, here!

Tech Map for Cork Opera House Culture Night 2025



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Part 1: Portable Multichannel Setup (Genelec and *Black Box*)

The *Black Box* that is going to be consoling the speakers will be on the First floor Foyer/Bar. Firstly a *heat map* (fig. 1) was by looking at the flow of people, access areas such as doors and stairs highlighted in red (Flow) and in blue (100%) was areas where wires could be secured so audience members would not be walking over them– to avoid liability. This is with the exception of cyan (possibility), where only a small amount of crossover would be the case and taping down and securing would be given more attention.

Another *heat map* (fig. 2) was made of the Second floor Foyer/Bar to where any connection would be made with cables hanging over the balcony vertically. Not hard to do but makes setting up and composing just a bit more effort. It would be great to add a height dimension to the multichannel sound be decided to not pursue it to keep set and composition a bit more simple.

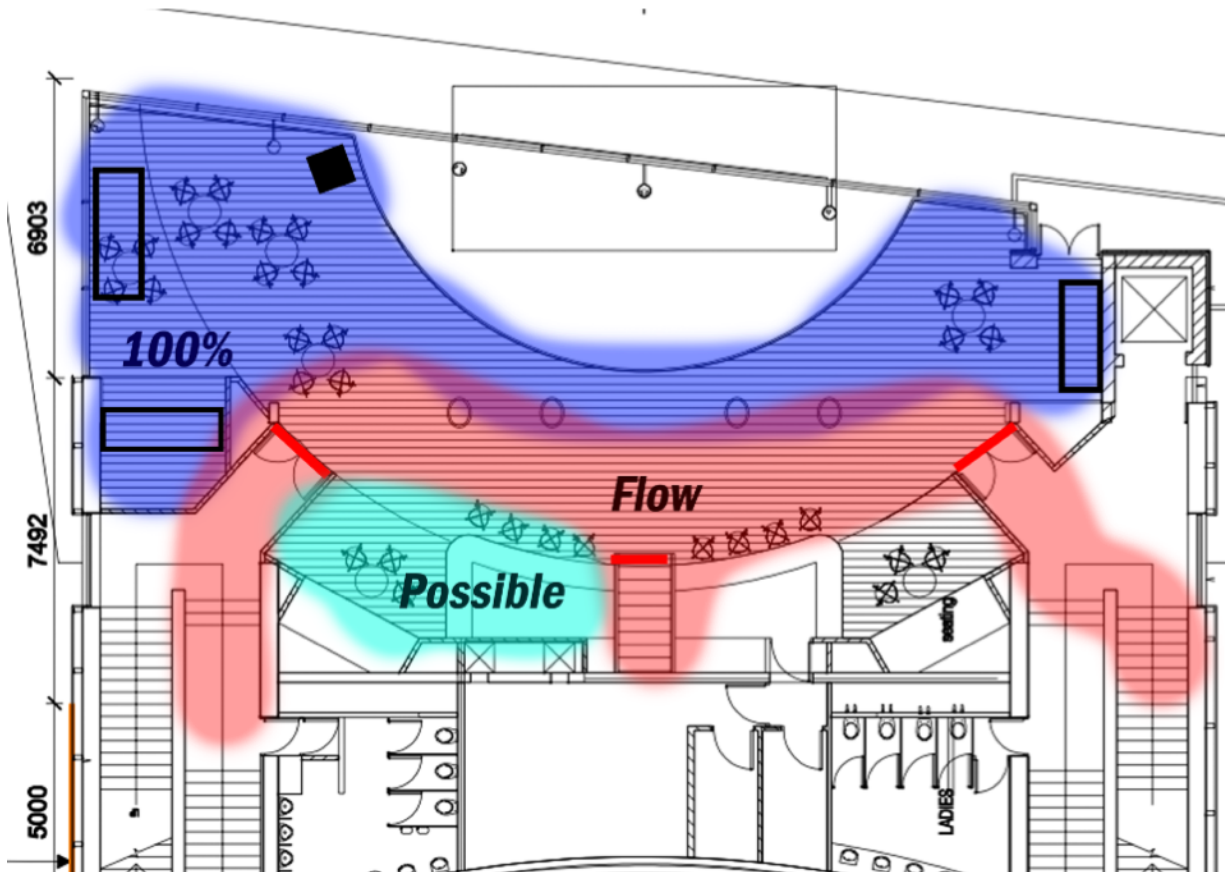
The *Black Box* includes the following:

