



iDX-FX SERIES

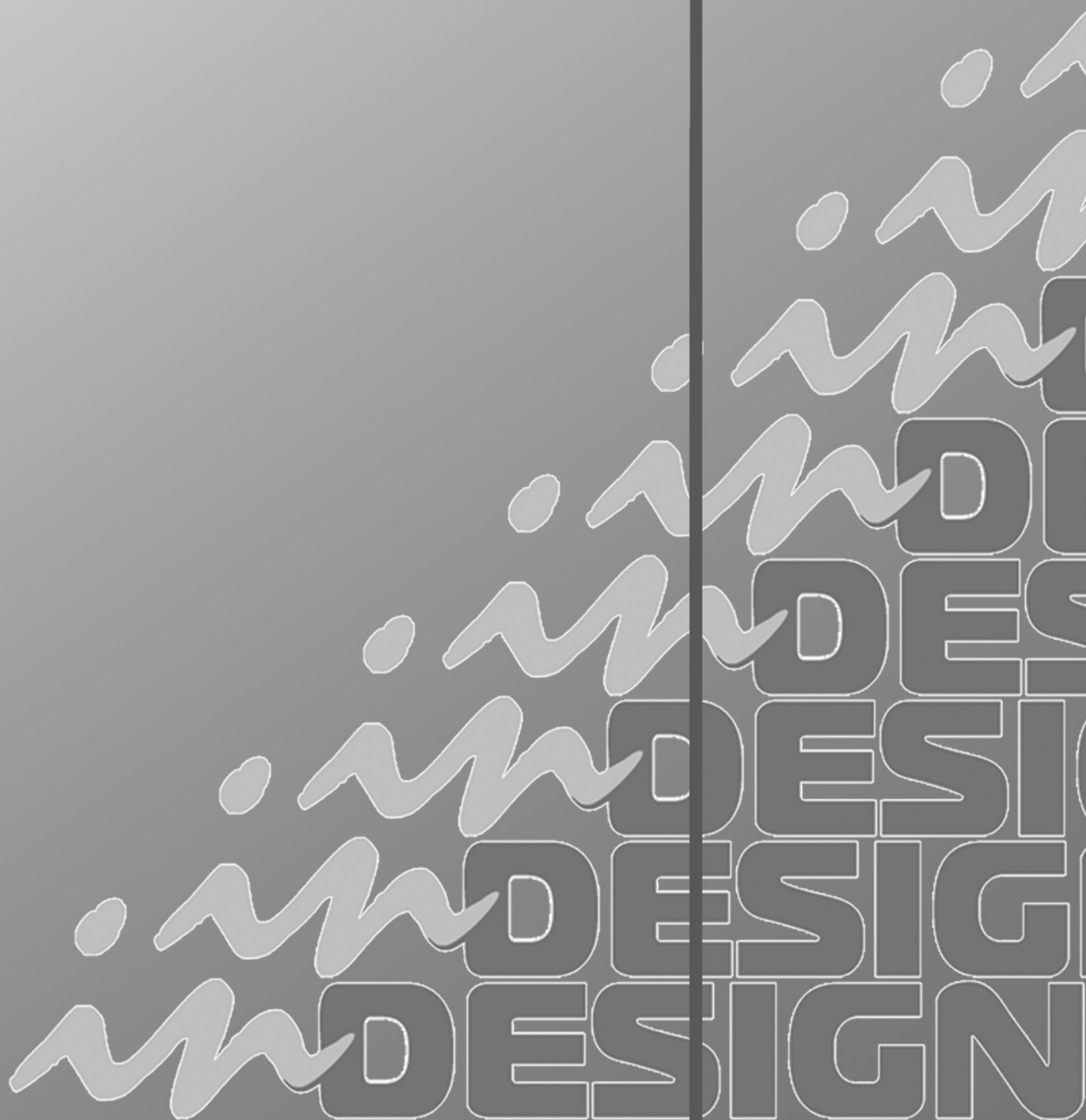
MIXING CONSOLES

iDX-8FX

iDX-12FX

iDX-16FX

iDX-20FX



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Ultra Low Noise, 8/12/16/20-Channel Mic/Line Mixer – INTRODUCTION

- 4, 8, 12, 16 mono input channels with silver plated XLRs and balanced line inputs. Ultra-low noise discrete mic preamps with +48 V phantom power
- 2 stereo input channels with balanced TRS jacks
- Balanced inputs for highest signal integrity
- Ultra-musical 3-band EQ and FREQ control on all mono channels and 3-band on all stereo channels. 4 LEDs on all mono and stereo channels
- 2 aux sends per channel for external effects and monitoring
- Built in digital multi effects (32 bit 256DSP)
- Separate stereo master output, 2 group outputs, monitor output and headphone outputs
- Highly accurate 2 x 10 segment bargraph meters
- Rugged design power supply ensures superior signal integrity

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, within 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.






CAUTION: 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.

