



User's Manual

DX series

DX-80 / DX-100



Antes de utilizar el equipo, lea la sección "Precauciones de seguridad" de este manual. Conserve este manual para futuras consultas.

Before operating the device, please read the "Safety precautions" section of this manual. Retain this manual for future reference.

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Amplificadores profesionales / Professional power amplifiers

Conserve y lea estas instrucciones.

Respete y siga todas las advertencias.

El signo de exclamación en un triángulo equilátero pretende alertar al usuario de instrucciones operativas y de mantenimiento (reparación) en la literatura que acompaña al aparato.

ADVERTENCIA: Los aparatos de CLASE I se deben conectar a una toma de corriente eléctrica con conexión a tierra.



Keep these instructions. Read these instructions.

Heed all warnings. Follow all instructions.

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

WARNING: Apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

El rayo con punta de flecha dentro de un triángulo equilátero pretende alertar al usuario de la presencia de voltajes peligrosos no aislados dentro de la envolvente del producto, que puede ser de magnitud suficiente para constituir un riesgo de descarga eléctrica para las personas.

ADVERTENCIA: Para evitar lesiones, este aparato debe estar firmemente sujeto al bastidor, de conformidad con las instrucciones de instalación.

El cableado exterior conectado a estos terminales requiere de su instalación por una persona instruida y el uso de cables flexibles preparados.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

WARNING: To prevent injury, this apparatus must be securely attached to the rack in accordance with the installation instructions.

The connected outer wiring to these terminals requires of its installation by an instructed person and the use of a flexible cable already prepared.

No exponga este equipo a la lluvia o humedad. No use este aparato cerca del agua (piscinas y fuentes, por ejemplo). No exponga el equipo a salpicaduras ni coloque sobre él objetos que contengan líquidos, tales como vasos y botellas. Equipo IP-20. Limpie con un paño seco. No use limpiadores con disolventes.

No instale el aparato cerca de fuentes de calor tales como radiadores, calefactores, estufas u otros aparatos que produzcan calor. No bloquee las aberturas de ventilación, e instale de acuerdo con las instrucciones del fabricante. Los ventiladores de refrigeración succionan aire fresco del frontal y sale caliente por la parte trasera de la unidad a través de las rejillas de ventilación. La parte delantera y trasera del amplificador debe tener una exposición al aire libre (por ejemplo, en un rack las puertas delanteras y traseras abiertas), con cámara de aire de 2 cm a los lados y la parte superior. SI AL AIRE NO SE LE PERMITE ESCAPAR POR ATRÁS, SE SOBRECIENTARÁ LA UNIDAD. Tenga cuidado al montar otro equipo en el mismo rack. Diseñado para funcionar entre 15°C y 35°C, con el 75% de humedad relativa máxima.



Do not expose this device to rain or moisture. Do not use this apparatus near water (for example, swimming pools and fountains). Do not place any objects containing liquids, such as bottles or glasses, on the top of the unit. Do not splash liquids on the unit. IP-20 equipment. Clean only with a dry cloth. Do not use any solvent based cleaners.

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus that produce heat.

Do not block any ventilation openings, install in accordance with the manufacturer's instructions.

The cooling fans suck cool air in through the front and blow hot air out at the rear of the unit through the ventilating grills. The front and rear of the amplifier should have free exposure to the air (i.e. in a rack leave the front and rear doors off), with 2cm air gap at the sides and top. IF AIR IS NOT ALLOWED TO ESCAPE FROM THE REAR, OVER-HEATING WILL OCCUR. Take care when mounting other equipment in the same rack.

Working temperature ranges from 15°C to 35°C with a relative humidity of 75%.

Desconecte este aparato durante tormentas eléctricas, terremotos o cuando no se vaya a emplear durante largos periodos.

Tenga en cuenta que la tensión nominal de alimentación es el valor indicado en la etiqueta, con un rango $\pm 10\%$ de ese valor (según IEC 60065:2001).

