

INSTALLATION & OPERATION MANUAL

inDESIGN

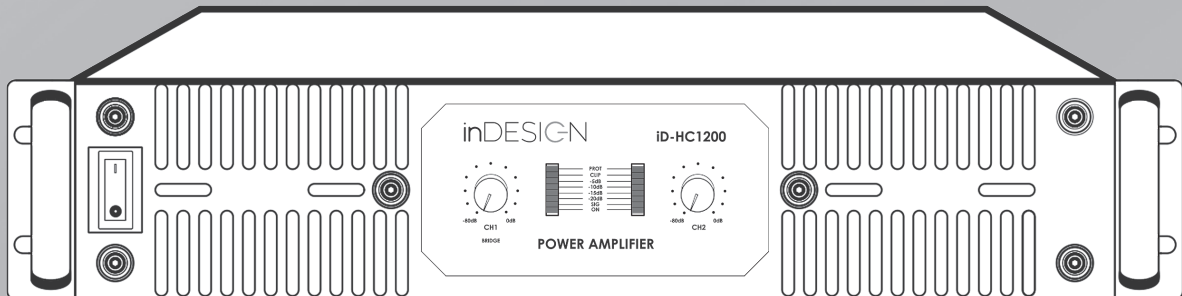
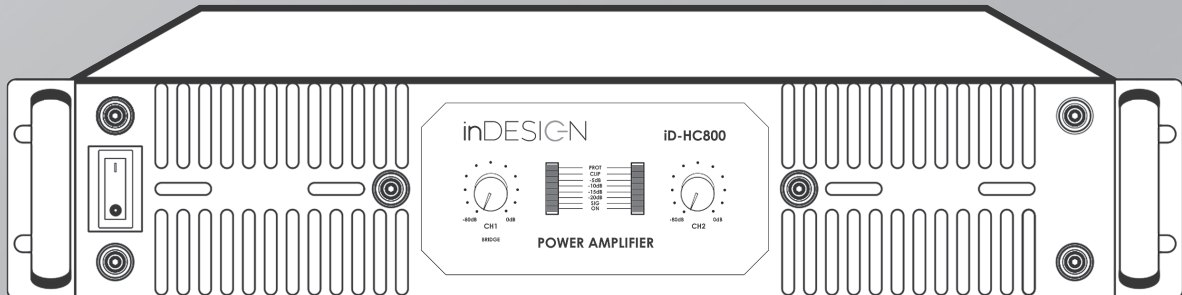
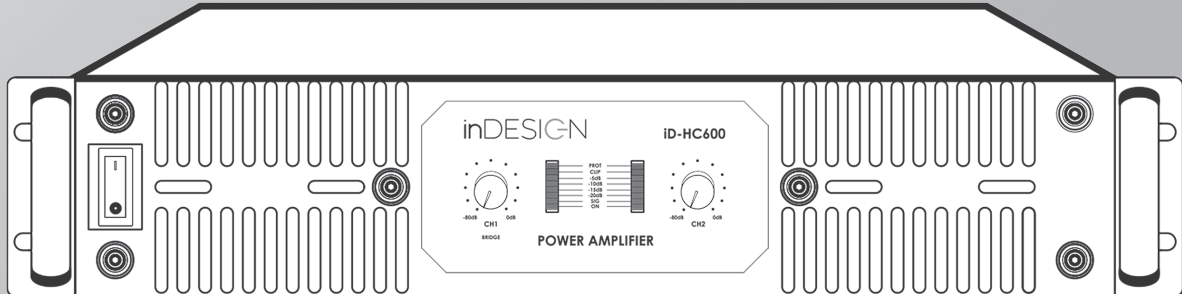
iD-HC SERIES

POWER AMPLIFIERS

iD-HC600

iD-HC800

iD-HC1200



CONTENTS

INTRODUCTION	2
IMPORTANT SAFETY INSTRUCTIONS	3
FRONT PANEL	4
REAR PANEL	5
MAINTENANCE	6
AMPLIFIER COOLING	7
SPECIFICATIONS	8
WARRANTY INFO	11-12

INTRODUCTION

Thank you for choosing inDESIGN iD-HC power amplifiers for your application. Please spare some time to read the contents of this manual, so you can obtain the best possible performance and longevity of the product/s.

