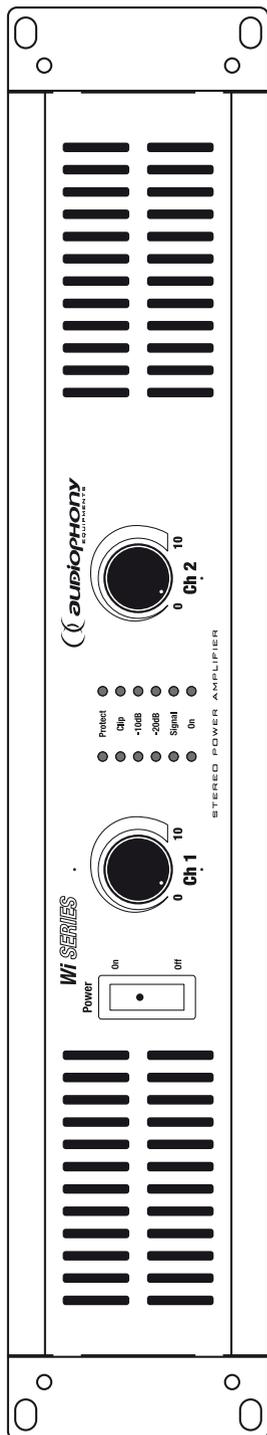


PROFESSIONAL STEREO AMPLIFIERS



Wi SERIES

USER GUIDE

1 - Safety information

Important safety information



This unit is intended for indoor use only. Do not use it in a wet, or extremely cold/hot locations. Failure to follow these safety instructions could result in fire, electric shock, injury, or damage to this product or other property.



This product contains non-isolated electrical components. Do not undertake any maintenance operation when it is switched on as it may result in electric shock.



Any maintenance procedure must be performed by a CONTEST authorised technical service. Basic cleaning operations must thoroughly follow our safety instructions.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING : This unit contains no user-serviceable parts. Do not open the housing or attempt any maintenance by yourself. In the unlikely even your unit may require service, please contact your nearest dealer. In order to avoid any electrical malfunction, please do not use any multi-socket, power cord extension or connecting system without making sure they are perfectly isolated and present no defect.



Risk of electrocution

To prevent the hazard of electric shocks, do not use extension cords, multi-socket or any other connection system without making sure metal parts completely are out of reach.



Sound levels

Our audio solutions deliver important sound pressure levels (SPL) that can be harmful to human health when exposed during long periods. Please do not stay in close proximity of operating speakers.



Recycling your device

- As HITMUSIC is really involved in the environmental cause, we only commercialise clean, ROHS compliant products.
- When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

Symbols used



This symbol signals an important safety precaution.



The CAUTION symbol signals a risk of product deterioration.



The WARNING symbol signals a risk to the user's physical integrity. The product may also be damaged.

Instructions and recommendations

1 - Please read carefully :

We strongly recommend to read carefully and understand the safety instructions before attempting to operate this unit.

2 - Please keep this manual :

We strongly recommend to keep this manual with the unit for future reference.

3 - Operate carefully this product :

We strongly recommend to take into consideration every safety instruction.

4 - Follow the instructions:

Please carefully follow each safety instruction to avoid any physical harm or property damage.

5 - Avoid water and wet locations :

Do not use this product in rain, or near washbasins or other wet locations.

6 - Installation :



We strongly encourage you to only use a fixation system or support recommended by the manufacturer or supplied with this product. Carefully follow the installation instructions and use the adequate tools.

Always ensure this unit is firmly fixed to avoid vibration and slipping while operating as it may result in physical injury.

7 - Ceiling or wall installation :

Please contact your local dealer before attempting any ceiling or wall installation.

8 - Ventilation :



The cooling vents ensure a safe use of this product, and avoid any overheating risk. Do not obstruct or cover these vents as it may result in overheating and potential physical injury or product damage. This product should never be operated in a closed non-ventilated area such as a flight case or a rack, unless cooling vents are provided for the purpose .

9 - Heat exposure :

Sustained contact or proximity with warm surfaces may cause overheating and product damages. Please keep this product away from any heat source such as a heaters, amplifiers, hot plates, etc...

10 - Electric power supply :



This product can only be operated according to a very specific voltage. These information are specified on the label located at the rear of the product.

