



DANTE™ AV NETWORKING WORLD

---

AMSTERDAM - **9 FEBRUARY 2015**

# National Indoor Sports Arena (NISA) & Velodrome

Tony Mott  
T.G.Baker(Sound) Ltd



DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# NISA & Velodrome Plan View



									<b>MEDIA SPONSORS</b>



DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Glasgow 2014 – Badminton



									<b>MEDIA SPONSORS</b>  

# Glasgow 2014 – Cycling



									<b>MEDIA SPONSORS</b>
									
									



DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Sports Hall



									<b>MEDIA SPONSORS</b>

# Notable Upcoming Events

- March – Davis Cup tennis GB v USA
- March – Host the BBL Trophy Final
- April – European Judo Championships

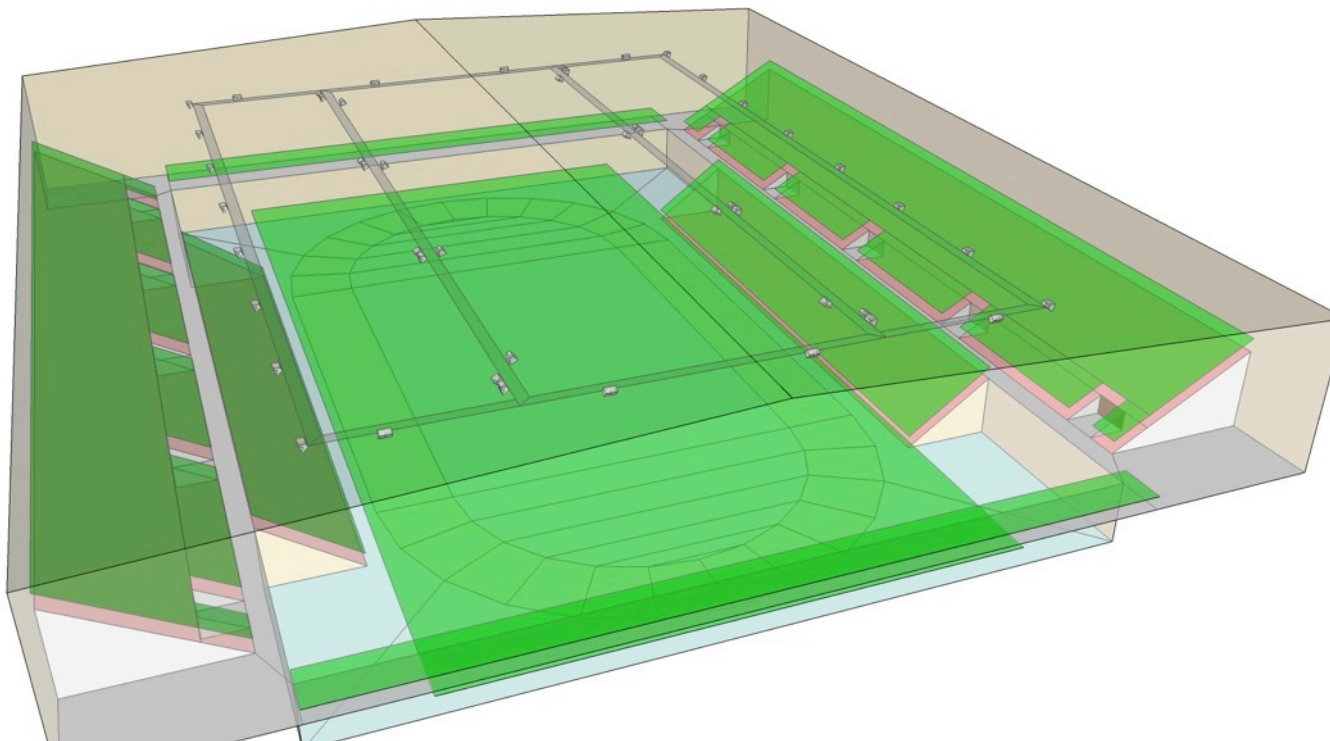
										
										
										

# Acoustic Modelling - Arena



									<b>MEDIA SPONSORS</b>	
										<b>AV MAGAZINE</b>
										

# Acoustic Modelling - Arena



ASHLY

ATTEROTECH

audinate

audio-technica.

BOSCH

BOSE

BSS  
by HARMAN

CREST  
AUDIO

DELEC  
MADE BY EXPERTS

MEDIA  
SPONSORS

Focusrite  
REDNET

HARMAN

LAB.GRUPPEN

lake

NEXO

NTP TECHNOLOGY

TKAL  
Commercial Audio

Towersoft  
AUDIO

PreSonus

AV  
MAGAZINE

RTS

SHURE

Soundcraft

SALZBENNER  
STAGETEC  
SYSTEMS

STEWART  
AUDIO

STUDIO  
TECHNOLOGIES

Symetrix

TENDZONE

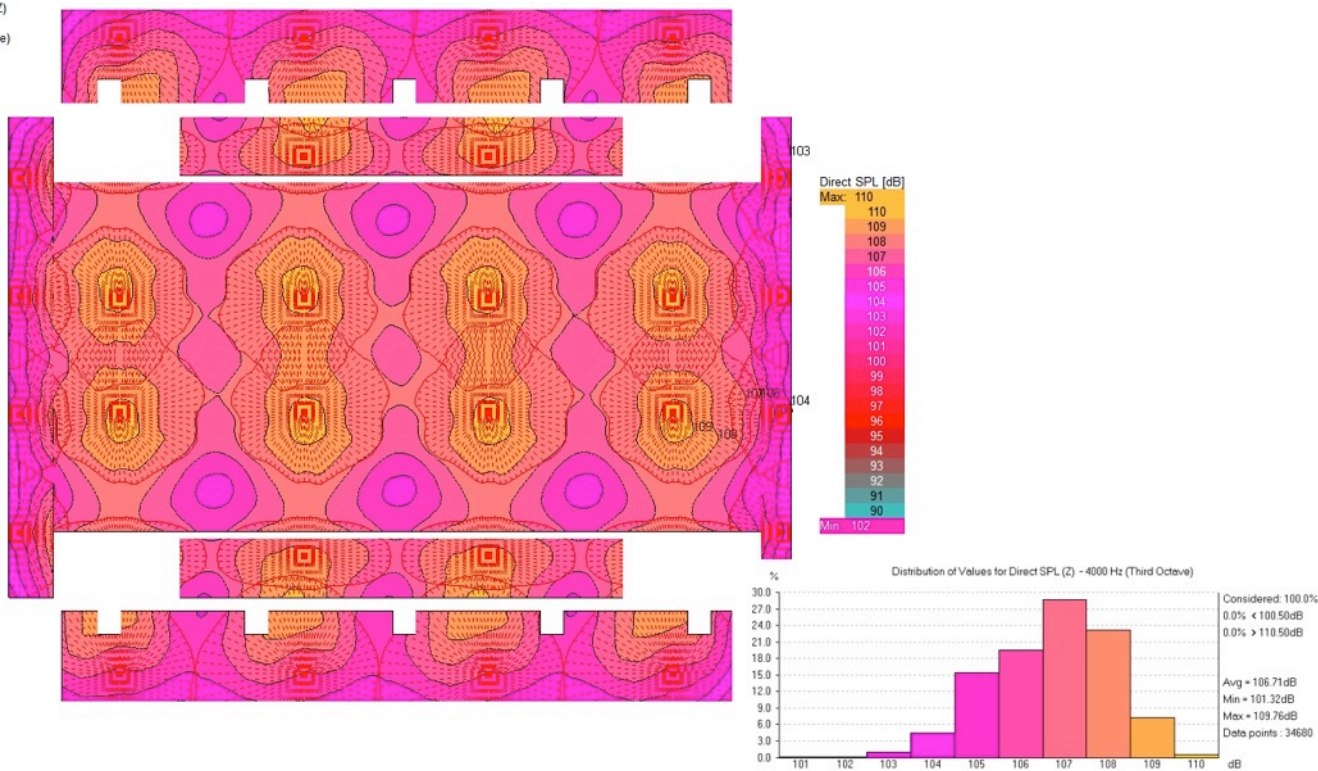
YAMAHA  
CO

rave  
europe



# Acoustic Modelling – Arena

Map: Direct SPL (Z)  
Freq. 4000 Hz  
(1/3 Octave Average)



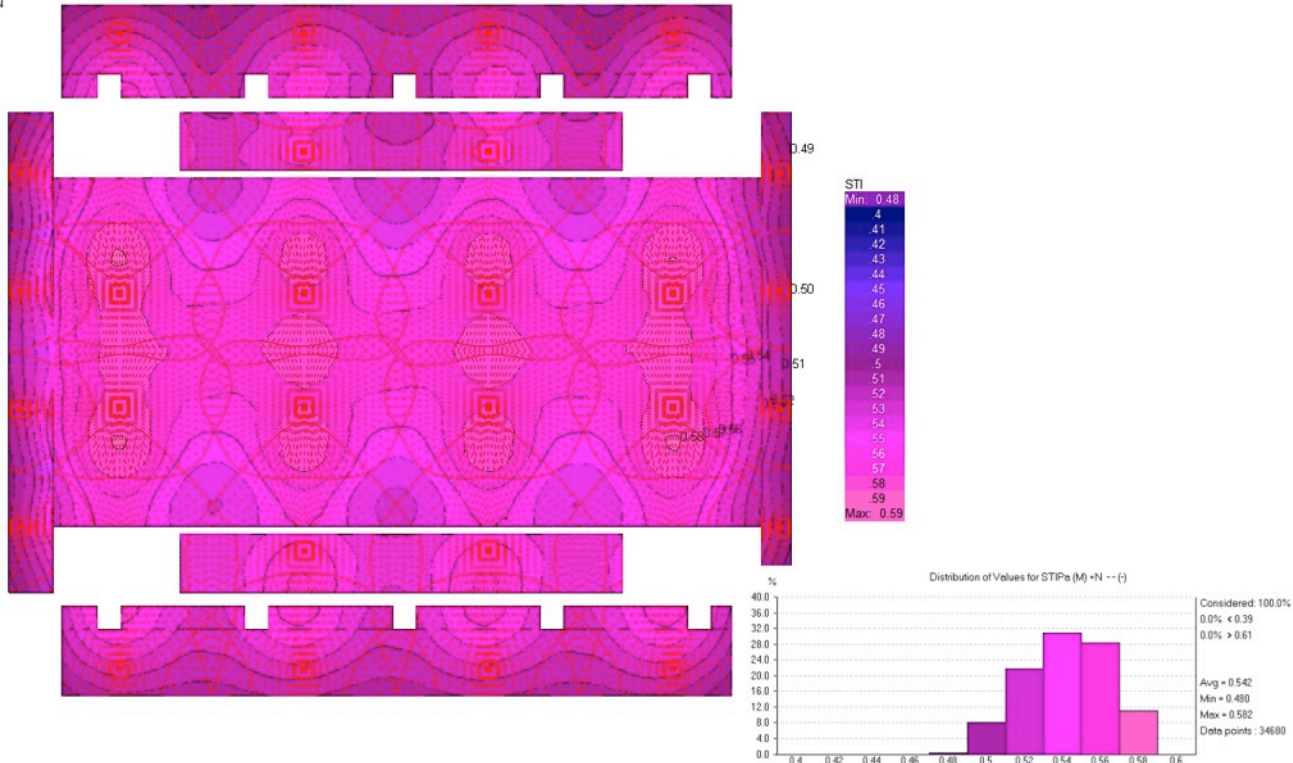
(c) EASE 4.3 / NISA Arena Stage E Tannoy Review Mar 2011 / 24/04/2011 11:46:48 / TG Baker (Sound) Ltd Tony