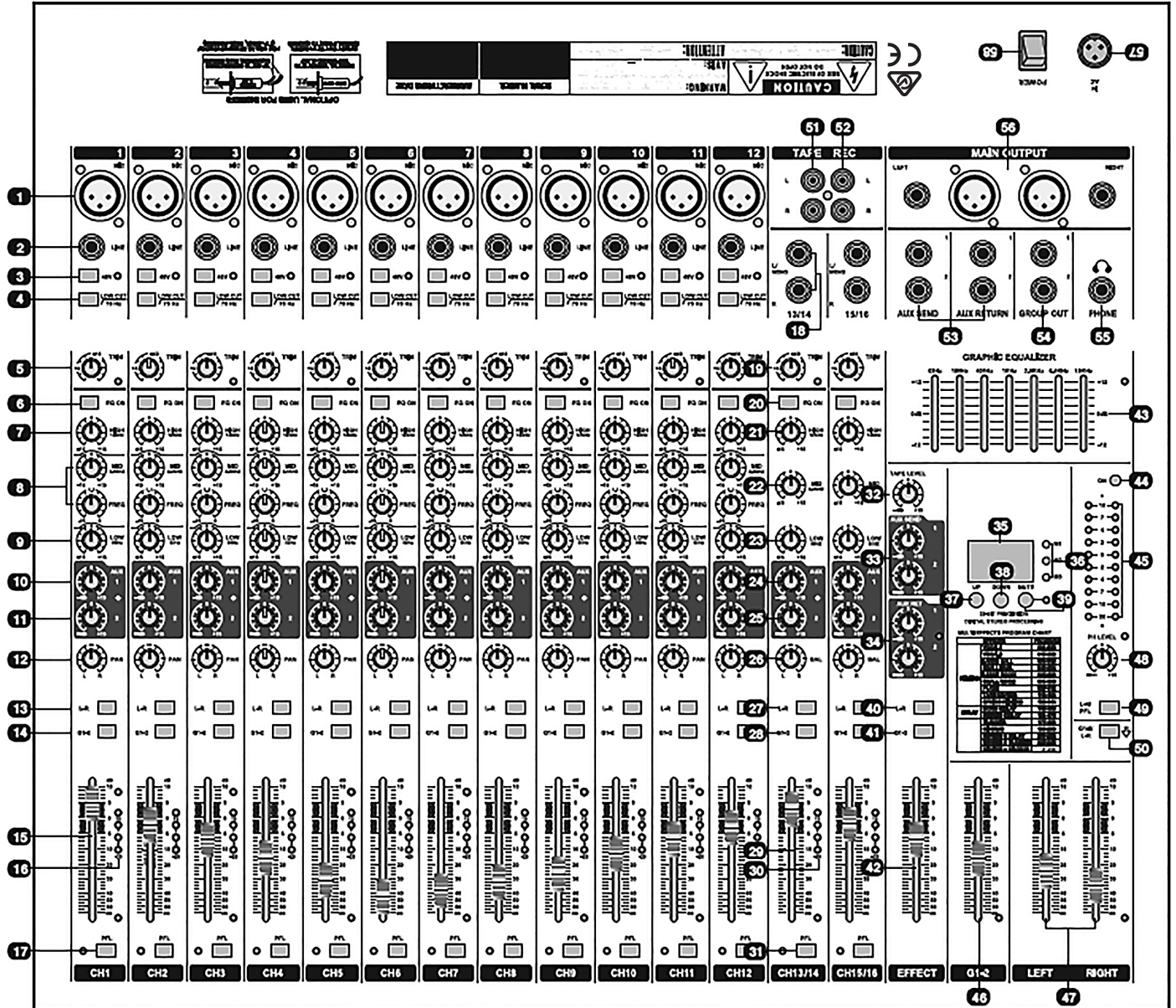
IMPORTANT SAFETY INSTRUCTIONS

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. 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.
7. Clean only with a dry cloth.
8. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
9. Do not install near any heat sources such as radiators, heaters, stoves, or other apparatuses (including amplifiers) that produce heat.
10. Unplug this apparatus during lightening storms or when not in use for long periods of time.
11.  Protective Earthing Terminal:
The apparatus should be connected to a mains socket outlet with a protective earthing connection.
12. The mains plug/appliance coupler is used as a disconnect device, the disconnect device shall remain readily operable.
13. 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.
14. 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.
15. Only use attachments/accessories specified by the manufacturer.
16. Check speaker line load prior to connecting to amplifier using an impedance meter.
17. 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.
18.  Correct Disposal of this Product:
This marking indicates that this product should not be disposed with other household wastes throughout Australia. 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.

A. OVERVIEW

Here you can find quick information on any feature on the console, along with a number reference where you will find a more detailed explanation.



B. INPUT CHANNEL

1. BALANCED INPUT (MIC)

Electronically balanced inputs accept a standard XLR male connector. +48V phantom power available on each input mic socket.

2. LINE INPUT

The unbalanced line input is provided for the use of an unbalanced line input signal. (This is used for connection of a CD/MP3 player, keyboard, etc.)

3. PHANTOM POWER SWITCH

Depressing this switch for each channel applies 48V DC for remote powering of condenser microphones. The LED will be turned on when engaged.

! ONLY connect condenser microphones with the +48V switch turned OFF and ONLY switch it ON with all output faders DOWN to prevent damage to the mixer or external devices.

4. LOW CUT

Push the switch to insert the 18 dB per octave 75Hz low cut filter in the signal path. This low cut filter is useful on live vocals to reduce stage rumble or “popping” from microphones. It can also be used to cut off low frequency hum.

5. TRIM

This has a function which adjusts the input sensitivity of each channel in order to input the constant level of the signal.

