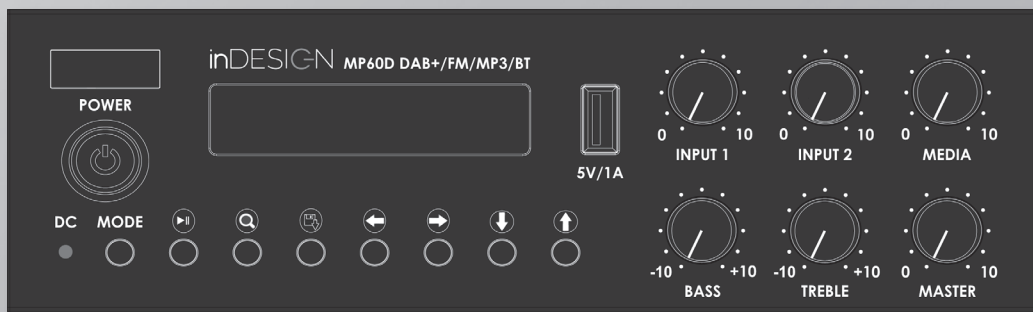


# INSTALLATION & OPERATION MANUAL

# inDESIGN

## MP60D

**MEDIA PLAYER & MIXER AMPLIFIER**  
**DAB+/FM/MP3/BT**



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## INTRODUCTION

The inDESIGN MP60D – 60 watt, all-in-one mixer amplifier is designed for small to medium installations where multiple playback sources are required. The in-built FM tuner, DAB+ tuner, USB/MP3 player allow easy playback of your favourite radio station, or music stored on a USB drive.

The MP60D delivers 60 watts via 8Ω or constant voltage 100V and 70V speaker outputs and features 2 Microphone/Line inputs with individual gain control for external audio sources and microphones. A 'pre-amp out/power amp in' link allows for the mixer audio signal to be sent to an external equaliser or a booster amplifier.

## 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.

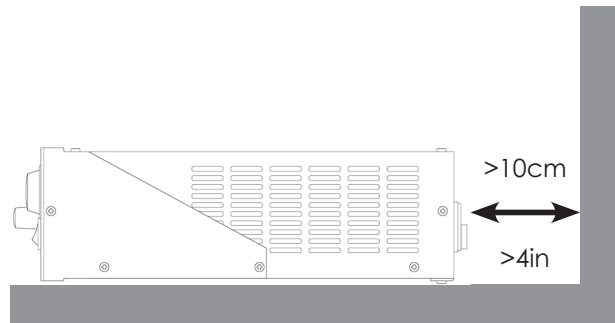
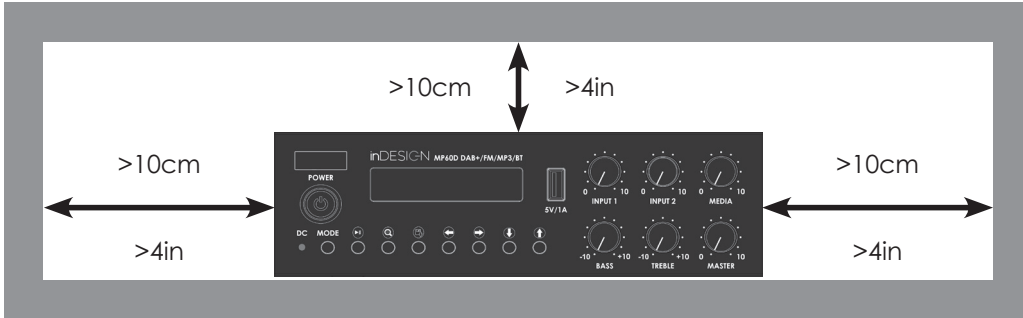
## IMPORTANT SAFETY INSTRUCTIONS

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.

You must allow a minimum 10 cm or 4 inches of unobstructed clearance around the unit.

Do not place the unit on a bed, sofa, rug, or similar surface that could block the ventilation openings. If the unit is placed in a bookcase or cabinet, there must be ventilation of the cabinet to allow proper cooling.

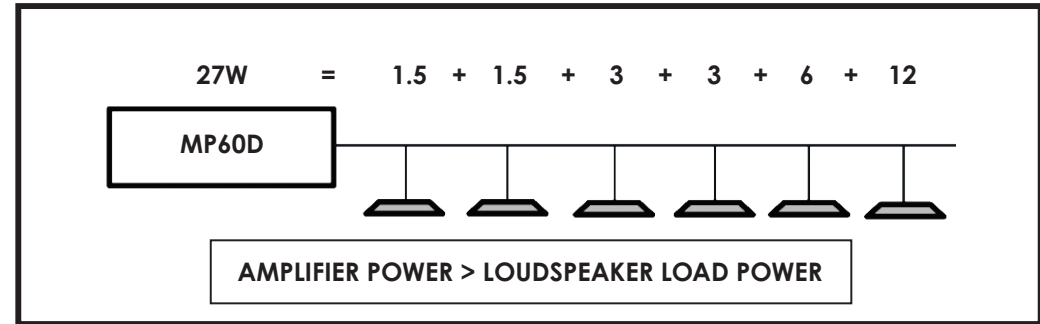


**INSTALLATION**

**How to Calculate the correct load for a 100V Amplifier:**

When installing a 100V loudspeaker system, it is rather simple to calculate the number of loudspeakers that can be connected to a particular 100V amplifier.