(c) EASE 4.3 / NISA Arena Stage E Tannoy Review Mar 2011 / 24/04/2011 11:46:17 / TG Baker (Sound) Ltd Tony

									<b>MEDIA SPONSORS</b>  

# Acoustic Modelling - Arena

Map: STIPa (M) +N



(c) EASE 4.3 / NISA Arena Stage E Tannoy Review Mar 2011 / 24/04/2011 12:16:30 / TG Baker (Sound) Ltd Tony

(c) EASE 4.3 / NISA Arena Stage E Tannoy Review Mar 2011 / 24/04/2011 12:16:13 / TG Baker (Sound) Ltd Tony

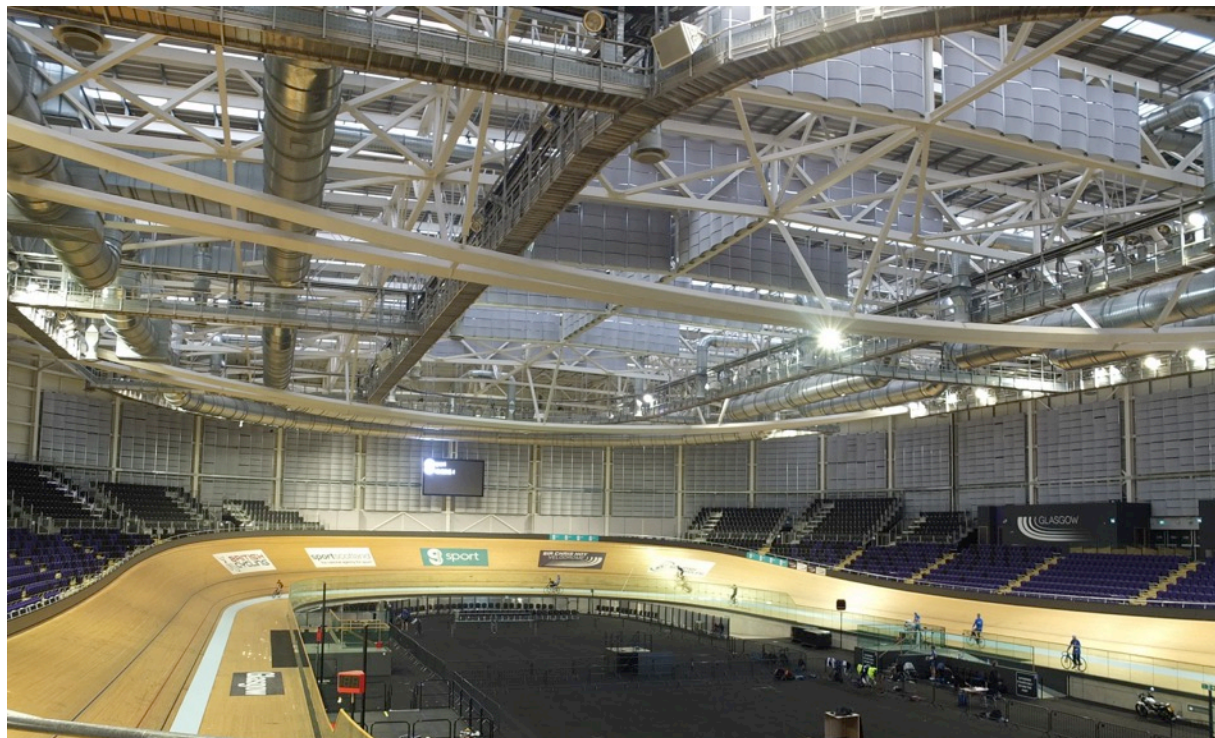
									<b>MEDIA SPONSORS</b>
									
									



DANTE™ AV NETWORKING WORLD

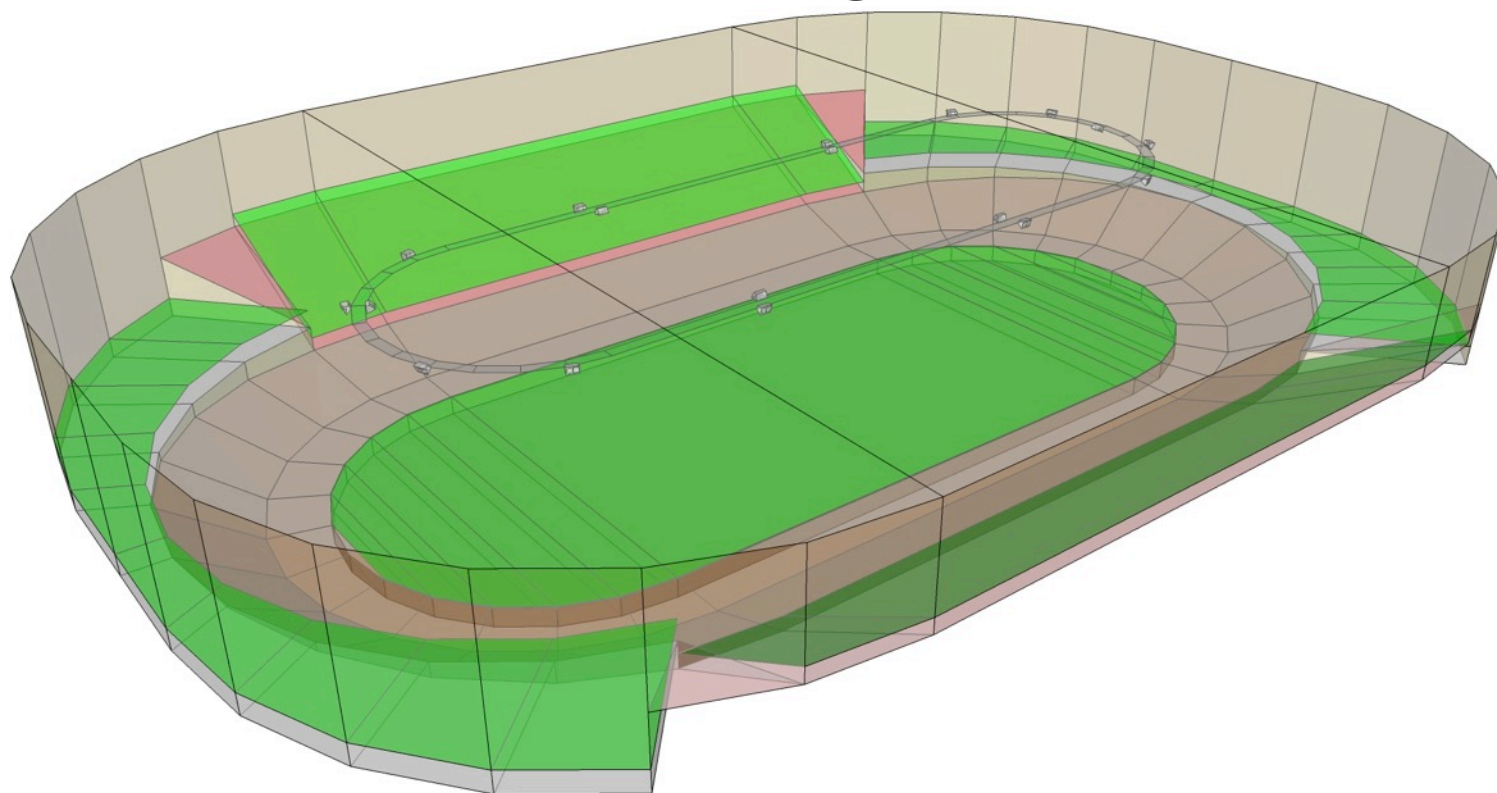
www.audinate.com/avnw-amsterdam15 ©2015

# Acoustic Modelling – Velodrome



									<b>MEDIA SPONSORS</b>  

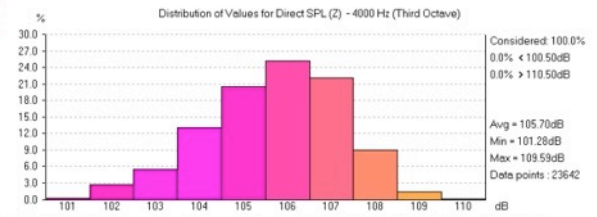
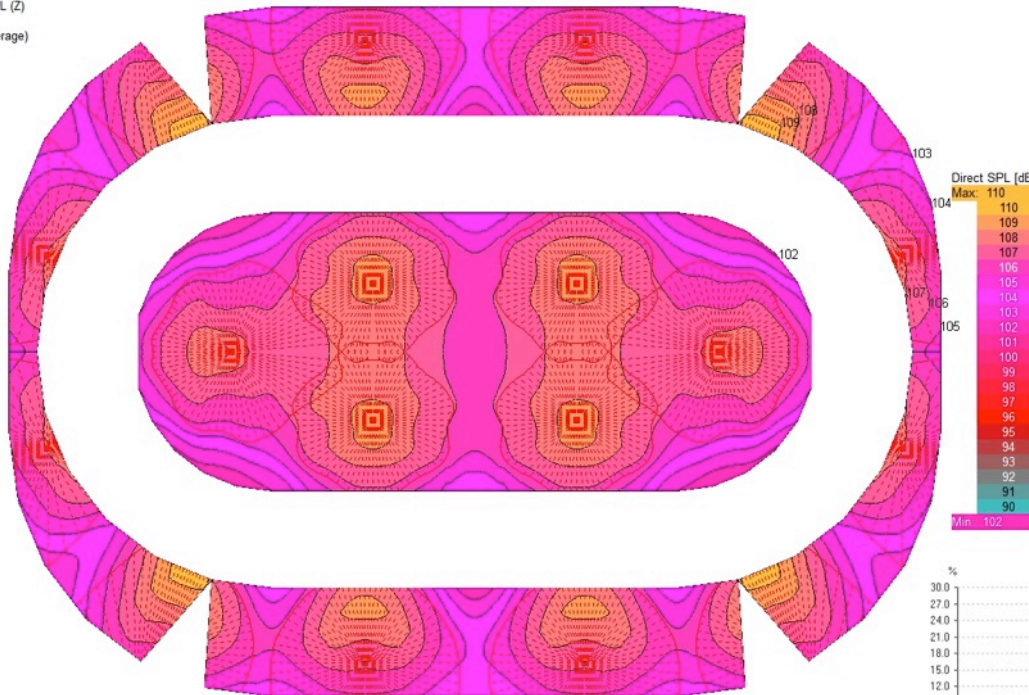
# Acoustic Modelling – Velodrome



									<b>MEDIA SPONSORS</b>
									
									

# Acoustic Modelling – Velodrome

Map: Direct SPL (Z)  
 Freq: 4000 Hz  
 (1/3 Octave Average)