6. EQ ON

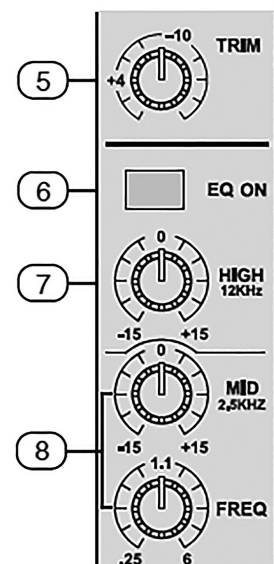
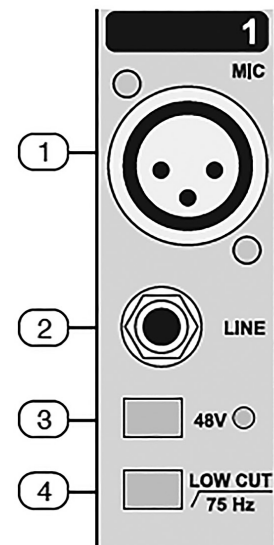
Leaving the switch up, the signal is not adjusted by EQ. Pushing the switch down, the signal is adjusted by EQ.

7. HIGH

Control the high frequency tone of each channel. This control should always be set to the 12 o'clock position however, you can control the high frequency tone according to the speaker, the condition of the listening position and listener's taste. Clockwise rotation of the control increases level.

8. FREQUENCY + MID

This equalisation has a “bell” response, i.e. Having reached maximum amplification or attenuation at the selected frequency, the amplitude response returns to zero either side of that frequency. The FREQ at which this occurs is variable up to 250Hz. The GAIN is variable between ± 15 dB at the selected frequency with a fixed Q of 1.5 (Q is a factor of bandwidth).



9. LOW

Control the low frequency tone of each channel. This control should always be set to the 12 o'clock position however, you can control the low frequency tone according to the speaker, the conditions of listening position and listener's taste. Clockwise rotation of the control increases the level.

10. AUX 1

This is normally derived after the EQ section and channel fader (PRE-FADER, POST-EQ) and is therefore unaffected by the fader position and routing status. This makes the send particularly suitable for foldback or monitor feeds, which need to be controlled separately from the main PA mix. All pre-fade sends may be selected internally to be PRE-FADE, PRE-EQ.

11. AUX 2

This is normally derived after the EQ and channel fader (POST FADER, POST EQ), and therefore follows any changes in fader level. They are normally used to drive effects processing units which are fed back into the mixer and must fade out with the input channel.

12. PAN

The pan control sends continuously variable amounts of the post fader signal to either the LEFT or RIGHT and G1, G2 main busses. In the centre position equal amounts of signal are sent to the LEFT and RIGHT or G1, G2 busses.

13. STEREO L-R

Push this switch and the channels signal is routed to the ST L-R fader.

14. G1-2

Push this switch and the channels signal is routed to the G1-2 fader.

15. CHANNEL FADER

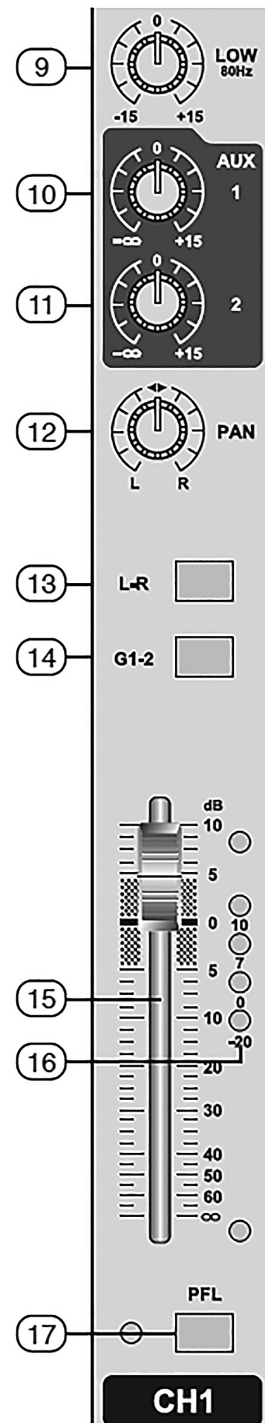
This is used to adjust the volume of signal connection into each channel and adjust the volume of output, together with master fader. Normal operating position is at the "0" mark and can also provide an extra 4dB of gain above that point, if required.

16. PEAK

Top (red) LED indicates a signal level at the insert return point, premaster fader, it illuminates at approximately 7dB below clipping.

17. PFL

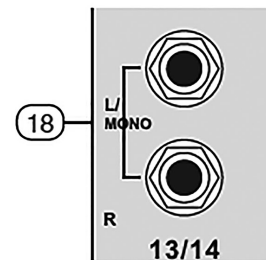
You can monitor the signal of a channel when this switch is on by using a separate headphone. When the PFL switch is on, the other channels mute automatically in the headphone mix. The LED will illuminate when engaged.



C. STEREO CHANNEL INPUTS

18. LEFT (MONO) / RIGHT

Balanced line level input connection with a 1/4" jack assigned to the LEFT and RIGHT stereo bus. If using the left mono input, signal is sent to both LEFT and RIGHT outputs. If using just the right-hand side, then signal goes just to the RIGHT stereo bus. If using as a stereo input, left-hand signal goes to the LEFT stereo bus and right-hand signal goes to the RIGHT stereo bus.



19. TRIM

This has a function which adjusts the input sensitivity of each channel in order to input the constant level of the signal.

20. EQ ON

Leaving the switch up, the signal is not adjusted by EQ. Pushing the switch down, the signal is adjusted by EQ.

21. HIGH

Control the high frequency tone of each channel. This control should always be set to the 12 o'clock position however, you can control the high frequency tone according to the speaker, the conditions of listening position and listener's taste. Clockwise rotation of the control increases level.