Each 100V loudspeaker has a 100V transformer that will have different power tapings, for example 1.5, 3 and 6W. The sum of all taps should never exceed the amplifiers power rating.

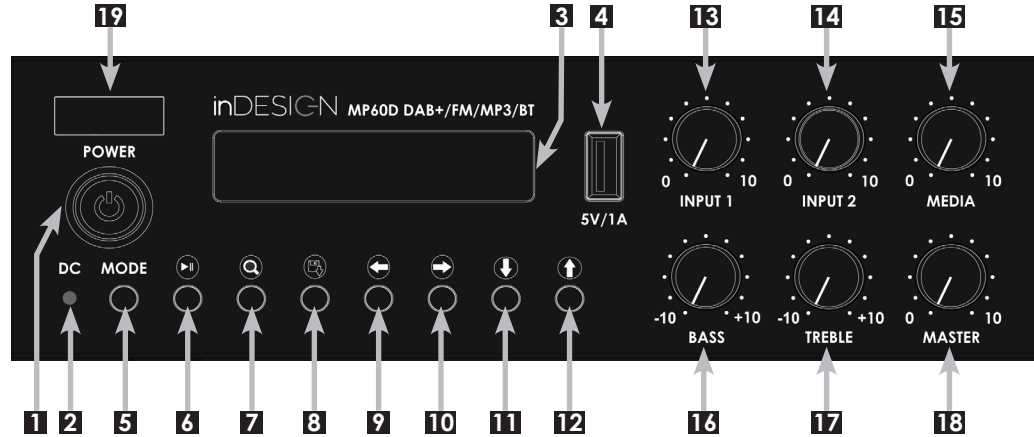


**To calculate the amplifiers capability:**

If your chosen amplifier has a maximum output of 30 Watts at 100V, the minimum impedance connected should be at least 333 Ohm (100V x 100V/333 Ohm = 30W).

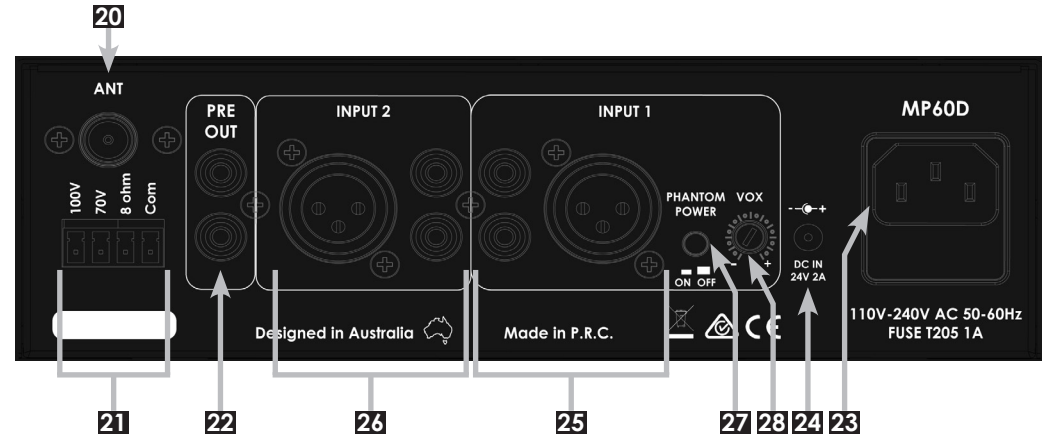
When measuring a constant voltage speaker load, use a professional impedance meter, not a multimeter.

