



# **DPA-4004**

## **4 Channel Power Amplifier**

### **User Manual**

## Contents

<b>Don't be a stranger</b>	<b>3</b>
<b>Package contents</b>	<b>3</b>
<b>Safety first!</b>	<b>4</b>
<b>About the amplifier</b>	<b>5</b>
<b>Setting up your amplifier</b>	<b>6</b>
Basic connection	6
Overview	6
<b>How does it work?</b>	<b>7</b>
Power on	7
Standby	7
Channel read out	7
Display dimming	7
Protection warnings	7
<b>Configuration</b>	<b>8</b>
Single ended and bridge configuration	8
Gain setting	9
<b>Make it last!</b>	<b>10</b>
<b>If all else fails...</b>	<b>10</b>
<b>Technical specifications</b>	<b>11</b>



## Don't be a stranger

Thank you for purchasing the Gato Audio DPA-4004. We are absolutely confident that it will bring you many hours of listening pleasure.

We hereby cordially invite you to join the Gato Audio family by registering your product online. You may also consider signing up for our newsletter to receive information about exciting new products, events and technical updates. We are also present on several social media like Facebook, Twitter, Instagram, Google+ and LinkedIn.

All this and more on [www.gato-audio.com](http://www.gato-audio.com)

Our very best,

Gato Audio

## Package contents

Please check that the following is included in the package:

- 1 Gato Audio DPA-4004 power amplifier
- 1 Mains cable
- 1 Mini jack link cable
- This manual - which you should be reading now 😊

## Safety first!

### Mains plug and cable:

- Insert the mains plug fully into the mains outlet socket
- Do not use any mains cable other than the one provided with this amplifier
- Do not defeat the ground connection
- Do not move the amplifier around while it is connected to mains
- Do not place heavy objects on the mains cable or place the cable near high-temperature objects
- Do not use damaged mains plugs or socket outlets

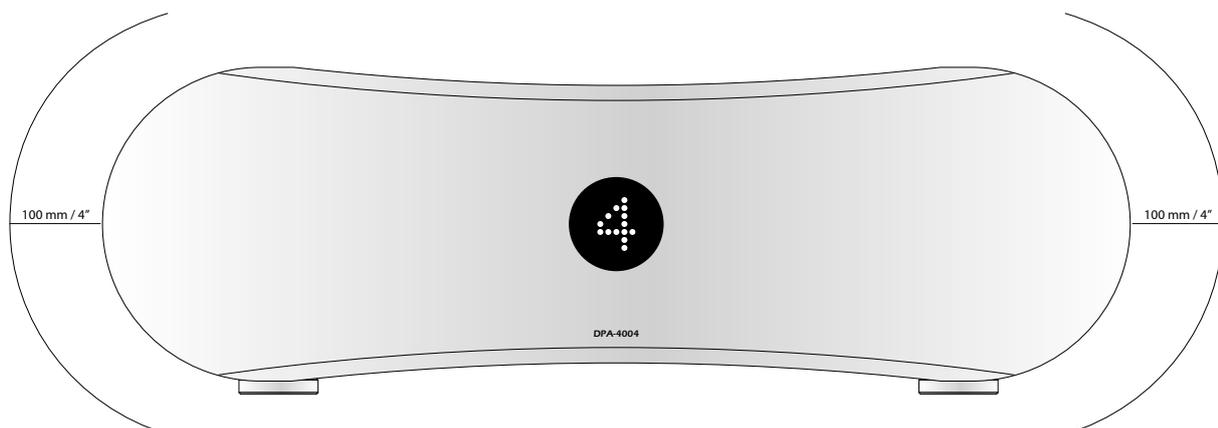
### Liquids:

Electricity and liquids are not a safe combination, therefore:

- When cleaning the amplifier, remove the mains plug
- Do not handle the mains plug with wet hands
- Do not spray any liquid directly onto the amplifier
- Do not place liquid containers above or near the amplifier
- Keep liquids away from the amplifier

