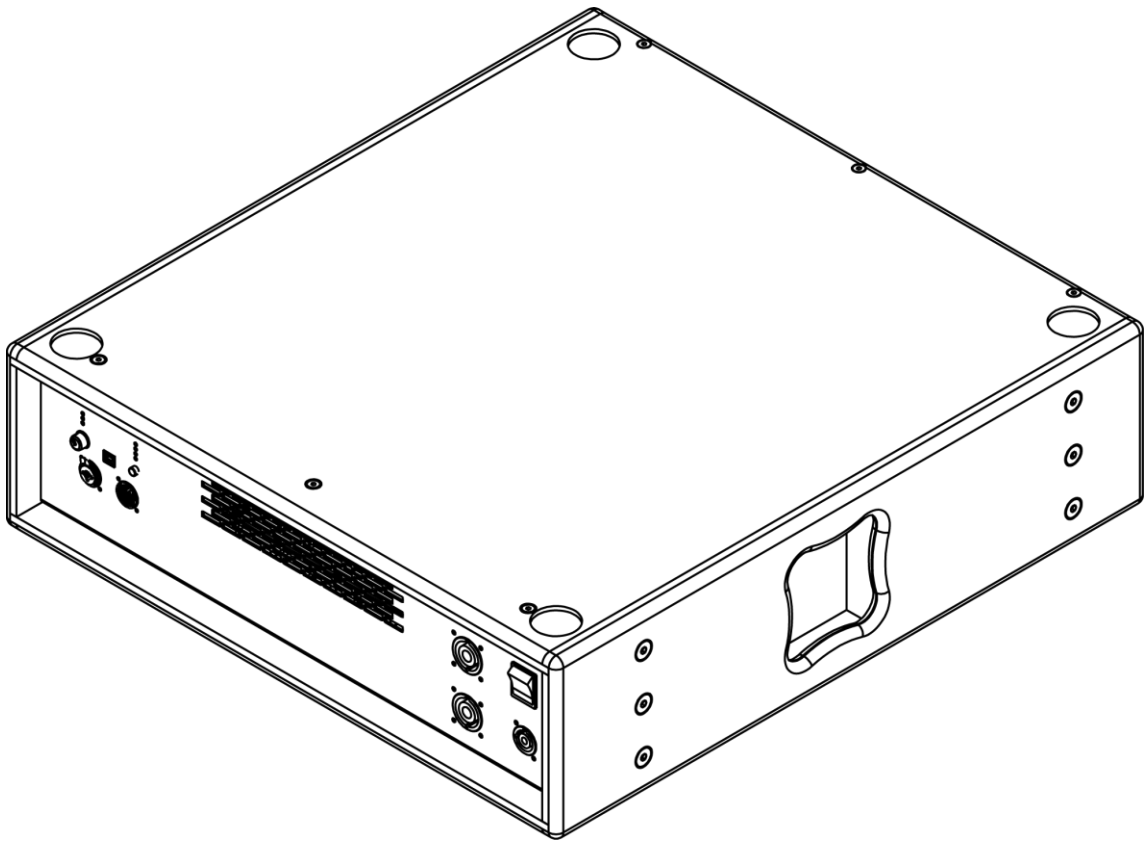


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PXA8001
PX POWER RACK
USER MANUAL

V201906

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INTRODUCTION

Thank you for purchasing a NEXT PXA8001. This manual will provide you with useful and important information about your NEXT PXA8001 element. Please devote some time reading this manual, and keep it at hand for future reference. NEXT-proaudio is concerned with your safety and well-being, so please follow all instructions and heed all warnings. Also, a better understanding of some specific features of the PXA8001 will help you to operate your system to its full potential. With a continuous evolution of techniques and standards, NEXT-proaudio, reserves the right to change the specifications of its products without early warning. For the most current data, please visit our website: www.next-proaudio.com

UNPACKING

Each NEXT PXA8001 element is built in Europe (Portugal) by NEXT-proaudio, to the highest standard and thoroughly inspected before it leaves the factory. When unpacking the NEXT PXA8001, examine it carefully for any signs of possible transit damage and inform your dealer immediately if any such damage is found.