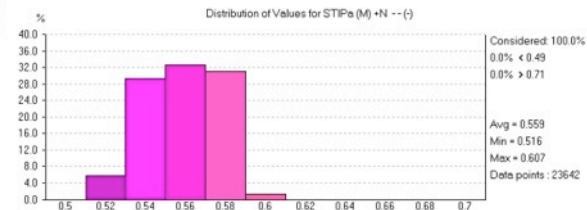
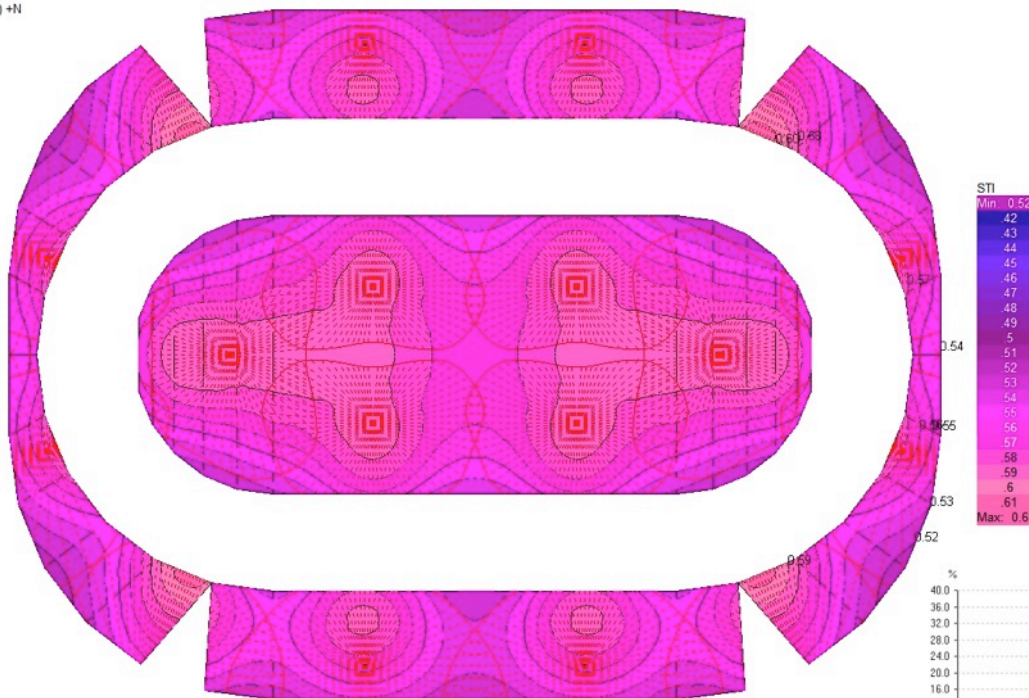
(c) EASE 4.3 / NISA Velodrome Stage E Tannoy Review Mar 2011 / 21/04/2011 16:16:17 / TG Baker (Sound) Ltd Tony

(c) EASE 4.3 / NISA Velodrome Stage E Tannoy Review Mar 2011 / 21/04/2011 16:16:05 / TG Baker (Sound) Ltd Tony

									<b>MEDIA SPONSORS</b>

# Acoustic Modelling – Velodrome

Map: STIPa (M) +N



(c) EASE 4.3 / NISA Velodrome Stage E Tannoy Review Mar 2011 / 21/04/2011 16:51:04 / TG Baker (Sound) Ltd Tony

(c) EASE 4.3 / NISA Velodrome Stage E Tannoy Review Mar 2011 / 21/04/2011 16:50:50 / TG Baker (Sound) Ltd Tony

									<b>MEDIA SPONSORS</b>



DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Acoustic Modelling – Sports Hall



ASHLY

ATTEROTECH

audinate

audio-technica.

BOSCH

BOSE

ESS  
by HARMAN

CREST  
AUDIO

DELEC  
MADE BY EXPERTS

MEDIA  
SPONSORS

Focusrite  
REDNET

HARMAN

LAB.GRUPPEN

lake

NEXO

NTP TECHNOLOGY

TKL  
Commercial Audio

Towersoft  
AUDIO

PreSonus

AV  
MAGAZINE

RTS

SHURE

Soundcraft

SALZBENNER  
STAGETEC  
SYSTEMS

STEWART  
AUDIO

STUDIO  
TECHNOLOGIES

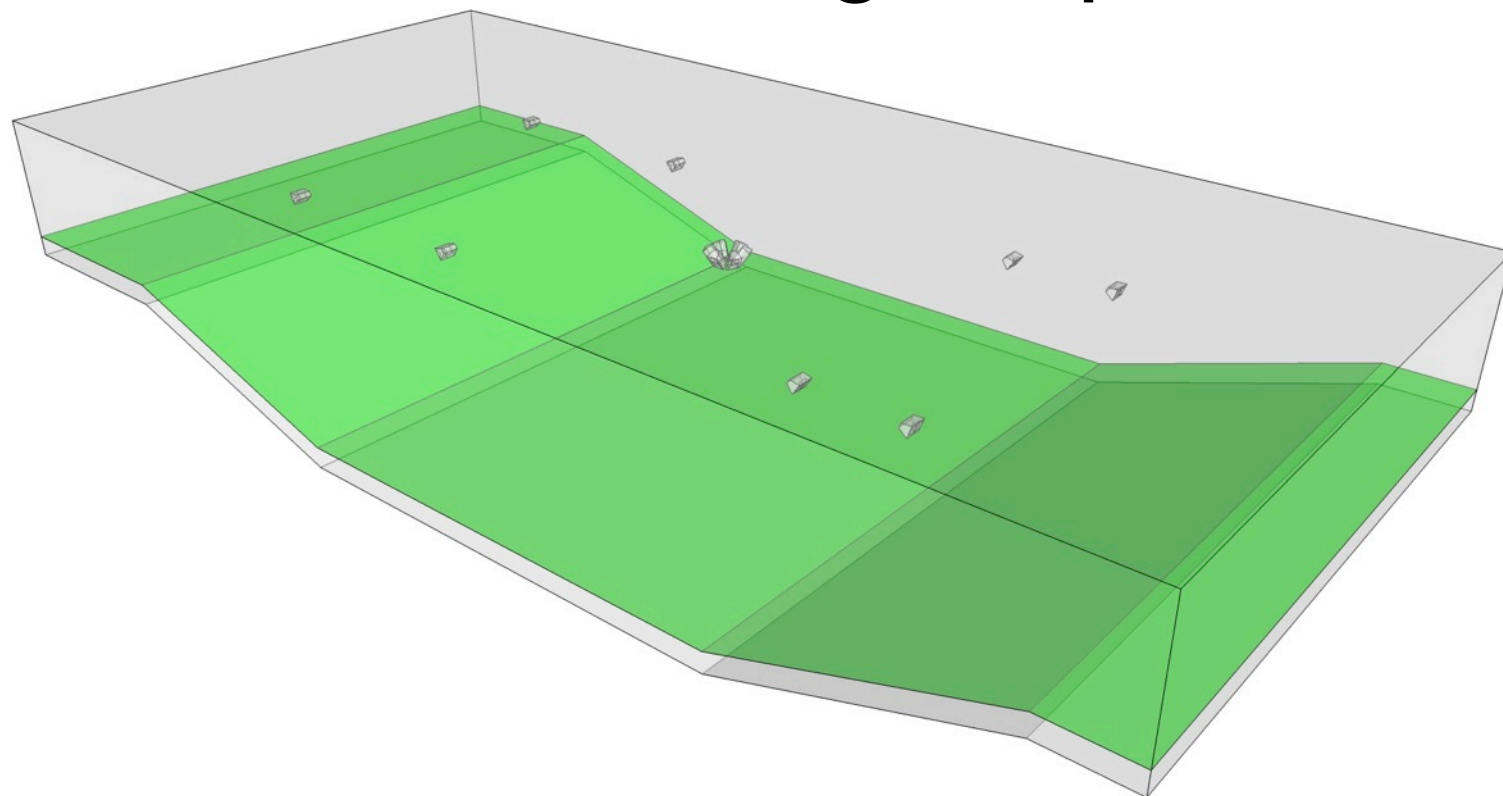
Symetrix

TENDZONE

YAMAHA  
CO

rave  
europe

# Acoustic Modelling – Sports Hall

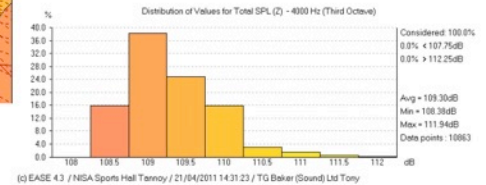
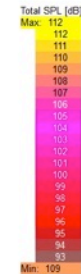
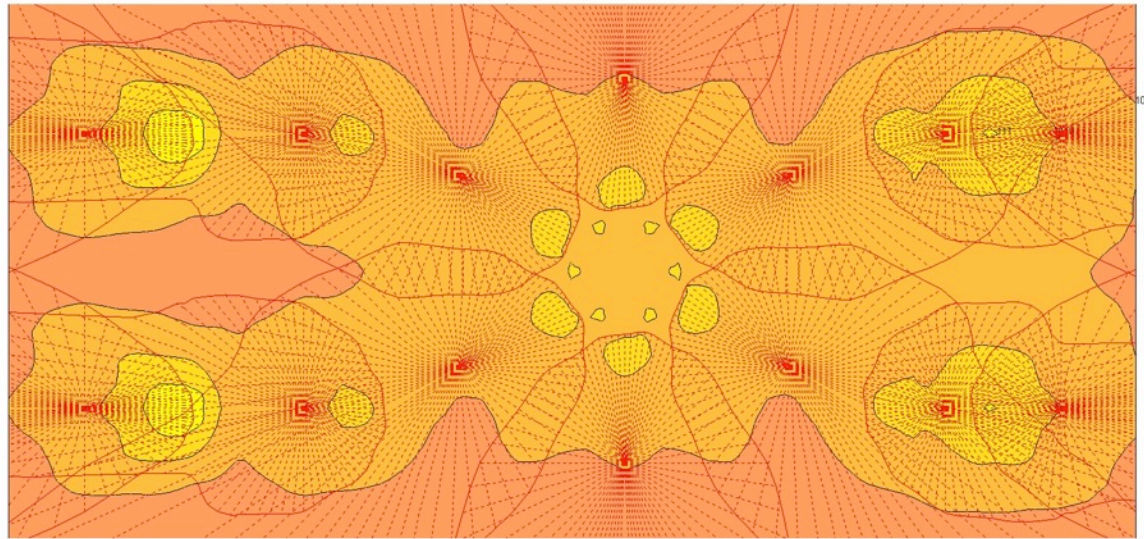




# Acoustic Modelling – Sports Hall

Freq: 4000 Hz  
(1/3 Octave Average)

