PROFESSIONAL SOUND SYSTEMS ➤➤➤

Titan™ Series

OPERATING MANUAL AND USER GUIDE

Titan™ 8 Passive Titan™ 12 Passive Titan™ 15 Passive
Titan™ 8 Active MKII Titan™ 12 Active Titan™ 15 Active
Titan™ Sub A12 Titan™ Sub A15

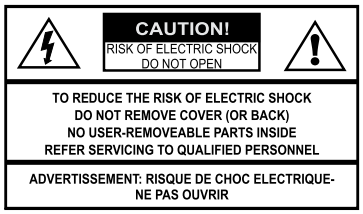
Wharfedale Pro

www.wharfedalepro.com

IMPORTANT WARNINGS & SAFETY INSTRUCTIONS - GENERAL

1. Please read and retain these safety instructions.
2. Heed all warnings in the operating instructions and on the appliance.
3. Do not use this apparatus near water or moisture.
4. Clean only with a dry cloth.
5. Do not install near sources of heat such as radiators, heat registers, stoves or other apparatus that produce heat.
6. Refer all servicing to authorised personnel.
7. 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. Servicing is required when the apparatus has been damaged in any way including: Impact damage, power cord/supply damage, liquid spillages, small objects falling into the unit or exposure to moisture. In addition please refer to authorised service personnel if the apparatus is not operating normally.
9. To completely disconnect this equipment from the AC mains disconnect the power plug from the AC receptacle.
10. To prevent fire never place the unit near any naked flame such as a candle.
11. Do not defeat the purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are there for your safety. If the plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
12. USING 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.
13. CABLES – Do not use shielded or microphone cables for connection between amplifiers and speakers. Use only approved speaker cables with proper connectors.
14. RIGGING – SUSPENDING – MOUNTING – Rigging, suspending and 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 SOUND REINFORCEMENT PRODUCTS 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.
15. CAUTION – Professional sound reinforcement systems are capable of generating very high sound pressure levels. Take care with placement and operation to avoid exposure to excessive volume levels. Permanent hearing damage can result when operated to extreme levels.

IMPORTANT SAFETY INFORMATION POWERED PRODUCTS



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched, particularly at Plugs, convenience receptacles, and the point where they exit from the apparatus.

Use only attachments/accessories specified by the manufacturer.

Unplug this apparatus during lightning storms or when unused for long periods of time.

Refer all servicing to qualified service personnel.

Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been exposed to rain or moisture, does not operate normally, or has been dropped.

Warning: To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture. The product must not be exposed to dripping and splashing and no object filled with liquids such as a vase of flowers should be placed on the product.

No naked flame sources such as candles should be placed on the product.

Caution: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this device.

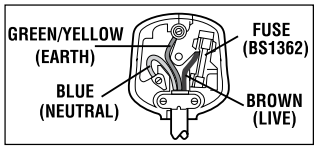
Warning: The mains power switch for this appliance is located on the rear panel. To permit free access to this switch, the apparatus must be located in an open area without any obstructions.

ESSENTIAL INFORMATION FOR UK USERS

The power cord on your subwoofer may be supplied with a plug incorporating a fuse, the value of which is indicated on the pin face of the plug. Should the fuse need to be replaced, an ASTA or BSI approved BS1362 fuse must be used of the same rating. If the plug is cut off it must NOT be re-used. Dispose of any such plug safely. There is a danger of electric shock if a cut-off plug is inserted into a mains socket.

The wires in the mains lead are coloured in accordance with the following code: Green and Yellow - Earth: Blue - Neutral: Brown - Live.
As the colours of the wires in the mains lead may not correspond with the markings identifying the terminals in the replacement mains plug, proceed as follows:
The wire coloured Blue must be connected to the terminal marked with the letter ¨N¨ or coloured Black. The wire coloured Brown must be connected to the terminal marked with the letter ¨L¨ or coloured Red. The wire coloured Green and Yellow must be connected to the terminal marked with the letter ¨E¨ , or coloured Green, or Green and Yellow, or marked with the Earth symbol.

Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination avoid injury from tip-over.



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INTRODUCTION

Wharfedale Pro Titan™ Series are the result of many years of experience in the use, design and manufacturing of professional loudspeaker products. We take great pride in engineering and building every Wharfedale Pro loudspeaker and wish to thank you for entrusting us with your sound.

From the time Gilbert Briggs built his first loudspeaker in 1932, to the present, Wharfedale Loudspeakers have maintained the same standard of quality in components, workmanship and performance. Wharfedale are one of the few present day manufacturers that design, engineer and build all of their own transducers.

Please take a few minutes to read this manual completely in order to ensure that you get the most out of your Titan™ Series Loudspeaker system.

ABOUT THE Titan™ SERIES

The Wharfedale Pro Titan Series are versatile loudspeakers suitable for the widest range of applications. Passive and active full range models are available and are complimented by 2 active subwoofers. The Titan Series is suitable for both portable and fixed installation applications.

Wharfedale Pro wall brackets are available as an optional accessory for the full range enclosures.

Suggested applications

- Foreground / Background music
- Paging systems
- Portable sound
- Presentations

TITAN™ SERIES OVERVIEW

The Titan Series are powerful, accurate, high quality loudspeaker systems with low distortion that are designed to deliver high quality sound at a cost effective price point.

The road tough polypropylene enclosures are ultra lightweight and include rubberized handles and cable channeling to keep wiring neat and tidy. Comprehensive rigging options suit the Titan series to flown applications and a range of wall mount options.

An Elliptical Wave Guide (EWG) provides smooth dispersion in both the horizontal and vertical planes.

Active models feature rear panel power LED's and a throat mounted LED to make you aware of AC power supply from both the front and rear of the unit. The 8A MK2 model features a horn LED defeat switch for less obtrusive aesthetics in applications such as conferencing and A/V presentations. The BRO™ (Bass Response Optimizer) circuit on the 12A and 15A models helps counteract loss of bass at low levels, similar to a loudness switch on home HiFi amplifiers.

FEATURES

Titan Passive

- 2 way full range loudspeakers
- Moisture proof woofers
- HF compression drivers
- 90° x 60° elliptical Wave Guide (EWG)
- DTF™ Dynamic Thermal Filament HF protection
- Lightweight high strength polypropylene enclosures
- Ergonomic rubberized handles
- Integral lockable 35mm (1⅜") pole mount socket
- M6 / M8 rigging points
- Speakon™ and ¼" jack inputs

Titan Passive

- Bi-amplified full range loudspeakers
- Moisture proof woofers
- HF compression drivers
- Independent LF & HF signal limiting
- Per channel volume controls (Master only on 8A)
- 2 Band EQ
- 90° x 60° elliptical Wave Guide (EWG)
- BRO™ Bass Response Optimizer (12A & 15A only)
- Horn LED defeat switch (8A only)
- XLR output for parallel wiring
- XLR / ¼" jack combo inputs
- Mic / line level input selector
- 2 mixable inputs (12A & 15A only)
- Stereo RCA inputs (12A & 15A only)
- Lightweight high strength polypropylene enclosures
- Ergonomic rubberized handles
- Integral lockable 35mm (1⅜") pole mount socket
- M6 / M8 rigging points
- IEC AC receptacle

Subwoofer

- Low distortion, high power woofers
- 2x balanced XLR HPF outputs
- 2x summed XLR / ¼" jack combo inputs
- Built in signal limiting
- Adjustable crossover frequency (SUB 12A only)
- −∞ to +6dB trim control
- 0° / 180° switch
- Ergonomic handles
- Pole mount socket
- IEC AC receptacle

SETTING UP

1. Ensure the speakers power switch is in the off position (Active models only)
2. Set the level controls to minimum (Fully anticlockwise) (Active models only)
3. Set the EQ controls to 0dB (Active models only)
4. Select mic/line input (Active models only)
5. Connect all signal cables
6. Connect the power cable (Active models only)
7. Switch on source equipment, ensuring that the master level is at minimum
8. Switch on the Titan Loudspeaker (Active models only)
9. Raise the level control on the Titan (Active models only) or external amplifier
10. If the limit LED illuminates lower the level control, if more level is required you will need more speakers. Occasional flashes are acceptable. (Active models only)
11. When powering down your system ensure that the level control (Active models only) has been lowered to minimum before switching off the power

SPEAKER PLACEMENT

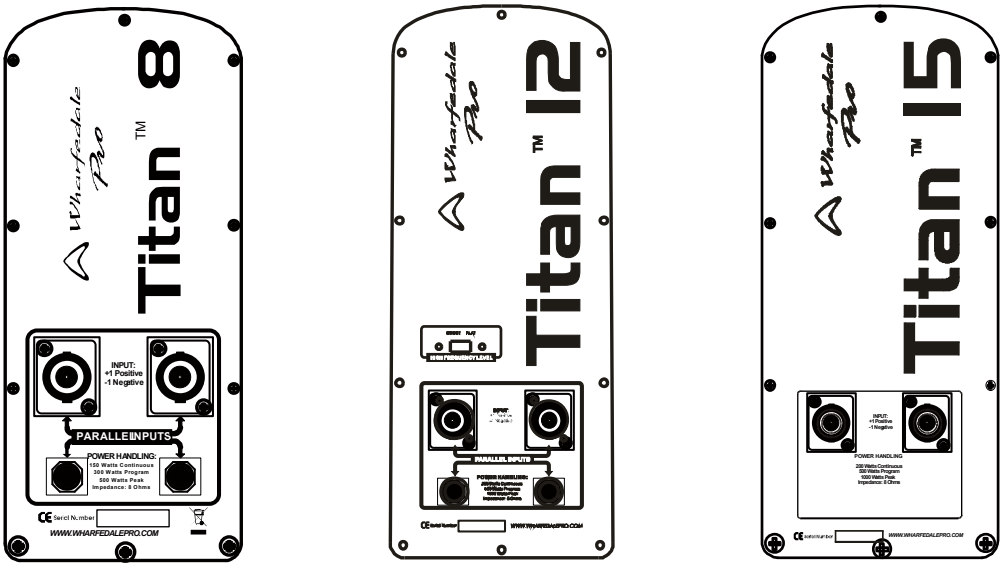
The well behaved dispersion characteristics of the Titan series make speaker placement quick and simple.