- RME Digiface USB – x1
- Ferrofish Pulse 16 – x1
- Behringer ADA8200 Ultragain – x2
- ~~AK170 Mini Car Amplifier~~ – x8 (Not in use for this project)
- ~~30A 12V DC Power Supply~~ – x1 (Not in use for this project)
- Extension lead – x1

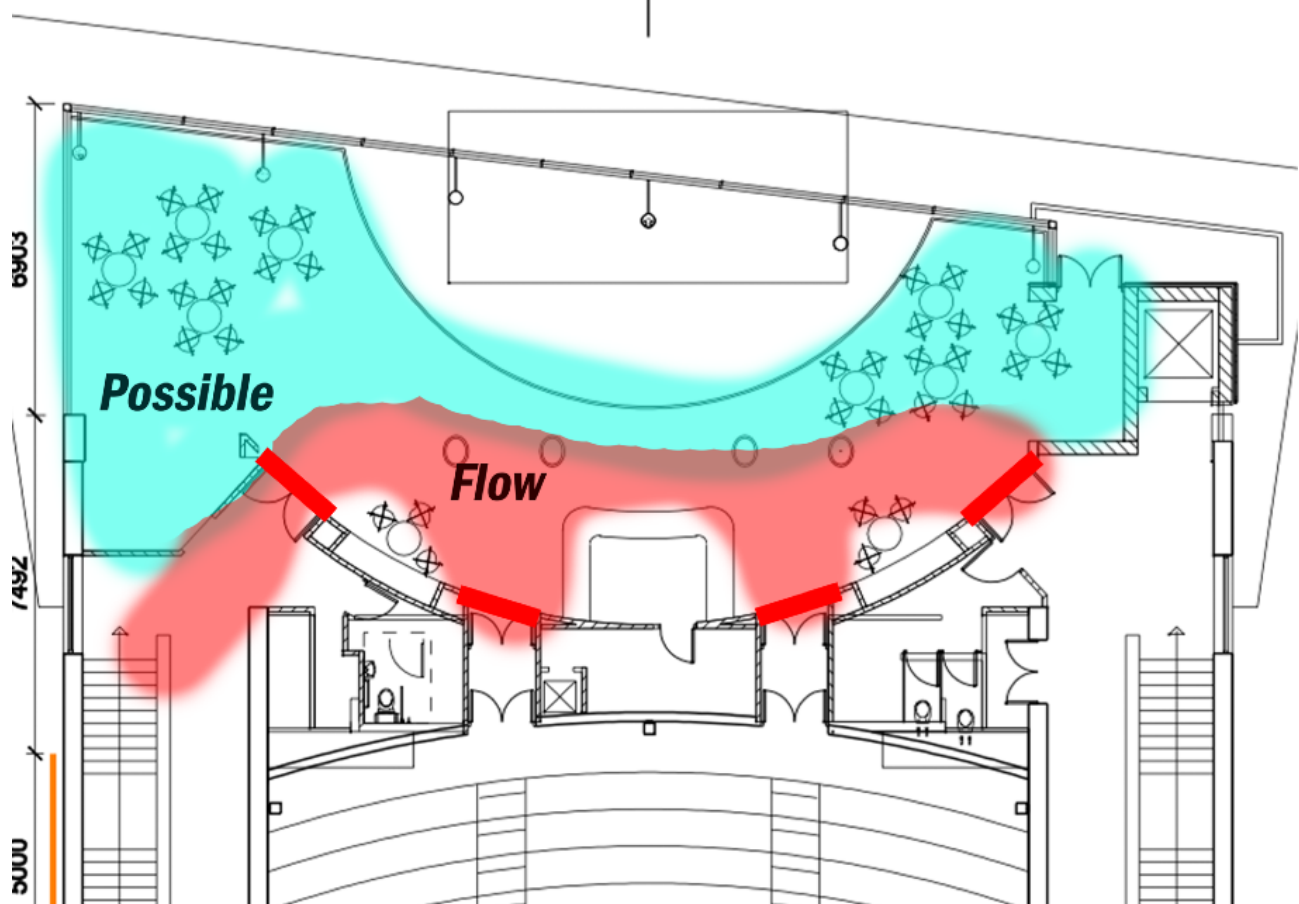
This this gives it 32 channels out. A laptop playing the multichannel audio through a DAW (Reaper or Ableton) is connected to the RME USB ADAT interface. The box will be kept in the left corner of the balcony. A discussion will need to be had on the display of this box (hide, obstruct, rise, etc.)