11 - Power cords protection:



Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at lugs, convenience receptacles and the point where they exit from the fixture.

12 - Cleaning precautions :



Unplug the product before attempting any cleaning operation. This product should be cleaned only with accessories recommended by the manufacturer. Use a damp cloth to clean the surface. Do not wash this product.

13 - Long periods of non use :

Disconnect the unit's main power during long periods of non use.

14 - Liquids or objects penetration :



Do not let any object penetrate this product as it may result in electric shock or fire.

Never spill any liquid on this product as it may infiltrate the electronic components and result in electric shock or fire.

15 - This product should be serviced when :



Please contact the qualified service personnel if :

- The power cord or the plug has been damaged.
- Objects have fallen or liquid has been spilled into the appliance.
- The appliance has been exposed to rain or water.
- The product does not appear to operate normally.
- The product has been damaged.

16 - Inspection/maintenance :



Please do not attempt any inspection or maintenance by yourself. Refer all servicing to qualified personnel.

17 - Operating environment :



Ambient temperature and humidity: +5 - +35°C, relative humidity must be less than 85% (when cooling vents are not obstructed).

Do not operate this product in a non-ventilated, very humid or warm place.

2 - Introduction

Thank you for purchasing a Wi amplifier.

You are now in possession of a high-quality product which will meet your every need.

These amplifiers were born from many years of Audiophony® experience and efforts.

They are easy to use, fast, highly resistant: in brief, they are top-of-the-range, super-efficient products.

The user guide you are currently reading will help you getting familiar with the many functions and possibilities offered by Wi amplifiers.

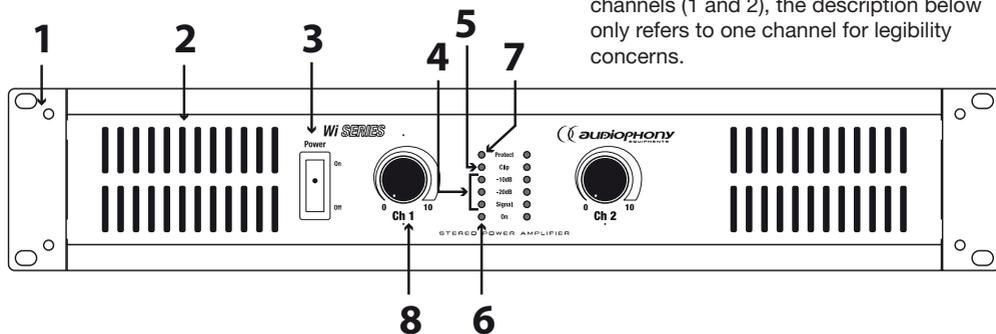
Please keep this guide within reach during first uses.

3 - Main characteristics

- From 320W to 110W at 4 Ohms
- Stereo, parallel or bridged modes
- Independent limiter for each channel
- Extremely precise and independent settings for each channel
- Many LED indicators allowing you to visualise the status of your amplifier
- 40 Hz bypass filter
- Double air flow featuring 2 sensors to provide optimal cooling
- Symmetrical inputs via combo socket (XLR and Jack TRS)
- Outputs via 4-point Speakon® banana/screw terminals
- High-performance toroidal transformer ensuring optimal power handling
- Independent thermal and DC protection for each channel
- Compatible with 19" racks

4 - Description

4.1 - Front panel



Note : Wi amplifiers feature 2 identical channels (1 and 2), the description below only refers to one channel for legibility concerns.

[1] - Mounting brackets

Allow you to insert your amplifier into 19" (482 mm) racks.

[2] - Cooling vents

Wi series amplifiers (apart from the Wi640) are equipped with two fans located at the rear. The air flow goes from the rear to the front and lowers the temperature of internal components. Never obstruct these vents and clean them on a regular basis to make sure your device benefits from the longest possible lifespan.

[3] - Power Button

Activates the device.

[4] - Signal LEDs

These green and yellow LEDs light up when an incoming signal is detected.

[5] - LED Clip

Lights up when the clip threshold has been reached, to indicate the input is saturated and the outgoing signal distorted.

Adjust the output level of your source to go back to adequate sound levels and prevent serious damages to your speakers and amplifier. The sound quality will be highly improved as well.

[6] - On LED

This blue LED lights up when the amplifier is connected to an electrical outlet and the power switch positioned onto ON.