It is suggested that you retain the original packaging so that the system can be repacked in the future if necessary. Please note that NEXT-proaudio and its authorized distributors cannot accept any responsibility for damage to any returned product through the use of non-approved packaging.

PXA8001 OVERVIEW

Perfectly integrated, the PX system Power Rack is the heart of the system. Composed by a very powerful Powersoft amplifier module, with PFC and SMPS, and a Powersoft DSP, integrated to Armonia, this power rack is capable of driving a wide range of system's configurations with absolute reliability and ample headroom.

The system amplifier is based in a Powersoft amplifier module, that features a fixed switching frequency design of the Pulse Width Modulation (PWM) block allowing for maximum performance, high predictability and immunity from intermodulation artefacts; all this with an additional and extensive set of protection mechanisms (power limiters, thermal shutdown, short circuit and overload, clip limiter): there's no quality without reliability! Working at optimal efficiency, little power is wasted and the need for heat dissipation is reduced, resulting in long-term reliability with an astounding power output of 4 x 2000W into 4Ω. Two PXH64 or PXH95 and four PXL118 can be driven with extreme operational reliability and sound quality.

The digital audio processor unit protects and optimizes the entire system, with RMS and PEAK Limiters. The DSP has already installed 4 presets: PXH64 FLAT, PXH64 MUSIC, PXH95 FLAT, PXH95 MUSIC. All necessary signal processing functions like equalization, crossover filters, delays and limiters are setup at the factory for plug 'n' play. The system can be fully integrated into Powersoft Armonia workspace.

When using a PX System plus a PX Slave System, there is a "dummy" PXA8001 on the slave system called PXA8000 Drawer, it includes a drawer for cable storage. A key feature is maintaining exactly the same appearance as PXA8001 from the front grille so nobody will notice it.

SAFETY FIRST

It's important that loudspeaker systems are used in a safe manner. Please take some time to review the following points concerning safe use of the NEXT PXA8001 element.



- This apparatus must be connected to a mains socket outlet with a protective grounding connection.
- Do not expose NEXT PXA8001 to rain or moisture.
- NEXT PXA8001 must be positioned in a way that nothing can block or interfere with proper ventilation.
- Do not place any objects on top of the stack, they can fall accidentally and cause injuries.
- Do not attempt to move the system while connected.
- NEXT PXA8001 must be serviced only by qualified personnel.
- Do not expose the systems to extreme heat or cold conditions to prevent component damage.

