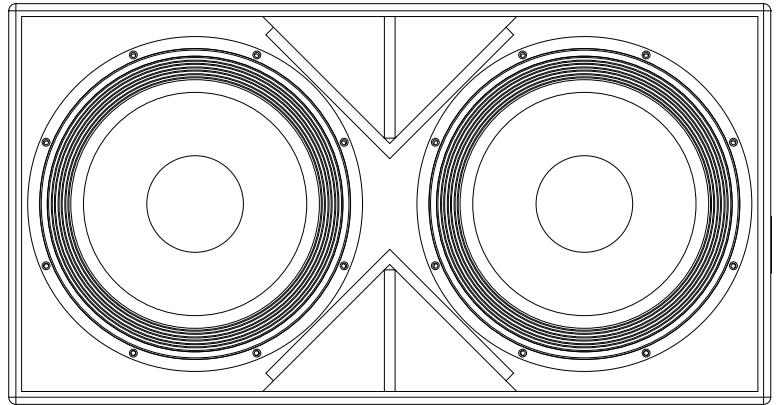
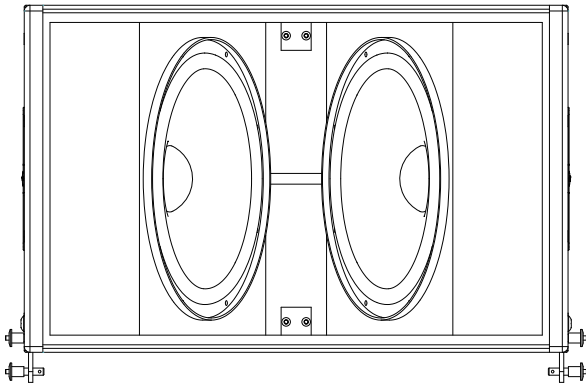
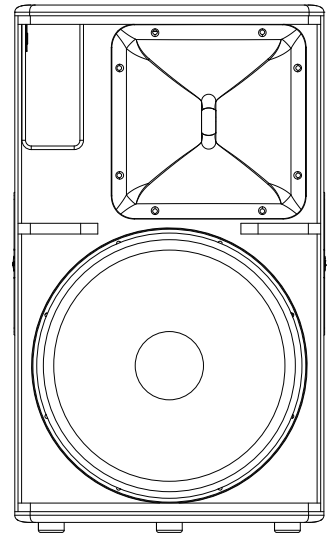
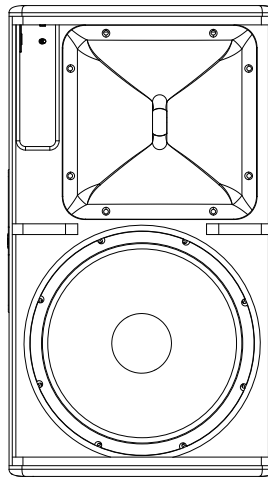
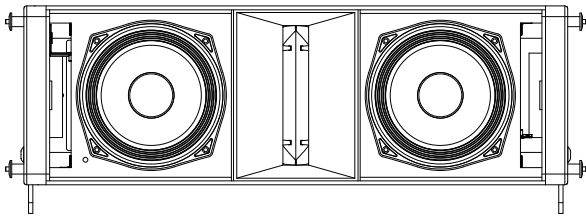


WLA ACTIVE Series

USER MANUAL

WLA-28A WLA-12MA WLA-15MA WLA-28SUBA WLA-218BA



www.wharfedalepro.com

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 in case 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-A Series

The quality and durability of the well established WLA series is now available in an active series. The series consists of 5 new models which are enhanced with internal DSP using FIR presets. Ethernet control also delivers remote system management tools through a single cable.

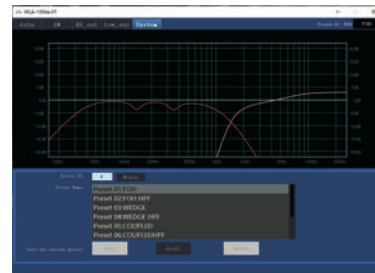
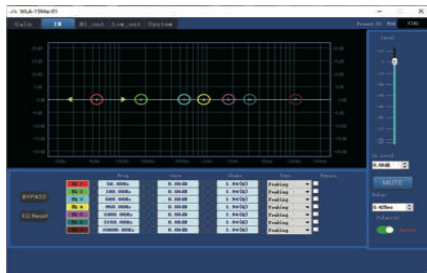
The line-up consists of a 2 x 8" array element, two active floor monitors, a dual 15" flown subwoofer and the 2400 W continuous WLA-218BA dual 18" subwoofer. A combination of products which allows for comprehensive systems to be designed, installed and toured.

The system is also compatible with the WLA-28 Common Fly Frame and WLA-28 Dolly Frame and can also be protected using the readily available WLA Series tourbags.

WLA-28A	Active 8" 2-way Bi-Amp	750 W Continuous
WLA-28SUBA	Active 2 x 15" Subwoofer	2000 W Continuous
WLA-218BA	Active 2 x 18" Subwoofer	2000 W Continuous
WLA-12MA	Active 12" Monitor Bi-Amp	750 W Continuous
WLA-15MA	Active 15" Monitor Bi-Amp	750 W Continuous

Software control

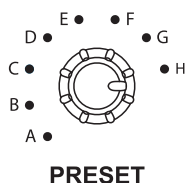
Network connection is made using the RS485 protocol and the control software is freely downloadable from www.wharfedalepro.com



Dsp Presets

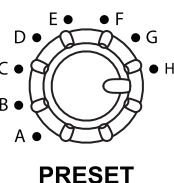
WLA-28A

- A) 1 SPKR 100 Hz HPF
- B) 2 to 4 SPKR 100 Hz HPF
- C) 5 to 8 SPKR 100 Hz HPF
- D) >8 SPKR 100 Hz HPF
- E) 2 to 4 SPKR
- F) 5 to 8 SPKR
- G) >8 SPKR
- H) CUSTOM



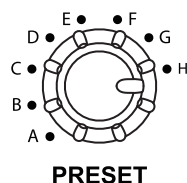
WLA-28SUBA

- A) FLOWN
- B) FLOWN with 218
- C) STACK
- D) STACK with 218
- E) CARDIOID AUDIENCE
- F) CARDIOID STAGE
- G) CUSTOM 1
- H) CUSTOM 2

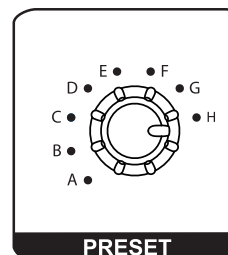


WLA-218BA

- A) 1 SPKR 80 Hz LPF
- B) 1 SPKR 100 Hz LPF
- C) >2 SPKR 80 Hz LPF
- D) >2 SPKR 100 Hz LPF
- E) CARDIOID AUDIENCE
- F) CARDIOID STAGE
- G) CUSTOM 1
- H) CUSTOM 2

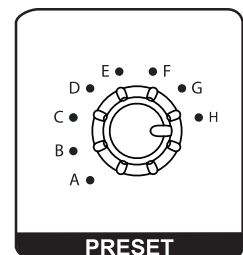


WLA-12MA



- A) FOH
- B) FOH HPF
- C) WEDGE
- D) WEDGE HPF
- E) COUPLED
- F) COUPLED HPF
- G) CUSTOM
- H) CUSTOM

WLA-15MA



- A) FOH
- B) FOH HPF
- C) WEDGE
- D) WEDGE HPF
- E) COUPLED
- F) COUPLED HPF
- G) CUSTOM
- H) CUSTOM

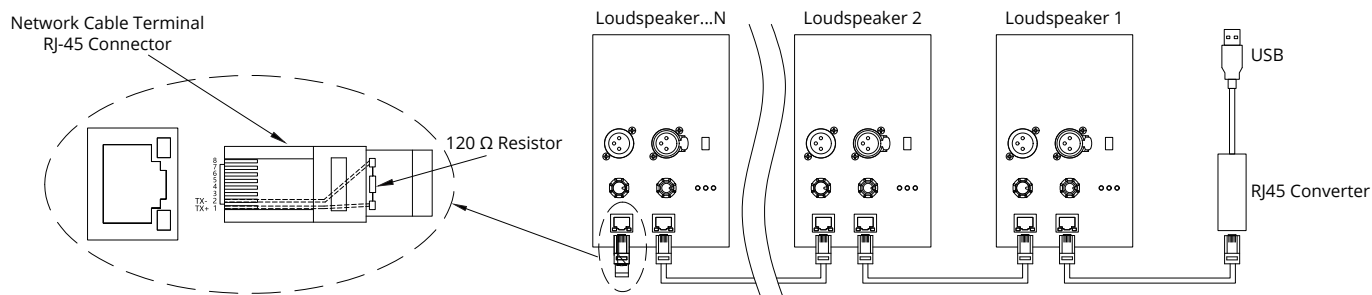
For the WLA-28SUBA the AUDIENCE or STAGE presets can be used in an Inverted Stack Gradient array configuration.

AC Power and Currents

When 'daisy chaining' elements with powerCON connectors, always ensure that the combined current draw on a single power source does not exceed maximum ratings.

