

Projeto

Ginásio de Esportes late Clube de Brasília



Fabio Montoro

27 fev 2025





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tirada no motorola edge 30 neo

WR75

26 de fev. de 2025, 15:08

27 fev 2025

Fabio Montoro



tirada no motorola edge 30 neo
WP75

26 de fev. de 2025, 15:08

27 fev 2025

Fabio Montoro



tirada no motorola edge 30 neo
WR75

26 de fev. de 2025, 15:07

27 fev 2025

Fabio Montoro



tirada no motorola edge 30 neo
WR75

26 de fev. de 2025, 15:08

27 fev 2025

Fabio Montoro



tirada no motorola edge 30 neo
WR75

26 de fev. de 2025, 15:09

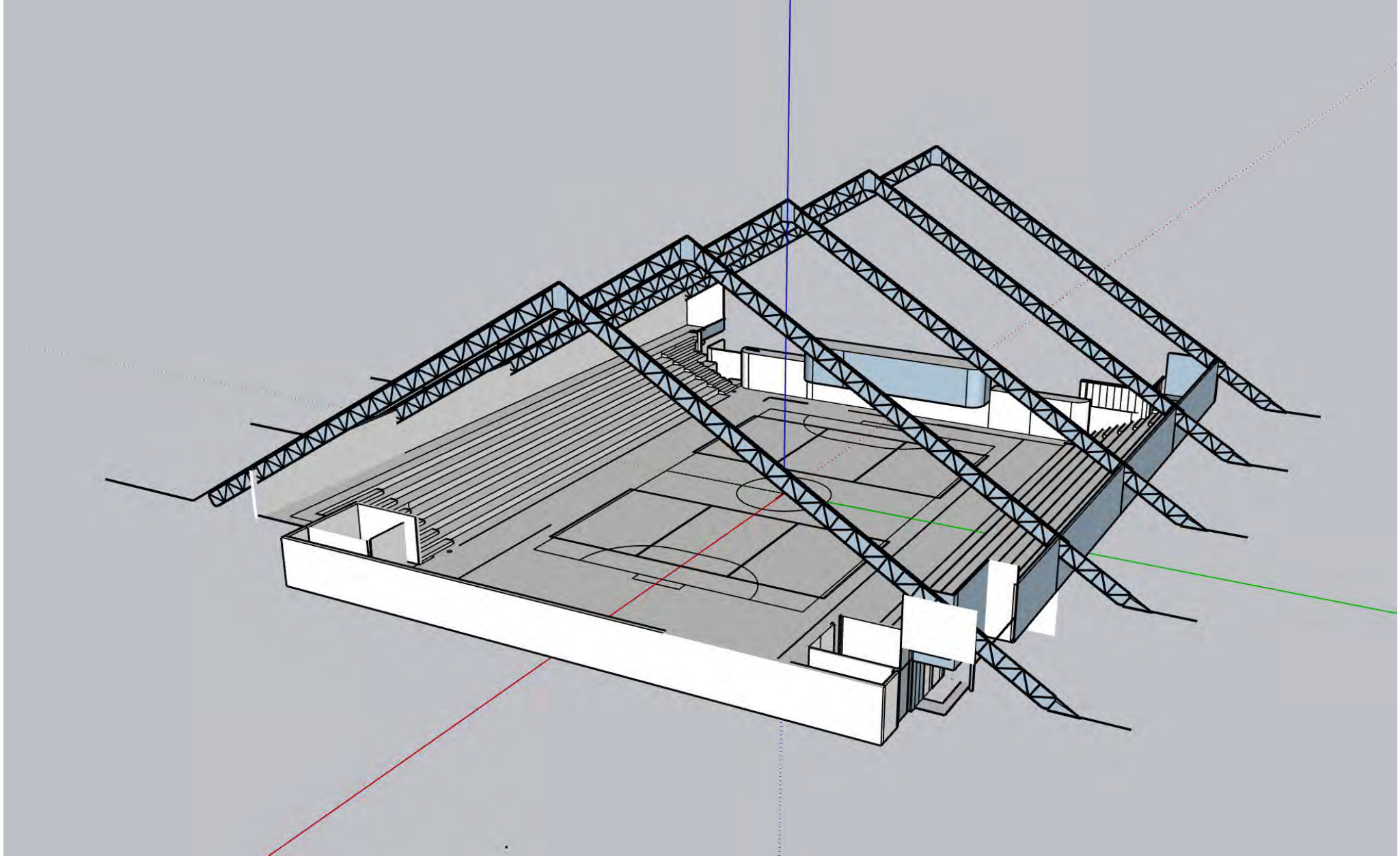
27 fev 2025

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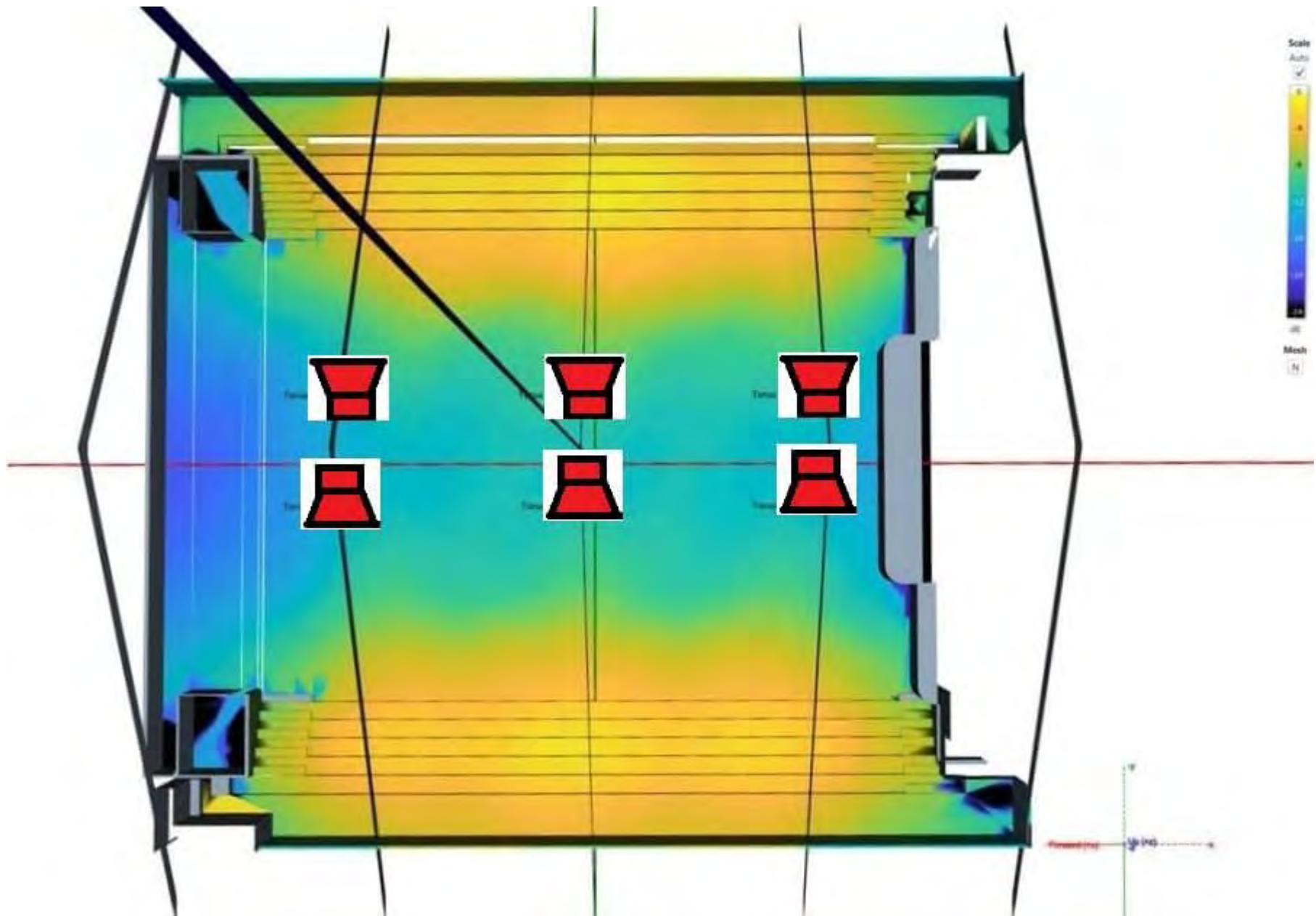


