



INTERACTIVE AUDIO-VISUAL SHOWCASE

A WHOLE NEW APPROACH TO LIVE PERFORMANCE

The main difference between a band playing a concert and an electronic musician performing their productions live is the relationship between the artist and the audience.

A band will improvise, react to the crowd, make up new material on the spot and - yes - also make mistakes, with unpredictable results that can't be reproduced.

This is the essence of „live“.

Electronic musicians, however intricate their performance may be technically, offer a one-sided experience where the crowd is merely a passive consumer.

Using 3D sensor tracking data, my goal is to enable the crowd to co-create the show, becoming an active part of it.



EMBRACING TECHNOLOGY TO TAKE THINGS FURTHER

Depth sensors like the Microsoft Kinect or Intel RealSense make it possible to generate 3D visuals and track positional data.

Combining these data feeds is what makes this showcase work.

Simply put, I have created a true audio-visual feedback loop. The crowd provides material for the visuals which react to the music, while their movement modulates the sound of the individual parts that make up the songs.

Like any electronic live musician, I am assembling and playing my material on the fly - but the end result depends entirely on how the crowd behaves.

They affect my music within the constraints I've defined, just by playing with the visuals.



**„WHAT DO YOU NEED?“
„GUNS... LOTS OF GUNS.“**

Generating both graphics and sound at the lowest latencies possible while processing live sensor data requires serious horsepower. As such, my setup relies on custom-built laptops and desktop PCs with downright insane specs.

Combined with a massive array of A/V equipment, it's a nerd's wet dream and a beast to behold:

Ableton Live & M4L & Push 2
NI Traktor Scratch & Kontrol D2
NI Maschine mk2 & Jam
AKAI APC40 mk2
Rane Sixty-Four
Vestax PDX3000 mk2
Roland VR-4HD
Keith McMillen QuNeo + Rogue
Leap Motion
RealSense & Kinect
iConnectivity ICA4+ & ICM4+
GoPro Hero5



WHO AM I?

My name is Ray Kawalec, alias Arkaei - DJ, VJ, live performing producer and part of the editorial team behind technology blog [DJWORX](#).

The idea behind this project is to inspire digital performers to further explore the possibilities of technology - plus, it's a good means of demonstrating just how much can be done live by involving the crowd.

It's all constantly evolving, and by the time you're reading this, I will have successfully added much more generative visual content to my arsenal.

While this is very much my idea, I believe in sharing over keeping secrets. As such, circumstances permitting, I will happily host an in-depth workshop explaining the inner workings of my setup.



TECH RIDER: STAGE SETUP

CONSOLE

- Humpter Pro + Pro 60 Plus
- centered to projection / screen
- facing dance floor
- **max. 3m from edge of stage** (essential! required for sensors)

SENSOR(S)