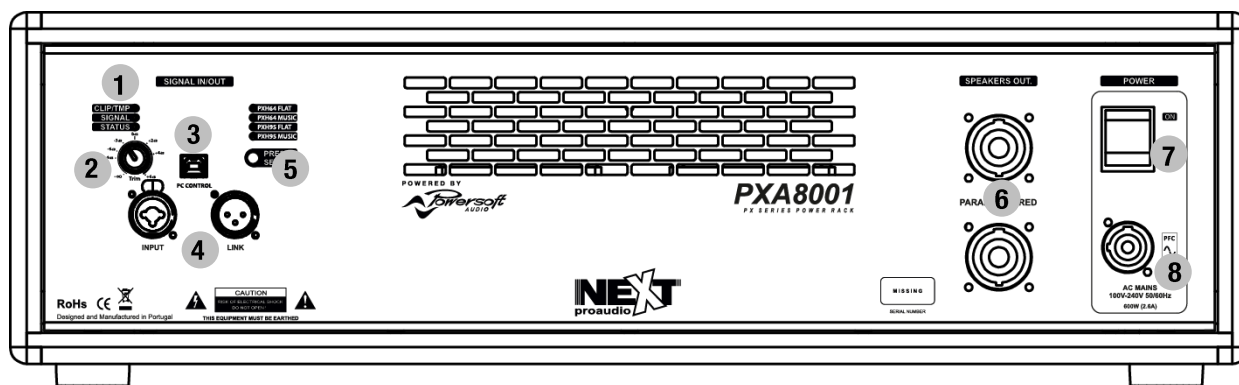
RIGGING AND SUSPENSION

- Before rigging or suspending NEXT PX systems, inspect all components and all hardware for any signs of damage or missing parts.
 - If you find any damaged, corroded or deformed parts, do not use them, replace them immediately.
 - Do not use hardware that isn't load rated or that its' rating is not enough to handle the system's weight with a good safety factor (4 minimum). Don't forget that the hardware won't just hold the systems weight. It has to be sturdy enough to handle dynamic forces like winds and other, without any part deformation. NEXT-proaudio advises customers to contact a licensed, professional engineer regarding equipment installation.
-

- NEXT PX system installation should only be carried out by qualified personnel.
- Always use adequate protective clothing and equipment to prevent possible injuries.
- Only install the systems on solid, levelled ground and isolate the surrounding area during installation and operation, to prevent general public presence near the systems.
- Be sure you understand all local and national regulations regarding equipment installation.
- Failure to comply with these instructions may result on injury or death.

PXA8001 BACK PANEL

Next PXA8001 is very easy to use. The connections panel is intuitive and doesn't require much user interference. There is one mono balanced signal XLR3 input, paralleled with a XLR3 link, and two NL8 power outputs, also paralleled. The cabling to achieve this is supplied by NEXT-proaudio when the PXA8001 is acquired as a component of the PX System, and is explained further below on the System Deployment chapter. Everything is done on the back of the rack-mount, including the audio processor interface, in order to maintain a good aesthetic look on the front of the system, and hide the controls and connections.

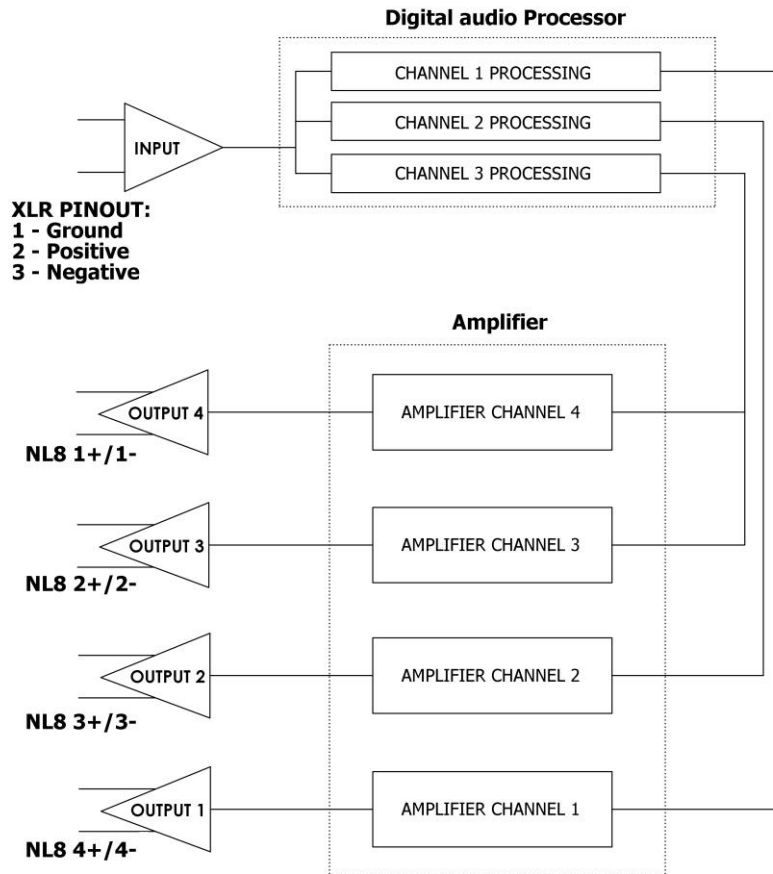


- 1- LED Indicators
- 2- Gain Knob
- 3- PC Control Connection
- 4- Input/Link XLR

- 5- Preset Selector
- 6- SpeakON NL8 Connectors
- 7- Mains Switch
- 8- PowerCON Mains Plug

CONNECTIONS AND ELECTRIC DIAGRAM

The NEXT PXA8000 was originally designed as part of the PX System. Because of its great aesthetic look, little weight, and great versatility, it is today applied in many other situations. Because of that, the signal was arranged in order to support any kind of system.