As with all full range loudspeakers it is recommended to place a Titan above the head level of the audience, as the human body can absorb a huge amount of high frequency energy. Placing the loudspeaker enclosure higher up also helps improve coverage for more even levels over a greater audience area.

Tripod speaker stands, pole mounts, Wall brackets and rigging hardware can be used to elevate the Titan loudspeaker. Always ensure that any accessories that are used are capable of safely elevating the loudspeaker as incorrect rigging can be dangerous and even fatal. Please refer to the important safety warnings section for more guidelines on rigging and suspending.

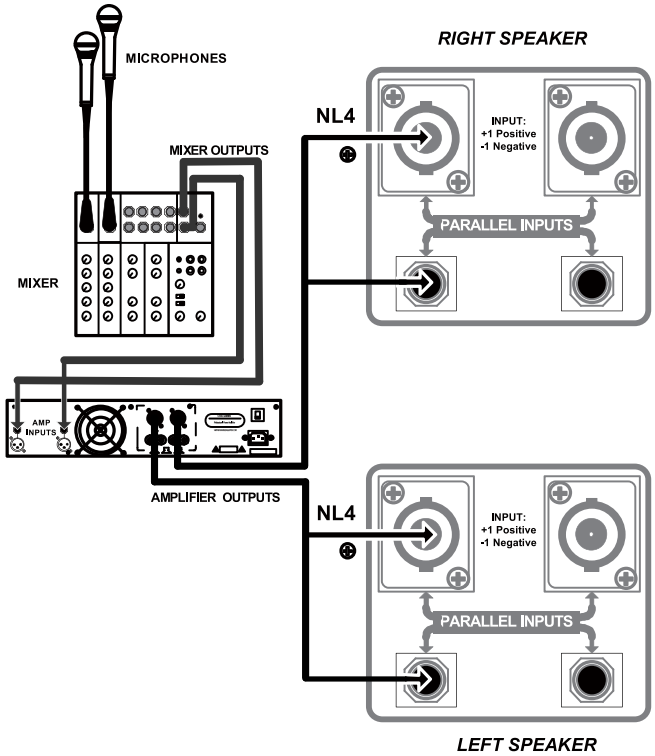
Always try to place your microphones outside the coverage of your front of house speakers to reduce the risk of feedback.

Titan™ REAR PANEL LAYOUT



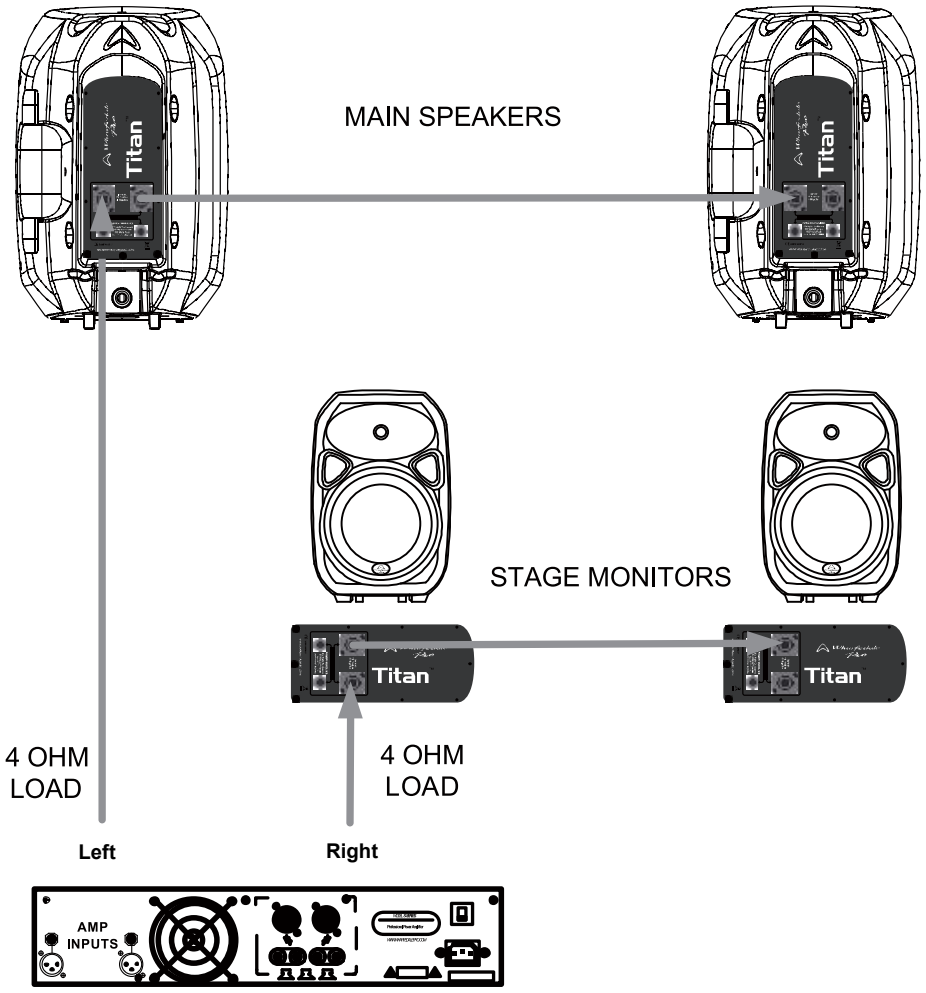
CONNECTION DIAGRAM #1

Titan two channel setup



CONNECTION DIAGRAM # 2

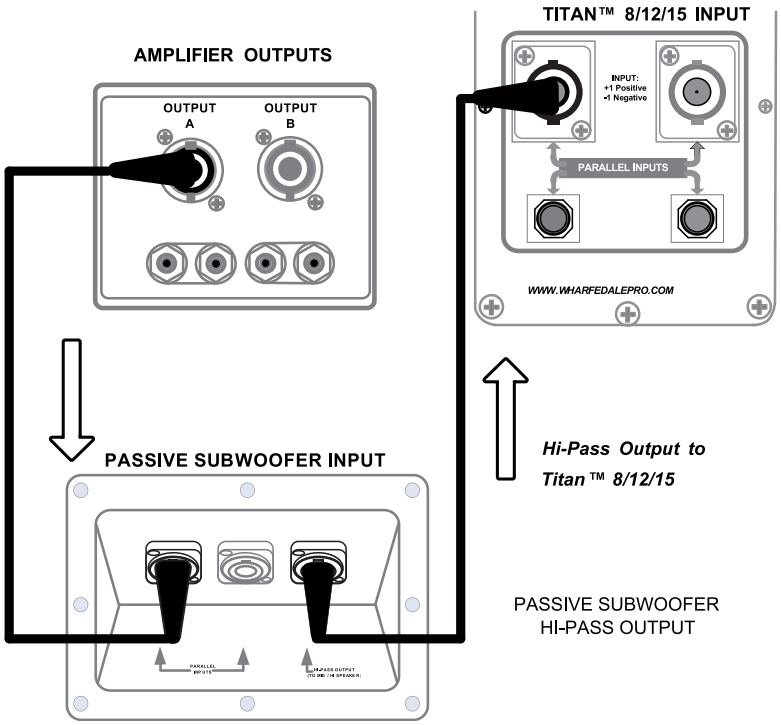
Titan mono front of house+stage monitor setup



NOTE: **This configuration represents a 4 ohm load to each output channel of the amplifie**

