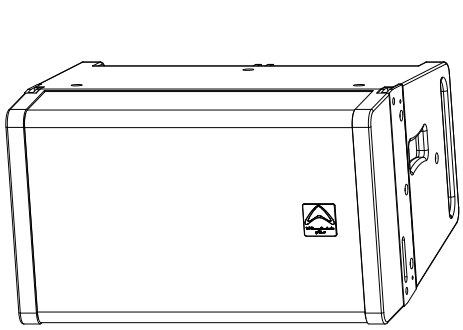
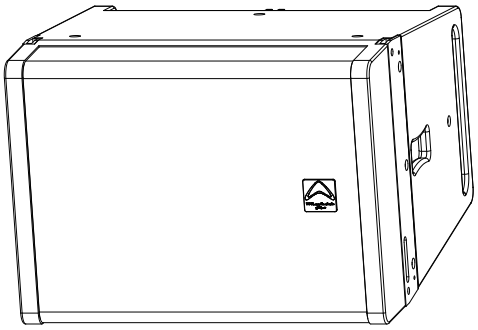
WLA-1 Series

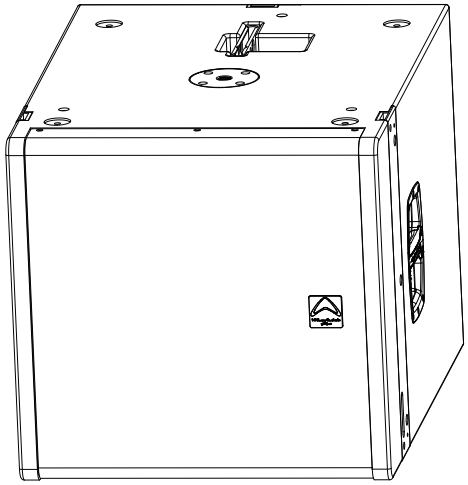
Hybrid Curvature Array

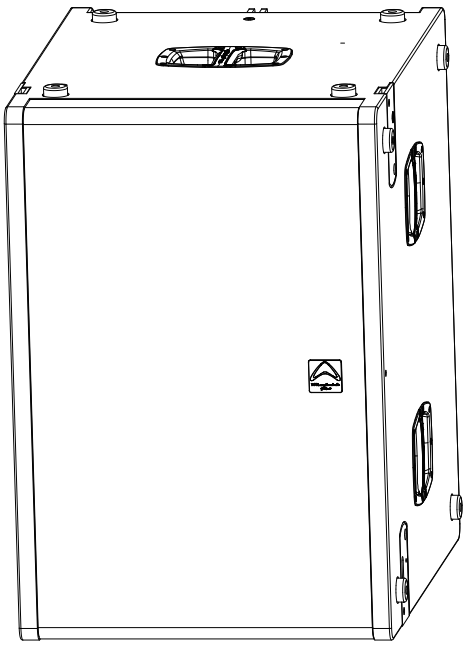
USER MANUAL

WLA-112 WLA-115 WLA-118SUB WLA-121SUB









Wharfedale Pro

www.wharfedalepro.com

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Important Warnings & Safety Instructions

- Read these instructions
- Follow these instructions
- Keep these instructions for future reference
- Heed all warnings
- Do not use this system near moisture or water
- Clean only with a dry cloth
- Install in accordance with these Wharfedale Pro operating instructions
- Follow the manufacturer's operating instructions for all peripheral devices such as amplifiers and processors
- Do not install near heat sources such as radiators, heat registers, stoves or any other apparatus that produces heat (for example lighting systems and amplifiers)
- Use only accessories specified or supplied by Wharfedale Pro
- Do not use shielded microphone/instrument cables to connect amplifiers and speakers, use only approved speaker cables with proper connectors
- Use caution with placement and operation of this speaker system, permanent hearing damage can be caused by prolonged exposure to excessive sound pressure levels
- Refer all servicing to qualified professionals. Servicing is required when the loudspeaker has been damaged in any way, such as impact damage, liquid ingress or foreign object damage. In addition the loudspeaker should be referred to qualified service personnel if there is any kind of malfunction.



- Rigging, suspending and mounting should only be attempted by experience qualified professionals. Incorrect usage can result in damage to equipment and property, injury and even death. Under no circumstances should you attempt to rig, suspend or mount these speakers unless you are fully qualified and certified to do so by relevant local, state and national authorities. If you are not properly qualified or do not know of pertinent regulations consult qualified personnel for advice. Consult a structural engineer before suspending a speaker system and ensure that the total weight of your system can be held by the truss or mounting surface.



- Inspect all mounting hardware before rigging, suspending or mounting. If there is any damage or distortion to any mounting hardware do not proceed until any damaged hardware is repaired or replaced.

UNPACKING

- All Wharfedale Pro products are fully checked before leaving our factory. After unpacking please inspect the cabinets for any physical damage Please retain the shipping carton if possible and internal packing material incase the unit ever needs to be returned. Please check as soon as possible that the unit is functioning. In the event of any damage please contact your dealer immediately so that a written claim for damage can be made.

About the WLA-1 Series

The science behind the new WLA-1 Hybrid Curvature Array is intense.

With 12" and 15" full-range elements and a breath-taking 18" and 21" subwoofer, the new WLA-1 system has been engineered by IAG's International R&D team to be highly versatile - making it perfect for touring and fixed installations.

The drivers inside are very special. Designed and Engineered by Wharfedale Pro UK and manufactured in Europe by Beyma, the full-range WLA-112 and WLA-115 elements use a coaxial design in combination with the exclusive incredible EVO-Fold high frequency waveguide. This design provides consistent dispersion coverage on both the horizontal and vertical planes with the sound radiating from one, singular and coherent, source. Together with the dedicated FIR pre-sets library a flatter phase front is granted allowing outstanding audio quality performance.

This highly engineered solution combats issues that traditional constant curvature two way systems suffer from due to physical spacing between the drive units.

Meanwhile, the WLA-121SUB uses a 21" Beyma driver with a 4.0" Quattro voice coil which results in the most extreme, but controllable flying subwoofer in the Wharfedale Pro line up.

The WLA-1 system can easily be configured in 3 different ways. As a sub-top pole mount, as a flown array with the optional Common Fly Frame, or as a Horizontal system with the optional WLA-1 Link hardware. Such versatility allows for users to deploy the system for multiple activities.

WLA-1 is a unique Hybrid Curvature Array. The science behind its development has been intense, but this extreme engineering results in an extra-ordinary system with massive lows, consistent coverage and phase coherence.

- 12" and 15" coaxial drivers from Beyma
- 18" and 21" Subwoofer with 4.0" Quattro voice coil
- EVO-Fold waveguide
- Integral side plate rigging
- Premium Baltic birch construction
- Versatile configurations
- Comprehensive hardware accessories

WLA-112

- 450 W Continuous
- 900 W Programme
- 1800 W Peak
- Impedance 8 Ω
- 12" Beyma coaxial driver
- EVO-Fold waveguide
- Dual Angle -2.5° / + 7.5° pole socket

WLA-115

- 500 W Continuous
- 1000 W Programme
- 2000 W Peak
- Impedance 8 Ω
- 15" Beyma coaxial driver
- EVO-Fold waveguide
- Dual Angle -2.5° / + 7.5° pole socket

WLA-118SUB

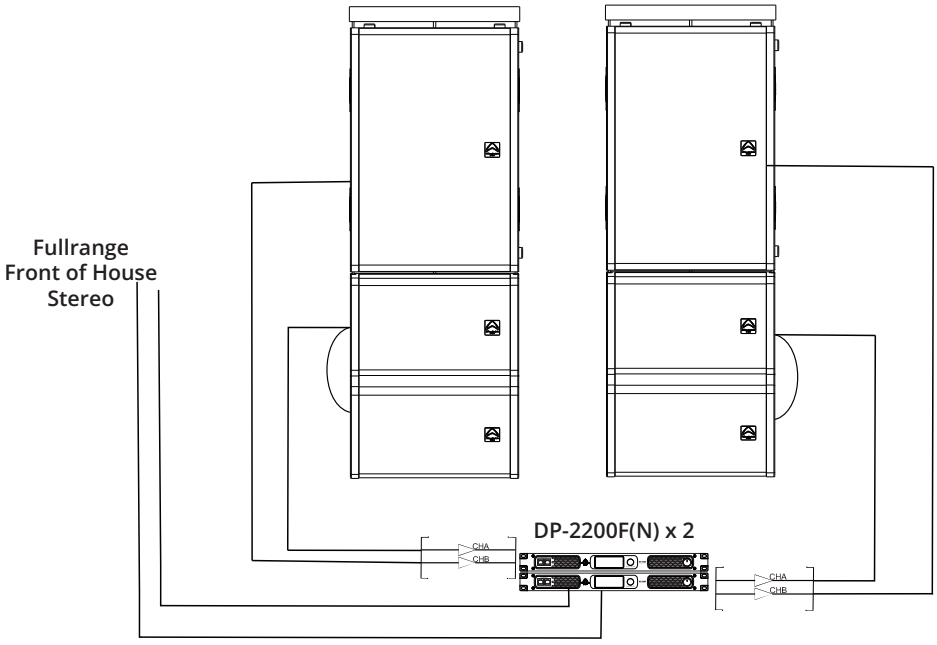
- 1600 W Continuous
- 3200 W Programme
- 6400 W Peak
- Impedance 4 Ω
- 18" Beyma subwoofer driver
- M20 pole socket

WLA-121SUB

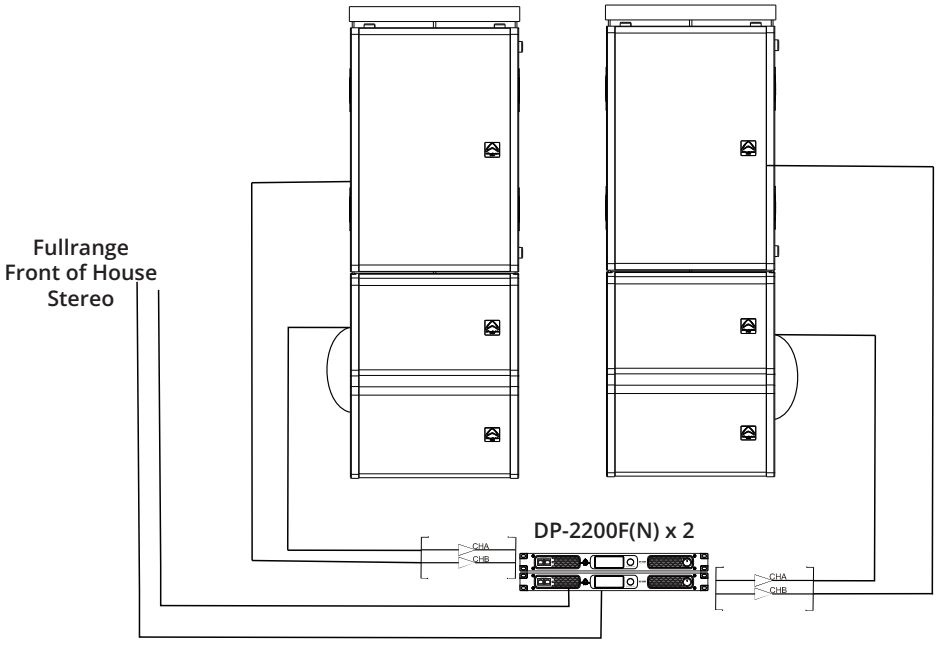
- 1600 W Continuous
- 3200 W Programme
- 6400 W Peak
- Impedance 4 Ω
- 21" Beyma subwoofer driver
- M20 pole socket