Proteja el cable de alimentación de ser pisado o aplastado, especialmente en los enchufes, receptáculos y en el punto en el que salen del aparato. Confíe las reparaciones a personal cualificado. Se requiere servicio cuando el aparato ha sido dañado de alguna manera, como por ejemplo si el cable de alimentación o el enchufe está dañado, se ha derramado líquido o han caído objetos dentro del aparato, el aparato ha sido expuesto a la lluvia o la humedad, no funciona con normalidad o se ha caído. El interruptor de alimentación deberá permanecer fácilmente accesible. Para desconectar completamente este aparato de la red eléctrica, desconecte el cable de alimentación del interruptor de corriente principal. Esta unidad está equipada con un cable de alimentación de 3 hilos. Por razones de seguridad, LA CONEXIÓN A TIERRA NO DEBE DESCONECTARSE EN NINGUNA CIRCUNSTANCIA.



Unplug this apparatus during lightning storms, earthquakes or when unused for long periods of time.

Take into account that the nominal AC voltage is the value shown in the equipment $\pm 10\%$ (according to IEC 60065:2001).

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as if the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

The mains circuit breaker shall remain readily accessible.

To completely disconnect this equipment from the AC mains, disconnect the power cord from the mains circuit breaker.

This unit is fitted with a 3-wire power cord. For safety reasons, THE EARTH LEAD SHOULD NOT BE DISCONNECTED IN ANY CIRCUMSTANCE.

Cuando la unidad esté montada en un rack y permanentemente conectada a red debe ser instalada con un conector de fácil acceso o con un dispositivo de desconexión omnipolar con al menos 3 mm de distancia entre sus contactos. El interruptor de los amplificadores sólo afecta a uno de los polos de la red eléctrica, por tanto, en las unidades con un cable desmontable el dispositivo de desconexión de red (por ejemplo, el enchufe o la conexión a red), debe ser fácilmente accesible para poder estar completamente desconectado de la red. Sin embargo, en unidades con cable fijo deberá usar un dispositivo de desconexión externo (antes descrito). La instalación deberá seguir todas las normas de instalación vigentes.

Utilice sólo accesorios (por ejemplo, soportes o racks) recomendados por el fabricante. Cuando se utiliza un rack o un carro de transporte, tenga cuidado al mover la combinación carro / aparato para evitar lesiones causadas por un vuelco.



Where the amplifier is mounted in a rack and permanently connected to the mains, then the rack should be installed with a readily accessible connector or an ALL POLE circuit breaker with 3mm breaking distances.

The mains switch on the amplifiers only switches one pole of the mains supply, therefore for units with a detachable cord to be fully disconnected from the mains, the mains disconnect device (ie mains plug or mains coupler) should remain readily operable. For units with a fixed mains lead the external all pole circuit breaker with 3mm breaking distances is the disconnect device and therefore the installation of the amplifier shall be carried out in accordance with all the applicable installation rules.

Only use attachments/accessories specified by the manufacturer. Use only with the cart, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from a tip over.

Este símbolo indica que el presente producto no puede ser tratado como residuo doméstico normal, sino que debe entregarse en el correspondiente punto de recogida de equipos eléctricos y electrónicos.



This symbol on the product indicates that this product should not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment.

GARANTÍA

Todos nuestros productos están garantizados por un periodo de 24 meses desde la fecha de compra.

Las garantías sólo serán válidas si son por un defecto de fabricación y en ningún caso por un uso incorrecto del producto.

Las reparaciones en garantía pueden ser realizadas, exclusivamente, por el fabricante o el servicio de asistencia técnica autorizado.

Otros cargos como portes y seguros, son a cargo del comprador en todos los casos.

Para solicitar reparación en garantía es imprescindible que el producto no haya sido previamente manipulado e incluir una fotocopia de la factura de compra.

WARRANTY

All our products are warranted against any manufacturing defect for a period of 2 years from date of purchase.

The warranty excludes damage from incorrect use of the product.

All warranty repairs must be exclusively undertaken by the factory or any of its authorised service centers.

To claim a warranty repair, do not open or intend to repair the product.

Return the damaged unit, at shippers risk and freight prepaid, to the nearest service center with a copy of the purchase invoice.



DECLARACIÓN DE CONFORMIDAD DECLARATION OF CONFORMITY

DAS Audio Group, S.L.

C/ Islas Baleares, 24 - 46988 - Pol. Fuente del Jarro - Valencia. España (Spain).

