

Delta X Series

OPERATING MANUAL AND USER GUIDE

Delta X10
Delta X215

Delta X12
Delta X15B

Delta X15
Delta X18B

Delta X12M
Delta X218B

Delta X15M



www.wharfedalepro.com

IMPORTANT WARNINGS & SAFETY INSTRUCTIONS

1. READ ALL INSTRUCTIONS – carefully and become familiar with the features and functions of these products before operating them.
2. RETAIN THESE INSTRUCTIONS – for future reference.
3. COMPLY WITH ALL WARNINGS – All warnings and instructions for this product should be adhered to.
4. USE WITH AMPLIFIERS – In order to avoid damage to drivers and other equipment, it is advisable to establish and follow a routine for powering up and powering down a sound system. With all system components connected, turn on source equipment (mixers, signal processors, record and playback units, etc.) BEFORE powering up amplifiers. Transient voltages from powering up source equipment can damage speakers if amplifiers are already turned on. Make sure that amplifier volumes are set to their minimum settings and power up any system amplifiers LAST. It is recommended that all system components be allowed to stabilize for several seconds before any source signals are introduced or level setting adjustments are made. Similarly, when shutting systems down, turn all amplifiers off first, before powering down any other system components.
5. CABLES – Do not use shielded or microphone cables for connection between amplifiers and speakers. Use only approved speaker cables with proper connectors.
6. CAUTION – These professional loudspeaker systems are capable of generating very high sound pressure levels. Use care with placement and operation to avoid exposure to excessive volume levels. Permanent hearing damage can result when operated to extreme levels.
7. SERVICE – There are no user serviceable parts inside this product. Users should not attempt to service this product. Warranty nullification could result if this is attempted.
8. RIGGING - SUSPENDING - MOUNTING - Rigging suspending or mounting of speaker systems can expose members of the public to serious health risks and even death.

UNDER NO CIRCUMSTANCES ATTEMPT TO RIG, SUSPEND OR OTHERWISE MOUNT THESE SPEAKERS 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.

TABLE OF CONTENTS

Important Warnings & Safety Instructions..... 1

Introduction..... 3

Models/Features 4

Installation..... 5

Delta X10/X12/X12M/X15/X15M/X215 Bi-Amp Wiring 6

Delta X10/X12/X12M/X15/X15M/X215 Full range Wiring..... 7

Delta X15B/X18B Full range Wiring 8

Delta X15B/X18B Bi-Amp Wiring..... 9

Delta X Series Suggested Network Settings..... 10

Rigging/Suspending 11

Block/Wiring Diagrams 12

Dimensional Drawings 19

Specifications 23

Warranty 26

INTRODUCTION

Delta X builds on the global success of the Wharfedale Pro Delta series.

Constructed from 15mm plywood and covered in the highest quality Rhino Rock paint, the Delta X models are instantly recognizable by their engraved iconic Wharfedale Pro 'boomerang' logo on their cabinets. The fresh cosmetic design however is not the only improvement the engineering team have made.

Internally Delta X also has a new crossover design and construction. Using new component positioning and bracing, the sensitive crossover electronics have been re-engineered to improve long term performance and reliability – even at the highest of volumes.

With rear panel switching, Delta-X can operate in either Bi-Amp or Full range modes. This routing flexibility allows for Delta X systems to be refined using multiple amplifiers and external crossovers.

Custom Wharfedale Pro transducers have also been selected. High output, low physical distortion cast frame woofers deliver unparalleled low frequency response. With the exception of the Delta X10, 2" titanium compression drivers are coupled to 90°x45° elliptical waveguides for impressive output level and smooth HF dispersion.

With a full lineup of 9 models, ranging from the 300w RMS Delta X10 to the 1600w RMS Dual Chamber 2 x 18" Delta X218 subwoofer, Delta X models are perfect for fixed installation and touring applications.

MODELS

- ◆ Delta X10 - Passive Loudspeaker
- ◆ Delta X12 - Passive Loudspeaker
- ◆ Delta X12M - Passive Stage Monitor
- ◆ Delta X15 - Passive Loudspeaker
- ◆ Delta X15M - Passive Stage Monitor
- ◆ Delta X215 - Passive Loudspeaker
- ◆ Delta X15B - Passive Subwoofer
- ◆ Delta X18B - Passive Subwoofer
- ◆ Delta X218B - Passive Dual Chamber Subwoofer

FEATURES

- ◆ High power, low distortion cast frame woofers
- ◆ 1" exit, 1.75" titanium diaphragm compression drivers(only Delta X10)
- ◆ 1.4" exit, 2" titanium diaphragm compression drivers
- ◆ Externally switchable full range/bi-amp operation
- ◆ Externally switchable discrete/parallel operation (only X218B)
- ◆ 90°x60° elliptical waveguides (only Delta X10)
- ◆ 90°x45° elliptical waveguides
- ◆ Dual angle pole mount receptacles
- ◆ Plywood construction with internal bracing
- ◆ 4-way high impact plastic carry handles
- ◆ Rhino Rock™ texturised composite finish
- ◆ Parallel speakON compatible inputs
- ◆ Through outputs on "M" models
- ◆ High-pass outputs on X15B and X18B

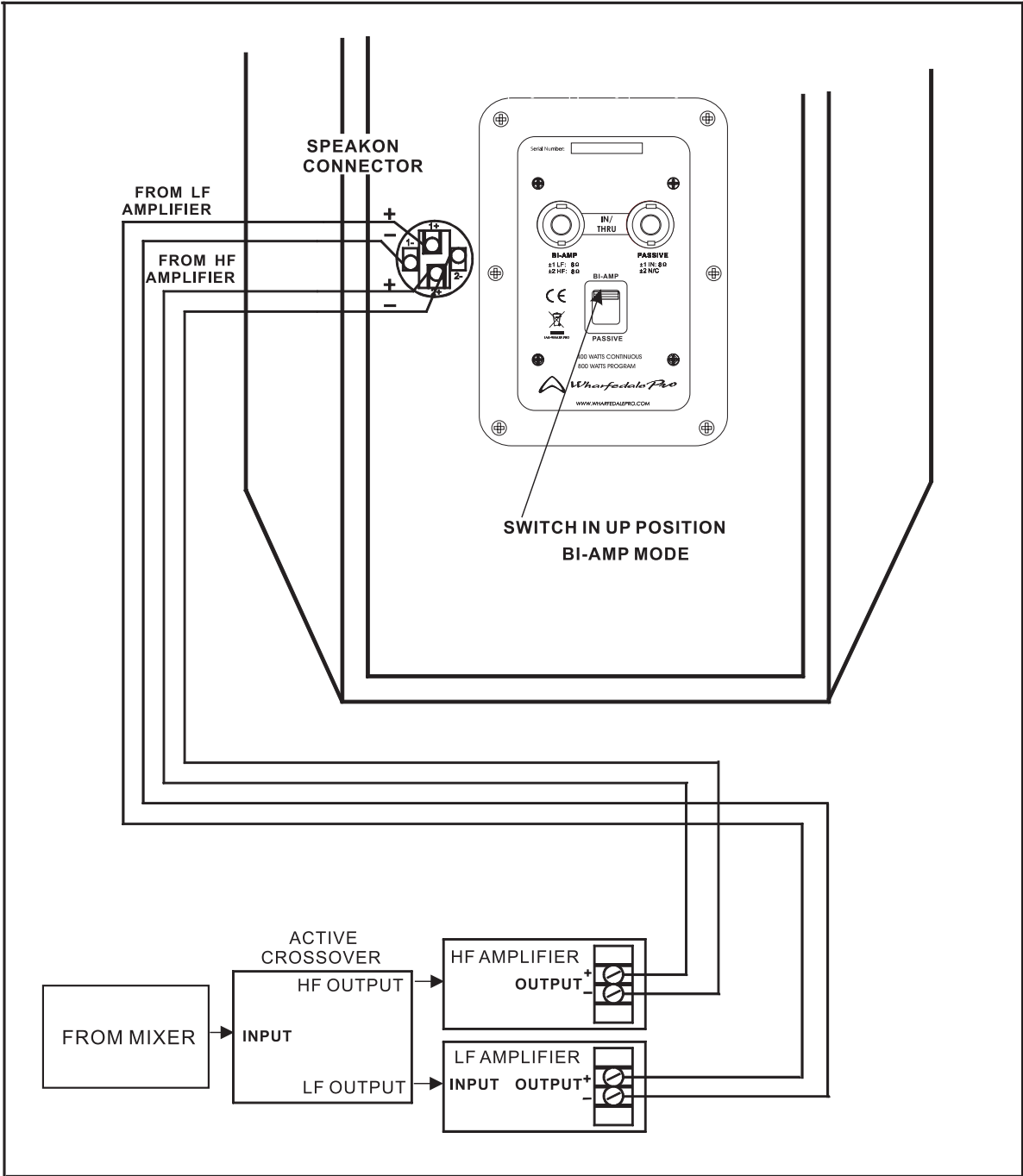
INSTALLATION

- Before attempting to install a Delta X Series loudspeaker system please refer to the important warnings and safety instructions. Only qualified personnel should install a loudspeaker system.