Model Name	WLA-28A	WLA-12MA	WLA-15MA	WLA-28SUBA	WLA-218BA
Max Consumption Power	750 W	750 W	750 W	2000 W	2200 W
Max Current Draw @ 110 - 120 V	2.5 A	2.5 A	2.5 A	8A @ 100 -240 V	8A @ 100 -240 V
Max Current Draw @ 220 - 240 V	1.25 A	1.25 A	1.25 A		

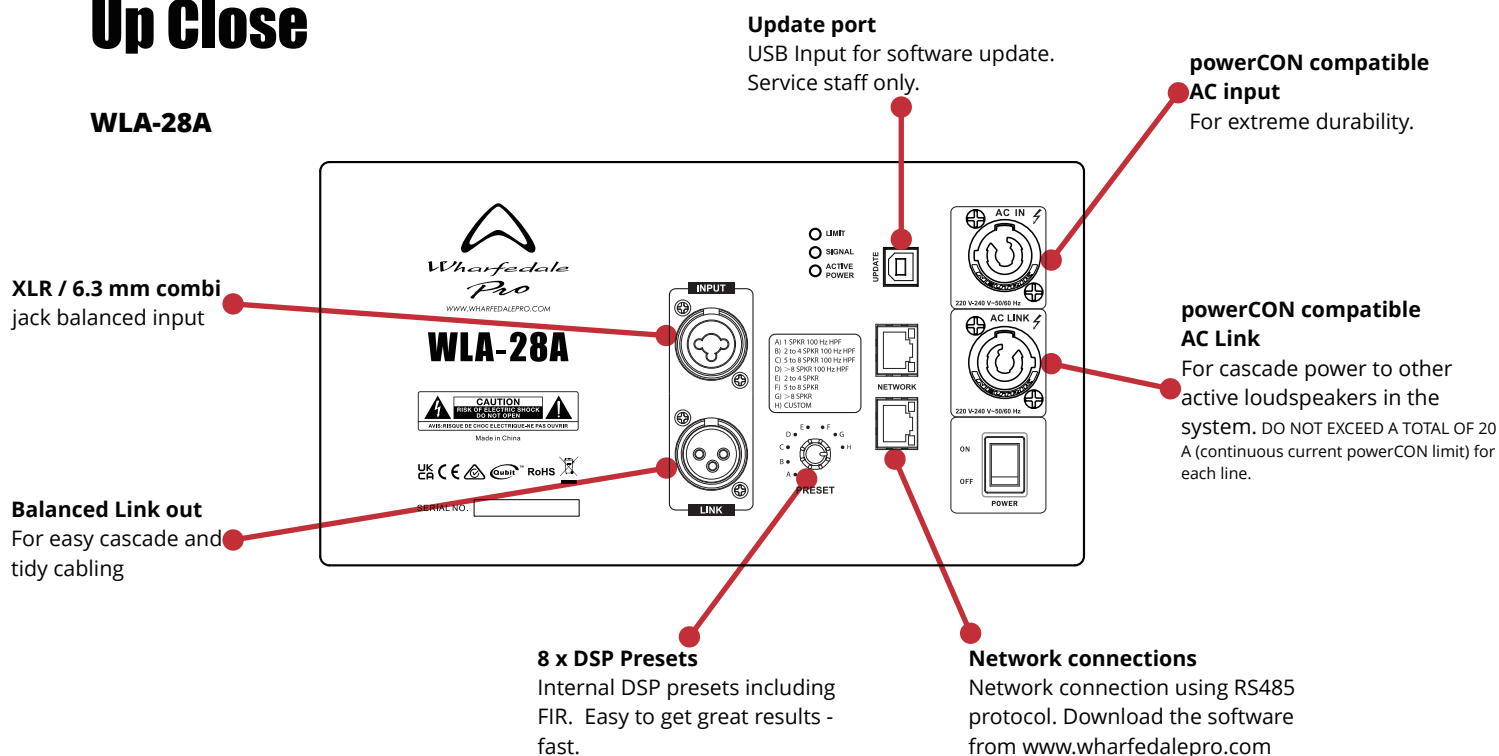
Network cable interface description



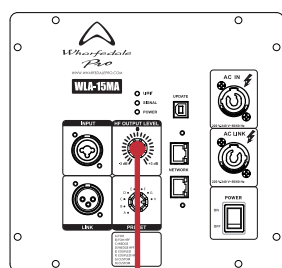
Network total length can be improved by using a 120 Ohm resistor between pins 1 and 2 on an RJ45 connector. This should be connected to the spare network port on the final speaker in the network.

Up Close

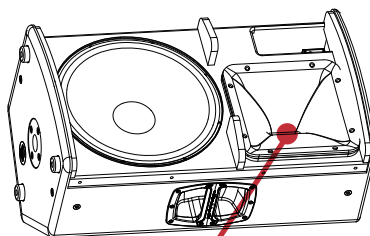
WLA-28A



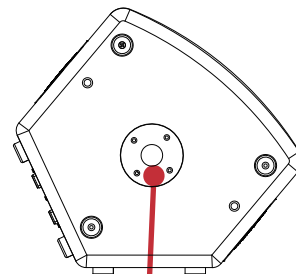
WLA-12MA and WLA-15MA Monitors



HF Output control
For immediate hands-on control, both monitors feature HF output level control. + / - 3 dB

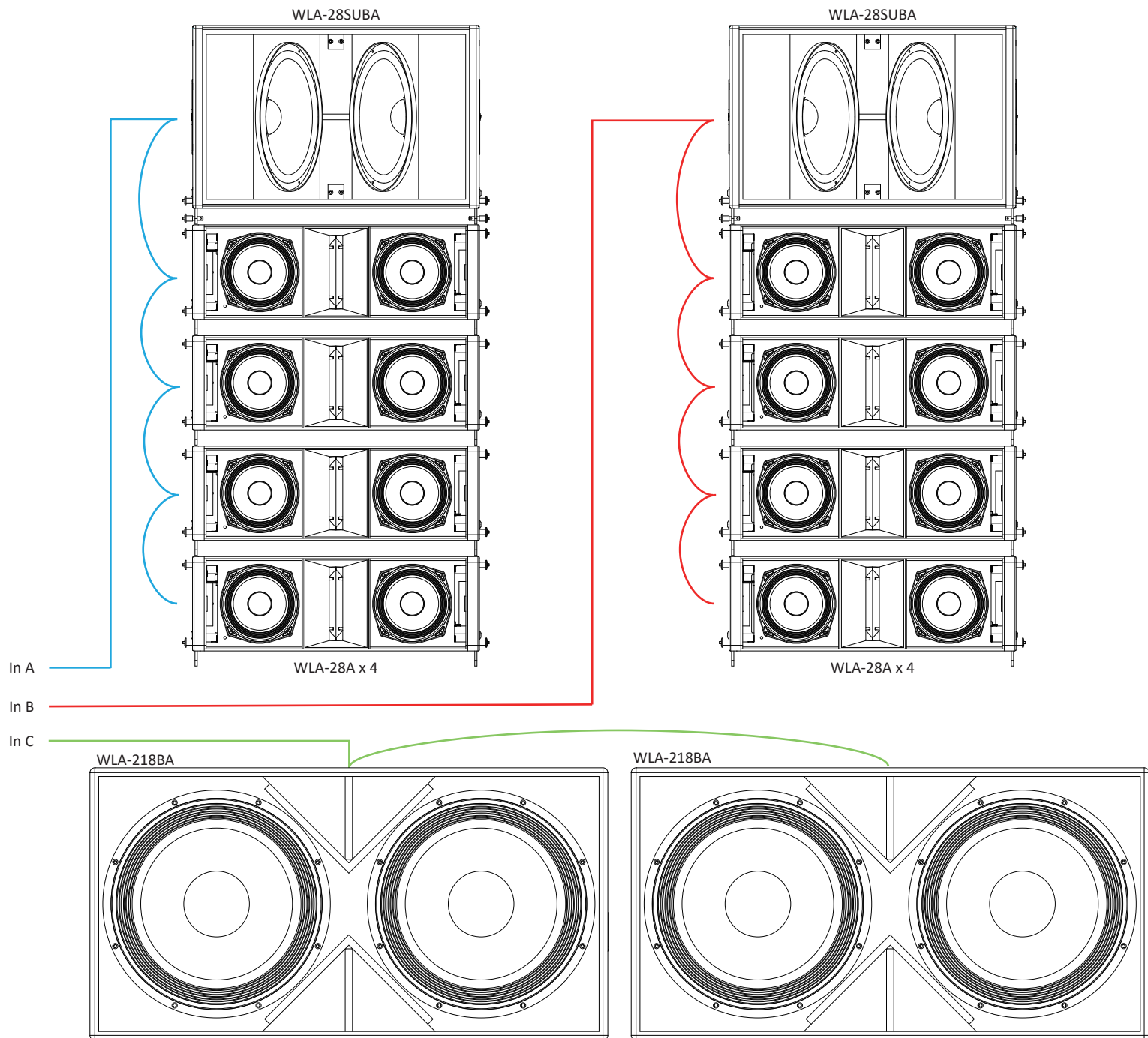


90° x 60° rotatable HF
For horizontal or verticle applications, the HF waveguide is rotatable.

