

DMi 4|2500A/DMi 4|3500A DMi 2|2000A/DMi 2|3000A/DMi 2|4000A

Professional Power Amplifier





User's Manual

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Safety Instruction



Installation

- •Only connect the unit to an AC outlet of the type shown in this manual or on the adapter. Otherwise it might cause a fire or electric shock.
- •Do not allow water to enter the unit or get it wet. Otherwise it might cause a fire or electric shock
- •Do not place containers containing liquid or fine metal objects on the unit. Doing so may cause a fire or electric shock if the liquid or small metal objects fall into the unit.
- •Do not place heavy objects (including this unit) on the power cord. Otherwise it may damage the power cord, resulting in a fire or electric shock. In particular attention, do not place heavy objects on the power cord covered by the carpet.
- •Be sure to connect to a suitable electrical outlet with a protective earth connection. Improper grounding may cause electric shock.

Operation

- •Do not scratch, bend, twist, stretch, or heat the power cord. Otherwise it may damage the power cord, resulting in a fire or electric shock.
- •Do not open the unit cover. Otherwise it may cause electric shock. If it is deemed necessary to repair, service or repair the product, contact the factory.
- •Do not modify this unit. Otherwise it may cause a fire or electric shock.
- •If a lightning strike occurs, switch off the power switch of the unit as soon as possible and unplug the power cord from the power outlet.
- •If lightning may occur, do not touch the plug of the power cable in the plugged state, as this may cause electric shock.

Errors during operation

- •If the power cord is damaged (eg, cut or exposed), obtain replacement from the factory. Continued use of the device with a damaged power cord may result in a fire or electric shock.
- •If the unit falls from a height or the case is damaged, immediately switch off the power switch, unplug the power cord from the AC outlet, and contact the factory. Failure to observe this precaution may result in a fire or electric shock.
- •When any anomalies are found, such as smoke, odor, noise or there are foreign objects or liquid entering the device. Please switch off the power switch and unplug the power cord from the AC outlet. If you continue to use, it may cause a fire or electric shock.

Safety Introduction



Installation

- •Please avoid using the power amplifiers in the following cases
 - Exposed to splashes of oil, steam, such as near kitchen stoves, humidifiers and other places.
 - Unstable surfaces, such as shaking tables or bevels.
 - Exposure to excessive heat, such as in a window-closed car or in direct sunlight.
 - Exposure to high humidity or dust accumulation environment.
- •Do not place the power cable near the heater, otherwise it may melt, causing a fire or electric shock.
- •When unplugging the power plug from the AC socket, please grasp the plug and do not pull the cable directly. otherwise it will damage the power cord, resulting in a fire or electric shock.
- •Please do not touch the power plug with wet hands. otherwise it'll cause electric shock.
- •The power amplifier has ventilation holes on the front and back that can prevent the internal temperature from becoming too high. Do not block these vents. Otherwise it may cause a fire. In particular attention, please don't
 - Turn the power amplifier upside down or put it sideways.
 - Place the power amplifier in a poorly ventilated place, such as a bookcase or closet (not on a special stand provided).
- Cover the power amplifier with a tablecloth or place it on the carpet and the bed.
- •Please reserve enough space around the unit to facilitate proper ventilation. The size of the space should be: at least 5CM from both sides, at least 10CM from the front and at least 10CM from above. If there is no sufficient air flow, the internal temperature of the power amplifier may rise and may cause a fire.
- •To mount several of the power amplifier on a standard EIA stand, please refer to the installation instructions
- •When removing the power amplifier, firstly, unplug the AC power cord from the AC socket. And unplug all connecting cables. Otherwise it may damage the cable, resulting in a fire or electric shock.
- •When setting up this power amplifier, make sure that the AC power socket to be used is within reach. If any problem occurs, please immediately turn off the power switch and unplug the power cord from the power socket. Even if the power switch is turned off, there is minimal current flow to the product. When you don't use the product for a long time, be sure to unplug the power cord from the AC socket.
- •Do not expose the power amplifier to a location where it may come in contact with corrosive gases or salt fog. Otherwise it may cause a malfunction.