FRONT PANEL



1. **Power On / Off button.**
2. **DC 24V power indication LED.**  
Red indicates 24V DC power available.  
Orange indicates 24V DC power active.
3. **Display screen.**
4. **USB input for MP3 playback.**  
5V, 0.5A.
5. **Mode select button.**  
Switch between DAB+, FM, MP3 and BT media options.
6. **BT mode:** Play / Pause, hold to Pair.  
USB mode: Play / Pause.
7. **DAB+:** Scan for available stations.  
FM: Auto-scan and store 10 radio stations.
8. **DAB+ / FM:** Hold to store station to pre-set slot. While storing, press again to cycle through available pre-set slots, the station will then store on selected pre-set slot automatically.  
Single press to recall station pre-set.  
Press again to cycle through available stored station.
9. **BT / USB:** Previous track.  
**DAB+:** Menu return.  
**FM:** Scan to previous station.
10. **BT / USB:** Next track  
**DAB+:** Menu enter.  
**FM:** Scan to next station.
11. **DAB+:** Menu up.  
**FM:** Manually change frequency.  
Down 100kHz step.
12. **DAB+:** Menu down.  
**FM:** Manually change frequency.  
Up 100kHz step.
13. **Volume adjustment for mic / line input 1.**
14. **Volume adjustment for mic / line input 2.**
15. **Volume adjustment for media source.**
16. **Bass level adjustment for output.**
17. **Treble level adjustment for output.**
18. **Output volume adjustment.**
19. **BT antenna** behind window.

REAR PANEL




20. **Antenna socket** for DAB+ and FM radio.
21. **Loudspeaker outputs.**  
When connecting low impedance speakers, use COM and 8Ω connections.  
For 70V or 100V speakers, use COM and the respective 70V or 100V connections.  
Do not use both 8Ω and 70V/100V outputs at the same time.
22. **Pre-Master Auxiliary Output** for external devices.
23. **Mains Socket.**  
**\*Note:** Only use a fuse equal to the specified rating.
24. **DC 24V input socket.**
25. **Input 1.** Balanced XLR for mic level and dual RCA for line level inputs.
26. **Input 2.** Balanced XLR for mic level and dual RCA for line level inputs.
27. **Phantom Power switch.** 24V DC mic input 1.
28. **Voice Priority.** Threshold level adjustment for input 1 voice priority.

**DAB+**

Use the 'Mode' button to select DAB+. Ensure the provided antenna is securely connected and uncoiled.



For first time use, use the  button to perform an initial scan.

Once the scan is finished, use the  and  buttons to scroll through the list of available stations.

Pressing the  button will select the current station.

To open the DAB+ menu press the  button.



The DAB+ menu provides access to the Station List, Full Scan and the MP30D Main Menu.



Use the  button to select any of these options, or the  button to return to the currently playing station.

**\*Please note, the Main Menu can only be accessed while in DAB+ mode.**

For ease of use, up to 10 stations can be stored as presets.


To store a station to a preset slot, first select a station from the station list.





With the desired station playing, press and hold the  button. When the 'Preset Save' prompt appears, press the  again to cycle through the 10 preset slots. The station will be automatically saved to the shown preset slot 3 seconds after last button press.



To recall preset stations, press the  button. With the 'Preset' prompt showing, pressing the  button will cycle through the 10 presets to recall. The selected station will be automatically recalled 3 seconds after last button press.



**FM RADIO**

Use the 'Mode' button to select FM Radio. Ensure the provided antenna is securely connected and uncoiled.

For first time use, use the  button to perform a quick scan. This will automatically store the first 10 available stations.





Using the  and  buttons will scan to the previous or next available station respectively, or use the  and  buttons to move down or up the available spectrum in 100kHz steps.

Preset stations can also be added or modified manually. To do so, first move to the desired station, then press and hold the  button. When the 'Preset Save' prompt appears, press the  again to cycle through the 10 preset slots. The station will be automatically saved to the shown preset slot 3 seconds after last button press.

To recall preset stations, press the  button. With the 'Preset' prompt showing, pressing the  button will cycle through the 10 presets to recall. The selected station will be automatically recalled 3 seconds after last button press.

**BLUETOOTH**

Use the 'Mode' button to select Bluetooth.

Press and hold the  button to enter pairing mode. On your playback device, in the bluetooth connection menu, you should see either MP60D or inDESIGN BT as the device name to connect to. With a compatible Bluetooth device paired, pressing the  button will play or pause the audio. Pressing the  button will begin the track again or skip to the previous track and pressing the  button will skip to the next track.