- 1. Projeto do sistema de sonorização do Ginásio de Esportes do Iate Clube de Brasília*
- 2. Atividades de jogos, eventos, música*
- 3. Usar Line Arrays focados na plateia*
- 4. Intensidade máxima do som: 122 dB SPL*
- 5. Intensidade média do som: 108 dB SPL*

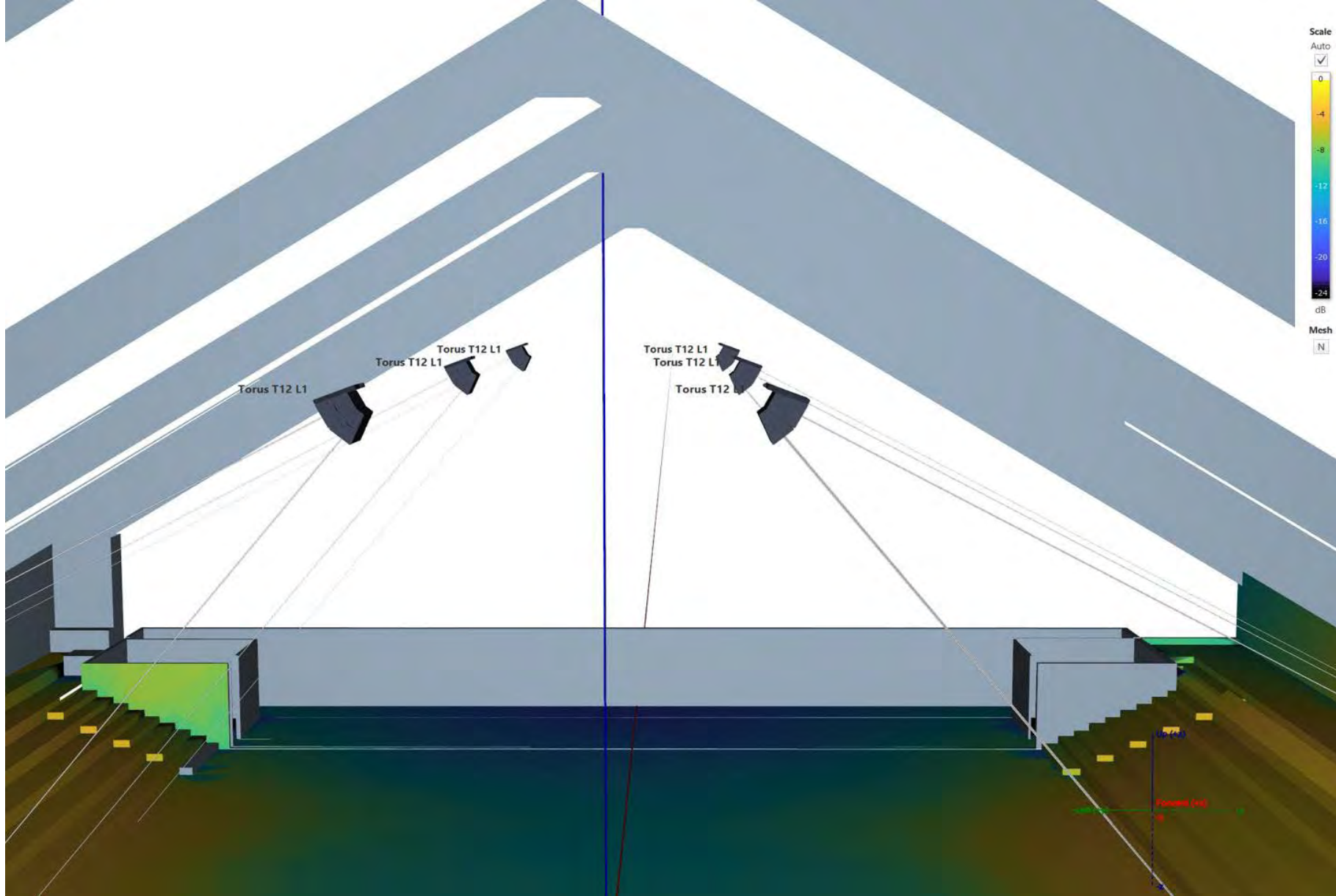
Requisitos



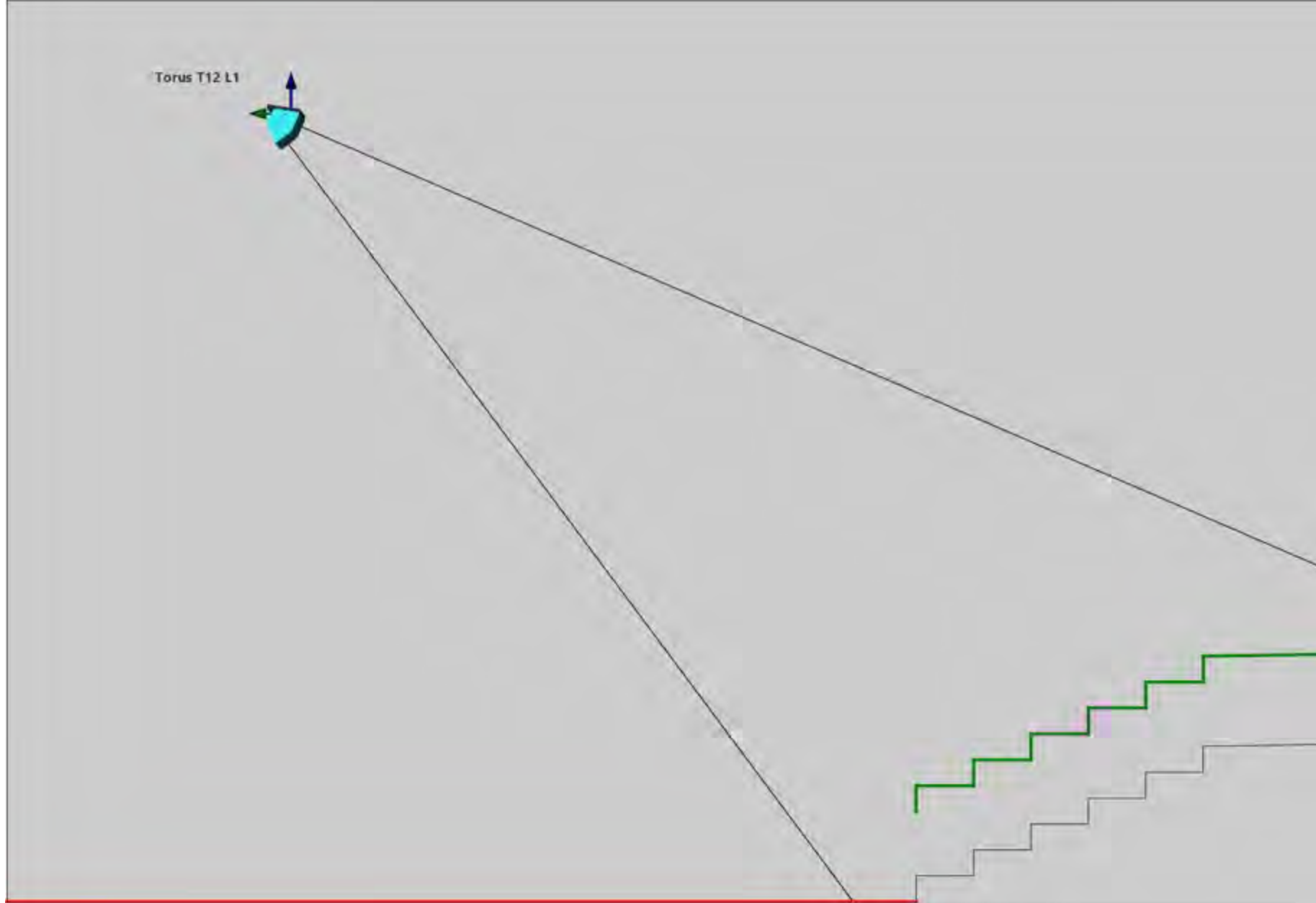
Análise



Análise



Análise



Análise