WLA-1 sound system example

2 x WLA-121SUB and 4 x WLA-112

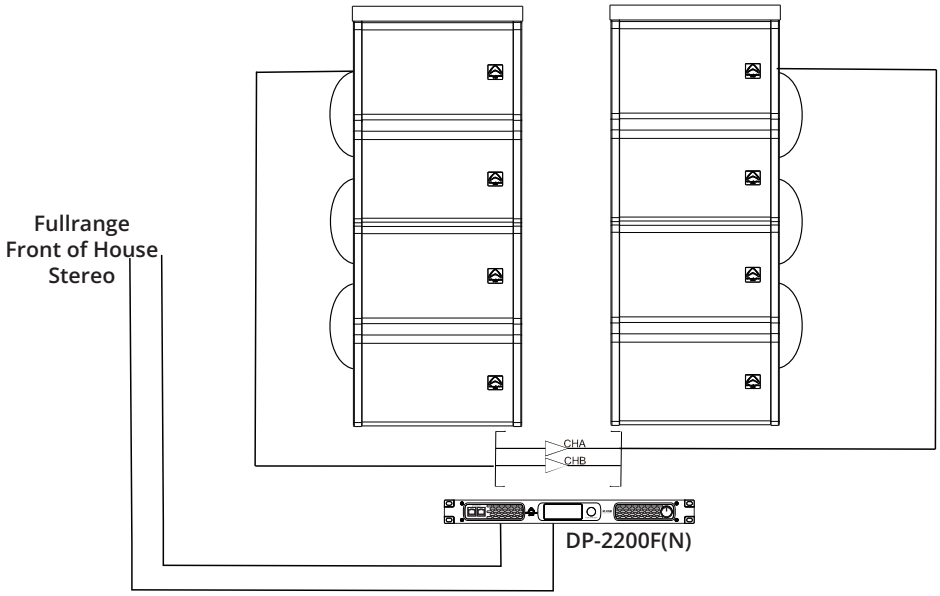


2 x WLA-121SUB and 4 x WLA-115

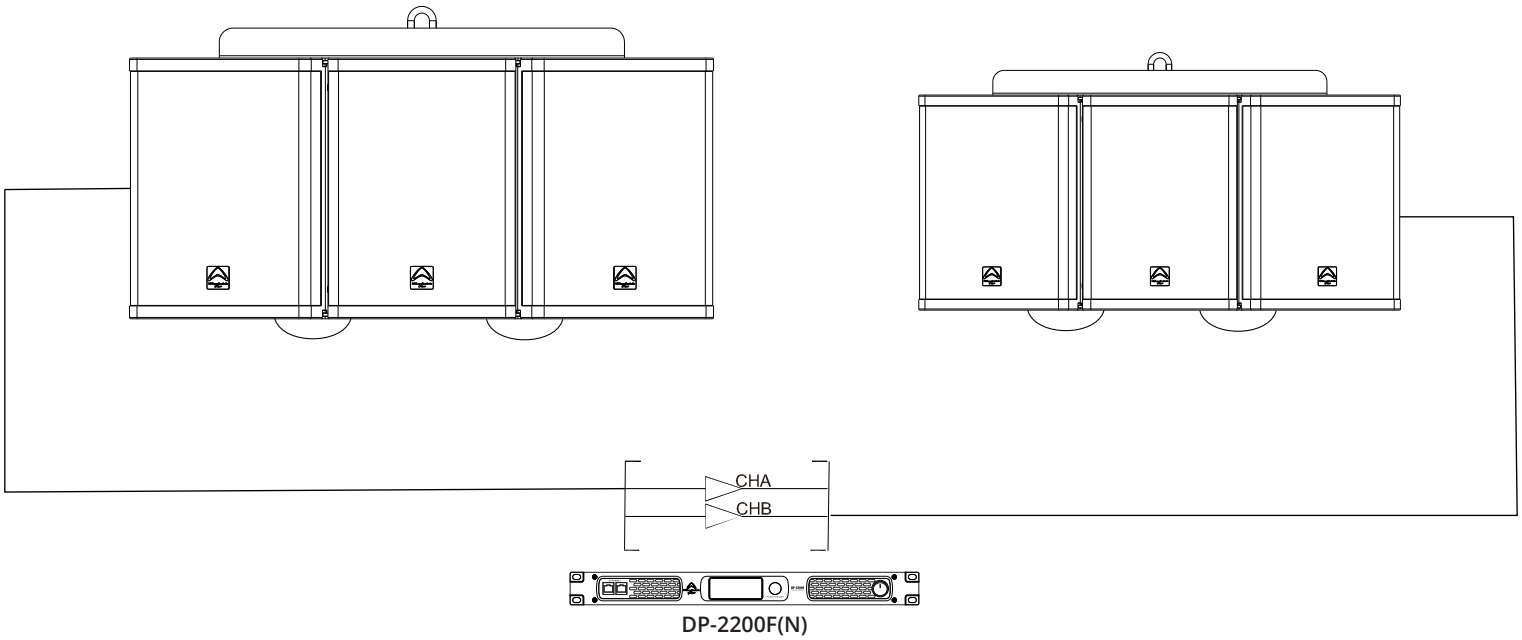


WLA-1 sound system example

4 x WLA-112 and 4 x WLA-115

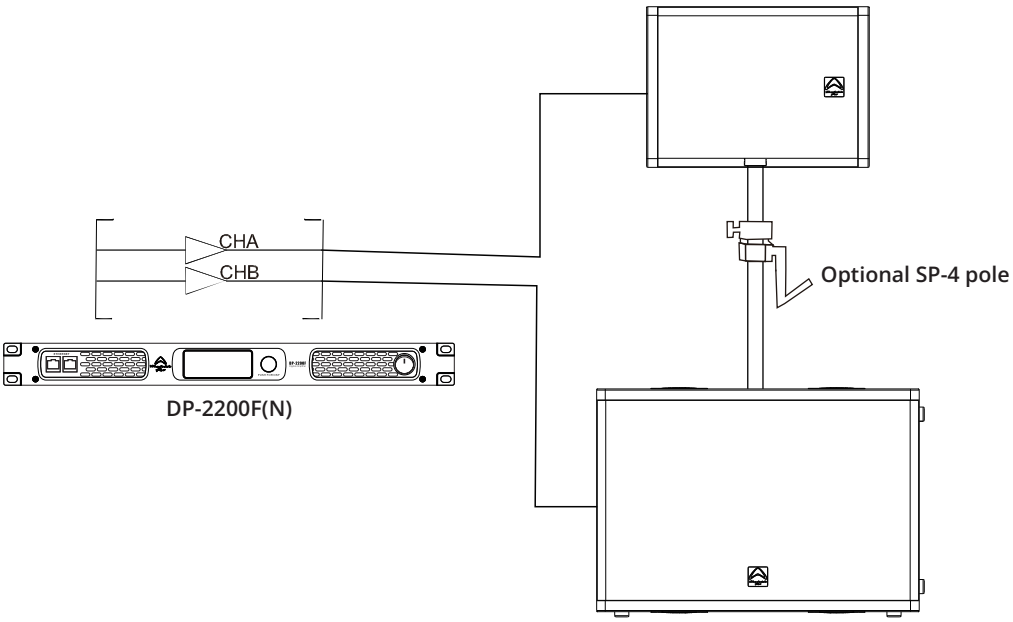


6 x WLA-112 or 6 x WLA-115

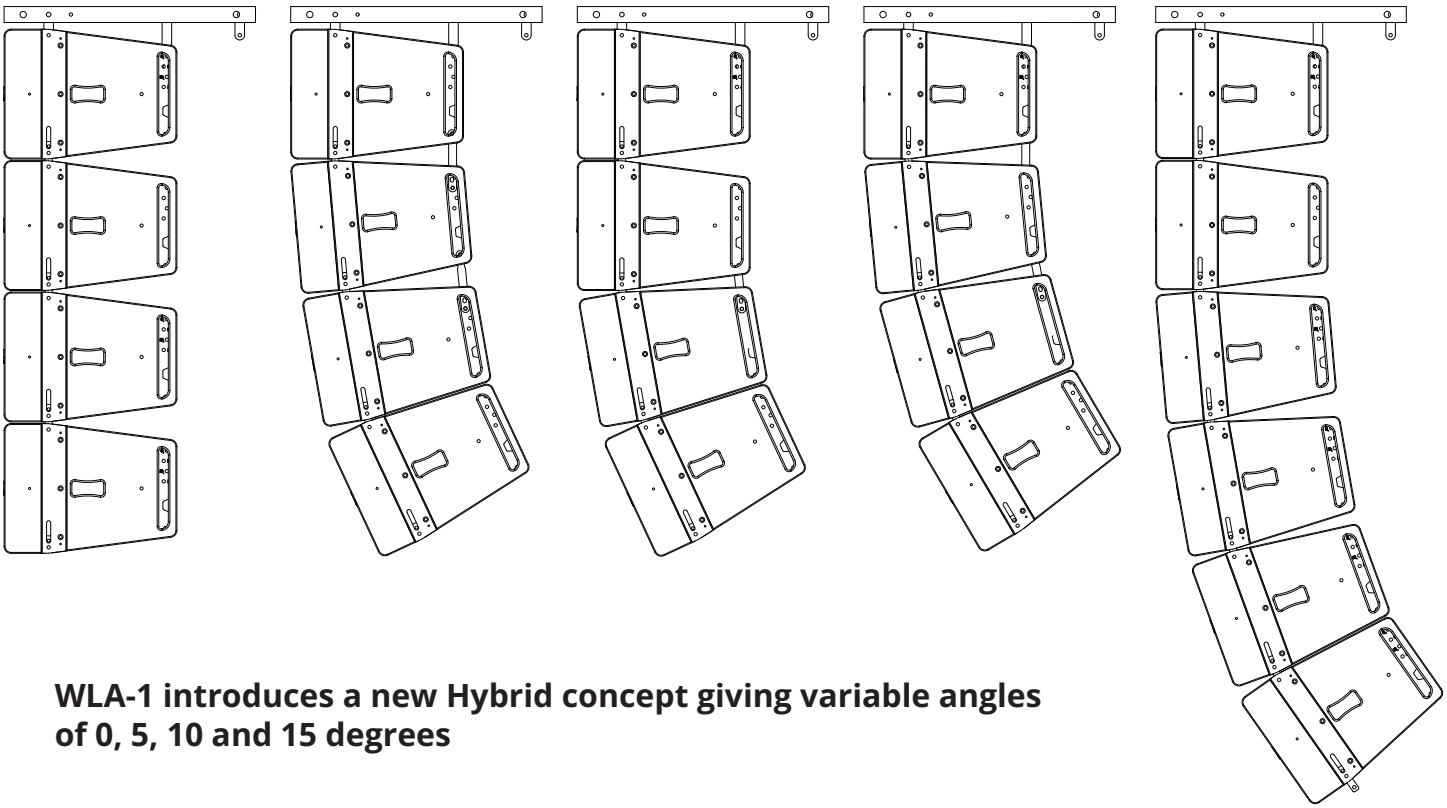


WLA-1 sound system example

WLA-112 and WLA-121SUB or WLA-115 and WLA-121SUB



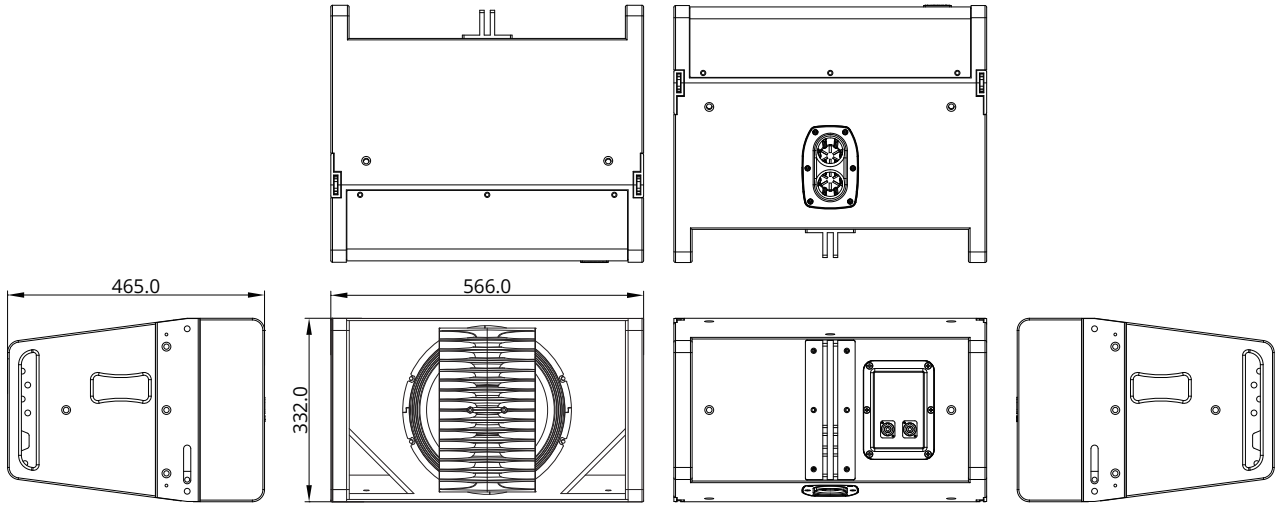
ANGLE CONFIGURATIONS



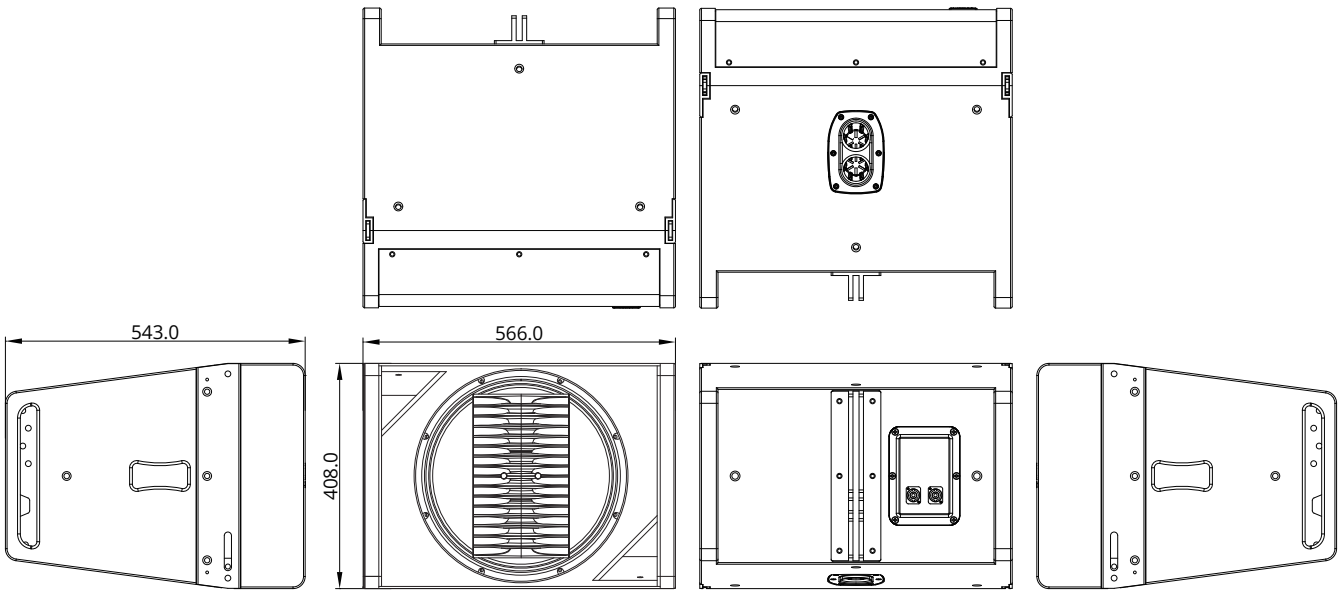
WLA-1 introduces a new Hybrid concept giving variable angles of 0, 5, 10 and 15 degrees