Declara que los amplificadores de la serie *DX*

Declares that *DX* amplifier series

cumplen con los objetivos esenciales de las Directivas:

abide by essential objectives relating Directives:

- de Baja Tensión (Low Voltage Directive) 2014/35/UE
- de Compatibilidad Electromagnética (EMC) 2014/30/UE
- RoHS 2011/65/UE
- RAEE (WEEE) 2012/19/UE

Y es conforme a las siguientes Normas Armonizadas Europeas:

In accordance with Harmonized European Norms:

- EN 60065:2014.- Audio, video and similar electronic apparatus. Safety requirements.
- EN 55032:2012.- Electromagnetic compatibility of multimedia equipment. Emission requirements.
- EN 55103-2:2009.- Electromagnetic compatibility. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 2:Immunity.
- EN 50581:2012.- Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

INTRODUCTION

Thank you for choosing a *DXseries* amplifier for your application.

Please spend a little time reading through this manual, so that you obtain the best possible performance from the unit and become familiar with its operating requirements.

All DAS Audio Group products are carefully designed and engineered for cutting-edge performance and world-class reliability. If you would like further information about this or any other DAS Audio product, please contact us.

We wish you many years of service from this amplifier and look forward to hearing from you in the near future.

The *DX amplifier series* has been designed to combine incredible audio power and performance with ultra-flexible connectivity for both remote control and audio. Exemplary audio processing is assured through the use of an external DAS's DSP, or of the DSP platform in the *DXi* models, and power amplifier capabilities are taken care of with high efficiency output stages and a generous power supply.

All units. *DX-100* and *DX-80*, can include optional Dante networked audio.

Accepting analogue, or optional Dante networked audio, this extra connectivity means that the *DX* models can also be used in installation systems which already have a centralized DSP core but require the flexibility of being able to pick up multiple channels of audio from a network.

With a range of power levels available in the *DXseries*, the amplifiers can be networked to a single *DXi* model, creating a powerful, efficient system that's easy to expand and adapt for use in live, install and everything in between.

INSTALLATION: ELECTRICAL CONSIDERATIONS

The amplifier has been manufactured to comply with your local power supply requirements, but before connecting the unit to the supply, ensure that the voltage (printed on the rear panel) is correct.

The amplifier is fitted with either a 100/120V or 220/240V tapped transformer according to customer requirements.

Make sure power outlets conform to the power requirements listed on the back of the unit. Damage caused by connecting to improper AC voltage is not covered by the warranty.

Safety Warning

Apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Where a MAINS plug or appliance coupler is used as the disconnect device, it should remain readily operable.

Where the amplifier is mounted in a rack and permanently connected to the mains, then the rack should be installed with a readily accessible connector or an ALL POLE circuit breaker with 3mm breaking distances.

This unit is fitted with a 3-wire power connector. For safety reasons, THE EARTH LEAD SHOULD NOT BE DISCONNECTED IN ANY CIRCUMSTANCE. If ground loops are encountered consult the section on Line Inputs and Outputs on page 11.

WHERE A FIXED MAINS LEAD IS FITTED, THE WIRING COLOURS ARE:

	230V AREAS:	120V AREAS:
EARTH =	GREEN AND YELLOW	GREEN
NEUTRAL =	BLUE	WHITE
LIVE =	BROWN	BLACK

TO PREVENT THE LIKELIHOOD OF SHOCK OR FIRE HAZARD, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE. DO NOT PLACE OBJECTS CONTAINING LIQUID ON TOP OF THE APPARATUS.

TO AVOID ELECTRICAL SHOCK DO NOT REMOVE COVERS. REFER ALL SERVICING TO QUALIFIED PERSONNEL.

DO NOT USE THE UNIT IF THE ELECTRICAL POWER CORD IS FRAYED OR BROKEN. The 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 and plugs and the point where they exit from the appliance.

ALWAYS OPERATE THE UNIT WITH THE AC GROUND WIRE CONNECTED TO THE ELECTRICAL SYSTEM GROUND. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.

DO NOT REMOVE THE LID. Removing the lid will expose you to potentially dangerous voltages. There are no user serviceable parts inside.

ESD strikes to the unit's front panel that are in excess of 4000 volts may cause disturbance to the status LEDs on the unit. This will not affect audio performance and will be corrected on the next power up cycle.

INTRODUCTION (cont'd)

INSTALLATION: MECHANICAL CONSIDERATIONS

To ensure that this equipment performs to specification, it should be mounted in a suitable rack or enclosure as described below. Like all high power amplifiers, it should be kept away from other equipment which is sensitive to magnetic fields. Also, this amplifier may suffer a substantial reduction in performance if it is subjected to, or mounted close to equipment which radiates high RF fields.