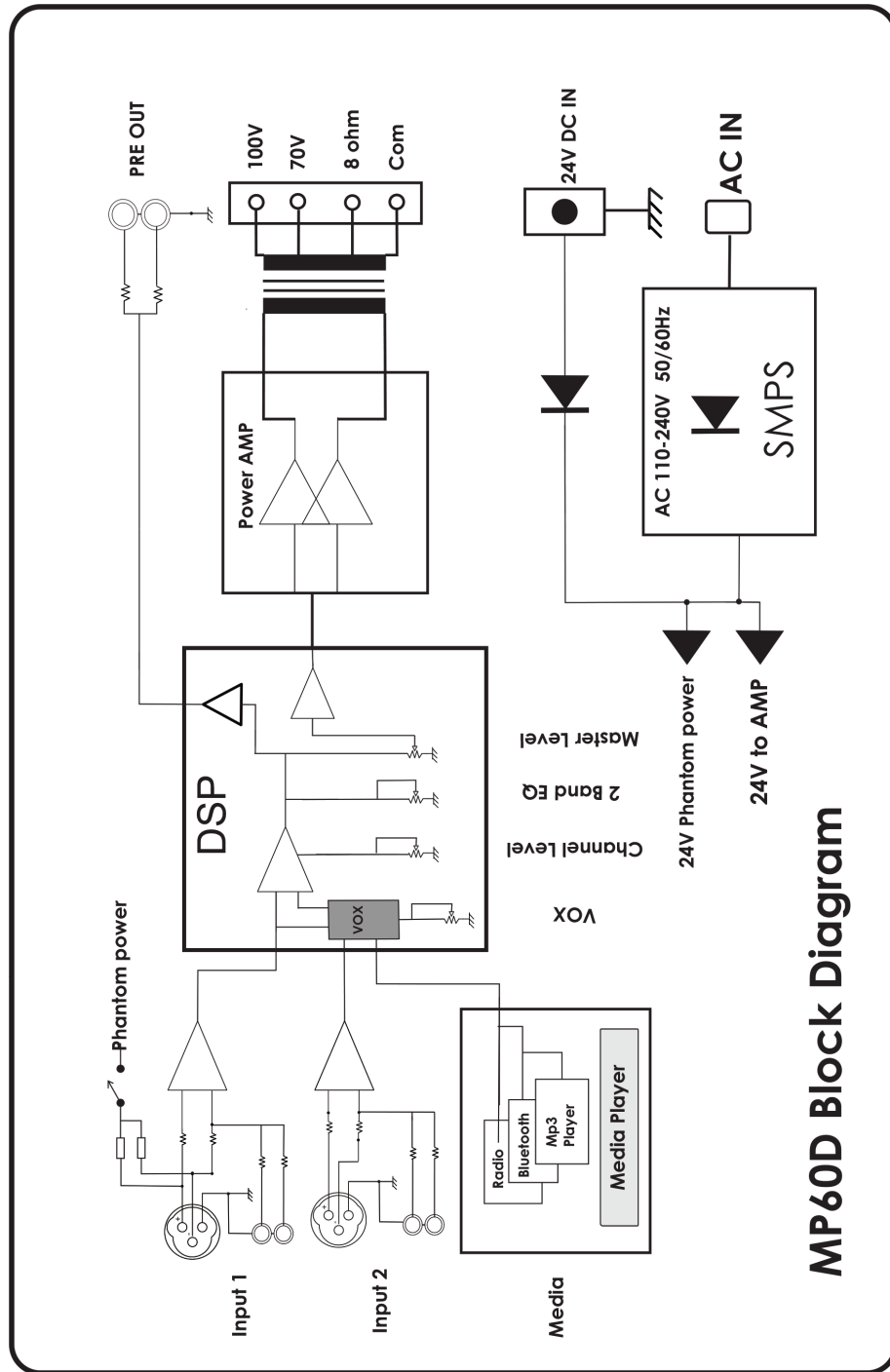
**USB**

Use the 'Mode' button to select USB.

Insert a USB drive into the port on the front of the unit. The unit will automatically locate compatible audio files on the USB drive and begin playback.

Use the  button will play or pause the audio. Pressing the  and  buttons will skip to the previous or next track respectively.

Pressing the  button will rotate between Loop All, Loop One and Random playback modes.



SPECIFICATIONS

MP60D	SPECIFICATION
Output power	60 watts. 8Ω or constant voltage 100v/70v line
AC power supply	Internal universal power supply (110VAC - 240VAC)
Output low impedance	8 ohm
Hi impedance output	70V / 83 ohm 100V / 166 ohm
Input sensitivity	Microphone 5mV Line 500mV
Frequency response	90Hz – 16KHz, +/- 1dB
THD (at -3dB rate power)	-0.5% @ 1KHz
Tone control	Bass 100Hz + - 10dB, Treble 10kHz + - 10dB
Protection	Thermal protected (at 75 degrees), short circuit overload
Size mm.	220 x 66 x 200
Weight kg (Net)	3.5
FM radio	88 – 108MHz. 10 preset stations
DAB+ frequency range	168MHz – 240MHz
Bluetooth	V3.0, V4.0 supported
USB playback	MP3 & WMA supported
Line Output level	600mV
Mains power	Internal universal power supply (110VAC - 240VAC)
Power consumption	100 watts
Safety	RCM / CE / EMC
Channel separation	>50dB
Noise level	<75dB
DC power supply	21-25V
AC fuse	T1AH 250V 5 x 20 mm

\* 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 National Audio Systems 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 National Audio Systems Pty Ltd (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-authorised 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.

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 re-installation 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](http://www.nas.solutions)