

PROFESSIONAL SOUND SYSTEMS >>>

Programme series

OPERATING MANUAL AND USER GUIDE



Programme 105 / 105T
108 / 108T
205 / 205T
206 / 206T
406 / 406T
Subwoofer



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. 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.

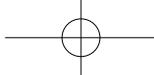
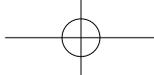


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WHAT ABOUT THE PROGRAMME SUBWOOFER?

Wharfedale Programme Series foreground/back-ground music speakers are designed for demanding professional applications such as reproduction and reinforcement of music and sound in venues as diverse as airports, houses of worship, schools, retail shops, restaurants and public houses.

When you need a powerful, easy to install and use sound reinforcement or background music system, you choose the system that can deliver the biggest sound for your money the **Programme Series** system is just what you asked for.

With its powerful 10 inch (254mm), dual coil woofer, and High-Pass Left and Right outputs, The **Programme Sub** is the perfect addition to the full range speakers in the Series.





INTRODUCTION

Wharfedale Programme 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.

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

PROGRAMME SERIES OVERVIEW:

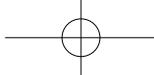
The Programme Series loudspeaker systems are designed to deliver accurate, high power sound in a lightweight, compact and easy to install package.

Each Programme Series speaker may also be used in constant voltage distributed systems. With an internal, switchable transformer, you can economically install a background music or paging system, while still only using one amplifier.

The Programme Series has a speaker to fit your sound requirements. From the compact, lightweight Programme105 to the multiple driver Programme406, or adding the Programme Sub, you have the flexibility you need to provide the best sound value. With the included mounting brackets, transformer option (full range), you will be impressed with the ease of wall or ceiling mounting as well as the clear, accurate sound coming out of these speakers.

FEATURES

- ◆ **2-way loudspeaker systems**
- ◆ **1" (25.4mm) Titanium Dome HF (105/205)**
- ◆ **1" (25.4mm) Titanium Compression Driver (206/406/108)**
- ◆ **Low distortion, high power woofers**
 - **Programme 105: 5" (133.4mm) woofer**
 - **Programme 108: 8" (203.2mm) woofer**
 - **Programme 205: 5" x 2 (133.4mm) woofer**
 - **Programme 206: 6.5" x 2 (165.1mm) woofer**
 - **Programme 406: 6.5" x 4 (165.1mm) woofer**
- ◆ **80 – 250 Watts Continuous Power Handling**
- ◆ **High strength Trapezoidal cabinet**
- ◆ **Pro-tech® (PTC) driver protection (Programme 105)**
- ◆ **Pro-tech® (Bulb) driver protection (108/205/206/406)**
- ◆ **M8 High Strength Hanging Points**
- ◆ **Barrier Strip or SpeakOn™ Input Connectors**
- ◆ **Models available with 70v/100v Transformer ('T' version)**



FEATURES (Programme Subwoofer)

- ◆ **Subwoofer loudspeaker system**
- ◆ **10" (254 mm) Dual coil woofer**
- ◆ **2 x 2" (50.8mm) voice coils**
- ◆ **400 Watts Continuous Power Handling (both inputs driven)**
- ◆ **High strength rectangular cabinet**
- ◆ **High pass output for other Programme Series speakers**
- ◆ **Low and High Pass filters for smooth frequency response**
- ◆ **Barrier Strip Input & Output Connectors**
- ◆ **Wall mount bracket included**
- ◆ **M8 High Strength Hanging Points**

SETTING UP/ SPEAKER PLACEMENT

The uniform dispersion of the Programme 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. A set of wall mounting brackets is included with each pair of speakers to make installation easy and safe.

The Programme Series are an excellent sound reinforcement or background music speaker and can be oriented in a vertical or horizontal position. All models have been designed for tabletop or bookshelf installation or, with the use of the included brackets they can be mounted on the wall or ceiling.

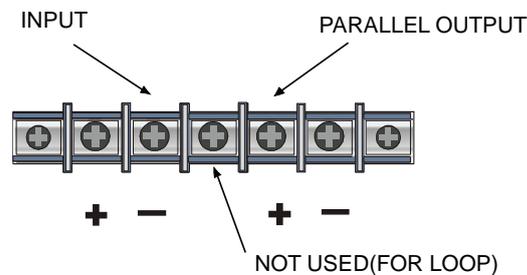
Don't worry about big rooms or rooms with hard to reach seats. The Programme "T" Series speakers have a transformer to allow the use of many more speakers than you would normally use. Use of the transformer is highlighted in the Connections/ Wiring Section.