Dimensional Drawings

WLA-112

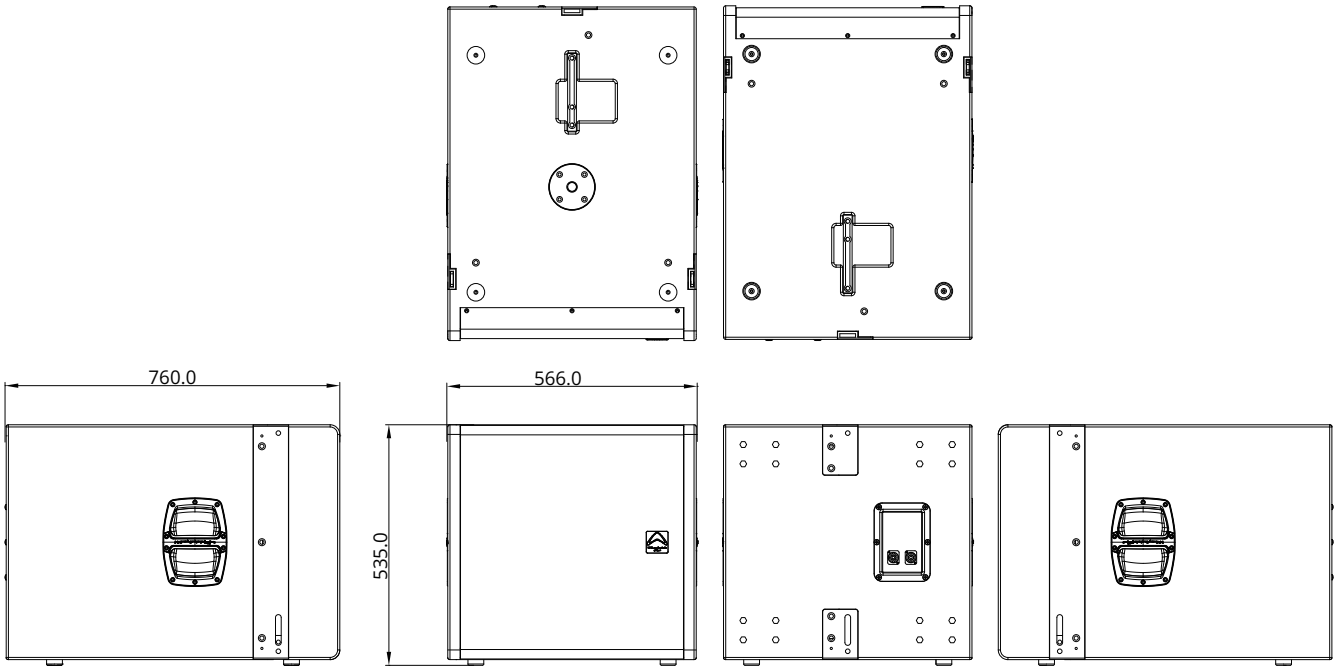


WLA-115

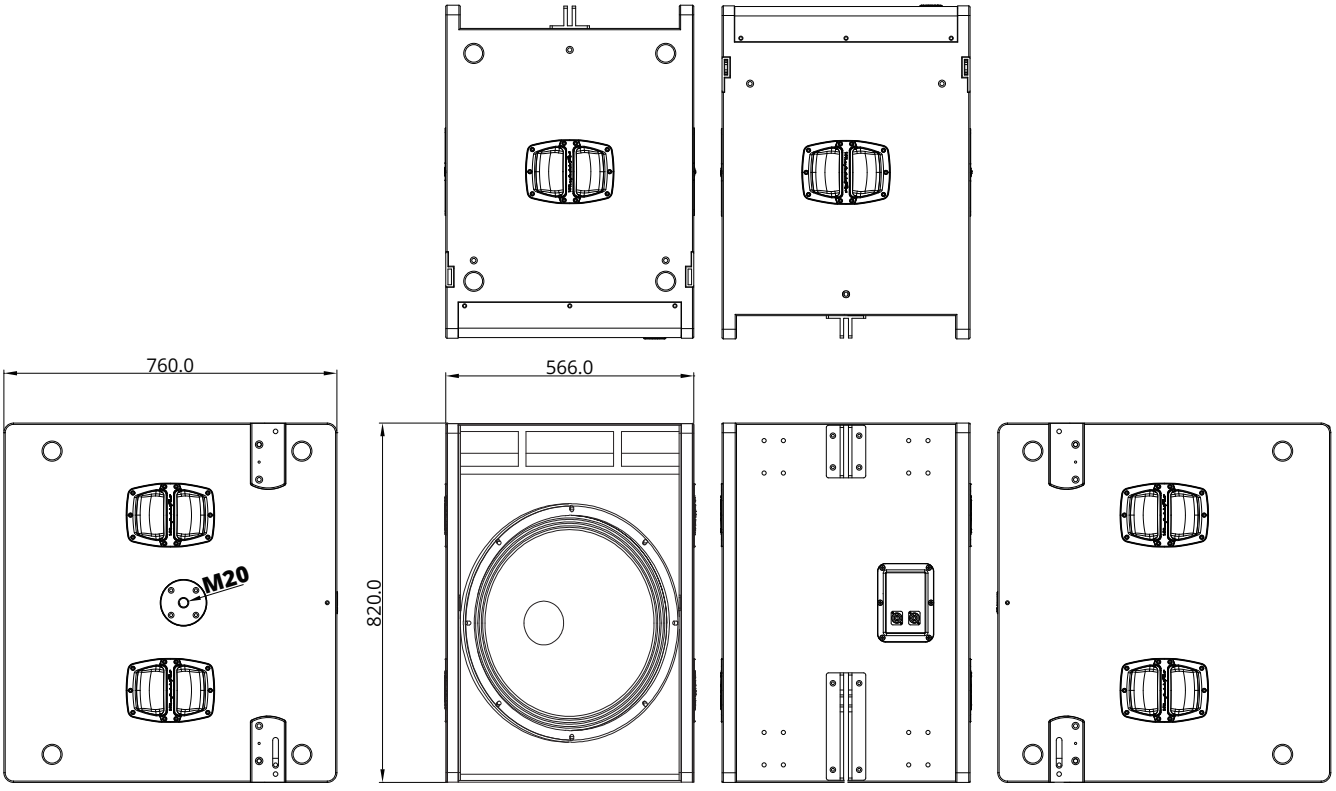


Dimensional Drawings

WLA-118SUB

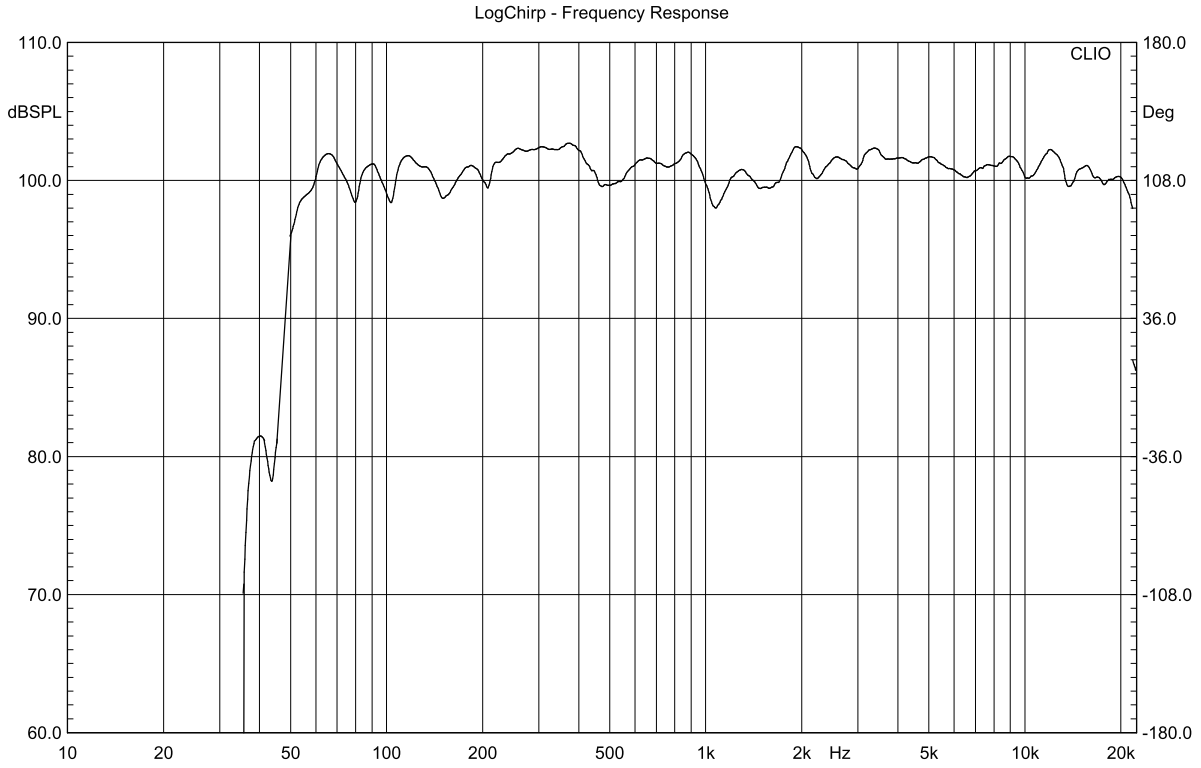


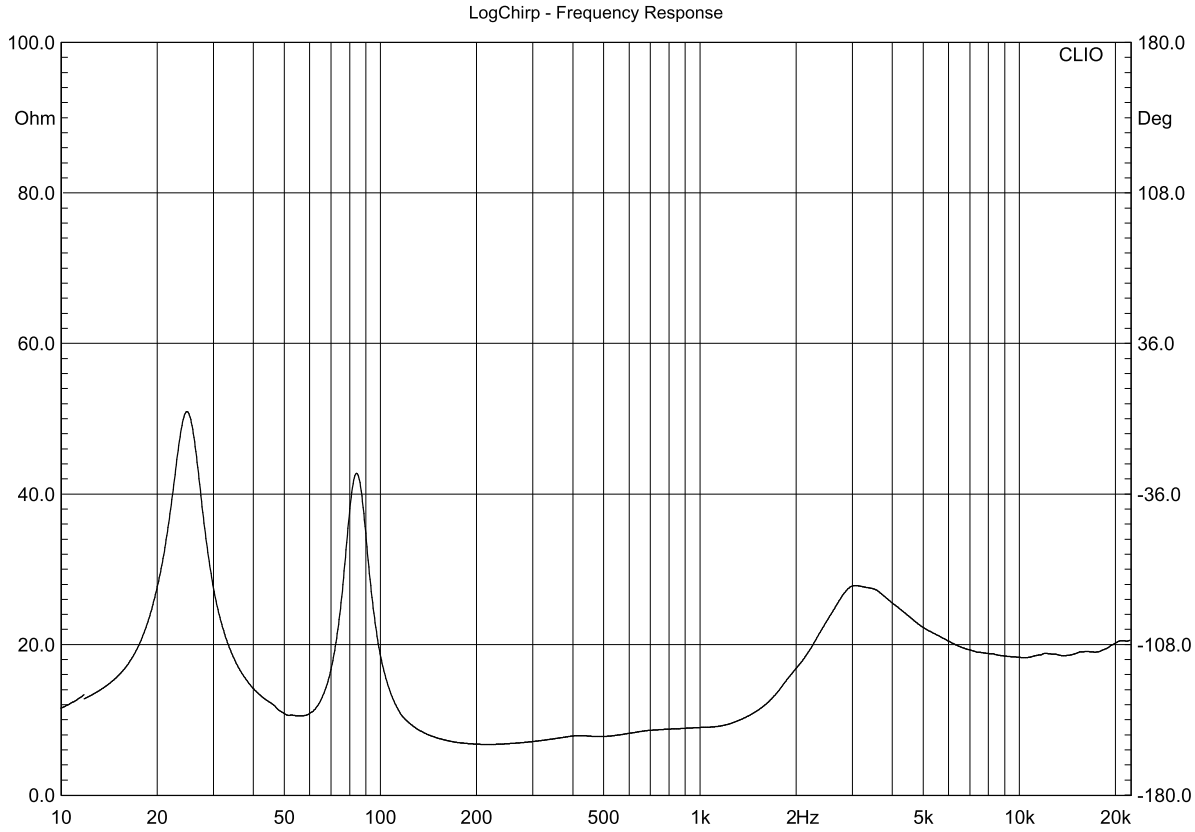