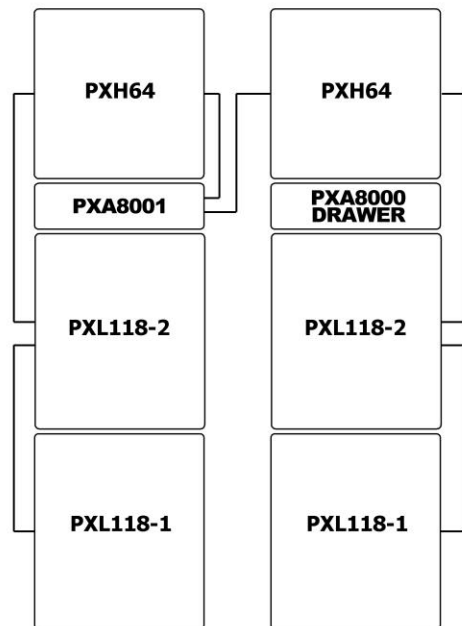
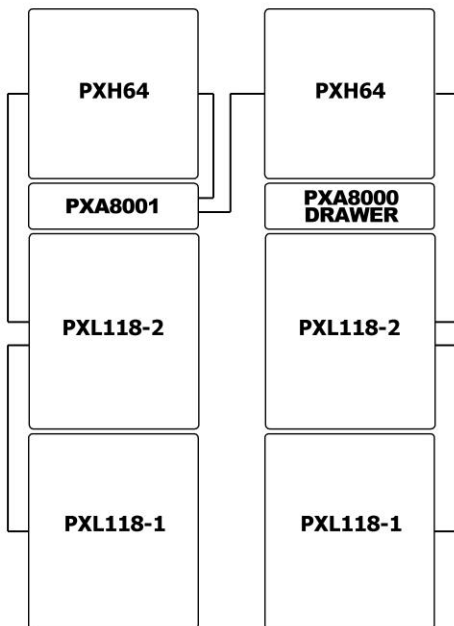
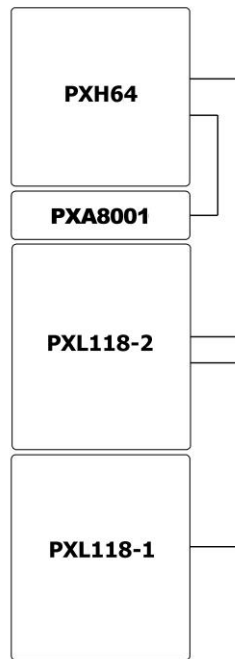
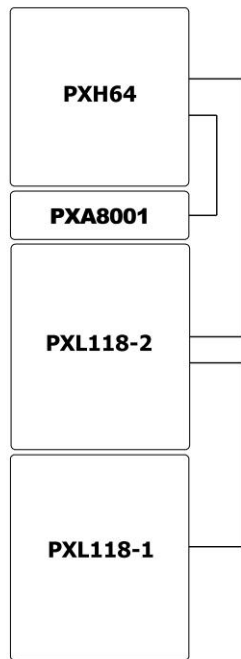
As you can see above, all output channels are independent and have their own individual processing, allowing the PXA8000 to drive a wide selection of system arrangements. In the PX System they have the following assignments:

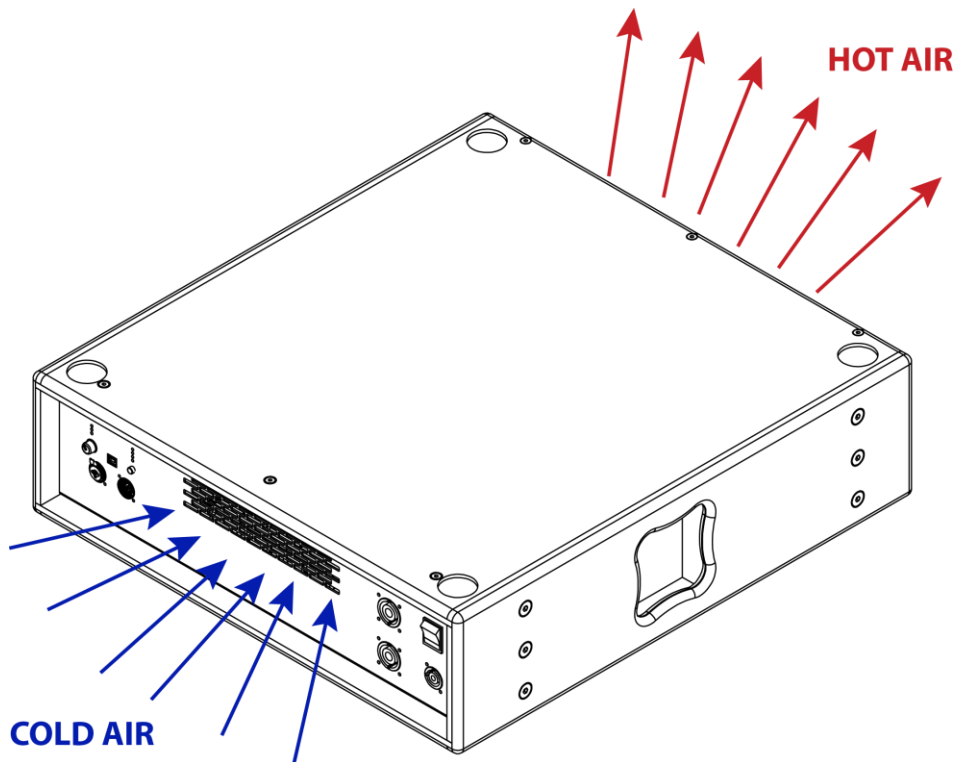
NL8 PINOUT	Description
1+ / 1-	PXL118 [1]
2+ / 2-	PXL118 [2]
3+ / 3-	PXH64/PXH95 MID
4+ / 4-	PXH64/PXH95 HIGH

PX SYSTEM DEPLOYMENT

The PX SYSTEM is an easy to use, fast deployment system. For normal ground-stacked operation all cables are included with the system. There are two options to deploy the system: Single Stereo System (uses one PX8001 each side) and Double Stereo System (uses one PXA8001 each side plus one PXA8000 drawer each side). Each PXA8001 is capable of powering one PX System + one PX Slave System.

Please follow the examples below:





Always be careful with PXA8001 placement in order to allow the correct air flow. The fresh air will come from the back panel and will be exhausted, already hot, from the front grille. Do not place any obstacle in a radius of 1 m from the Rack.

CABLE SELECTING

On very specific installations sometimes the PX System can't be deployed as a "tower" and the MID/HIGH section needs to be apart from the subs, in this case bigger cables are needed. Selecting a cable consists of calculating the correct cable section (size) in relation to the load impedance and the required cable length. A small cable section will increase its serial resistance, which will induce power-loss and response variations (damping factor). The following table indicates, for 3 common sizes, a cable length with a maximum serial resistance equal to 4% of the load impedance (damping factor = 25):

Cable section	Maximum Length related to load impedance	
	8Ω	4Ω
1.5 mm ²	12m [40 ft]	6m [20 ft]
2.5 mm ²	20m [64 ft]	10m [32 ft]
4 mm ²	32m [104 ft]	16m [52 ft]

TROUBLESHOOTING

Simple troubleshooting does not require sophisticated measurement equipment and can be easily undertaken by users. The technique should be to segment the system in order to identify the faulty system component: signal source, controller, amplifier, loudspeaker or cable? Most installations are multi-channel. It is often the case that one channel works and others do not. Trying different combinations of system elements can usually help to isolate and locate the fault.