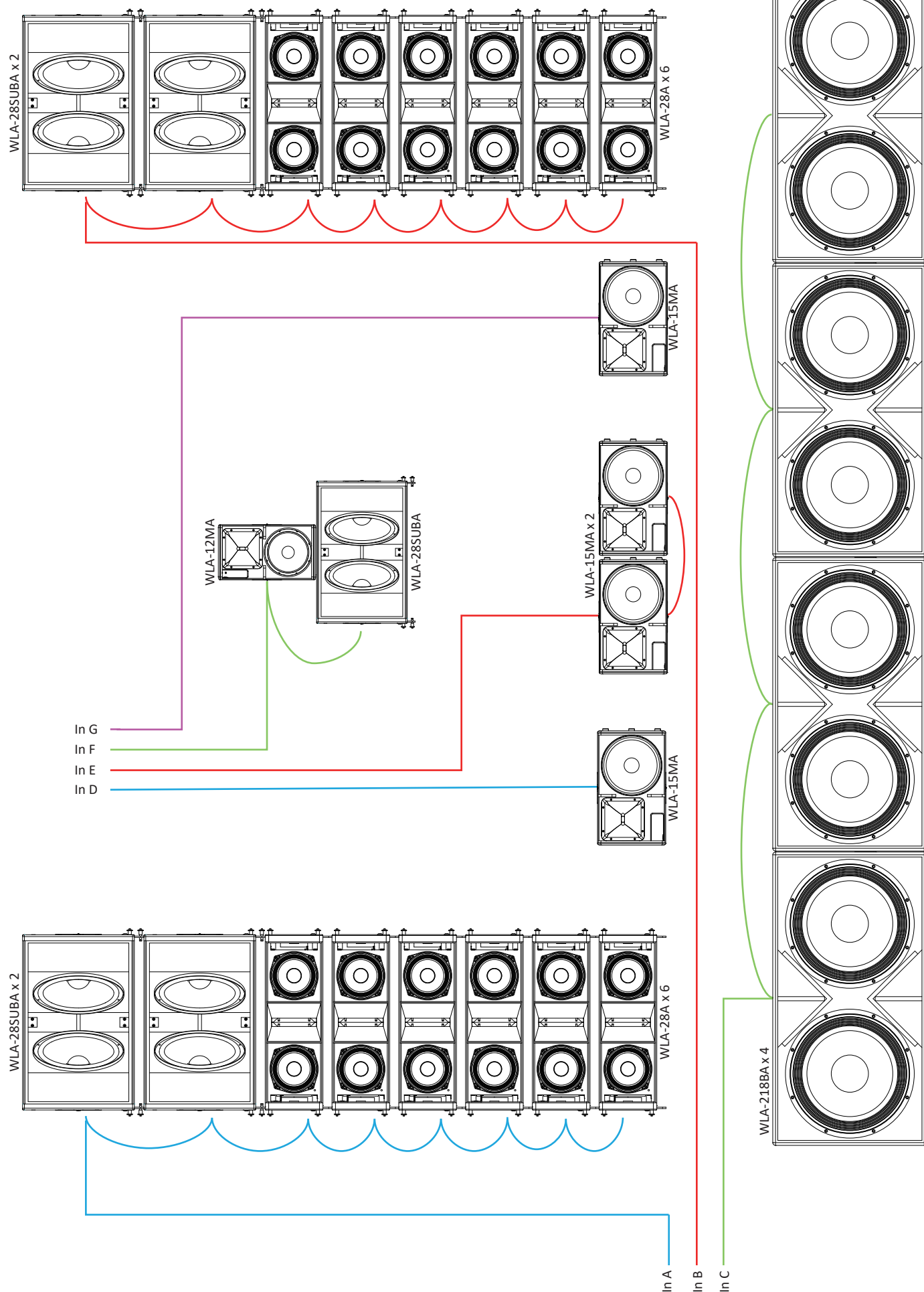


35 mm pole socket
Both monitors feature a 35 mm pole socket giving complete system versatility.

