DELTA AXF Full Range and AX Series Subwoofers

ACTIVE LOUDSPEAKERS

DELTA-AXF12 DELTA-AXF15 DELTA-AX15B DELTA-AX18B



Wharfedale Pro

www.wharfedalepro.com

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IMPORTANT WARNINGS & SAFETY INSTRUCTIONS

1. Read these instructions
2. Follow all instructions
3. Keep these instructions
4. Heed all warnings
5. Do not use this apparatus near water
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of a polarised or grounding plug. A polarised plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding blade. The wide blade or the third blade is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at the plug, receptacle and or the point where it exits from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Only use a stand, tripod, bracket or rack specified by the manufacturer, or sold with the apparatus. When a rack is used, use caution when moving the rack and apparatus combination to avoid tip-over or injury.



13. Unplug the apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way including but not limited to power supply cord or plug damage, liquid ingress, foreign objects in the chassis, exposure to rain/moisture or impact damage. In addition the unit must be serviced when you experience any abnormal operation.
15. CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not attempt to perform any servicing other than that contained in the operating instructions unless you are qualified to do so. In addition opening the casing will result in your warranty becoming null and void.
16. Do not install this apparatus in a confined space such as a book case or similar unit. Good ventilation should be maintained around the apparatus. Any vents, air-inlets or fans should not be obstructed by objects such as paper, table-cloths, curtains etc.
17. WARNING: To reduce the risk of fire or electric shock, do not expose the apparatus to rain or moisture. The apparatus should not be exposed to dripping or splashing and objects filled with liquids, such as vases, should not be placed on the apparatus.
18. WARNING: Do not use the mains plug/appliance coupler to power on or off the device. Use the ON / OFF switch.



19. The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

    - Warning: To reduce the risk of electric shock, do not remove the cover (or back) as there are no user-serviceable parts inside. Refer servicing to qualified personnel.

    - The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.

20. ⏚ (Protective earthing terminal) The apparatus should be connected to a mains socket outlet with a protective earthing connection.

21. Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use local return and collection systems or contact the retailer where the product was purchased. They can take this product for safe environmentally friendly recycling.

INTRODUCTION

We just can't help making things better. We are always looking for improvements that can be made. Our R&D team cannot stop taking everything that they see to pieces. They try different components, they update algorithms and they explore different physical system configurations. Dismantling…..measuring….testing….measuring……but then a break through comes.

Their work has now unlocked the true potential of the DELTA Active full range models which have been a trusted and reliable audio solution since their introduction in 2014.

Through both electronic and software optimisation, the new DELTA-AXF12 and AXF15 models now feature internal FIR filters using 'DNA' harvested from the flagship WLA active line array and monitors system development. This FIR filtering has brought independent control of magnitude and phase, more detailed equalisation and optimisation of frequency and power response. In the end….this results in highly improved system performance. The amplifiers have also been optimised, resulting in 800 W Continuous power.

The new DELTA-AXF models have the same solid Baltic birch plywood construction and the same custom made Wharfedale Pro drivers as their predecessors, but with the new FIR filters the sonic improvements are clear. The updated 'AXF' electronics are fully interchangeable with existing DELTA active models and can be quickly retro-fitted by Service engineers. AXF models are also perfectly tuned to be used with the current DELTA-AX15B and DELTA-AX18B active subwoofers.

KEY FEATURES

DELTA-AXF12

12″ two-way bi-amplified active loudspeaker
800 Watts Continuous power
1600 Watts Peak power
90° x 45° dispersion
2″ HF Compression driver
3″ LF voice coil
Advanced Internal FIR DSP
130.5 dB Max SPL @ 1 meter

DELTA-AXF15

15″ two-way bi-amplified active loudspeaker
800 Watts Continuous power
1600 Watts Peak power
90° x 45° dispersion
2″ HF Compression driver
3″ LF voice coil
Advanced Internal FIR DSP
131.5 dB Max SPL @ 1 meter

