PROFESSIONAL SOUND SYSTEMS

Titan™ Series

OPERATING MANUAL AND USER GUIDE

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

Wharfedale Pro

www.wharfedalepro.com

IMPORTANT WARNINGS & SAFETY INSTRUCTIONS - GENERAL

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. This also applies to active or self-powered speakers, Switch them on LAST and off FIRST.
5. **CABLES** – Do not use shielded or microphone cables for connection between amplifiers and speakers. Use only approved speaker cables with proper connectors.
6. **RIGGING – SUSPENDING – MOUNTING** – Rigging, suspending and mounting of these 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.**
7. **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.
8. **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.

Wall Mounting Titan Speaker System

WPB-1 Wall Mounting Bracket (Titan™ 12 / 15)

WHARFEDALE PRO LIMITED WARRANTY

Wharfedale Pro Titan™ Series speakers 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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DIMENSIONS

Titan™ 12 A

Titan™ 15 A

TITAN™ SERIES OVERVIEW

The Titan™ Series are powerful, accurate, high quality loudspeaker systems with low distortion that were designed to deliver high quality sound for the best value. From the Titan™ 8 (passive) to the Titan™ 15 Active models plus two powered subs, you have what it takes to assemble the system that your music deserves.

An important factor in loudspeakers is the smoothness of the sound coverage. Many speakers that may sound acceptable in the horizontal plane have problems in the vertical plane. Due to an integral high frequency Elliptical Wave Guide (EWG), the Titan™ speakers exhibit very smooth and well behaved sound dispersion characteristics in both the horizontal and vertical planes making positioning and set-up less critical. Everyone in the room will hear the same quality sound.

The Titan™ Active Series has many features to allow you greater flexibility in your sound: "BRO™ " Bass Response Optimizer circuit, when engaged, allows for enhanced low frequency response at lower volume levels. This is very similar to a loudness switch on your home stereo amplifier.

Starting with the Titan™ 12 Active speaker, two-band EQ (equalization) is added. These tone controls provide +/-10dB in each frequency range.

Sometimes, in live performance, it is not easy to know if your speakers are working or not; they may be ahead of you when performing or they are not so close to you. To remedy this problem, there is a POWER 'ON' indicator LED on the back panel as well as in the throat of the horn to give you a visual indication that there is power to the speaker. There is also a LIMIT indicator LED on the back panel. The LIMIT LED illuminates when the signal limiter is actively limiting the level of the signal to prevent distortion and overload.

The Titan™ Series rugged cabinet features moulded in handles, feet, cord wrap and cable anchors moulded into the lightweight Polypropylene cabinet. It also accommodates a bottom mounted OmniMount® 60.0 bracket for wall mounting.

To make installation easier and safe, mounting and hanging brackets are available. The diagrams at the end of this manual have rigging / hanging suggestions to get the most out of your system.

DIMENSIONS

Titan™ 8

Titan™ 12

SETTING UP/ SPEAKER PLACEMENT

The uniform dispersion of the Titan™ Series makes it easy to place the speakers where you need them, rather than trying to rearrange the room to accommodate the sound system. For the best coverage and highest quality sound, the speakers should be located above head level. Mounting hardware (M6/M8) and an integral tripod stand socket make installation easy and safe. The Titan™ Series accommodates a bottom mounted OmniMount® 60.0 (Titan™ 12, 15) and OmniMount® 30.0 (Titan™ 8) bracket and has optional rigging / hanging brackets.

Before turning on the Titan™ Series, or any powered loudspeaker, be sure that the power switch is in the off position, volume controls are all the way down (at 0 level) and all audio connections are made.

After power-up, speak into your mic or start the CD or MP3 player or other line level device and slowly increase the volume to the desired level. Always remember that a speaker will do what you tell it to do (i.e. deliver sound to the audience), but if the audience is too large and your system too small, you will not achieve the desired sound level without a lot of distortion. Avoid distortion as it can damage your speakers in the long term. If you cannot achieve the desired SPL, you must add more speakers or a subwoofer to the system.

CONNECTIONS/ WIRING

Titan™ 8 / Titan™ 12 / Titan™ 15 Passive

Connecting the Titan™ Series to your system is easy. The rear panels include NL4 and 1/4" phone connectors in parallel. Run your speaker wires from your amplifier to the speaker. You can use either input connector. Use the correct gauge of speaker cable according to the power handling ability of your Titan™ Series cabinet. Use stranded insulated cable for speaker runs. It is always advisable to use heavier gauge (lower number) cables on longer runs. Be sure to connect your speakers in proper polarity (what many refer to erroneously, as phase). This means that in normal operation; connect one end of the same wire to the Red terminal on the amplifier and the other end to the + (tip) connector on the speaker. Black is always the ground or common.