### ...And:

- This is not a toy and should not be handled like one (by children OR adults)
- Do not remove the covers of the amplifier (for service see page 10)
- Do not attempt to put foreign objects inside the amplifier (for service see page 10)
- Do not cover the amplifier with cloth
- Do not place the amplifier on sloped or unstable surfaces
- When the amplifier will not be used for a long time, remove the mains plug
- Never connect or disconnect cables when the amplifier is switched on
- Do not short the amplifier outputs
- This unit is made for indoor temperature (15-25° C or 59-77 °F). If it has been exposed to cold temperature, let it adjust itself to indoor temperature before use
- Make sure that your amplifier is able to breathe by securing a minimum safe distance around the heat sinks of 100 mm or 4 inches
- The amplifier can get hot during use. Normal operating temperature is from room temperature to 50° C or 122° F





## About the amplifier

### General design

The Gato Audio DPA-4004 is a 4 channel flexible power amplifier that offers unparalleled power and performance in the smallest and most beautiful package. The DPA-4004 offers no less than 4x400W / 8ohm, doubling in 4ohm. Each pair of channels is bridgeable – enabling this fully configurable powerhouse to be used for either multichannel setups, active systems or for bi-amping speakers. This amplifier is the obvious choice for the Gato Audio PRD-3 preamplifier/DAC, but is also very suitable as a workhorse for the integrated amplifiers DIA-250 and DIA-400 – offering even more channels and flexibility. For multichannel systems it will serve as a slave for a surround processor perhaps in combination with a PRD-3, DIA-250 or DIA-400 enabling their Home Theater setting.

### Class-D Output Stage

The DPA-4004 amplifier offers four state of the art Class-D output stages with dedicated and optimized switch mode power supplies. The multiple stage power amplifiers are built around proven technology from International Rectifier, optimized with a precision high frequency oscillator and PWM modulator. A pair of precision switching MOS-FET transistors, with super low on-resistance ensures the high frequency switching is done perfectly and with as little loss as possible. The output filters are made from quality PP capacitors and low DCR coils, converting the high power PWM signals back into detailed and smooth analogue music.