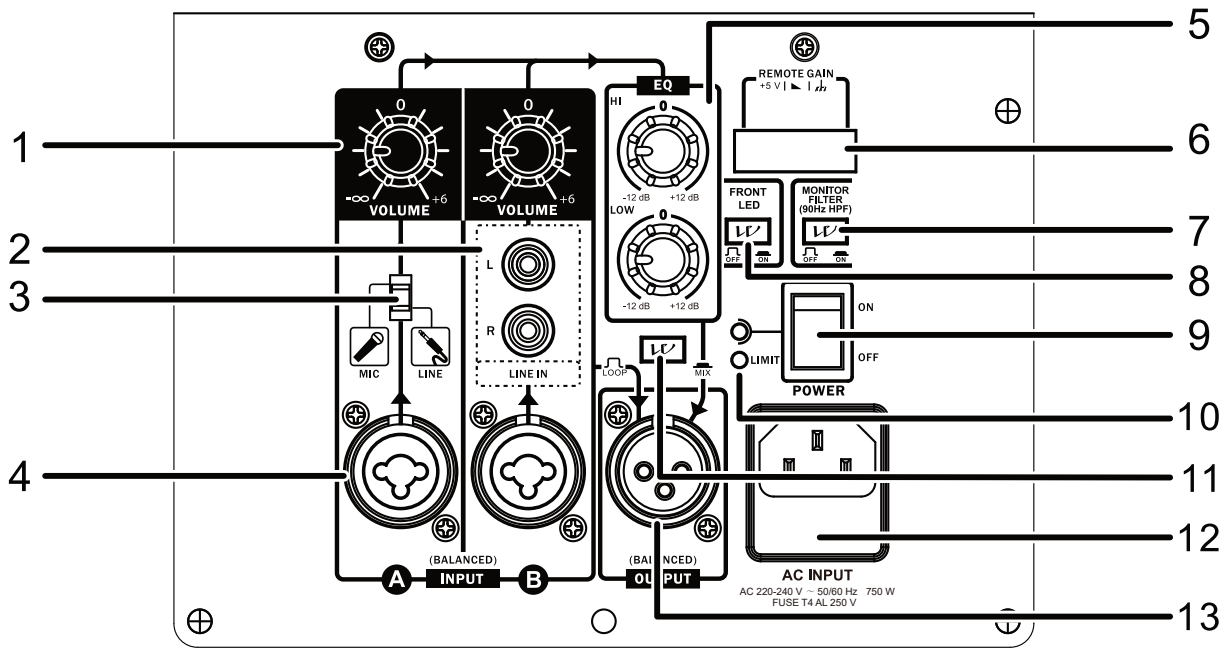
DELTA-AX15B

15″ active subwoofer
Low pass filter control
Hi Pass link outputs
42 Hz – 200 Hz Frequency response
180° phase switch
4″ LF voice coil
900 Watts Continuous
1800 Watts Peak
130 dB Max SPL @ 1m

DELTA-AX18B

18″ active subwoofer
Low pass filter control
Hi Pass link outputs
38 Hz – 200 Hz Frequency response
180° phase switch
4″ LF voice coil
1000 Watts Continuous
2000 Watts Peak
132 dB Max SPL @ 1m

DELTA-AXF12 / AXF15 REAR PANEL LAYOUT



1. Volume for input A and input B: These knobs control the level of each input channel.

2. RCA L/R (Left and Right) input connectors: These connectors allow input of a stereo signal (left and right). The signal is actively combined or "summed" providing a mono signal to the amplifier.

3. GAIN selection switch: This switch selects the proper gain structure for INPUT A. If a microphone is connected to INPUT A, use mic mode (up). If the signal source is anything other than a microphone (playback device, keyboard or mixer output, for instance) use the line mode (down).

4. XLR 1/4" COMBO input jacks for INPUT A and INPUT B: These convenient jacks allow XLR or 1/4" balanced input connections to INPUT A and INPUT B.

5. HI and LOW EQ (equalization) controls: These knobs control the equalization of the overall output signal providing +/-12 dB of gain for each band.

6. Remote control: This Phoenix connector can be used to control the volume with an applied voltage.

7. 90 Hz Monitor filter switch: Used to reduce bass buildup due to half space loading.