Warning: To prevent injury, this apparatus must be securely attached to the rack in accordance with the installation instructions.

When mounting the amplifier in a rack or enclosure:

Be aware that ...

THE FRONT PANEL IS NOT CAPABLE OF SUPPORTING THE UNIT ON ITS OWN.

Make sure that the rear of the unit is adequately supported. The brackets which are supplied fit standard 19 inch (483mm) rack mounting systems.

ENSURE THERE IS ADEQUATE VENTILATION.

The cooling fans suck cool air in through the front and blow hot air out at the rear of the unit through the ventilating grills. The front and rear of the amplifier should have free exposure to the air (i.e. in a rack leave the front & rear doors off), with 2cm air gap at the sides.

IF AIR IS NOT ALLOWED TO ESCAPE FROM THE REAR, OVER-HEATING WILL OCCUR.

Take care when mounting other equipment in the same rack.

Make sure that the rack unit has a separate earth connection (technical earth).

Please also see the notes regarding maintenance on page 10.

RF EMISSIONS

The high frequency resonant converters in the *DX series* amplifiers have been designed to have very low radio frequency (RF) emissions; however even these low level emissions can cause interference with other equipment.

In order for this to be minimised, the amplifier should be mounted in a metal rack enclosure, which should have a separate (technical) Earth. Alternatively a separate earth should be attached to the amplifier at the rear rack mounting bracket.

DYNAMIC AMPLIFIER PERFORMANCE MEASUREMENTS

The *DX series* is the very latest example of a 'dynamic amplifier'. This new 'breed' of power amplifiers provide very high peak power levels in a much smaller, and lighter, package than previously possible with conventional amplifiers.

They are designed specifically for today's high power audio installations, which use multiple speakers with electronic crossovers or speaker controllers. These systems can handle very high transient signals that far exceed their RMS power rating. The *DX series* amplifiers have been designed to match this requirement and can deliver huge levels of power for short durations.

In order to protect themselves and the loudspeakers that they are driving, continuous signals such as sine waves, are automatically detected and reduced (ramped down) to a safe level.

When trying to measure the power output however, continuous signals will give totally incorrect results. A dynamic signal, such as a tone burst, should be used and the levels measured by monitoring the waveform on an oscilloscope. The power envelope can then be accurately measured.

Our power output figures are measured using signals with known Crest Factors and are quoted at the rear of this manual on page 43 and on our website.

Please refer to the technical area of our website for further information.

INITIAL SET-UP AND SWITCHING ON

Please read all documentation before operating your equipment and retain all documentation for future reference.

Do not spill water or other liquids into or on the unit and do not operate the unit while standing in liquid.

Do not block fan intake or rear ventilation outlets or operate the unit in an environment that could impede the free flow of air around the unit.

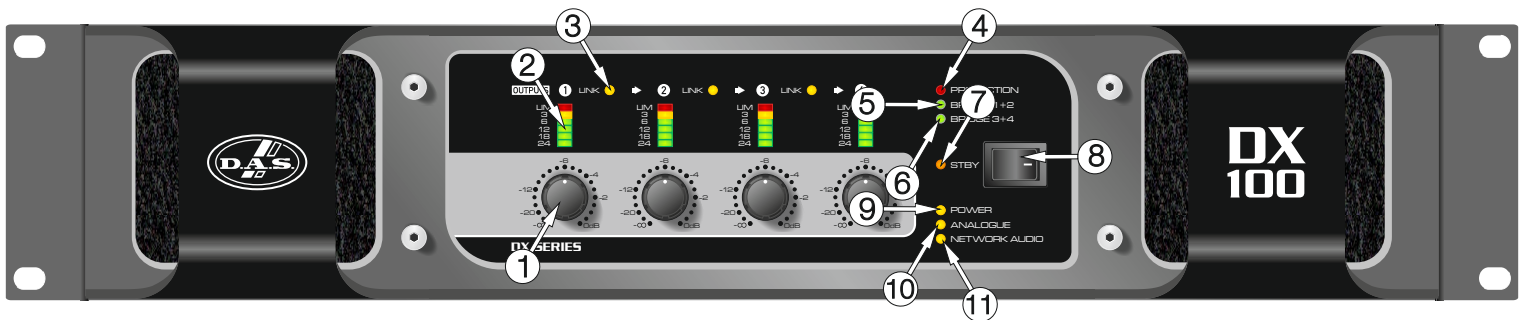
If the unit is used in an extremely dusty or smoky environment, it should be cleaned of any collected debris at regular intervals. Please also see the notes regarding maintenance on page 10.