WLA-A sound system example



WLA-A sound system example



Polar Plots

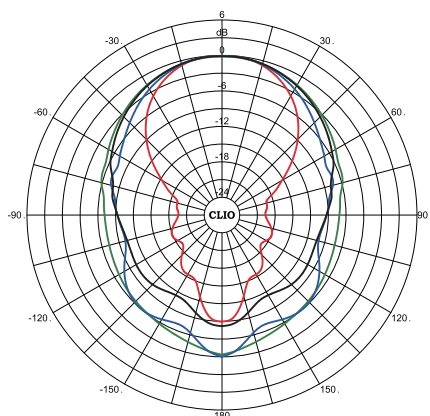
WLA-28A. Horizontal

200Hz

250Hz

315Hz

400Hz

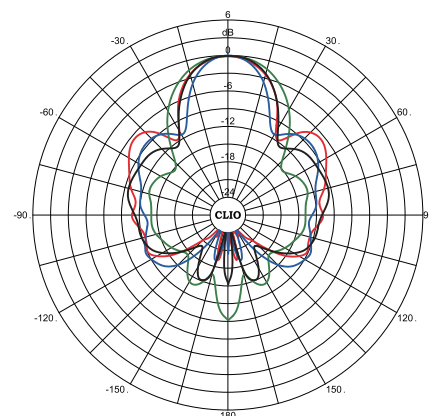


500Hz

630Hz

800Hz

1000Hz

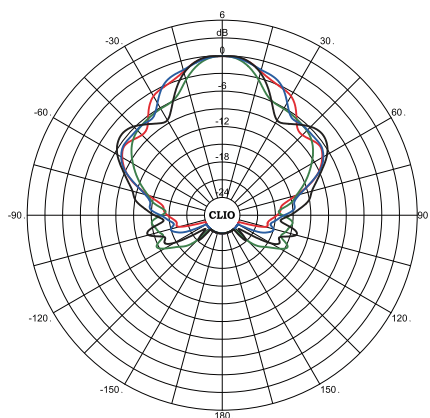


1250Hz

1600Hz

2000Hz

2500Hz

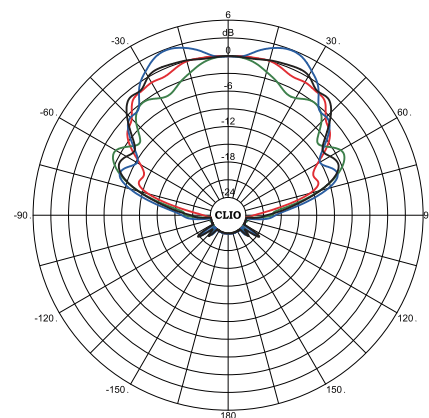


3150Hz

4000Hz

5000Hz

6300Hz

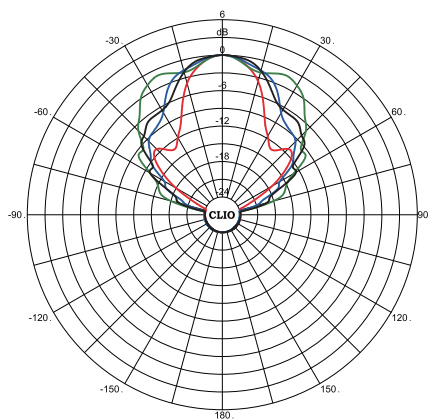


8000Hz

10000Hz

12500Hz

16000Hz



Polar Plots

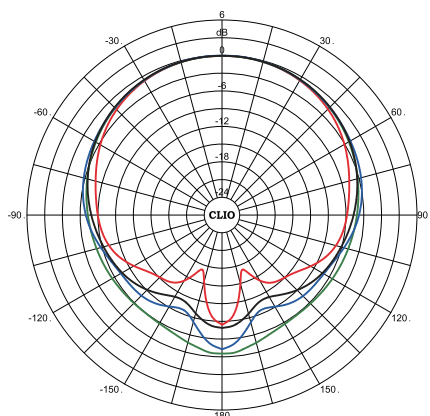
WLA-28A. Vertical

200Hz

250Hz

315Hz

400Hz

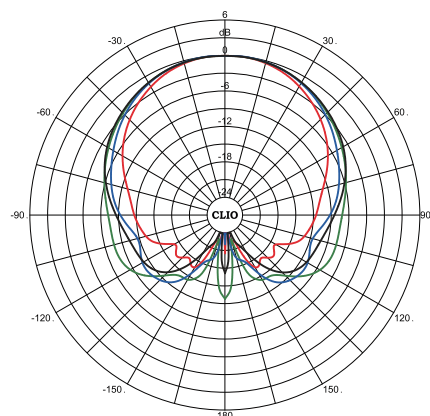


500Hz

630Hz

800Hz

1000Hz

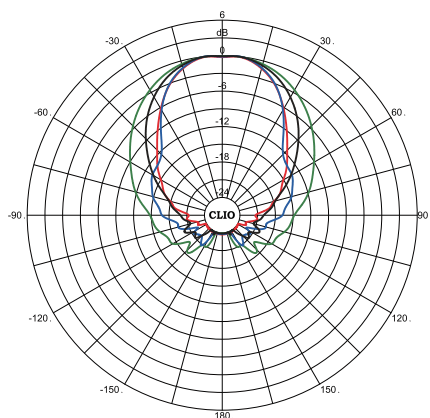


1250Hz

1600Hz

2000Hz

2500Hz

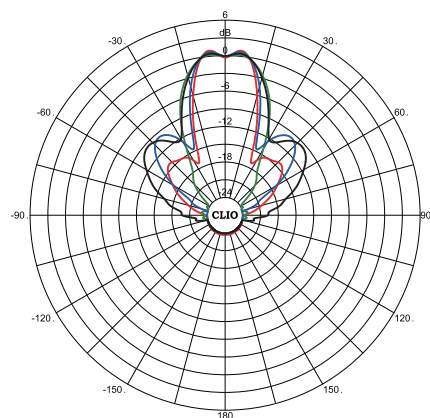


3150Hz

4000Hz

5000Hz

6300Hz

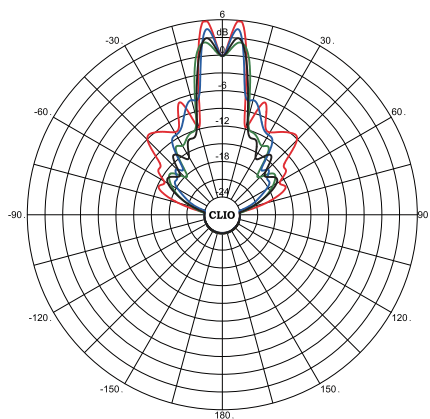


8000Hz

10000Hz

12500Hz

16000Hz



Polar Plots

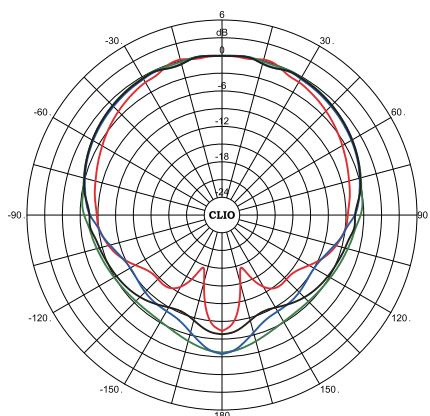
WLA-12MA. Horizontal

200Hz

250Hz

315Hz

400Hz

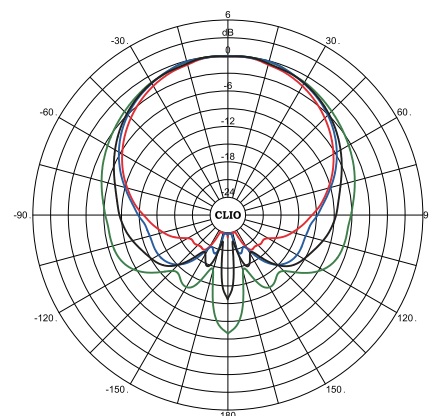


500Hz

630Hz

800Hz

1000Hz

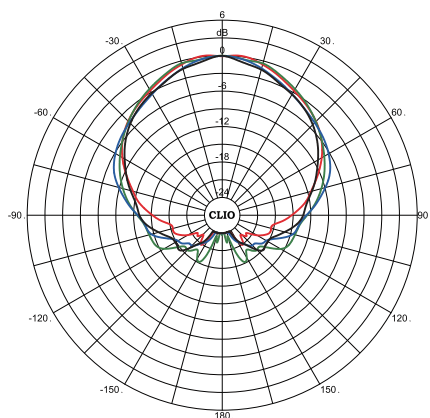


1250Hz

1600Hz

2000Hz

2500Hz

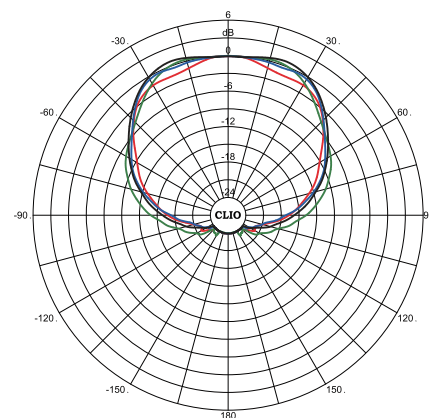


3150Hz

4000Hz

5000Hz

6300Hz

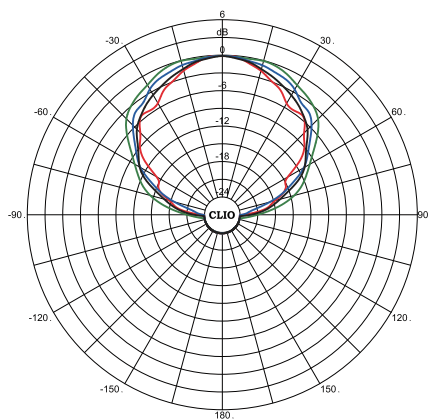


8000Hz

10000Hz

12500Hz

16000Hz



Polar Plots

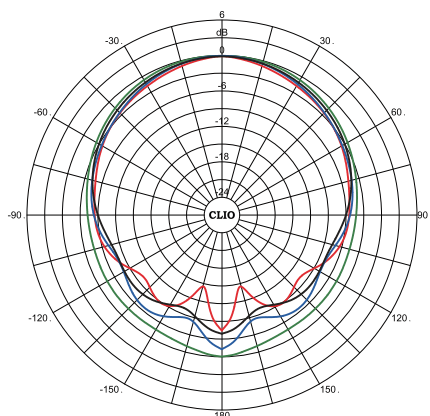
WLA-12MA. Vertical

200Hz

250Hz

315Hz

400Hz

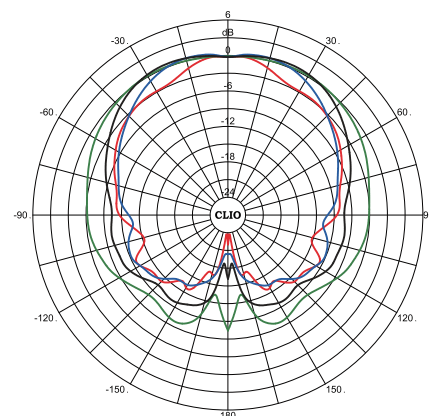


500Hz

630Hz

800Hz

1000Hz

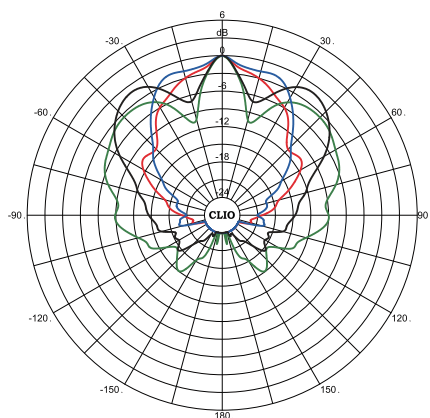


1250Hz

1600Hz

2000Hz

2500Hz

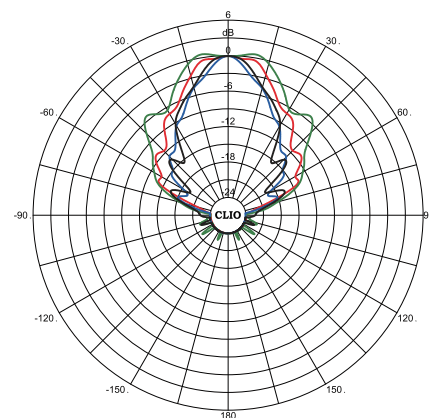


3150Hz

4000Hz

5000Hz

6300Hz

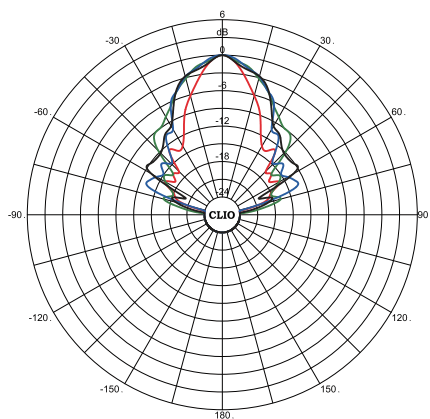


8000Hz

10000Hz

12500Hz

16000Hz



Polar Plots

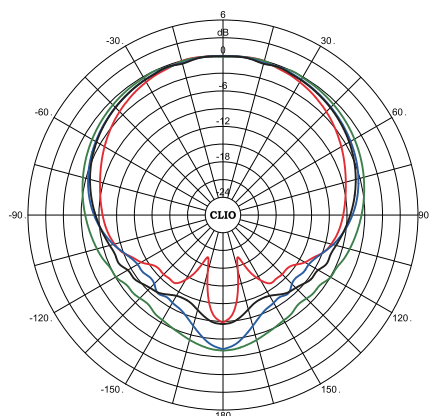
WLA-15MA. Horizontal

200Hz

250Hz

315Hz

400Hz

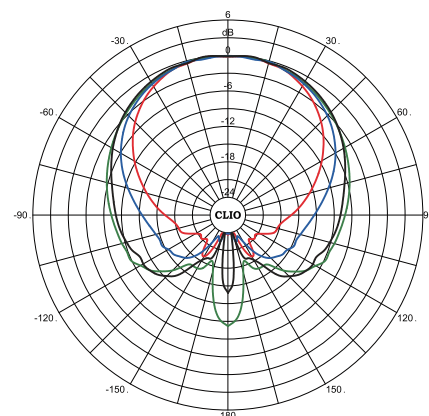


500Hz

630Hz

800Hz

1000Hz

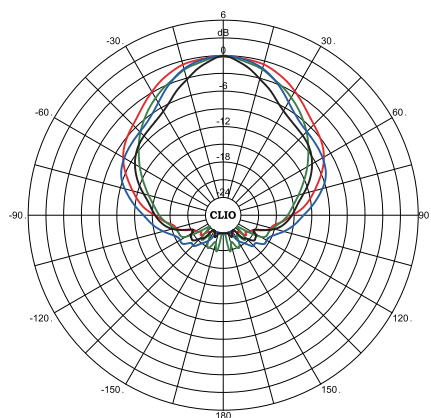


1250Hz

1600Hz

2000Hz

2500Hz

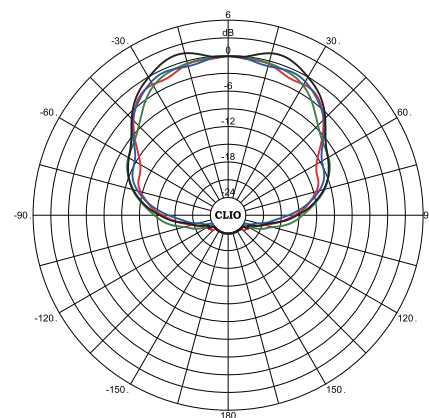


3150Hz

4000Hz

5000Hz

6300Hz

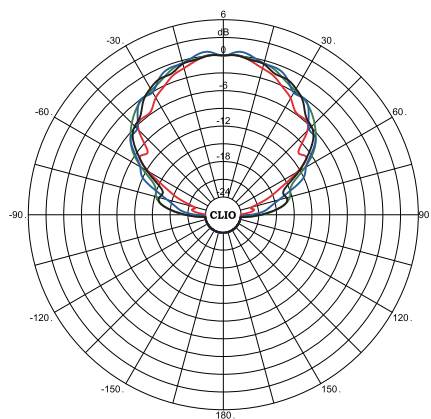


8000Hz

10000Hz

12500Hz

16000Hz



Polar Plots

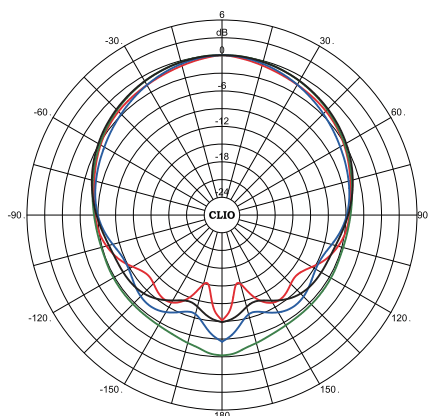
WLA-15MA. Vertical

200Hz

250Hz

315Hz

400Hz

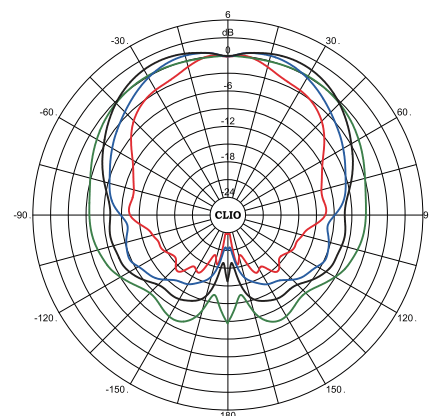


500Hz

630Hz

800Hz

1000Hz

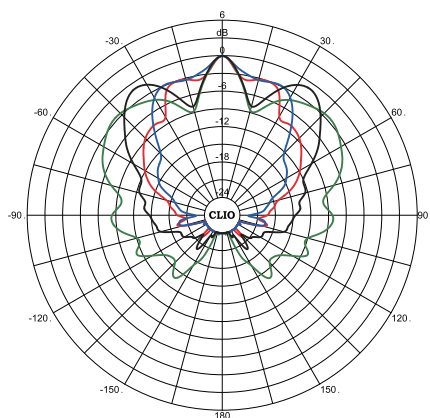