8. Front LED defeat switch: Switches off the front power LED for discrete applications.

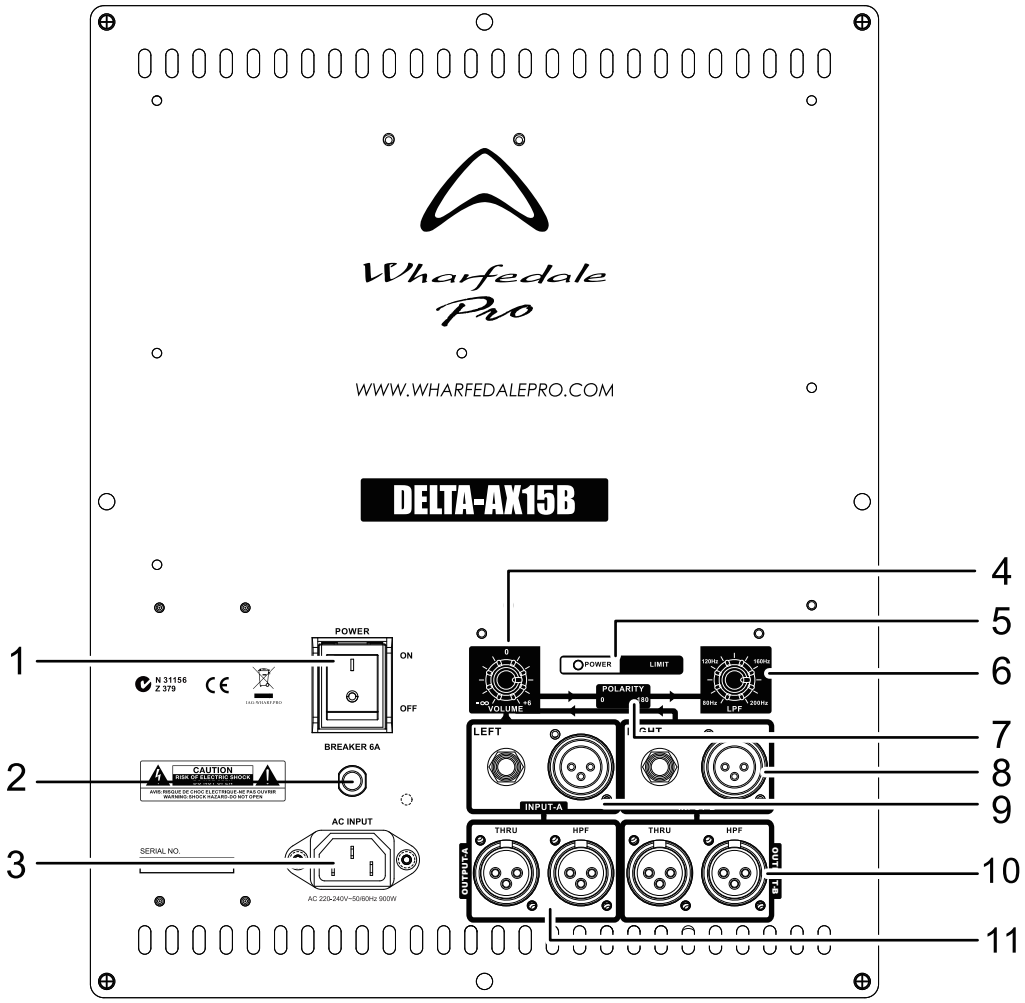
9 & 10. POWER ON / OFF switch, POWER 'ON' indicator LED and LIMIT indicator LED:
The switch: Turns the power on and off. The green LED to the left of the POWER switch illuminates when the power switch is in the 'ON' position. The red LED illuminates when the signal limiter is limiting the level of the signal to prevent distortion and overload.

11.Output source "LOOP/MIX" switch: In the "LOOP" mode, this switch routes the signal of INPUT A and B to the line level XLR OUTPUT jack, bypassing the EQ section and volume control. When in the MIX mode, this switch routes the combined (or "mixed") signals of both INPUT A and INPUT B to the line level XLR OUTPUT jack.

12.POWER cord receptacle: This is a receptacle for a standard IEC, three prong, grounded AC electrical connection cord. Be sure that you are plugging into the correct source voltage that matches what is indicated just below the power cord receptacle.

13.XLR line level OUTPUT connector: This connector provides a balanced line level output for connection to additional Delta Active, powered subwoofers or amplifier.

DELTA-AX15B / AX18B REAR PANEL LAYOUT



1. Power switch: Turns the power on and off.

2. Circuit breaker: Protect amplifier from damage caused by short circuit or other electrical destruction. Reset the breaker after the failure fixed.

3. POWER receptacle: This is the connection for the IEC AC power connector.

4. Volume control: Adjusts the volume.

5. LIMIT LED POWER LED: The red LED indicator illuminates when the signal limiting function is activated. The green LED indicator illuminates when the unit is powered up.

6. Crossover frequency control: Adjustable 80Hz to 200Hz.

7. Phase switch: Selects the polarity of the signal being sent to the subwoofer. 0° selects the signal polarity as it appears at the input. The 180° selection inverts the polarity of the signal.

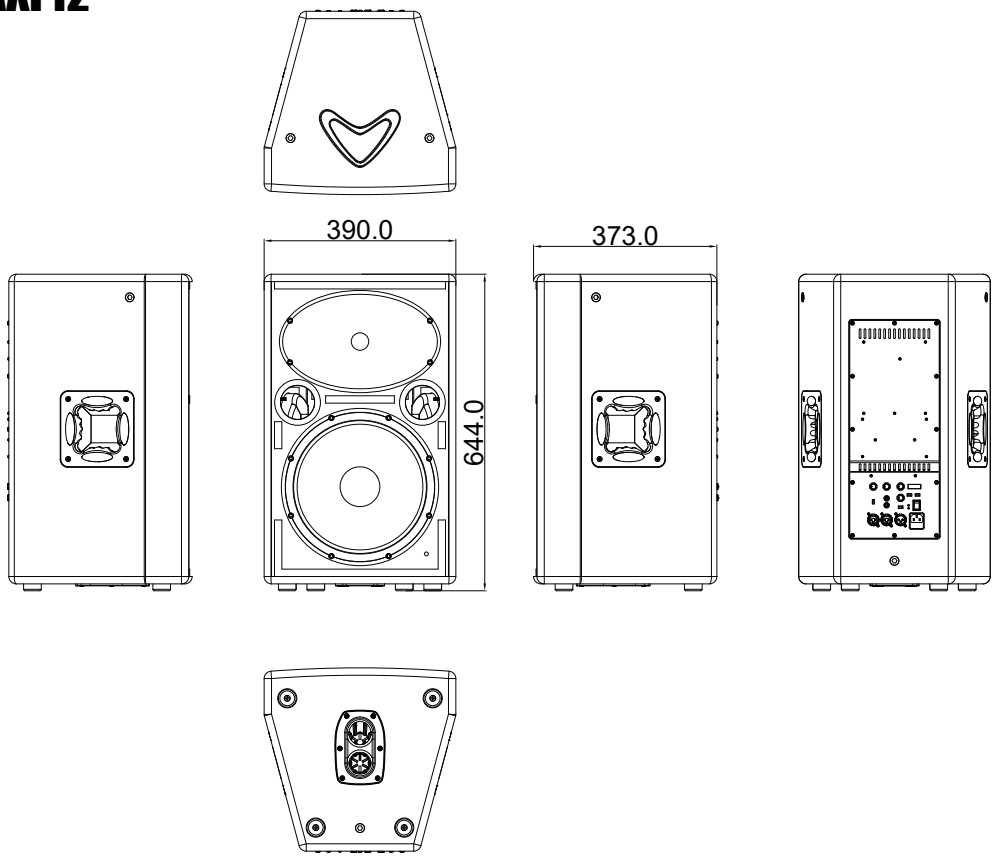
8. Input B: TRS Jack and female XLR balanced for INPUT B.