It is important that the power output of your amplifier is matched to the power handling capacity of your loudspeaker. If not, damage to the loudspeaker could occur.

Switching On...

At 'switch-on' the protection circuit will initially activate whilst the circuits stabilise, indicated by the red A/P LED illuminating, in addition to various other LEDs. After a few seconds the red A/P LED will extinguish indicating a satisfactory working condition. Other LEDs may remain illuminated depending upon rear panel switch settings and input connections. If the A/P LED does not extinguish after 5 seconds the unit may be faulty or some external connections may be incorrect or inappropriate. If this occurs you should power down the unit and remove all external connections (except for the mains power supply) and repeat the power up sequence. If the problem persists please contact us.

FRONT PANEL



Note: The front panel is common for all models.

1: Analogue level controls: These function in both analogue input and network audio input mode.

2: Signal meters: These will show the level of the respective amplifier's output channel. The red LED in the meter will illuminate when the limiter threshold has been reached and limiting is occurring.

3: Link LED: This indicates if the channel is linked to its immediate neighbour. If this is illuminated, the attenuation control of the channel to the immediate right will not function as both channels are being fed from the left hand channel. Linking is disabled in Network Audio mode and Link LEDs will be extinguished.

4: PROTECTION LED: If a condition exists, either internally or externally, that could cause damage to either the amplifier or the speakers, the protection circuit will disengage the outputs and this LED will illuminate/flash.

Typical conditions that could cause the protection to be triggered include very high frequency or subsonic input signals, DC in the inputs, short-circuited outputs, or internal high temperatures.

The protection circuit can affect all channels or a 'channel pair' depending on the type of fault. This is indicated by the combination of Protection LED illuminating and a corresponding message on the LCD. In this way, it is possible for two channels (a channel pair) to remain functioning even though a fault has caused the other channel pair to mute. A channel pair would be 1+2 or 3+4.

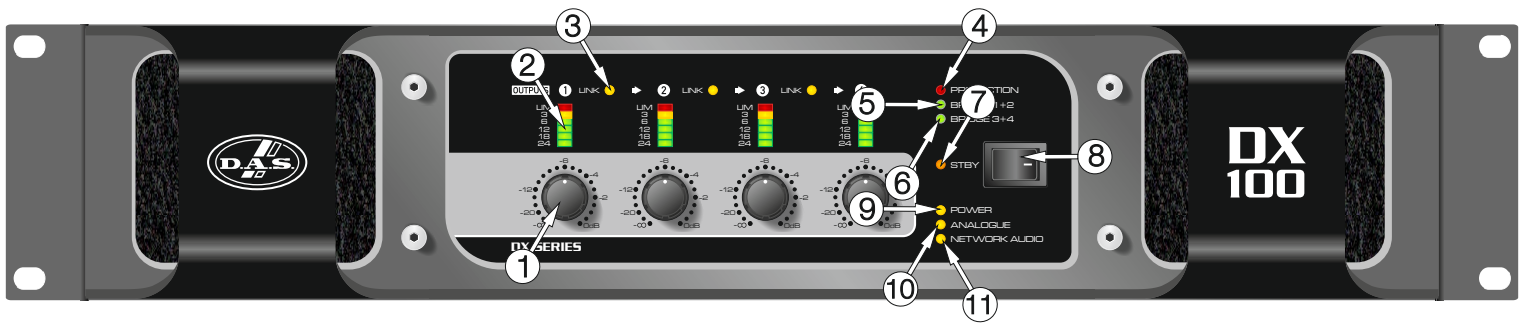
Temperature related faults will reset automatically if the unit has cooled sufficiently. Output short circuits will require manual reset after clearing the fault (switching off at the mains switch and then on again after a few seconds). Short circuits on either channel of a channel pair will only affect that channel pair.

5,6: BRIDGE pair LEDs: The channel pair LED will illuminate if these channels have been switched into bridged (mono) mode. See page 11 for details of how to connect your speaker to a bridged channel pair, and page 12 for how to enable bridge mode.

7: STBY LED: The *DX* amplifiers can be powered down leaving just the input circuitry and Dante network audio card (if fitted) active. This LED illuminates when the power amplifier sections are turned OFF.