22. MID

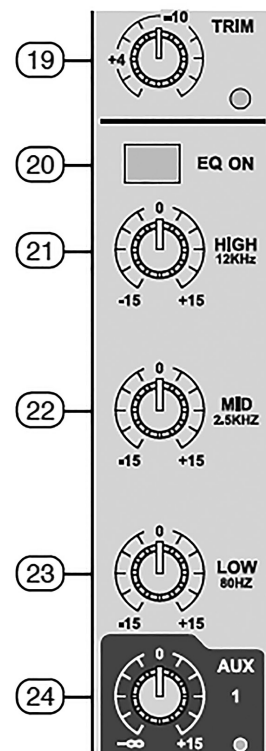
This knob provides 15 dB of boost or cut, centred at 2.5KHz, also flat at the centre detent. MID EQ is often thought of as the most dynamic because the frequencies that define any particular sound are almost always found in this range. You can create many interesting and useful EQ changes by turning this knob down as well as up.

23. LOW

Control the low frequency tone of each channel. This control should always be set to the 12 o'clock position however, you can control the low frequency tone according to the speaker, the conditions of listening position and listener's taste. Clockwise rotation of the control increases the level.

24. AUX 1

This is normally derived after the EQ section and channel fader (PRE-FADER, POST-EQ) and is therefore unaffected by the fader position and routing status. This makes the send particularly suitable for foldback or monitor feeds, which need to be controlled separately from the main PA Mix. All pre-fade sends may be selected internally to be PRE-FADE, PRE-EQ.



25. AUX 2

This is normally derived after the EQ and channel fader (POST FADER, POST EQ) and therefore follows any changes in fader level. They are normally used to drive effects processing units which are fed back into the mixer and which must fade out with the input channel.

26. PAN

The pan control sends continuously variable amounts of the post fader signal to either the left or right and G1, G2 main busses. In the centre position equal amounts of signal are sent to the left and right or G1, G2 busses.

27. STEREO L-R

Push the switch and the channels signal is routed to the ST L-R fader.

28. G1-2

Push the switch and the channels signal is routed to the G1-2 fader.

29. CHANNEL FADER

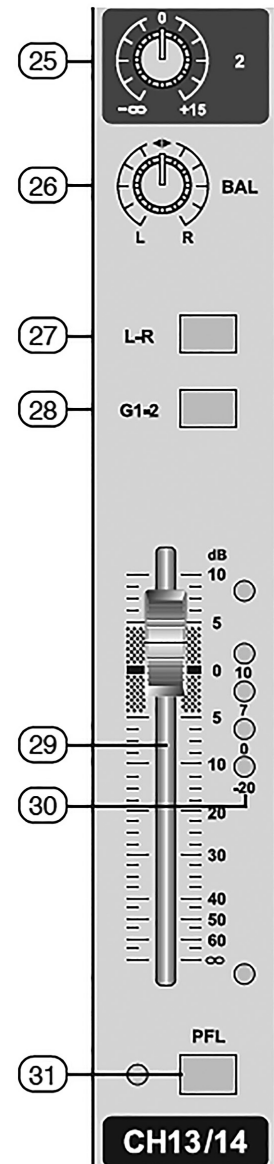
This is function to adjust the volume of signal connection into each channel and adjust the volume of output, together with master fader. Normal operating position is at the "0" mark and can also provide an extra 4dB of gain above that point, if required.

30. PEAK

Top (red) LED indicates a signal level at the insert return point, premaster fader. It illuminates at approximately 7dB below clipping.

31. PFL

You can monitor the signal of a channel when this switch is on by using a separate headphone. When the PFL switch is on, the other channels mute automatically in the headphone mix. The LED will illuminate when engaged.



D. MASTER CHANNEL

32. TAPE LEVEL

You can adjust the volume of TAPE in signal by this when connecting tape in.

33. AUX 1-2 SENDS

This is used for adjusting volume of AUX sound, when sending AUX signal to send jack.

34. AUX 1-2 RETURN

Controls the level of return input signal.

35. EFFECT PROGRAMS

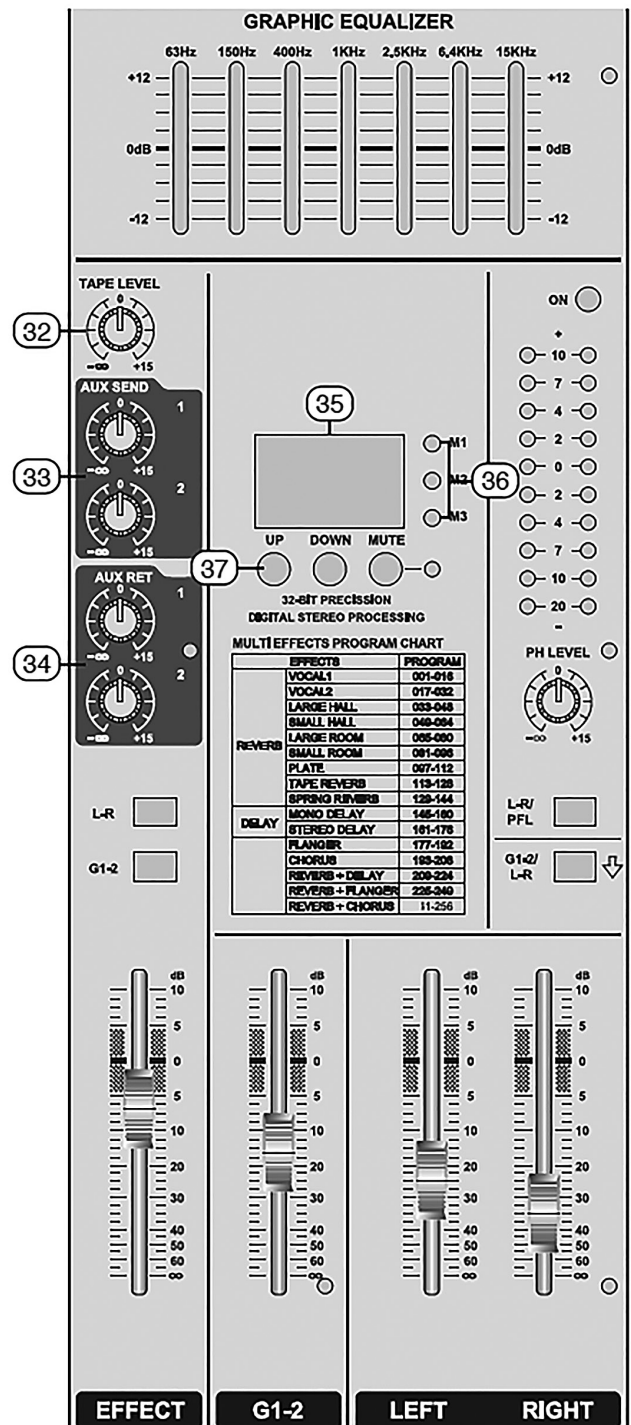
Digital LED screen of effects program number being used.