9. Input A: TRS Jack and female XLR balanced for INPUT A.

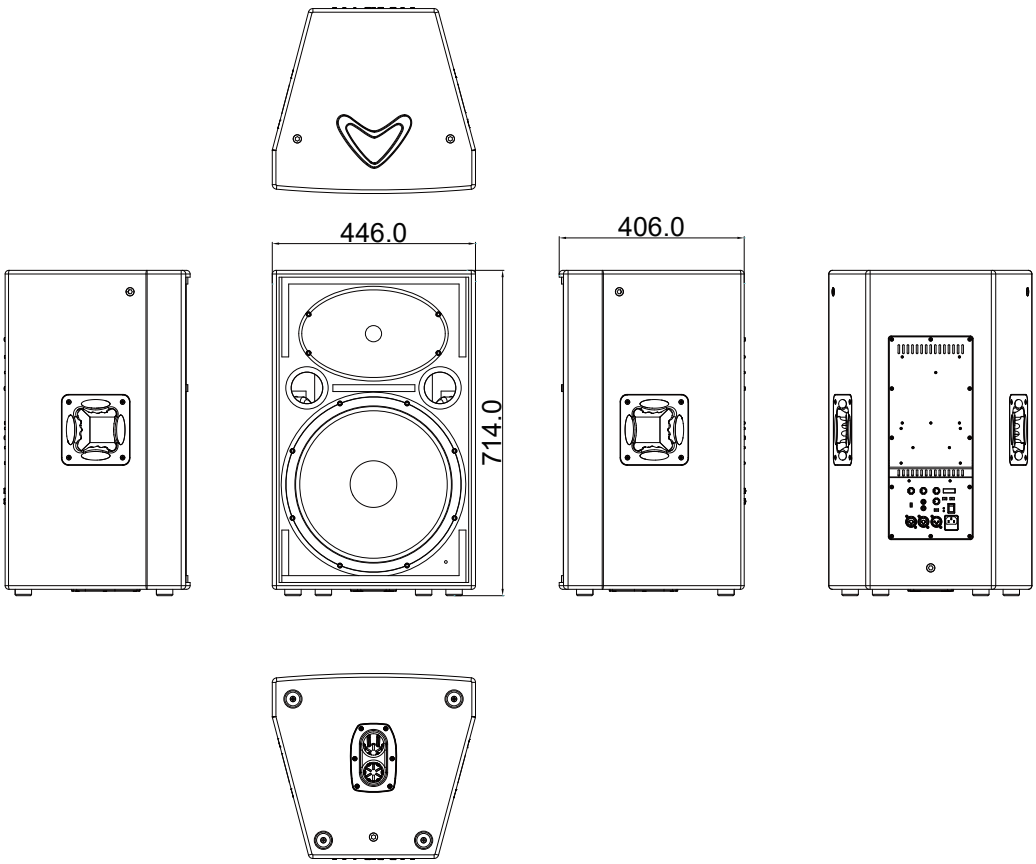
10 & 11. Output A & Output B: Balanced male XLR connector provides output HIGH PASS signal. Selects the signal type that is routed to the OUTPUT connectors, "THRU" sends the unprocessed signal to the outputs. "HPF" filters the signal at 100Hz to the outputs.