- edge of stage (for max. range)
- facing dance floor

CAMERAS

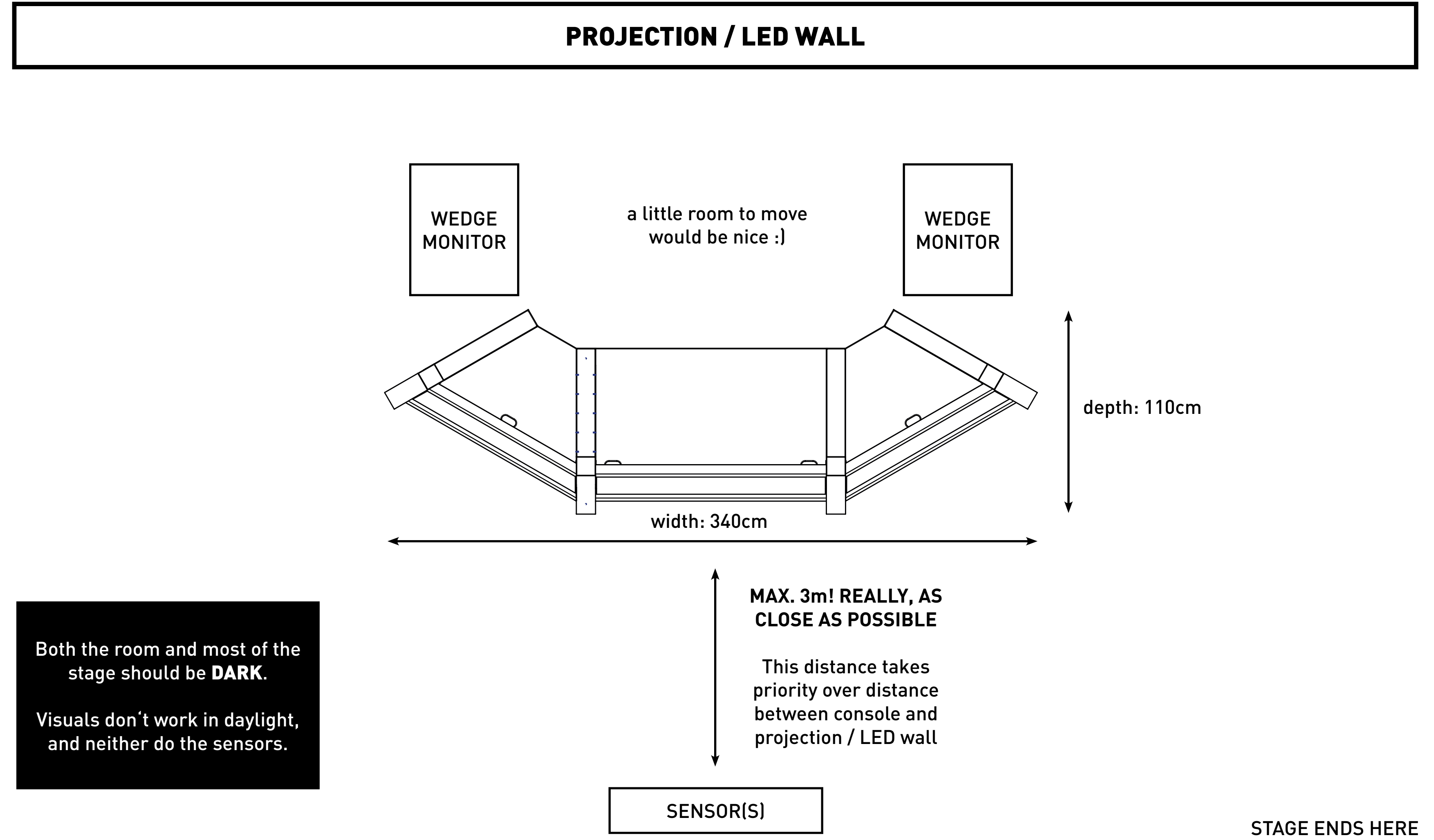
- 2x GoPro Hero5 on console
- 1x GoPro Hero5 facing stage
- 2x GoPro Hero5 mobile

AUDIO MONITORING

- stereo (matching L/R of PA)
- volume control, **please :)**
- floor wedges preferred

PROJECTION

- **LARGE** 16:9 screen (~8 x 4.5m)
- behind console, centered, 1080p
- bright LED walls preferred
- if projector: 12000+ lumens



Sensor height is adjustable, but they must be at the crowd's eye level. If possible, the stage shouldn't be too elevated. They can also be set up on tripods in front of the stage - if there are barriers to protect them.

DANCE FLOOR

TECH RIDER: CONNECTIVITY

MAIN / MONITOR AUDIO OUT

XLR (male, **stereo**)

6.3mm (female, **stereo**)

Outputs depend on the device at the end of the audio chain, please provide both connections.

A **DI box with ground lift** for each output would be great. Thanks!

