

Zenith

CD Series Amplifiers User Manual



Order codes:
AMP10 - CD2400
AMP09 - CD4400

WARNING**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP!**

- Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all the parts are present.
- Before initial start-up, please make sure that there is no damage caused during transportation.
- Should there be any damage, consult your dealer and do not use the equipment.
- Retain the carton and all packaging materials.
- In the event that the equipment must be returned to the supplier, it is important that the equipment is returned in the original carton and packaging.
- To maintain the equipment in good working condition and to ensure safe operation, it is necessary for the user to follow the safety instructions and warning notes written in this manual.
- Please note that damages caused by user modifications to this equipment are not subject to warranty.

**IMPORTANT:**

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorised modification to the equipment.

- Never let the power cable come into contact with other cables. Handle the power cable and all mains voltage connections with caution!
- Never remove warning or informative labels from the equipment.
- Do not open or modify the equipment.
- Do not connect this equipment to a dimmer-pack.
- Do not switch the equipment on and off in short intervals, as this will reduce the system's life.
- Only use the equipment indoors.
- Do not expose to flammable sources, liquids or gases.
- Always disconnect the power from the mains when equipment is not in use or before cleaning! Only handle the power cable by the plug. Never pull out the plug by pulling the power cable.
- Make sure that the available voltage is between 220-240V, 50/60Hz AC.
- Make sure that the power cable is never crimped or damaged. Check the equipment and the power cable periodically.
- If the equipment is dropped or damaged, disconnect the mains power supply immediately. Have a qualified engineer inspect the equipment before operating again.
- If the equipment has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation might damage the equipment. Leave the equipment switched off until it has reached room temperature.
- If the product fails to function correctly, discontinue use immediately. Pack securely (preferably in the original packing material), and return to your dealer for service.
- Only use fuses of same type and rating.
- Repairs, servicing and power connection must only be carried out by a qualified technician. THIS UNIT CONTAINS NO USER SERVICEABLE PARTS.
- WARRANTY: One year from date of purchase.

OPERATING DETERMINATIONS

If this equipment is operated in any other way, than those described in this manual, the product may suffer damage and the warranty becomes void. Incorrect operation may lead to danger e.g: short-circuit, burns and electric shocks etc.

In case of malfunction this unit should be returned for service or inspection.

Do not endanger your own safety and the safety of others!

Incorrect installation or use can cause serious damage to people and/or property.

CD Series Amplifiers

The Zenith CD Series feature high power, outstanding sound quality and superior stability for a wide range of installed sound systems as well as portable live sound applications. Automatic clip limiting along with high efficiency tunnel cooling and DC fans ensure reliability time after time.

- Protection circuits: Soft start, limit, thermal, short circuit, overload, DC fault protection & AC power supply fuse
- LED indicators: Active, signal & clip
- Input connections:
 - 2 x XLR sockets (CD2400 only),
 - 4 x XLR sockets (CD4400 only),
 - 1 x powerCON input
- Output connections:
 - 2 x speakON connectors (CD2400 only),
 - 4 x speakON connectors (CD4400 only)
- Additional features:
 - Switchable stereo, parallel and bridge and low pass filter

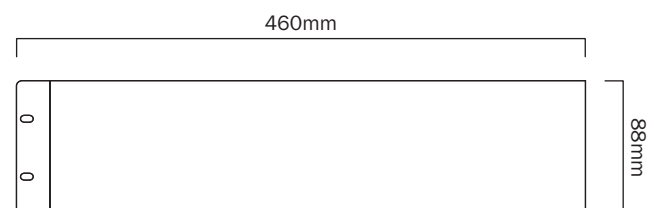
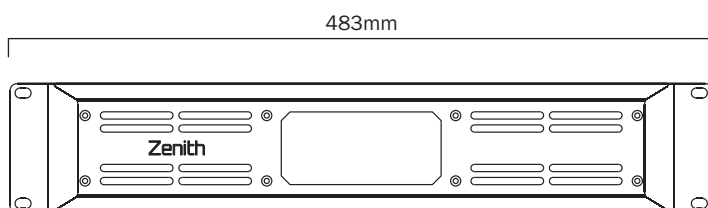
CD2400