[7] - Protect LED

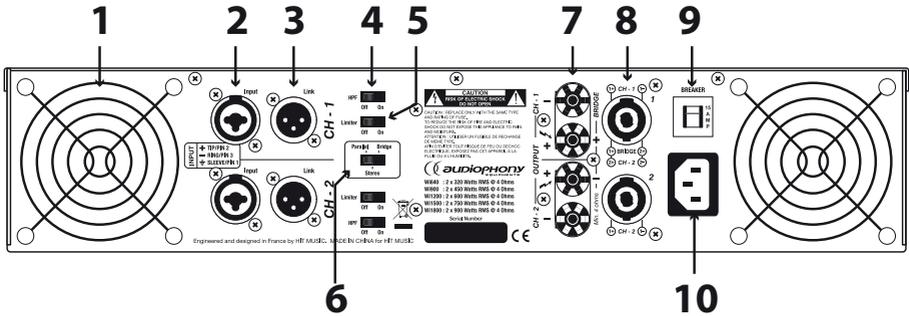
This LED lights up to indicate the channel is in protection mode, the output signal is interrupted by an internal relay. The protection mode is activated when the channel is overheating or a serious problem has been detected. Its aim is to protect the speakers connected to the channel in default. Usually, this LED briefly lights up upon activation of your device but should light off quite slowly. This is to protect your speakers against current peaks when your amplifier is initialising.

[8] - Input attenuator

Each channel features an input attenuator allowing you to limit the incoming signal level.

This attenuator features 21 notches. On its left, it attenuates the incoming signal by 80dB, on its right, the signal is not attenuated and the amplifier works at full power. When activating the "mono bridge" mode, attenuator 1 only will affect the sound level, whereas each attenuator adjusts the sound level of the corresponding channel in "Parallel" mode.

4.2 - Rear panel



[1] - Cooling fan

The air flow goes from the rear to the front and lowers the temperature of internal components. Never obstruct these vents and clean them on a regular basis to make sure your device benefits from the longest possible lifespan.

[2] - Combo input socket

This connector allows you to power up your amplifier with a line-level signal. It is fully compatible with both symmetrical and asymmetrical signals but we recommend, whenever possible, to use asymmetrical signals as it will help you getting rid of parasitic noises when using low-quality cables. This connector can also be used to connect Jack 6.35 TRS and male XLR plugs. Polarities are spread as follows:

- Pin 2 (Tip) = Signal +
- Pin 3 (Ring) = Signal -
- Pin 1 (Sleeve) = Ground

[3] - Link connector

Allows you to send the incoming signal to another amplifier.

[4] - HPF (High Pass Filter) switch

When "ON", the incoming signal is filtered. Frequencies below 40 Hz are disposed of. This function allows you to get rid of parasitic noises and send a signal appropriate to the broadband of your loudspeakers. When "OFF", a filter still eliminates frequencies below 5 Hz to protect the input of your amplifier against direct currents.

[5] - Switch Limiter

Activates the "Limiter" function allowing you to automatically reduce the sound level of excessive signals and prevent them from being distorted.

[6] - Parallel / Stereo / Bridge Selector

Allows you to select the operating mode of your amplifier:

- Stereo: Standard mode, each channel amplifies the signal currently received.
- Parallel: The signal sent to input 1 is amplified in a similar manner by both channels.
- Bridge: The two amplification channels are added and only the input 1 signal is amplified.

[7] - Output via terminals

Allows you to connect speakers via a cable with terminals plugs, or directly connect stripped cables. In "Bridge" mode, use the red terminals to connect your speaker.

[8] - Output via Speakon® connector

Allows you to connect speakers via a cable with SpeakOn® connectors. More details about wiring are available in next chapter.