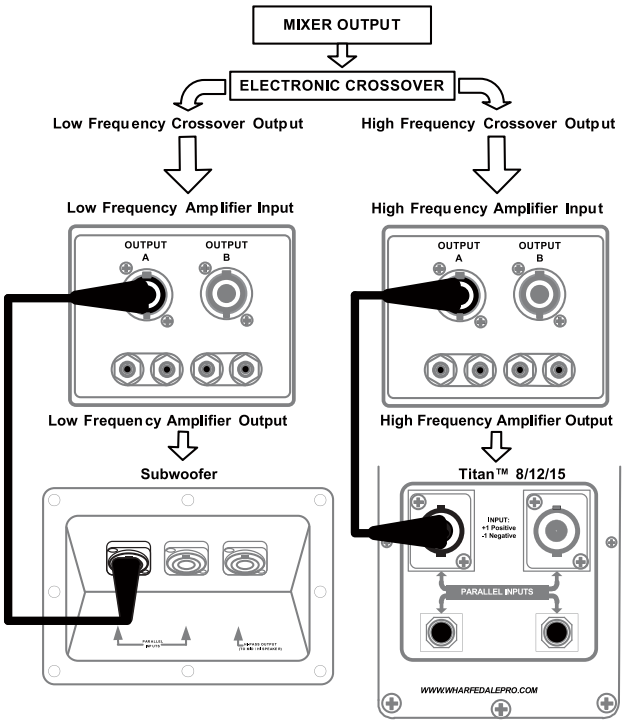
CONNECTION DIAGRAM # 3

USING THE Titan WITH A PASSIVE SUBWOOFER



CONNECTION DIAGRAM # 4

USING THE Titan™ 8/12/15 IN A BI-AMP SYSTEM

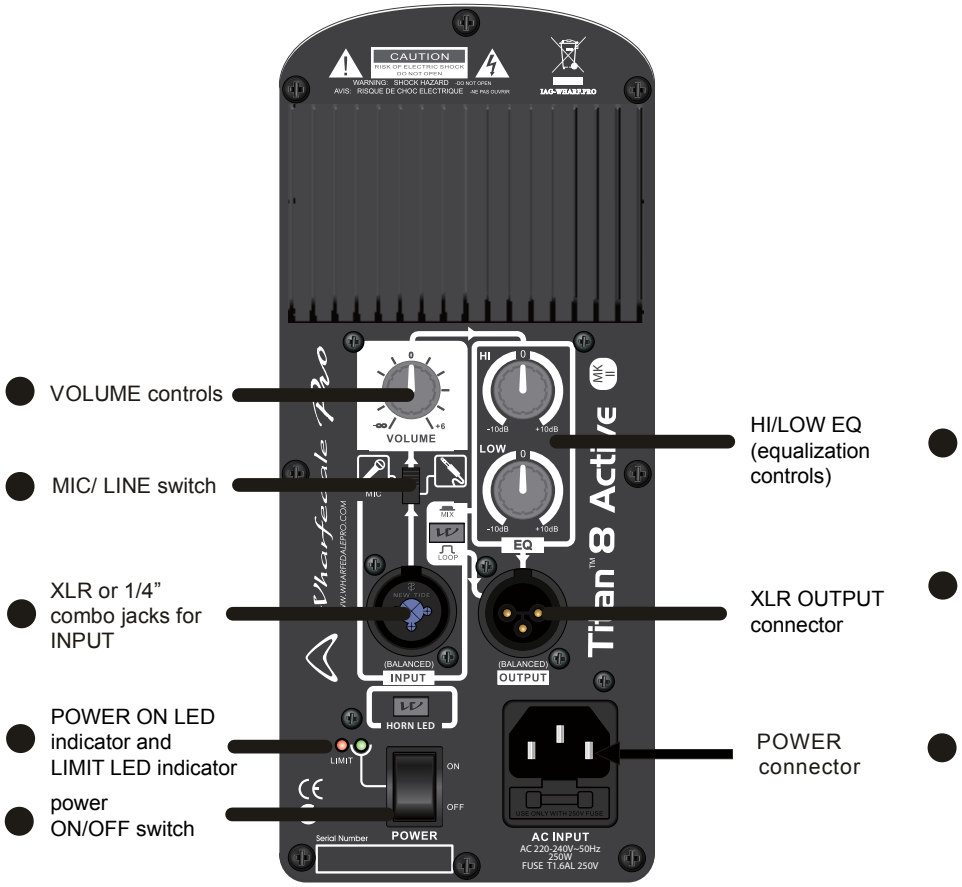


Titan™ 8 / Titan™ 12 / Titan™ 15 ACTIVE

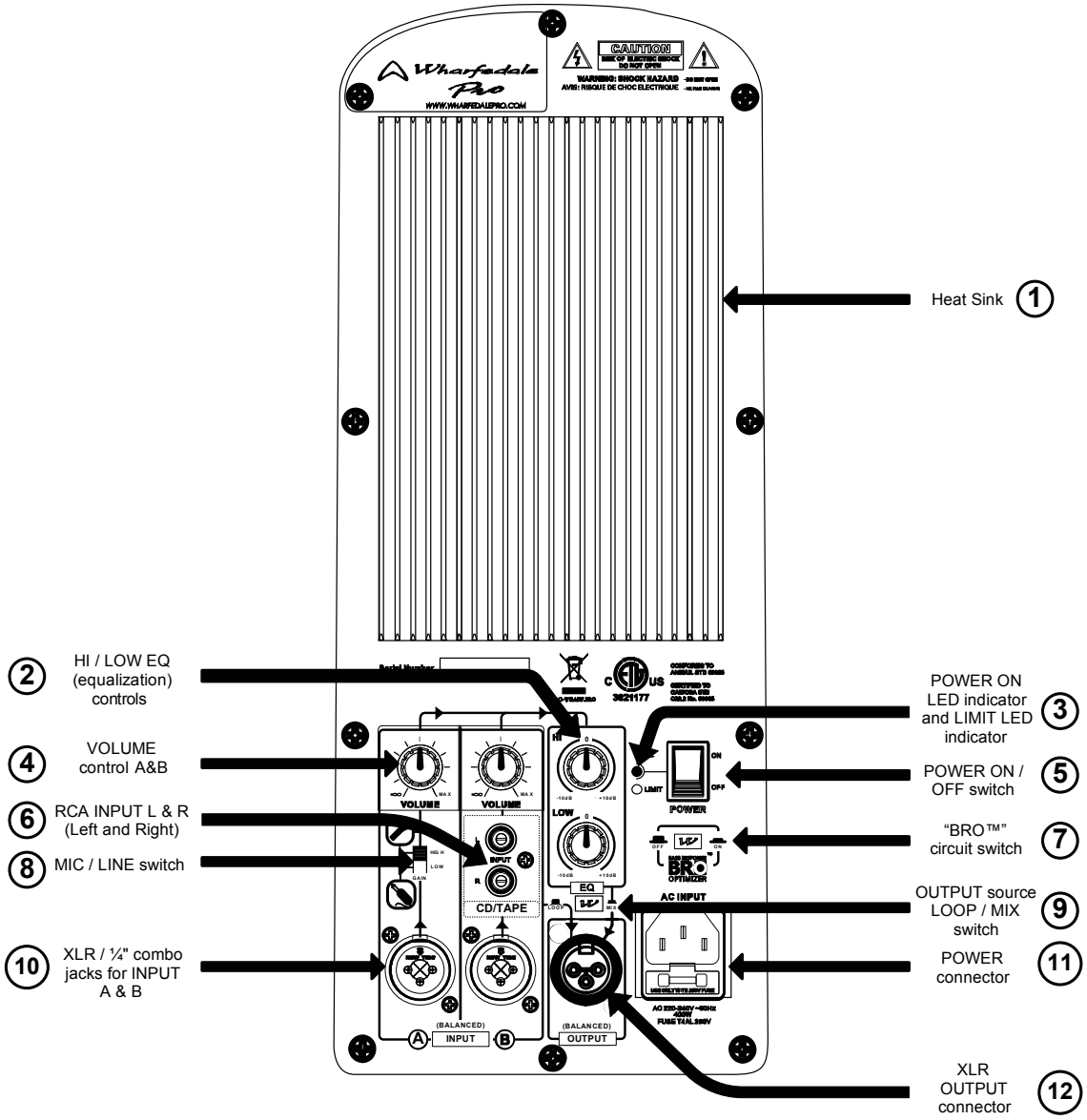
The Loop / Mix Switch

The LOOP/MIX switch allows you to control the signal content going to the XLR OUTPUT jack. In the “LOOP” mode, this switch routes the signal of INPUT 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. This signal can then be sent to additional powered speakers or powered subwoofers.

Titan™ 8 ACTIVE - REAR PANEL FEATURES



Titan™ 12/15 ACTIVE REAR PANEL LAYOUT



TITAN™ 8/12/15 ACTIVE REAR PANEL FEATURES

1. **Heat Sink:** The heat sink allows for dissipation of heat built up from the amplifier via air cooling at the rear of the enclosure.

2. **HI and LOW EQ (equalization) controls:** These knobs control the equalization of the overall output signal providing +/- 10dB of gain for each band.

3. **POWER ´ON´ indicator LED and LIMIT indicator LED:** The bracketed LED to the left of the POWER switch illuminates when the power switch is in the´ON´ position. The LIMIT LED illuminates when the signal limiter is limiting the level of the signal to prevent distortion and overload.

4. **VOLUME for INPUT A and INPUT B:** These knobs control the volume of each input channel (Controls the master volume on the Titan 8A MK2)

5. **POWER ON / OFF switch:** This switch: turns the power on and off.

6. **RCA L / R (Left and Right) input jacks:** These jacks allow input of a stereo signal (left and right). The signal is actively combined or “summed” providing a mono signal to the amplifier.

7. **BRO™ Bass Response Optimizer circuit switch:** The BRO™ circuit, when engaged, allows for enhanced low frequency response at lower volume levels.

8. **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) .

9. **Output source “LOOP / MIX” switch:** In the “LOOP” mode, this switch routes the signal of INPUT 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.

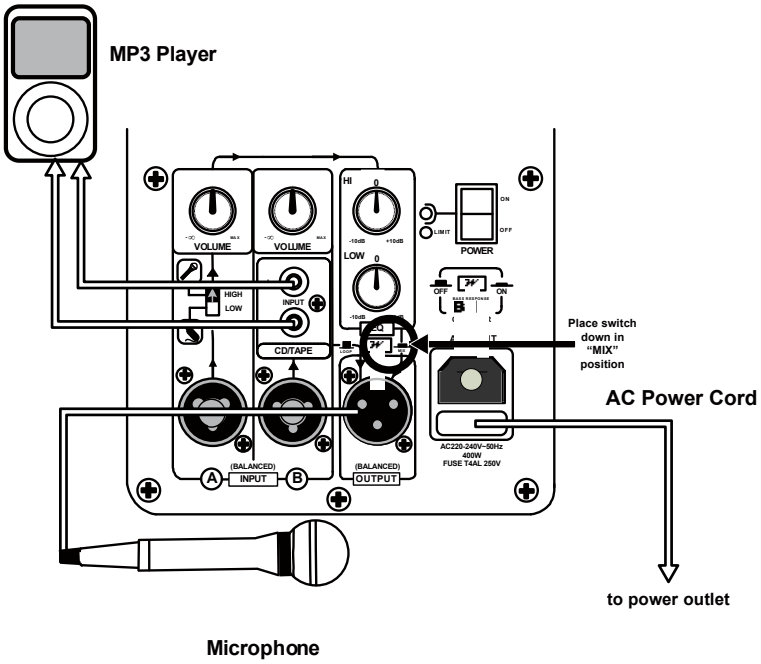
10. **XLR / ¼” COMBO input jacks for INPUT A and INPUT B:** These convenient jacks allow XLR or ¼” balanced input connections to INPUT A and INPUT B

11. **POWER cord jack:** This is a jack 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 jack.