Operation

- •When connecting the speakers to the amplifier output, use the speaker-specific cables, other cables may cause a fire.
- •When connecting the power amplifier, please turn off all instruments, audio equipment and speakers. Choose the correct cables and connect them as specified.
- •Be sure to turn the volume control knob to minimum before turning on the power of this amplifier. Otherwise a sudden outbreak of sound may damage your hearing.
- •Do not use this amplifier for purposes other than driving the loudspeaker.
- •If you are not going to use the unit for a long time, such as going on vacation. Unplug the power cord from the AC socket. Otherwise it may cause a fire.

Foreword

Introduction

Thank you for purchasing our power amplifier products, DMi series power amplifier has a high reliability, stability and excellent acoustic properties. All of these are designed in a compact 2U size chassis.

Main Features:

Amplifier Module

DMi series professional power amplifier adopts three circuit topologies of Class 2H and Class D+AB according to the power level. The amp module boards choose copper pin plug-in resistors, which have a good performance on the audio bandwidth.

The fully enclosed tunnel heat dissipation design is matched with the high-efficiency dense tooth radiator, which can remove more than 90% of the heat by the fan, and will not stay in the chassis for a long time to form heat accumulation. Compared with the traditional semi-closed heat sink, this design has improved heat dissipation greatly.

Toroidal Transformer

High quality toroidal transformer. High-quality iron core makes the electromagnetic loss and temperature rise are very low. Power supply noise, the third harmonic signal and interference were effectively inhibited. Very low physical noise and current noise. Using special silicon steel shield, greatly reduce the noise from the circuit affected by the electromagnetic of transformer.

Protection System

It has multiple protection features such as output short circuit protection, overload protection, DC protection, VHF protection, output voltage automatic limiter, High Temperature Auto Power Limit, on progressive volume etc. Well protect your system devices.

Sound Characteristic

MF: warm, mellow, full of human voice; LF: powerful, moderate experience; HF: clear and slender voice.

Applications

- •With the XLR input jack and Speakon output jack, so DMi series is widely applicable to a variety of installation system requirements.
- •The device has three operating modes: STEREO (DMi 2|: CH1 CH2 operate independently in this mode) STEREO(DMi 4|: CH1 - CH4 operate independently in this mode), ,
- PARALLEL (in which the device outputs a single-channel source via a dual-channel amplifier system) and BRIDGE (in this mode, the device operates as a simple high-power amplifier).
- •Each channel has its own SIGNAL and CLIP indicators
- •Whenever the protection circuit of the unit is activated, the PROTECTION indicator lights and the sound output is automatically stopped.
- •The variable speed fan control system ensures low noise levels.

In order to maximize the power of the power amplifier and extend the normal life, before using this power amplifier, please you must read this user manual carefully. After reading, keep this manual in a safe place.

Front Panel Introduction



1.Mounting Hole

Used for fixing amplifiers on cabinets, easy to transport.

2.Handle

Used for handling product.

3.Air slot

The fan draws air from the front and exits it from the back. Do not block the intake and exhaust ports.

Remarks: When the power is initially turned on, the fan will have an accelerated start-up sequence, and the fan speed will automatically adjust to the normal low speed state.

4. CH1 Volume Knob

Input signal attenuator, in stereo and parallel mode, they control the volume of the corresponding channel; when bridged, CH1 will control the volume of the two channels CH1 and CH2.

5.CH2 Volume Knob

Input signal attenuator, in stereo and parallel mode, they control the volume of the corresponding channel; when bridged, CH2 volume knob is idle and not controlled.

6.Function LED lights

6.1 CLIP Level LED light

A red indicator will light when the amplitude of the output signal of the corresponding channel (above the nominal power) has shaved off and is more than 1% distorted.

- 6. 2 Signal Level LED light
 - SIG Signal and -5, -10 level LED indicators.
- 6. 4 ON-Power LED light

Indicates that the amplifier is turned on and is in the working state.

7.LCD Screen Introduction

- 7.1 Voltage Display, from 150V to 270V.
- 7.2 Temperature Display, from 0°C to 100°C.