DIMENSIONAL DRAWINGS

DELTA-AXF12

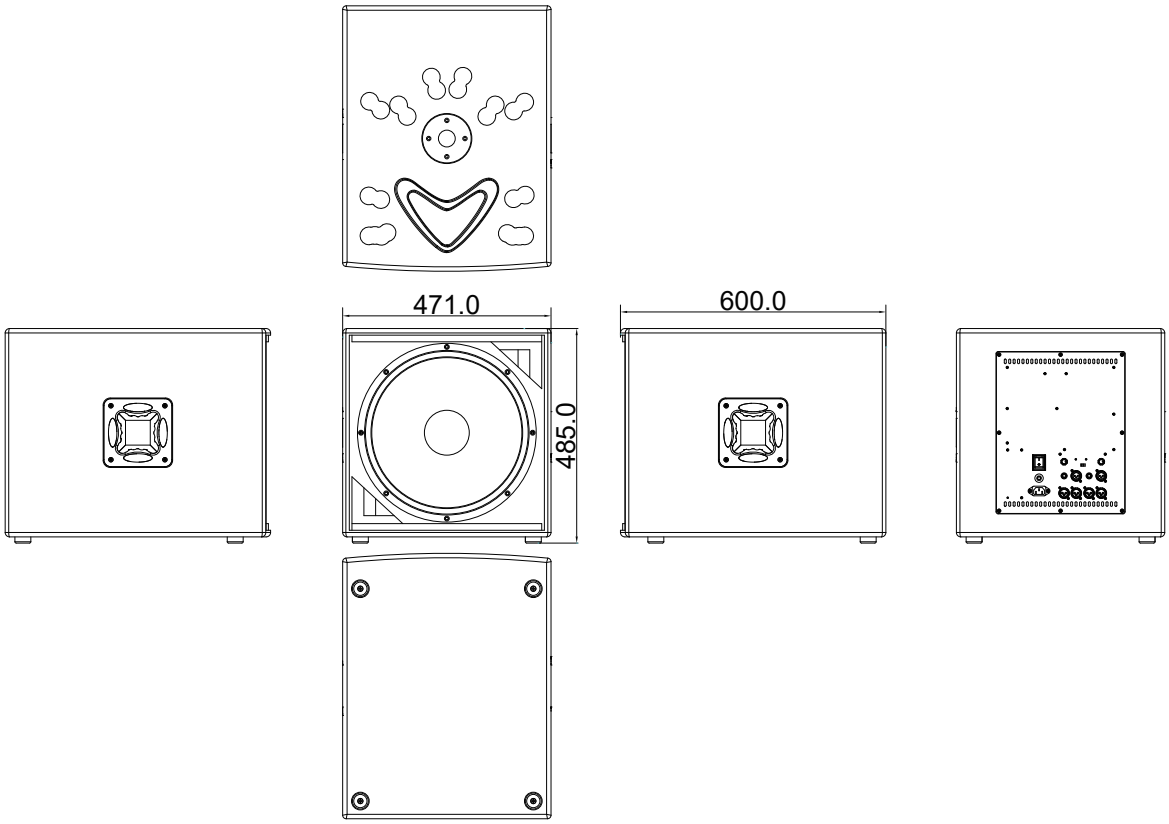


DELTA-AXF15

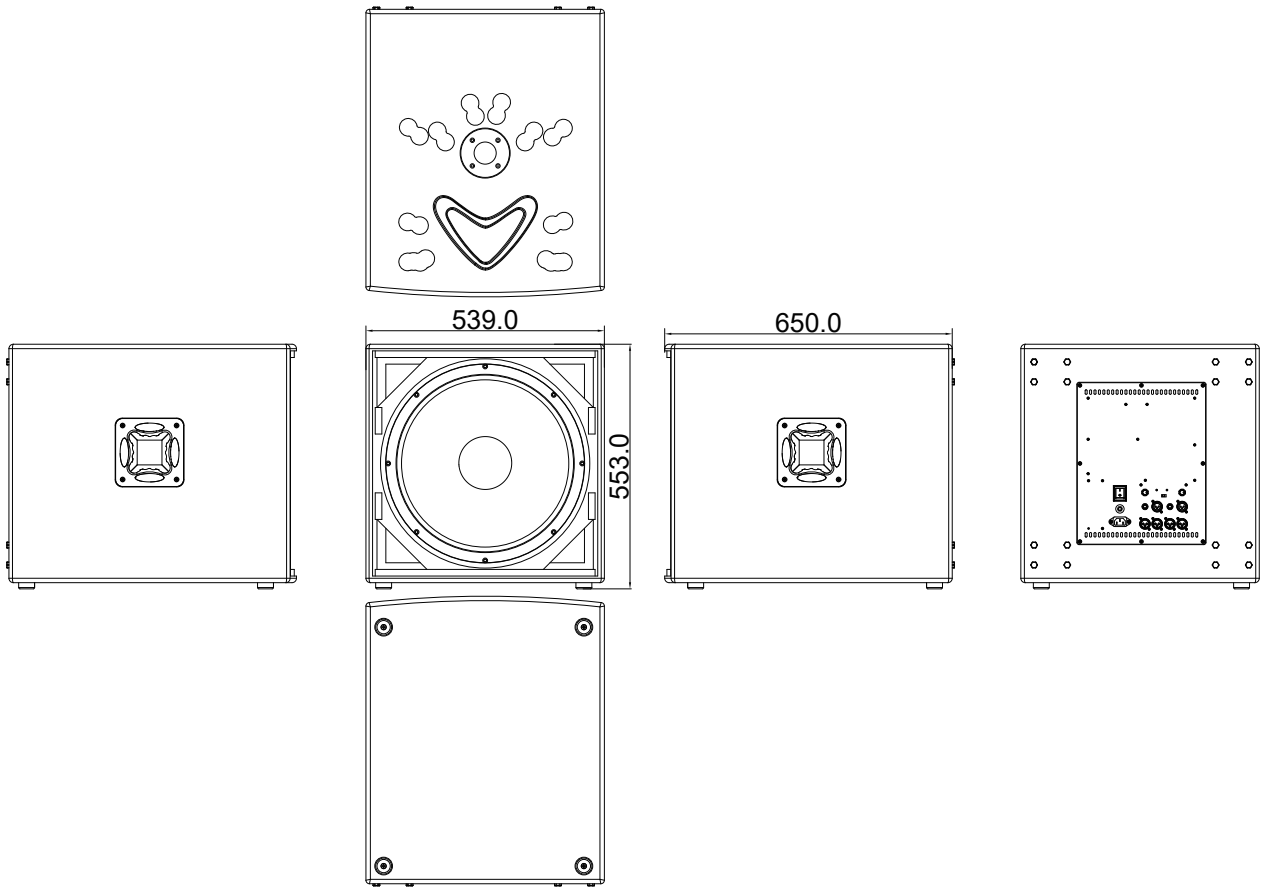


DIMENSIONAL DRAWINGS

DELTA-AX15B

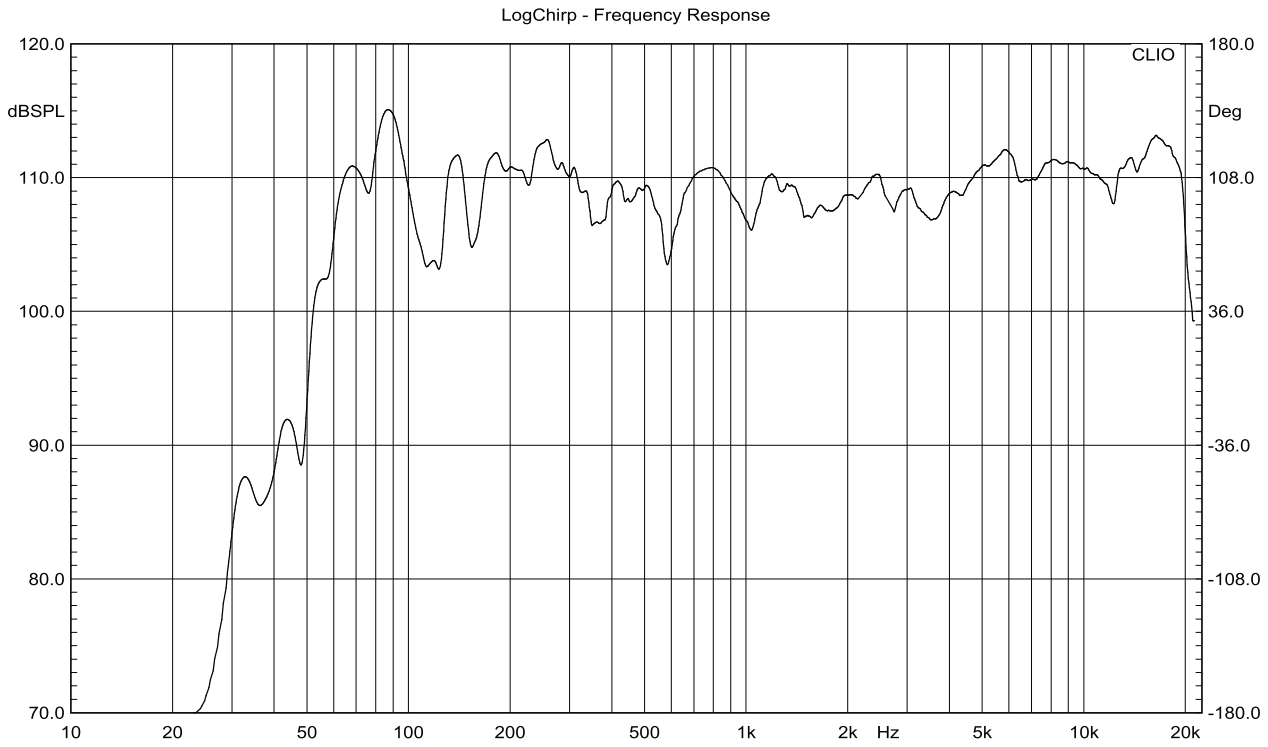


DELTA-AX18B

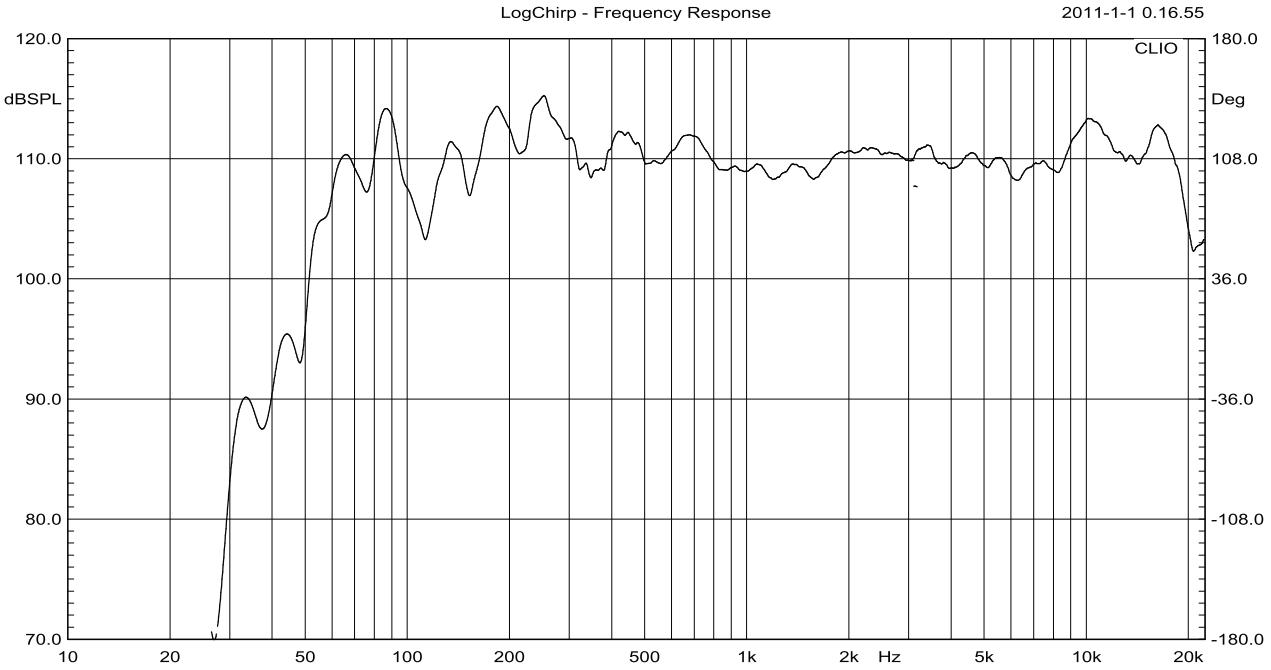


FREQUENCY RESPONSE

DELTA-AXF12



DELTA-AXF15



SPECIFICATION

Model Name	DELTA-AXF12	DELTA-AXF15
System Type	Active 12" 2-way Bi-Amplified	Active 15" 2-way Bi-Amplified
Frequency Response (+/-3 dB)	60 Hz – 20 KHz	50 Hz – 20 KHz
Frequency Range (-10 dB)	55 Hz – 20 KHz	45 Hz – 20 KHz
Calculated Maximum SPL @1m	130.5 dB	131.5 dB
Low Frequency Transducer		
Low Frequency Transducer – Size (mm / inches)	332 mm / 12"	404 mm / 15"
Coil Size (mm / inches)	75 mm / 3"	75 mm / 3"
Impedance	4 Ω	4 Ω
High Frequency Transducer		
Type	Compression Driver	Compression Driver
Coil Size (mm / inches)	51.2 mm / 2"	51.2 mm / 2"
Exit Size (mm / inches)	35.6 mm / 1.4"	25 mm / 1"
Diaphragm Material	Titanium	Titanium
Impedance	8 Ω	8 Ω
Nominal Coverage (H x V)	90° x 45°	90° x 45°
Amplifiers		