The inDESIGN iD-HC power amplifier series is a high powered efficient 2 Stage, Class H amplifier design-built for demanding mobile live sound and permanent installation amplification applications.

Each model features min. 4 ohms load, bridging @ 8 ohms, switchable input sensitivity, soft start, DC protection, short circuit protection, clip limiter and thermal overload protection.

Maintenance is a breeze with removal – washable front filters via the front panel. The weight is due to large transformers – sorry about that... at least your amps will have a long service life!

Electrical and Safety Warnings

CAUTION

THESE SERVICE INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.



The lightning flash with arrowhead symbol, with an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.






WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



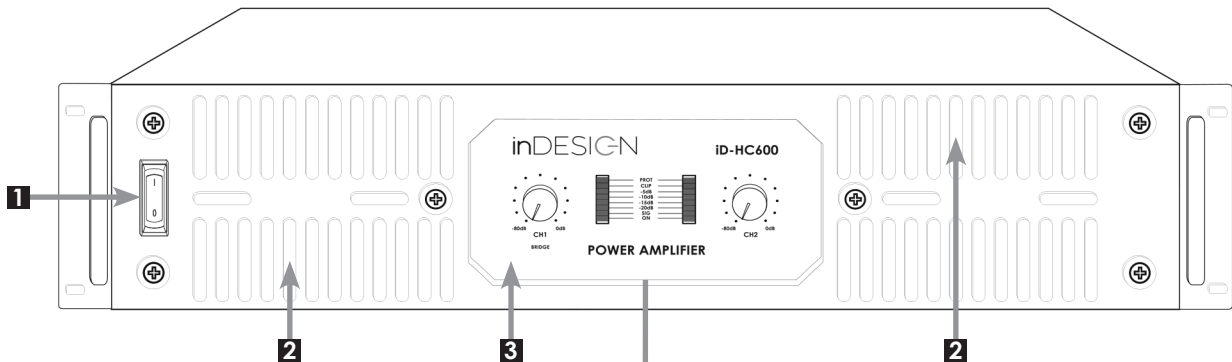
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT SAFETY INSTRUCTIONS

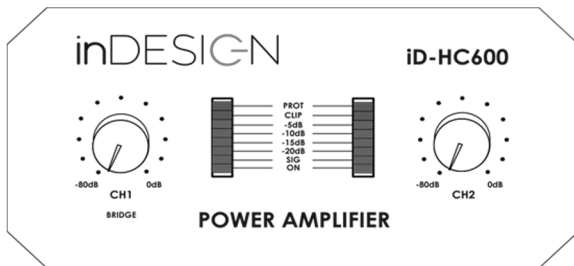
1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. To prevent injury please refer to these instructions for electrical and safety information before installing or operating the apparatus.
6. No naked flame sources such as lighted candles should be placed on the apparatus.
7. Operation of this apparatus is recommended for moderate climates only.
8. This apparatus must not be exposed to dripping or splashing liquid.
No object filled with liquid, such as a vase, should be placed on the apparatus.
9. Clean only with a dry cloth.
10. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
11. Do not install near any heat sources such as radiators, heaters, stoves, or other apparatuses (including amplifiers) that produce heat.
12. Unplug this apparatus during lightening storms or when not in use for long periods of time.
13.  Protective Earthing Terminal:
The apparatus should be connected to a mains socket outlet with a protective earthing connection.
14. The mains plug/appliance coupler is used as a disconnect device, the disconnect device shall remain readily operable.
15. When not in use and during transportation, please take care of the power cord set, for example, tie up the power cord set with a cable tie/something similar. It should be kept away from sharp edges and the like that can cause abrasion of the power cord set. When put into use again, check that the power cord set is not damaged. If any damage is found, have the unit checked by a qualified service person to replace the power cord set specified by the manufacturer.
16. The terminals marked with symbol of "" may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by a qualified service person or the use of ready-made leads or cords.
17. Only use attachments/accessories specified by the manufacturer.
18. Check speaker line load prior to connecting to amplifier using an impedance meter.
19. Refer all servicing to qualified service personnel. Servicing is required if the apparatus has been damaged in any way, such as power-supply cord or plug breakage, damage due to liquid or objects falling onto the apparatus, exposure to rain or moisture, or if the apparatus does not operate normally, or has been dropped.
20.  Correct Disposal of this Product:
This marking indicates that this product should not be disposed of with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental-safe recycling.