For this installation I have sixteen Genelec 8010 active speakers. Each one take XLR (male) and need a IEC (C13) for power. I have a straight and adjustable stand for each, otherwise the speakers all have feet that can sit on.

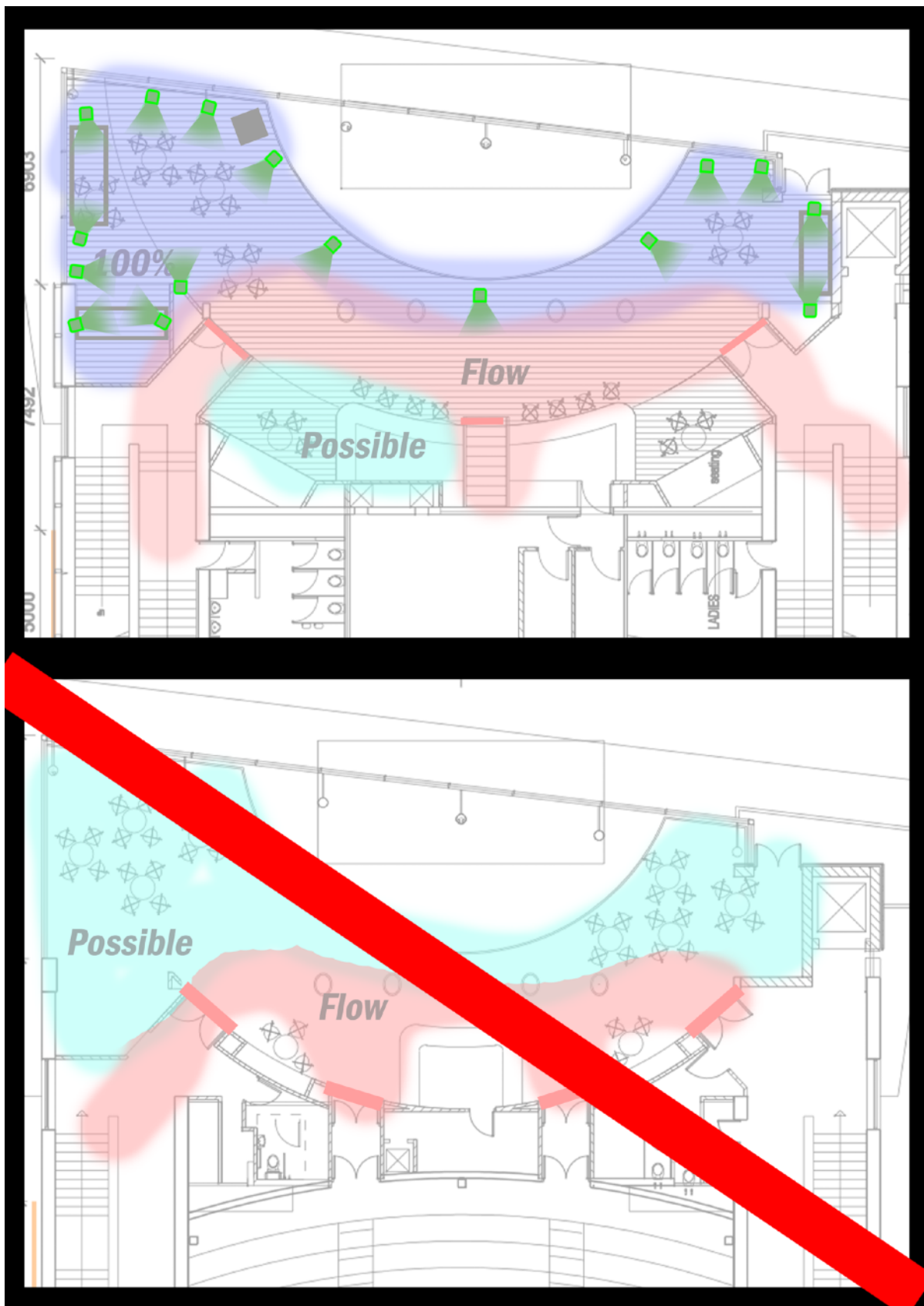
Notice in the third image (fig. 3) has the speakers placement and direction depicted in green and grey, eight left of the box and eight right of the box. This is the easiest and most stress free way to set up the multichannel system