WLA-121SUB



WLA-1 Series Response graphs

WLA-112

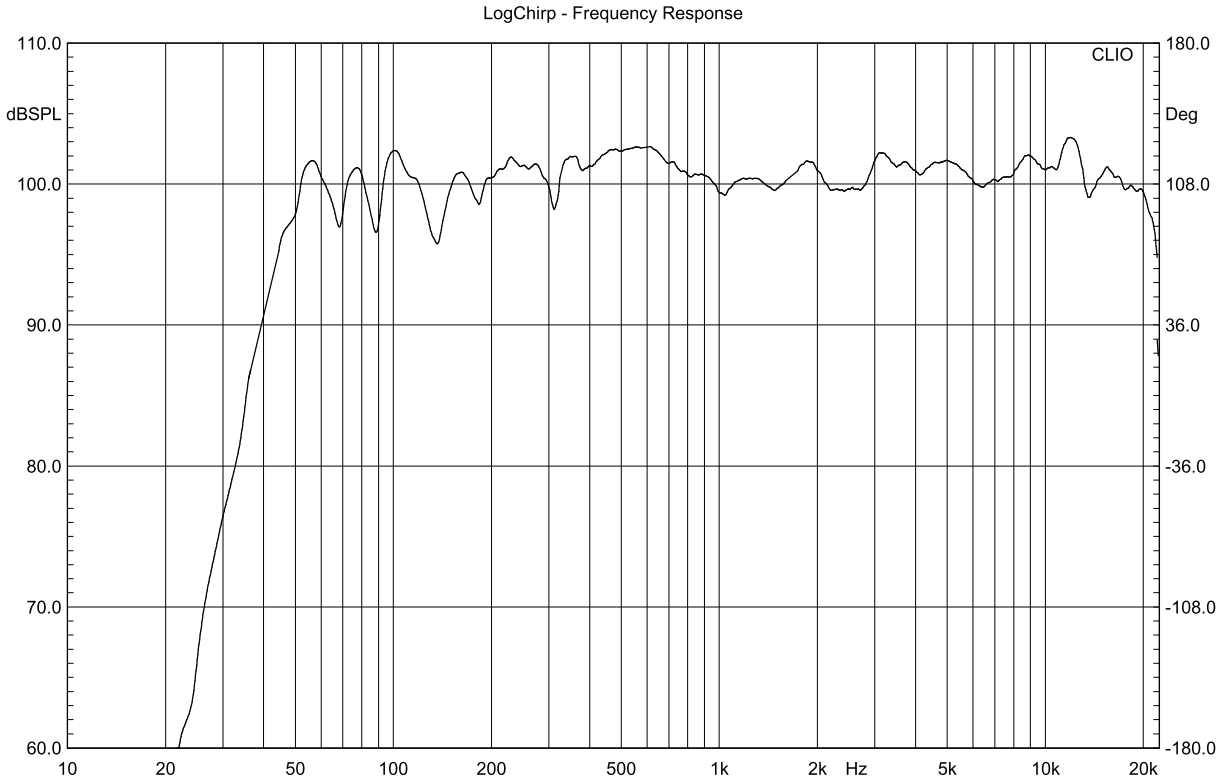


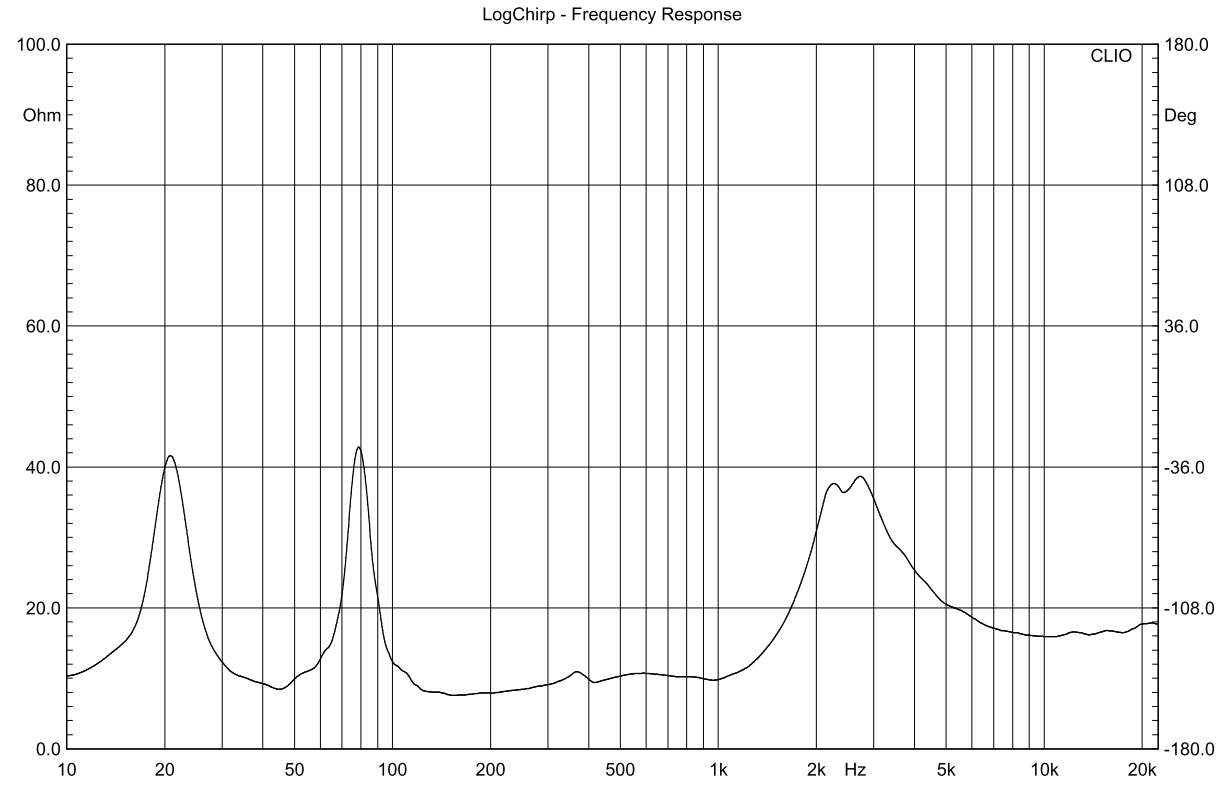


Note : Specification and graphs are created with the dedicated DSP presets.