WARNING: There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

FRONT PANEL



1. Power Switch
2. Cooling vent with dust filter
3. Control Panel:



PROTECT: Illuminates when a channel or both channels goes into protect mode due to a fault.


PROTECT LED FLASHING

Indicates the amplifier has gone into thermal mode protect mode. The amplifier will resume operation once cooled down. Check dust filters for clogs or other environmental heat source issues.

A flashing protect LED can also indicate speaker circuit short circuit. Check for speaker line faults and rectify.

PROTECT LED ILLUMINATED

Indicates there is a hardware fault with the amplifier channel. The amplifier must be returned to place of purchase for repair.

CLIP:  Illuminates when the amplifier is driven too hard and is in distortion. Continuous clipping will damage connected speaker drivers.

-3dB: Illuminates when channels are driven to -3dB of output.

-6dB: Illuminates when channels are driven to -6dB of output.

-12dB: Illuminates when channels are driven to -12dB of output.

-24dB: Illuminates when channels are driven to -24dB of output.

SIG: Illuminates when input signal is present.

ON: Illuminates when each channel is in normal operation.

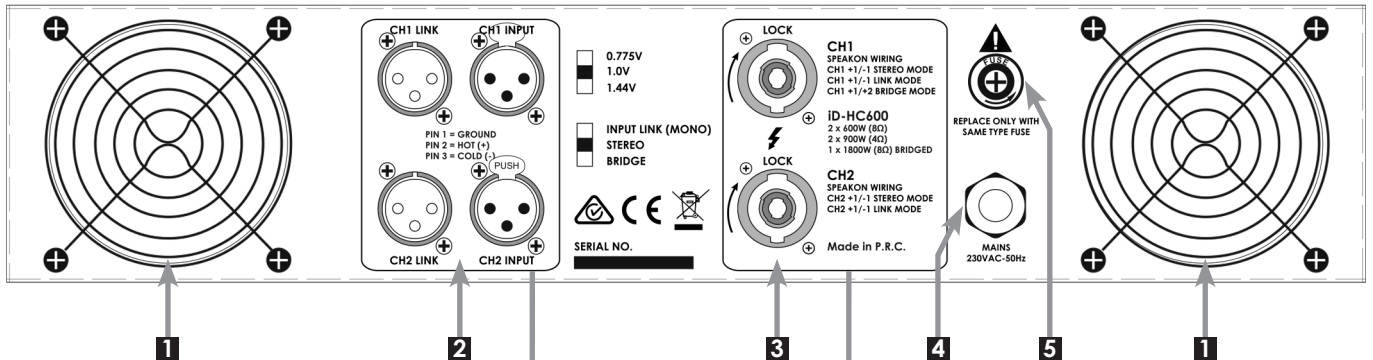
CH1-CH2: Level Control potentiometer for each channel.

Stereo and Input Link Modes: Both CH1 and CH2 controls are active.

Bridge Mode: Only CH1 level control is active.

REAR PANEL

iD-HC600 back panel shown



1. Ventillation outlet
2. Signal INPUT / LINK
3. Speakon NL4 speaker outputs
4. Power cable
5. Fuse block

! iD-HC amplifier minimum ohm loading is 4 OHMS per single channel and 8 OHMS in bridge mode. Operating the amplifier below 4 ohms or 8 ohms in bridge mode will likely overheat and/or damage the amplifier. This may void your warranty.

Mode Selector Switch

INPUT LINK (MONO):

In this mode, the amplifier will only accept signal applied to Channel 1's input XLR. Channel 2's output signal will come from Channel 1's input but both channels will have independent level control via front panel level potentiometers.