Amplifier Design	Class D	Class D
Power Rating	1600 W Peak (1400 W LF + 200 W HF), 800 W Continuous (700 W LF + 100 W HF)	1600 W Peak (1400 W LF + 200 W HF), 800 W Continuous (700 W LF + 100 W HF)
Power On Protection	Power On Protection	Power On Protection
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 LF and HF Limiters	Independent LF and HF Limiters
DC and Short Protection	Yes	Yes
Clip Limiter	Turns on Approx 600 W Output	Turns on Approx 650 W Output
Limiter Indicator	Red LED	Red LED
Power Indicator	Green LED	Green LED
Connectors		
Input A – type	Switchable Balanced Mic or Line Level Input	Switchable Balanced Mic or Line Level Input
Input Sensitivity	Mic:-40 dBu Line:0 dBu	Mic:-40 dBu Line:0 dBu
Maximum Input Level	22 dBu	22 dBu
Input Connector	XLR 1/4" Combo jack / 2 x RCA	XLR 1/4" Combo jack / 2 x RCA
Input Impedance	Balanced:20 KΩ Unbalanced:10 KΩ	Balanced:20 KΩ Unbalanced:10 KΩ
Line Output Connector	Switchable LOOP/MIX Balanced pin XLR Connector	Switchable LOOP/MIX Balanced pin XLR Connector
Impedance Balanced	Balanced: 200 Ω Unbalanced:100 Ω	Balanced: 200 Ω Unbalanced:100 Ω