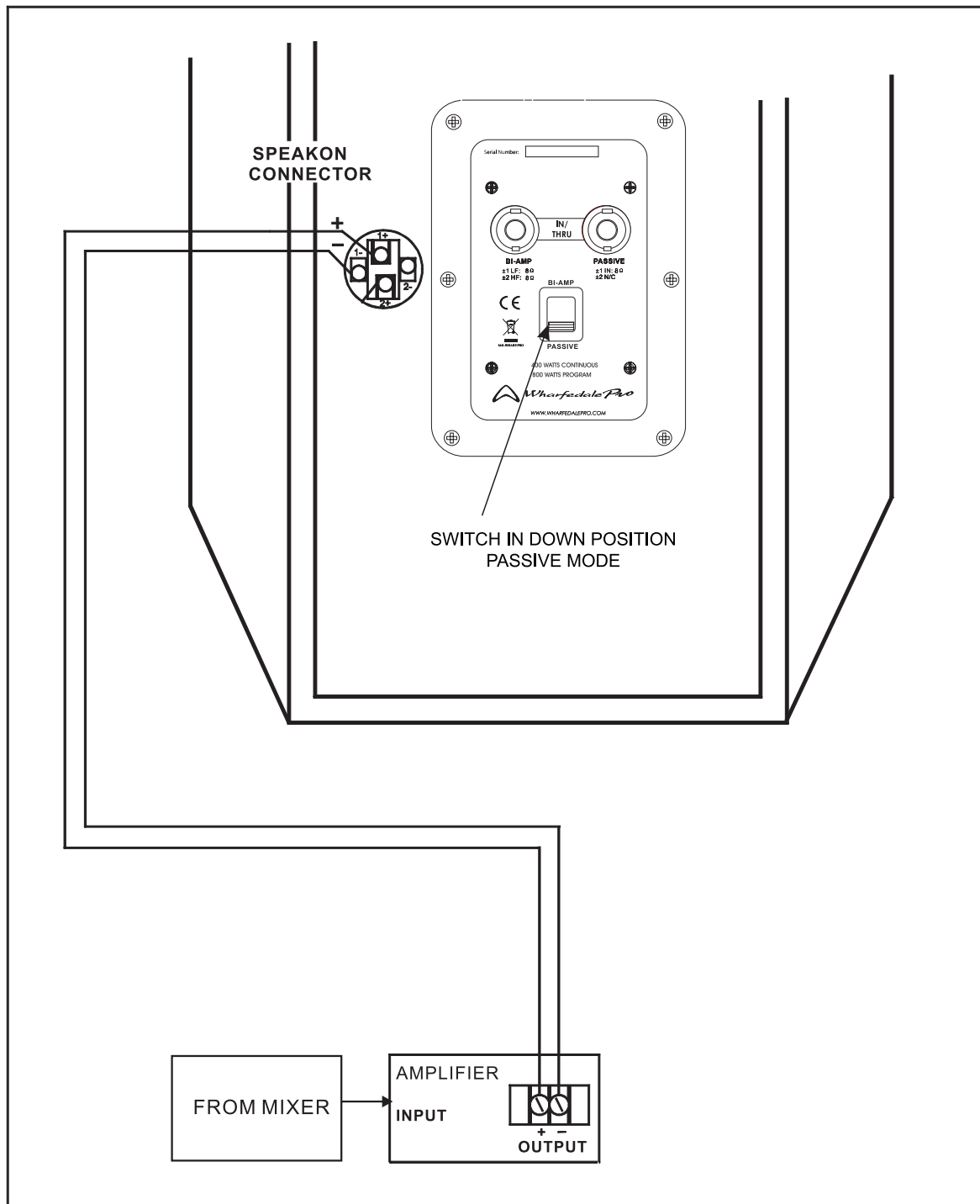
Improper installation of a loudspeaker system can cause serious harm and even death if correct procedure is not followed. Anyone attempting installation assumes all liability arising from such use.

- Bi-amp switching - ensure that the internal passive network selector is in the correct position. When using an external active network select the bi-amp setting. Failure to do this can result in damage to the drivers of your Delta X Series loudspeakers.
- Models with dual angle pole mount sockets (Delta X10, Delta X12 and Delta X15) have an angled socket that angles the cabinet down by 10°. This allows more sound to be aimed directly at the audience and less at the ceiling, reducing early reflections. Please ensure that the correct socket is used for each speaker.

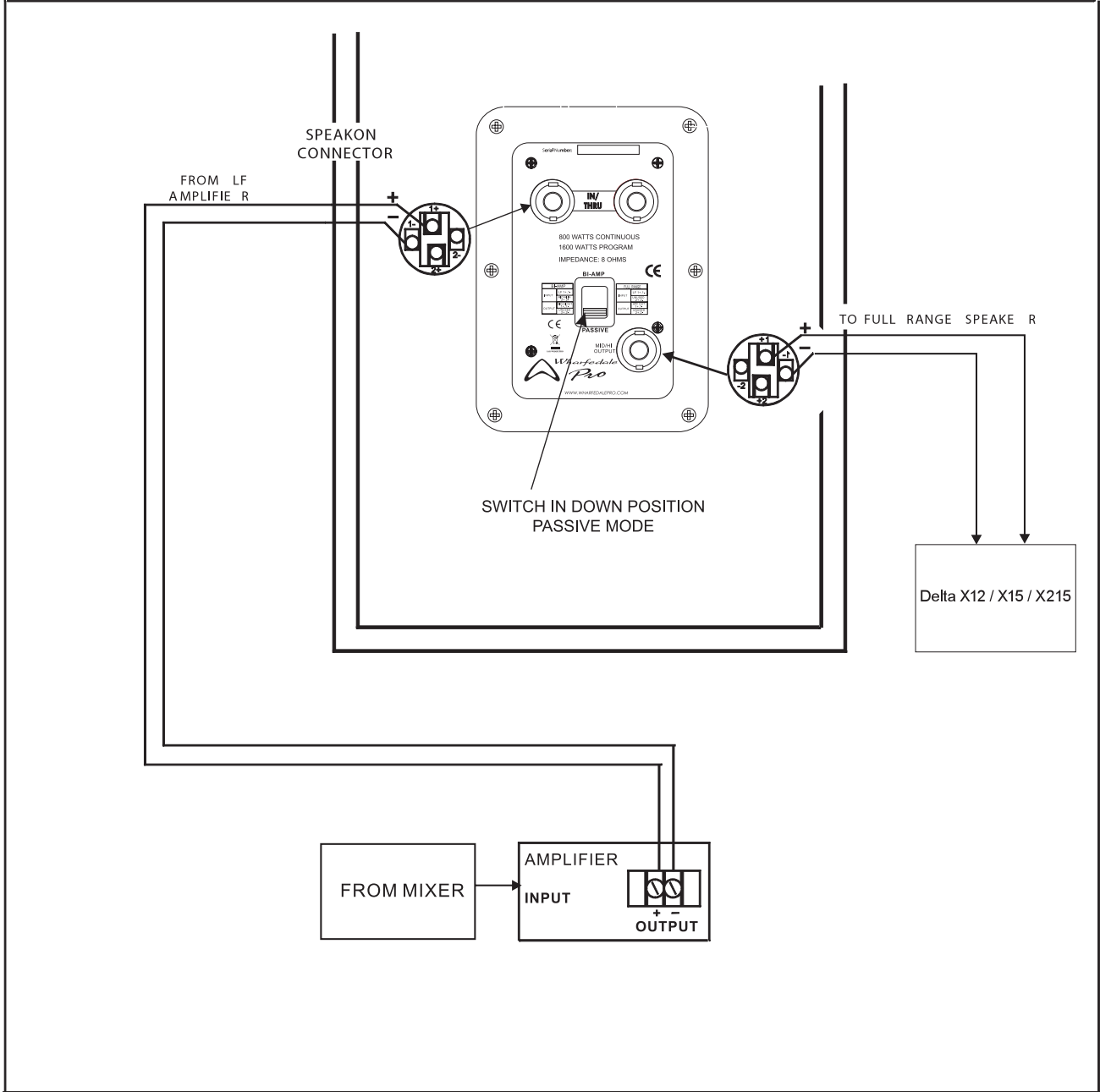
DELTA X10/X12/X12M/X15/X15M/X215 BI-AMP WIRING



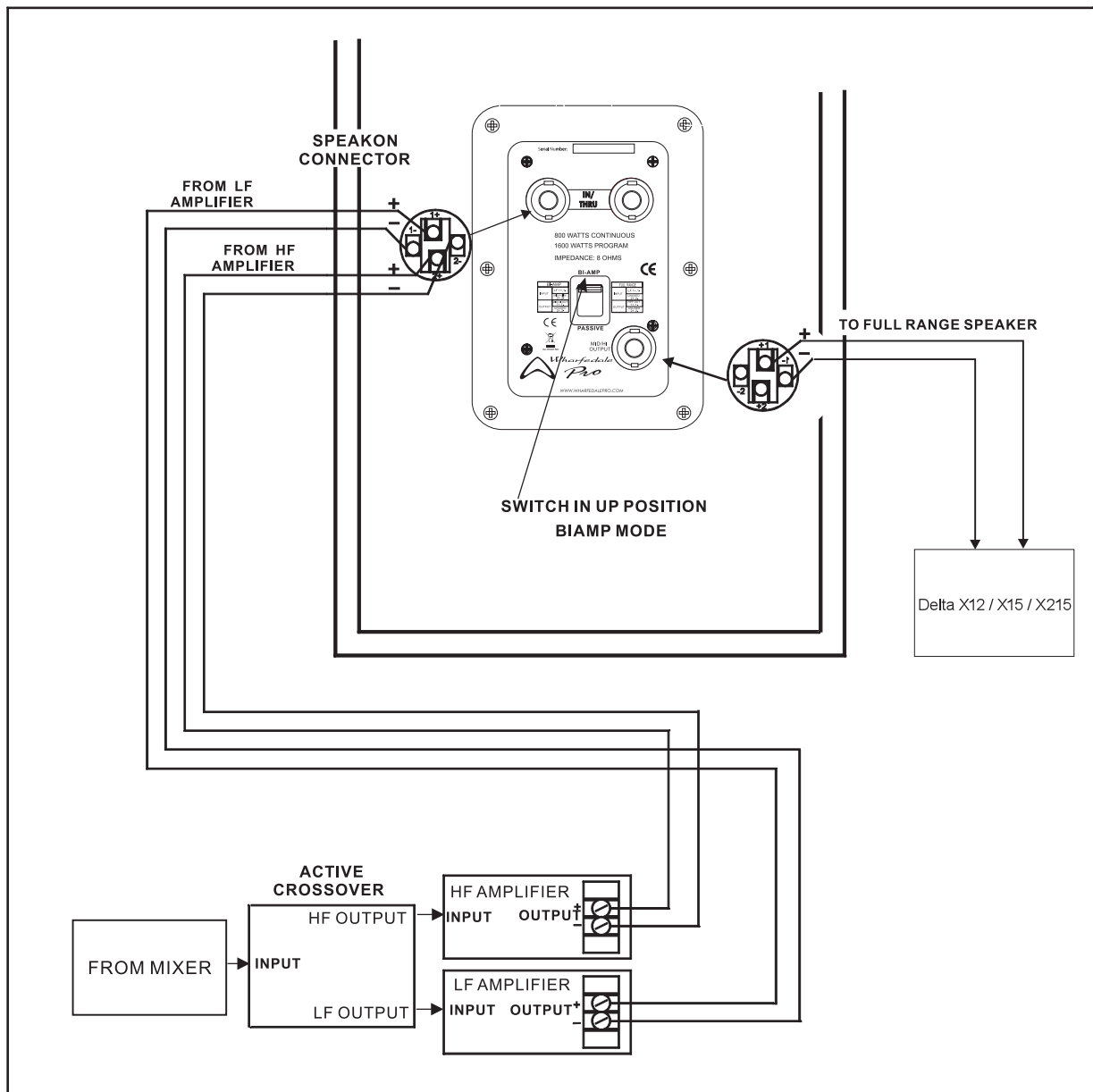
DELTA X10/X12/X12M/X15/X15M/X215 FULLRANGE WIRING