8: Power Switch: This double pole switch turns the amplifier fully off and isolates it from the mains supply.

FRONT PANEL (cont'd)

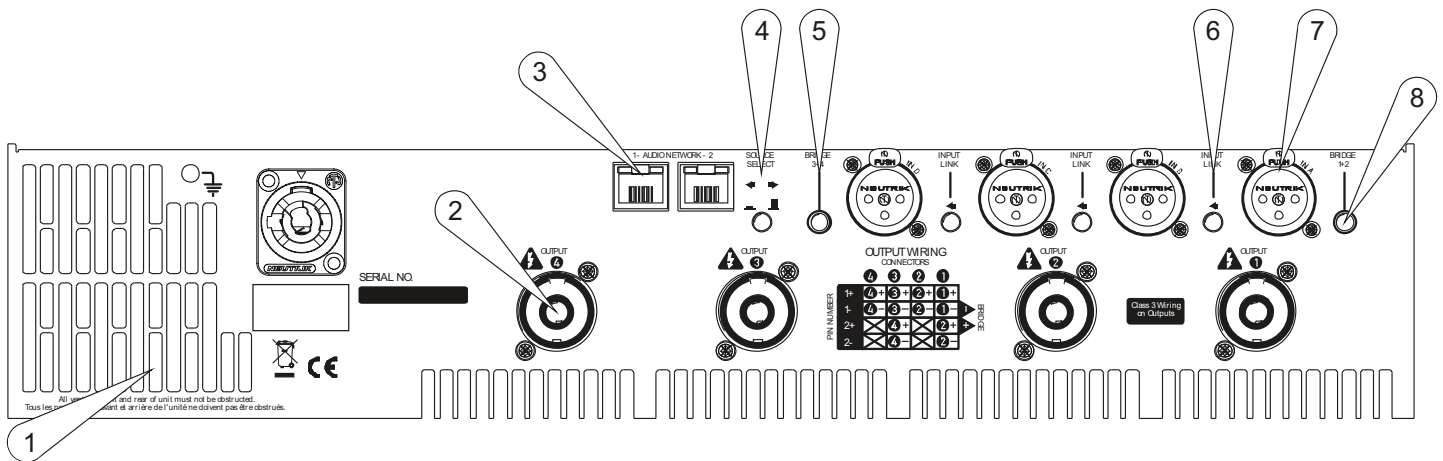


9: POWER LED: This will illuminate when the Power Switch is ON. It is not an indicator of connected supply.

10: ANALOGUE LED: This illuminates when the selected source is the four input XLRs.

11: NETWORK AUDIO LED: This will illuminate when the selected source is the network audio connection.

REAR PANEL



Note: Designed and manufactured in England by MC² Audio for DAS Audio Group, S.L. The rear panel is common for all models.

1: Fan outlet: The variable speed fans suck air in through the front vents and out through the back of the amplifier. Please see maintenance for recommendations on how to clean this and the front foam sections.

2: Channel output Speakon socket: Normal output is on pins 1+ hot, 1- cold. Channel B's output is also wired to this socket to enable a single NL4 to provide both channels and to facilitate easier wiring in bridged mode. Channel B is wired pins 2+ hot, 2- cold. Similarly channel C's output Speakon socket carries Channel D's output. Check the table on the rear panel for details.

3: Audio network connections: Four additional inputs can be added to the available input choices via the optional Dante network card.

4: Source select switch: This selects either the four analogue input XLRs or the output of the network audio card as the audio source. It operates globally across all four channels.

5,8: Bridged (mono) switch (3+4)/(1+2): Press this switch to run this pair of amplifier channels in bridged mode. To run 1+2 bridged, press the switch on the far left of the panel, beside channel A's input XLR.

6: Link switch: Press this switch to link the input of the channel to its immediate left. Multiple channels may be linked using these switches so, for example, to link all outputs to input A, press all three switches IN and use input A only. The front panel attenuators will still operate independently when channels are linked. Linking is disabled in Network Audio mode and Link LEDs will be extinguished.

7: Input XLR sockets: Connect signal inputs to these sockets, wired pin 2 hot, 3 cold, 1 ground. For sensitivity and impedance of these inputs, please see the specifications on page 14.

MAINTENANCE

These maintenance instructions are for use by qualified personnel only. Before any routine maintenance, please ensure that your amplifier is disconnected from the mains supply!