36. PRE-SET

Push buttons M1, M2 or M3 for more than 5 seconds and it memorises the displayed effects program number. Re-push those buttons and memorised program number appears.

37. UP SWITCH

Pushing this button raises the program number. Holding the button for more than 5 seconds allows a high-speed action.



38. DOWN SWITCH

Pushing this button lowers the program number. Holding the button for more than 5 seconds allows a high-speed action.

39. MUTE

Effect ON/OFF.

40. EFFECT STEREO (L/R)

Pushing this button allows the EFFECT you need to connect to the main control busses.

41. EFFECT GROUP (1/2)

Pushing this button allows the EFFECT you need to connect to the G1-2 busses.

MULTI EFFECTS PROGRAM CHART

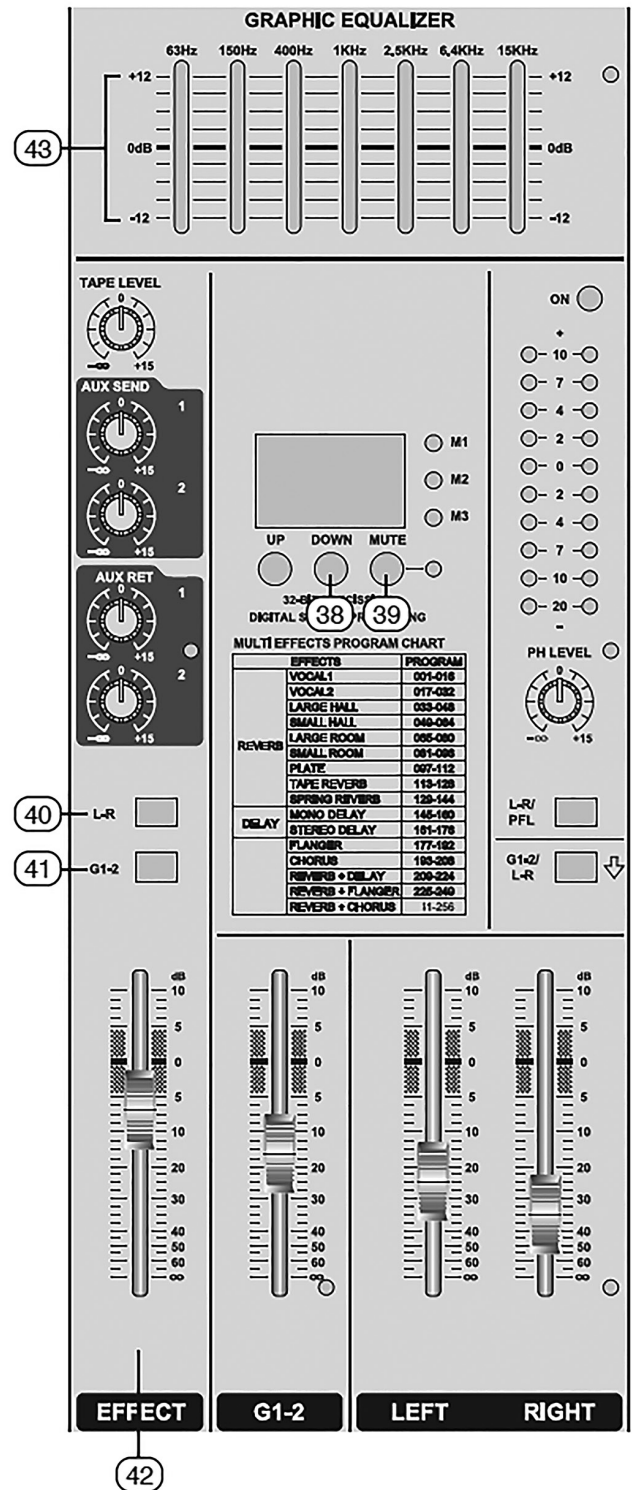
	EFFECTS	PROGRAM
REVERB	VOCAL 1	001-016
	VOCAL 2	017-032
	LARGE HALL	033-048
	SMALL HALL	049-064
	LARGE ROOM	065-080
	SMALL ROOM	081-096
	PLATE	097-112
	TAPE REVERB	113-128
	SPRING REVERB	129-144
DELAY	MONO	145-160
	STEREO	161-176
	FLANGER	177-192
	CHORUS	193-208
	REVERB + DELAY	209-224
	REVERB + FLANGER	225-240
	REVERB + CHORUS	241-256

42. EFFECT LEVEL

Using this control, you can adjust signal level of the effects & external effects if they are used.