DELTA X15B/X18B FULLRANGE WIRING

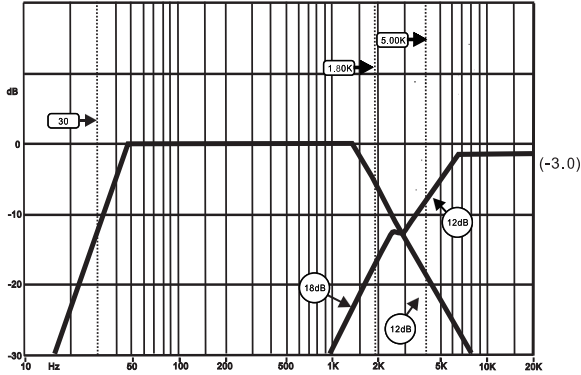


DELTA X15B/X18B BI-AMP WIRING

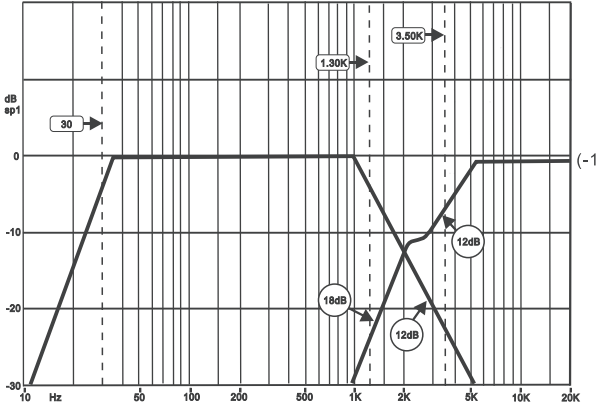


Delta X Series SUGGESTED NETWORK SETTINGS

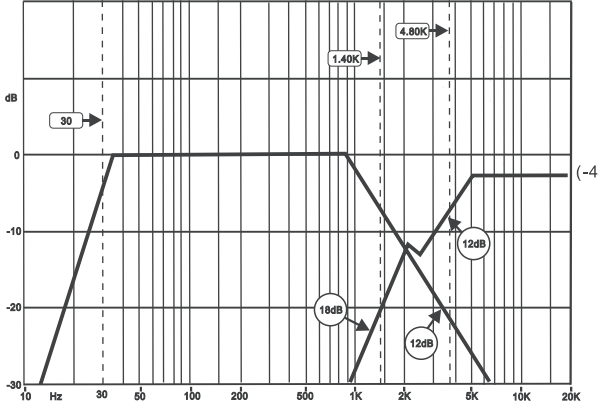
Delta X10



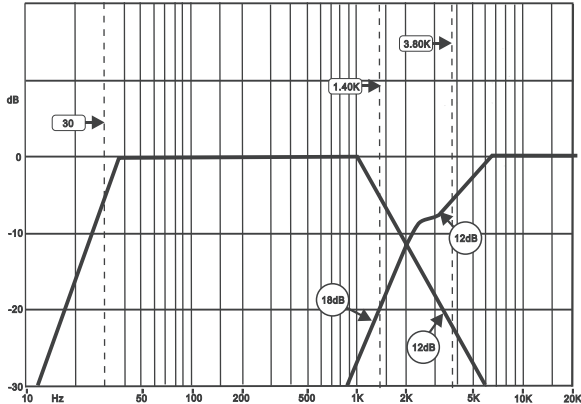
Delta X15



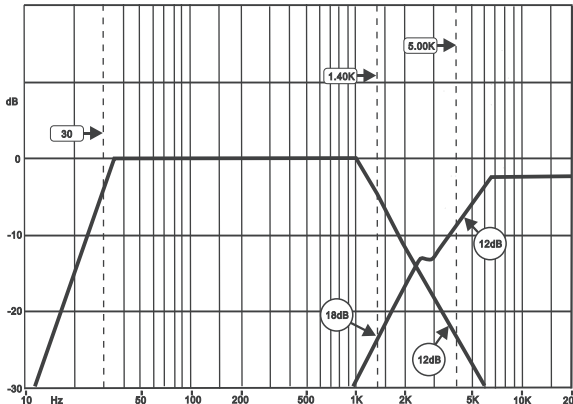
Delta X12



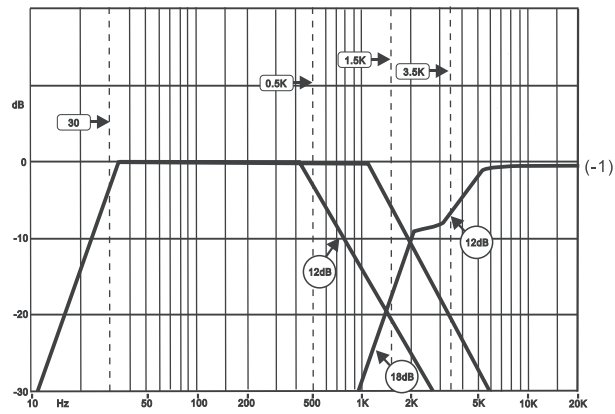
Delta X15M



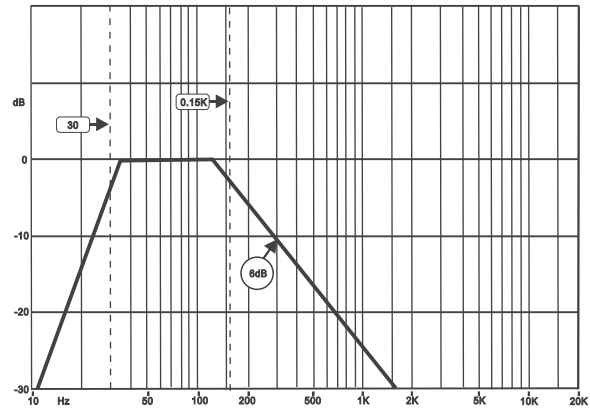
Delta X12M



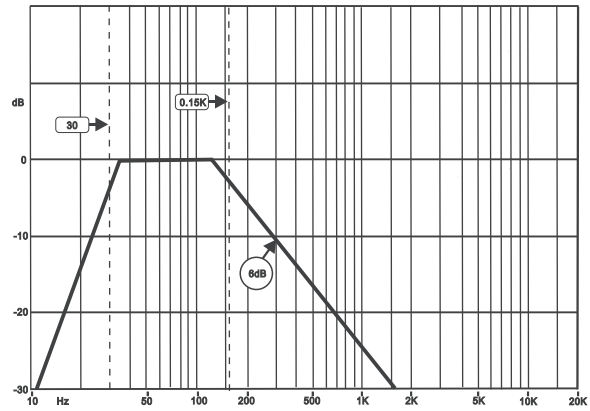
Delta X215



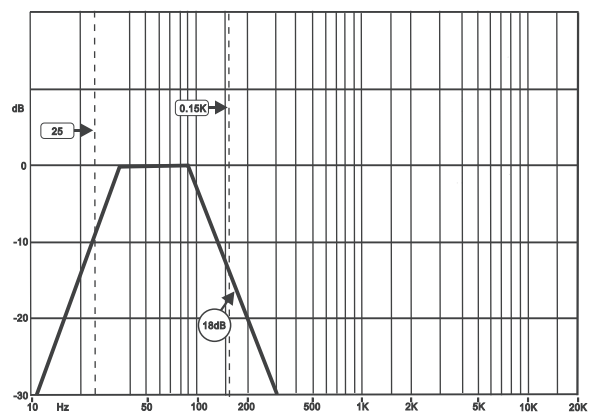
Delta X15B



Delta X18B



Delta X218B



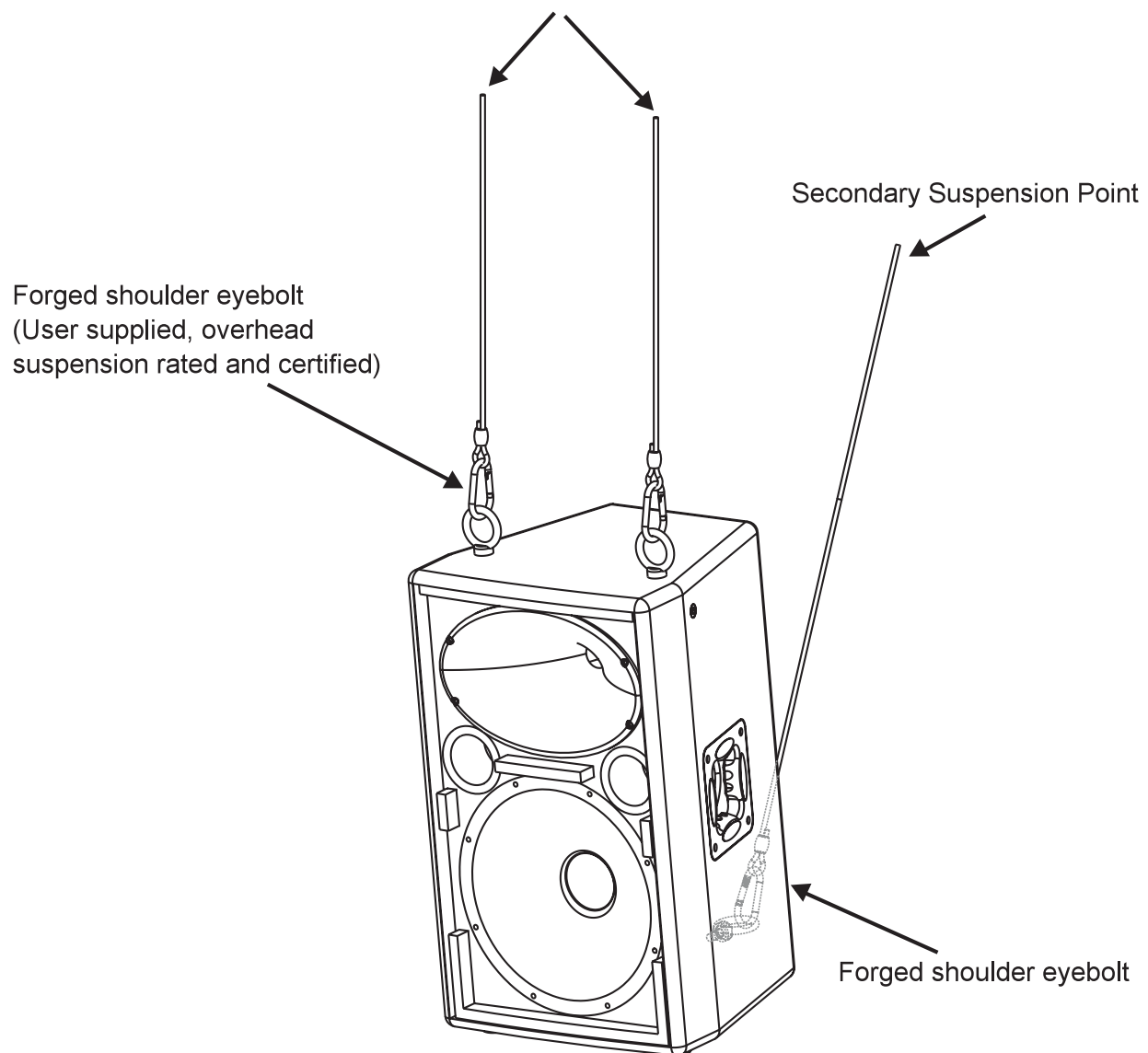
RIGGING/SUSPENDING

Using Shoulder Eyebolts

Always apply the load to the bolt along the plane of the eye. For long term installation use a thread-locking compound. Do not attempt to bend or otherwise deform any rigging hardware.