Although the location of the speakers is not often critical to your sound, there are some guidelines to follow, especially with powered speakers, to make the sound the best it can be.

- Try to plug the amplifiers (a/k/a powered speakers) into a circuit that does not have light dimmers or refrigerators on it. When these devices are in the circuit , it is almost certain you will get a 50Hz hum in your system that cannot be removed with a EQ.
- Make sure the speakers are above head level to make the projection of the sound as good as it can be. Keep the speakers out of the corner of the room. Place them away from boundaries and the microphones. Do not place them too far apart.
- When using the hanging bracket or another apparatus, use a cable safety line attached to the speaker and a solid part of the wall - not the bracket. If the bracket fails, the speaker will not fall down.
- If the speakers will be hanging above the audience, it often is a good idea to turn the speakers upside down and aim the horn 2/3 of the way back in the room.This will provide good coverage of the audience.

SPECIFICATIONS - Titan™ ACTIVE (Con't)

	Titan™ 8 ACTIVE	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: -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)	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: 20k ohms	Balanced: 20k ohms Unbalanced: 10k ohms	Balanced: 20k ohms Unbalanced: 10k ohms
Maximum Input Level	+22dBu	+22dBu	+22dBu
Input B – type		Line level input	Line level input
Input Sensitivity		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
Input Connectors		Combo jack: 1/4" - XLR / Summed dual RCA jacks	Combo jack: 1/4" - XLR / Summed dual RCA jacks
Line Output			
Line Output 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
Sensitivity		+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	AC100~120V / 220~240V, 50 / 60Hz	AC100~120V / 220~240V, 50 / 60Hz	AC100~120V / 220~240V, 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 (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	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)	5.7kg / 12.54lbs	12.8kg / 28.16lbs	23.94kg / 52.67lbs
Gross Weight (kg / lbs)	7.70kg /16.94lbs	14.8kg / 32.56lbs	26.94kg / 59.27lbs

CONNECTION DIAGRAM # 2

Titan™ 8/12/15 MONO SYSTEM WITH TWO MONITORS

CONNECTING MULTIPLE Titan™ 8/12/15 SPEAKERS TOGETHER IN A MONO-MAIN AND STAGE MONITOR CONFIGURATION USING A SINGLE, DUAL CHANNEL AMPLIFIER

NOTE: This configuration represents a 4 ohm load to each output channel of the amplifier.

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
		EWG™ - Elliptical Waveguide	
Horn Type:	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

CONNECTION DIAGRAM # 4

USING THE Titan™ 8/12/15
WITH A PASSIVE SUBWOOFER

CONNECTION DIAGRAM # 5

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

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.

Titan™ 12/15 ACTIVE REAR PANEL LAYOUT

Titan™ Sub-A12 CONNECTION DIAGRAM # 2

USING TWO Titan™ Sub-A12 WITH TWO POWER SPEAKERS

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 HIGHAPASS OUTPUT

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 in each frequency range.

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 actively limiting the level of the signal to prevent distortion and overload.

4. **VOLUME controls for INPUT A and INPUT B:** These knobs control the volume of each input channel (Titan™ 8 VOLUME controls is MAIN) .

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

6. **RCA L / R (Left and Right) input jacks:** These jacks provide for the 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 the **HIGH** selection (up). If the signal source is anything other than a microphone (playback device, keyboard or mixer output, for instance) use the **LOW** selection (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 provide for either XLR or ¼" balanced input connections to **INPUT A** and **INPUT B** (**Titan™ 8 XLR ¼" COMBO** input jacks for **INPUT**).

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 of **INPUT A** and **INPUT B** signals (in **MIX** mode) or **INPUT B** signal only (in **LOOP** mode) for connection to additional Titan™ 12 / 15 ACTIVES, powered subwoofers or amplifiers.

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 output "THRU" or HIGHPASS signal (depending on switch setting).

3. **SPEAKER LEVEL INPUT** - Allows for connection of the output of an external amplifier to use the Titan™ Sub-A15 as a passivesubwoofer.
   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 nding 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 and only sends signals above 100Hz to the outputs.

9. **PHASE SWITCH** - Selects the polarity of the singal 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™ 8 / Titan™ 12 / Titan™ 15 ACTIVE

Connecting the Titan™ Active Series to your system is just as easy, with a couple more things to do. Plug in the electrical cable and your audio cables and switch the unit on. Always be sure there is a good electrical ground. The Titan™ Series rear panel has one combo XLR / TRS Jack input. Be sure to use high quality shielded cable and high quality connectors. The volume control is conveniently located above the input sensitivity switch (mic/line). Be sure you have that switch in the correct position.