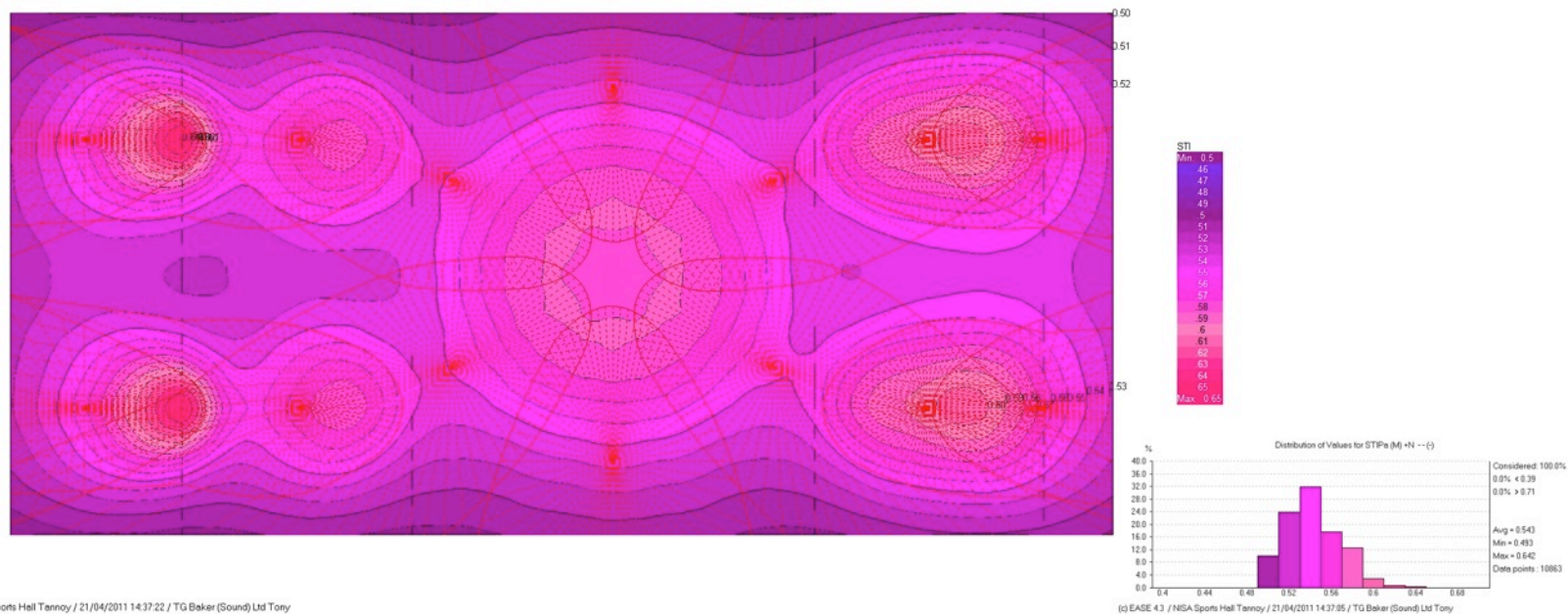


(c) EASE 4.3 / NISA Sports Hall Tannoy / 21/04/2011 14:31:42 / TG Baker (Sound) Ltd Tony

(c) EASE 4.3 / NISA Sports Hall Tannoy / 21/04/2011 14:31:23 / TG Baker (Sound) Ltd Tony

									<b>MEDIA SPONSORS</b>  

# Acoustic Modelling – Sports Hall



(c) EASE 4.3 / NSA Sports Hall Ternoy / 21/04/2011 14:37:22 / TG Baker (Sound) Ltd Ternoy

(c) EASE 4.3 / NSA Sports Hall Ternoy / 21/04/2011 14:37:55 / TG Baker (Sound) Ltd Ternoy

									<b>MEDIA SPONSORS</b>  

# Installed Products

- Tannoy VQ and VX Series Loudspeakers
- Lab.gruppen PLM10000 and PLM20000 power amplifiers
- Peavey Nion nE, nt180 and Kiosk
- Application Solutions VAR Series routers and VARNIA



# Sound System Overview

- There are 20 PAVA zones
- Each zone has a minimum of 2 separate interleaved loudspeaker circuits fed from independent amplifiers
- The system is designed so that no one individual item of equipment will cause the total failure of the PAVA

# Sound System Overview

- Performance loudspeakers are low impedance (Low-Z) and monitored
- All other areas are 100V line (High-Z) and monitored
- Local inputs at each node are configured to address sub-zones within at each location

# Sound System Inputs & Priority

- 4 Emergency Fire Microphones
- Evacuation Message
- Staff Red Code Message
- Staff Green Code Message
- Fire Alarm Test Message
- Paging Microphones

# Sound System Inputs & Priority

- Dance Studio
- Mind & Body Studio
- Level 5 Function Room 1 and 2
- Level 4 Gym/Dry/SPA/Wet Area
- Level 2 Facilities Management

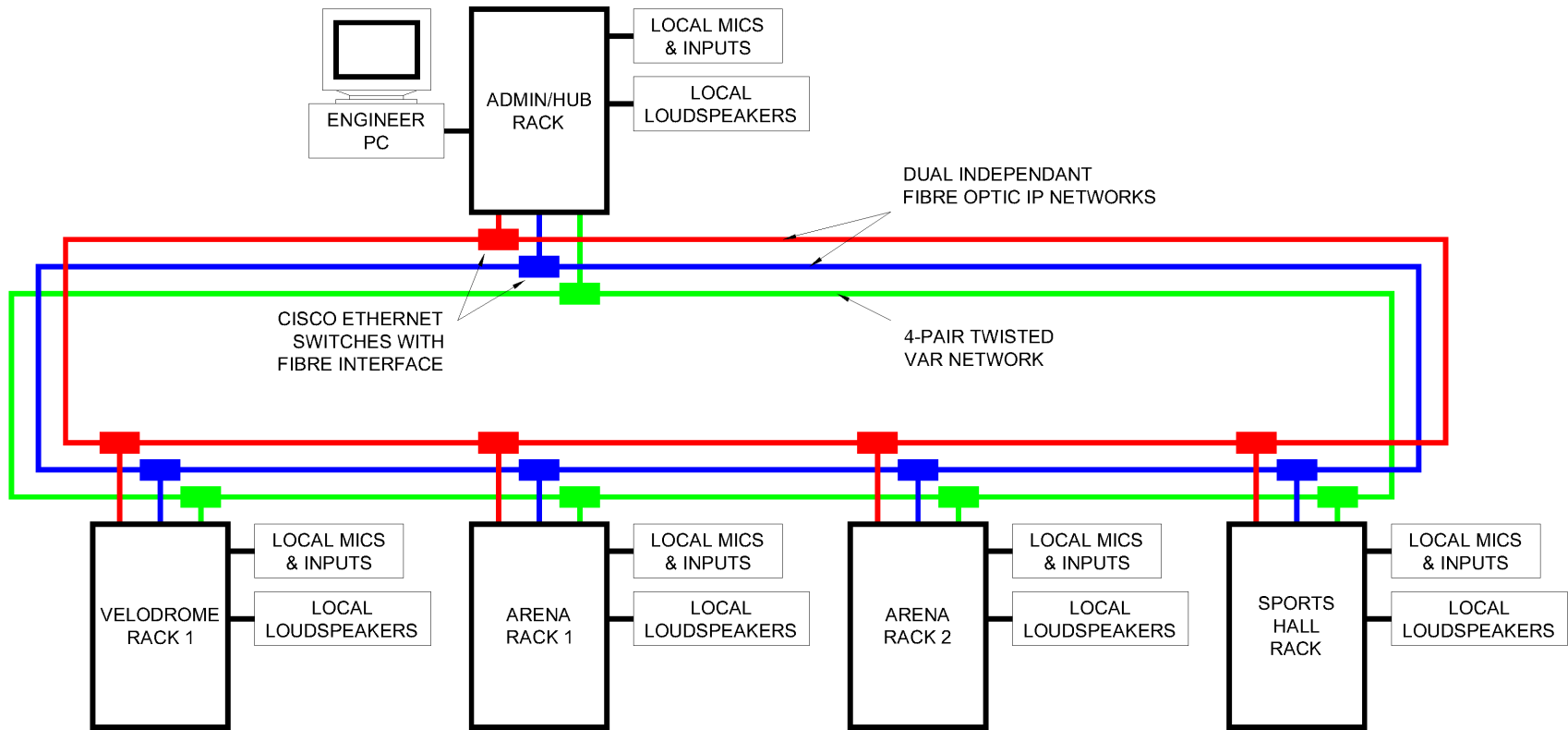
# Event Audio Equipment



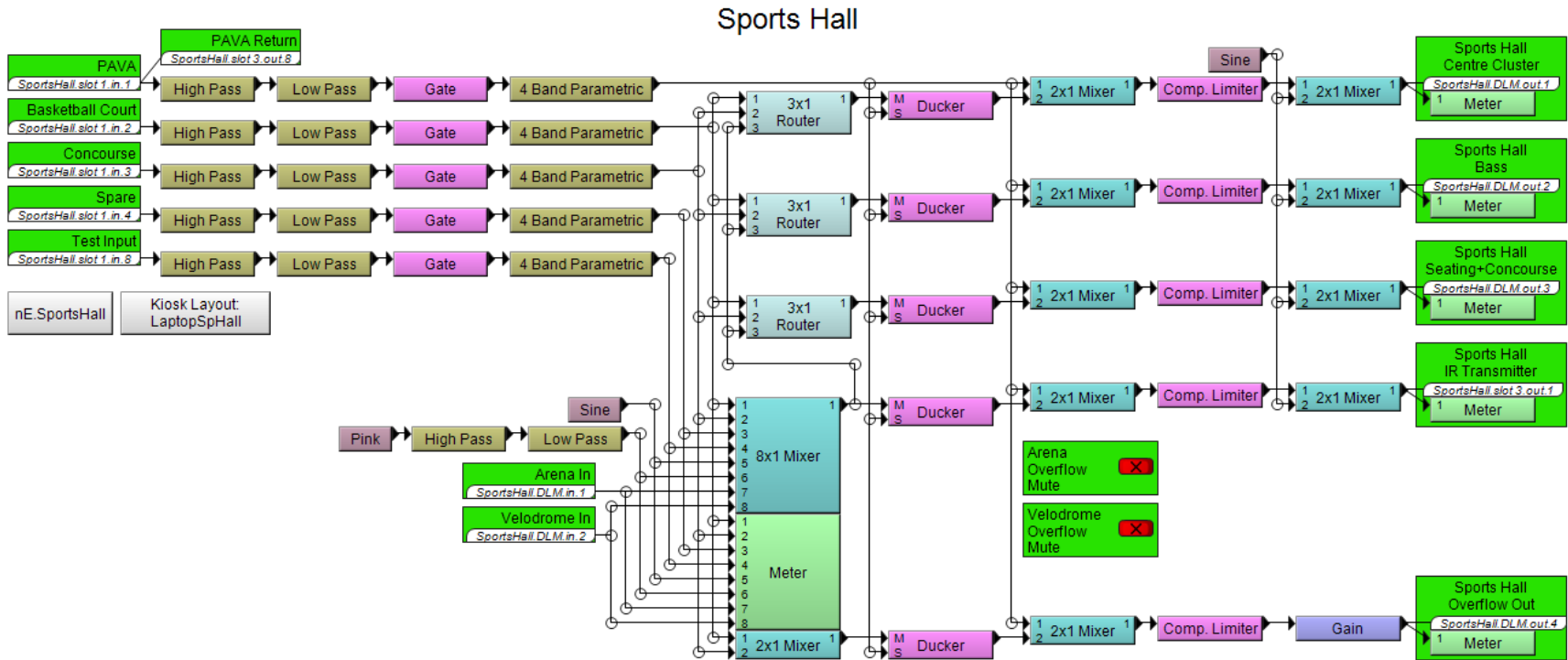


# Network Topology



									<b>MEDIA SPONSORS</b>  

# Sports Hall Schematic



									<b>MEDIA SPONSORS</b>



DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Dante – Network Routing

**Dante™**

Filter Transmitters

Filter Receivers

**Dante Transmitters**

arena-dlm	Infield	Base	Log	LowSeat	EndSeat	Media	Presentation	Rear	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			
arena-dlm																																			
DLP-00-12-a6-09-94-e0																																			
DLP-00-12-a6-09-b2-60																																			
01																																			
02																																			
DLP-00-12-a6-09-ec-f0																																			
DLP-00-12-a6-09-f3-00																																			
01																																			
02																																			
DLP-00-12-a6-09-f7-90																																			
DLP-00-12-a6-09-f7-b0																																			
DLP-00-12-a6-09-f7-c0																																			
01																																			
02																																			
DLP-00-12-a6-0a-01-00																																			
01																																			
02																																			
DLP-00-12-a6-0a-01-20																																			
01																																			
02																																			
DLP-00-12-a6-0a-07-00																																			
DLP-00-12-a6-0a-07-10																																			
DLP-00-12-a6-0a-07-90																																			
DLP-00-12-a6-0a-08-50																																			
01																																			
02																																			
DLP-00-12-a6-0a-09-10																																			
DLP-00-12-a6-0a-ab-b0																																			
01																																			
02																																			
DLP-00-12-a6-0a-d4-20																																			
01																																			
02																																			
sportshall-dlm																																			
velodrome-dlm																																			