8. Power Switch

Press the switch up to "ON "and down to "OFF". When the switch is turned on, the amplifier is powered on.

Front Panel Introduction



1.Mounting Hole

Used for fixing amplifiers on cabinets, easy to transport.

2.Handle

Used for handling product.

3.Air slot

The fan draws air from the front and exits it from the back. Do not block the intake and exhaust ports.

Remarks: When the power is initially turned on, the fan will have an accelerated start-up sequence, and the fan speed will automatically adjust to the normal low speed state.

4. Volume Knob

4. 1 CH1 Volume Knob

Input signal attenuator, in stereo and parallel mode, they control the volume of the corresponding channel; when bridged, CH1 will control the volume of the two channels CH1 and CH2.

4. 2 CH2 Volume Knob

Input signal attenuator, in stereo and parallel mode, they control the volume of the corresponding channel; when bridged, CH2 volume knob is idle and not controlled.

4. 3 CH3 Volume Knob

Input signal attenuator, in stereo and parallel mode, they control the volume of the corresponding channel; when bridged, CH3 will control the volume of the two channels, CH3 and CH4.

4. 4 CH4 Volume Knob

Input signal attenuator, in stereo and parallel mode, they control the volume of the corresponding channel; when bridged, CH4 volume knob is idle and not controlled.

5.Function LED lights

5.1 CLIP Level LED light

A red indicator will light when the amplitude of the output signal of the corresponding channel (above the nominal power) has shaved off and is more than 1% distorted.

- 5. 2 Signal Level LED light
 - SIG Signal Output Power Level LED indicator.
- 5. 3 ON—Power LED light
 - Indicates that the amplifier is turned on and is in the working state.
- 6.LCD Screen Introduction
- 6.1 Voltage Display, from 150V to 270V.
- 6.2 Temperature Display, from 0°C to 100°C.

7. Power Switch

Press the switch up to "ON "and down to "OFF". When the switch is turned on, the amplifier is powered on.

Rear Panel Introduction



1. Thermal Breaker

The power amplifier will disconnect the AC power supply in the event of an overload condition. Pressing the reset lever after the fault is released, it will restore the operation (reusable).

2. Power Cable

Plug into AC power socket.

3.Signal In LINK

LINK Input Connector(Pin 1=Ground/Pin 2=+/Pin 3=-).

4.Signal In

XLR Input Connector:

1) Balance input: Pin 1=Ground/Pin 2=+/Pin 3=- (according to standard IEC 268)

2) un-balance input: Pin 1/3=Ground/Pin 2=+

5.Speakon Output Connector

Stereo/Parallel Mode:

Speakon11+/1- Respectively Connect the positive (+) / negative (-) terminals of speaker 1. Speakon12+/2- Respectively Connect the positive (+) / negative (-) terminals of speaker 2. Speakon21+/1- Respectively Connect the positive (+) / negative (-) terminals of speaker 2. Speakon22+/2- Idle. Bridge Mode:

Speakon1 1 + / 2- Respectively Connect the positive (+) / negative (-) terminals of speaker 2.

6. Binding Post Connector

Stereo/Parallel Mode:

Channel 1 red (+) / black (-) Binding posts are connected respectively to the positive (+) / negative (-) terminals of speaker 1.

Channel 2 red (+) / black (-) Binding posts are connected respectively to the positive (+) / negative (-) terminals of speaker 1.

Bridged Mode:

Channel 1 red (+) Binding post connected to the positive (+) terminals of speaker and Channel 2 black(-) Binding post connected to the negative(-) terminals of spaker.

7.Fan Outlet

The fan draws air from the chassis.

8.Input Sensitivity Switch

0. 775V (0dBu) / 1V (0dBv) / 32dB Threes input gain choices.

9. Working Mode Switch

- 1.Stereo: CH1-2 Function Independent work and control.
- 2. Parallel: 1)Input signal to CH1, CH1 is paralleled with CH2, CH1 and CH2 are controlled independently, now CH2 input is invalid.
- 3. Bridged: 1) Input signal to CH1, signal through CH1 will access CH2 in reverse phase, The volume of CH1 can control CH2 at the same time. CH1 Output and CH2 Output connect with Speaker in series.