Because the Programme subwoofer has crossovers built-in, you don't have to invest too much money to assemble a great sounding, foreground or background music system. The full range Programme Series speakers come with mounting brackets, and to keep the sub out of sight, you may use the mounting bracket that is included with the Sub.

The Programme Sub is an excellent low frequency speaker and can be placed anywhere in the room, mounted in the ceiling or on the wall. Heavy-duty rigging hardware makes installation easy and safe (see safety instructions at the beginning of this manual).

CONNECTIONS / WIRING

LOW IMPEDANCE SPEAKER BARRIER STRIP





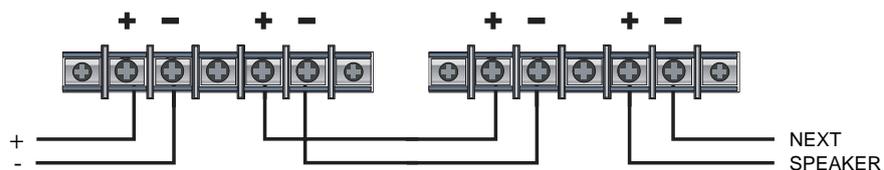
CONNECTIONS / WIRING

LOW IMPEDANCE 8Ω MODEL CONNECTIONS

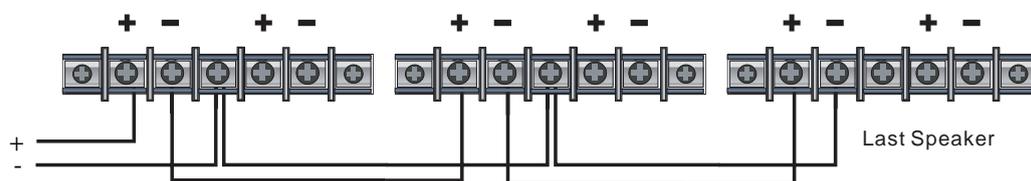
Normal Connection



Parallel Connection



Series Connection



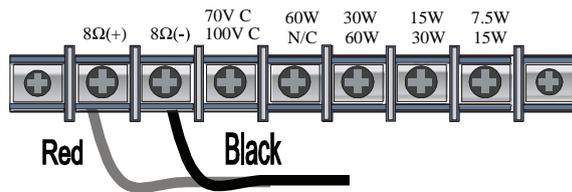
CONNECTIONS/ WIRING

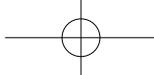
Wiring and setting up your Programme Series is as easy as plugging in a household appliance. You simply run your speaker cables from your amplifier to one of the parallel spring style input connectors or on the Programme Series input panel.

The Programme Series accept stripped bare end cables and SpeakOn™ connectors (108/206/406). Attach the speaker cable securely to your Programme Series unit and power amplifier (the amplifier should be off). Use the correct gauge of speaker cable according to the power handling ability of your Programme 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 8Ω (+) connector on the speaker. Black is always the ground or common and should be connected to the 8Ω (-).