Loop Gain	Mic:69 dB, Line:29 dB	Mic:69 dB, Line:29 dB
AC Power details – Power Supply	High Efficiency Switching Mode Power Supply	High Efficiency Switching Mode Power Supply
AC Power Options	AC100-120 V~/220-240 V~,50/60 Hz	AC100-120 V~/220-240 V~,50/60 Hz
Hardware – Rigging	M10 x 6	M10 x 6
Pole Mount	Dual Angle (0º or 10º) 35 mm Pole Socket	Dual Angle (0º or 10º) 35 mm Pole Socket
Enclosure Material and finish	15 mm Plywood	15 mm Plywood
Colour Options	Black Paint	Black Paint
Grille Material & Finish	1.5 Steel	1.5 Steel
Unpacked dimensions		
Height	640 mm / 25.2"	700 mm / 27.56"
Width (Front)	390 mm / 15.35"	446 mm / 17.56"
Width (Back)	241.2 mm / 9.5"	281.4 mm / 11.08"
Depth	373 mm / 14.69"	406 mm / 15.98"
Packed Dimensions		
Height	745 mm / 29.3"	803 mm / 31.6"
Width (Front)	566 mm / 22.3"	638 mm / 25.1"
Width (Back)	328 mm / 12.9"	366 mm / 14.4"
Depth	464 mm / 18.3"	498 mm / 19.6"
Net Weight (kg / lbs)	26.5 kg / 58.3 lbs	30.5 kg / 67.1 lbs
Gross Weight (kg / lbs)	30.0 kg / 66.0 lbs	35.4 kg / 77.9 lbs