10. Earthing Switch

When the switch is turned ON (AC ground), the ground switch is on (AC-DC ground), signal ground selection --- The audio system noise can be suppressed by grounding switch.

Note: The output of all amplifiers will produce high voltage. Live installation is not allowed. There shouldn't be any excess bare copper exposed between the speaker cable and the amplifier binding posts. In addition, please do not ground the amplifier output, or access to any other amplifier input or output. Please use high-quality speaker connector and speakers dedicated cable, and minimize the power amplifier and speaker connection cable.

Rear Panel Introduction



When the switch is turned ON (AC ground), the ground switch is on (AC-DC ground), signal ground selection --- The audio system noise can be suppressed by grounding switch.

Rear Panel Introduction

9. Binding Post Connector

Stereo/Parallel Mode:

Channel 1 red (+) / black (-) Binding posts are connected respectively to the positive (+) / negative (-) terminals of speaker 1.

Channel 2 red (+) / black (-) Binding posts are connected respectively to the positive (+) / negative (-) terminals of speaker 1.

Channel 3 red (+) / black (-) Binding posts are connected respectively to the positive (+) / negative (-) terminals of speaker 1.

Channel 4 red (+) / black (-) Binding posts are connected respectively to the positive (+) / negative (-) terminals of speaker 1.

Bridged Mode:

Channel 1 red (+) Binding post connected to the positive (+) terminals of speaker and Channel 2 black(-) Binding post connected to the negative(-) terminals of speaker. Channel 3 red (+) Binding post connected to the positive (+) terminals of speaker and Channel 4 black(-) Binding post connected to the negative(-) terminals of speaker.

10.Fan Outlet

The fan draws air from the chassis.

Note: The output of all amplifiers will produce high voltage. Live installation is not allowed. There shouldn't be any excess bare copper exposed between the speaker cable and the amplifier binding posts. In addition, please do not ground the amplifier output, or access to any other amplifier input or output. Please use high-quality speaker connector and speakers dedicated cable, and minimize the power amplifier and speaker connection cable.

Connectors Introduction

Binding Post Connection At the end of each speaker cable,

At the end of each speaker cable, peel off the 15mm-long insulation and place the bare wire through the appropriate binding post of the speaker. Tighten the posts until they grip the wire firmly. Refer to the socket for the polarity of the speaker.

XLR input connector connection diagram is as below: Pin 1 is grounded / shielded, pin 2 is positive (+), pin 3 is negative (-),

Balanced XLR wiring diagram



Unbalanced XLR wiring diagram



Description: When the input signal source is unbalanced mode (single-ended) input, XLR Pin 1 and Pin 3 can be connected in parallel. But unbalanced signal cable should not be too long, otherwise it will lead to line noise (hum), it is recommended as far as possible to use balanced input connection mode to improve noise suppression.

Speakon Connection Socket

1.Switch off POWER.

2.Plug the Neutrik NL4FC into Speakon socket on the rear panel of amplifier, and then lock it clockwise.







Speakon Connector

At the end of each speaker cable, peel off the 15mm-long insulation and place the bare wire through the appropriate binding post of the speaker. Tighten the posts until they grip the wire firmly. Refer to the socket for the polarity of the speaker.

Connection Mode Introduction

Connect the speakers as shown below. Note that the speaker impedance varies depending on the connection method and the connected speaker parameters. Be sure that the speaker impedance is not lower than the lowest value shown below.

Bridge Mode

The output speaker cable must be connected to the positive pole of channel 1 and the negative pole of channel 2.

The bridge output is doubling the output voltage.



If the amplifier is set to BRIDGE mode: only the CH1 volume knob is active. (The CH2 volume knob is disabled)

Stereo/Parallel Mode



Stereo/Parallel Mode Speakon 1 connection Two speaker connection



Stereo/Parallel Mode Speakon 2 connection

INPUT (CH1, CH2) Each channel is equipped with two sockets. Note that when using BRIDGE or PARALLEL mode, only the channel 1 is valid.