1250Hz

1600Hz

2000Hz

2500Hz

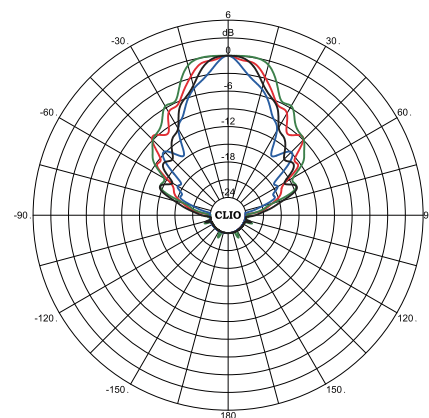


3150Hz

4000Hz

5000Hz

6300Hz

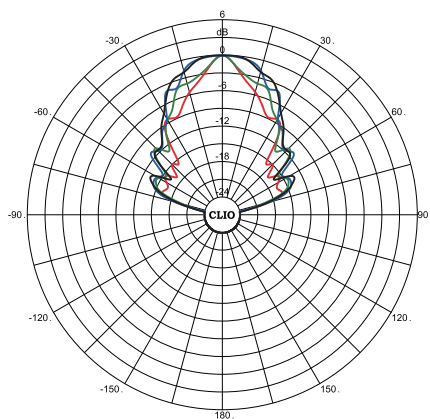


8000Hz

10000Hz

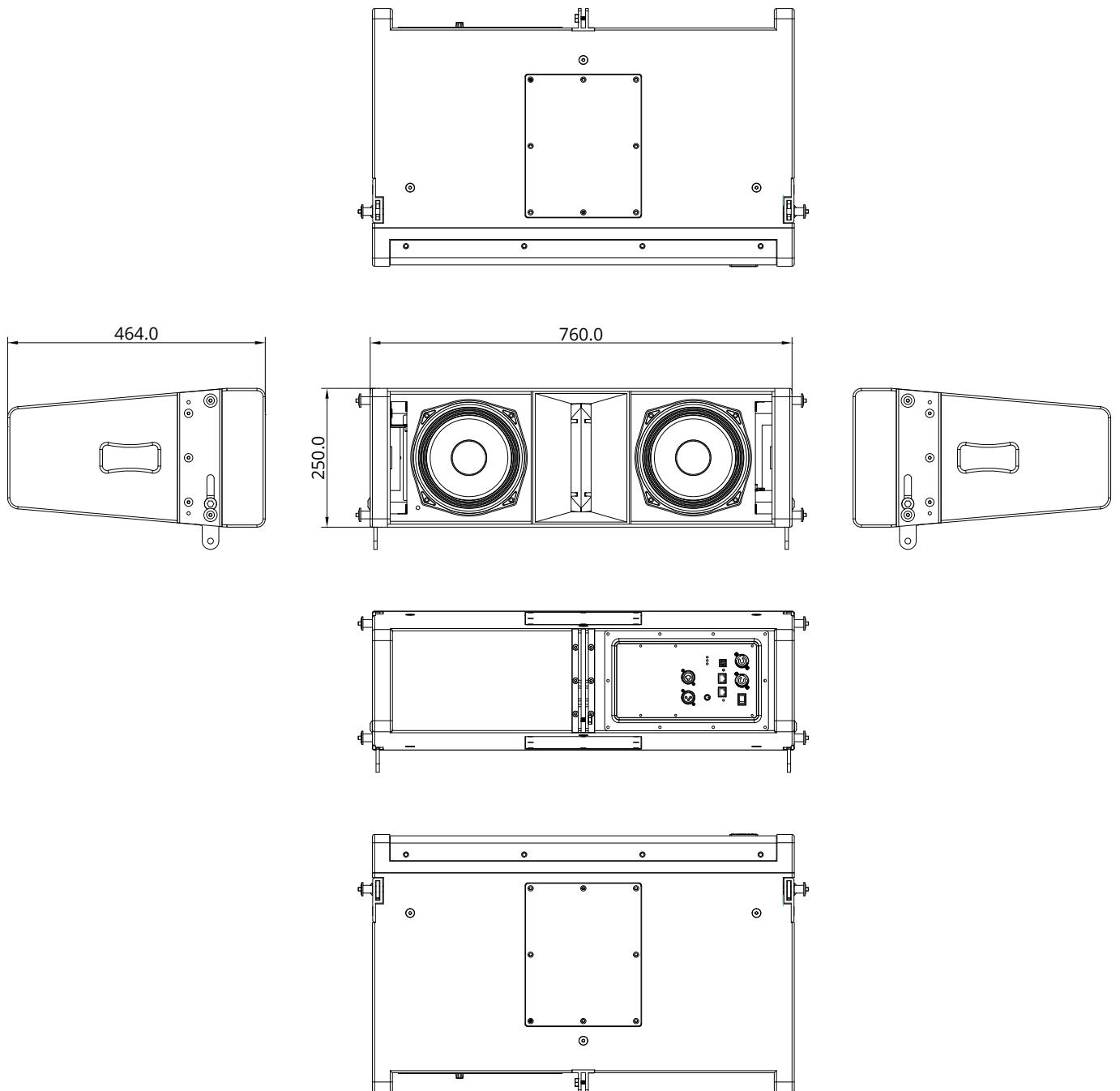
12500Hz

16000Hz



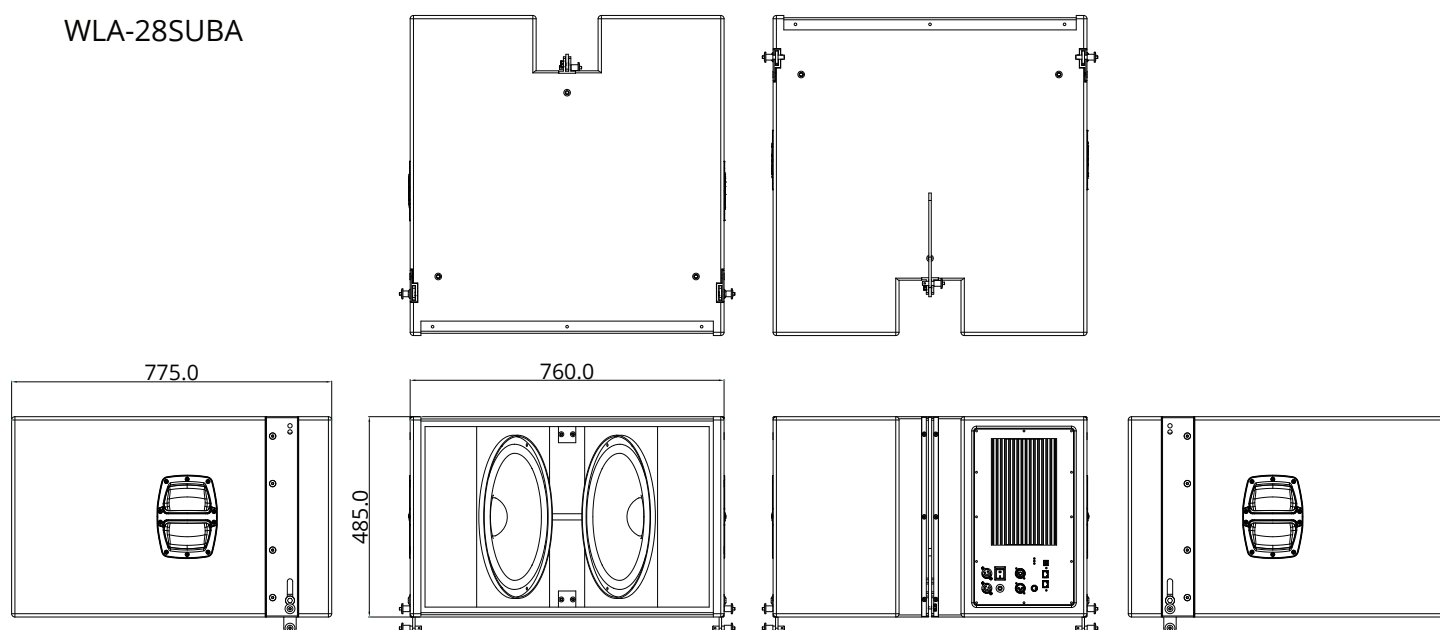
Dimensional Drawings

WLA-28A

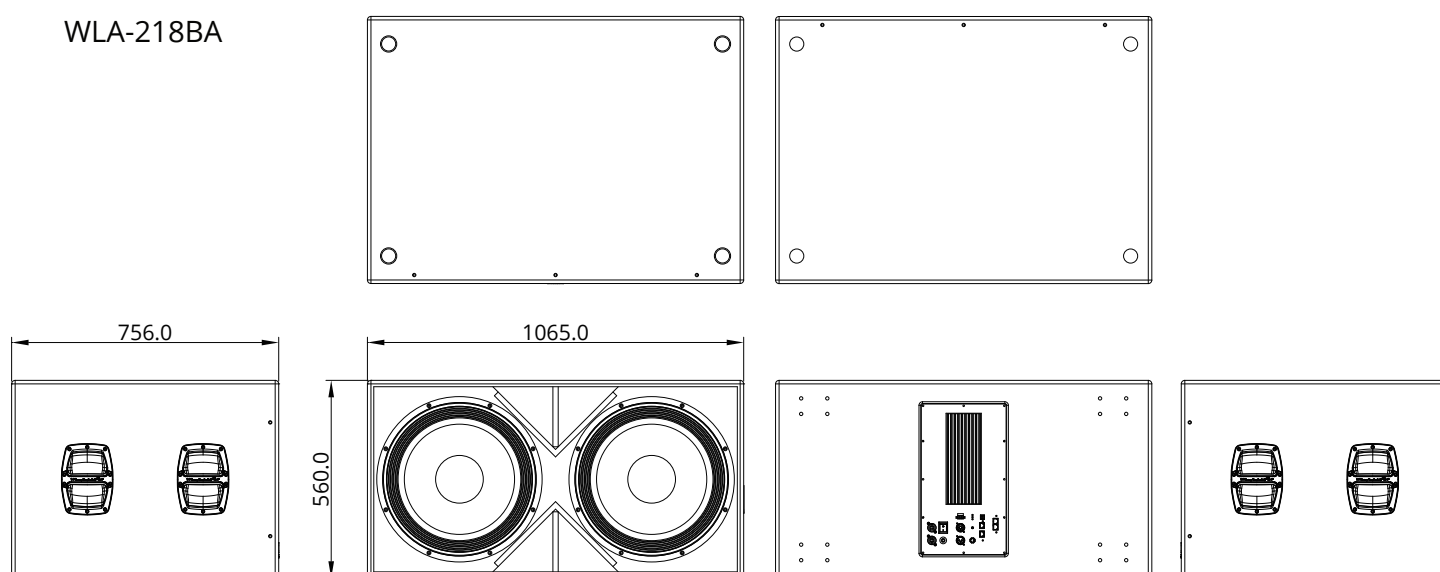


Dimensional Drawings

WLA-28SUBA

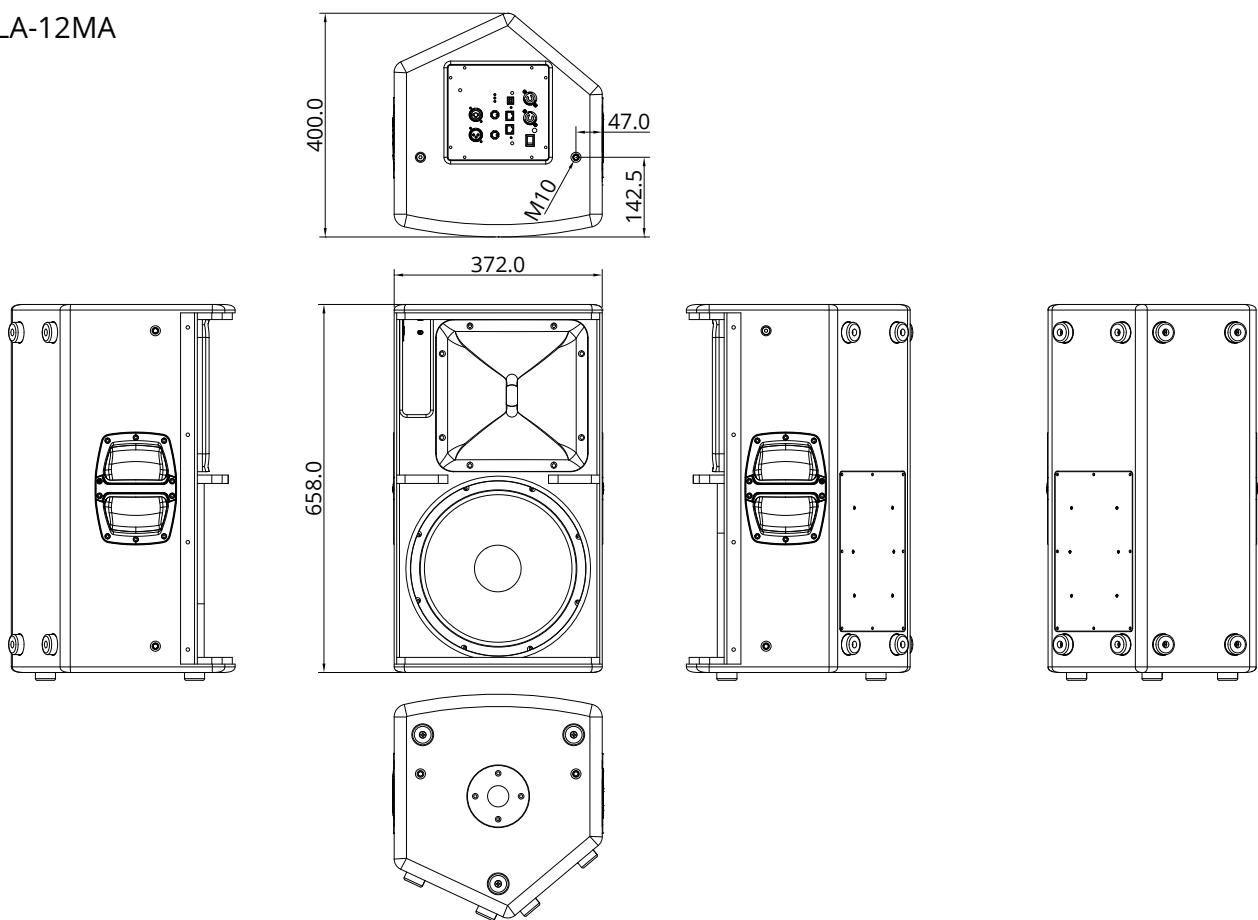


WLA-218BA

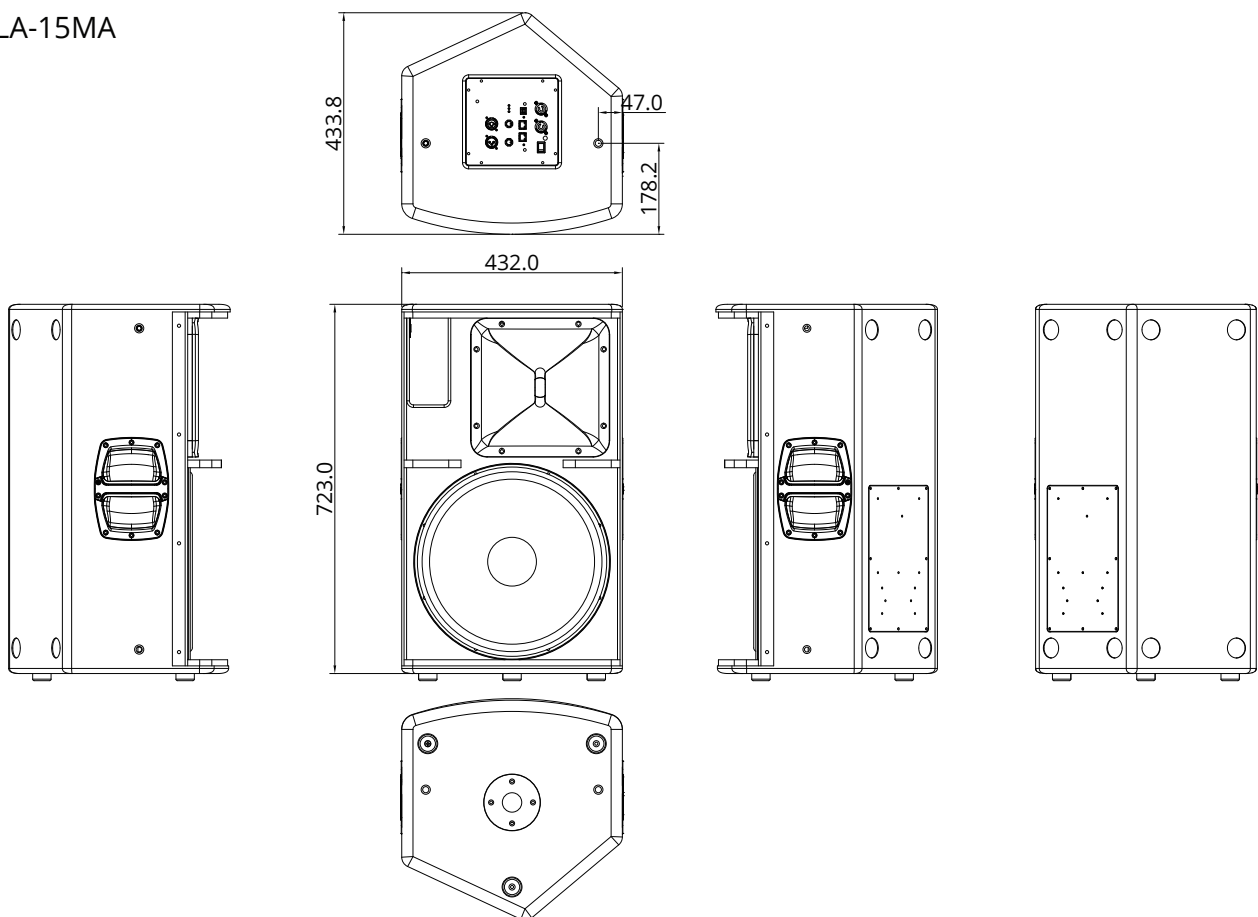


Dimensional Drawings

WLA-12MA



WLA-15MA



Specifications

Model Name	WLA-28A	WLA-28SUBA	WLA-218BA
System Type	Active 8" 2-way Bi-Amplified	Active 2x15 Subwoofer	Active 2x18 Subwoofer
Frequency Response (+/-3 dB)	60 Hz - 20 KHz	39 Hz - 125 HZ	30 Hz - 100 Hz
Frequency Range (-10 dB)	65 Hz - 20 KHz	35 Hz - 163 KHz	25 Hz - 150 Hz
Loudspeaker Sensitivity @ 1 W / 1 m)	100 dB	108 dB	109 dB
Maximum SPL(peak)(@1 m)	132 dB	145 dB	148 dB
Nominal Coverage (H x V)	100° x 10°	-	-
Signal Processing	DSP based, 8 FIR presets resident in Input Module	DSP based,8 presets resident in Input Module	DSP based,8 presets resident in Input Module
Preset list	A) 1 SPKR 100 Hz HPF B) 2 to 4 SPKR 100 Hz HPF C) 4 to 8 SPKR 100 Hz HPF D) >8 SPKR 100 Hz HPF E) 2 to 4 SPKR F) 4 to 8 SPKR G) >8 SPKR H) CUSTOM	A) FLOWN B) FLOWN with 218 C) STACK D) STACK with 218 E) CARDIOID AUDIENCE F) CARDIOID STAGE G) CUSTOM H) CUSTOM	A) 1 SPKR 80 Hz LPF B) 1 SPKR 100 Hz LPF C) >2 SPKR 80 Hz LPF D) >2 SPKR 100 Hz LPF E) CARDIOID AUDIENCE F) CARDIOID STAGE G) CUSTOM H) CUSTOM
Amplifiers			
Amplifier Design	Class D	Class D	Class D
Power Rating:	1500 W Peak (1300 W LF + 200 W HF), 750 W Continuous (650 W LF + 100 W HF)	4000 W Peak / 2000 W Continuous	4000 W Peak / 2000 W Continuous
Power On Protection	Power switch on/off mute	Power switch on/off mute	Power switch on/off mute
Thermal Protection	Amplifier Shut Down. Auto Reset	Amplifier Shut Down. Auto Reset	Amplifier Shut Down. Auto Reset
Low Line Voltage Shut Down	80% Nominal Line Voltage	80% Nominal Line Voltage	80% Nominal Line Voltage
Driver Protection	Independent L/ H Limiters and DC	Independent L/ H Limiters and DC	Independent L/ H Limiters and DC
DC and Short Protection	Yes	Yes	Yes
Limiter Indicator	Red LED	Red LED	Red LED
Signal Indicator	Green LED	Green LED	Green LED