## Setting up your amplifier

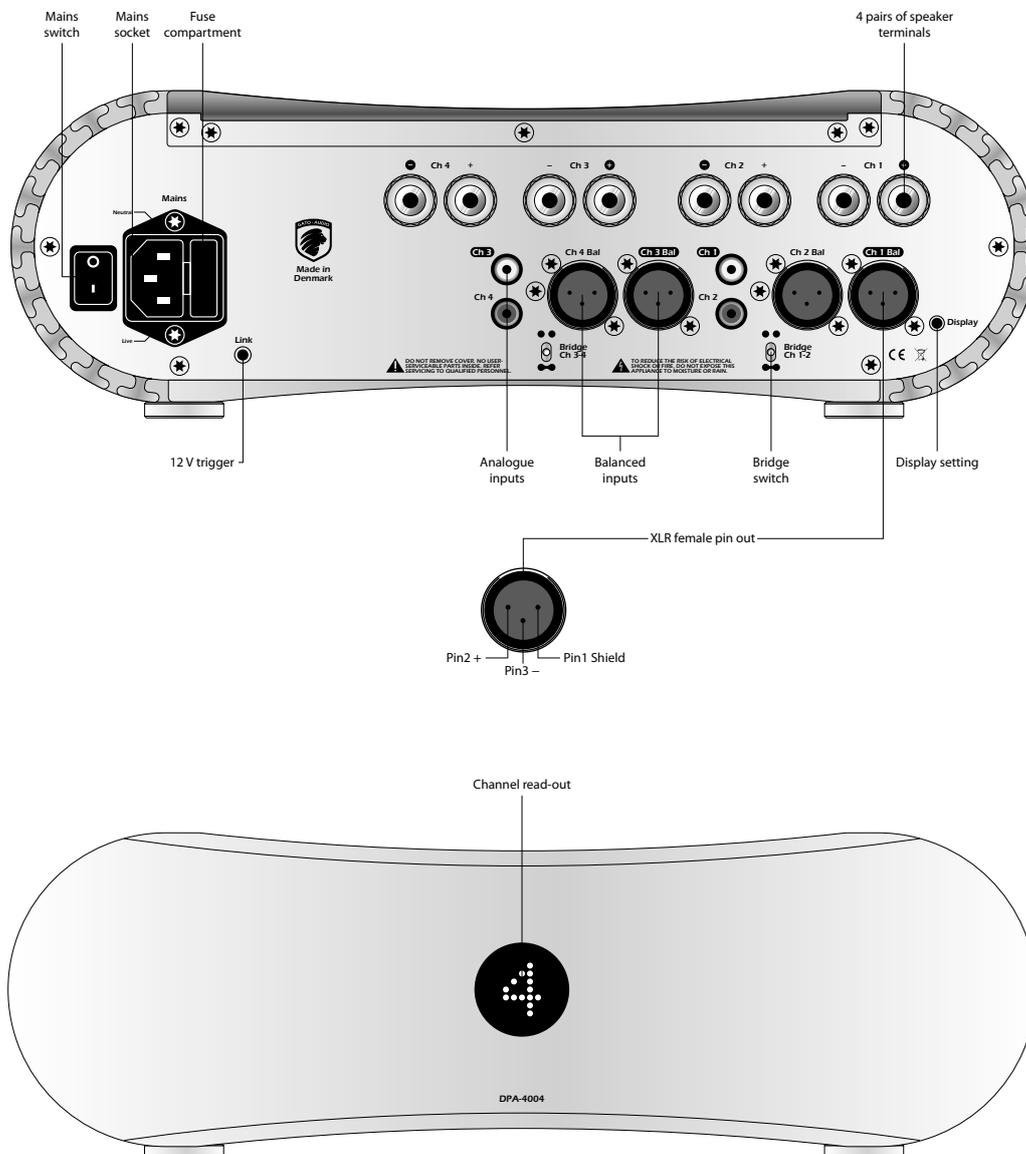
### Basic connection

Follow these steps for setting up your system in this sequence:

1. Place the DPA-4004 as per the instructions on page 4
2. Connect all inputs to the amplifier
3. Connect your loudspeakers to the amplifier
4. Connect mains power cable to the amplifier and turn it on
5. Enjoy!

**PLEASE NOTE: It is only possible to use either XLR or RCA for each channel! Connecting both XLR and RCA inputs at the same time in the same channel may damage the amplifier or the connected equipment.**

### Overview





## How does it work?

### Power on

Use the mains switch on the back of the amplifier to turn it on. The amplifier will start up immediately.



Standby

### Standby

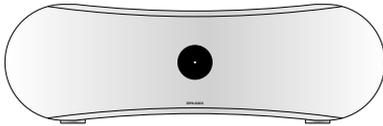
To set the amplifier in standby mode connect it to a piece of equipment (e.g. pre amplifier or integrated amplifier) featuring a 12 V trigger with the mini jack cable. The power amplifier will go into standby when the connected equipment goes into standby.



4 Channels

### Channel read out

The central display of the amplifier will show the number of available channels according to the current configuration. Please see page 8 for further information about the configuration.



Display dim

### Display dimming

The display can be dimmed by pressing the Display on the back of the amplifier. The display is now turned off except for one LED indicating the dimmed display state. Press the button again to exit display dimming mode.

### Protection warnings

The DPA-4004 is equipped with a sophisticated protection circuit to protect the amplifier and/or the connected equipment in case of failure. The DPA-4004 features two warning signals:

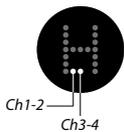


Hot warning

An **H** (for HOT) sign will be shown in the display due to temperature problems. One or two dots will flash indicating which output section is failing:

If this happens, turn off the amplifier mains switch and wait about 10 minutes for the heat sinks cool down before turning on the mains again. If a lot of heat is generated within a short period of time, please check the following:

- The ventilation around the amplifier
- The speaker cable and cable connections for the displayed channels
- The specifications of the connected loudspeakers for the displayed channels

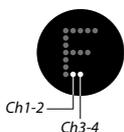


Failure warning

An **F** (for FAIL) sign will be shown in the display. One or two dots will flash indicating which output stage is failing:

Turn off the amplifier mains switch and please check the following before turning the mains on again:

- The speaker cable and cable connections for the displayed channels
- The connected equipment for the displayed channels
- That you are not playing above the clipping area of the amplifier



If the amplifier keeps failing after the powering up routine, please turn off the amplifier and contact your dealer or national distributor.