43. STEREO GRAPHIC EQUALISER

Dual 7 band stereo master equaliser is provided for specialised final tone control.



44. POWER LED

Power LED will illuminate when power is present in the mixer.

45. OUTPUTS LEVEL INDICATOR

This level meter shows the output levels to the left & right channels when operating, therefore, you can monitor the output condition through this meter.

46. OUTPUT GROUPS 1-2 FADERS

Using this control, you can adjust G1-2 output level.

47. OUTPUT MAIN FADER (LEFT/RIGHT)

This is a master fader for adjustment for volume for the LEFT/RIGHT output.

48. HEADPHONE LEVEL

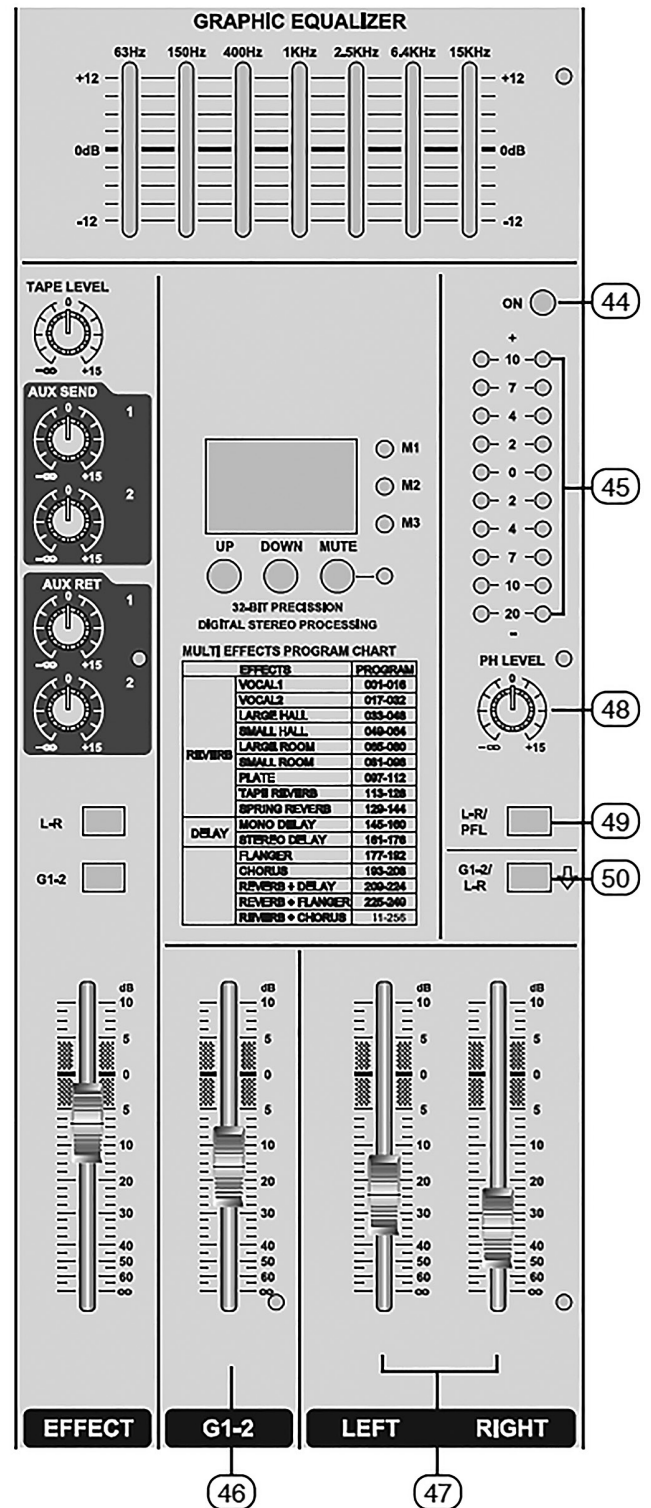
This is a single volume control that changes the level to the headphones and main monitors.

49. MAIN / PFL

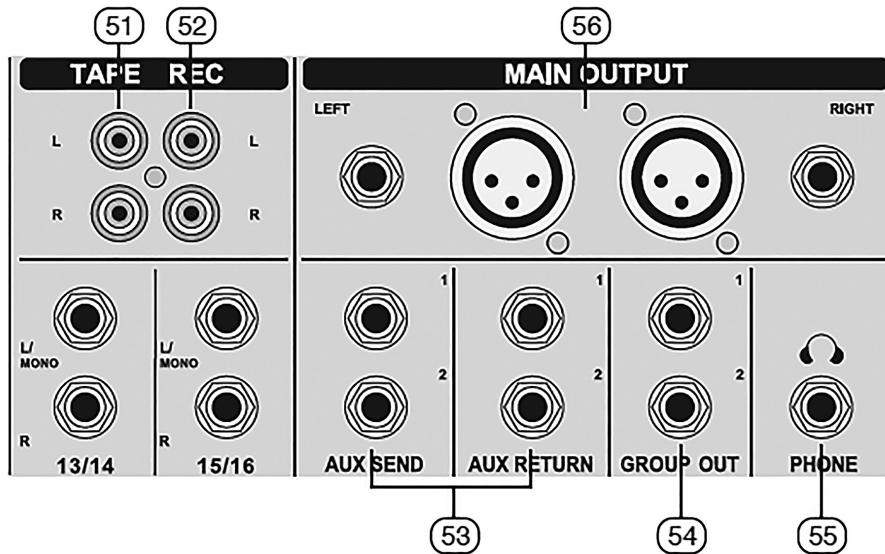
This is a monitor convert switch. When the switch is up, you can monitor MAIN (L-R) output signal, when depressing the switch, you can monitor PFL busses signal.