**Dante Receivers**

- arena-dlm
- DLP-00-12-a6-09-94-e0
- DLP-00-12-a6-09-b2-60
- 01
- 02
- DLP-00-12-a6-09-ec-f0
- DLP-00-12-a6-09-f3-00
- 01
- 02
- DLP-00-12-a6-09-f7-90
- DLP-00-12-a6-09-f7-b0
- DLP-00-12-a6-09-f7-c0
- 01
- 02
- DLP-00-12-a6-0a-01-00
- 01
- 02
- DLP-00-12-a6-0a-01-20
- 01
- 02
- DLP-00-12-a6-0a-07-00
- DLP-00-12-a6-0a-07-10
- DLP-00-12-a6-0a-07-90
- DLP-00-12-a6-0a-08-50
- 01
- 02
- DLP-00-12-a6-0a-09-10
- DLP-00-12-a6-0a-ab-b0
- 01
- 02
- DLP-00-12-a6-0a-d4-20
- 01
- 02
- sportshall-dlm
- velodrome-dlm

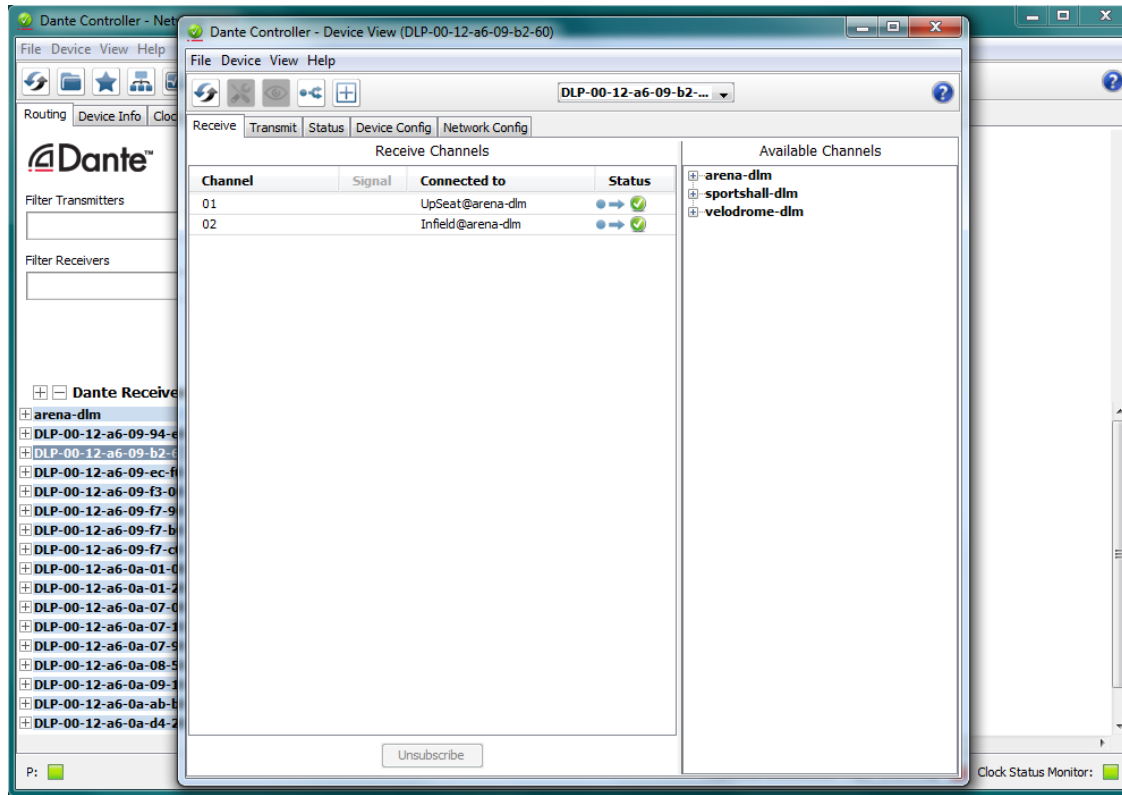




DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Dante – Device View



ASHLY

ATTEROTECH

audinate

audio-technica

BOSCH

BOSE

ESS  
by HARMAN

CREST  
AUDIO

DELEC  
MADE BY EXPERTS

MEDIA  
SPONSORS

Focusrite  
REDNET

HARMAN

LAB.GRUPPEN

lake

NEXO

NTP TECHNOLOGY

TKL  
Commercial Audio

Towersoft  
AUDIO

PreSonus

AV  
MAGAZINE

RTS

SHURE

Soundcraft

SALZBENNER  
STAGETEC

STEWART  
AUDIO

STUDIO  
TECHNOLOGIES

Symetrix

TENDZONE

YAMAHA  
CO

rave  
europe



DANTE™ AV NETWORKING WORLD

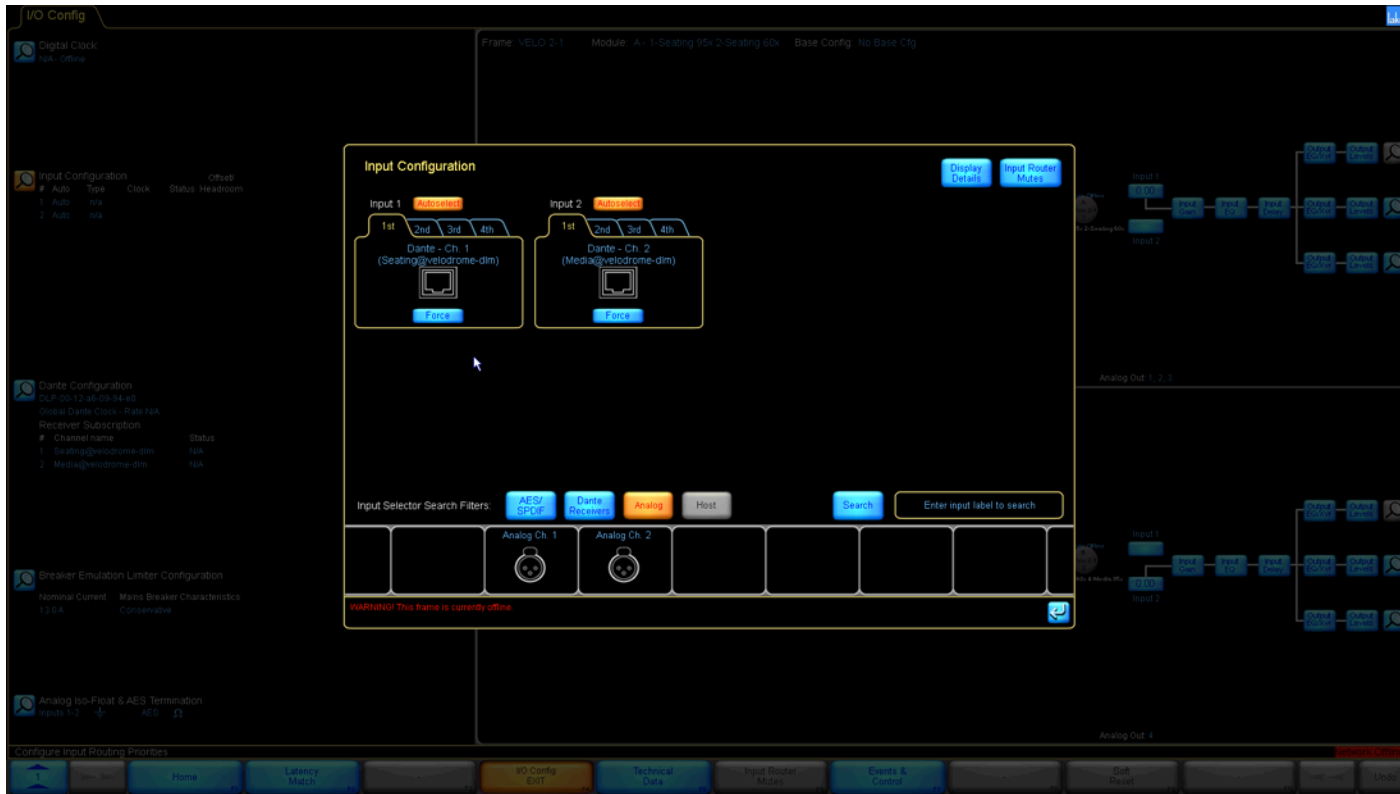
www.audinate.com/avnw-amsterdam15 ©2015

# Lake Controller

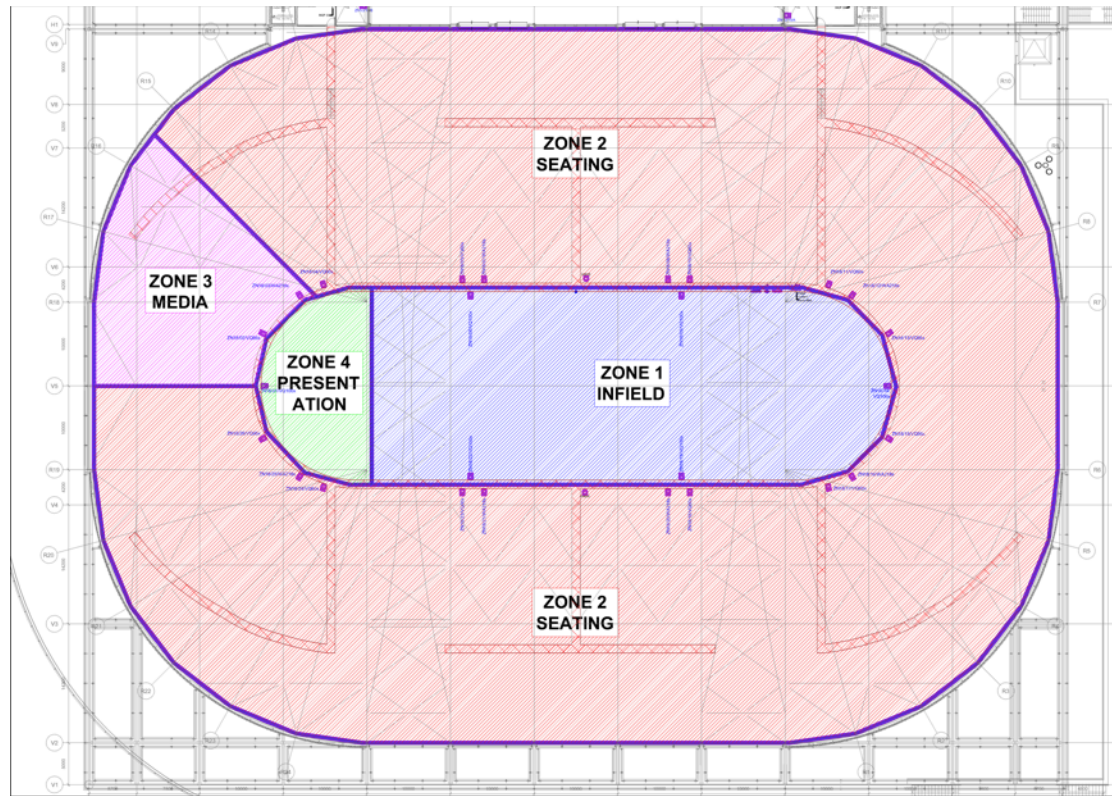
The screenshot displays the Lake Controller software interface. At the top left, it shows 'Nisa 1e v6.1b004' and 'All'. The main area is a grid of modules, each with a circular icon and a list of components. For example, the 'Velo 2-1' module includes '1-Seating 95x', '2-Seating 60x', and '3-Mid 95x'. Other modules include 'Arena 2-1', 'Arena 2-2', 'Arena 2-3', 'Arena 2-4', 'Arena 1-3', 'Arena 1-4', 'Arena 1-2', 'Arena-Bass1', 'Arena-Bass2', 'Arena-Bass3', 'Arena-Bass4', 'Arena-Bass5', 'Arena-Bass6', 'Arena-Bass7', 'Arena-Bass8', 'Arena-Rear', 'Arena-Seating All', 'Arena-Seating Upper', 'Arena-Seating Lower', 'Arena-Mid High', 'Arena-Bass', 'Arena-Floor', 'SpHall 2-1', 'SpHall 2-2', 'SpHall 2-3', 'SpHall 2-4', 'SpHall 1-1', 'SpHall 1-2', 'SpHall 1-3', 'SpHall 1-4', 'SpHall-Mid High', 'SpHall-Mid', 'SpHall-Main Court', 'SpHall-Bass', 'SpHall-Seating', 'Velo-All', 'Velo-Infield', 'Velo-Seating All', 'Velo-Bass', 'Velo-Mid High', 'Velo-Bass1', 'Velo-Bass2', 'Velo-Bass3', 'Velo-Bass4', 