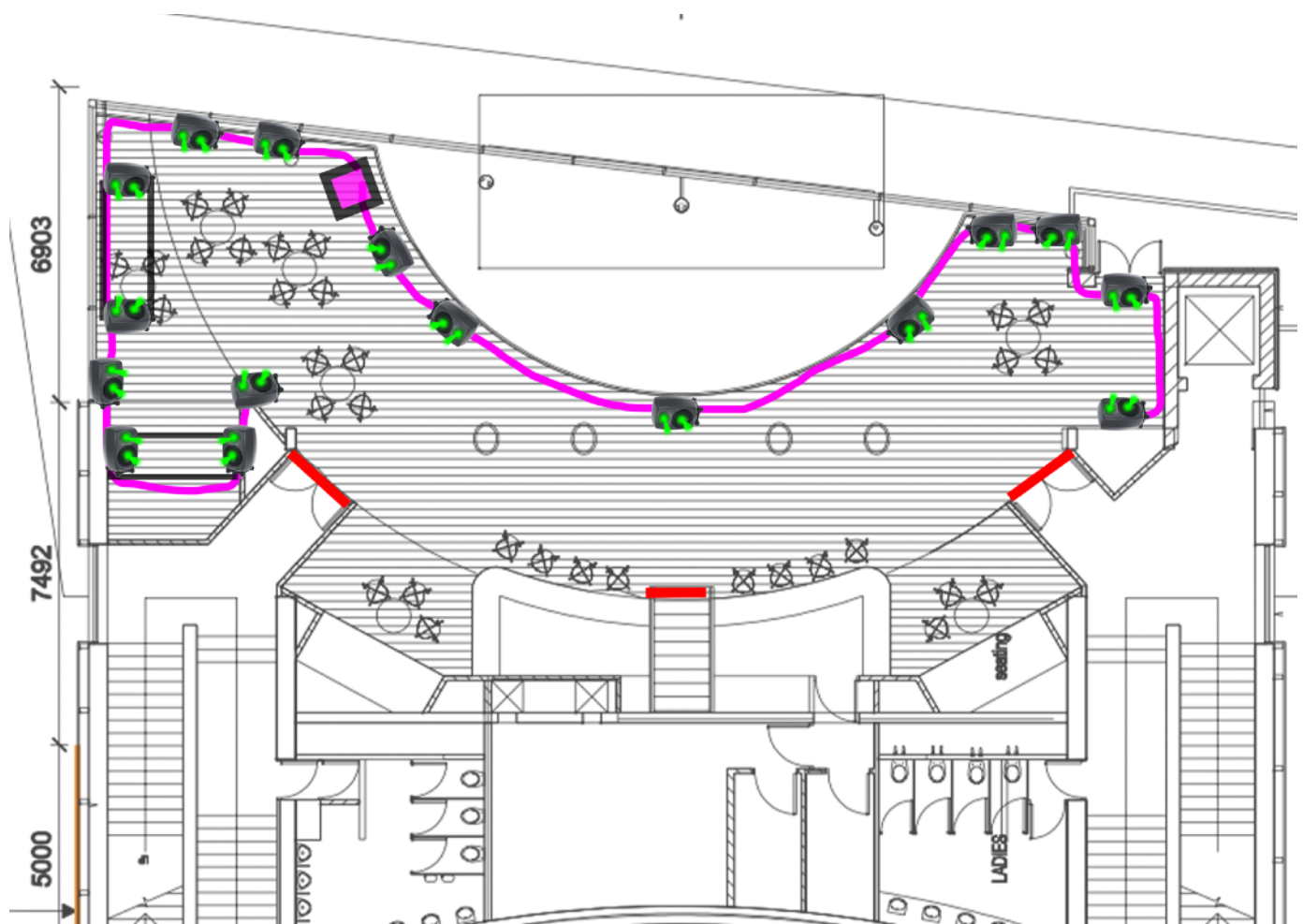
Foyer/Bar Floor 1 heat map (fig. 1)