Please refer to the important safety warnings before you consider suspending any loudspeakers.

Each primary load bearing suspension point shall be rated for the total load.
(A minimum 5:1 Design Factor or Local Standard should be observed, whichever is greater)

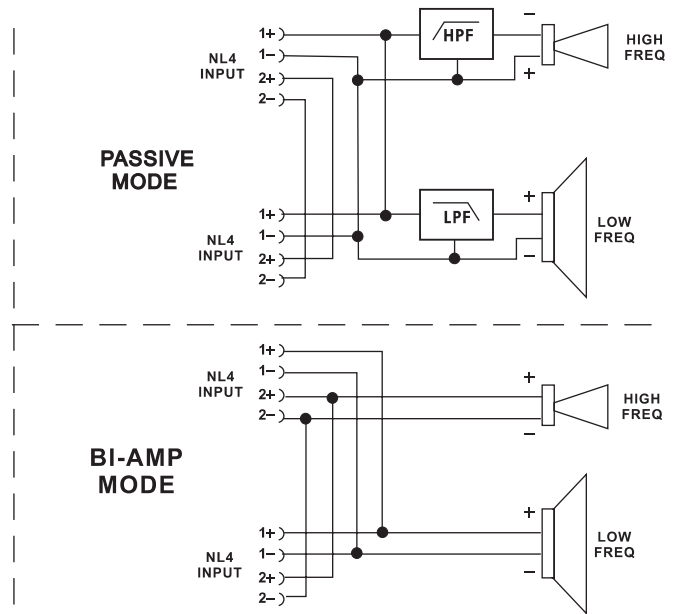
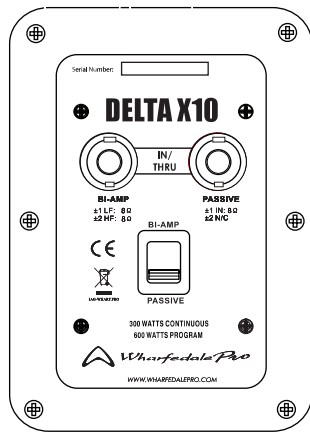


Working load limits: No more than four (4) high (vertical)
The four (4) high vertical specification represents a static ratio of 7:1

BLOCK/WIRING DIAGRAMS

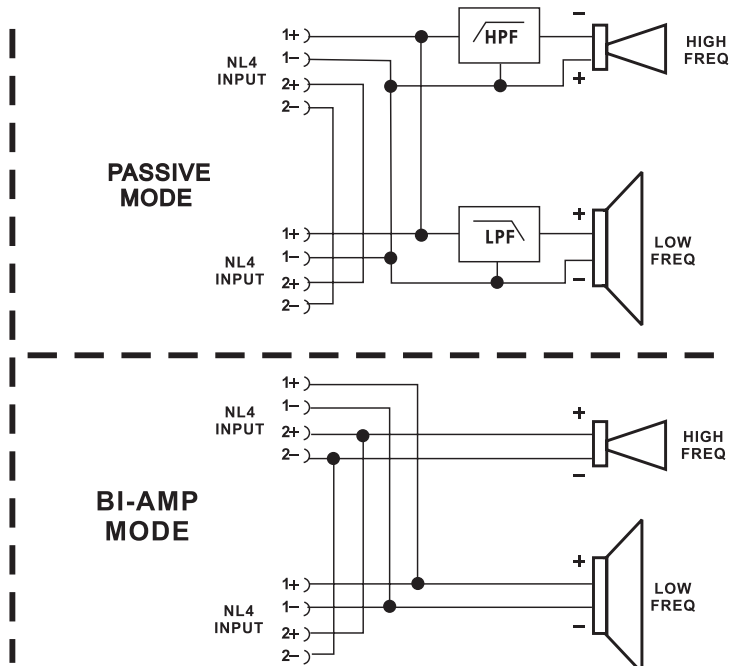
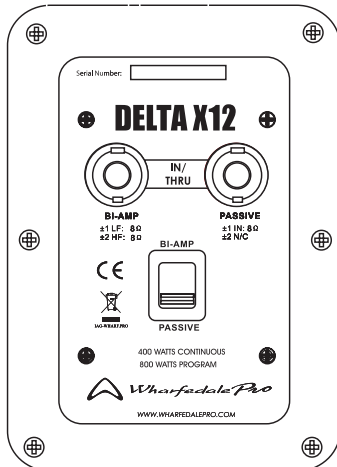
Delta X10

Block Diagram

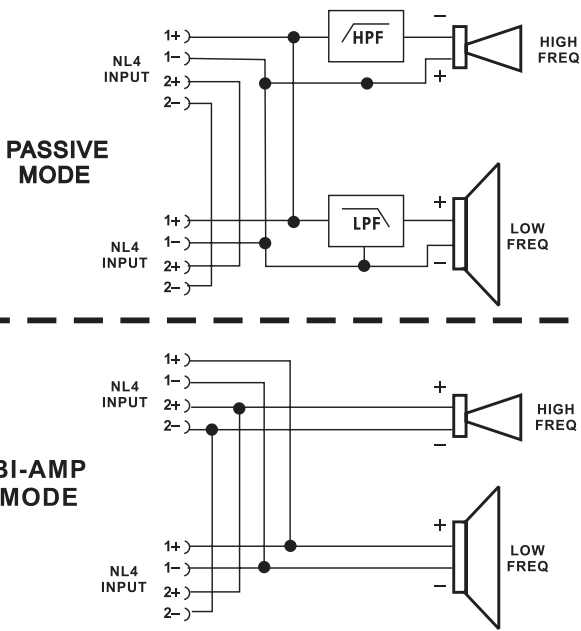
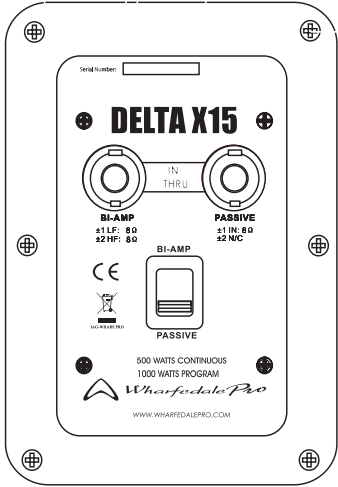


Delta X12

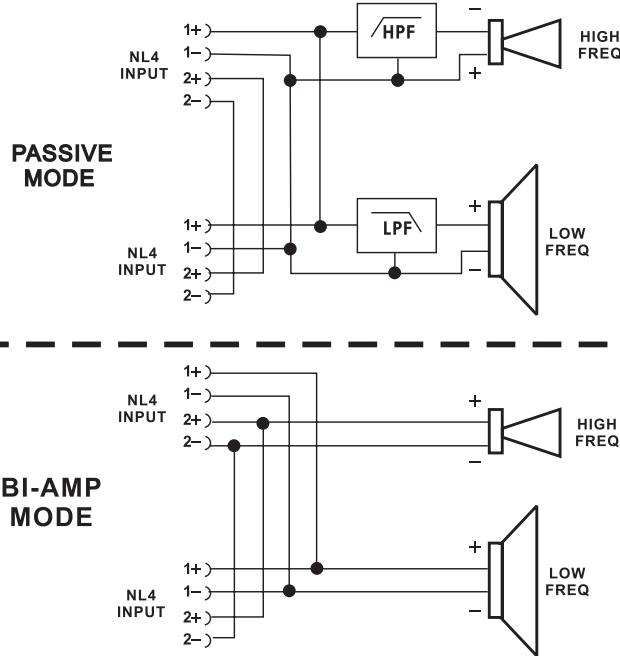
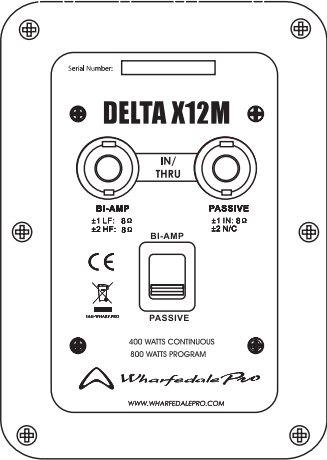
Crossover Block Diagram