WLA-1 Series Response graphs

WLA-115

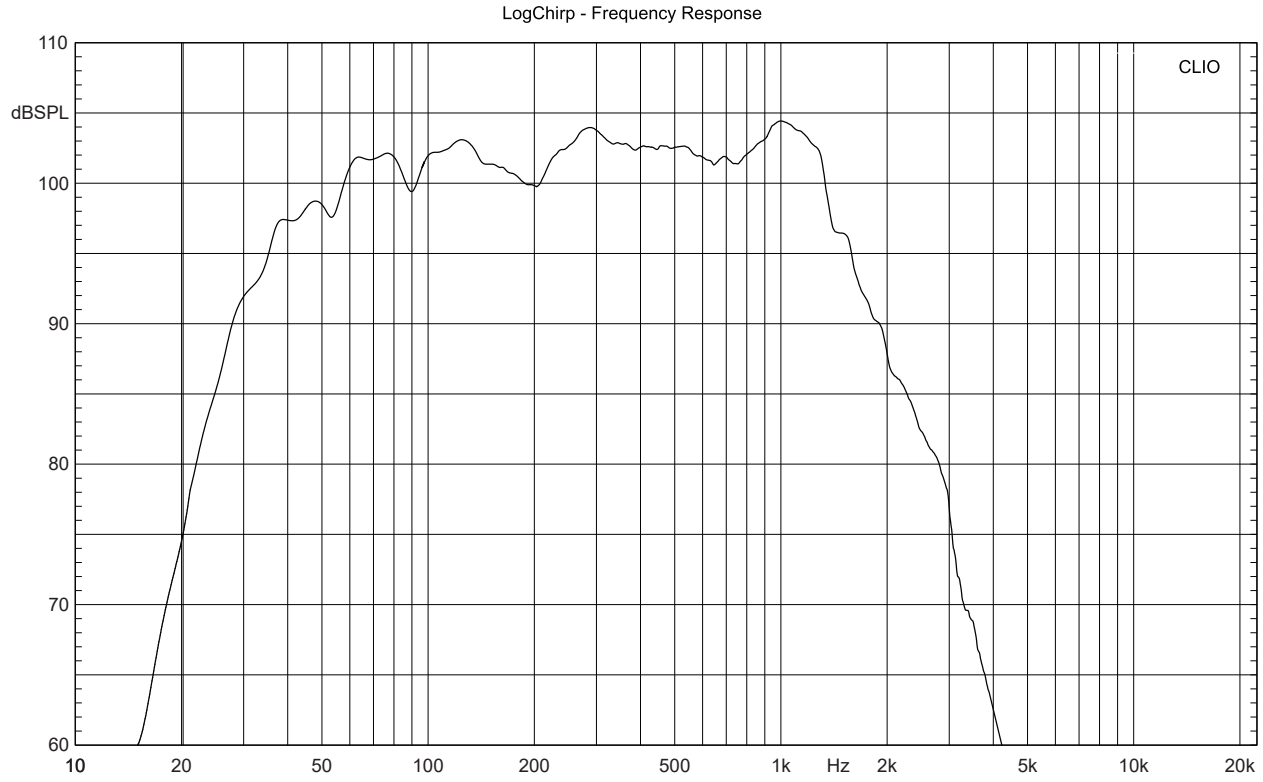


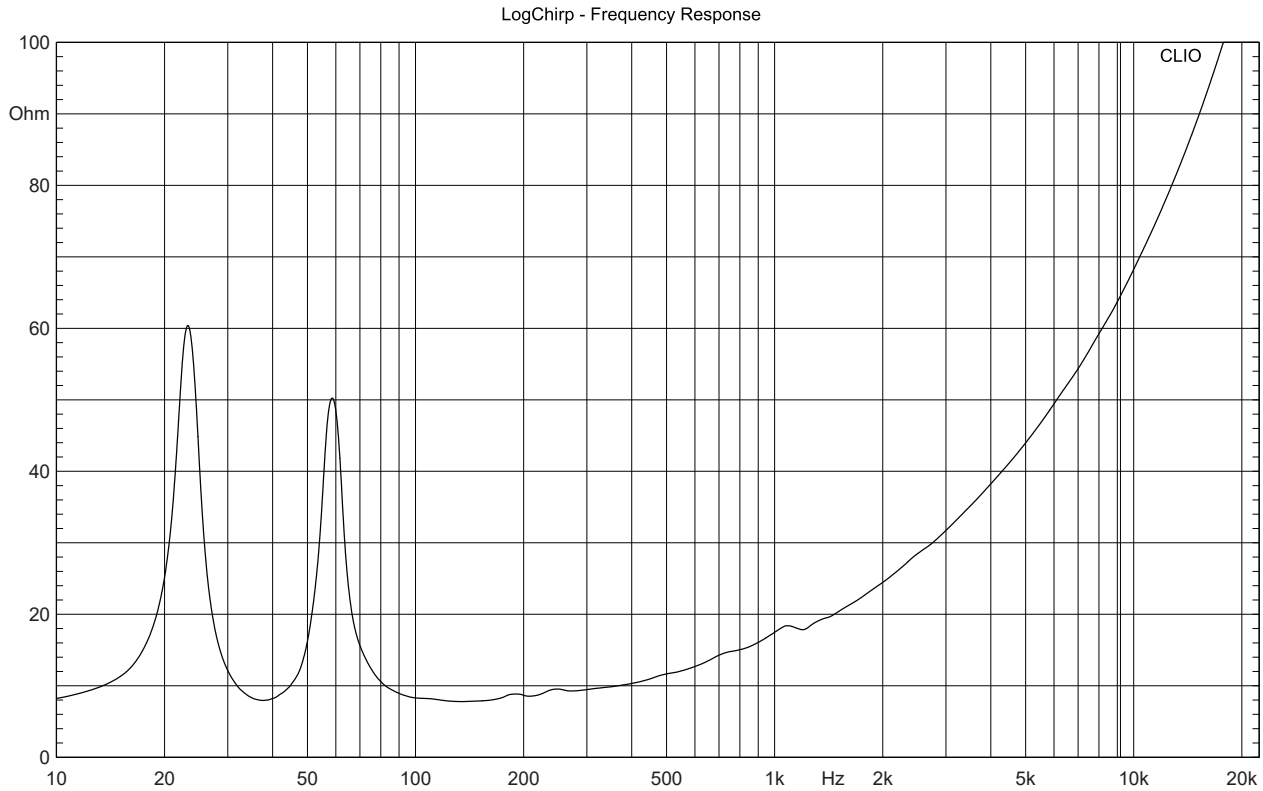


Note : Specification and graphs are created with the dedicated DSP presets.