'Velo-Bass5', 'Velo-Bass6', 'Velo-Bass7', 'Velo-Bass8', 'Arena 1-1', 'Arena 1-2', 'Arena 1-3', 'Arena 1-4', 'Arena 2-1', 'Arena 2-2', 'Arena 2-3', 'Arena 2-4', 'Arena 1-1-09', 'Arena 1-1-11', 'Arena 1-1-12', 'Arena 1-1-13', 'Arena 1-1-14', 'Arena 1-1-15', 'Arena 1-1-16', 'Arena 1-1-17', 'Arena 1-1-18', 'Arena 1-1-19', 'Arena 1-1-20', 'Arena 1-1-21', 'Arena 1-1-22', 'Arena 1-1-23', 'Arena 1-1-24', 'Arena 1-1-25', 'Arena 1-1-26', 'Arena 1-1-27', 'Arena 1-1-28', 'Arena 1-1-29', 'Arena 1-1-30', 'Arena 1-1-31', 'Arena 1-1-32', 'Arena 1-1-33', 'Arena 1-1-34', 'Arena 1-1-35', 'Arena 1-1-36', 'Arena 1-1-37', 'Arena 1-1-38', 'Arena 1-1-39', 'Arena 1-1-40', 'Arena 1-1-41', 'Arena 1-1-42', 'Arena 1-1-43', 'Arena 1-1-44', 'Arena 1-1-45', 'Arena 1-1-46', 'Arena 1-1-47', 'Arena 1-1-48', 'Arena 1-1-49', 'Arena 1-1-50', 'Arena 1-1-51', 'Arena 1-1-52', 'Arena 1-1-53', 'Arena 1-1-54', 'Arena 1-1-55', 'Arena 1-1-56', 'Arena 1-1-57', 'Arena 1-1-58', 'Arena 1-1-59', 'Arena 1-1-60', 'Arena 1-1-61', 'Arena 1-1-62', 'Arena 1-1-63', 'Arena 1-1-64', 'Arena 1-1-65', 'Arena 1-1-66', 'Arena 1-1-67', 'Arena 1-1-68', 'Arena 1-1-69', 'Arena 1-1-70', 'Arena 1-1-71', 'Arena 1-1-72', 'Arena 1-1-73', 'Arena 1-1-74', 'Arena 1-1-75', 'Arena 1-1-76', 'Arena 1-1-77', 'Arena 1-1-78', 'Arena 1-1-79', 'Arena 1-1-80', 'Arena 1-1-81', 'Arena 1-1-82', 'Arena 1-1-83', 'Arena 1-1-84', 'Arena 1-1-85', 'Arena 1-1-86', 'Arena 1-1-87', 'Arena 1-1-88', 'Arena 1-1-89', 'Arena 1-1-90', 'Arena 1-1-91', 'Arena 1-1-92', 'Arena 1-1-93', 'Arena 1-1-94', 'Arena 1-1-95', 'Arena 1-1-96', 'Arena 1-1-97', 'Arena 1-1-98', 'Arena 1-1-99', 'Arena 1-1-100'. The bottom bar contains buttons for 'Home', 'System Store/Recall', 'Modules', 'Groups', 'Solo/Mute', 'Pages', 'User Preferences', 'Icon Control', 'Network', 'Quit Controller', and 'Undo'. The text 'Store or recall a System Configuration file' is visible on the left, and 'NISA 1e v6.1b004' is on the right.

									<b>MEDIA SPONSORS</b>

# Lab.gruppen Input Configuration



# Velodrome Sub-Zones



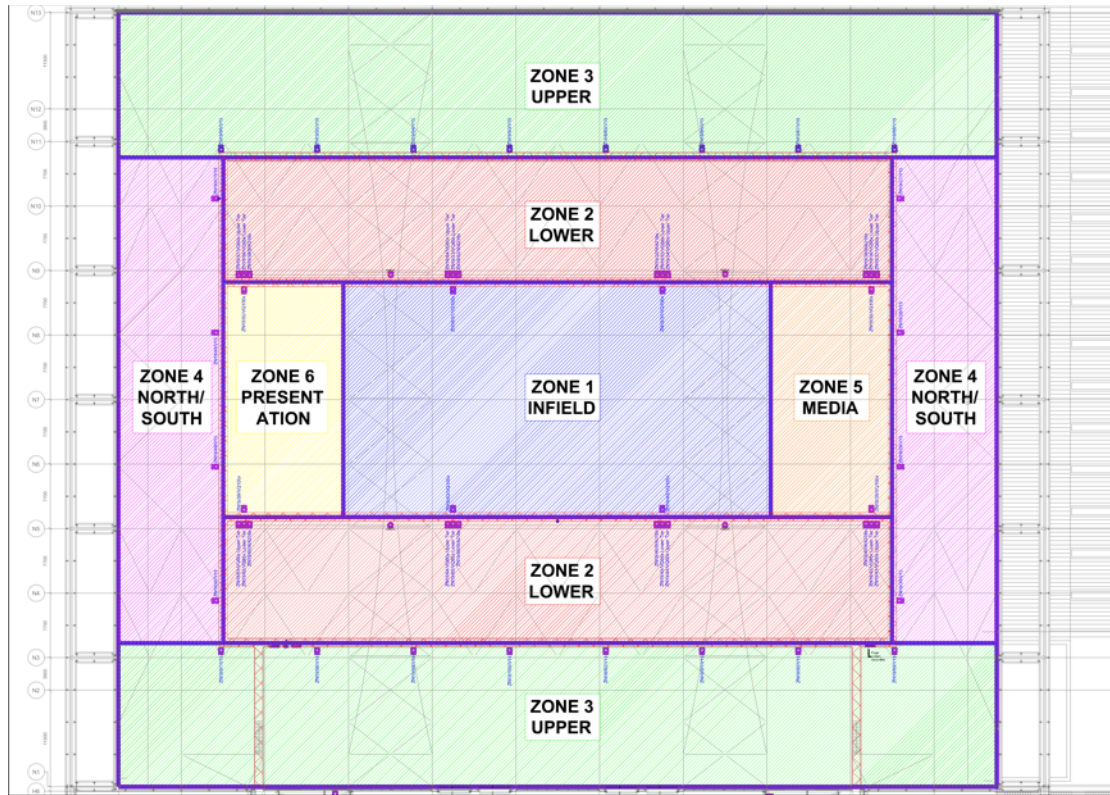
									<b>MEDIA SPONSORS</b>
									
									



DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Arena Sub-Zones



ASHLY

ATTEROTECH

audinate

audio-technica.