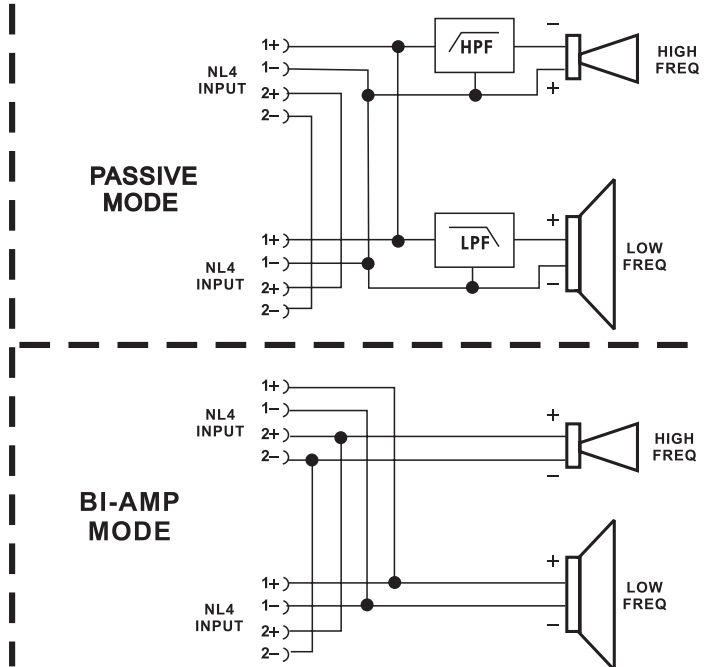
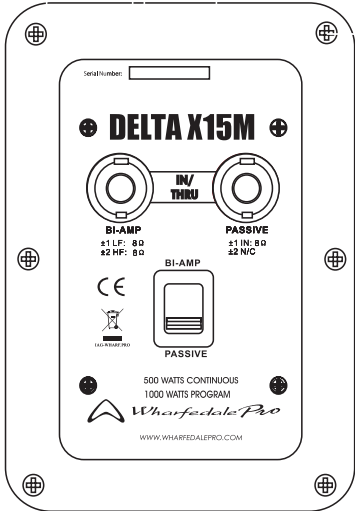
Delta X15 Crossover Block Diagram



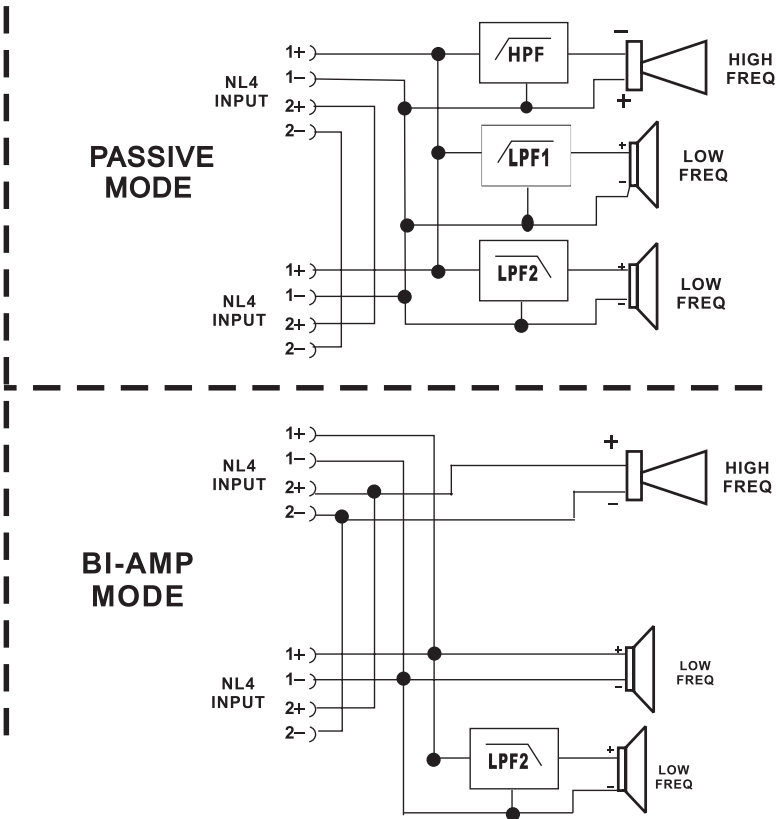
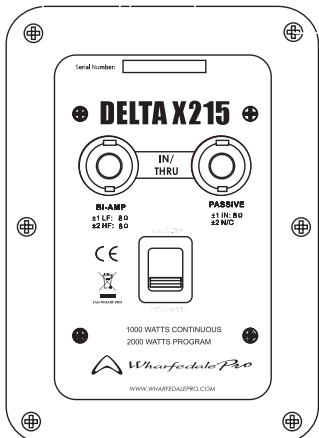
Delta X12M Crossover Block Diagram



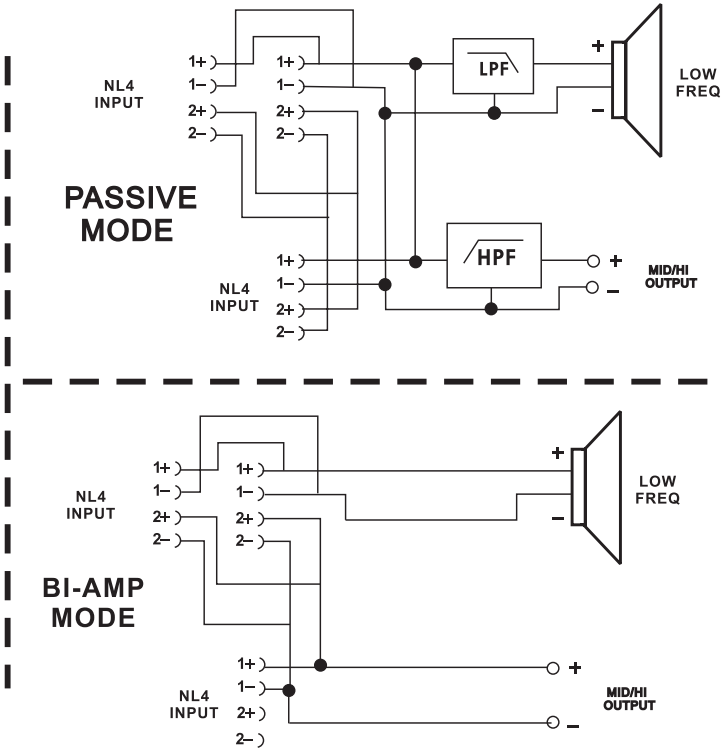
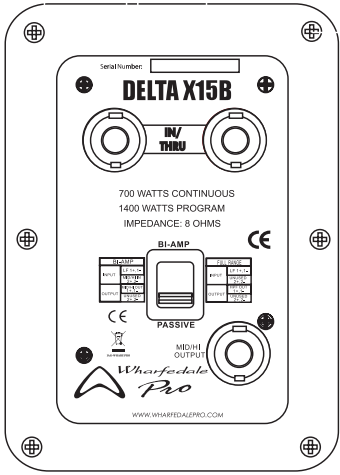
Delta X15M
Crossover Block Diagram



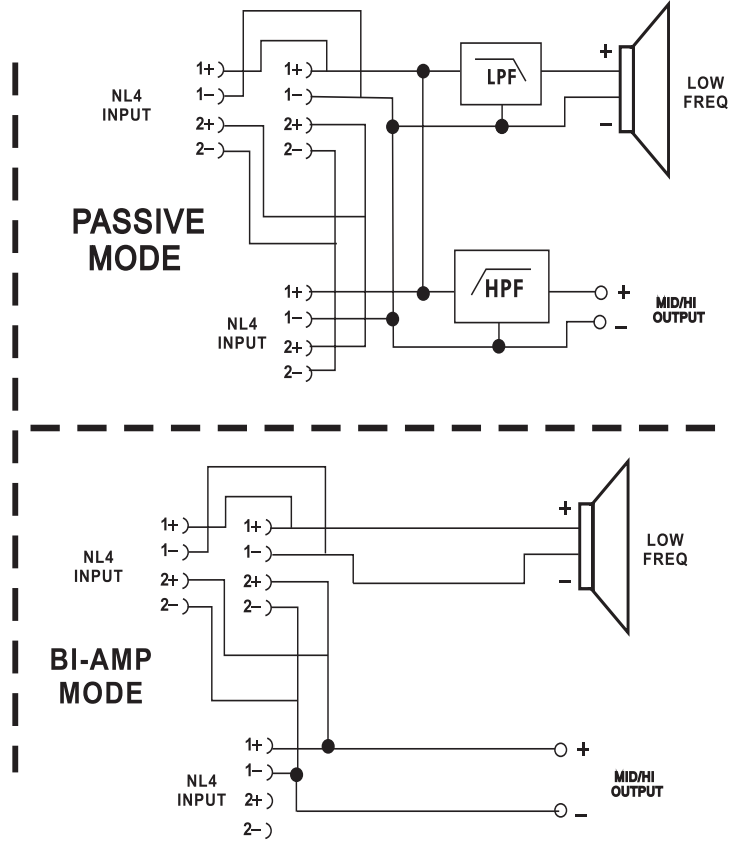
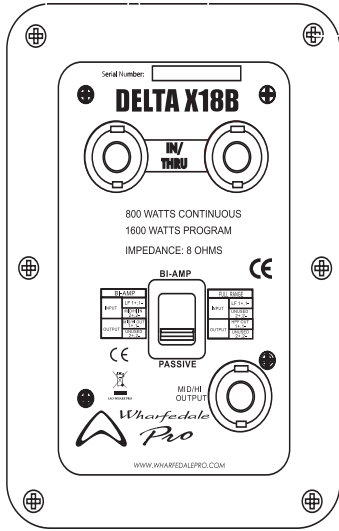
Delta X215
Crossover Block Diagram