Power/Active Indicator	White LED	White LED	White LED
Find Function Indicator	Blue LED	Blue LED	Blue LED
Input Sensitivity	+4 dBu	+4 dBu	+4 dBu
Maximum Input Level	+18 dBu	+18 dBu	+18 dBu
Input Impedance	Balanced: 10 KΩ	Balanced: 10 KΩ	Balanced: 10 KΩ
AC Power details - Power Supply	High Efficiency Switching Mode Power Supply	High Efficiency Switching Mode Power Supply	High Efficiency Switching Mode Power Supply
Connectors			
Input Connector	XLR 1/ 4" Combo jack	XLR 1/ 4" Combo jack	XLR 1/ 4" Combo jack
Link Connector	Balanced Male XLR Connector	Balanced Male XLR Connector	Balanced Male XLR Connector
UPDATE	USB Type B	USB Type B	USB Type B
NETWORK (RS485)	RJ45	RJ45	RJ45
AC Power Options	AC 100-120 V~ / 220-240 V~,50/60 HZ	AC 100-240 V~,50/60 HZ	AC 100-240 V~,50/60 HZ
AC Input Connector	Neutrik powerCON 20 A	Neutrik powerCON 20 A	Neutrik powerCON 20 A
AC Loop Through Connector	Neutrik powerCON 20 A	Neutrik powerCON 20 A	Neutrik powerCON 20 A
Hardware - Rigging	Integral side plate adjustable rigging 0°-10°	Integral side plate	-
Enclosure Material and finish	15 mm / 18 mm Plywood	15 mm / 18 mm Plywood	18 mm Plywood
Colour Options	Black Rhino Paint	Black Rhino Paint	Black Rhino Paint
Grille Material & Finish	1.5 Steel	1.5 Steel	1.5 Steel
Unpacked dimensions - Height	250 mm / 9.84" 181 mm / 7.1"	485 mm / 19.1"	560 mm / 22.0"
Width (Front)	760 mm / 29.92"	760 mm / 29.9"	1065 mm / 41.9"
Width (Back)	760 mm / 29.92"	760 mm / 29.9"	1065 mm / 41.9"
Depth	463.2 mm / 18.23"	775 mm / 30.67"	756 mm / 29.8"
Packed Dimensions - Height	320 mm / 12.6"	575 mm / 22.6"	638 mm / 25.1"
Width (Front)	830 mm / 32.7"	850 mm / 33.5"	1138 mm / 44.8"
Width (Back)	830 mm / 32.7"	850 mm / 33.5"	1138 mm / 44.8"
Depth	534 mm / 21.0"	865 mm / 34.6"	829 mm / 32.6"
Net Weight (Kg / lbs)	30.2 Kg / 66.4 lbs	67.0 Kg / 147.4 lbs	78.0 Kg / 171.6 lbs
Gross Weight (Kg / lbs)	32.5 Kg / 71.5 lbs	74.3 Kg / 163.5 lbs	92.04 Kg / 202.4 lbs

Specifications

Model Name	WLA-12MA	WLA-15MA
System Type	Active 12" 2-way Monitor Bi-Amplified	Active 15" 2-way Monitor Bi-Amplified
Frequency Response (+/-3 dB)	55 Hz - 20 KHz	45 Hz - 20 KHz
Frequency Range (-10 dB)	50 Hz - 20 KHz	40 Hz - 20 KHz
Loudspeaker Sensitivity @ 1 W / 1 m)	98 dB	99.5 dB
Maximum SPL(peak)(@1 m)	131 dB	134 dB
Nominal Coverage (H x V)	90° x 60°	90° x 60°