[9] - Circuit breaker

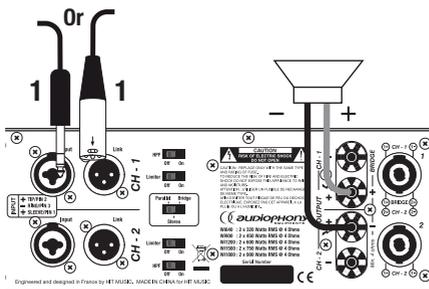
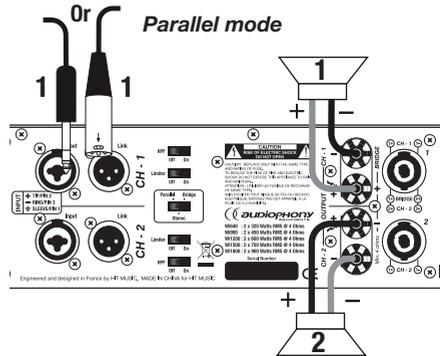
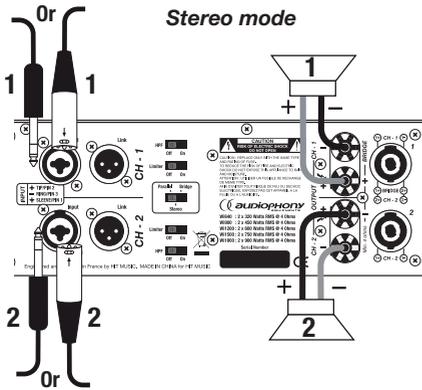
Turns off the power supply in case of mains failure or voltage overload. Press it again to reactivate it.

[10] - Power input

Connect here the supplied power cord to power up your amplifier.