12. **XLR line level OUTPUT jack:** This jack provides a balanced line level output for connection to additional Titan™ ACTIVES, powered subwoofers or amplifiers.

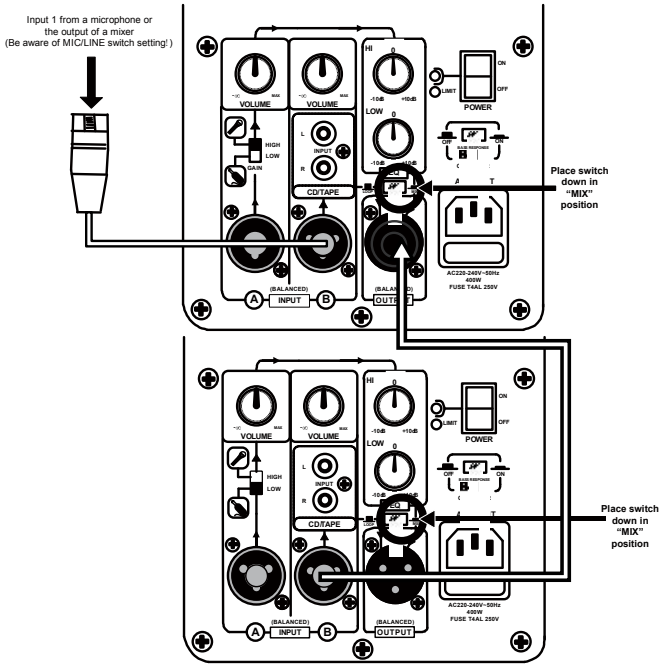
Titan™12A / 15A CONNECTION DIAGRAM # 1

Basic microphone / playback hookup



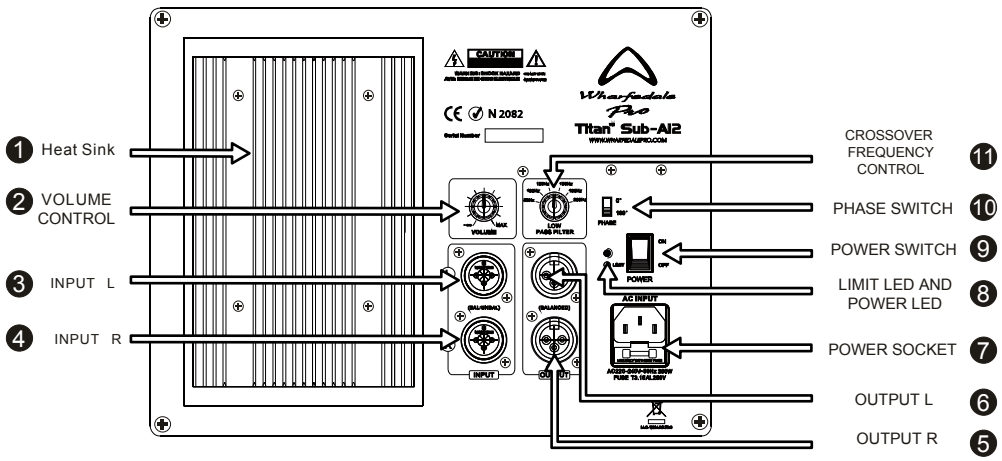
Titan™12A / 15A CONNECTION DIAGRAM # 2

Connecting two Titan™ 12 ACTIVE speakers together



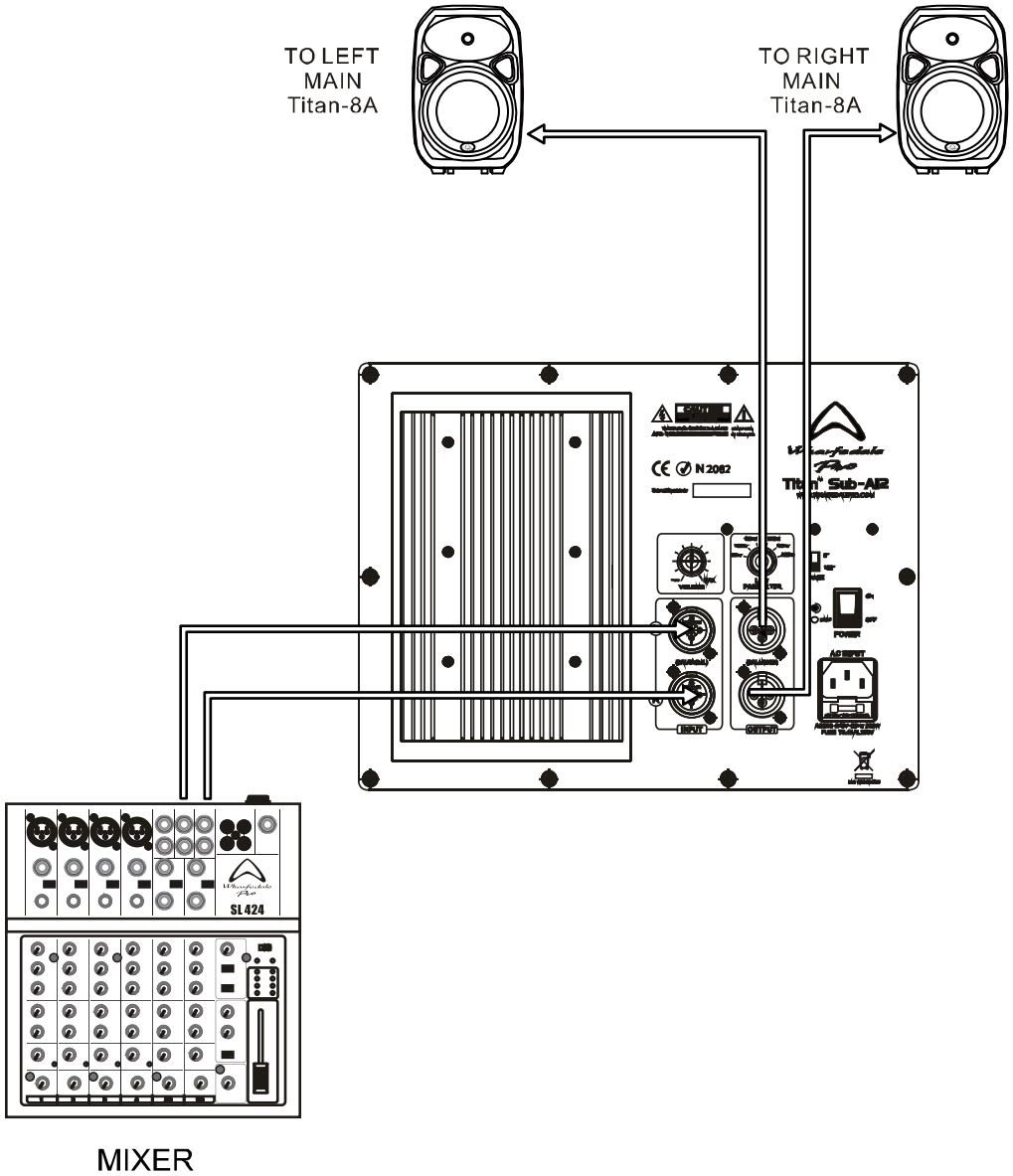
TITAN™ SUB A12 REAR PANEL FEATURES

1. HEAT SINK	Cooling fins for amplifier. Do not obstruct.
2. VOLUME CONTROL	Adjusts the volume.
3. INPUT L	Balanced line level input via a XLR/ ¼" combo connector.
4. INPUT R	Balanced line level input via a XLR/ ¼" combo connector.
5. OUTPUT R	Balanced male XLR connector provides output HIGHPASS signal.
6. OUTPUT L	Balanced male XLR connector provides output HIGHPASS signal.
7. POWER SOCKET	This is the connection for the IEC AC power connector.
8. LIMIT LED	LED indicator illuminates when the signal limiting function is activated.
POWER LED	LED indicator illuminates when the unit is powered up.
9. POWER SWITCH	Turns the power on and off to the subwoofer amplifier module.
10. 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.
11. CROSSOVER FREQUENCY CONTROL	Adjustable 80Hz/100Hz/120Hz/150Hz/180Hz/200Hz.