WLA-1 Series Response graphs

WLA-118SUB

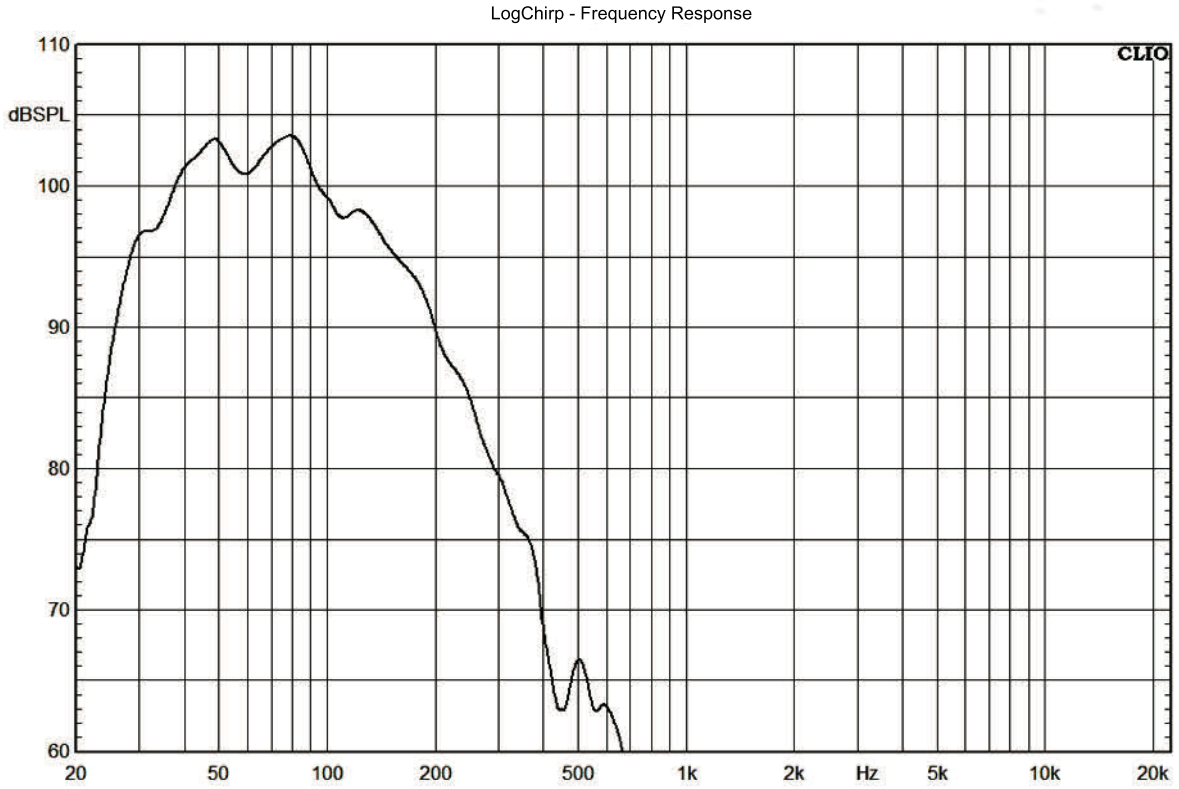


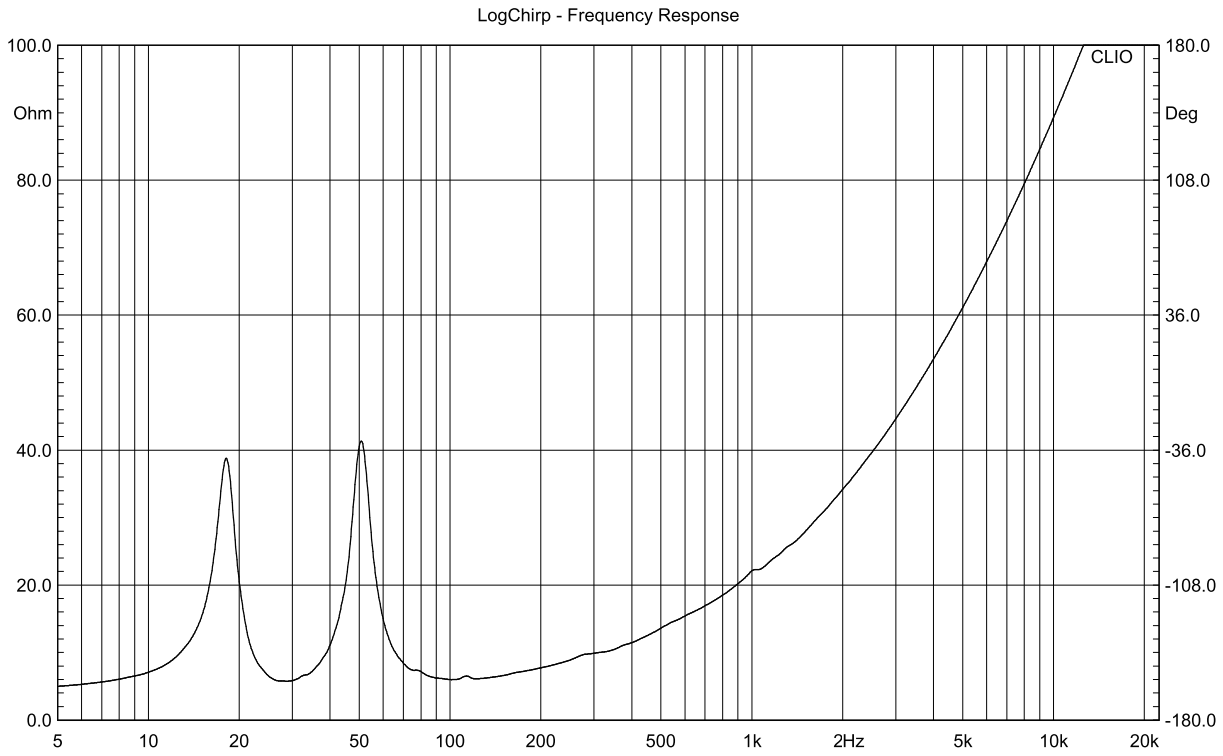


Note : Specification and graphs are created with the dedicated DSP presets.

WLA-1 Series Response graphs

WLA-121SUB





Note : Specification and graphs are created with the dedicated DSP presets.

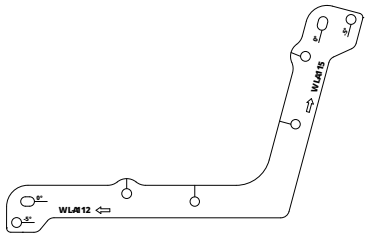
Specifications

Model Name	WLA-112	WLA-115	WLA-118SUB	WLA-121SUB
Design	Hybrid Curvature Array		Subwoofer	
System Type	12" Coaxial Passive	15" Coaxial Passive	18" Subwoofer	21" Subwoofer
Configuration	Two-Way		Single Subwoofer	
Frequency Response (+/-3 dB)	55 Hz - 20 KHz	42 Hz - 20 KHz	35 Hz - 100 Hz	25 Hz - 100 Hz
Frequency Range (-10 dB)	35 Hz - 25 KHz	25 Hz - 25 KHz	28 Hz - 125 Hz	18 Hz - 125 Hz
Sensitivity 2.83 V / 1 m	101 dB	102 dB	103 dB*	103 dB*
Calculated Maximum SPL @1 m	133 dB	135 dB	141 dB*	141 dB*
System Peak SPL	139 dB**	141 dB**	147 dB**	147 dB**
System Rated Impedance	8 Ω		4 Ω	
*			level at 1 m under half space conditions using pink noise with crest factor 2, with dedicated preset.	
**	level at 1 m under free field conditions using pink noise with crest factor 4, with dedicated preset.		level at 1 m under half space conditions using pink noise with crest factor 4, with dedicated preset.	
Low Frequency Transducer				
Size (mm / inches)	312 mm / 12"	388 mm / 15"	420 mm / 18"	545 mm / 21"
Voice Coil Size (mm / inches)	101.6 mm / 4.0"		101.6 mm / 4.0" QUATTRO (4 layers)	
LF Frame Material	Aluminium			
High Frequency Transducer				
HF Driver Type	Compression Driver		/	
Coil Size (mm / inches)	72.2 mm / 2.87"		/	
Exit Size (mm / inches)	38.1 mm / 1.5"		/	
Diaphragm Material	Composite Titanium / Polyester		/	
Waveguide Type	EvoFold®		/	
Nominal Coverage (H x V)	100° x 20°		/	
Special Features	Copper Demodulating rings in both LF and HF units		Aluminium demodulating ring	
	Waterproof LF cone			
	Shared High performing Ferrite magnet system design		Malt Cross® TCS	
Power(AES2)				
System Continuous Power	450 W	500 W	1600 W	
System Programme Power	900 W	1000 W	3200 W	
System Peak Power	1800 W	2000 W	6400 W	
Crossover frequency	1.2 KHz		1.2 KHz	
Recommended HPF = BW 18 dB/oct.	30 Hz	25 Hz	20 Hz	
Input Connector	2 x speakON compatible			
Rigging & Hardware	3 Points for Rigging			
Vertical Splay angle range	0°- 5° - 10° - 15°		/	
Horizontal Splay angle	15°		/	
Optional Accessories	-WLA-1 Common Fly Frame -WLA-1 Link		WLA-1 Common Fly Frame	
Stand Pole	Dual Angle -2.5° / +7.5°		M20 Pole Mount	
Handle	2 Side / 2 Back		2 Side (2 pcs)	2 Side (4 pcs) + 2 (Top / Bottom)
Enclosure				
Cabinet Type	Trapezoid		Rectangular	
Enclosure Material & Finish	15 mm plywood / Rhino Rock		18 mm plywood / Rhino Rock	
Colour Options	Black Paint			
Grille Material & Finish	Powder Coated Perforated Steel			
Dimensions - Unpacked				
Height Front	332.0 mm / 13.1"	408.0 mm / 16.1"	535.0 mm / 21.1"	820.0 mm / 32.3"
Height Rear	246.4 mm / 9.7"	302.0 mm / 11.8"	/	/
Width	566.0 mm / 22.3"	566.0 mm / 23.4"	566.0 mm / 23.4"	566.0 mm / 23.4"
Depth	465.0 mm / 18.3"	543.0 mm / 16.5"	760.0 mm / 29.9"	760.0 mm / 29.9"
Dimensions - Packed				
Height	661.0 mm / 26.0"	661.0 mm / 26.0"	630 mm / 24.8"	895.0 mm / 35.2"
Width Front	550.0 mm / 21.7"	630.0 mm / 24.8"	/	/
Width Rear	550.0 mm / 21.7"	630.0 mm / 24.8"	656.0 mm / 25.8"	656.0 mm / 25.8"
Depth	410.0 mm / 16.7"	490.0 mm / 19.3"	850.0 mm / 33.5"	850.0 mm / 33.5"
Weight				
Net Weight	29.4 Kg / 64.7 lbs	34.5 Kg / 77.9 lbs	56.2 Kg / 123.6 lbs	70.5 Kg / 165.0 lbs
Gross Weight	31.8 Kg / 69.96 lbs	37.5 Kg / 82.5 lbs	64.4 Kg / 141.7 lbs	76.5 Kg / 168.3 lbs

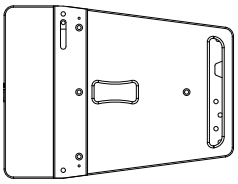
Note : Specification and graphs are created with the dedicated DSP presets.

WLA-121SUB ARM

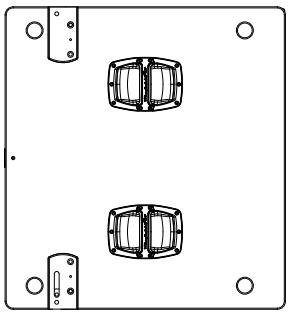
Supplied with the WLA-121SUB is the WLA-121SUB Arm. This arm allows the first speaker of the array (WLA-112 or WLA-115) to be be angled as 0° or as -5° down. Simply insert the bolt to select the angles in the diagrams below.