1. *escolha: 6 arrays iguais, ajustados por software para a plateia*
2. *escolha: Linha TORUS de Martin Audio*
 - *12 gabinetes de 30º , 132 dB SPL de pico, modelo TORUS T1230*
 - *6 subwoofers cardioide 140 dB SPL de pico, modelo SXCF118*
 - *2 amplificadores de 4 canais x 5000 w @ 2 ohms, modelo ik42*
 - *1 amplificador de 8 canais x 1250 W @ 2 ohms, modelo ik81*
3. *Acessórios de suspensão*

Escolha dos equipamentos

Sistem	Model	Chanel	Amplifier
Cluster 1	Torus 1230	1	IK81
	Torus 1230		
Cluster 2	Torus 1230	2	
	Torus 1230		
Cluster 3	Torus 1230	3	
	Torus 1230		
Cluster 4	Torus 1230	4	
	Torus 1230		
Cluster 5	Torus 1230	5	
	Torus 1230		
Cluster 6	Torus 1230	6	
	Torus 1230		
Sub 1 - 2	SXCF118 Front	1	IK42
	SXCF118 Back	2	
Sub 3- 4	SXCF118 Front	3	
	SXCF118 Back	4	
Sub 5-6	SXCF118 Front	1	IK42
	SXCF118 Back	2	