Connection Mode Introduction

Connect the speakers as shown below. Note that the speaker impedance varies depending on the connection method and the connected speaker parameters. Be sure that the speaker impedance is not lower than the lowest value shown below.

Bridge Mode

The output speaker cable must be connected to the positive pole of channel 1 and the negative pole of channel 2.

The bridge output is doubling the output voltage.



If the amplifier is set to BRIDGE mode: only the CH1and CH3 volume knob is active. (The CH2/ CH4 volume knob is out of use)

Stereo/Parallel Mode



Stereo/Parallel Mode Speakon 3 connection

Stereo/Parallel Mode Speakon 4 connection

INPUT

Each channel is equipped with two sockets. CH1 and CH3 both have a parallel/LINK output socket.

Installation

Stack installation

In order to ensure good cooling environment, please amount power amplifiers according to below conditions Due to lots of dust in construction environment, there might be much dust in filter sponge blocking wind

environment, there might be much dust in filter sponge blocking wind path. It's advised to clean sponge H^{ot air} with high-power vacuum cleaner. Monthly maintenance can guarantee good heat radiation. Besides, please do not pile cables before air outlet. Kindly tie them up and put them on amps two sides. ->20CM cold air Goldair 00000 Working temperature is suggested below 35°C. When stacking not horizontally, Avoid air short circuit. it's advised to make rear panel air outlet upside or make rear panel Prevent hot air from drawing to opposite to air outlet. front panel exhaust inlet. Install equipment to Even when system programming draw away hot air and other limit conditions, compulsively. the working temperature is also H^{ot a} suggested below 35°C. cold air 00000 Cold air Keep hot air out of front panel exhaust inlet.

Technical Specifications

Model	DMi 2 2000A	DMi 2 3000A	DMi 2 4000A
Max. Output Power			
8 ohms per ch. (all ch.'s driven)	680Wx2	868Wx2	1300Wx2
4 ohms per ch. (all ch.'s driven)*	1100W*x2	1440W*x2	2150W*x2
2 ohms per ch. (all ch.'s driven)*	1300W*x2	1700W*x2	2600W*x2
8 ohms Bridged per ch.	2200W*x1	2500W*x1	4300W*x1
4 ohms Bridged per ch.			
Performance with Gain			
THD+N (typical)	≤0.03% (1/2 Rated Output Power)		
Frequency Response	20Hz-32KHz (+0/-	0.5dB)	
Signal To Noise Ratio	98dB	100dB	
Damping Factor	200 (1 kHz and belo	ow)	
Channel separation	70dB (1 kHz and be	low)	
Amplifier gain selectable	0.775V/1V/32dB		
Input Impedance	$20 \text{K}\Omega/10 \text{K}\Omega$ (balance)	ed/Unbalanced)	
Input Common Mode Rejection /CMR	70dB		
Default gain	38.2dB/36dB/32dB	40.3dB/38dB/32dB	42dB/39.8dB/32dB
Output Circuitry	Class 2H	Class D+AB	Class D+AB
Cooling	front-to-rear airflow		
Protection circuit	Soft start, DC, short c automatic reduce pow	rcuit, clip limit, over hea er, progressive volume	t, temperature rise
Function			
Front panel indicator	Working state, voltage	e, CLIP, SIG, ON, LCD so	creen
Rear panel indicator			
Front panel	Power switch/Volum	e control	
Rear panel	Stereo/Parallel/Brid	dge	
Connectors			
Input connectors (per ch.)	3-pin XLR, electroni	cally balanced	
Output connectors (per ch.)	NI4 Speakon, Bindin	g post.	
Dimensions/Weight			
Product outline dimension	483mmx418mmx89	mm	483mmx452mmx89mm
Outer packing size	600mmx555mmx185	mm	600mmx565mmx185mm
Gross weight	21.0kg	21.0kg	24.0kg
Power	~220V/50Hz.±10%		

Remark: 1. " * " Measure by pulse signal. 2. The amplifier's PSU operates as a non-resistive load, so the calculation "Volts x Amps = Watts" would not be correct. 3. All specifications are subject to change without notice.