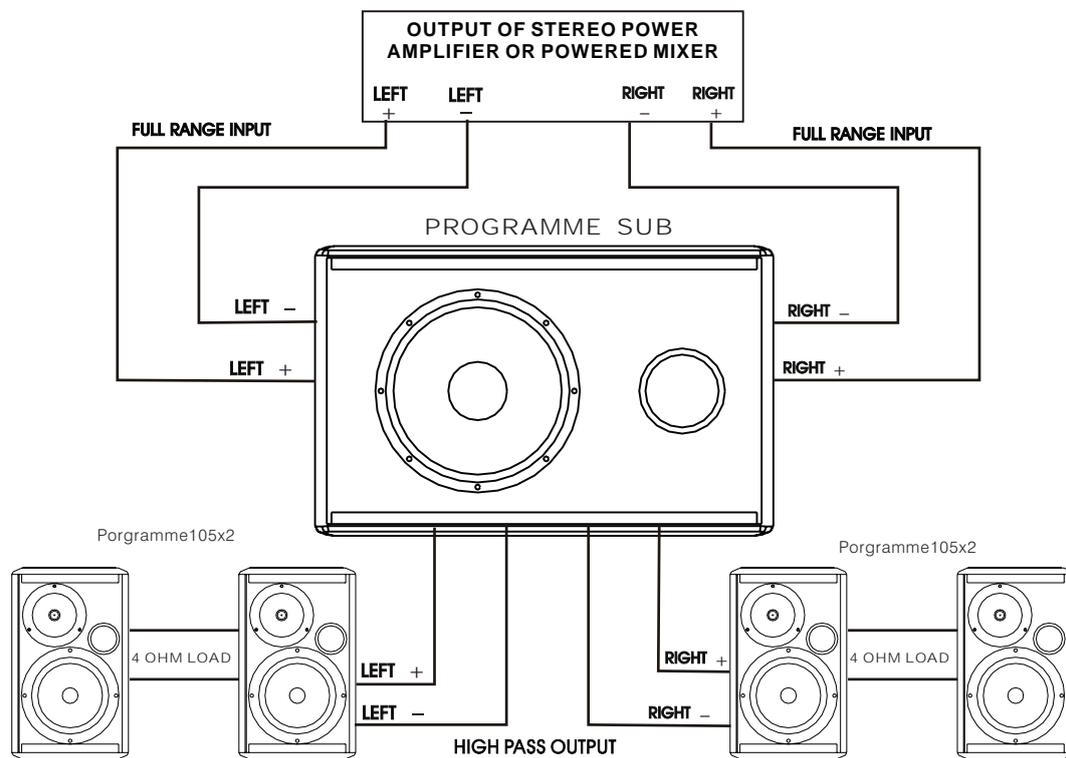
LOW IMPEDANCE CONNECTION (T) MODELS





CONNECTIONS / WIRING

The Programme Subwoofer has left and right channel high-pass filters to allow the use of one 2-channel amplifier for a set of (up to) two Programme Series full range speakers per channel (See the diagram below).



Optimum System Configuration

Four programme 105 satellite speakers (two on each 105 satellite output) provide optimum sensitivity balance and impedance loading resulting in full-range 35Hz-20kHz system performance. Broad band impedance is 4ohm per input x 2 channels

HIGH-IMPEDANCE/CONSTANT-VOLTAGE SYSTEM:

The Programme Series features an internal line-matching transformer with four power/impedance selections for 70/100-volt line. In speaker systems, anything over 32Ω is considered high impedance. Smaller wire can be used without excessive power loss. The four power taps vary for each model.

- Programme 105: 7.5/15/30/60 Watts
- Programme 108/206/406: 15/30/60/120 Watts

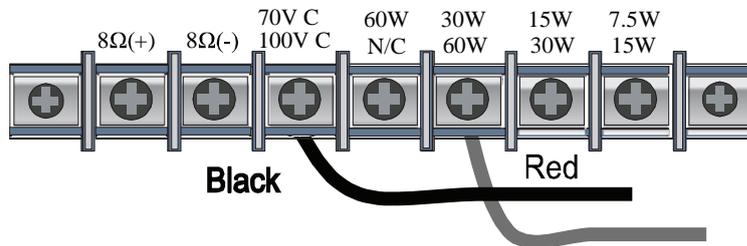
If you are using these models, wiring is just as easy - with a few more steps. You connect your speaker cable from the 70v or 100v output of your amplifier (or through an external transformer) to the input terminals of the speaker. You will then have to adjust the wattage of the transformer to the correct setting.

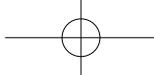
As you would with any audio system, you will need to figure out how many speakers that you want to use and then divide that into the wattage of your power amplifier - you should not exceed that load, otherwise, you will encounter distortion.

$$\text{Transformer tap (W)} \Rightarrow \frac{\text{Amplifier Power}}{\text{Number of Speakers}}$$

Because of the low wattage limitations of the individual speakers, this set up is normally used in sound systems and areas where you only want to hear background music, or occasional messages to everyone within a facility.

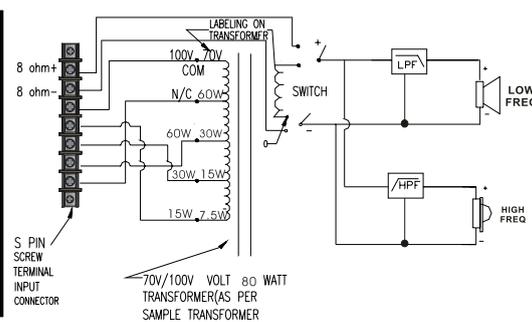
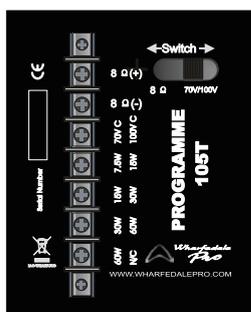
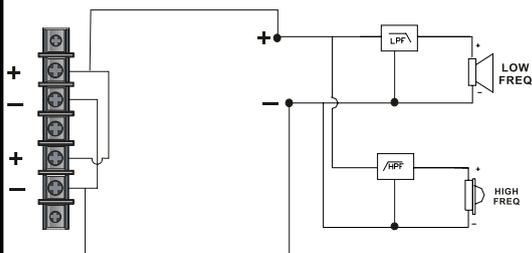
You connect the + (positive) side to the connector labeled with the power rating and the - (negative) to the ground (70V C/ 100V C) connector. If you are adding more speakers, connect your speaker wire from the Red to Red and Black to Black.