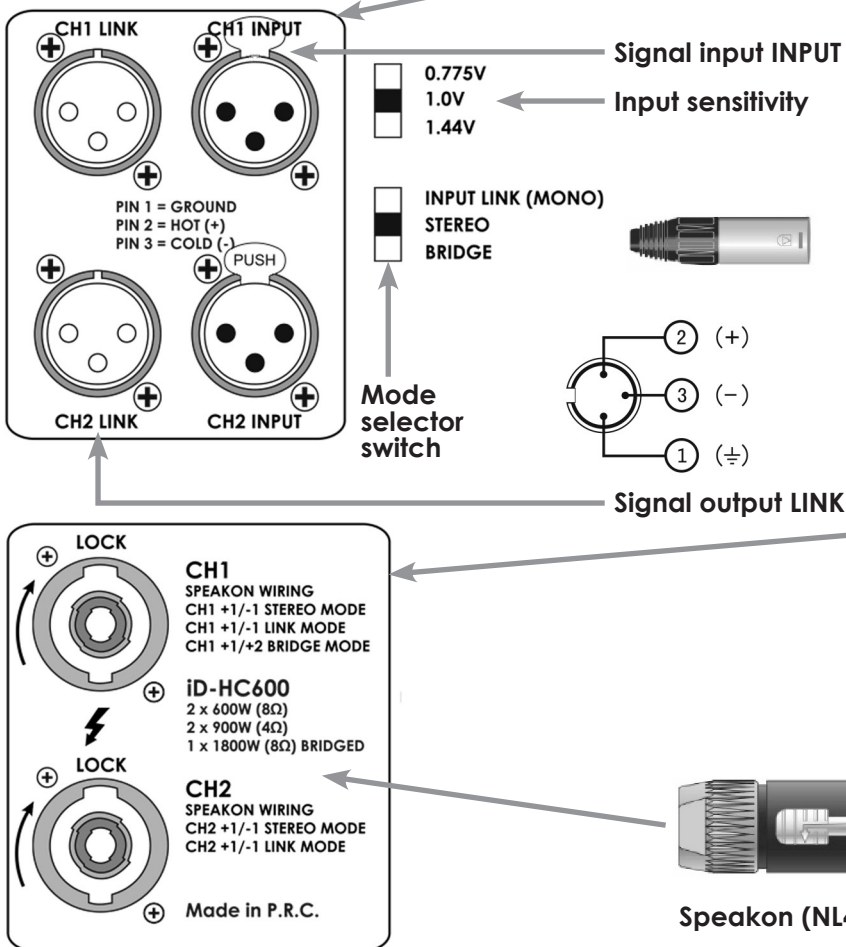
STEREO MODE:

In this mode, both inputs signals are active and each channel operates independently. Both front panel level potentiometers are active in this mode.

BRIDGE MODE:

In this mode, both channels output stages are combined which, in turn, doubles the power output @ 8 ohms. The amplifier will only pass signal connected to Channel 1's XLR input. Channel 1 level control potentiometer will be active. Both channel 2's input and level control potentiometer are inactive in BRIDGE MODE.

The NL4 wiring must be configured as PIN 1+ and 2+ in BRIDGE MODE.