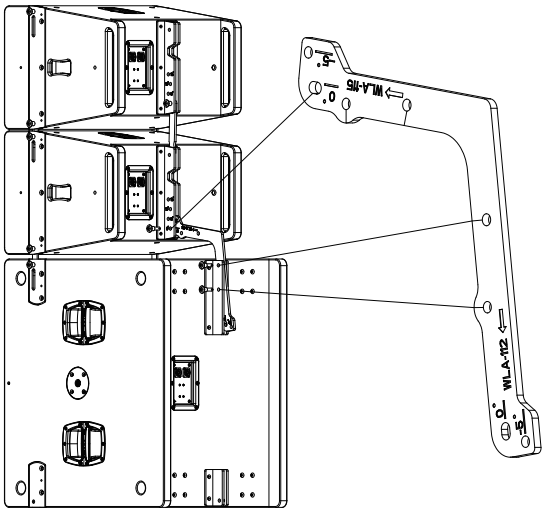
WLA-121SUB ARM

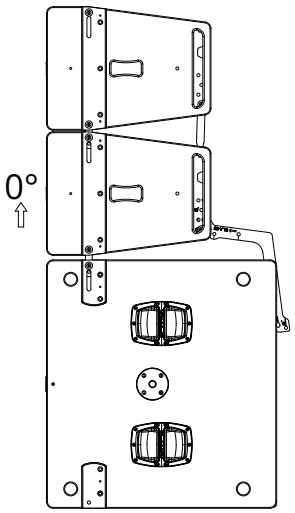


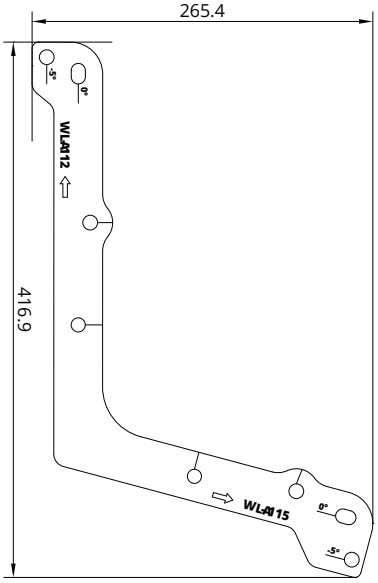
WLA-112/115

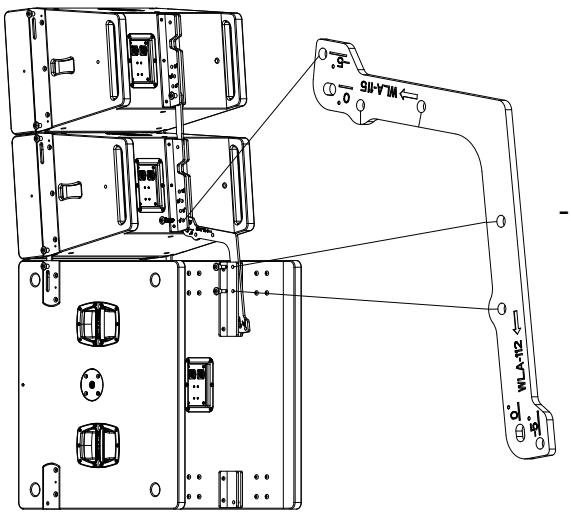


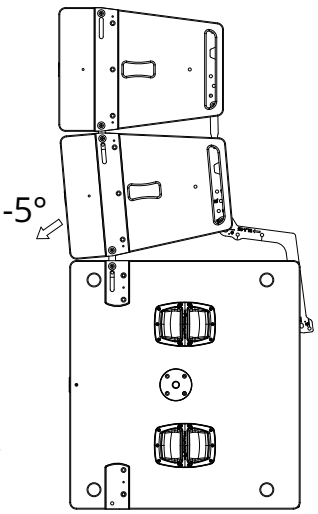
WLA-121SUB







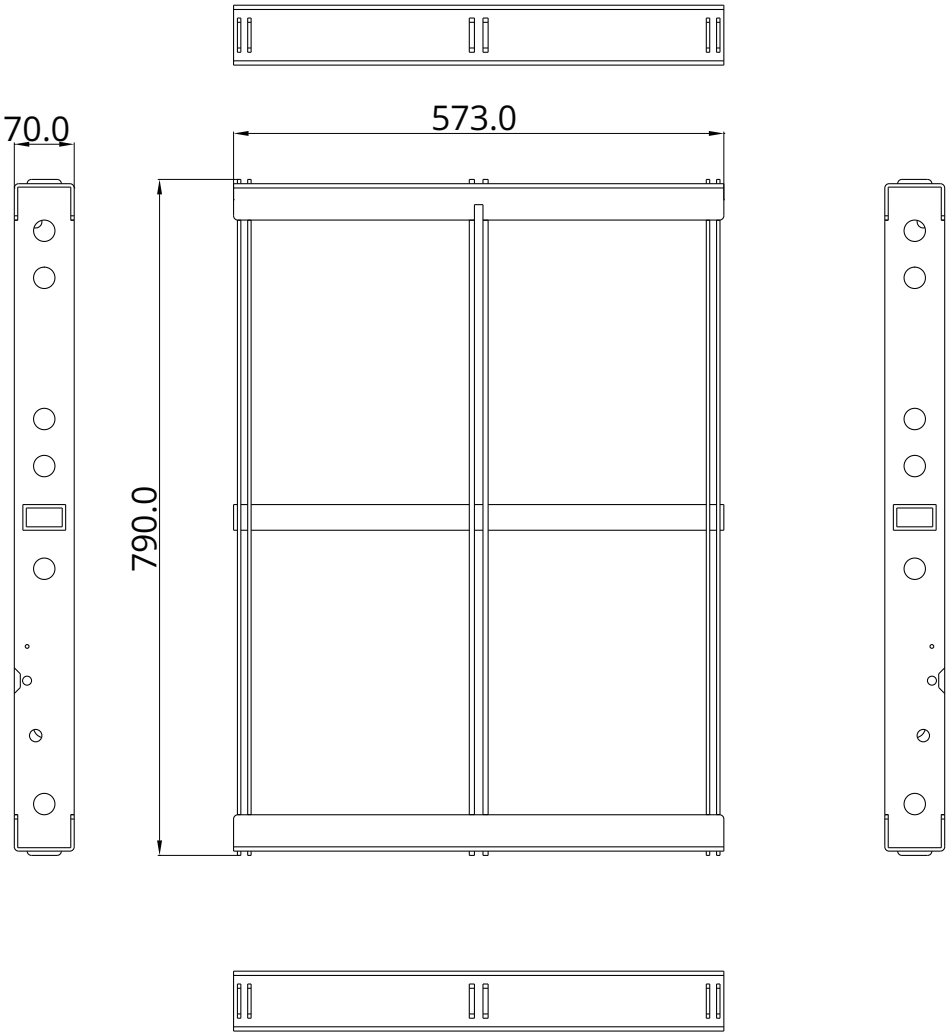


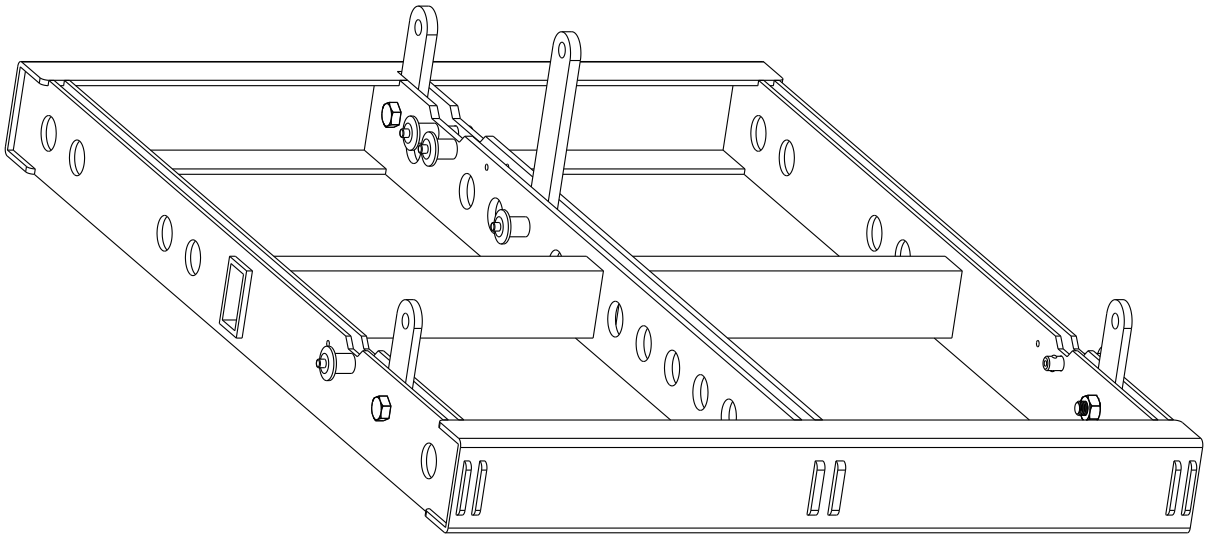




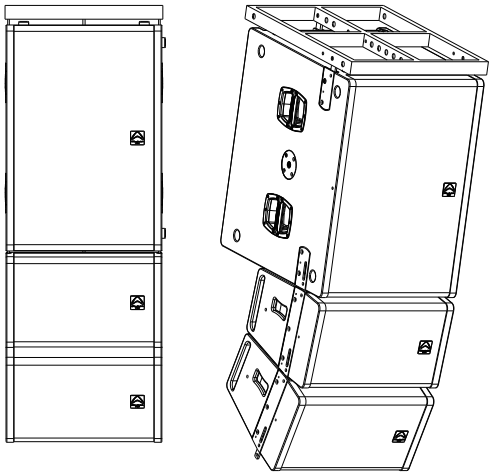
Configurations
1 - Common Fly Frame

WLA-1 Common Fly Frame

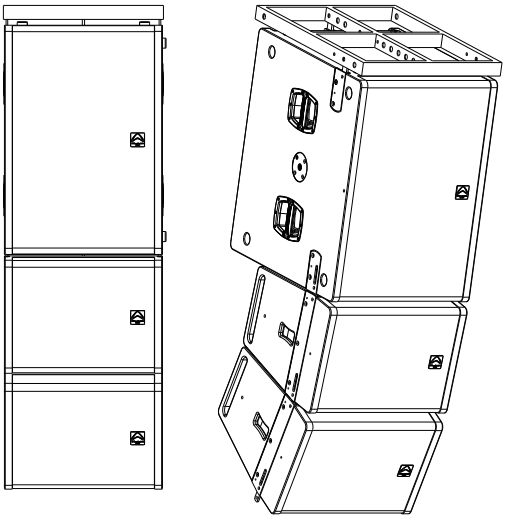




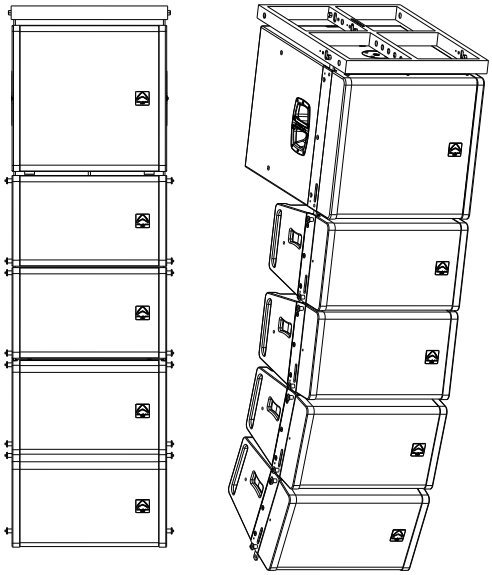
WLA-121SUB + 2 x WLA-112



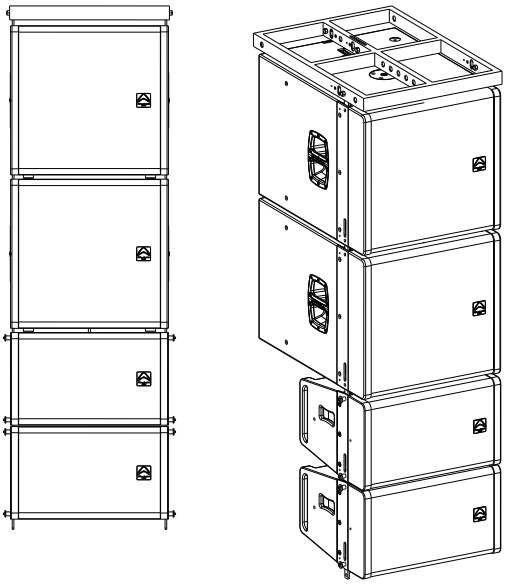
WLA-121SUB + 2 x WLA-115



WLA-118SUB + 4 x WLA-112



2 x WLA-118SUB + 2 x WLA-112

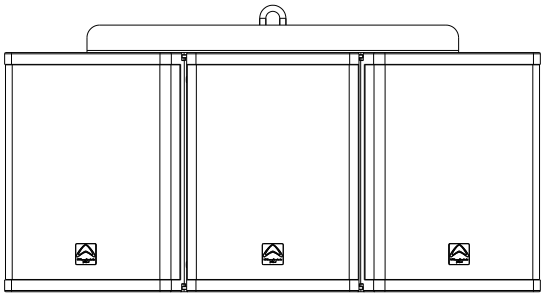


Under no circumstances attempt to rig, suspend or otherwise mount loudspeakers unless you are fully qualified and certified to do so by relevant local, state and national authorities. All relevant safety regulations must be followed. If you are not properly qualified or do not know of pertinent regulations, consult qualified personnel for advice.