Some cabinet faults can be quite easily identified and corrected by the user. A simple sweep with a sine wave generator can be very helpful though it **MUST** be made at a fairly low level to prevent damage to the speakers. A sine wave sweep can help find:

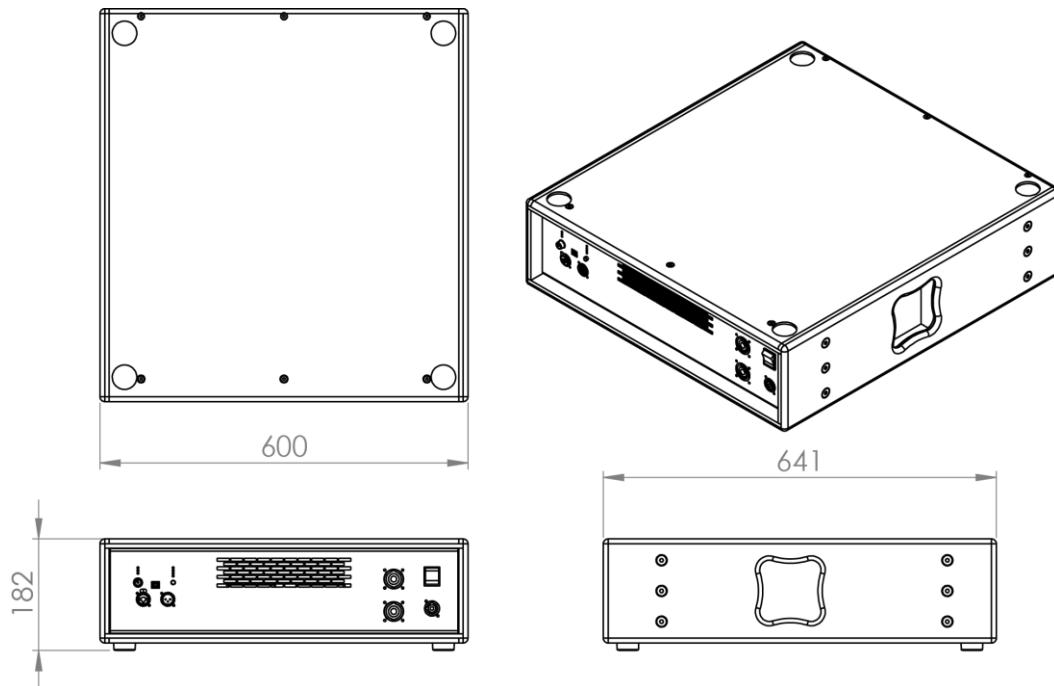
- Vibrations due to loose screws.
- Air-leak noises: check that no screws are missing, particularly where the accessories attach to the cabinet.
- Vibrations due to a front grille badly positioned on the quick release fixings.
- Foreign object that has fallen into the cabinet after repair or through the ports.
- Internal connection wires or absorbing material touching the loudspeaker diaphragm: check by removing the bass loudspeaker.
- Loudspeaker not connected or phase reversed following a previous inspection, test or repair.