The filter behind the air intake apertures on the front of your amplifier should be cleaned or replaced periodically, e.g. 12-24 months. (Filters in amplifiers located in more 'dirty' atmospheres may require more frequent maintenance).

The filter should be 'dry' cleaned, using a vacuum cleaner preferably. Running the unit without a filter is not recommended unless it is within a 'clean room'. Replacement filter material is available.

If the fan vents on the rear of the amplifier develop a build-up of dust/debris on the finger guards, they can be cleaned with a dry paintbrush and a vacuum cleaner.

The casework of the amplifier may be cleaned with a lightly dampened cloth – do not use any solvents as they will damage the paint finish and could remove printing.

If you have any doubts about carrying out maintenance, please refer to a service engineer or contact your local dealer.

**VLR
MALE**



LINE INPUTS AND OUTPUTS

The inputs are made via 3-pin XLR connectors, which are electronically balanced and should be connected via a high grade twin core screened cable, as follows:

- Pin 1: Screen (see note below)
- Pin 2: Hot (signal +)
- Pin 3: Cold (signal -)

The amplifier is designed to operate with fully balanced equipment and ground loops or loss of performance may be experienced if connected to unbalanced sources. If it is unavoidable however, the following wiring should be used. The cable should still be twin core plus screen.

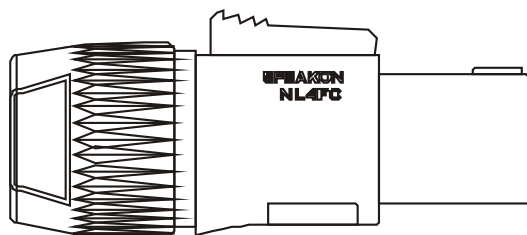
Pin 1: Screen - connected to the chassis of the unbalanced equipment - or left disconnected at the unbalanced end.

- Pin 2: Hot (signal +)
- Pin 3: Cold (ground 0V)

NOTE: This amplifier is wired to the latest industry recommendations. Pin 1 is connected directly to the chassis/mains earth. If ground loops (mains hum) are encountered remove the screen connection from the other end of the cable and leave it open circuit. If problems persist, consult your dealer/supplier. **DO NOT TAMPER WITH OR ALTER ANY GROUND (EARTH) CONNECTIONS INSIDE THE AMPLIFIER.**

For bridged operation input should be made to channel A (or C) only and the channels set for bridged mode for the appropriate pair of channels.

**SPEAKON
NL2 & NL4**



SPEAKER OUTPUTS

The speaker outputs are via Neutrik Speakon connectors. 2 pole (NL2FC) or 4 pole (NL4FC) connectors can be used.

- Pin 1+: Hot
- Pin 1-: Cold

Additionally, Channel 1 Speakon connector carries Channel 2 output on Pins +2 & -2 to allow easy bi-amping or bridged operation using a single NL4 connector. Similarly, Channel 3's Speakon connector also carries Channel 4 output.

Output Connector 1

- Pin 2+: Hot Ch. 2
- Pin 2-: Cold Ch. 2

Output Connector 3

- Pin 2+: Hot Ch. 4
- Pin 2-: Cold Ch. 4

REAR PANEL (cont'd)

For bi-amped operation, connect as above.

There must be no shared connections between channels.

Negative output terminals must not be joined together as they are not both at ground potential. Connecting them together will damage the amplifier and void the warranty!

As the currents involved are very high, and to ensure best performance, the speaker cables should be kept as short as possible and conform to the following minimum requirements:

DX-80, 14A into 4 Ohm speaker loads

DX-100, 20A into 4 Ohm speaker loads

When operating the amplifier into loads of less than 4 Ohms, be aware that the current capacity of the speaker cables will need to be increased above the values quoted here.

Do not connect the inputs/outputs to any other voltage source such as a battery, mains source or power supply, regardless of whether the amplifier is turned on or off.

Do not run the output of any amplifier channel back into another channel's input and do not parallel or series-connect an amplifier output with any other amplifier output.

BRIDGED (MONO) OPERATION

Pairs of channels may be independently bridged – channel pair 1+2, and/or channel pair 3+4.

The method is the same for both channel pairs:

Use Channel 1 or 3's Output Speakon connector and connect as follows:

Pin 2+: Hot

Pin 1-: Cold

When operating in bridged mode, the minimum impedances are doubled.

The minimum load in bridged mode is 4 ohms.