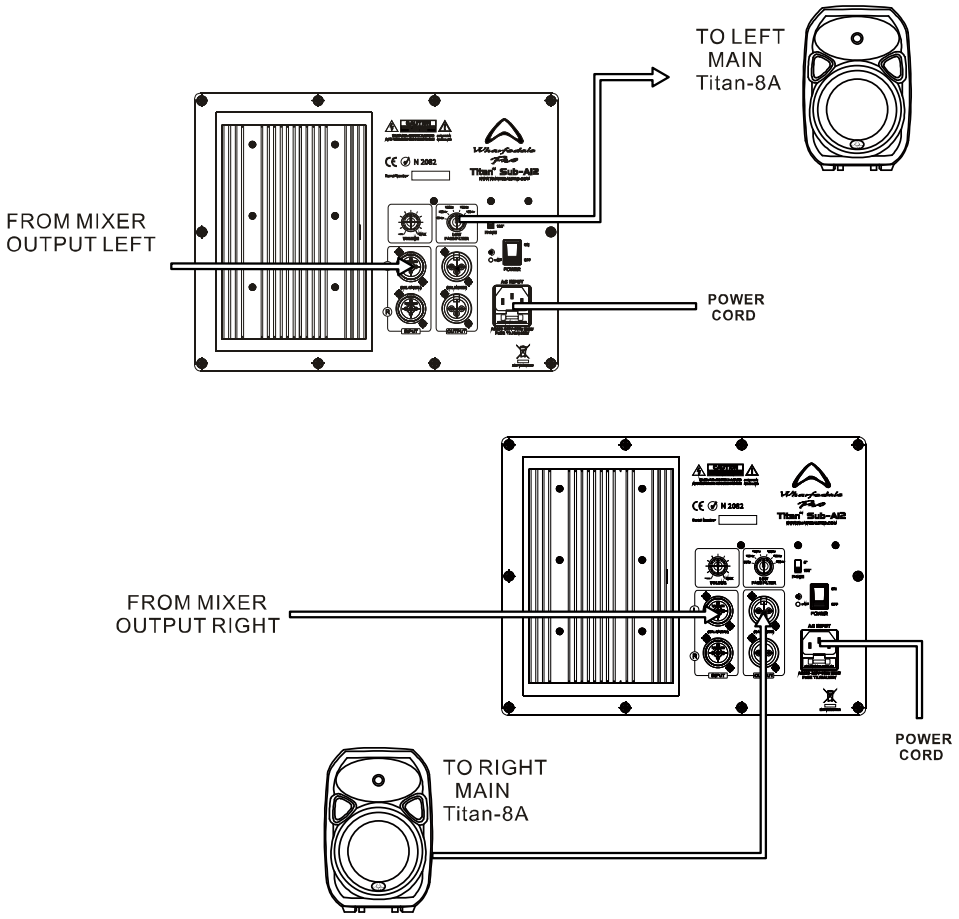
Titan™ Sub-A12 CONNECTION DIAGRAM # 1

TWO CHANNEL SYSTEM WITH HIGHPASS OUTPUT



Titan™ Sub-A12 CONNECTION DIAGRAM # 2

USING TWO Titan™ Sub-A12 WITH
TWO POWER SPEAKERS



Titan™ Sub-A15 - REAR PANEL FEATURES

1. **INPUT A** - Balanced line level input via a XLR / ¼" combo connection.

2. **OUTPUT A** - Balanced male XLR connection provides "THRU" or HIGHPASS signal (depending on switch setting).

3. **SPEAKER LEVEL INPUT** - Allows for connection of an external amplifier to use the Titan™ Sub-A15 as a passive subwoofer.
   NOTE: Disconnect the power cord when using the Titan™ Sub-A15 in this mode.

4. **INPUT B** - Balanced line level input via a XLR / ¼" combo connection.

5. **OUTPUT B** - Balanced male XLR connection provides output "THRU" or HIGHPASS signal (depending on switch setting).

6. **HEATSINK** - Cooling fins for amplifier. Do not obstruct.

7. **VOLUME CONTROL** - Adjusts volume level of the subwoofer.

8. **THRU / HIGHPASS SWITCH** - Selects the signal type that is routed to the OUTPUT jacks, "THRU" sends the unprocessed signal to the outputs. "HIGHPASS" filters the signal at 100Hz to the outputs.

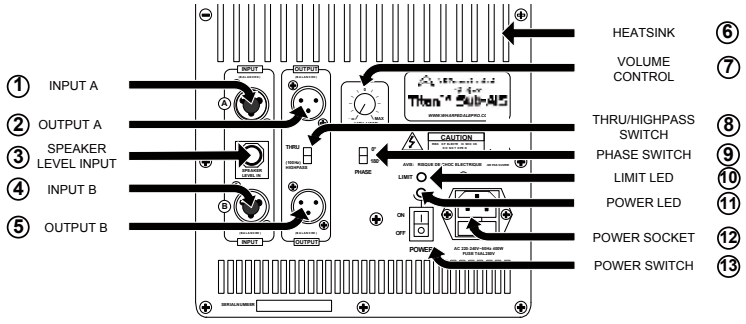
9. **PHASE SWITCH** - Selects the polarity of the signal being sent to the subwoofer. 0° selects the signal polarity as it appears at the input. The "180°" selection inverts the phase of the signal.

10. **LIMIT LED** - LED indicator illuminates when the singal limiting function is activated.

11. **POWER LED** - LED indicator illuminates when the unit is powered up.

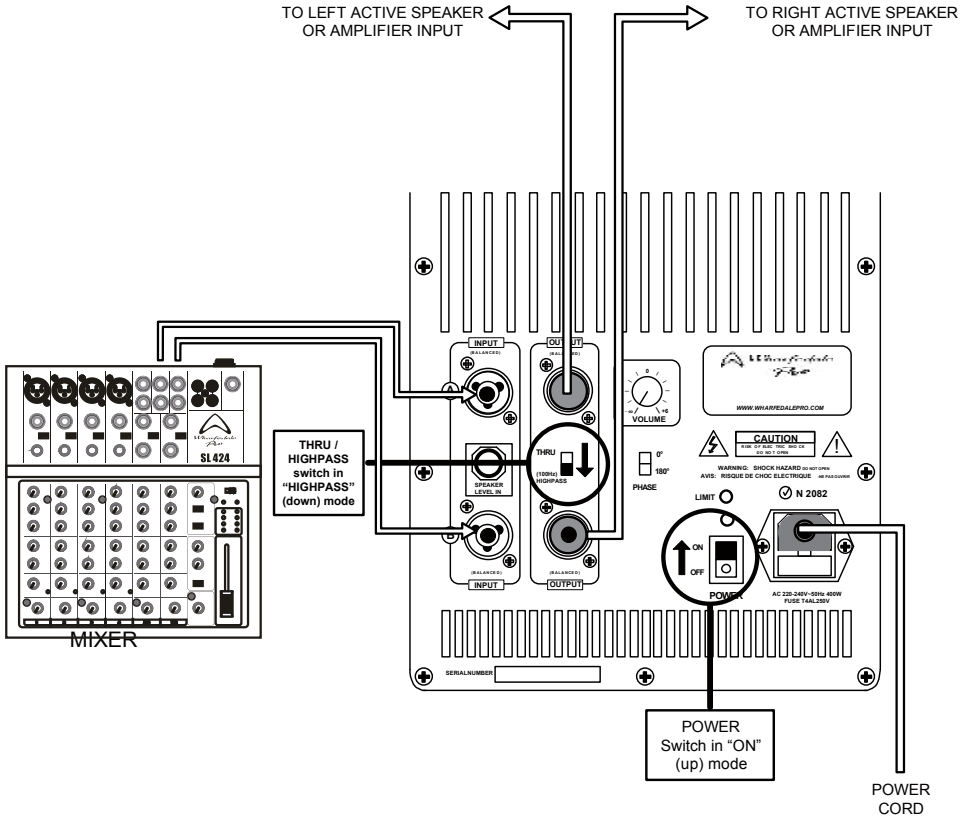
12. **POWER SOCKET** - This is the connection for the IEC AC power connector.

13. **POWER SWITCH** - Turns the power on and off to the subwoofer amplifier module.