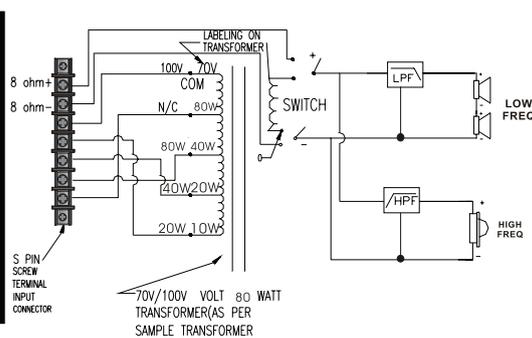
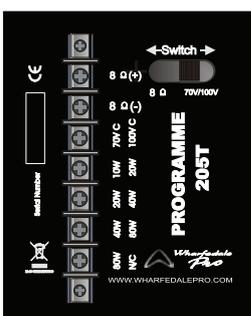
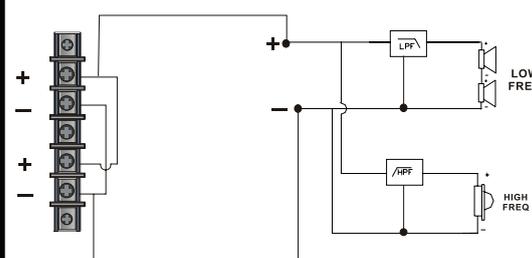


BLOCK DIAGRAM

105 / 105T

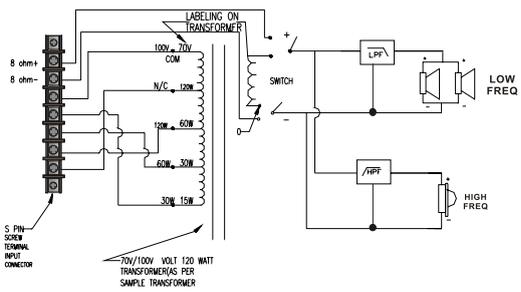
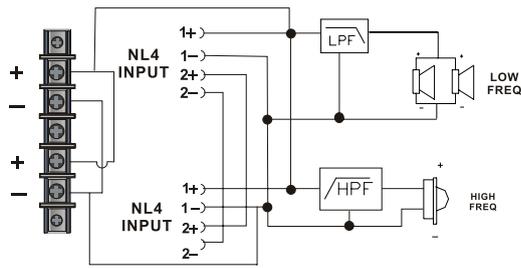


205 / 205T

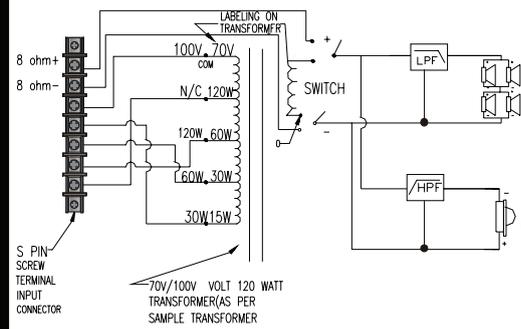
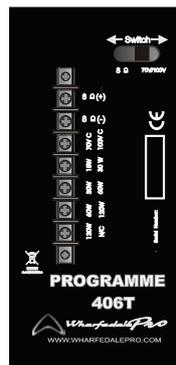
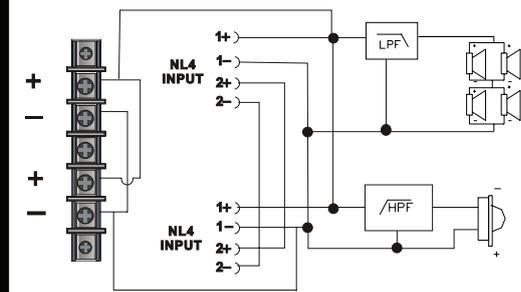