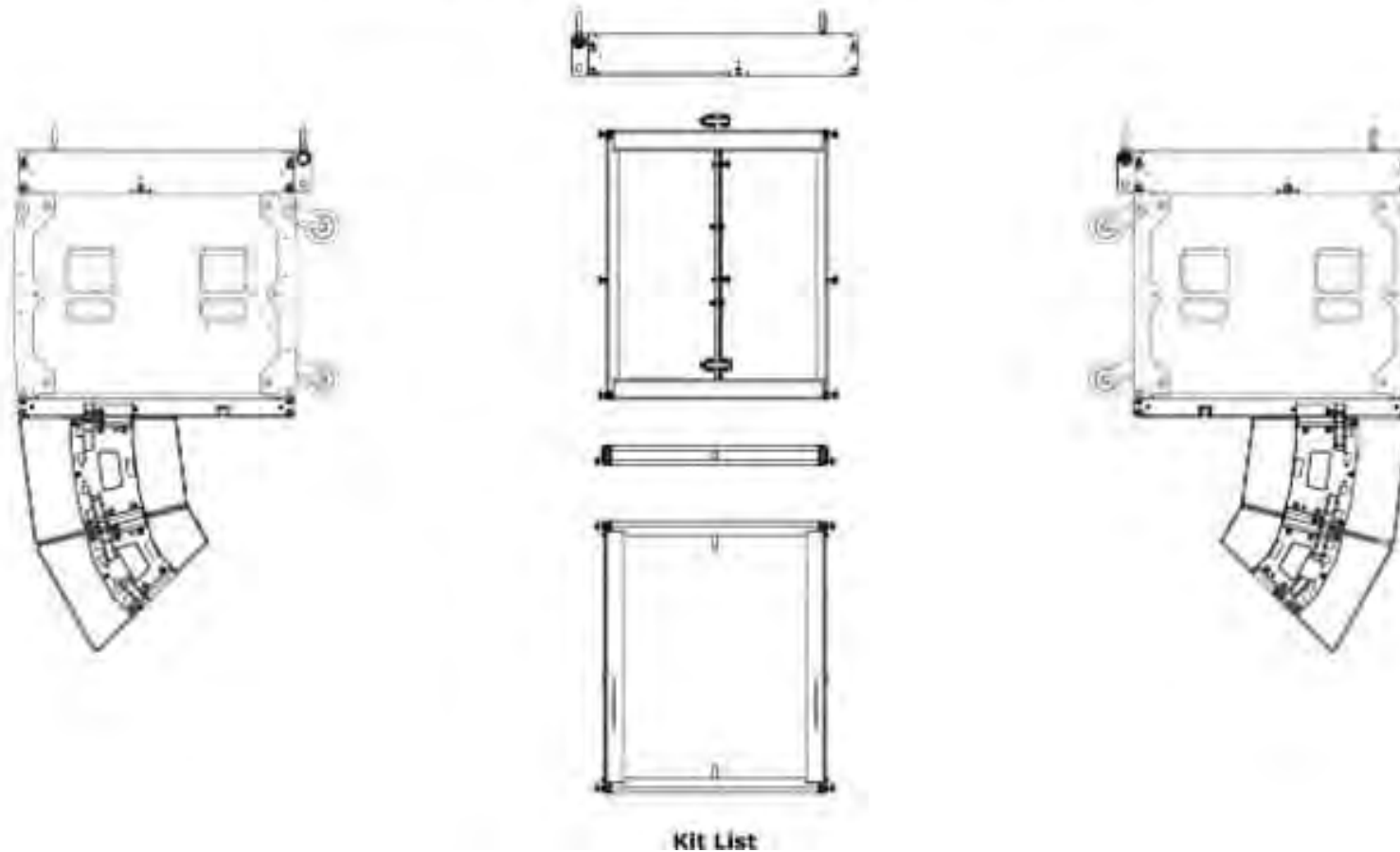
Roteamento dos canais

T12 45° Vertical Coverage - Flown Full Range Array

Small to medium installed or touring live sound.

Simple LR coverage

Fly up to 6 TORUS T12 cabinets (left or right handed) using T12TRIG below an SXCP118



Disposição dos equipamentos

T1230

Passive, 30° Fixed Angle Array Cabinet



Technical Specifications

TYPE	Passive 2-way Constant Curvature 30° enclosure
FREQUENCY RESPONSE (with iKON settings)	65Hz – 18kHz $\pm$ 3dB, -10dB @ 50Hz
DRIVERS	LF: 12", 3" Voice Coil, Neodymium HF: 3 x 1" exit, 1.4" Voice Coil, HT Polymer dome neodymium compression driver
SENSITIVITY	(2.83V 1m free-field) 99dB
NOMINAL IMPEDANCE	8 ohms
RATED POWER	AES 400W, PEAK 1600W
MAXIMUM SPL (SYSTEM)	126dB continuous, 132dB peak*
DISPERSION	60-75-90° horizontal, 30° vertical
PIN CONNECTIONS (INPUT)	1+/- or 2+/-
PIN CONNECTIONS (LINK)	1+/- and 2+/-
DIMENSIONS	(W) 650mm, (H) 350mm, (D) 442mm (W) 25.59ins, (H) 13.76ins, (D) 17.40ins
WEIGHT	26kg (57.32 lbs)