Titan™ Sub-A12 CONNECTION DIAGRAM # 1

TWO CHANNEL SYSTEM WITH
HIGHPASS OUTPUT

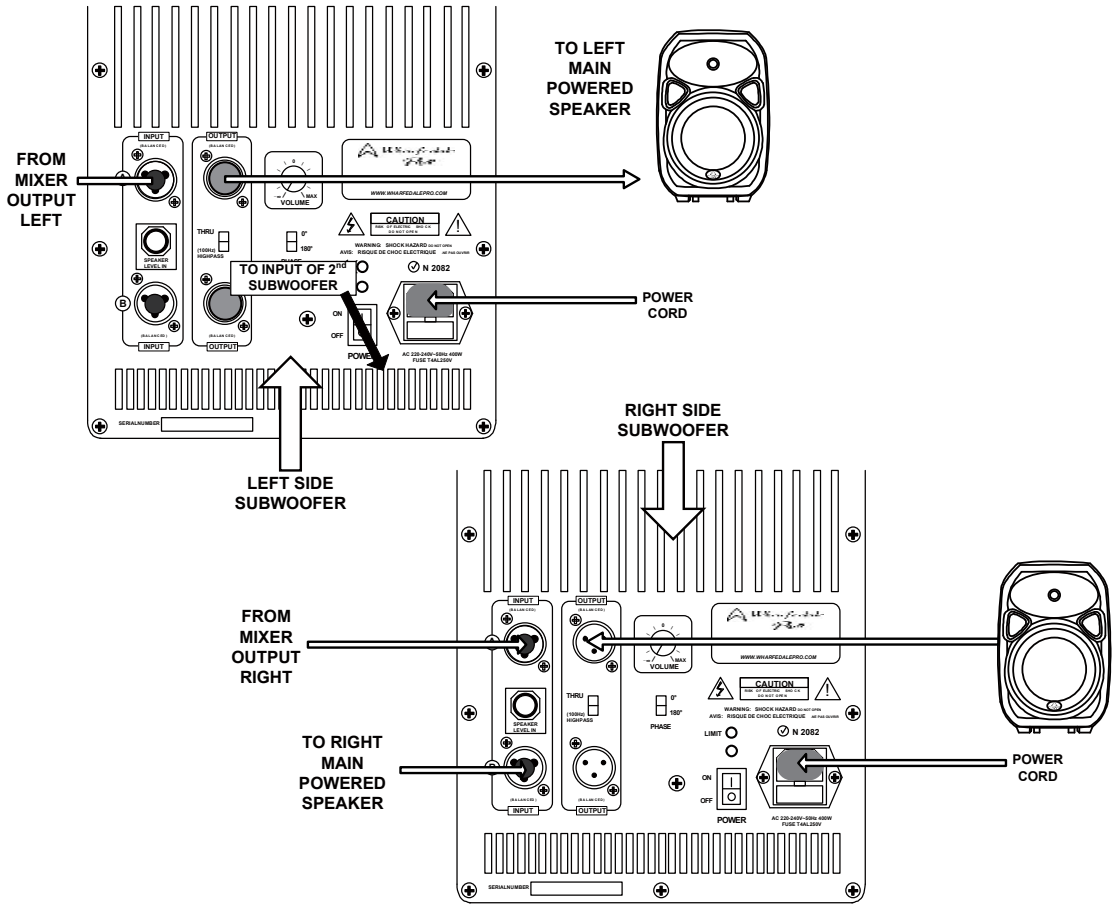


NOTE: This same connection configuration can be used with OUTPUT A and B used in a full-range mode when the THRU/HIGHPASS switch is in the "THRU" (up) position.

CONNECTION DIAGRAM # 2

USING TWO Titan™ Sub-A15's WITH

TWO POWERED SPEAKERS



SPECIFICATIONS - Titan™ PASSIVE SERIES

	Titan™ 8	Titan™ 12	Titan™ 15
Loudspeaker Type:	8" 2-way	12" 2-way	15" 2-way
Frequency Response (+/–3dB):	70 - 20kHz	55 - 20kHz	50 - 20kHz
Sensitivity (1W@1M):	96dB	98dB	97dB
Peak SPL:	124dB	128dB	129dB
HF Coverage (H x V):	90˚ x 60˚	90˚ x 60˚	90˚ x 60˚
System Impedance:	8 ohm	8 ohm	8 ohm
POWER (WATTS)			
Continuous:	150W	250W	400W
Music:	300W	500	800W
Peak:	600W	1000	1600W
LF DRIVER			
Size:	203mm/ 8"	305mm/ 12"	381mm/ 15"
Coil Size:	38.86mm / 1.53"	64.26mm / 2.5"	75mm / 3.0"
HF DRIVER/ HORN	Compression Driver	Compression Driver	Compression Driver
Coil Size:	25mm/1"	44mm/1.75"	51mm/ 2.0"
Exit Size:	30mm/1.2"	25mm/1"	25mm/1"
Diaphragm Material:	Cloth	Titanium	Titanium
HF Driver Protection:	Bulb	DTF™ Dynamic Thermal Filament	DTF™ Dynamic Thermal Filament
Long-Throw EQ Compensation:	N/A	3dB boost (long-throw) / Flat (near-field)	N/A
Horn Type:	EWG™ - Elliptical Waveguide	EWG™ - Elliptical Waveguide	EWG™ - Elliptical Waveguide
Throat Size:	25mm/1"	25mm/1"	25mm/1"
CROSSOVER			
Type/Frequency/Filter:	2-way 2.4KHz / Linkwitz-Riley	2-way 2.2KHz / Linkwitz-Riley	2-way 1.8KHz / Linkwitz-Riley
ENCLOSURE			
Shape/ Material:	Trapezoidal/ Polypropylene	Trapezoidal/ Polypropylene	Trapezoidal/ Polypropylene
Rigging:	(8) M6 threaded rigging points + (4) M6 threaded rigging points on bottom in Omnimount® 30.0-type footprint + Speaker pole-mount receptacle with lock screw + 1 built-in carry handle + Optional wall-mount bracket + (Optional dual-unit array speaker stand hardware)	(10) M8 threaded rigging points + (4) M8 threaded rigging points on bottom in Omnimount® 60.0-type footprint + Speaker pole-mount receptacle with lock screw + Optional wall-mount bracket + (Optional dual-unit array speaker stand hardware)	(10) M8 threaded rigging points + (4) M8 threaded rigging points on bottom in Omnimount® 60.0-type footprint + Speaker pole-mount receptacle with lock screw + Optional wall-mount bracket + (Optional dual unit array speaker stand hardware)
COLOURS	Grey or Black or White	Grey or Black or White	Grey or Black or White
OUTPUT CONNECTORS	2 x 1/4" jacks + 2 x NL4	2 x 1/4" jacks + 2 x NL4	2 x 1/4" jacks + 2 x NL4
DIMENSIONS/WEIGHTS			
Weight:	5.5kg / 12.1lbs	12kg / 26.4lbs	22kg / 48.4lbs
Dimensions (H x W x D):	396 x 266 x 221mm/ 15.59" x 10.47" x 8.7"	556 x 384 x 312mm/ 21.88" x 15.1" x 12.3"	708.3 x 477.8 x 401.77mm/ 27.9" x 18.8" x 15.8

SPECIFICATIONS - Titan™ ACTIVE SERIES

	Titan™ 8 ACTIVE MK II	Titan™ 12 ACTIVE	Titan™ 15 ACTIVE
System Type	Active 8" 2-way Bi-Amplified	Active 12" 2-way Bi-Amplified	Active 15" 2-way Bi-Amplified
Frequency Response (+/-3dB)	70-20kHz	55-20kHz	50-20kHz
Low Frequency Driver (mm/in.)	205mm / 8"	305mm / 12"	381mm / 15"
High Frequency Driver	Compression Driver	Titanium Compression Driver	Titanium Compression Driver
Exit Size (mm / inches)	30mm / 1.2"	25mm / 1"	25mm / 1"
Dispersion (H x V)	90° x 60°	90° x 60°	90° x 60°
Amplifiers			
Low Frequency (Class D)	Rated 150W continuous, 300W Peak	Rated 250W continuous, 500W Peak	Rated 350W continuous, 700W Peak
High Frequency (Class D)	Rated 30W continuous, 60W Peak	Rated 50W continuous, 100W Peak	Rated 70W continuous, 140W Peak
Electronic Crossover:	24dB per octave Linkwitz-Riley	24dB/octave Linkwitz-Riley	24dB/octave Linkwitz-Riley
Crossover Frequency	2.4kHz	2.3kHz	1.8kHz
Equalization:	High (±10dB) 10kHz Shelving	High (±10dB) 10kHz Shelving	High (±10dB) 10kHz Shelving
	Low (±10dB) 100Hz Shelving	Low (±10dB) 100Hz Shelving	Low (±10dB) 100Hz Shelving
Subsonic Filter	30Hz, Second -order filter	30Hz, Second -order filter	30Hz, Second -order filter
Amplifier Protection			
Power On	Power switch on / off mute	Power switch on / off mute	Power switch on / off mute
Thermal	Amplifier shutdown, auto reset	Amplifier shutdown, auto reset	Amplifier shutdown, auto reset
Low Line Voltage Shut Down	< 80VAC	60% Nominal line voltage	60% Nominal line voltage
Driver Protection	Independent LF and HF limiters	Independent LF and HF limiters	Independent LF and HF limiters
DC Protection	Yes	Yes	Yes
Short Protection	Yes	Yes	Yes
Clip Limiter:	Turns on approx 150W output	Turns on approx 250W output	Turns on approx 350W output
Limiter Indicator	Red LED	Red LED	Red LED
Power Indicator	Blue LED	Blue LED	Blue LED

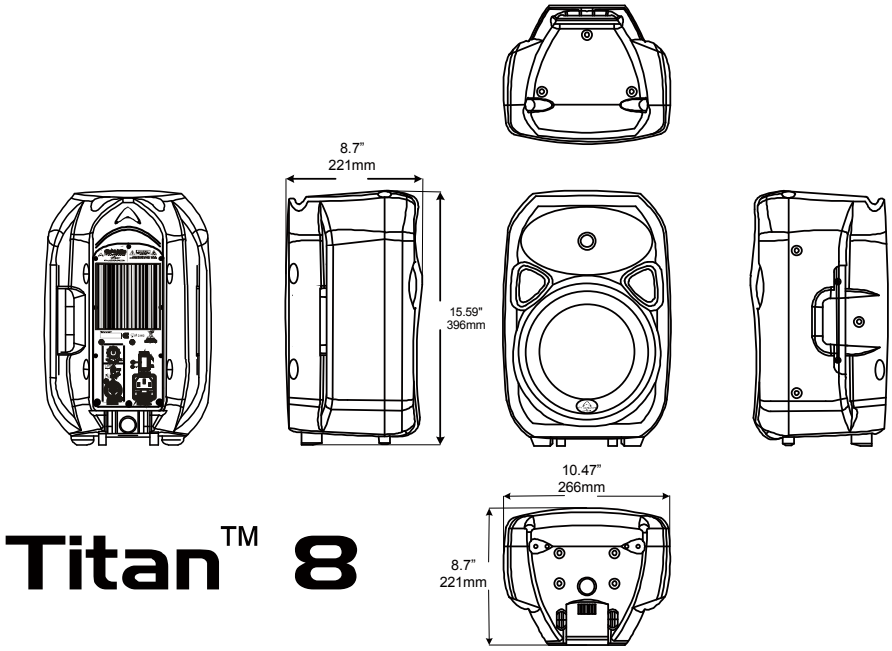
SPECIFICATIONS - Titan™ ACTIVE (Con't)