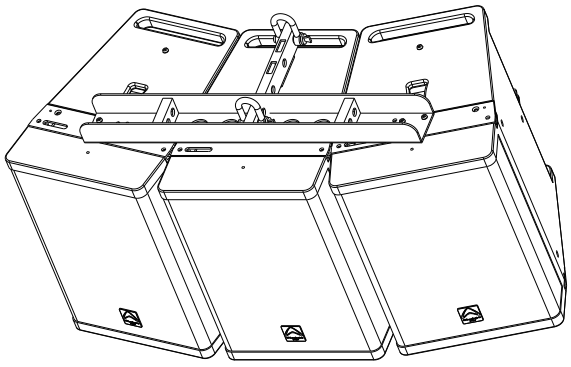
Use the optional WLA-1 Common Fly Frame to fly WLA-118SUB (A) with WLA-115 (A) or WLA-112 (A) elements as a traditional flown array.

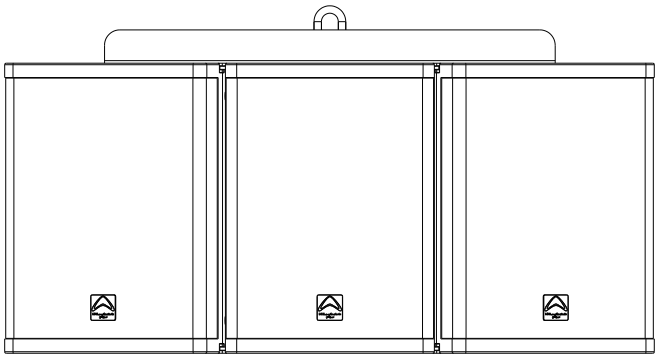
Note :
- A maximum of 3 subwoofers should be loaded on the fly frame without full range elements.
- A Maximum of 8 full range elements can be flown.
- WLA-118SUB (A) will not fly with WLA-121SUB (A).
- Check full configuration using EASE Focus software.
- Also always check the latest configurations using our Fly Frame Calculator:
  https://wharfedalepro.com/fly-frame-calculator/

Configurations
2 - WLA-1 LINK

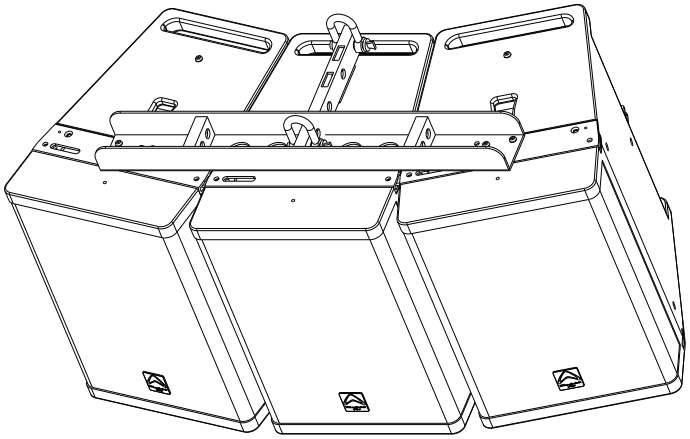


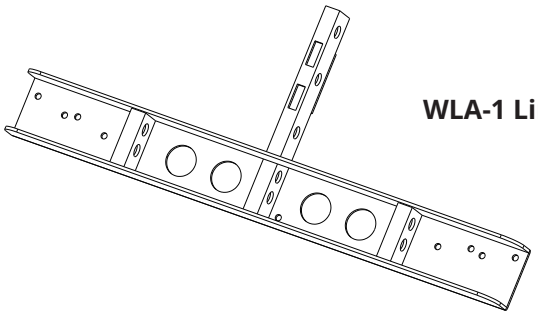
3 x WLA-112



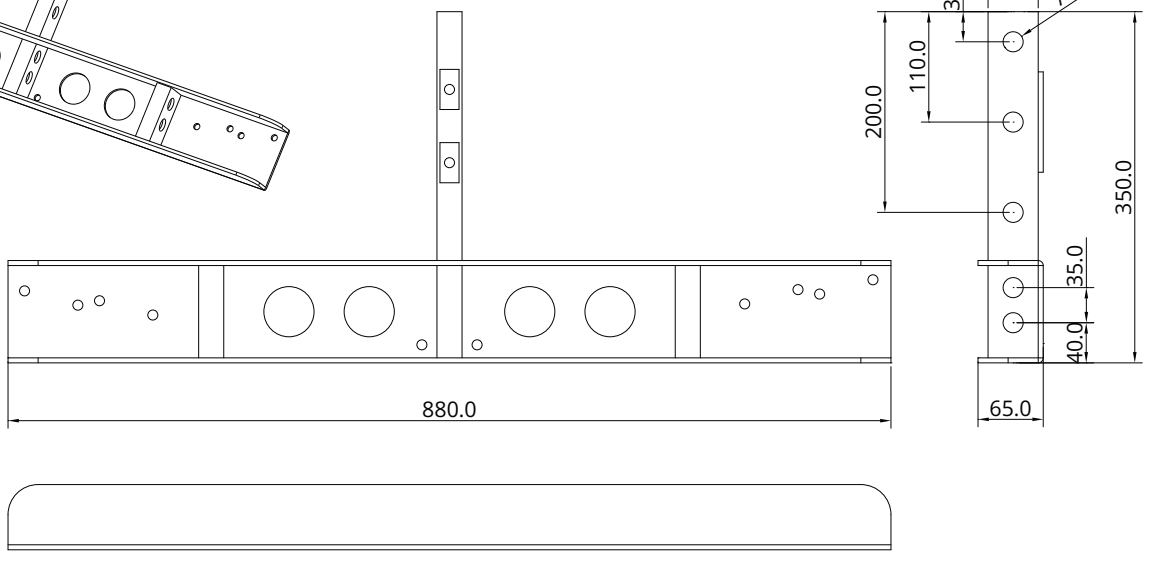


3 x WLA-115



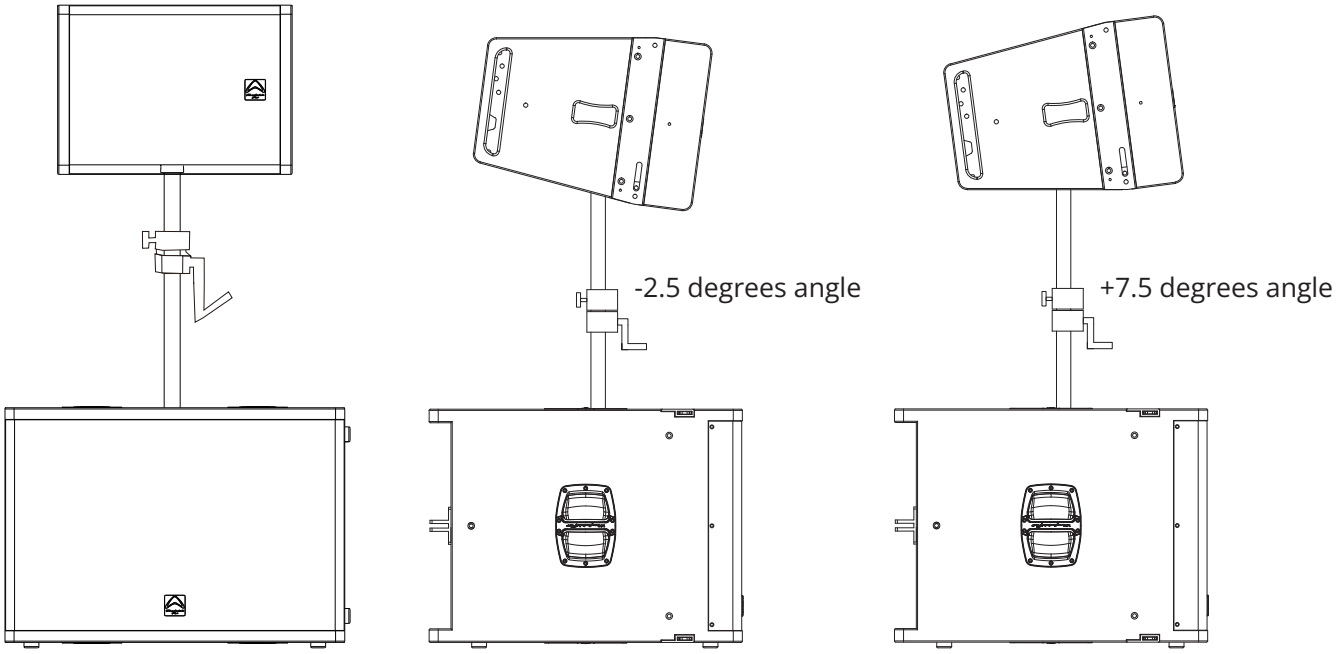


WLA-1 Link

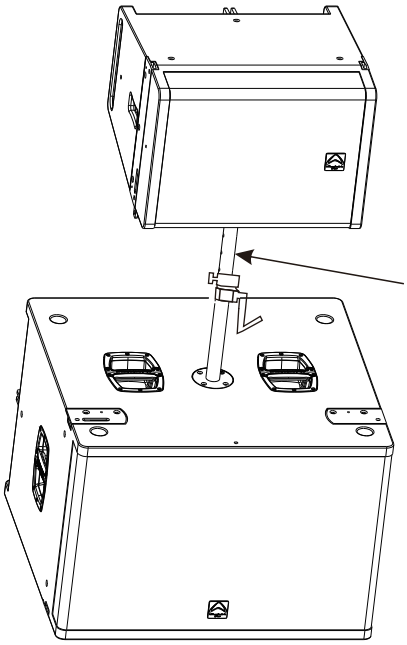


Configurations
3 - SP-4 pole

Using the optional SP-4 pole to connect a WLA-112 or a WLA-115 to the subwoofer

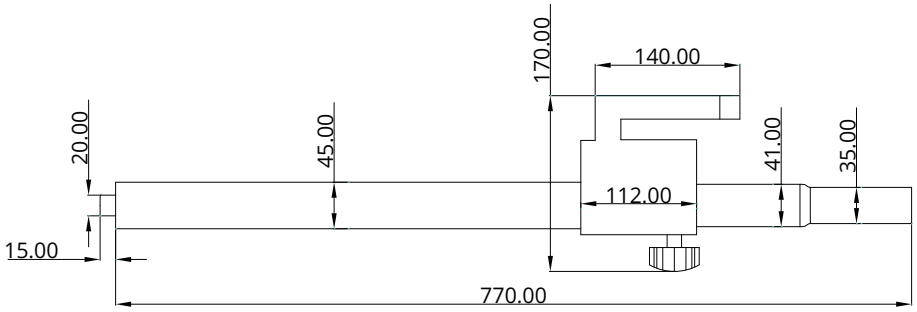


WLA-118SUB or WLA-121SUB + 1 x WLA-112 or 1 x WLA-115



WLA-112 or WLA-115

SP-4



SP-4

WLA-118SUB or WLA-121SUB

WHARFEDALE PRO LIMITED WARRANTY

Wharfedale Pro products are warranted of manufacturing or material defects for a period of three years from the original date of purchase. In the event of malfunction, contact your authorised Wharfedale Pro dealer or distributor for information.

Please be aware that the warranty details may differ from country to country. Contact your dealer or distributor for information (available at wharfedalepro.com). These terms do not infringe your statutory rights.

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June 2026