Foyer/Bar Floor 2 heat map (fig. 2)

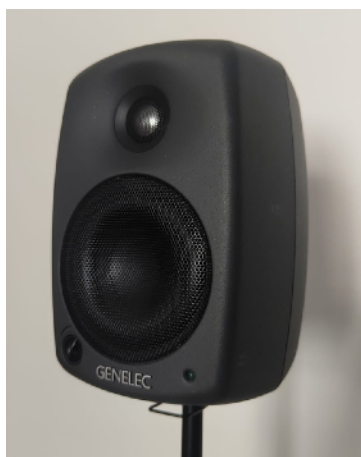


Foyer/Bar Floors with (green) speaker placement (fig. 3)

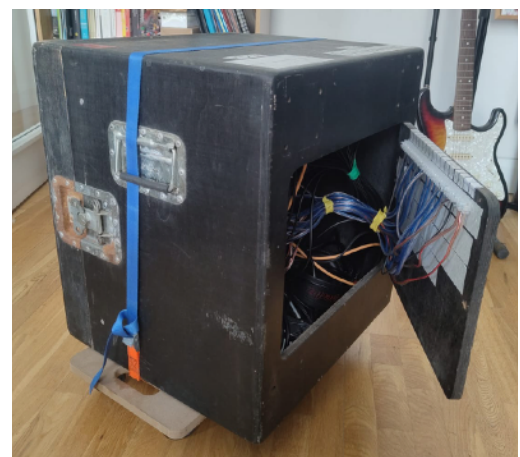


Foyer Floor 1 with (green) speaker placement (fig. 4)

The last image (fig. 4) depicts the speaks and their placement, along with two pink lines coming from the black box which show the cable arrangement being flush with the wall and not interfering with entrances or available walking spaces.



Genelec 8010 (fig. 5)



Black Box (fig. 6)

Part 2: Map of Three Audio Sources

Tannoys on the ceiling in the Foyer/Bars will be playing from a MP3 player which has a connection in the Box Office. As discussed in Part 1 the portable multichannel setup will be playing from the *Black Box*, and using the Cork Opera House's main infrastructure and desk there will be a multichannel setup in the house.

The house set up is as follows:

- Channel 1: Center Fills
- Channel 2: Left Front Stalls
- Channel 3: Right Front Stalls
- Channel 4: Left Front Stalls (LFE/Subs)
- Channel 5: Right Front Stalls (LFE/Subs)
- Channel 6: Left Front Balcony
- Channel 7: Right Front Balcony
- Channel 8: Left Wings/Backstage
- Channel 9: Right Wings/Backstage
- Channel 10: Left Rear Stalls (Surround)
- Channel 11: Right Rear Stalls (Surround)
- Channel 12: Left Rear Balcony (Surround)
- Channel 13: Right Rear Balcony (Surround)