	Titan™ 8 ACTIVE MKII	Titan™ 12 ACTIVE	Titan™ 15 ACTIVE
Inputs			
Input A – type	Switchable balanced mic or line level input	Switchable balanced mic or line level input	Switchable balanced mic or line level input
Input Sensitivity	Mic: -47dBu (-49.2dBv or 3.4mVrms) Line: 0dBu (-2.2dBv or 0.775Vrms)	Mic: -36dBu (-38.2dBv or 12.28mVrms) Line: +4dBu (1.78dBv or 1.228Vrms)	Mic: -36dBu (-38.2dBv or 12.28mVrms) Line: +4dBu (1.78dBv or 1.228Vrms)
Maximum Input Level	+22dBu	+22dBu	+22dBu
Input Connector	XLR - 1/4” Combo jack	XLR - 1/4” Combo jack	XLR - 1/4” Combo jack
Input Impedance	Balanced: 20kΩ - Unbalanced: 10kΩ	Balanced: 20k ohms Unbalanced: 10k ohms	Balanced: 20k ohms Unbalanced: 10k ohms
Maximum Input Level	+22dBu	+22dBu	+22dBu
Input B – type	N/A	Line level input	Line level input
Input Sensitivity	N/A	XLR - 1/4” Combo jack: 1.78dBv or 1.228Vrms RCA: 0dBu (-2.2dBv or 0.775Vrms)	XLR - 1/4” Combo jack: 1.78dBv or 1.228Vrms RCA: 0dBu (-2.2dBv or 0.775Vrms)
Maximum Input Level	+22dBu	+22dBu	+22dBu
Input Connectors	Combo jack: 1/4" - XLR	Combo jack: 1/4" - XLR / Summed dual RCA jacks	Combo jack: 1/4" - XLR / Summed dual RCA jacks
Line Output	Switchable LOOP / MIX Balanced Male XLR Connector	Switchable LOOP / MIX Balanced Male XLR	Switchable LOOP / MIX Balanced Male XLR
Impedance:	Balanced: 1k ohm Unbalanced: 500 ohm	Balanced: 1k ohm Unbalanced: 500 ohm	Balanced: 1k ohm Unbalanced: 500 ohm
Sensitivity	0dBu (-2.2dBv or 0.775Vrms)	+4dBu (1.78dBv or 1.228Vrms)	+4dBu (1.78dBv or 1.228Vrms)
AC Power details			
Power Supply	High Efficiency Switching Mode Power Supply	High Efficiency Switching Mode Power Supply	High Efficiency Switching Mode Power Supply
AC Power Options	AC100~240V, 50 / 60Hz	AC100~120V / 220~240 V, 50 / 60Hz	AC100~120V / 220~240 V, 50 / 60Hz
Power On Indicator	LED	LED	LED
Rigging / Bracket / Mounting Options	8 M6 threaded inserts including 4 M6 threaded inserts on bottom in OmniMount 30.0-type footprint Pole-mount receptacle with lock screw 1 carry handles Optional wall-mount bracket	10 M8 threaded inserts including 4 M8 threaded inserts on bottom in OmniMount 60.0-type footprint Pole-mount receptacle with lock screw 2 carry handles (one on each side) Optional wall-mount bracket	10 M8 threaded inserts including 4 M8 threaded inserts on bottom in OmniMount 60.0-type footprint Pole-mount receptacle with lock screw 2 carry handles (one on each side) Optional wall-mount bracket
Enclosure Material	Injection Moulded Polypropylene	Injection Moulded Polypropylene	Injection Moulded Polypropylene
Colours	Grey or white or black	Grey or white or black	Grey or white or black
Dimensions H x W x D (mm)	396 x 266 x 221	556 x 384 x 312	708.3 x 477.8 x 401.8
Dimensions H x W x D (in)	15.6 x 10.5 x 8.7	21.9 x 15.1 x 12.3	27.9" x 18.8" x 15.8
Net Weight (kg / lbs)	6.25kg / 13.75lbs	12.8kg / 28.16lbs	23.94kg / 52.67lbs
Gross Weight (kg / lbs)	8.15kg/ 17.93lbs	14.8kg / 32.56lbs	26.94kg / 59.27lbs

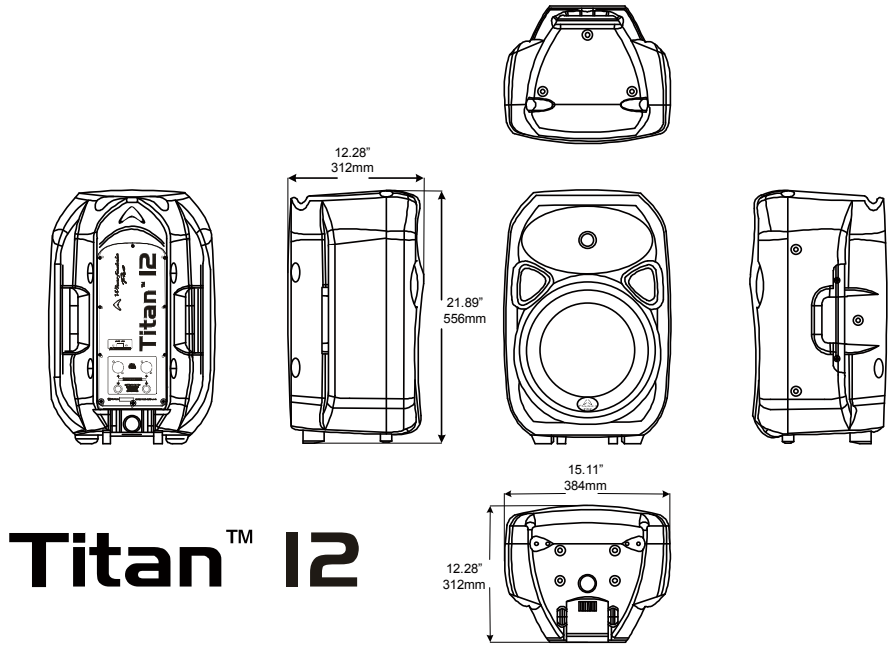
SPECIFICATIONS - Titan™ SUB SERIES

	TITAN™ Sub-A15	Titan™ Sub-A12
System Type	Band-pass subwoofer	Reflex subwoofer
Frequency Response (+/-3dB)	45-150Hz	55-200Hz
Enclosure Material	18mm Plywood	15mm MDF
Enclosure Colour	Grey or Black	Grey or Black
Frame material	Die-cast aluminium frame	steel frame
Size (mm / inches)	404mm / 15"	305mm / 12"
Coil Size (mm / inches)	75 / 3"	64.26mm / 2.5"
Impedance	4 ohm	4 ohm
Speaker Pole Adapter	Yes	Yes
Inputs A & B - Type / Connection	Balanced Line Level inputs via two combo connectors	Balanced Line Level inputs via two combo connectors
Output A & B Type / Connection	Balanced Line Level inputs via two combo connectors	Balanced Line Level inputs via two combo connectors
Input Sensitivity	0.56V	0.37V
High Pass Frequency Selection	100Hz	150Hz
Phase Switch Selection	0° / 180°	0° / 180°
Crossover Frequency (HZ)	150	80/ 100/ 120/ 150/ 180/ 200 (adjustable)
Speaker Level Input Impedance	1/4" TS Phone input	
Speaker Level Input Connection	4Ω	
Amplifier Power: Continuous	400W	250W
Amplifier Power: Peak	600W	500W
Power On Indicator	LED	LED
Power On Protection	Power switch on / off mute	Power switch on / off mute
Thermal Protection	Amplifier shutdown, auto reset	Amplifier shutdown, auto reset
Low Line Voltage Shut Down	60% Nominal line voltage	60% Nominal line voltage
Driver Protection	Independent LF limiters	Independent LF limiters
DC Protection	Yes	Yes
Short Protection	Yes	Yes
Clip Limiter:	Turns on approx 400W output	Turns on approx 250W output
Limiter Indicator	Red LED	Red LED
Power Indicator	Blue LED	Blue LED
Dimensions H x W x D: (mm)	630.0 x 478.0 x 640.0	360.0 x 493 x 431.0
Dimensions H x W x D (in)	24.8 x 18.8 x 25.2	14.2 x 19.4 x 16.9
Weight (Net) kg / lbs	45.48kg / 100.0lbs	22.31kg /49.0lbs