Especificação dos equipamentos

SXCF1 18

Compact Cardioid Flown Subwoofer

Technical Specifications

TYPE	Compact, cardioid subwoofer
FREQUENCY RESPONSE (1)	43Hz – 150Hz $\pm$ 3dB, -10dB @ 34Hz
DRIVERS	18" (460mm)/4" (100mm) voice coil, long excursion, ferrite magnet, waterproof cone 14" (356mm)/3.5" (88mm) voice coil, long excursion, neodymium magnet, waterproof cone
RATED POWER (2)	18": 1000W AES, 4000W peak 14": 800W AES, 3200W peak
SYSTEM AMPLIFIER	iKON iK42
SENSITIVITY (10)	104dB
MAXIMUM SPL(9)	140dB peak
NOMINAL IMPEDANCE	18": 8 ohms, 14": 8 ohms
DISPERSION	Cardioid
ENCLOSURE	Multi-laminate birch ply
FINISH	Textured black polyurea
PROTECTIVE GRILLE	Black HEX perforated steel
CONNECTOR	2 x NL4
PIN CONNECTIONS (INPUT)	18": +1, -1; 14": +2, -2
PIN CONNECTIONS (LINK)	18": +1, -1; 14": +2, -2
FITTINGS	Two skids on base, with mating channels on top M20 top-mounted thread plate for pole mounting Two bar handles on each side Four fittings for optional transit cover
DIMENSIONS (INCL SKIDS)	(W) 650mm x (H) 611mm x (D) 812mm (940mm incl castors) (W) 25.6in x (H) 24.1in x (D) 32.0in (37.0in incl castors)
WEIGHT	75kg (165lbs), 78kg (172 lbs) incl castors
ACCESSORIES	Transit cover

SXCF1 18

Compact Cardioid Flown Subwoofer



Especificação dos equipamentos

iK42

High Power, Four-Channel Class D Amplifier

Technical Specifications

General	
TYPE	Four-channel Class D amplifier
POWER OUTPUT*	5000W into 2 ohms 3000W into 4 ohms 1500W into 8 ohms 750W into 16 ohms 10000W bridged per channel pair, 4 ohms 6000W bridged per channel pair, 8 ohms
CV LINE OUTPUT*	1250W, 25V line 3500W, 70V line 5000W, 100V line
DIGITAL SIGNAL PROCESSING	96kHz/48kHz DSP on all inputs and outputs
COOLING	Dual vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (105°F)
Audio Inputs/Outputs	
ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	20kΩ balanced to ground
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
AES3 IN/LINK (2 CHANNELS)	1 x female, 1 x male Neutrik™ XLR, balanced
DANTE™ (4 CHANNELS) (AES67 COMPATIBLE)	2 x shielded RJ45, primary and secondary
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4
Audio Performance	
DYNAMIC RANGE	>113dBA, analogue input >114dBA AES/Dante™ input
FREQUENCY RESPONSE	7Hz-30kHz (-2.5dB points, 4 ohm load)
TOTAL HARMONIC DISTORTION	<0.05% typical @ 1kHz, 4 ohm load
SLEW RATE	>60V per microsecond
DAMPING FACTOR	>800 at amplifier output, ref 8 ohms
Control and Monitoring Network	
PROTOCOL	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™

Digital Signal Processing	
SAMPLE RATE	96kHz (48kHz for FIR filter implementation)
AUDIO INPUTS	4 x analogue, 1 x AES pair with link output, 4 x Dante™ inputs routable to 4 x input DSP
DRIVE MODULE INPUT DSP	Input signal routing, delay, gain, HPF, Phase, Mute EQ: 2 x low shelf, 6 x PEQ/bandpass and FIR shelving filters
DRIVE MODULE OUTPUT DSP	Source, delay, gain, Phase, Mute, crossover filters, limiters. EQ: low shelf, 8 x PEQ / band pass and shelving filters
Power Supply	
TYPE	High performance Series Resonant
AC INPUT OPERATING RANGE	85 – 240V ~ AC, 47 - 63Hz
MAINS INRUSH CURRENT	6A at 115V, 12A at 230V (max for <10ms)
MAINS CONNECTOR	Neutrik 32A Powercon™
Physical	
DIMENSIONS	(W) 482 x (H) 2U/88mm x (D) 441mm (W) 18.98in x (H) 2U/3.46in x (D) 17.35in incl handles and optional rear support
WEIGHT	12.5kg (27.5lbs)