MAINTENANCE

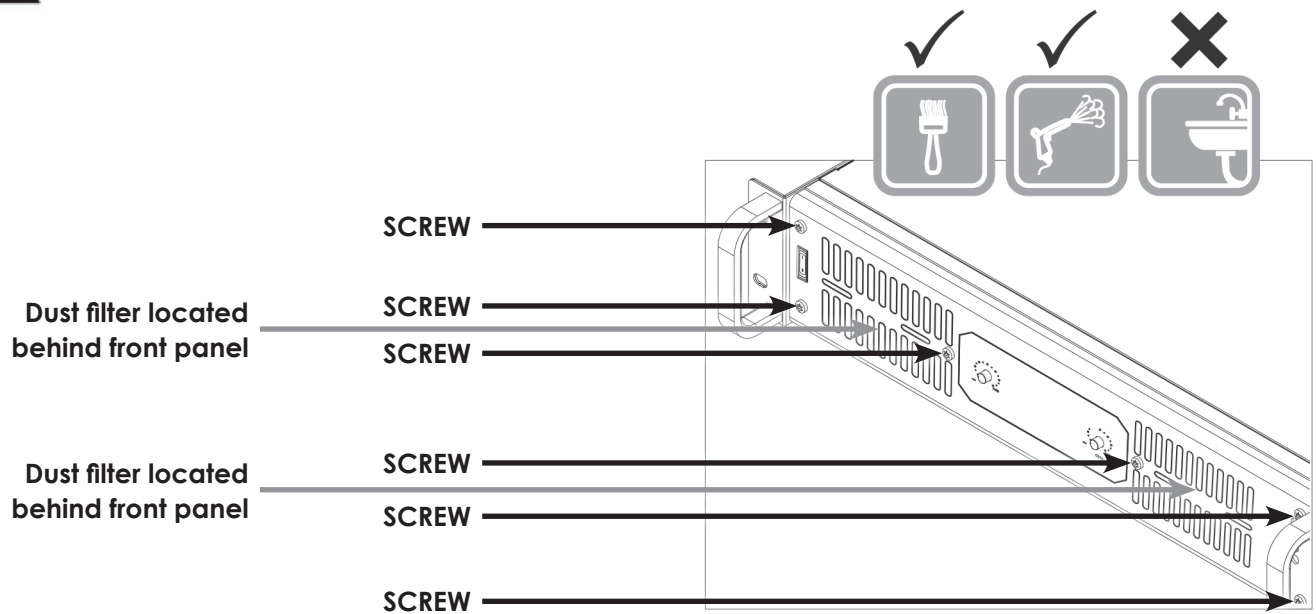


Cleaning the dust filters: It is recommended to clean both dust filters every 3 months.

Operating the amplifier without dust filters in place or with clogged dust filters will either damage or shorten the service life of the amplifier.



Warning: Lack of maintenance may void your warranty.

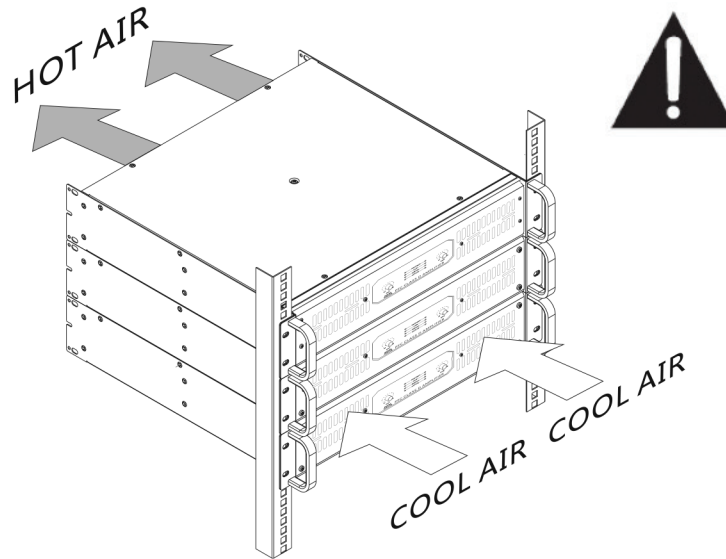
**To clean the dust filters:**

1. Remove the 6 front panel screws shown in the figure above.
2. Used compressed air, a vacuum or brush to clean the dust from filters.
3. Re-assemble the front panel.

AMPLIFIER COOLING

Please observe the following figures below for venting recommendations.