The Loop / Mix Switch - Titan™ 12A / 15A ONLY

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

CONNECTION DIAGRAM # 2

USING TWO Titan™ Sub-A15's
WITH TWO POWERED SPEAKERS

CONNECTION DIAGRAM # 3

Titan™ 8/12/15 MONO MAIN SYSTEM WITH TWO MONITORS (another view)

NOTE: This configuration represents a 4 ohm load to each output channel of the amplifier.

SPECIFICATIONS - Titan™ ACTIVE SERIES

	Titan™ 8 ACTIVE	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°
Impedance (ohms)	4Ω	4Ω	4Ω
Amplifiers			
Low Frequency (Class D)	Rated 150W RMS, 300W Peak	Rated 250W RMS, 500W Peak	Rated 350W RMS, 700W Peak
High Frequency (Class A/B)	Rated 30W RMS, 60W Peak	Rated 50W RMS, 100W Peak	Rated 70W RMS, 140W Peak
Electronic Crossover:	24dB/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
Bass Response Optimizer (BRO™)		Low (±10dB) 100Hz Shelving +5dB at 60Hz	Low (±10dB) 100Hz Shelving +5dB at 60Hz
circuit			
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	60% Nominal line voltage	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

Titan™ REAR PANEL LAYOUT

CONNECTION DIAGRAM #1

Titan™ 8/12/15 TWO - CHANNEL
SOUND SYSTEM CONNECTION

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	0.775V	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

FEATURES

- 2-way reflex systems
- Passive (3) and Active (3) + Powered Subs (2)
- Low distortion, high power woofers
- 25.4mm Titanium high frequency compression drivers
- BRO™ Bass Response Optimizer (Titan™ 12/15 Active)
- Class D Low Frequency Amplifier (Active)
- Class A/B High Frequency Amplifier (Active)
- XLR output for connecting to another powered speaker
- RCA inputs for MP3, CD or other inputs
- Integral Elliptical Wave Guide (EWG) 90° x 60°
- Power On LED indicator in horn throat and back panel
- Active signal limiting system with LED indicator
- DTF™ Dynamic Thermal Filament HF driver protection (Titan™ 8,12,15 Passive)
- Light weight, high strength Polypropylene cabinet
- Integral 35mm (1-3/8") stand socket
- M6, M8 hanging points
- NL4 & 1/4" speaker inputs (Passive)
- Combo XLR/ 1/4" input jacks (Active)
- Internal crossover passive outputs (Sub-A12/15)
- Accommodates OmniMount® 60.0 bracket

DIMENSIONS

Titan™ 15

Titan™ 8A

WHAT ABOUT THE Titan™ SERIES?

Wharfedale Pro Titan™ Series of passive and self-powered foreground/back-ground music and sound reinforcement speakers are designed for demanding professional applications such as reproduction and reinforcement of music and sound in venues as diverse as live performance venues, airports, houses of worship, A/V presentations, schools, retail shops, restaurants and public houses.

The Titan™ Series loudspeakers are high quality speaker systems designed to provide the best sound in a compact, feature laden, easy to use package. It is designed to provide transparent and accurate sound reproduction or reinforcement. The 25mm Exit Titanium high frequency drivers project crystal clear high frequencies . A proprietary 90° x 60° Elliptical Wave Guide (EWG) delivers the high frequencies in a well defined, even coverage pattern. Dynamic passages, such as the crack of a snare drum or the report of a cannon, come through just like the real thing.

The Titan™ Series are also ideal in Audio/Visual applications. The rich accurate sound is a great complement to any visual performance or presentation. Easy to transport and quick to set up, the Titan™Active Series is the ideal choice for the serious professional.

Accessory wall brackets and rigging components available.

INTRODUCTION

Wharfedale Pro Titan™ Series loudspeakers 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. Actually, Wharfedale is one of a 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.

DIMENSIONS

Titan™ SUB AI2

Titan™ SUB AI5

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.

Read these instructions.
Keep these instructions.
Head all warnings.
Follow all instructions.
Do not use this apparatus near water.
Clean only with dry cloth.
Do not block any ventilation openings.
Install in accordance with the manufacturer's instructions.
Do not install near any heat sources such as radiators, heat registers, Stoves, or other apparatus(including amplifiers) that produce heat.

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.

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.

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.

Wharfedale Professional
IAG HOUSE Sovereign Court, Ermine Business Park Huntingdon, Cambs, PE29 6XU, England

www.wharfedalepro.com

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