BOSCH

BOSE

ESS  
by HARMAN

CREST  
AUDIO

DELEC  
MADE BY EXPERTS

MEDIA  
SPONSORS

Focusrite  
REDNET

HARMAN

LAB.GRUPPEN

lake

NEXO

NTP TECHNOLOGY

TRU1  
Commercial Audio

Towersoft  
AUDIO

PreSonus

AV  
MAGAZINE

RTS

SHURE

Soundcraft

SALZBENNER  
STAGETEC

STEWART AUDIO

STUDIO  
TECHNOLOGIES

Symetrix

TENDZONE

YAMAHA CO

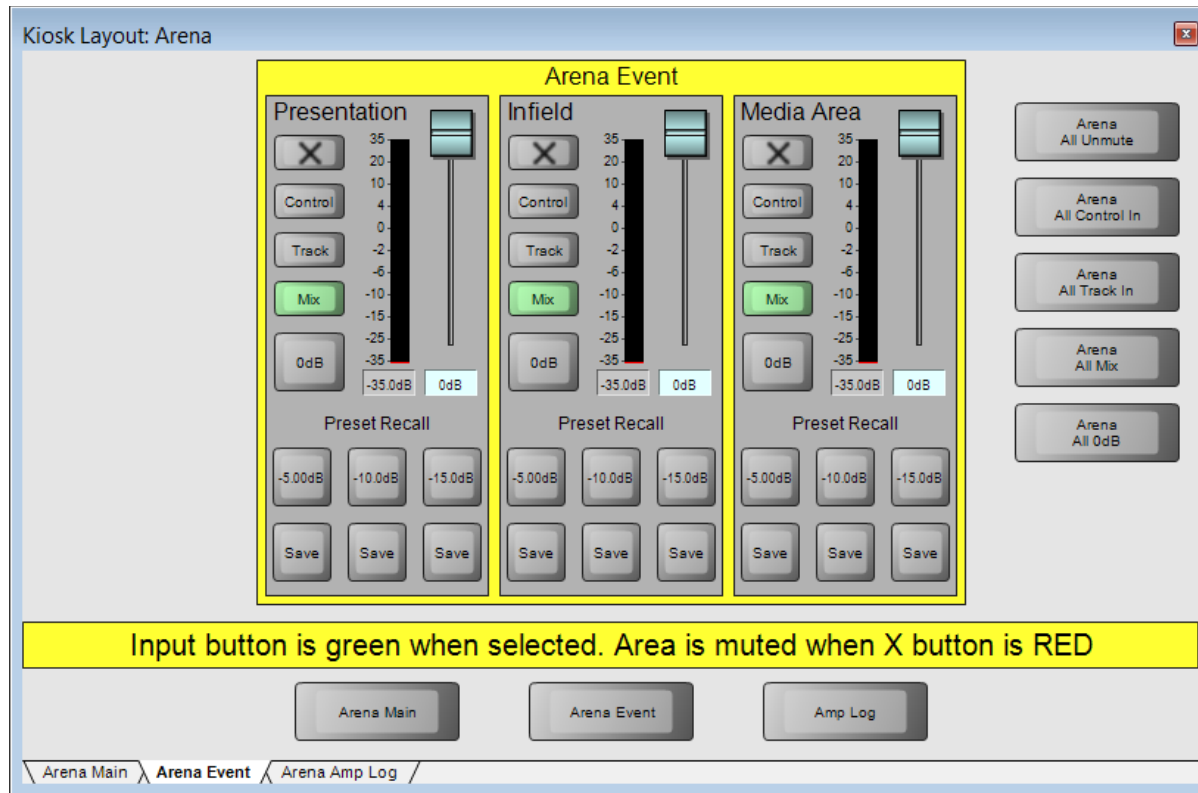
rave  
europe



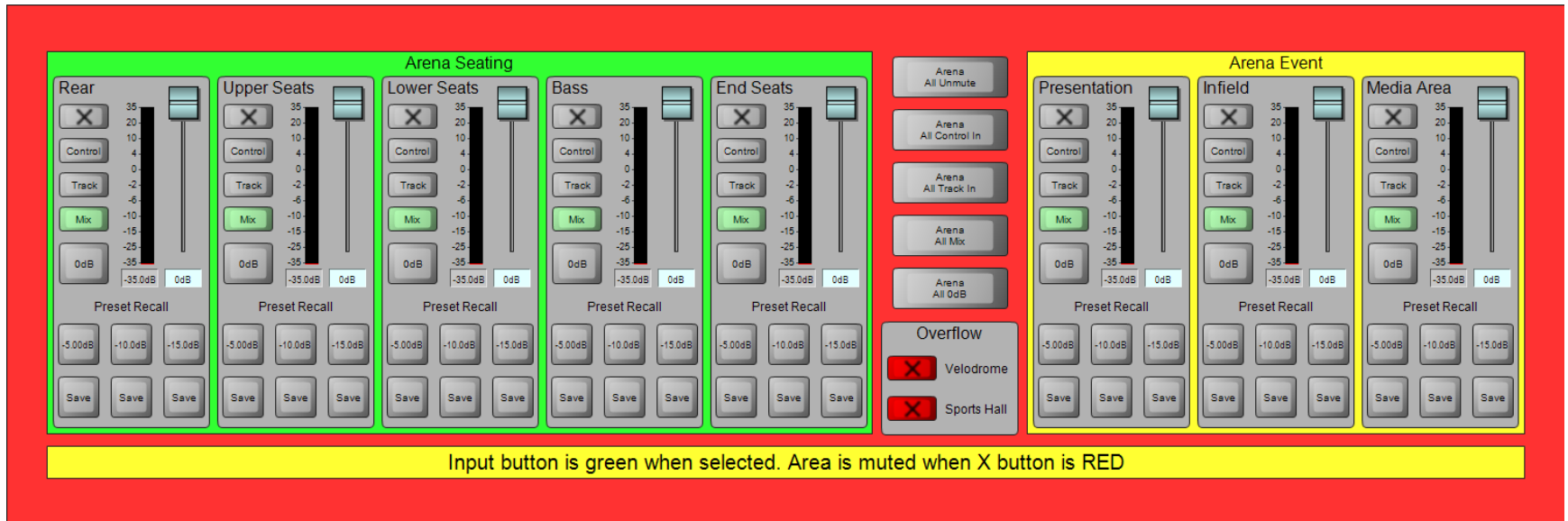
# Zone Control - Main




# Zone Control - Event



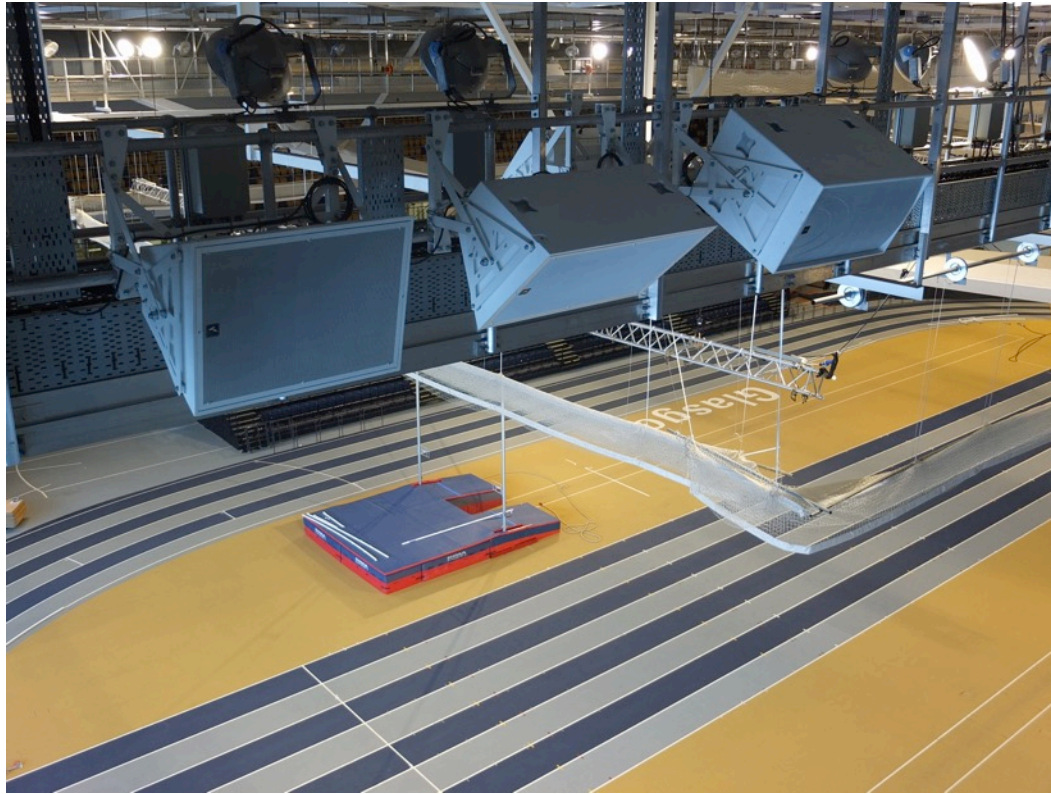

# Complete Event Zone Control



Input button is green when selected. Area is muted when X button is RED

# Loudspeaker Installation



**ASHLY**

**ATTEROTECH**

**audinate**

**audio-technica.**

**BOSCH**

**BOSE**

**ESS**  
by HARMAN

**CREST AUDIO**

**DELEC**  
MADE BY EXPERTS

**MEDIA SPONSORS**

**Focusrite REDNET**

**HARMAN**

LAB.GRUPPEN

**lake**

**NEXO**

**NTP TECHNOLOGY**

**TRULI**  
Commercial Audio

**Towersoft AUDIO**

**PreSonus**

**AV MAGAZINE**

**RTS**

**SHURE**

**Soundcraft**

**SALZBENNER STAGETEC**

**STEWART AUDIO**

**STUDIO TECHNOLOGIES**

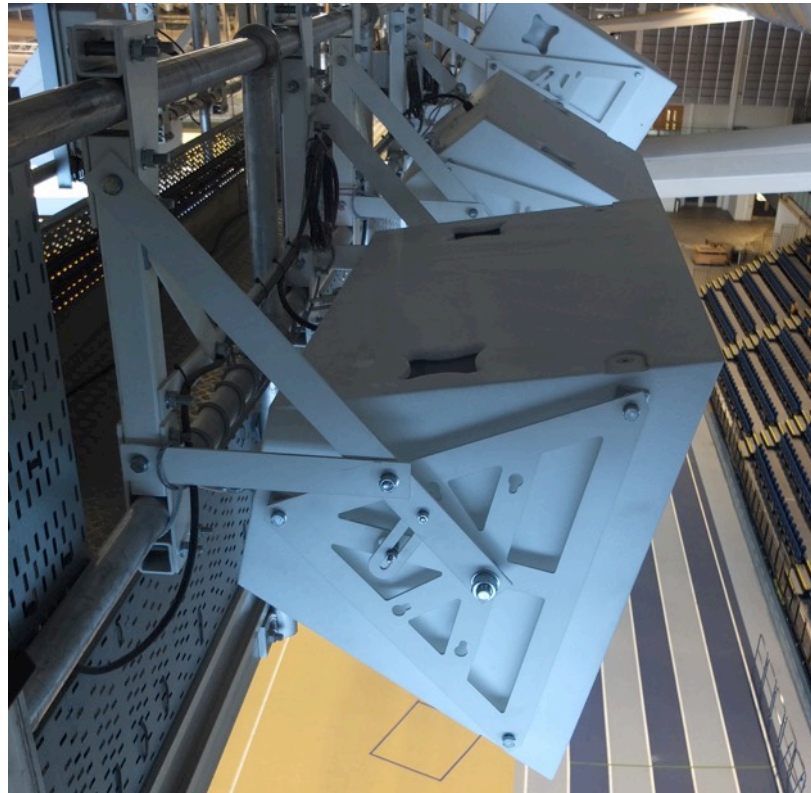
**Symetrix**

**TENDZONE**

**YAMAHA CO**

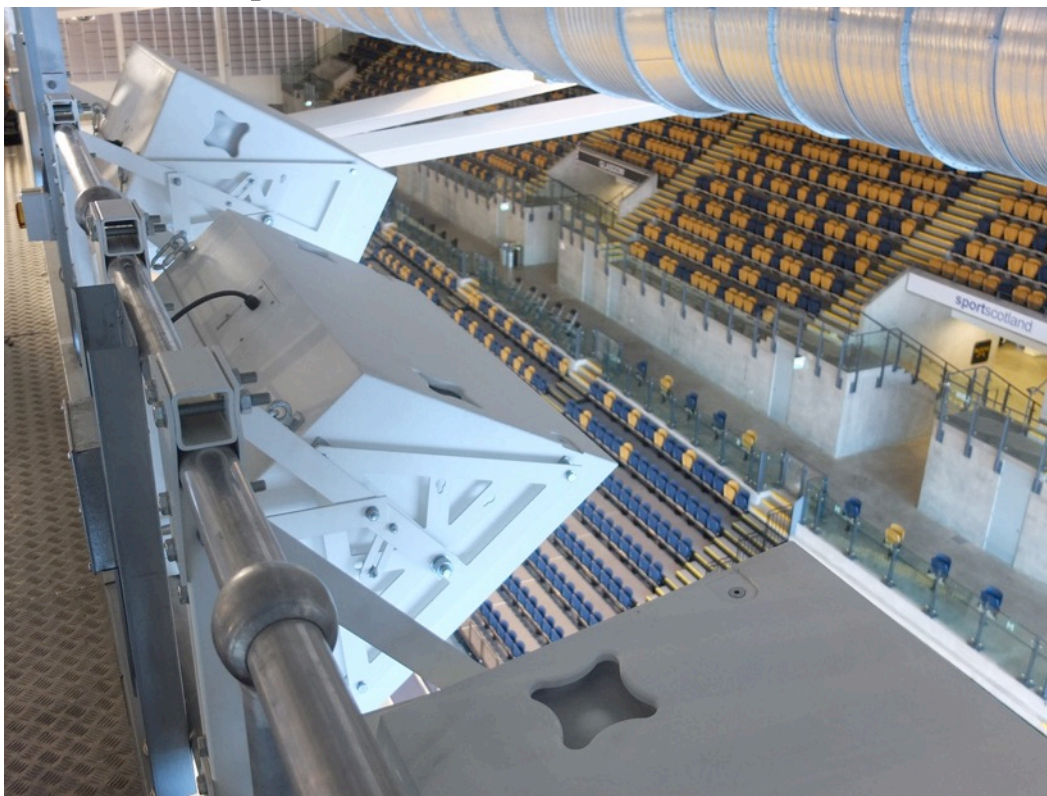
**rave europe**

# Loudspeaker Installation



									<b>MEDIA SPONSORS</b>  

# Loudspeaker Installation



**ASHLY**

**ATTEROTECH**

**audinate**

**audio-technica.**

**BOSCH**

**BOSE**

**ESS**  
by HARMAN

**CREST AUDIO**

**DELEC**  
MADE BY EXPERTS

**MEDIA SPONSORS**

**Focusrite REDNET**

**HARMAN**

LAB.GRUPPEN

**lake**

**NEXO**

**NTP TECHNOLOGY**

**TRU1**  
Commercial Audio