Delta X15B Crossover Block Diagram

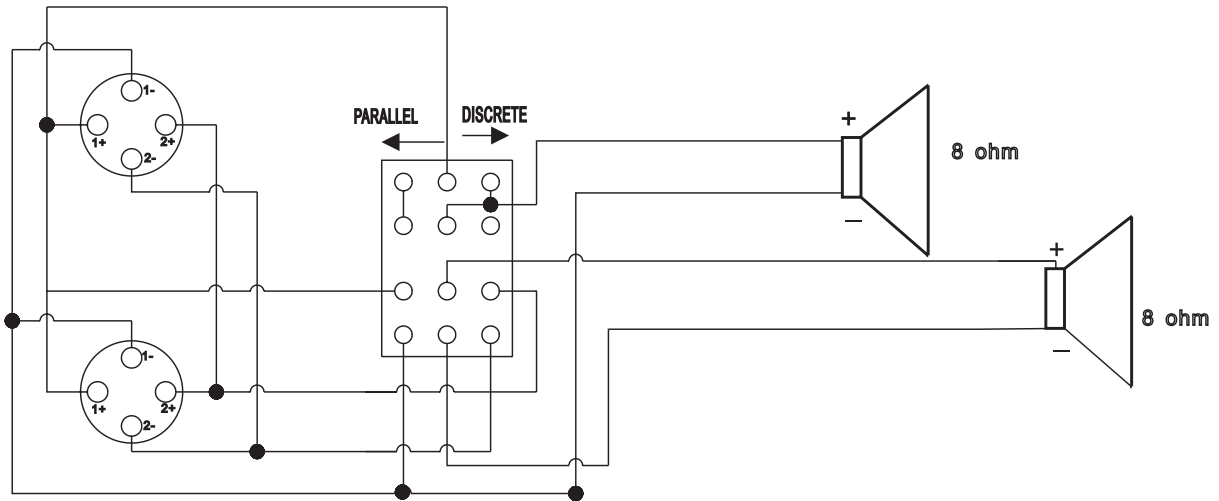
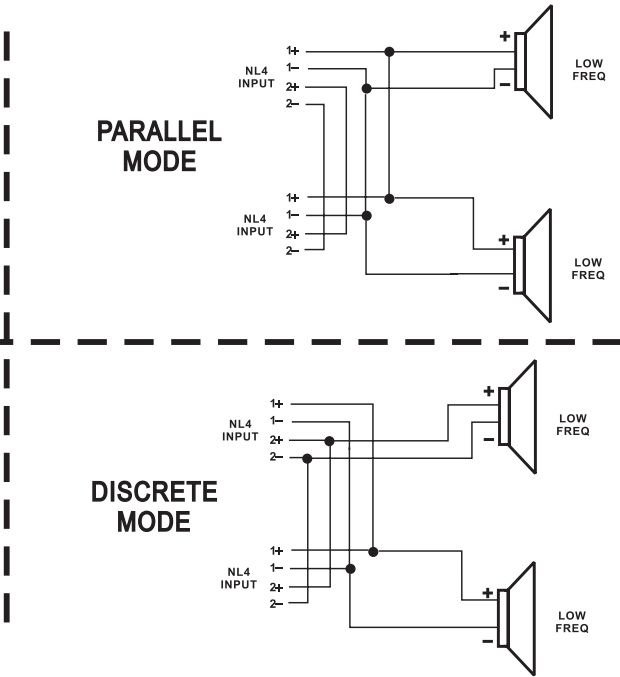
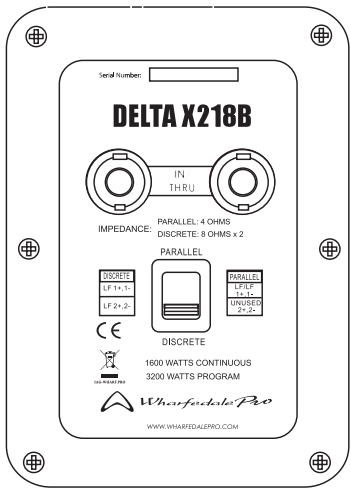