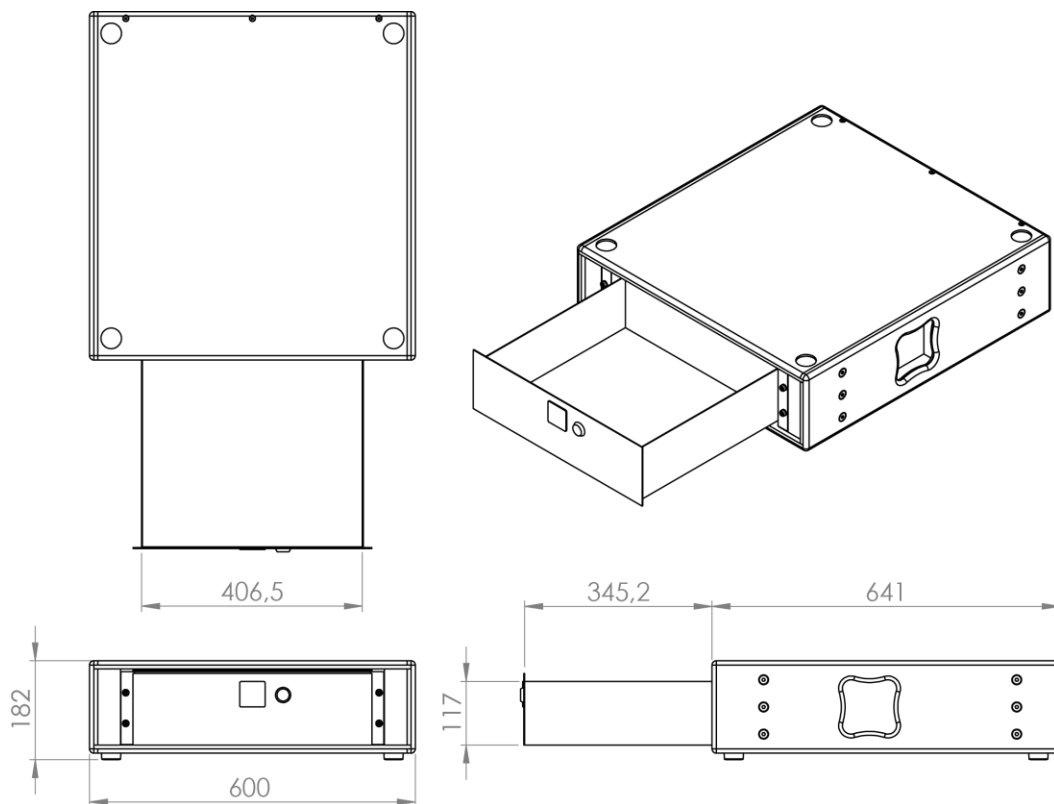
TECHNICAL SPECIFICATIONS

NEXT PXA8001 TECHNICAL SPECIFICATIONS	
Type	4-Channel PX System Power Rack
Amplifier Technology	SMPS with PFC Class D Amplifier
Cooling	Temperature Controlled Internal Fans
Average Efficiency	>79%
Total Output Power	8000W
LF1/LF2 Section Output Power	2000W@4Ω
MF Section Output Power	2000W@4Ω
HF Section Output Power	1000W@8Ω
Controller	24 bit/48kHz 3 channel DSP
Digital Crossover	150Hz/1200Hz, 24dB/oct L-R
System Presets	4 Factory Presets (PXH64 Flat, PXH64 Music, PXH95 Flat, PXH95 Music)
PC Control	Real time control plus monitoring via Powersoft Armonia
AC Operating Voltage	90 - 264Vac, 50 - 60Hz
Nominal Power Consumption	600W (2.6A)
Mains Connector	Neutrik Powercon
Construction	15mm Multi-Laminate Birch Ply
Finish	Textured Black Semi-Matte Coating
Protective grill	Black Perforated Steel
Fittings	12 x M8 for Optional Rigging/Tilt System
Handles	1 on Each Side
Dimensions (W x H x D)	600 x 182 x 641 mm
Net Weight	19kg
Gross Weight	20.2kg

DIMENSIONS



PXA8001



PXA8000 – Drawer

CONTACTS

In case of any doubts or any further information just:

Write us:

NEXT-PROAUDIO
Rua da Venda Nova, 295
4435-469 Rio Tinto
Portugal

Contact us:

Tel. +351 22 489 00 75
Fax. +351 22 480 50 97

Send an e-mail:

info@next-proaudio.com

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