SPECIFICATIONS

Main Specifications

Parameter (Units)	DX-80	DX-100
Output Power per channel [Crest Factor = 4.8] (Watts)		
8 Ohms	1000	1400
4 Ohms	2000	2800
2.7 Ohms	2200	3700
2 Ohms	2000	3500
Output Power per channel bridged [Crest Factor = 4.8] (Watts)		
8 Ohms	4000	5400
4 Ohms	4000	7000
THD+N, 4 Ohms (%)		
@1kHz, 1dB below max output power <	0.18	0.08
@20Hz - 20kHz, 1dB below max output power <	0.1	0.1
Gain [dB]	32	32
Sensitivity Options for max power [dBu]	8.3	10.7
Sensitivity Options for max power (Volts)	2.13	2.66
Frequency Response, +0/0.5dB (Hz)	20 – 20000	20 – 20000
Power Consumption, Nominal @ 240V, 4 Ohms (A)	5.0	7.5
Power Consumption, Nominal @ 120V, 4 Ohms (A)	10.4	15.5
Dimensions H x W x D (mm)		
Amplifier	88 x 482 x 428	88 x 482 x 428
Boxed	230 x 580 x 560	230 x 580 x 560
Boxed Shipping – all except UK	250 x 610 x 600	250 x 610 x 600
Weight (kgs)		
Amplifier	10.1	10.8
Boxed – shipping	11.6	12.3

Additional Specifications

Parameter (Units)	DX-80	DX-100
Input Impedance – Active Balanced (Ohms)	20k	20k
Input CMRR [dB]	> 60	> 60
Damping Factor, 1kHz, 8 ohms	> 400	> 400
Signal Limiters Present	Yes	Yes
Protection Present – Short Circuit / DC Output / Temperature	Yes	Yes
Mains In-rush Control Present	Yes	Yes
Output Power per channel, 8 Ohms (Watts)		
Continuous music [Crest Factor of 2.8 or 9dB]	975	1360
Continuous music [Crest Factor of 4.8 or 14dB]	1000	1400
Continuous music [Crest Factor of 7.8 or 18dB]	1025	1440
Output Power per channel, 4 Ohms (Watts)		
Continuous music [Crest Factor of 2.8 or 9dB]	1950	2620
Continuous music [Crest Factor of 4.8 or 14dB]	2000	2700
Continuous music [Crest Factor of 7.8 or 18dB]	2050	2780
Output Power per channel, 2.7 Ohms (Watts)		
Continuous music with Crest Factor of 2.8 [9dB]	1960	3600
Continuous music with Crest Factor of 4.8 [14dB]	2010	3700
Continuous music with Crest Factor of 7.8 [18dB]	2060	3880

Due to continuing product improvement, the above specifications are subject to change.

SPECIFICATIONS (cont'd)

Power Consumption and Thermal Emissions – DX-80

Mains (V)	Load (R)	Current Draw (A)				Thermal Emissions (W)			
		No Sig'l	Light	Average	Heavy	No Sig'l	Light	Average	Heavy
240	8	1.5	2.2	3.4	6.3	360	378	410	486
240	4	1.5	2.8	5.0	10.3	360	394	453	593
240	2	1.5	3.1	5.8	12.4	360	402	474	647
120	8	3.3	4.7	7.1	12.9	400	418	450	526
120	4	3.3	5.9	10.4	21.0	400	434	493	633
120	2	3.3	6.5	12.0	25.1	400	442	514	687

Power Consumption and Thermal Emissions – DX-100

Mains (V)	Load (R)	Current Draw (A)				Thermal Emissions (W)			
		No Sig'l	Light	Average	Heavy	No Sig'l	Light	Average	Heavy
240	8	2.1	3.2	5.1	9.6	504	533	582	701
240	4	2.1	4.1	7.5	15.7	504	557	647	863
240	2	2.1	4.6	8.9	19.1	504	570	682	953
120	8	4.7	6.9	10.6	19.6	560	589	638	757
120	4	4.7	8.7	15.5	31.9	560	613	703	919
120	2	4.7	9.7	18.2	38.7	560	626	738	1009

No Sig'l = Quiescent, Light = Crest Factor of 7.8(18dB),

Average = Crest Factor of 4.8(14dB), Heavy = Crest Factor of 2.8(9dB)

For details of measurement methods please refer to the Technical Support area of our website.



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