Delta X18B Crossover Block Diagram



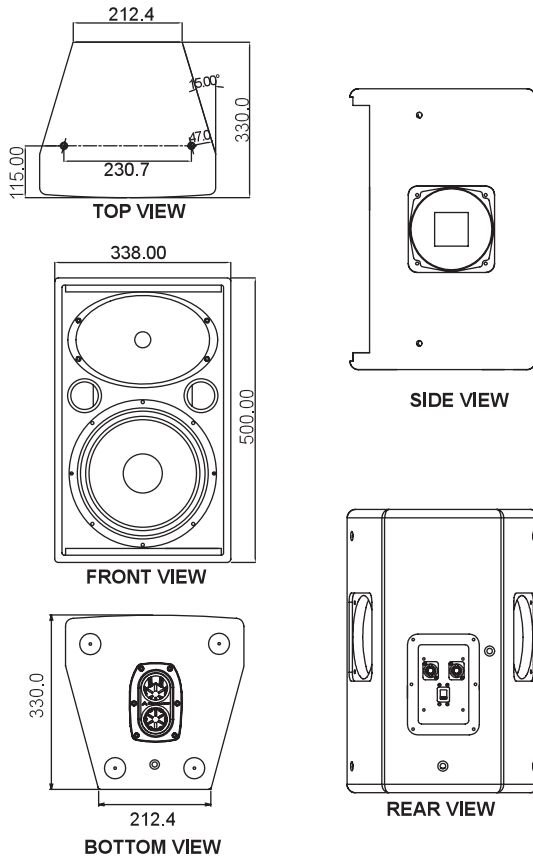
Delta X Series

Delta X218B Crossover Block Diagram

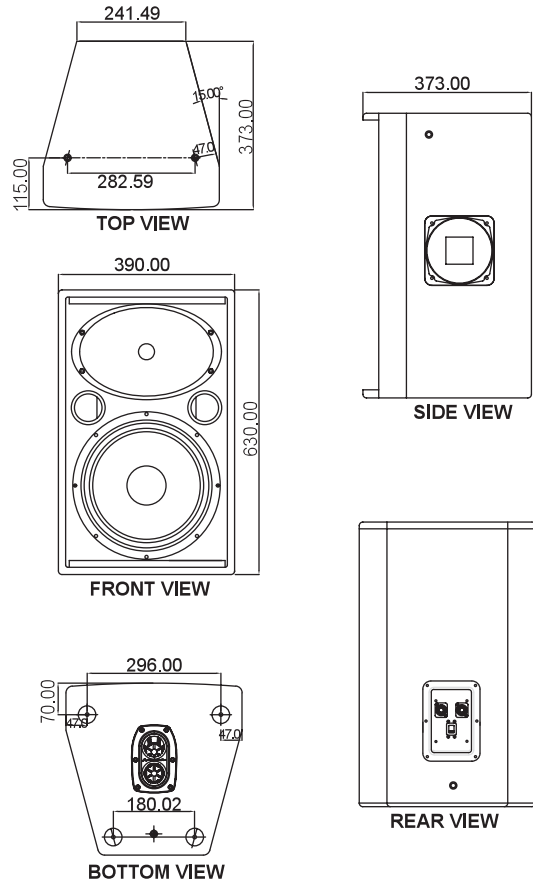


DIMENSIONAL DRAWINGS

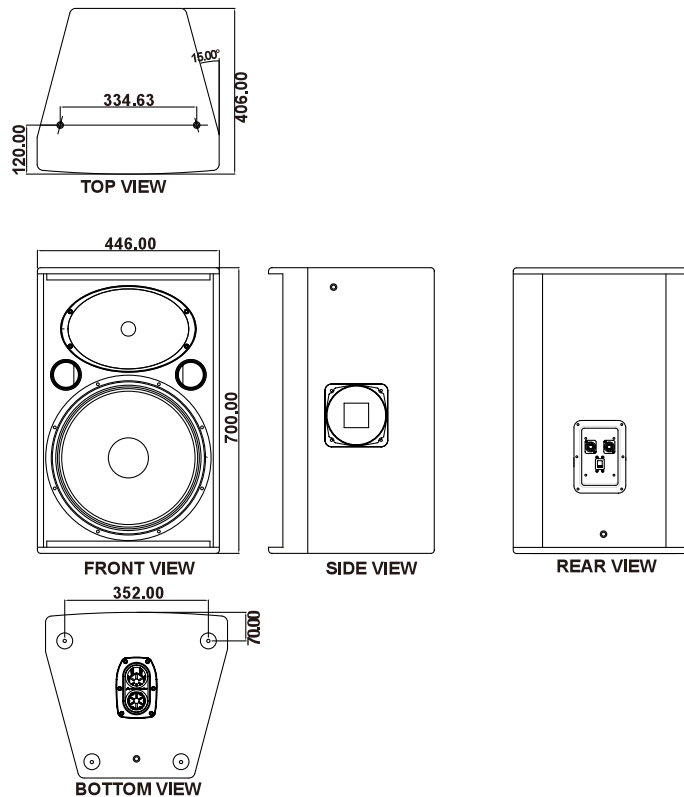
Delta X10



Delta X12

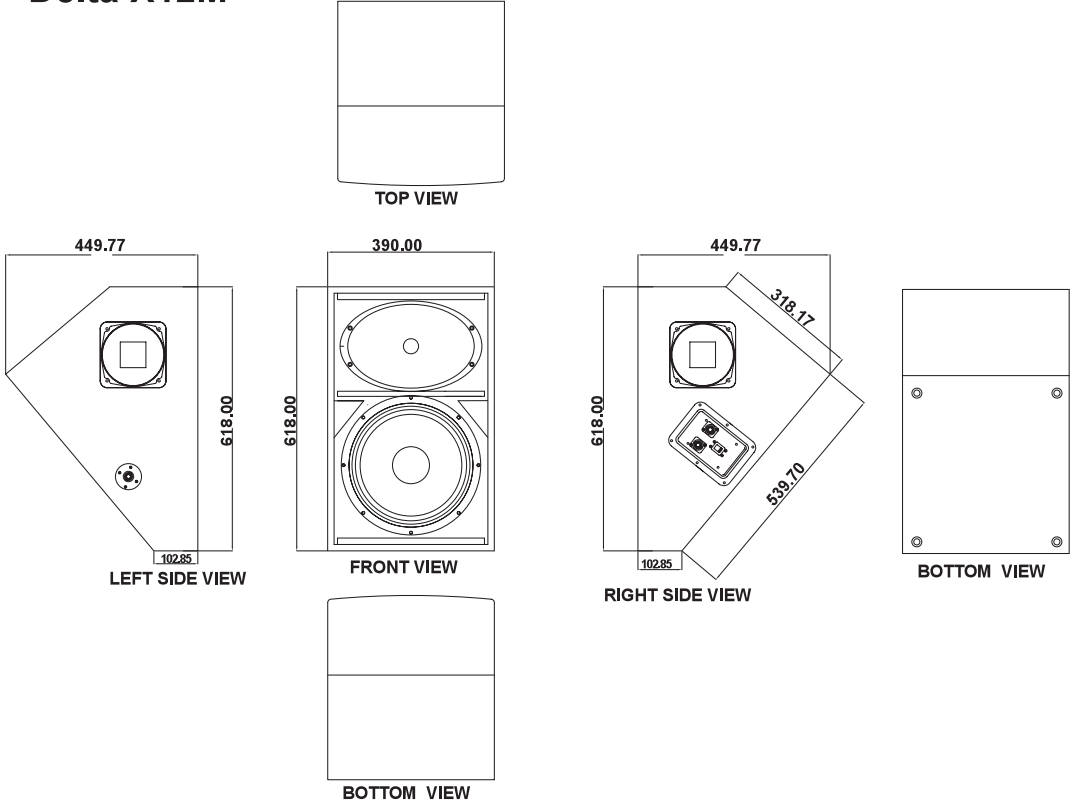


Delta X15

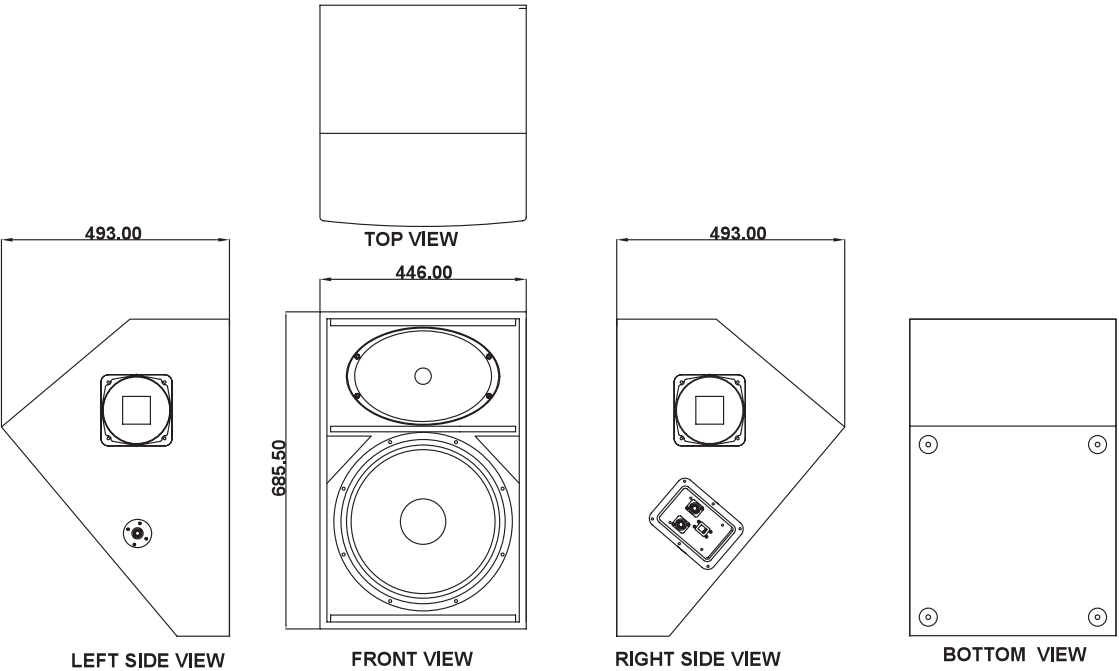


Delta X Series

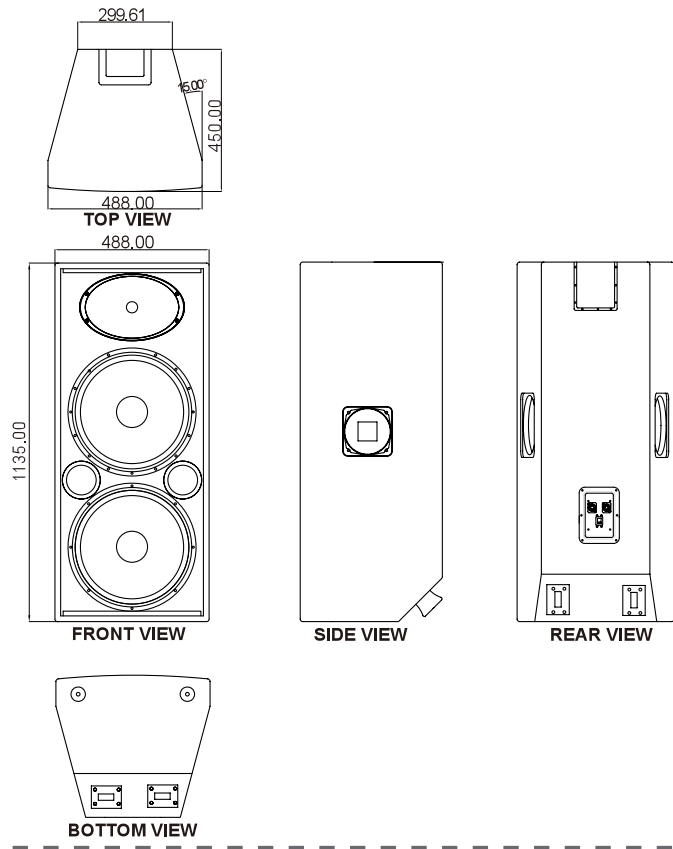
Delta X12M



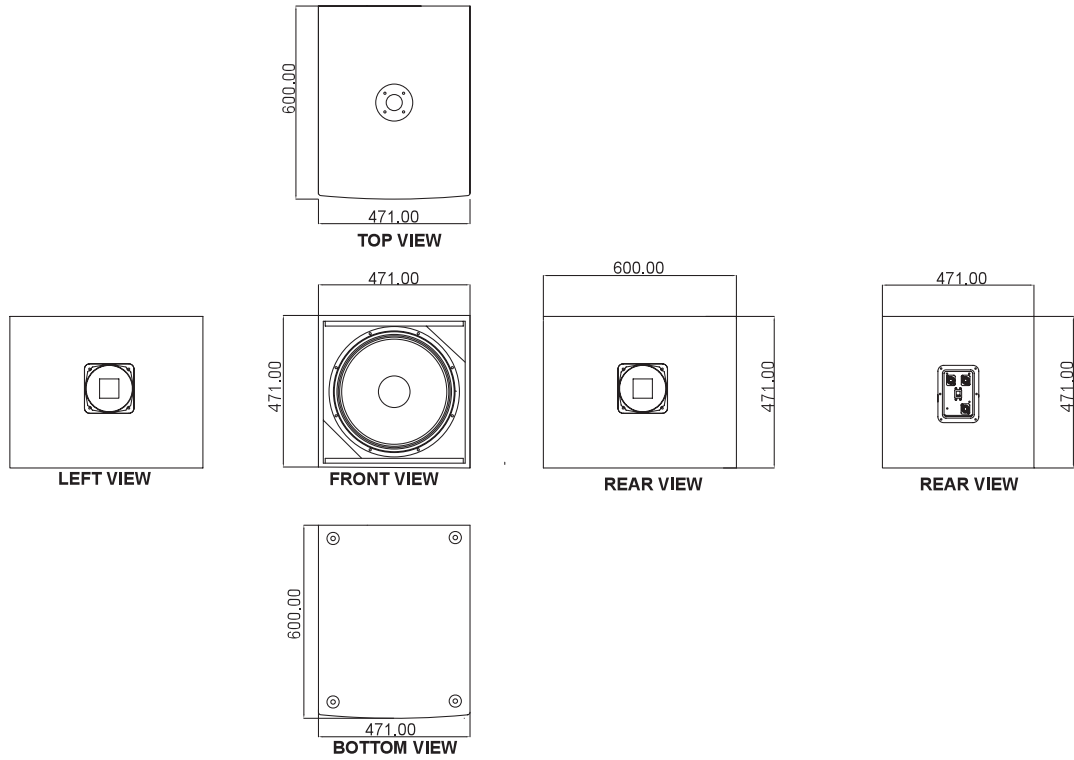
Delta X15M



Delta X215

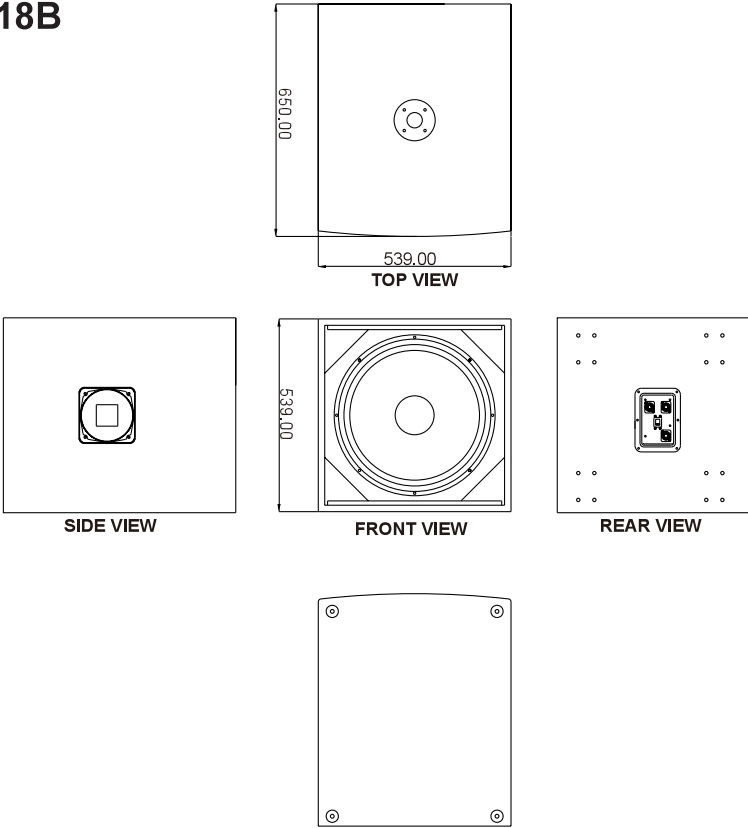


Delta X15B

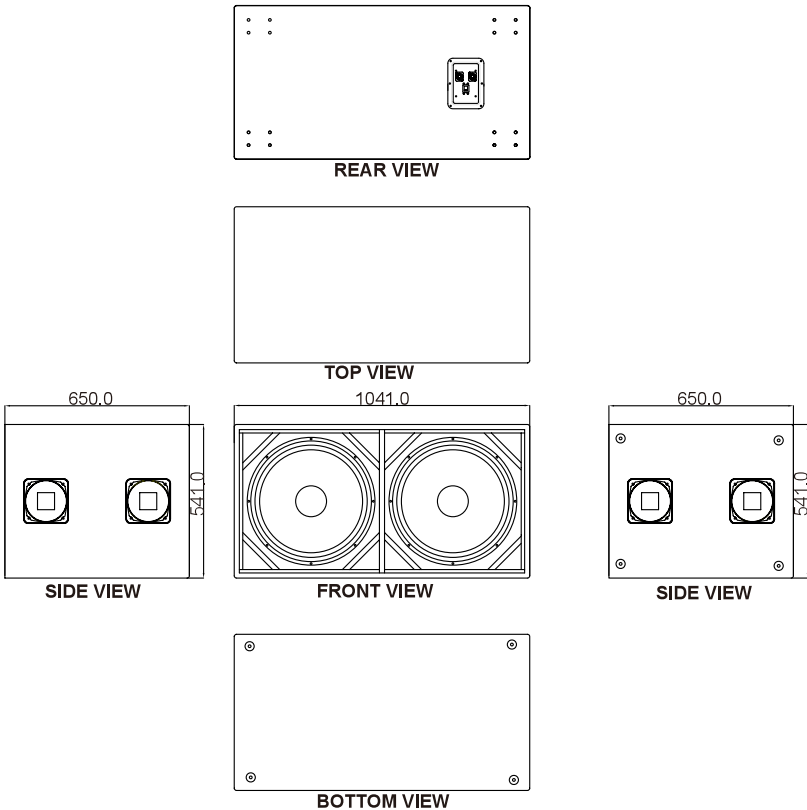


Delta X Series

Delta X18B



Delta X218B



SPECIFICATIONS

Model Name	DELTA-X10	DELTA-X12	DELTA-X15
System Type	Passive	Passive	Passive
Configuration	Two-way	Two-way	Two-way
Frequency Response (+/-3dB)	65-20kHz	60-20kHz	50-20kHz
Frequency Range (- 10 dB)	60-20kHz	55-20kHz	45-20kHz
Sensitivity (2.83v/1m)	97dB	97dB	98dB
Calculated Maximum SPL @1m	128dB	129dB	131dB
System Rated Impedance	8Ω	8Ω	8Ω
Low Frequency Transducer Size	288mm / 10" Paper	332mm / 12" Paper	404mm / 15" Paper
Voice-Coil Size	63.5mm / 2.5"	77.1mm / 3"	77.1mm / 3"
Rated Impedance	8Ω	8Ω	8Ω
LF Power (re:AES2-2012)	300W	400W	500W
High Frequency Transducer			
HF Driver Type	Compression Driver	Compression Driver	Compression Driver
Voice-Coil Size	44.5mm / 1.75" Titanium	50.8mm / 2" Titanium	50.8mm / 2" Titanium
Exit Size	25.4mm / 1"	35.6mm / 1.4"	35.6mm / 1.4"
Diaphragm Material	Titanium	Titanium	Titanium
Rated Impedance	8Ω	8Ω	8Ω
HF Power (re:AES2-2012)	40W	50W	50W
Nominal Coverage (H x V)	90° x 60°	90° x 45°	90° x 45°
Power			
System Continuous Power	300W	400W	500W
System Programme Power	600W	800W	1000W
System Peak Power	1200W	1600W	2000W
Crossover frequency	2.8kHz	1.8kHz	1.8kHz
Input Connector	2 x NL4 (speakON Compatible)	2 x NL4 (speakON Compatible)	2 x NL4 (speakON Compatible)
Hardware			
Pole Mount	Dual Angle (0° or 10°) 35mm Pole Socket	Dual Angle (0° or 10°) 35mm Pole Socket	Dual Angle (0° or 10°) 35mm Pole Socket
Handles	2 on Sides	2 on Sides	2 on Sides
Enclosure			
Enclosure Material	15mm Plywood	15mm Plywood	15mm Plywood
Finish	black paint	black paint	black paint
Grille Material & Finish	1.5 mm Steel Black or White	1.5 mm Steel Black	1.5 mm Steel Black
Dimensions - Unpacked)			
Height	500mm / 19.7"	630mm / 24.8"	700mm / 27.6"
Width Front	338mm / 13.3"	390mm / 15.3"	446mm / 17.6"
Width Rear	212.4mm / 8.4"	241.2mm / 9.5"	281.4mm / 11.1"
Depth	330mm / 13"	373mm / 14.7"	406mm / 16"
Dimensions - Packed (mm / inches):			
Height	575mm / 22.6"	745mm / 29.3"	803mm / 31.6"
Width Front	400mm / 15.7"	566mm / 22.3"	638mm / 25.1"
Width Rear	300mm / 11.8"	328mm / 12.9"	366mm / 14.4"
Depth	386mm / 15.2"	464mm / 18.3"	498mm / 19.6"
Weight			
Net Weight (kg / lbs)	16.58kg / 36.5lbs	24.7kg / 54.5lbs	29.9kg / 65.9lbs
Gross Weight (kg / lbs)	19.6kg / 43lbs	29kg / 63.8lbs	35.5kg / 78.1lbs

SPECIFICATIONS

Model Name	DELTA-X12M	DELTA-X15M	DELTA-X215
System Type	Passive	Passive	Passive
Configuration	Two-way	Two-way	Quassi Three-way
Frequency Response (+/-3dB)	60-20kHz	55-20KHZ	45-20KHZ
Frequency Range (- 10 dB)	55-20kHz	50-20KHZ	45-20KHZ
Sensitivity (2.83v/1m)	97dB	98dB	101dB
Calculated Maximum SPL @1m	129dB	131dB	137dB
System Rated Impedance	8Ω	8Ω	4Ω
Low Frequency Transducer Size			
Voice-Coil Size	332mm / 12" Paper	404mm / 15" Paper	2 x 404mm / 15"
Rated Impedance	77.1mm / 3"	77.1mm / 3"	77.1mm / 3"
LF Power (re:AES2-2012)	8Ω	8Ω	2x8Ω
High Frequency Transducer	400W	500W	2x500W
HF Driver Type			
Voice-Coil Size	Compression Driver	Compression Driver	Compression Driver
Exit Size	50.8mm / 2" Titanium	50.8mm / 2" Titanium	50.8mm / 2"
Diaphragm Material	35.6mm / 1.4"	35.6mm / 1.4"	35.6mm / 1.4"