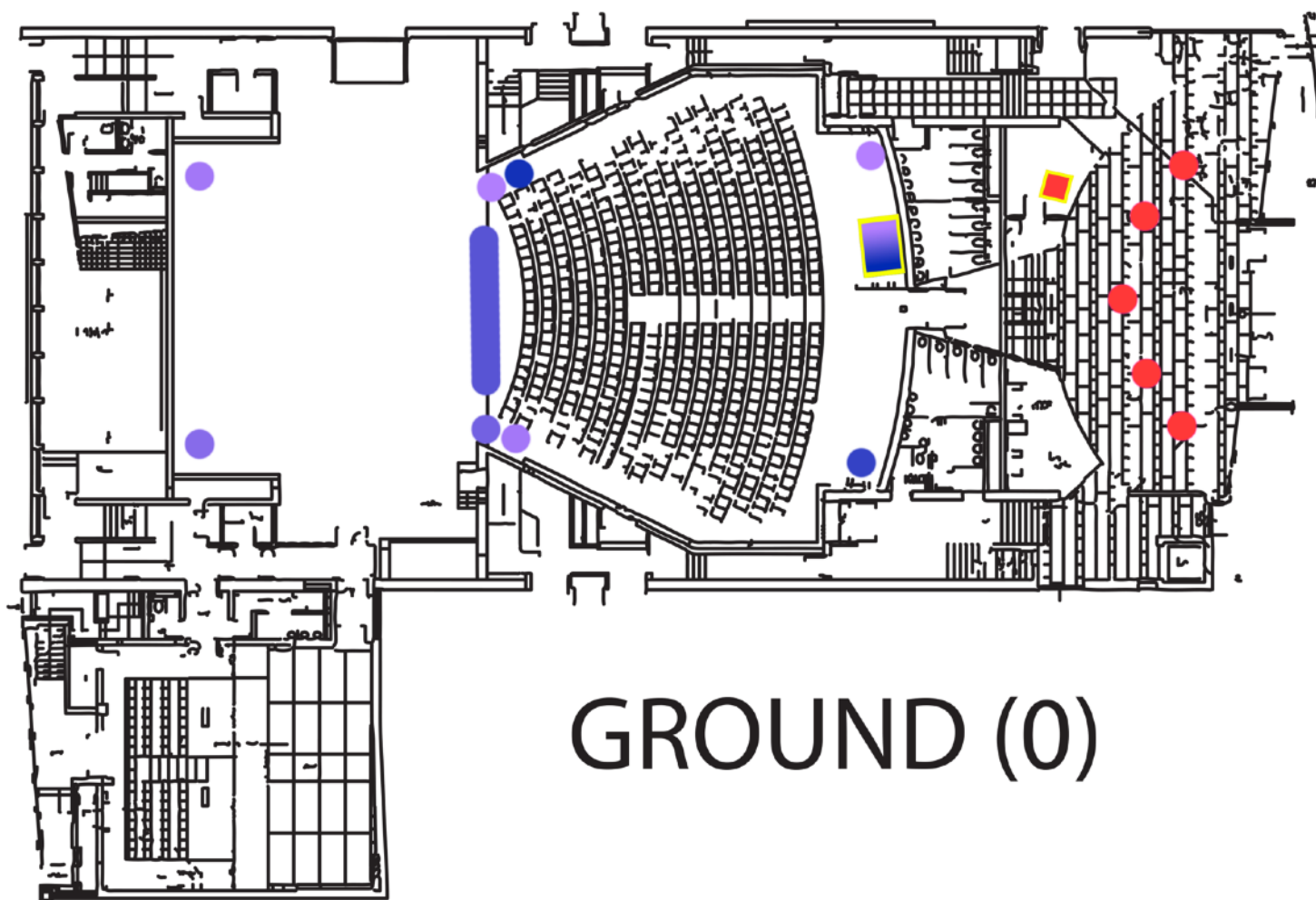
Look to the maps below to see how the audio will be controlled (MP3/Desk/Black Box) and where sound wavefronts will be produced from (Speakers).

There will be three loops composed, to have all synced will be tricky. each will have a click track for a few seconds to make sure they are relatively synced, but this will be by pressing play at the same time with a few attempts. Regardless the composition is not dependant that they are playing at the same time to avoid syncing errors.