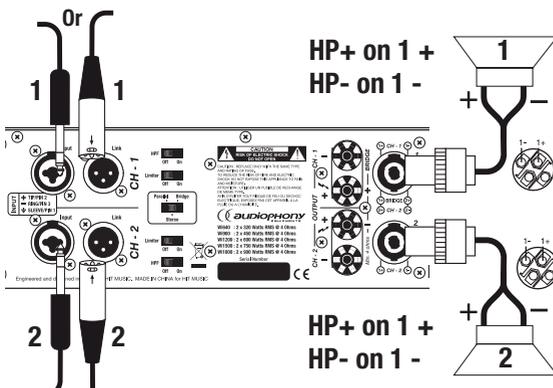
5 - Circuit principle

5.1 - Wiring via terminals

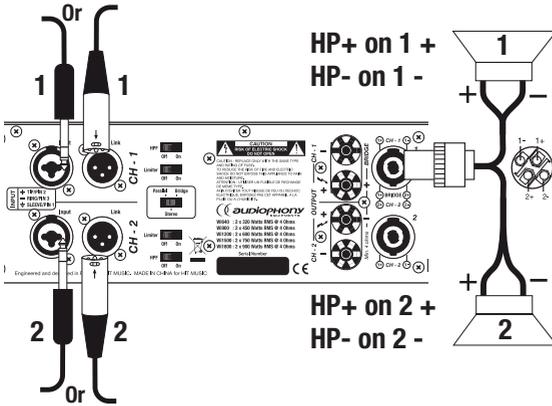


Mono-bridged mode

5.2 - Wiring via Speakon® connectors

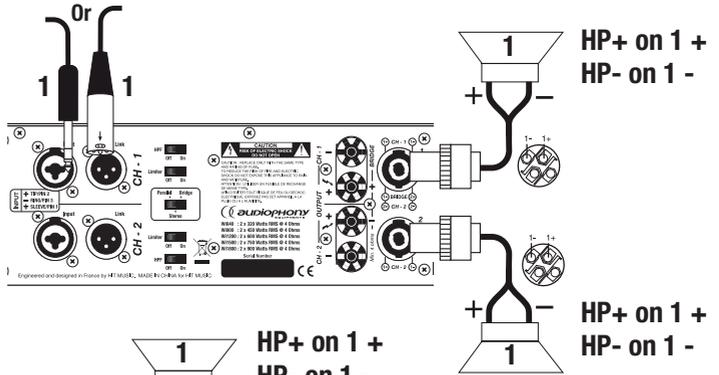


Standard stereo mode



Stereo mode via one single output

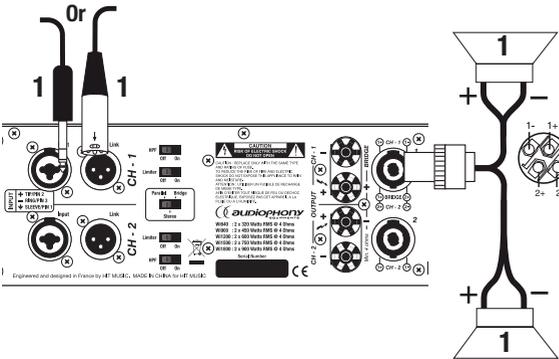
Standard parallel mode



HP+ on 1 +
HP- on 1 -

HP+ on 1 +
HP- on 1 -

Parallel mode via one single output

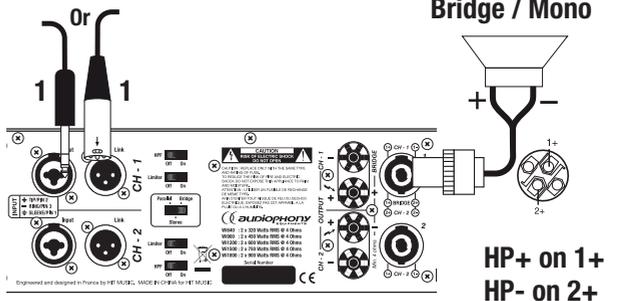


HP+ on 1 +
HP- on 1 -

HP+ on 2 +
HP- on 2 -

Mono-bridged mode

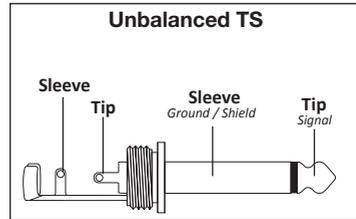
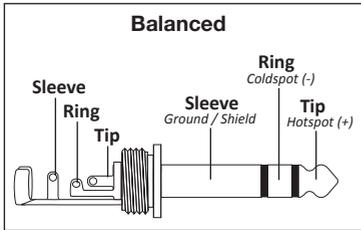
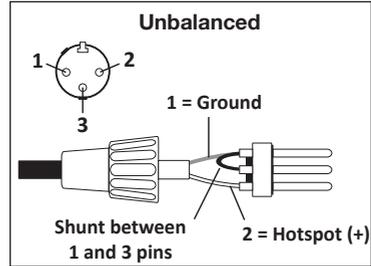
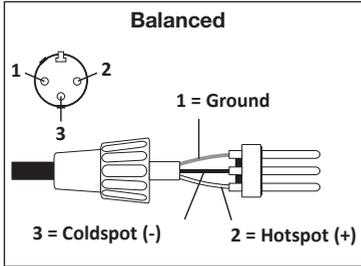
Bridge / Mono



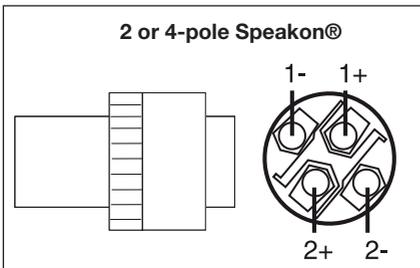
HP+ on 1+
HP- on 2+

6 - Connectors

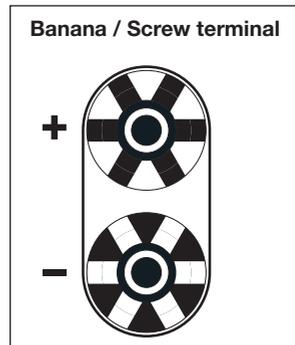
6.1 - Inputs



6.2 - Outputs



Note : Even if your speakers feature 2-pin Speakon® connectors, they can still be connected to 4-pin output connectors.



Note : When connecting stripped cables directly to the terminals, please make sure no strand is in contact with both polarities. Please use tinned cables to prevent short-circuits.

7 - Protection systems

Wi series amplifiers feature multiple protection systems born from Audiophony's long experience in professional sound solutions, to ensure the best possible lifespan and protect the internal components of your device and connected sources.

- SoftStart system

The SoftStart protection system gradually powers up your unit upon activation in order to preserve your speakers.

- Thermal protection

In case of overheating, the thermal protection will open output relays. The Protect LED will light up during this process. If the power transformer is also overheating, its temperature sensor will disconnect all power outputs, the Protect and Clip LEDs will light up while the "On" LED will turn off. The cooling fans will operate at lower speed. Your device will be fully operational again once the standard temperature has been reached.

- Short-circuits

In case of short-circuit (defective loudspeaker, poorly isolated cable, etc.) this system will automatically protect the amplifier. This system detects short-circuits such as too low impedances and reduces power stages levels. If the short-circuit remains, all outputs will be disconnected by the thermal protection system.

- Direct current protection

Whenever a channel detects a direct current via its output connectors, all output relays will automatically open to prevent damages to your speakers.