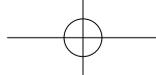
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206 / 206T



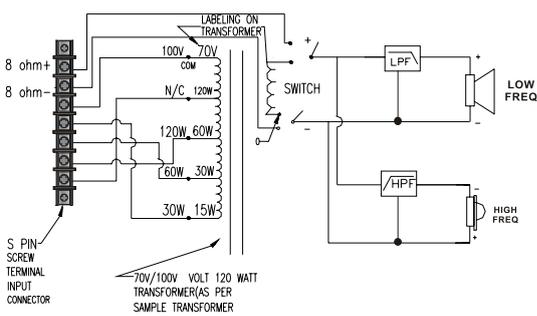
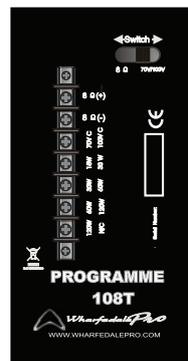
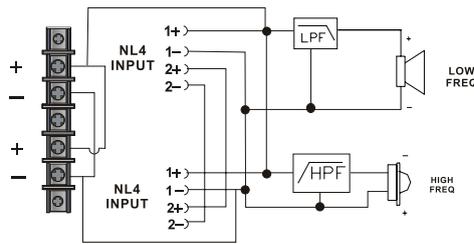
406 / 406T



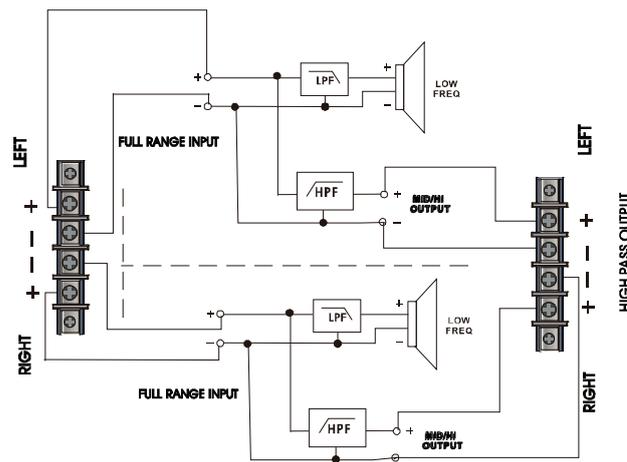


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108 / 108T

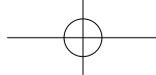


Subwoofer



SPECIFICATIONS

	105(T)	205(T)	206(T)	406(T)	108(T)
Type	2 - way	2 - way	2 - way	2 - way	2 - way
Frequency Response	75Hz-20KHz	70Hz-20KHz	65Hz-20KHz	60Hz-20KHz	60Hz-20KHz
Continuous Power	80W	100W	150W	250W	150W
Peak Power	320W	400W	600W	1000W	600W
Sensitivity: dB-SPL (1W @1M)	89dB	91dB	93dB	96dB	90dB
Max SPL	114dB	117dB	120dB	126dB	118dB
Impedance	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm
Dispersion angle: (degrees)	60 x 60	60 x 60	60 x 60	60 x 60	60 x 60
LF driver	5"	5" x 2	6.5" x 2	6.5" x 4	8"
HF driver	1" Titanium dome	1" Titanium dome	1" Titanium	1" Titanium	1" Titanium
HF protection type	Pro-TECT (PTC)	Pro-TECT (BULB)	compression driver	compression driver	compression driver
Crossover Point			Pro-TECT (BULB)	Pro-TECT (BULB)	Pro-TECT (BULB)
Enclosure shape	2.3KHZ	2.3KHZ	2.3KHZ	2.3KHZ	2.3KHZ
Dimensions: HxWxD (mm)	Trapezoidal	Trapezoidal	Trapezoidal	Trapezoidal	Trapezoidal
Weight (kg)	304 x 184 x 205	500 x 184 x 205	660.5 x 215 x 275	980 x 215 x 275	458 x 248 x 275
Finish colour	5.22Kg	7.689Kg	11.36Kg	17.8Kg	9.34Kg
Cabinet material	Black/ white Paint	Black/ white Paint	Black/ white Paint	Black/ white Paint	Black/ white Paint
Grille	MDF	MDF	MDF	MDF	MDF
	Black/ white full (steel)	Black/ white full (steel)	Black/ white full (steel)	Black/ white full (steel)	Black/ white full (steel)
Rigging	M8 x 14	M8 x 18	M8 x 18	M8 x 18	M8 x 18
Input Connectors	barrier strip	barrier strip	2 x Speakon + barrier strip	2 x Speakon + barrier strip	2 x Speakon + barrier strip
Input Connectors (T)	barrier strip	barrier strip	barrier strip	barrier strip	barrier strip
Transformer (T)	100V/70V	100V/70V	100V/70V	100V/70V	100V/70V
Transformer Taps (70v)	7.5,15,30,60W	10,20,40,80W	15,30,60,120W	15,30,60,120W	15,30,60,120W
Transformer Taps (100v)	15,30,60W	20,40,80W	30,60,120W	30,60,120W	30,60,120W
Included accessory	black/white bracket	black/white bracket	black/white bracket	black/white bracket	black/white bracket