Signal Processing	DSP based,8 FIR presets resident in Input Module	DSP based,8 FIR presets resident in Input Module
Preset list	A) WEDGE B) WEDGE HPF C) COUPLED D) COUPLED HPF E) FOH F) FOH HPF G) CUSTOM H) CUSTOM	A) WEDGE B) WEDGE HPF C) COUPLED D) COUPLED HPF E) FOH F) FOH HPF G) CUSTOM H) CUSTOM
Amplifiers		
Amplifier Design	Class D	Class D
Power Rating:	1500 W Peak (1300 W LF + 200 W HF), 750 W Continuous (650 W LF + 100 W HF)	1500 W Peak (1300 W LF + 200 W HF), 750 W Continuous (650 W LF + 100 W HF)
Power On Protection	Power switch on/off mute	Power switch on/off mute
Thermal Protection	Amplifier Shut Down. Auto Reset	Amplifier Shut Down. Auto Reset
Low Line Voltage Shut Down	80% Nominal Line Voltage	80% Nominal Line Voltage
Driver Protection	Independent L/ H Limiters and DC	Independent L/ H Limiters and DC
DC and Short Protection	Yes	Yes
Limiter Indicator	Red LED	Red LED
Signal Indicator	Green LED	Green LED
Power/Active Indicator	White LED	White LED
Find Function Indicator	Blue LED	Blue LED
Input Sensitivity	+4 dBu	+4 dBu
Maximum Input Level	+18 dBu	+18 dBu
Input Impedance	Balanced: 10 KΩ	Balanced: 10 KΩ
AC Power details - Power Supply	High Efficiency Switching Mode Power Supply	High Efficiency Switching Mode Power Supply
Connectors		
Input Connector	XLR 1/ 4" Combo jack	XLR 1/ 4" Combo jack
Link Connector	Balanced Male XLR Connector	Balanced Male XLR Connector
UPDATE	USB Type B	USB Type B
NETWORK (RS485)	RJ45	RJ45
AC Power Options	AC 100-120 V~/ 220-240 V~,50/60 HZ	AC 100-120 V~/ 220-240 V~,50/60 HZ
AC Input Connector	Neutrik powerCON 20 A	Neutrik powerCON 20 A
AC Loop Through Connector	Neutrik powerCON 20 A	Neutrik powerCON 20 A
Hardware - Rigging	M10 x 8	M10 x 8
Enclosure Material and finish	15 mm Plywood	15 mm Plywood
Colour Options	Black Rhino Paint	Black Rhino Paint
Grille Material & Finish	1.5 Steel	1.5 Steel
Unpacked dimensions - Height	658 mm / 25.9"	723 mm / 28.5"
Width (Front)	372 mm / 14.6"	432 mm / 17"
Width (Back)		
Depth	400.1 mm / 15.8"	433.8 mm / 17.1"
Packed Dimensions - Height	738 mm / 29.1"	808 mm / 31.8"
Width (Front)	470 mm / 18.5"	504 mm / 19.84"
Width (Back)	470 mm / 18.5"	504 mm / 19.84"
Depth	445 mm / 17.5"	504 mm / 19.84"
Net Weight (Kg / lbs)	26.5 Kg / 58.3 lbs	29.6 Kg / 65.1 lbs
Gross Weight (Kg / lbs)	28.8 Kg / 63.4 lbs	32.3 Kg / 30.1 lbs