SPECIFICATION

Model Name	DELTA-AX15B	DELTA-AX18B
System Type	Active 15" Subwoofer	Active 18" Subwoofer
Frequency Response (+/-3 dB)	42 Hz – 200 Hz	38 Hz – 200 Hz
Calculated Maximum SPL @1m	130.5 dB	131.5 dB
Low Frequency Transducer		
Size (mm / inches)	404 mm / 15"	470 mm / 18"
Coil Size (mm / inches)	101.6 mm / 4"	101.6 mm / 4"
Impedance	8 Ω	8 Ω
Amplifiers		
Low-Frequency Power Amplifier RMS	900 w (Class D)	1000 w (Class D)
Amplifier Protection	Yes	Yes
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	Yes	Yes
DC and Short Protection	Yes	Yes
Clip Limiter	Turns on Approx 900 W Output	Turns on Approx 1000 W Output
Limiter Indicator	Red LED	Red LED
Power Indicator	Green LED	Green LED
Connectors		
Input A – type	Balanced	Balanced
Input Sensitivity	Line:0 dBu	Line:0 dBu
Maximum Input Level	22 dBu	22 dBu
Input Connector	TRS jack and socket XLR	TRS jack and socket XLR
Input Impedance	Balanced:20 KΩ Unbalanced:10 KΩ	Balanced:20 KΩ Unbalanced:10 KΩ
Line Output Connector	pin XLR Connector	pin XLR Connector
Impedance Balanced	Balanced: 200 Ω Unbalanced:100 Ω	Balanced: 200 Ω Unbalanced:100 Ω
Loop Gain	0 dB	0 dB
AC Power details – Power Supply	High Efficiency SMPS	High Efficiency SMPS
AC Power Options	AC100-120 V~/220-240 V~,50/60 Hz	AC100-120 V~/220-240 V~,50/60 Hz
Power On Indicator	Green LED	Green LED
Enclosure Material and finish	15 mm Plywood	15 mm Plywood
Colour Options	Black Paint	Black Paint
Unpacked dimensions		
Height	471 mm / 18.54"	539 mm / 21.22"
Width (Front)	471 mm / 18.54"	539 mm / 21.22"
Width (Back)	471 mm / 18.54"	539 mm / 21.22"
Depth	600 mm / 23.62"	650 mm / 25.59"
Packed Dimensions		
Height	556 mm / 21.89"	624 mm / 24.57"
Width (Front)	672 mm / 26.46"	722 mm / 28.43"
Width (Back)	672 mm / 26.46"	722 mm / 28.43"
Depth	543 mm / 21.38"	611 mm / 24.06"
Net Weight (kg / lbs)	33.1 kg / 72.82 lbs	38.4 kg / 84.48 lbs
Gross Weight (kg / lbs)	36.7 kg / 80.74 lbs	44.3 kg / 97.46 lbs

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 di☒er 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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August 2024