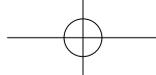


SPECIFICATIONS (Subwoofer)

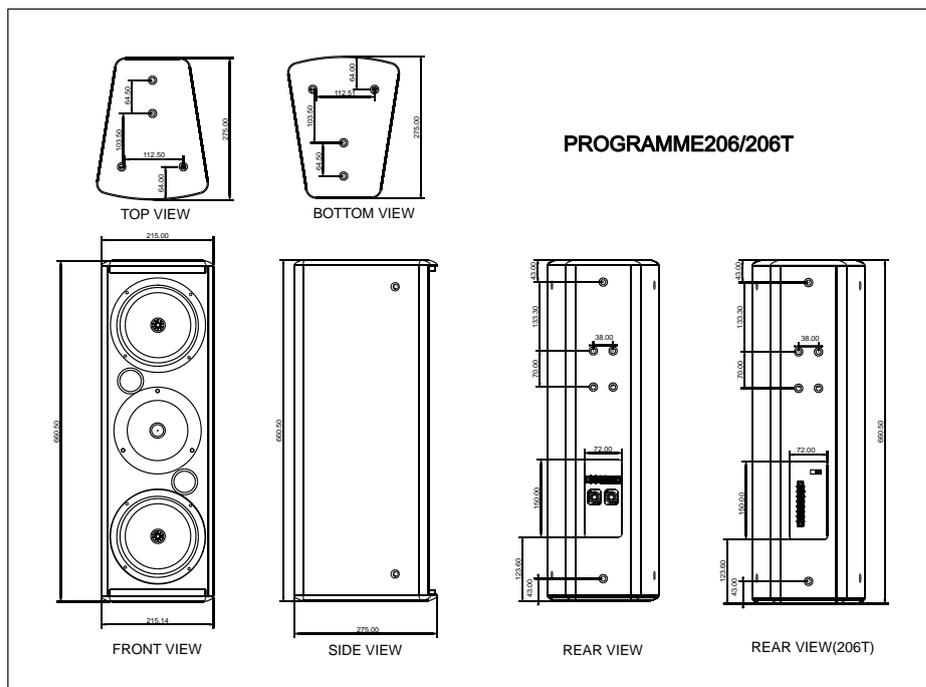
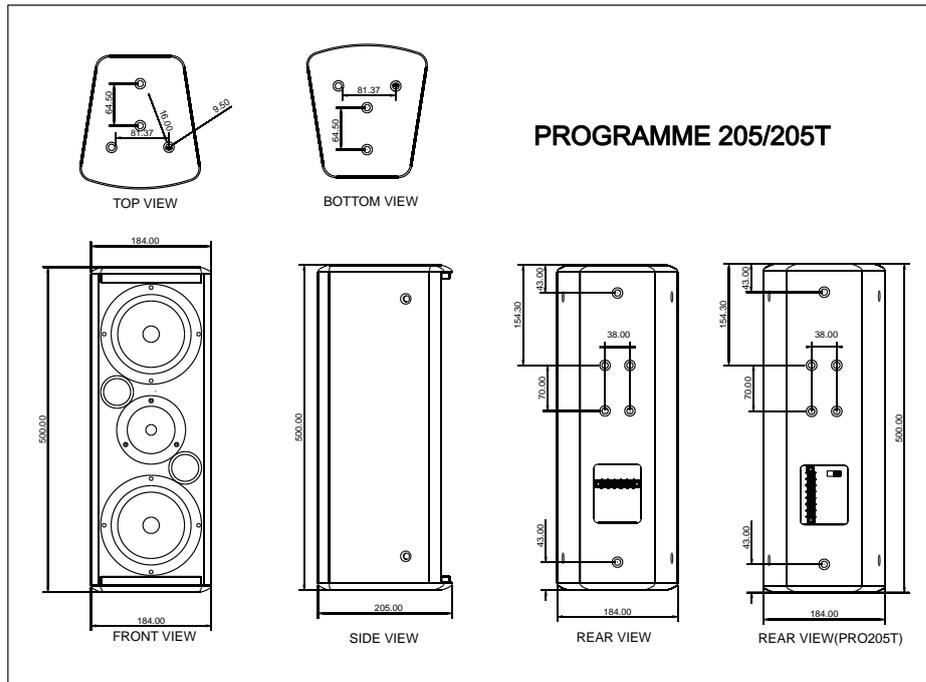
Model name	Programme Sub
Feature	Bass Reflex Subwoofer
Frequency Response (-3dB)	45Hz-170Hz
Power handling (both inputs driven)	400W
Power handling (each input driven)	200W
Sensitivity (each input): dB-SPL (1W (2.83v) @1M)at corner junction	98dB
Sensitivity (both inputs): dB-SPL (1W (2.83v) @1M) at corner junction	101dB
Max SPL (both inputs driven)	124dB
Impedance	8 ohm per input/ 4 ohm both inputs paralleled
Dispersion @ -6dB (degrees)	NA
LF driver	10" (254 mm)
Crossover Point (12dB/octave low-pass, 6dB/ octave high-pass)	170HZ
Enclosure shape	Rectangle
Dimensions: H x W x D (mm)	413 x 635 x 392
Dimensions: H x W x D (in)	16.25 x 25.0 x 15.4
Weight: (kg/lb)	18.4 kg (40.5 lb.)
Finish colour	Black and White Paint
Cabinet material	15 mm MDF
Grille	1.2 mm Steel
Rigging	M8 x 12
Input Connectors	Screw terminal strip connector
High-Pass Output Connectors	Screw terminal strip connector
Included accessory	black and white wall mount bracket