Installation Diagram

Figure 1

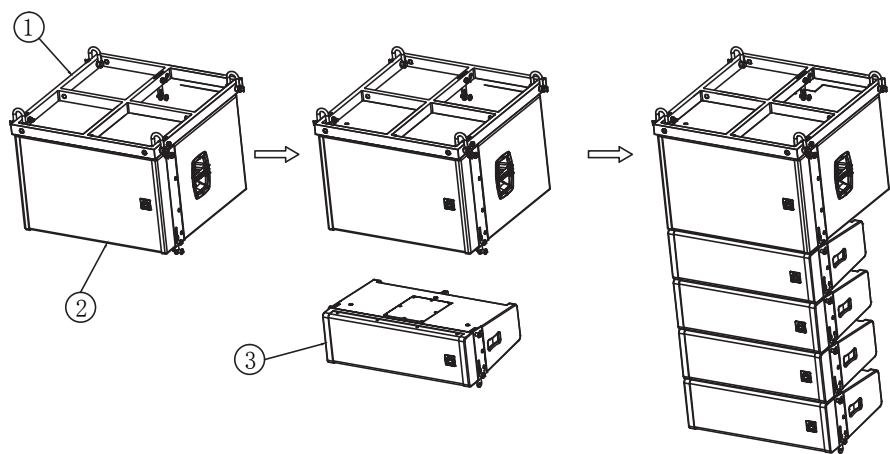
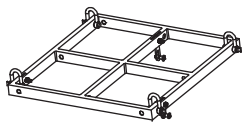
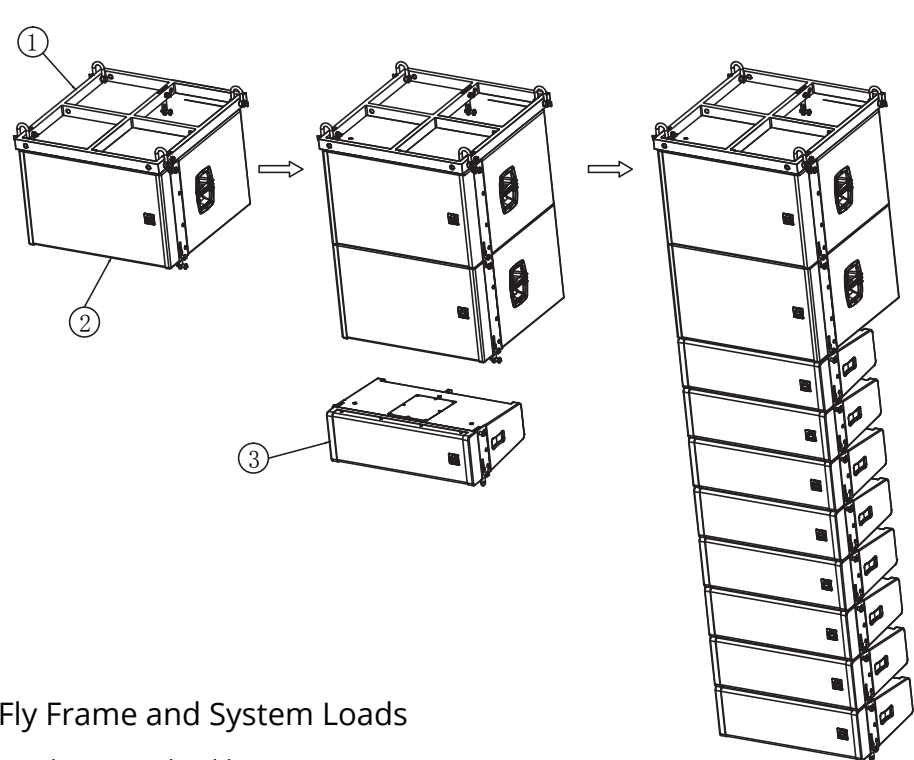
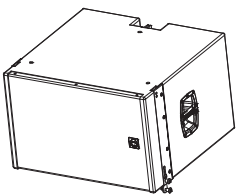


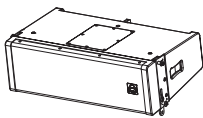
Figure 2



① WLA-28 Common Fly Frame



② WLA-28SUBA



③ WLA-28A

Fly Frame and System Loads

Brackets' MAX load-bearing 450 Kg

WLA-28A weight: 30.2 Kg

WLA-28SUBA weight: 67.2 Kg

Combination as below :

WLA-28A x4+WLA-28SUBA x 1(Figure 1)

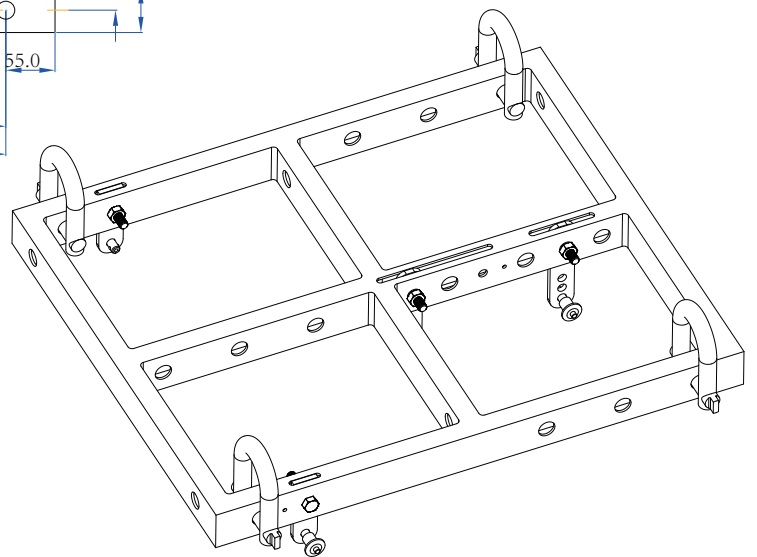
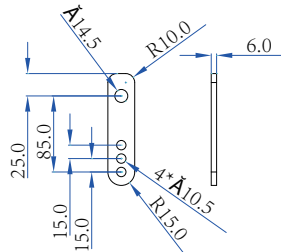
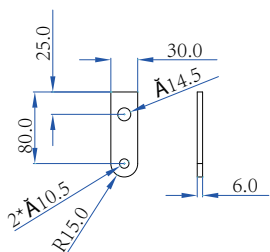
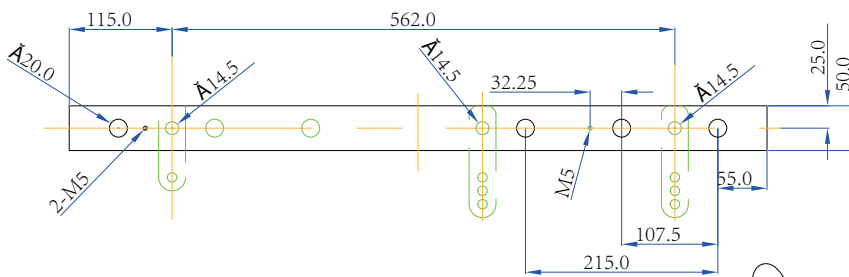
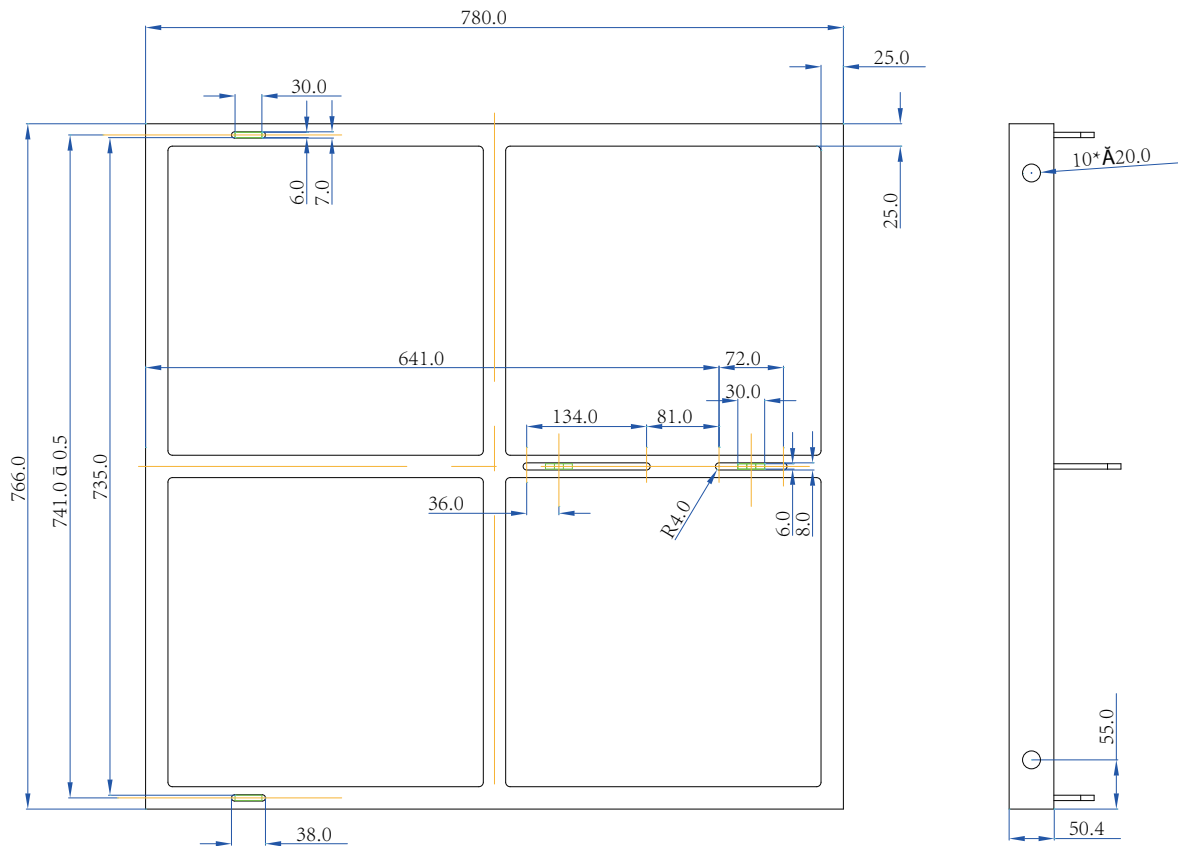
	quantity	weight(Kg)
WLA-28A	4	120.8
WLA-28SUBA	1	67
Total weight		187.8

WLA-28A x8+WLA-28SUBA x 2(Figure 2)

	quantity	weight(Kg)
WLA-28A	8	241.6
WLA-28SUBA	2	134
Total weight		375.6

Bracket Dimensional Drawings

WLA-28 Common Fly Frame



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 www.wharfedalepro.com). These terms do not infringe your statutory rights.



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