- Very low frequencies (<40 Hz)

The internal high-pass filter gets rid of very low frequencies. Despite all that, whenever an excessively low frequency is detected a relay will deactivate the output.

Important note about the Bridge mode

1 - In Bridge mode, the load impedance must never fall below 4 Ohms. For the record, connecting 2 x 8 Ohms speakers in parallel on one of the amplifier output will result in a 4 Ohms load for this output. Calculating the impedance connected to an output can be done as follows:

Let us return to our 2 x 8 Ohms speakers:

$$\text{LOAD} = 1 / (1/8 \text{ Ohms} + 1/8 \text{ Ohms}) = 1 / (0.125 + 0.125) = 1 / 0.25 = 4 \text{ Ohms}$$

This clearly demonstrates you cannot add an extra speaker connected in parallel to this bridged output without falling below a 4 Ohms impedance.

2 - In stereo mode the minimum impedance is 2 Ohms: 4 x 8 Ohms speakers connected in parallel per side.

3 - Never connect the ground of the cables of your speakers.



8 - Technical specifications

	Wi640	Wi900	Wi1200	Wi1500	Wi1800
Stereo output					
8 Ohms	210 W	300 W	400 W	550 W	600 W
4 Ohms	320 W	450 W	600 W	750 W	900 W
2 Ohms	420 W	700 W	900 W	1200 W	1400 W
Mono bridged output					
8 Ohms	650 W	900 W	1200 W	1400 W	1800 W
4 Ohms	845 W	1400 W	1800 W	2400 W	2800 W
Signal-to-Noise ratio	100 dB	102 dB	102 dB	104 dB	104 dB
Distortion (SMPTE-IM)	0,05%	0,01%	0,01%	0,04%	0,04%
Input sensitivity @ 8 Ω	4 dBu	4 dBu	4 dBu	4 dBu	4 dBu
Voltage gain	30 dB	32 dB	33 dB	34 dB	35 dB
Amplification class	AB	AB	AB	H	H
Power consumption	115Vac / 230Vac - 50/60Hz				
at 1/8 of full power @ 4Ω	4,5A / 2,2A	6,3A / 3,1A	7,2A / 3,5A	7A / 3,5A	8,5A / 4,1A
at 1/3 of full power @ 4Ω	7A / 3,6A	9,5A / 4,8A	12A / 6A	14,5A / 7,1A	17A / 8,3A
at full power @ 4Ω	10,5A / 5,5A	15,5A / 7,7A	19,5A / 9,5A	26A / 13A	32A / 16A
Distortion					
20Hz-20KHz at 1/2 of full power	0,01%	0,01%	0,01%	0,03%	0,03%
1Khz at full power	0,1%	0,1%	0,1%	0,1%	0,1%
Frequency response	0/-0,5dB ; 20Hz-20KHz, 0/-3dB ; 5Hz-60Hz				
Damping factor (400Hz)	200	280	280	350	350
Input impedance	Asymmetrical: 15 KOhms / Symmetrical: 30 KOhms				
Clip level	22 dBu (10 Vrms)				
Cooling system	Fan at variable speed - Front to rear				
Connectors					
Input	Symmetrical combo socket (XLR + Jack TRS)				
Output	Screw terminals + 4-pin Speakon®				
Settings					
Front panel	Power switch / Channels 1 & 2 volume settings				
Rear panel	HPF Switch / Limiter Switch / Mode selector				
Indicators	On (blue) / Protect (red) / Clip (red) / -20dB (green) / -10dB (yellow)				
Protections	Short-circuits / Current limiter / DC offset Immune to radio frequencies				
Power supply	115Vac/230Vac - 50/60Hz				
Dimensions	19" (482mm) x 3,5" (88mm) x 16,5" (420mm)				
Net weight	13.6 Kg	15.4 Kg	18.2 Kg	18.4 Kg	20.4 Kg

Because AUDIOPHONY® takes the utmost care in its products to make sure you only get the best possible quality, our products are subjects to modifications without prior notice. That is why technical specifications and the products physical configuration might differ from the illustrations.

Make sure you get the latest news and updates about the AUDIOPHONY® products on www.audiophony.com
AUDIOPHONY® is a trademark of HITMUSIC S.A. - Zone Cahors sud - 46230 FONTANES - FRANCE