MAIN VIDEO OUT

1080p/50, HDMI

POWER

20x Type F (EU) power socket

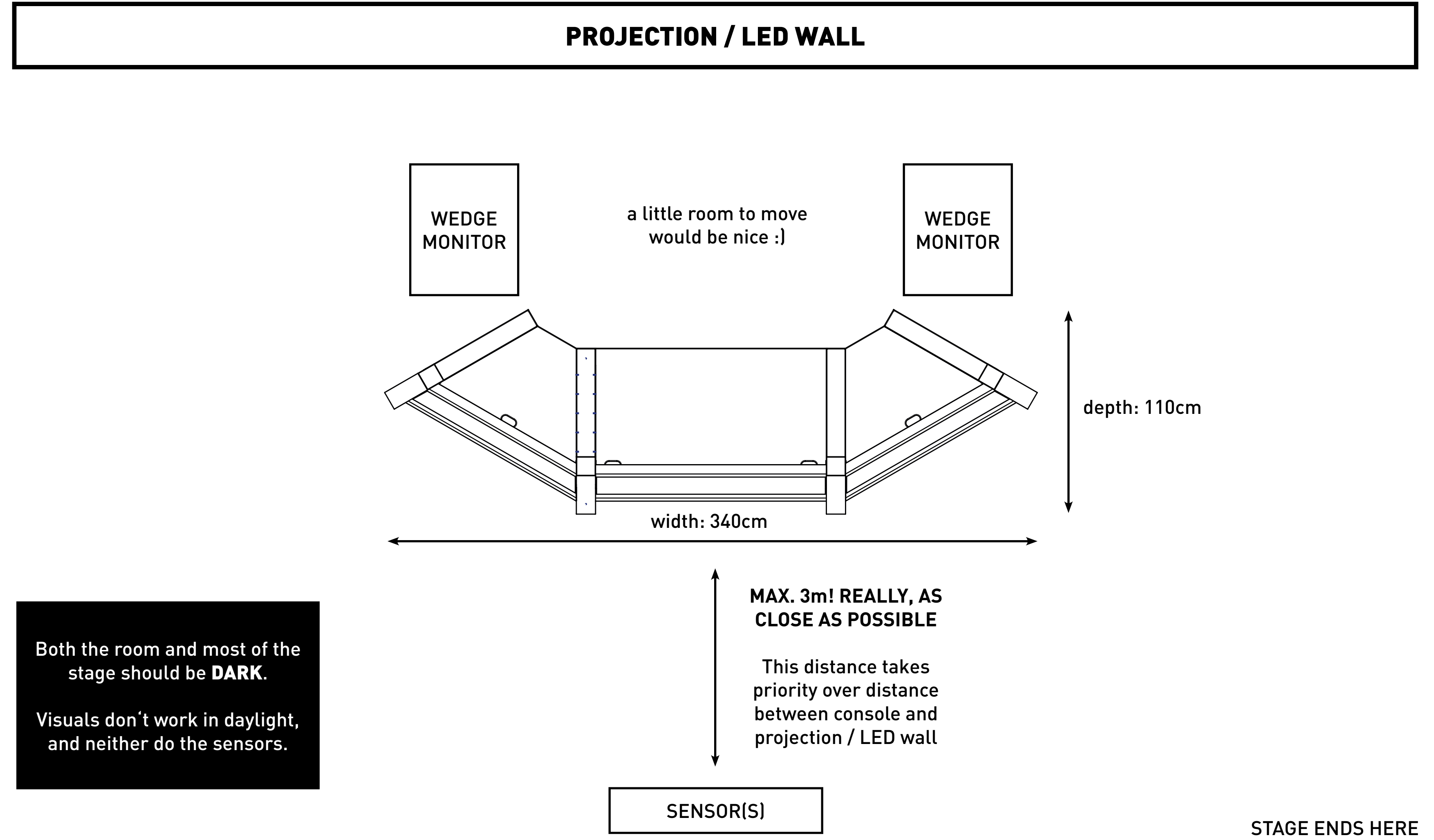
220V / 50Hz

PERFORMANCE TIME

60 min. total, can work between DJ sets if set up ahead of time.

SETUP TIME

Approx. 45 min, ideally off stage and just „wheeled out“. If possible, ~5 min for sound/video check.



Both the room and most of the stage should be **DARK**.

Visuals don't work in daylight, and neither do the sensors.

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DANCE FLOOR

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