## Configuration

### Single ended and bridge configuration

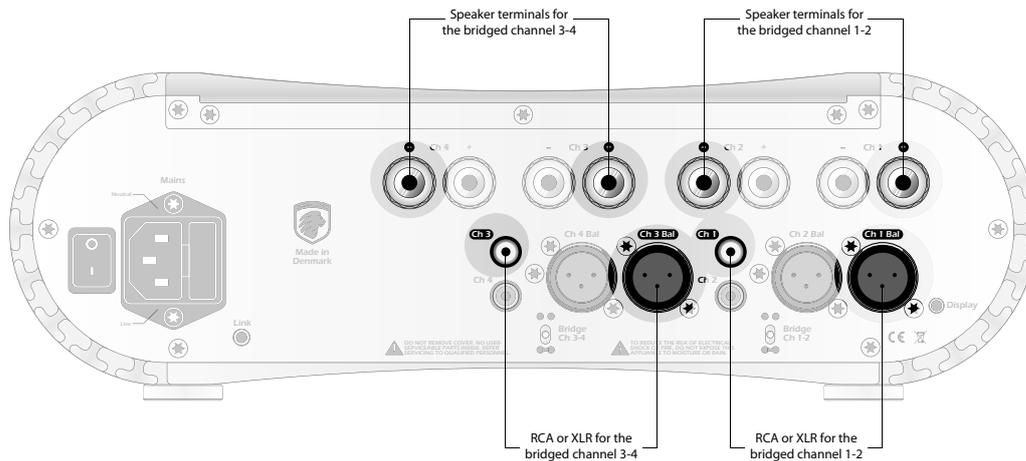
The DPA-4004 can be configured to 2, 3 or 4 channel operation, accommodating your specific system requirements.

The DPA-4004 offers in total four discrete output stages, organized in two sections each containing two channels. All sections can be configured as single ended or as bridged outputs. Each section is configured by its own little switch on the back of the amplifier. Move the switch towards ●● if you want to set the section in two channel mode (single ended) or towards ● if the section should be set to one channel mode (bridge). This individual control of each section makes it possible to configure the DPA-4004 exactly to your needs or system requirements.

Please note that when a section is configured as bridge, the connections on the back of the amplifier are changed; the speaker will share connectors from both channels in this section. Use the highlighted + from one channel and - from the other channel. Use only one of the highlighted inputs in this section, either the unbalanced **Ch 1** or the balanced connector **Ch 1 Bal**.

### The amplifier should be turned off while sections and cables are configured!

The specific in- and outputs for each section during bridge mode is shown in the below illustration.





**Gain setting**

The DPA-4004 has a default voltage gain setting of 26dB. In some system setups it can be useful to change the voltage gain to adapt different connected equipment. The gain setting switches are located inside the DPA-4004 and can be adjusted with the assistance of a technician.

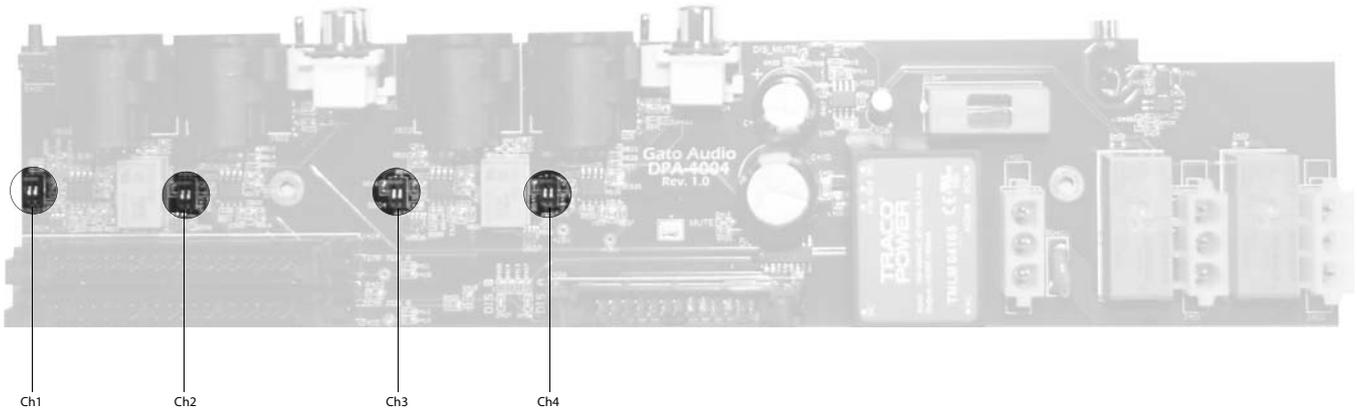
For each channel there is a two-way micro switch with these combinations:

Gain adjustment	SW1	SW2	
- 2.0 dB	on	on	
0.0 dB (default)*	on	off	
+2.5 dB	off	on	
+6.0 dB	off	off	

\* The default state matches the voltage gain for the Gato Audio DIA-250 and DIA-400 integrated amplifiers.

Please note that when a section is bridged, both micro switches for each channel must be set to the same value.

Gain micro switch placement on the PCB:



## Make it last!

Please apply simple common sense to maintain the sound quality and lifespan of your new Gato Audio amplifier. Here are a few guidelines:

- Regular care: wipe the surfaces carefully by using a clean soft dry cloth
- Cleaning: if necessary, wipe the hard surfaces clean using a soft cloth dampened only with clean water.
- Grease stains or finger marks can be removed carefully with a clean soft cloth lightly dampened in a mix of clean lukewarm water and a single drop of dish-washing liquid. Then wipe the surfaces dry using a soft dry cloth
- Be careful never to use hot water or any type of concentrated detergent, solvent, thinner, or any other volatile substance on the surfaces, or you may cause permanent damage to the surface coating
- Keep the cabinet away from prolonged contact with rubber or PVC materials
- Do not expose the amplifier to direct sunlight or other heat sources

## If all else fails...

...don't panic! Every Gato Audio product comes with a minimum 2-year warranty. See our website for details.

This warranty does not cover damage or wear directly or indirectly caused by improper use, violence, tampering with or unauthorized access to or servicing of any part of the product.

If you are in need of service or repair, please do not hesitate to contact us at [hello@gato-audio.com](mailto:hello@gato-audio.com) or visit our website [www.gato-audio.com](http://www.gato-audio.com) for more information.

## Technical specifications

Output power @ 8 $\Omega$	4x 400W / 2x 1400W / 1x 1400W + 2x 400W
Output power @ 4 $\Omega$	4x 800W (we do not recommend 4 $\Omega$ load in bridge mode)
Frequency response	20 Hz-20 kHz - 0.5 dB, and 2 Hz-70 kHz - 3 dB
Total Harmonic Distortion	< 0,01% at rated power
Signal to noise ratio	> 110 dB
Input impedance	20 k $\Omega$ RCA or 40 k $\Omega$ Balanced
Voltage gain	26 dB
Recommended speaker load	Single Ended 4 -16 $\Omega$ , Bridged 8 -16 $\Omega$

### Connectors

Balanced analogue inputs	2 pairs gold plated XLR Neutrik
Unbalanced analogue inputs	2 pairs of gold plated RCA stereo
Speaker output	4 pairs of gold plated safety banana
Trigger, 12V	1 mini jack

### Size & Power

Power Requirements	115 VAC/230 VAC, 50 Hz/60 Hz, 2000W max
Fuse	20 mm sand-filled, 8 AT
Power consumption stdb/idle/max	< 1W/50W/2000W
Dimensions (WxHxD)	325 x 105 x 420 mm / 12.8 x 4.1 x 16.5"
Weight	11 kg / 24.3 lb



**Gato Audio**  
Marielundvej 28  
DK-2730 Herlev  
Denmark

Phone: +45 4095 2205

[www.gato-audio.com](http://www.gato-audio.com)  
[hello@gato-audio.com](mailto:hello@gato-audio.com)