Optimum System Configuration:

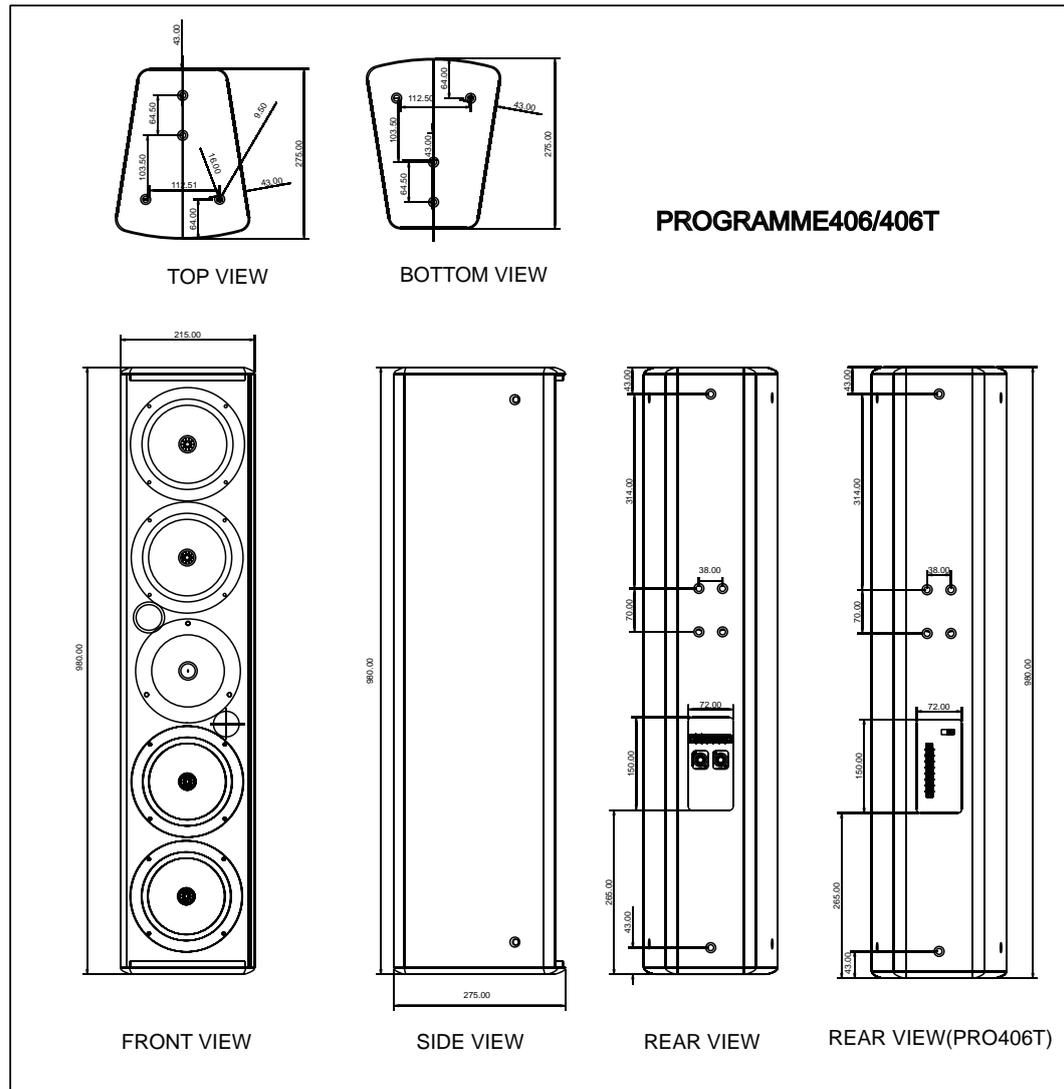
Four programme 105 satellite speakers (two on each 105 satellite output) provide optimum sensitivity balance and impedance loading resulting in full-range 35Hz-20 kHz system performance. Broadband impedance is 4 ohm per input x 2 channels