Technical Specifications

Model	DMi 4 2500A	DMi 4 3500A
Max. Output Power		
8 ohms per ch. (all ch.'s driven)	680Wx4	968Wx4
4 ohms per ch. (all ch.'s driven)*	1100W*x4	1600W*x4
2 ohms per ch. (all ch.' *s driven)*	1300W*x4	1900W*x4
8 ohms Bridged per ch.	2200W*x2	3200W*x2
4 ohms Bridged per ch.		
Performance with Gain		
THD+N (typical)	0.035%(THD at 1 kHz and 1 dl	B below clipping)
Frequency Response	20Hz-32KHz (+0/-0.5dB,1/8 W into 8 ohms)	
Signal To Noise Ratio	≥100dB	
Damping Factor	250 (1 kHz and below)	
Channel separation	70dB(1 kHz and below)	
Amplifier gain selectable	0.775V/1V/32dB	
Input Impedance	$20 K\Omega/10 K\Omega$ (balanced/Unbalanced)	
Input Common Mode Rejection /CMR	70dB	
Default gain	39.5dB	40.2dB
Output Circuitry	Class 2H	Class D+AB
Cooling	front-to-rear airflow, temperature controlled speed	
Protection circuit	Soft start, VHF, DC, short circuit, clip limit, over heat, progressive volume	
LED and Function		
Front panel indicator	Working state, voltage, CLIP, SIG, ON, LCD screen	
Rear panel indicator		
Front panel	Power switch/Volume control	
Rear panel	Stereo/Parallel/Bridge/Gain switch/ground switch	
Connectors		
Input connectors (per ch.)	3-pin XLR, electronically balanced	
Output connectors (per ch.)	NI4 Speakon, Binding Post	
Dimensions/Weight		
Product outline dimension	483mmx493mmx89mm	
Outer packing size	620mmx590mmx185mm	
Gross weight	26.6kg	31.5kg
Power	~220V/50Hz.±10%	

Remark: 1. " * " Measure by pulse signal. 2. The amplifier's PSU operates as a non-resistive load, so the calculation "Volts x Amps = Watts" would not be correct. 3. All specifications are subject to change without notice.

Troubleshooting

Failure phenomenon	Possible Reasons	Related Circuit	Measures
	Short circuited between amplifier Output Connection +/-	Short-circuit protection	Disconnect the power cable to check if the failure is removed
"PROT" indicator in long-time on	Amplifier has DC output	DC protection	Please contact the factory service center
	Working mode switch bad connection	Input signal board, circuit switch part	Dial mode switch repeatedly to check.
The background noise is loud	Wrong connection of signal cables		XLR: Pin 1 to Ground, Pin 2 to +, Pin 3 to
	Line-induced interference		Set the sensitivity to 32dB then adjust the pre-amp processor.
One Channel has no output	Check if mode switch on rear panel is set correctly	Mode Switch	Toggle the mode switch several times to see if it returns to normal status
	Signal cable or speaker cable connection abnormal		When the signal light is normal, please check the speaker cables
	Mode switch is not toggled in place	Mode switch	Toggle the mode switch several times to see if it returns to normal status
Distortion	Short circuited between amplifier output cables		Insert another speaker cables
	Signal cable problem		Listen to the sound and check if it's normal when change another signal cable

Warranty

Warranty range

- 1.We provide 1 year warranty, during this period, as a result of product materials and manufacturing process problems and failures. When verification is true, the company offers free repair and replacement devices.
- 2. The following cases are not in the free maintenance range:
- A. The product is faulty or damaged due to improper installation or improper use.
- B. The product has ever been repaired, altered, or modified by any other company's technical staff,
- or the user replaces any part of the machine by himself.
- C. The serial number is altered or tore up the warranty label.
- D. Negligent use. water, or other objects are getting into the machine and cause damage.
- E. Failure or damage caused by a natural disaster.

Any cost will be covered by the users with the following circumstances

- A. As a result of natural or man-made or other irresistible matter, the product is damaged or in a failure.
- B. Damage to the product as a result of improper use or modification.
- C. Damage to the product after installation or destruction.

We do not accept any responsibility for any damaged speakers or other equipments caused by improper use of this product.