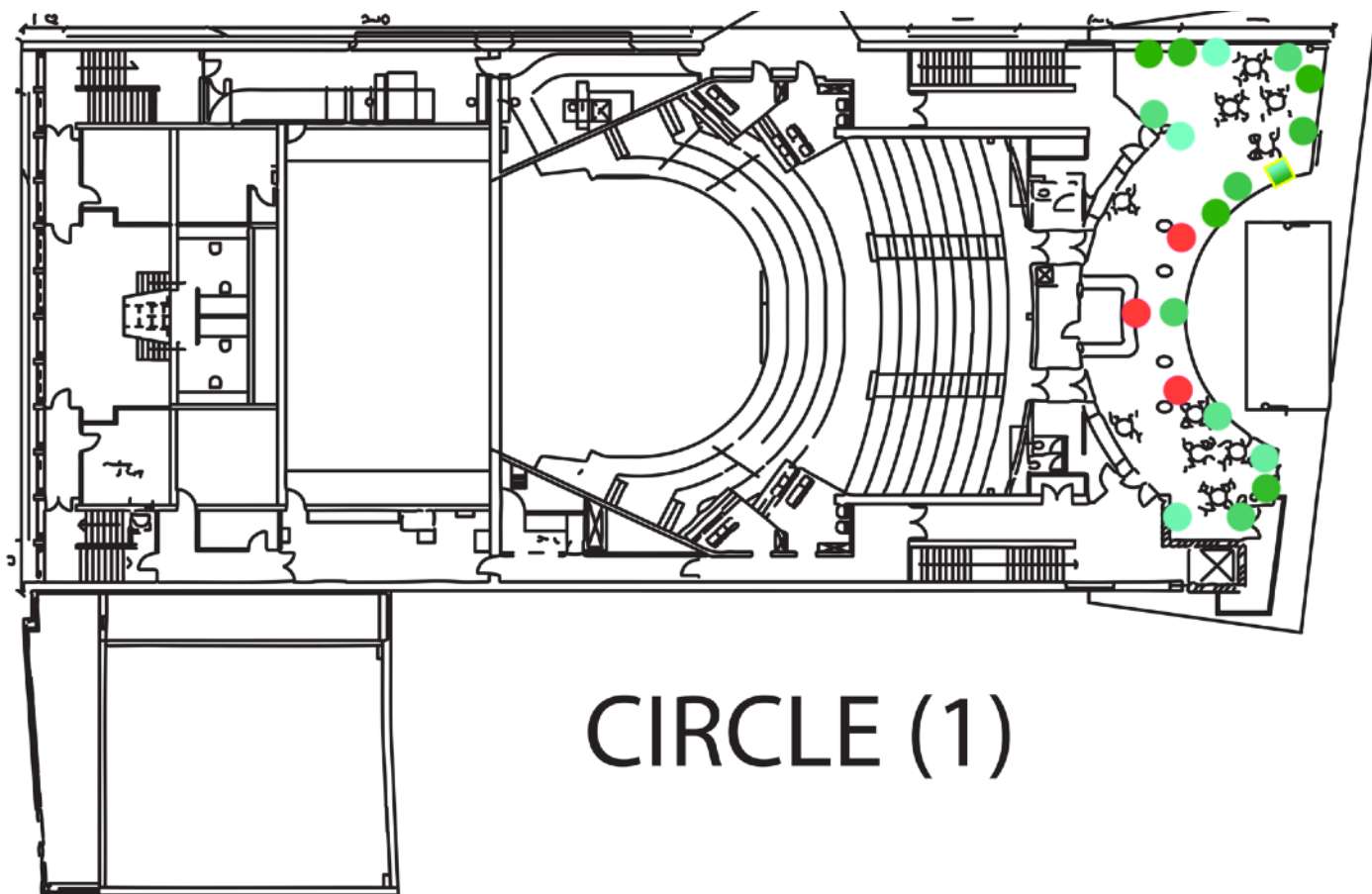
Map Legend

	Speakers/ Sound Front	Playback Source
Monophonic		 MP3 from Box Office
Multichannel House	 x13	 Desk and Dante
Multichannel First Floor Bar/Foyer	 x16	 Blackbox, Reaper, and RME