Rated Impedance	Titanium	Titanium	Titanium
HF Power (re:AES2-2012)	8Ω	8Ω	8Ω
Nominal Coverage (H x V)	50W	50W	50W
Power	90° x 45°	90° x 45°	90° x 45°
System Continuous Power			
System Programme Power	400W	500W	1000W
System Peak Power	800W	1000W	2000W
Crossover frequency	1600W	2000W	4000W
Input Connector	1.8kHz	1.8kHz	1.8Hz
Hardware	2 x NL4 (speakON Compatible)	2 x NL4 (speakON Compatible)	2 x NL4 (speakON Compatible)
Pole Mount			
Handles	2 on Sides	2 on Sides	2 on Sides / 1 on Back
Enclosure			
Enclosure Material	15mm Plywood	15mm Plywood	15mm Plywood
Finish	black paint	black paint	black paint
Grille Material & Finish	1.5 mm Steel Black	1.5 mm Steel Black	1.5 mm Steel Black
Dimensions - Unpacked)			
Height	449(SITU)mm/17.7"	493(SITU)19.4"	1135mm / 44.7"
Width Front	390mm/15.4"	446mm/17.6"	488mm / 19.2"
Width Rear	390mm/15.4"	446mm/17.6"	299.6mm / 11.8"
Depth	618mm/24.3"	685mm/27"	450mm / 17.7"
Dimensions - Packed (mm / inches):			
Height	462mm/18.2"	518mm/20.4"	1218mm / 48"
Width Front	690mm/27.2"	757mm/29.8"	558mm / 22"
Width Rear	690mm/27.2"	757mm/29.8"	558mm / 22"
Depth	522mm/20.6"	565mm/22.2"	522mm / 20.6"
Weight			
Net Weight (kg / lbs)	23.18kg/50.9lbs	27.24kg59.9lbs	52.9kg / 116.6lbs
Gross Weight (kg / lbs)	28.5kg/62.7lbs	33.96kg/74.7lbs	59kg / 130lbs

SPECIFICATIONS

Model Name	DELTA-X15B	DELTA-X18B	DELTA-X218B
System Type	Passive	Passive	Passive
Configuration	Subwoofer	Subwoofer	Dual Chamber Subwoofer
Frequency Response (+/-3dB)	42-2kHz(BI-AMP)	38-1.5kHz(BI-AMP)	30-1.5KHZ
Frequency Range (- 10 dB)	38-150HZ	30-1.5KHZ	30-1.5KHZ
Sensitivity (2.83v/1m)	98dB	99dB	100dB
Calculated Maximum SPL @1m	132dB	134dB	138dB
System Rated Impedance	8Ω or 4Ω	8Ω or 4Ω	Parallel:4Ω Discrete:8Ω x2
Low Frequency Transducer Size			
Voice-Coil Size	404mm / 15"	470mm / 18"	470mm / 18"
Rated Impedance	102mm / 4"	102mm / 4"	102mm / 4"
LF Power (re:AES2-2012)	8Ω or 4Ω	8Ω or 4Ω	2x8Ω
High Frequency Transducer	700W	800W	800W
HF Driver Type			
Voice-Coil Size	-	-	-
Exit Size	-	-	-
Diaphragm Material	-	-	-
Rated Impedance	-	-	-
HF Power (re:AES2-2012)	-	-	-
Nominal Coverage (H x V)	-	-	-
Power	-	-	-
System Continuous Power	700W	800W	1600W Parallel / 800W Discrete
System Programme Power	1400W	1600W	3200W Parallel / 1600W Discrete
System Peak Power	2800W	3200W	6400W Parallel / 3200W Discrete
Crossover frequency	-	-	-
Input Connector	2 x NL4 (speakON Compatible)	2 x NL4 (speakON Compatible)	2 x NL4 (speakON Compatible)
Hardware			
Pole Mount	35mm	35mm	
Handles	2 on Sides	2 on Sides	4 on Sides
Enclosure			
Enclosure Material	15mm Plywood	15mm Plywood	18mm Plywood
Finish	black paint	black paint	black paint
Grille Material & Finish	1.5 mm Steel Black	1.5 mm Steel Black	1.5 mm Steel Black
Dimensions - Unpacked)			
Height	471mm / 18.5"	539mm / 21.2"	541mm / 21.3"
Width Front	471mm / 18.5"	539mm / 21.2"	1041mm / 41"
Width Rear	471mm / 18.5"	539mm / 21.2"	1041mm / 41"
Depth	600mm / 23.6"	650mm / 25.6"	650mm / 25.6"
Dimensions - Packed (mm / inches):			
Height	556mm / 21.9"	624mm / 24.6"	626mm / 25.6"
Width Front	672mm / 26.5"	722mm / 28.4"	1126mm / 44.3"
Width Rear	672mm / 26.5"	722mm / 28.4"	1126mm / 44.3"
Depth	543mm / 21.4"	611mm / 24.1"	722mm / 28.4"
Weight			
Net Weight (kg / lbs)	31.5kg / 69.4lbs	37.3kg / 82.06lbs	78.9kg / 173.9lbs
Gross Weight (kg / lbs)	35.12kg / 77.4lbs	43.2kg / 95.04lbs	86kg / 189.6lbs

Delta X Series

WHARFEDALE PRO LIMITED WARRANTY

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

*Be aware that warranty details may differ from country to country. Contact your dealers or distributor for information. These terms do not infringe your statutory rights.



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