DIMENSIONS



Titan™ 8



Titan™ 12

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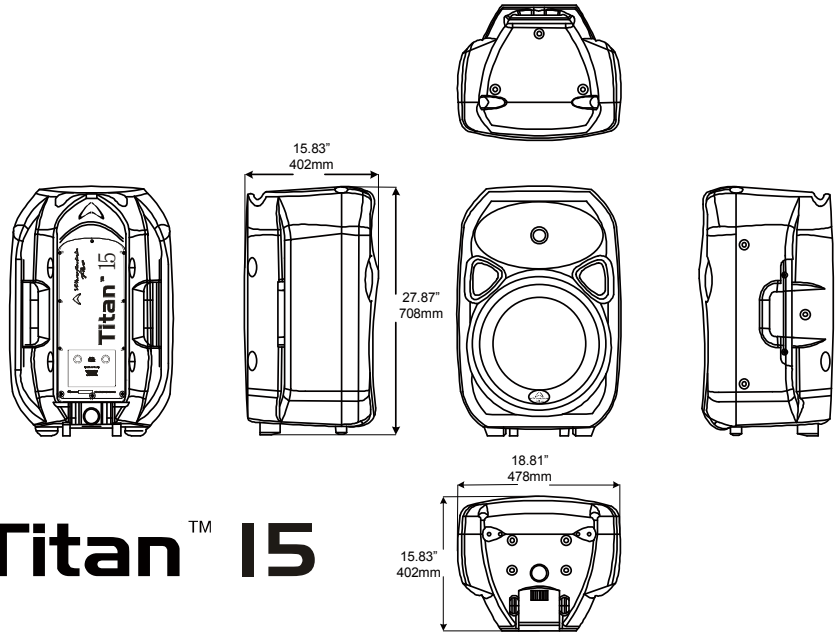
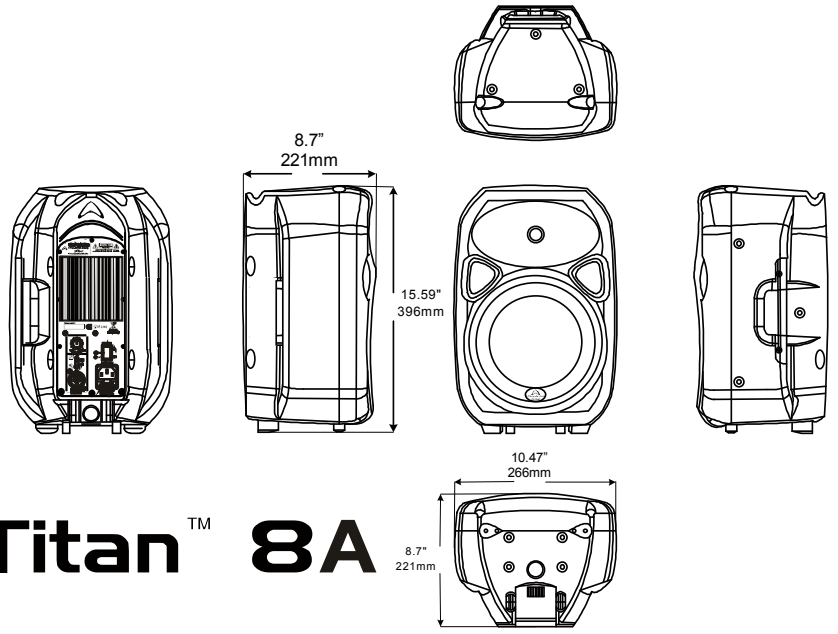


Titan™ 15



Titan™ 8A

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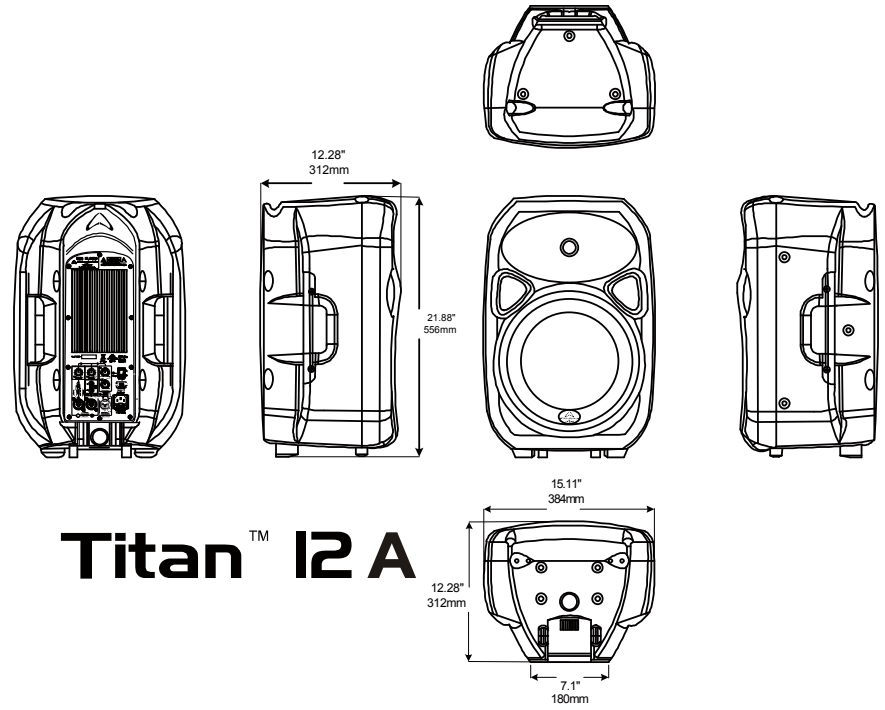
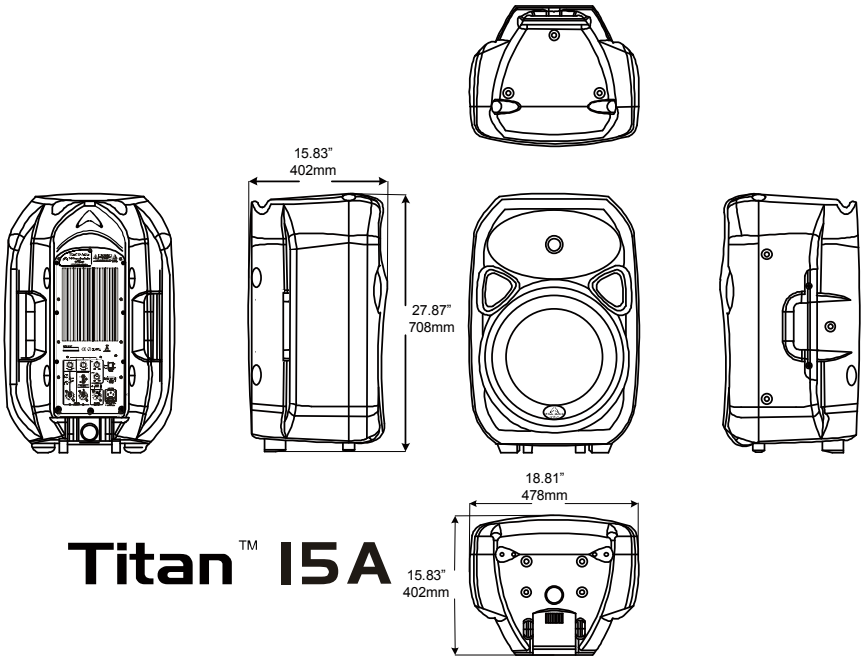


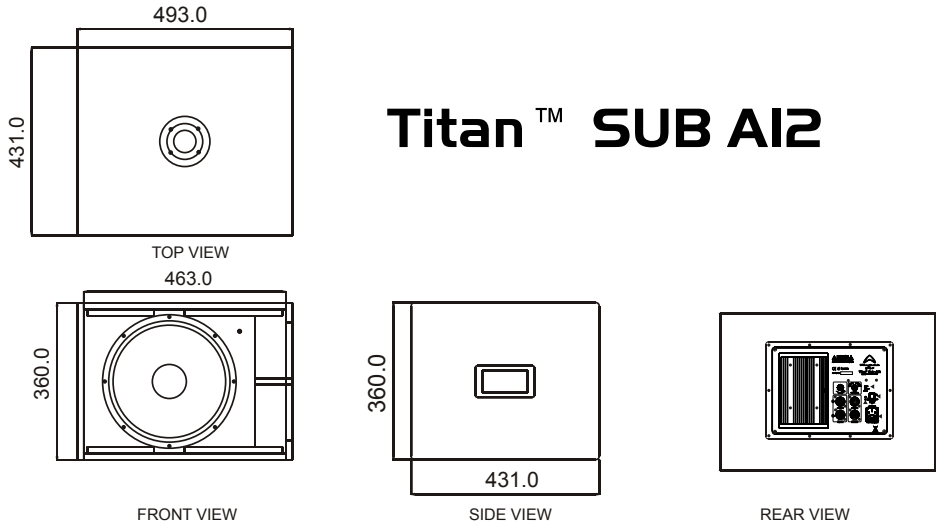
Titan™ 12 A



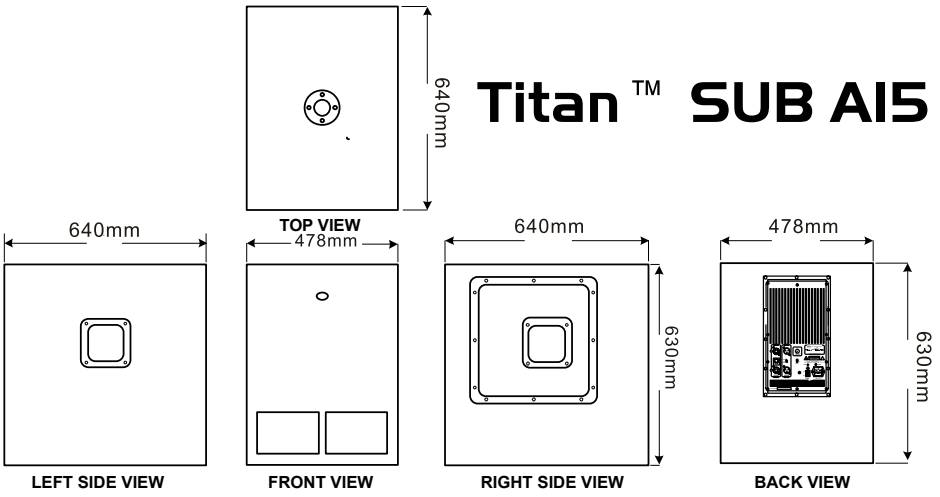
Titan™ 15 A

DIMENSIONS

Titan™ SUB AI2



Titan™ SUB AI5



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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