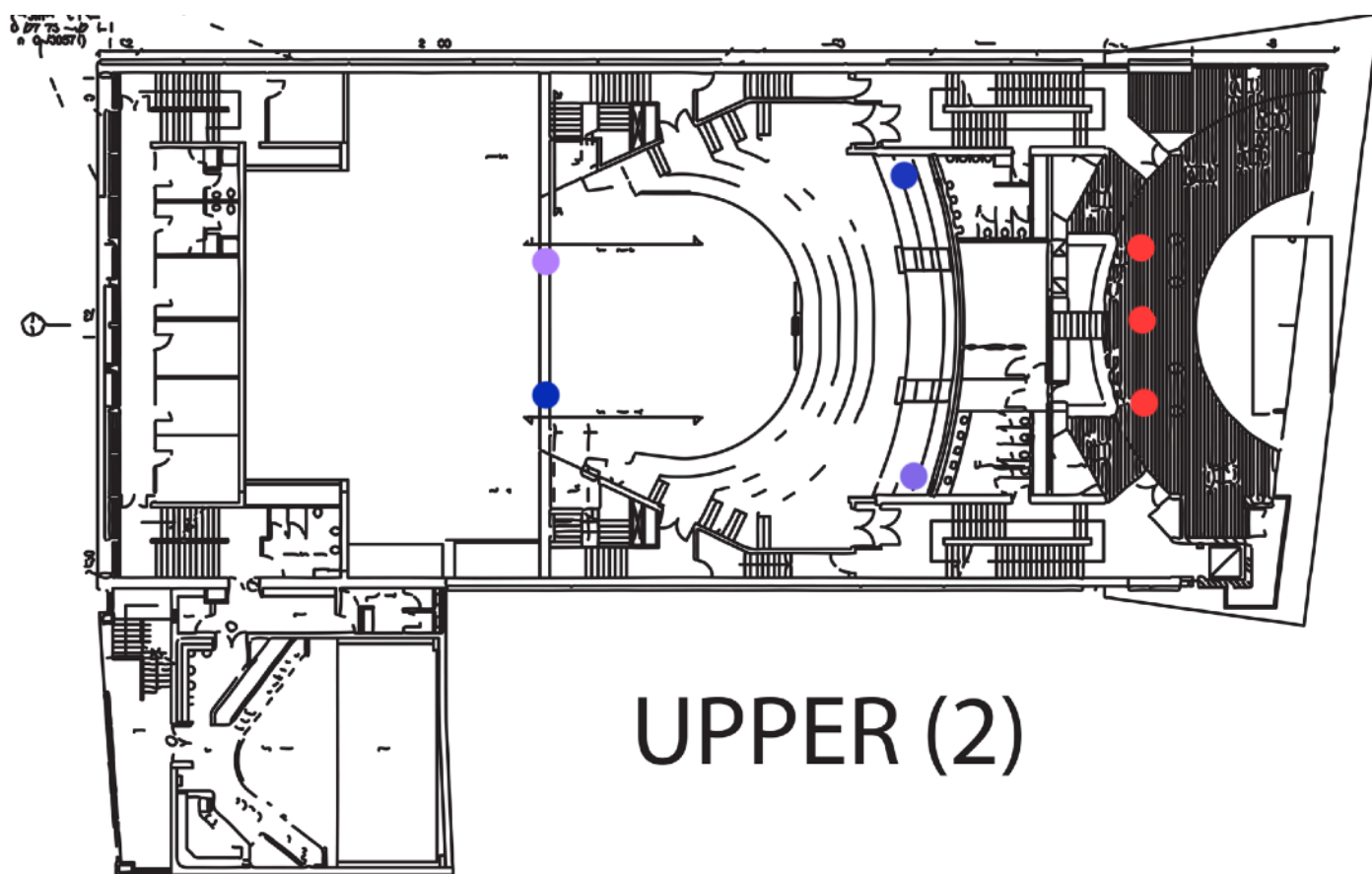
Map Legend (fig. 6)



Ground floor speaker and playback arrangement (fig. 7)



First floor speaker and playback arrangement (fig. 8)



Second floor speaker and playback arrangement (fig. 9)

Part 3: Visual and Guide

Flood lights slowly rotating through colours, as the installation plays.
Projector of photogrammetry scan animation.

Printed out A4 or pamphlet of the installation description and a guide on how one should lend their ear to wander around the designated space.