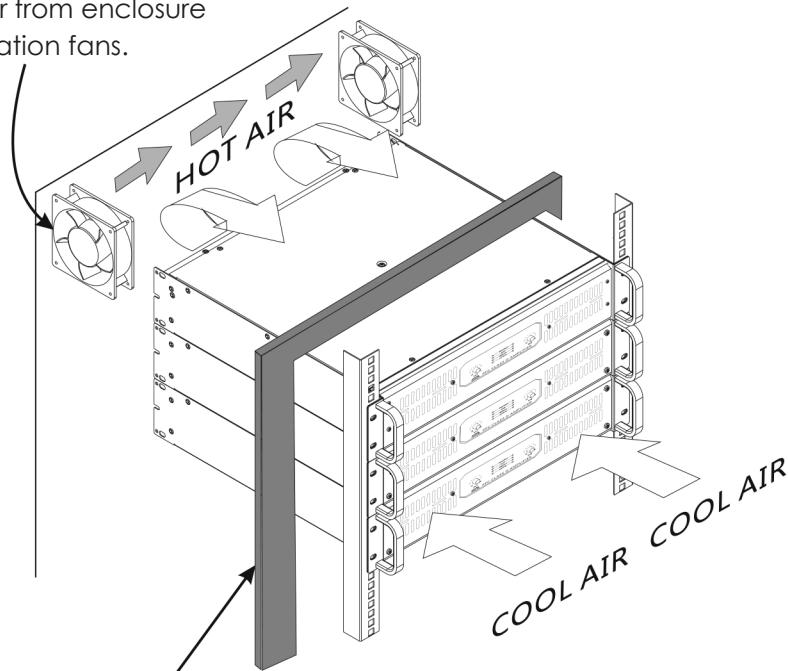
UNENCLOSED OR OPEN RACK INSTALLATION



ENCLOSED RACK INSTALLATION



Expel hot air from enclosure with evacuation fans.

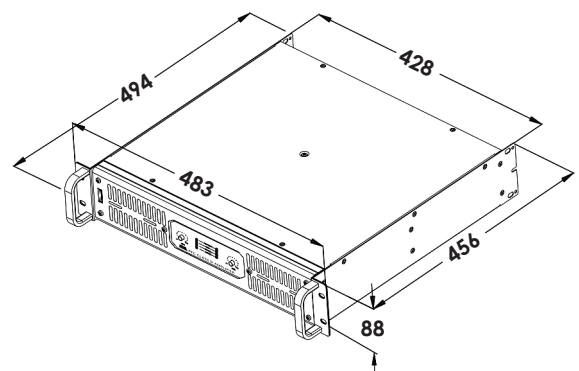


Ensure vented hot air does not re-circulate into front cooling vents.

SPECIFICATIONS

	iD-HC600	iD-HC800	iD-HC1200
Number of Channels	2		
Power RMS Watts 8Ω Stereo	600W	800W	1200W
Power RMS Watts 4Ω Stereo	900W	1200W	1850W
Power RMS Watts 8Ω Bridged	1800W	2400W	3900W
Amplifier Topology Category	2 STAGE, CLASS H		
Frequency Response	20Hz - 20kHz		
THD	0.05%		0.08%
S/N Rate	>108dB		
Slew Rate	>20V/μs		
Damping Factor	300 (100Hz)		
Input Connections	2x XLR3F	PIN2 = HOT (+)	PIN3 = COLD (-) PIN3 = GROUND
Signal Link Connection	2x XLR3M	PIN2 = HOT (+)	PIN3 = COLD (-) PIN3 = GROUND
Input Impedance (unbal/bal)	10kΩ / 20kΩ		
Input Sensitivity VAC	0.77V / 1V / 1.44V		
Output Connections & Wiring	SPEAKON NL4 x2 CH1 +1/-1 STEREO MODE CH1 +1/-1 INPUT LINK MODE CH1 +1/+2 BRIDGE MODE		CH2 +1/-1 STEREO MODE CH2 +1/-1 INPUT LINK MODE CH2 NOT CONNECTED IN BRIDGE MODE
Voltage Gain	36dB	38dB	
Cooling Flow	Front to Rear (via dual thermo controlled fans)		
Protection	Soft Start, DC Protection, Short Circuit, Clip Limiter, Thermal Overload		
Mains Power Requirements	230V/50Hz +/- 10%		
Mains Power Connection	10 AMP PLUG / attached cable		15 AMP PLUG / attached cable
Power Consumption RMS @ Stereo 4Ω			
AH/Watts @ Idle	0.13A / 29.9W	0.15A / 24.5W	0.17A / 39.1W
AH/Watts @ 1/8th Power	1.5A / 345W	2.0A / 460W	2.9A / 667W
AH/Watts @ 1/3rd Power	3.9A / 687W	5.3A / 1219W	7.5A / 1725W
AH/Watts @ Full Power	8.9A / 1587W	9.7A / 2231W	14.3A / 3289W
Product Dimensions (2RU) WxDxH	483 x 456 x 88 mm		
Product Weight	18.6kg	21.6kg	25.6kg
Carton Dimensions WxDxH	570 x 560 x 145 mm		
Gross Weight	19kg	24kg	28kg

*** Disclaimer:** Instructions and specifications are correct at time of printing. Information within may be subject to change without notice.