50. G1-2/L-R SWITCH

This switch routes the G1-2 mix output to the STEREO bus, allowing G1-2 bus to use two mono subgroups mixed down to a single output when stereo is not required.



E. MIXER OUTPUT



51. TAPE INPUT JACK

This jack is to be connected to an MP3 player, CD, cassette deck or other line input source for playback.

52. RECORD IN JACK

This jack should be connected to a recording device for recording main mixed output.

53. AUX RETURNS & SENDS

This can be used to connect all kinds of external effects.

54. GROUP 1-2 OUTPUT JACKS

Master outputs from the signals routed into Groups 1 and 2.

55. PHONES JACK

This is used for monitoring the master signal and individually monitoring each channel with PFL and L/R bus signal.

56. MAIN OUTPUT JACK (LEFT/RIGHT)

Master mixer outputs which can be sent to an amplifier via an XLR or 6.5m jack.

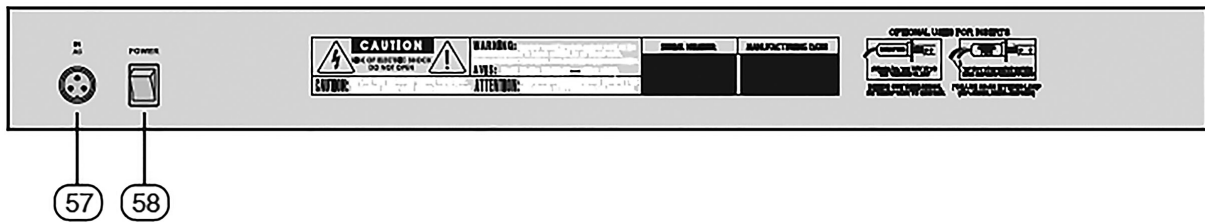
F. POWER

57. POWER JACK

Please insert power supply output to this plug.