iK42

High Power, Four-Channel Class D Amplifier

iKON



Especificação dos equipamentos

iK81

High Power, Eight-Channel Class D Amplifier

Technical Specifications

General	
TYPE	Eight-channel Class D amplifier
POWER OUTPUT*	1250W into 2 ohms 1250W into 4 ohms 1250W into 8 ohms 625W into 16 ohms 2500W bridged per channel pair, 4 ohms 2500W bridged per channel pair, 8 ohms
CV LINE OUTPUT*	625W, 25V line 1250W, 70V line 1250W, 100V line
DIGITAL SIGNAL PROCESSING	96kHz/48kHz DSP on all inputs and outputs
COOLING	Dual vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (105°F)
Audio Inputs/Outputs	
ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	20kΩ balanced to ground
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
AES3 IN/LINK (2 CHANNELS)	1 x female, 1 x male Neutrik™ XLR, balanced
DANTE™ (8 CHANNELS) (AES67 COMPATIBLE)	2 x shielded RJ45, primary and secondary
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4
Audio Performance	
DYNAMIC RANGE	>113dBA, analogue input >114dBA AES/Dante™ input
FREQUENCY RESPONSE	7Hz-30kHz (-2.5dB points, 4 ohm load)
TOTAL HARMONIC DISTORTION	<0.05% typical @ 1kHz, 4 ohm load
SLEW RATE	>60V per microsecond
DAMPING FACTOR	>800 at amplifier output, ref 8 ohms
Control and Monitoring Network	
PROTOCOL	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™

iK81

High Power, Eight-Channel Class D Amplifier

iKON



Digital Signal Processing	
SAMPLE RATE	96kHz (48kHz for FIR filter implementation)
AUDIO INPUTS	4 x analogue, 1 x AES pair with link output, 8 x Dante™ inputs (4 x inputs routable to 4 x input DSP, 4 x inputs routable to output DSP)
DRIVE MODULE INPUT DSP	Input signal routing, delay, gain, HPF, Phase, Mute EQ: 2 x low shelf, 6 x PEQ/bandpass and FIR shelving filters
DRIVE MODULE OUTPUT DSP	Source, delay, gain, Phase, Mute, crossover filters, limiters. EQ: low shelf, 8 x PEQ / band pass and shelving filters
Power Supply	
TYPE	High performance Series Resonant
AC INPUT OPERATING RANGE	85 – 240V ~ AC, 47 - 63Hz
MAINS INRUSH CURRENT	6A at 115V, 12A at 230V (max for <10ms)
MAINS CONNECTOR	Neutrik 32A Powercon™
Physical	
DIMENSIONS	(W) 482 x (H) 2U/88mm x (D) 441mm (W) 18.98in x (H) 2U/3.46in x (D) 17.35in incl handles and optional rear support
WEIGHT	12.5kg (27.5lbs)

Especificação dos equipamentos

WPSGRIDt



TOURING FLYING FRAME FOR WPS OR SXCF118 OR SXCF118 WITH WPS OR T12

Features

- Front and rear mounting positions
- Fly up to 24 WPS cabinets (three-point rigging system)
- Fly up to 16 SXCF118 subs (four-point rigging system)
- Fly SXCF118 above WPS (requires one WPSGRIDt above the SXCF118 and one WPSGRIDt between SXCF118 and WPS). With two subs, max 12 WPS. With three subs, max nine WPS
- Fly SXCF118 above up to six T12 (requires T12TRIG)
- Ground-stack up to six WPS cabinets on one or more SXCF118 (also requires ground-stack kit WPSOUTRIG)
- Inclinator sensor mounting point
- One or two point pick-up
- Available in black (WPSGRIDt) or white (WPSGRIDt-W)



Applications

- Touring flown arrays or touring ground-stacked arrays

Contents

- 1 x flying frame
- 2 x 3.25t shackles
- 12 x fly pins

Technical Specifications

WEIGHT	32kg (70.5lbs)
MATERIAL	Weatherised polyester powder coated mild steel

Acessórios

T12TRIG



TRANSITION FRAME BETWEEN SXCF118 AND TORUS T12 CABINETS

Features

- Fly up to six T12 cabinets below SXCF118 cabinets (requires one WPSGRIDT above the SXCF118 and one T12TRIG between the SXCF118 and the T12)
- Available in black (T12TRIG) or white (T12TRIG-W)

Applications

- Touring and installed vertically flown arrays of SXCF118 with T12

Contents

- 1 x T12TRIG



Technical Specifications

Weight:	13.0kg (28.7lb)
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Acessórios