**Towersoft AUDIO**

**PreSonus**

**AV MAGAZINE**

**RTS**

**SHURE**

**Soundcraft**

**SALZBENNER STAGETEC**

**STEWART AUDIO**

**STUDIO TECHNOLOGIES**

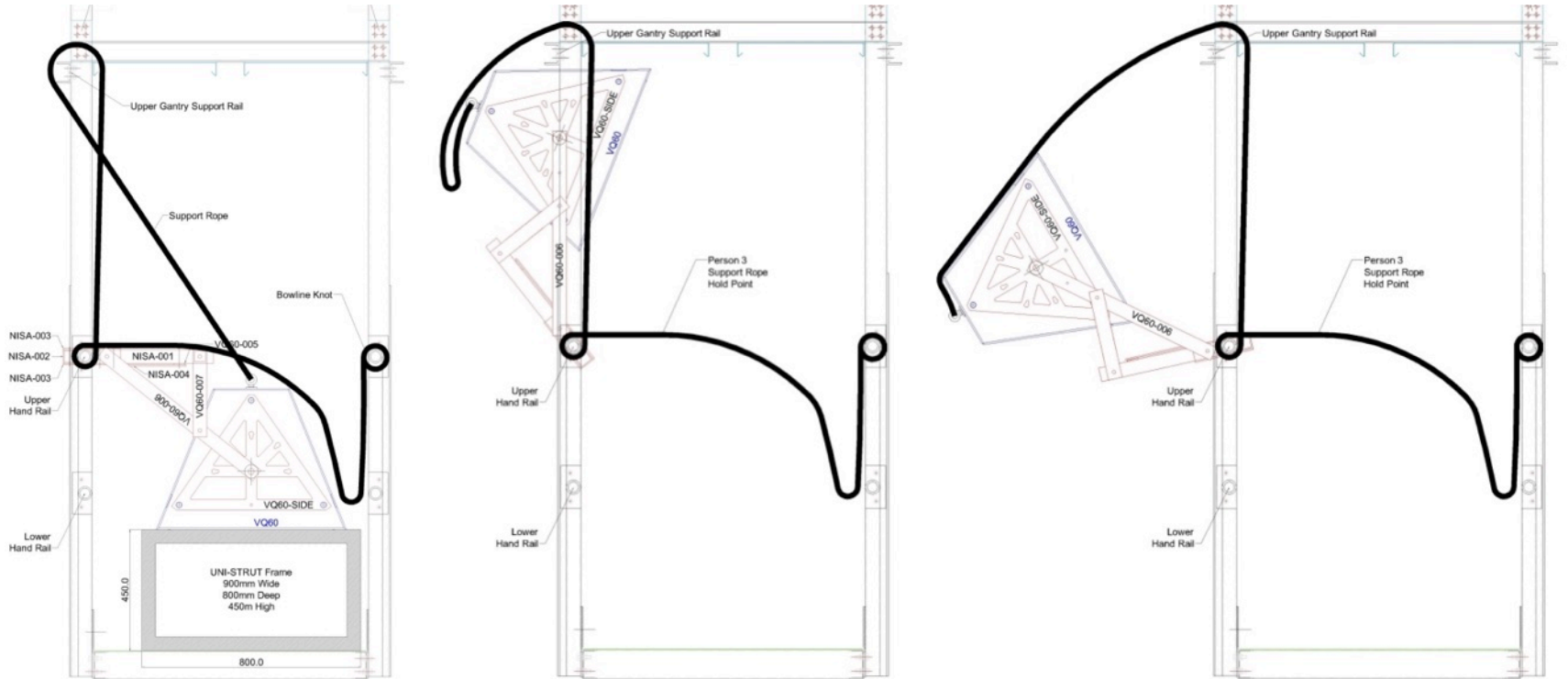
**Symetrix**

**TENDZONE**

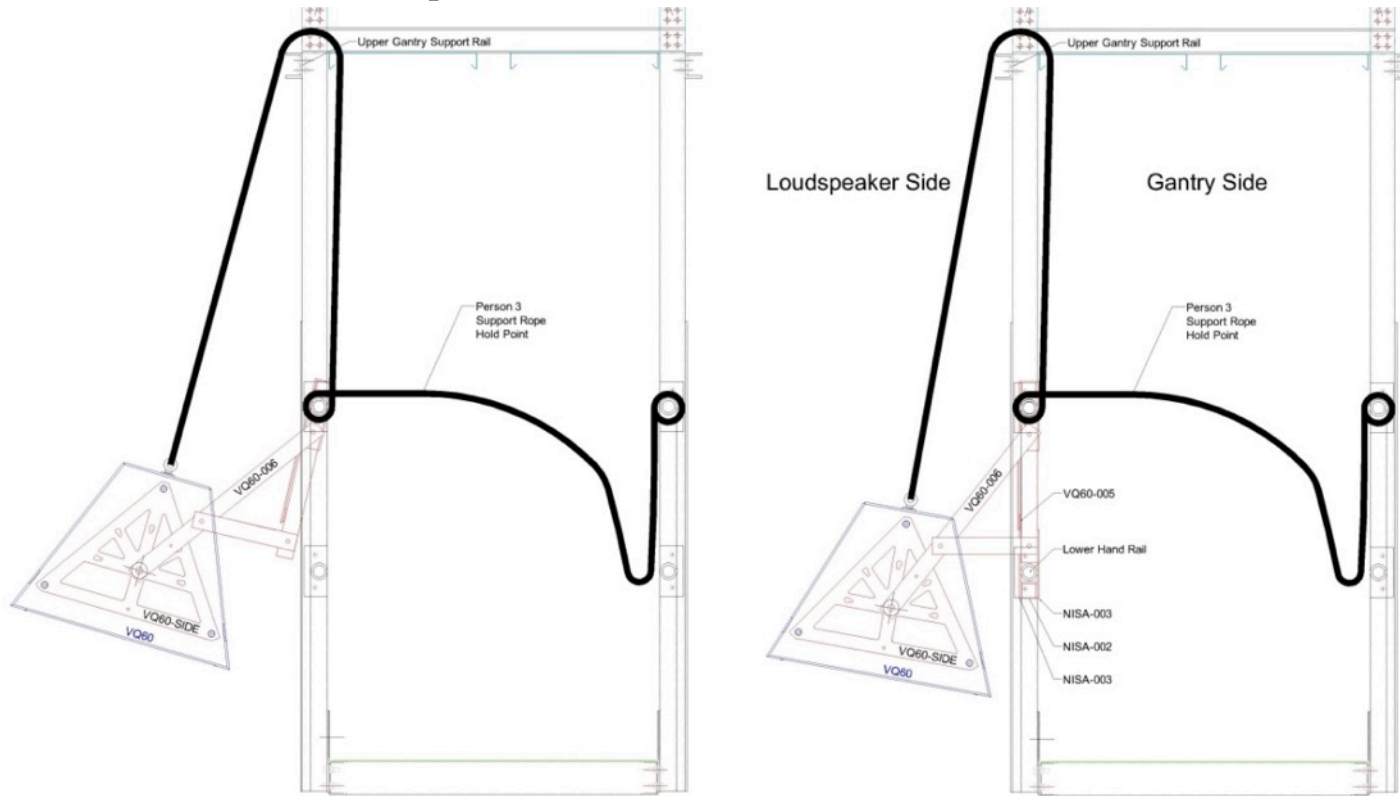
**YAMAHA CO**

**rave europe**

# Loudspeaker Installation




# Loudspeaker Installation



ASHLY

ATTEROTECH

audinate

audio-technica

BOSCH

BOSE

ESS  
by HARMAN

CREST  
AUDIO

DELEC  
MADE BY EXPERTS

MEDIA  
SPONSORS

Focusrite  
REDNET

HARMAN

LAB.GRUPPEN

lake

NEXO

NTP TECHNOLOGY

TRULI  
Commercial Audio

Towersoft  
AUDIO

PreSonus

AV  
MAGAZINE

RTS

SHURE

Soundcraft

SALZBENNER  
STAGETEC  
NETWORKS

STEWART  
AUDIO

STUDIO  
TECHNOLOGIES

Symetrix

TENDZONE

YAMAHA  
CO

rave  
europe





DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Outside View – Velodrome



									<b>MEDIA SPONSORS</b>  



DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Outside View – Main Entrance



									<b>MEDIA SPONSORS</b>  



DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Athletics Set-up



									<b>MEDIA SPONSORS</b>  

# Glasgow Rocks Opening Night



									<b>MEDIA SPONSORS</b>  



DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# And Finally.....

As a company we are extremely proud to be associated with this project and be part of the dedicated team that enabled the venue to open on time. Using the selected products we achieved the functionality and flexibility that the client required and we are delighted with the system performance.




DANTE™ AV NETWORKING WORLD

www.audinate.com/avnw-amsterdam15 ©2015

# Q & A