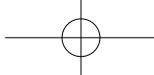


DIMENSIONAL DRAWINGS

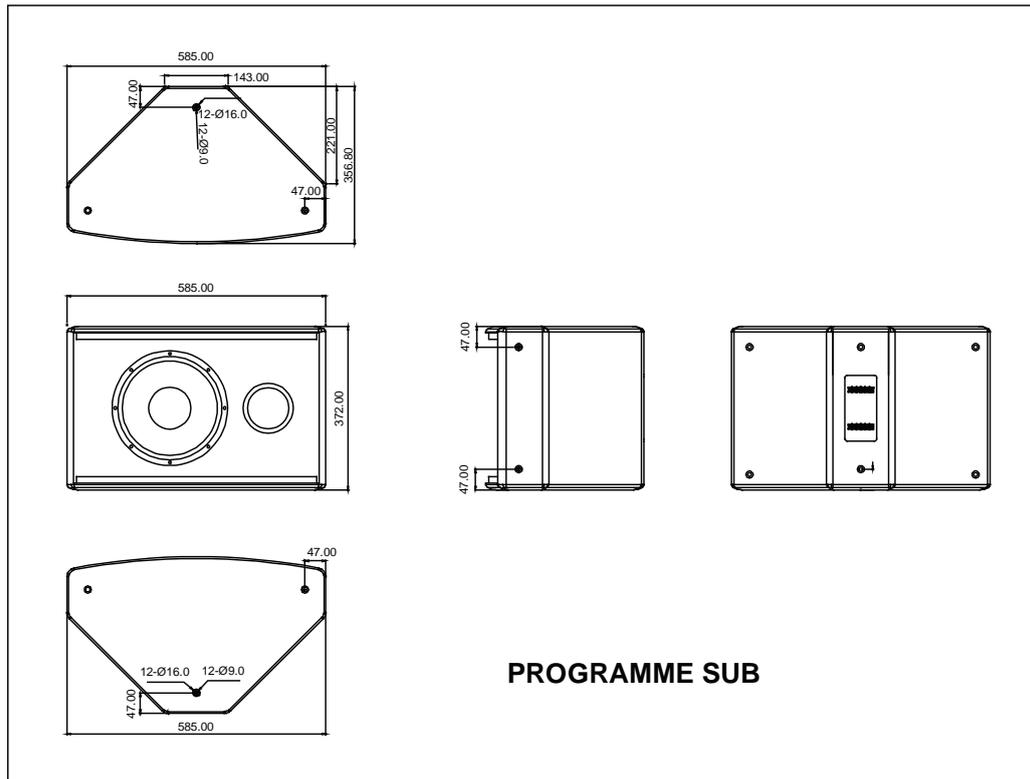


DIMENSIONAL DRAWINGS





DIMENSIONAL DRAWINGS

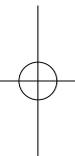
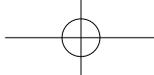


PROGRAMME SUB

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.



Wharfedale Professional

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