WARRANTY INFORMATION – Terms of Warranty – 5 Years

Consumer Guarantees

When you purchase a NAS Solutions distributed product, you have the peace of mind in knowing that your product is covered by the NAS warranty. The NAS warranty is provided by NAS Solutions (ABN 50 085 679 894), 127 Merrindale Drive, Croydon, Victoria 3136. ['NAS']

The Australian Consumer Law protects consumers by giving them certain guaranteed rights when they buy goods and services. Rights guaranteed under the Australian Consumer Law include;

- The goods are of acceptable quality;
- The goods match their description or any sample or demonstration model;
- The goods are fit for any represented purpose or purpose which the consumer has made known;
- Repairs and spare parts are reasonably available (unless notice has been provided that repairs or spare parts would not be available); and
- The services are carried out with reasonable care and skill and are completed within a reasonable time

These rights are called 'Consumer Guarantees' and apply automatically whenever goods or services are supplied to a consumer. These Consumer Guarantees cannot be refused, changed or limited.

Consumer Guarantees have no set time limit and depending on the price and quality of goods a Consumer may be entitled to a remedy after any manufacturers' or NAS's extended warranty has expired.

The Specific Warranty Table Information outlines the warranty period, warranty type and any specific exclusions for your NAS product. NAS considers the warranty period specified in the Specific Warranty Table to be a reasonable warranty period having regard to the price, design, manufacture and expected use of the product.

General Warranty ('Warranty')

NAS products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure or if the goods fail to be of acceptable quality. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and failure does not amount to a major failure. What constitutes a major failure is set out in the Australian Consumer Law.

Subject to the terms and conditions set out below, and unless otherwise specified in the Specific Warranty Information for your NAS product, NAS agrees to repair or replace, at NAS's cost, the NAS product purchased by you in Australia or New Zealand from NAS or a NAS authorised reseller when the product does not perform substantially in accordance with the specifications during the warranty period specified in the Specific Warranty Table for your NAS product. NAS makes no other express warranties in respect of your NAS product. To make a claim under this Warranty, valid proof of purchase must be presented when the warranty claim is made, along with any other required information. The Warranty offered by NAS is not transferable.

The Warranty will only apply if your NAS product has been installed and used in accordance with NAS's recommendations as noted in the operating instructions.

Warranty Exclusions

The Warranty does not cover damage caused by;

- Misuse or abuse of the product by You;
- Incorrect operation or not following the operation instructions (as noted in the operating instructions);
- Improper installation;
- Incorrect or improper maintenance or failure to maintain the product;
- Failure to clean or improper cleaning of the product;
- Incorrect voltage or non-authorized electrical connections;
- Adverse external conditions such as incorrect or fluctuations in electrical voltage, thunderstorm activity, acts of God, acts of terrorism, damage caused by vermin, or any other circumstance beyond NAS's control;
- Exposure to excessive heat, moisture or dampness;
- Exposure to abnormally corrosive conditions;
- Alterations or modifications to the product made by You or a third party; or
- Damage as a result of accident, liquid, grit, impact or lack of proper care as indicated in the operating instructions;
- Damage resulting from the use of cleaning solvents such as acetone

The Warranty does not apply if any serial number or appliance plate on the product has been tampered with, removed or defaced.

The Warranty does not apply if the product has been repossessed under any financial agreement.

The Warranty excludes accessories and consumable goods which have ceased working through normal wear and tear such as, but not limited to, batteries, lamps and other parts classifiable as a consumable part.

This includes the CD mechanism and laser fitted to the inDESIGN iDCDP-110.

These parts carry a 3 month warranty.

The Warranty does not cover the loss of any data howsoever caused. You shall be responsible for backing up and protecting data against loss, damage or destruction.

Products presented for repair may be replaced by refurbished products of the same type rather than being repaired. Refurbished parts may be used to repair the products. Replacement of the product or a part does not extend or restart the Warranty Term.

The product will be at the owner's risk whilst in transit to and from all NAS authorised service centres, unless transported by NAS or its authorised representatives.

NAS and its authorised service centres may seek reimbursement of any costs incurred by them when the product is found to be in good working order.

The cost of claiming under this warranty, including return of any product to NAS is to be borne by the consumer.

The Warranty excludes removal or reinstallation costs.

*** All inDESIGN products come with a 5 year warranty term.**

For further information and warranty claims, refer to our **Support** page at www.nas.solutions