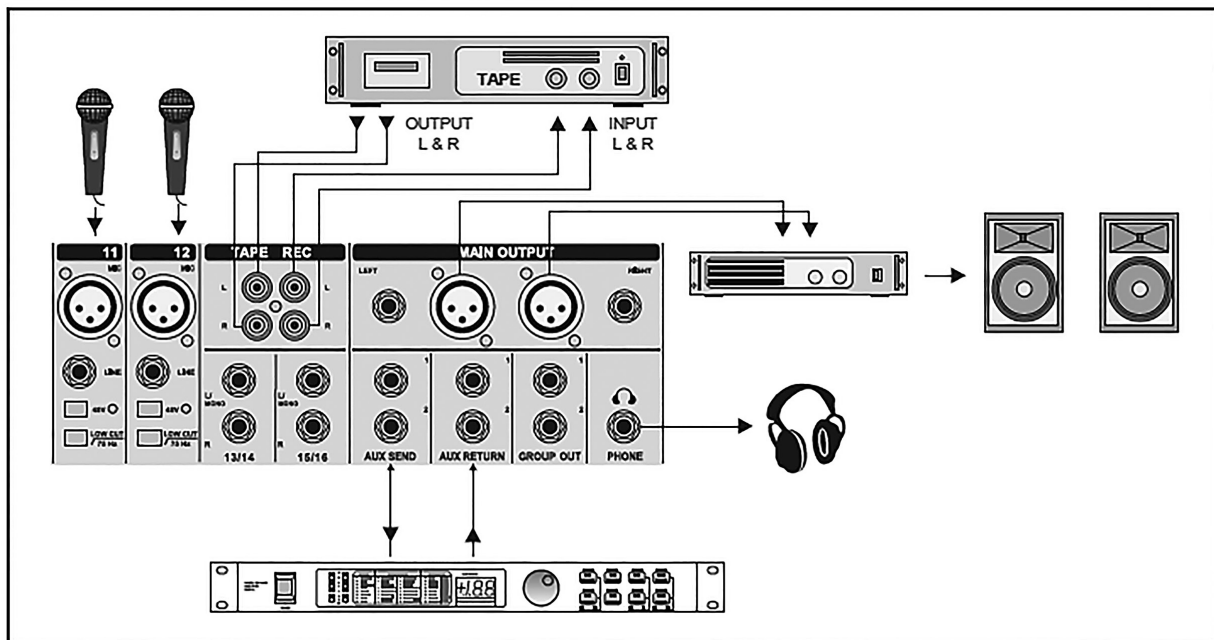
58. POWER SWITCH

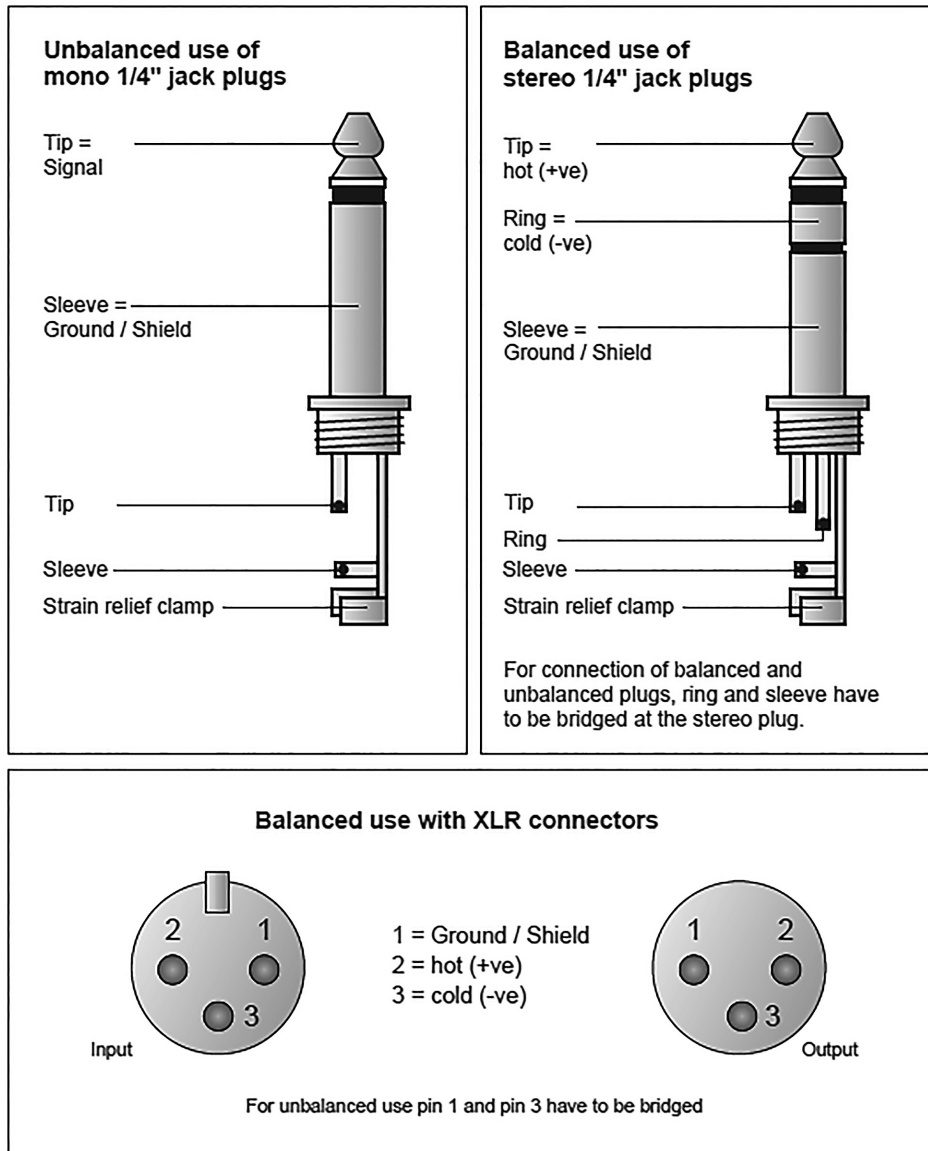
Push switch when you want to operate the mixer. The LED (SEE NO. 44) will be turned on when operating.



G. INSTALLATION

Experience tells us that the cables in a studio environment can get tangled very quickly.





Different plug types

I. SPECIFICATIONS

MONO INPUTS		
Mic Input:	Electronically balanced, discrete input configuration	
Bandwidth:	10 Hz to 60 kHz \pm 3 dB	
Distortion (THD & N):	0.01% at +4 dBu, 1 kHz, Bandwidth 80 kHz	
Mic E.I.N (22 Hz - 22 kHz):	-129.5 dBu, 150 Ohm source	
	-117.3 dBap, 150 Ohm source	
	-132.0 dBu, input shorted	
	-122.0 dBap, input shorted	
TRIM Range:	+10dB to +60dB	
Line Input:	Electronically balanced	
Bandwidth:	10 Hz to 60 kHz \pm 3 dB	
Distortion (THD & N):	0.01% at +4 dBu, 1 kHz, Bandwidth 80 kHz	
Line Level Range:	+10 dBu to -40 dBu	
Equalisation:	Hi Shelving:	12 kHz +/-15 dB
	Mid Range:	2.5 kHz +/-15 dB
	Lo Shelving:	80 Hz +/-15 dB
STEREO INPUTS		
Line Input:	Unbalanced	
Bandwidth:	10 Hz to 55 kHz \pm 3 dB	
Distortion (THD & N):	0.01% at +4 dBu, 1 kHz, bandwidth 80 kHz	
Equalisation:	Hi Shelving:	12 kHz +/-15 dB
	Mid Bell:	100Hz -8KHz +/- 15dB, Q fixed at 1 oct
	Lo Shelving:	80 Hz +/-15 dB, Q fixed 2 oct
	Lo Cut (High Pass) Filter:	-3dB at 75Hz, 18dB / oct
MASTER MIX SECTION		
Max Output:	+22 dBu balanced	
Aux Send Max Out:	+22 dBu unbalanced	
Control Room Out:	+22 dBu unbalanced	
Signal-To-Noise Ratio:	112 dB, all channels at Unity Gain	
POWER SUPPLY		
Mains Voltages:	USA/Canada:	~ 115 V AC, 60 Hz
	UK/Australia:	~ 240 V AC, 50 Hz
	China:	~ 220 V AC, 50 Hz
	Germany:	~ 230 V AC, 50Hz

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

J. WARRANTY INFORMATION – 5 Year Warranty Term

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 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.nationalaudio.com.au.