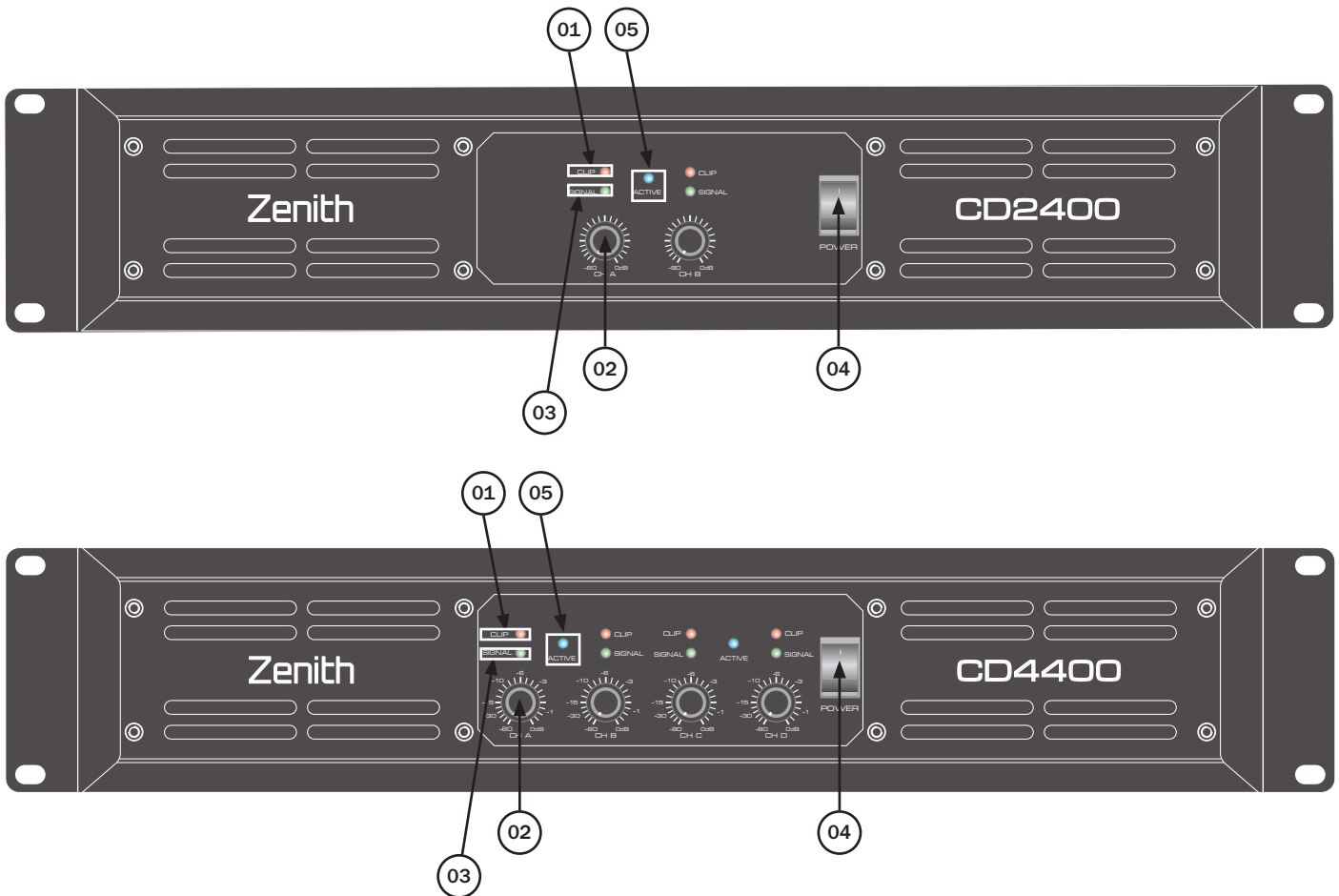
CD4400



Specifications	CD2400	CD4400
Power output @ 8Ω	2 x 400Wrms	4 x 400Wrms
Power output @ 4Ω	2 x 700Wrms	4 x 700Wrms
Power output bridge @ 8Ω	1 x 1200Wrms	2 x 1200Wrms
Frequency response	20Hz to 20kHz	20Hz to 20kHz
Input sensitivity	0.775V, 32dB or 26dB	0.775V, 32dB or 26dB
Min. Load impedance (Stereo)	4Ω	4Ω
Min. Load impedance (Bridge)	8Ω	8Ω
Power supply	220-240V AC 50/60Hz	220-240V AC 50/60Hz
Power consumption	250W (1/8 power @ 8Ω)	530W (1/8 power @ 8Ω)
Dimensions	88 x 483 x 460mm	88 x 483 x 460mm
Weight	8kg	9.6kg
Order code	AMP10	AMP09



Front panel



01 - Clip LEDs - These LEDs flash red to indicate when the output of the amplifier has reached the maximum, and is right on the edge of clipping. Clipping is bad for speakers and should be avoided. It is okay if the LED blinks occasionally. It means that the transient peaks of the music are just hitting the full output of the amplifier.

Gain control - These knobs control the levels of Channels A & B (CD2400), or A, B, C & D (CD4400). Usually, these controls are set all the way up. After you have set the levels for the mixer (or other signal source), adjust the Level controls on the amplifier as the final adjustment to set the overall volume for the system.

In stereo and mono mode, use the level controls to control the levels going to each speaker.

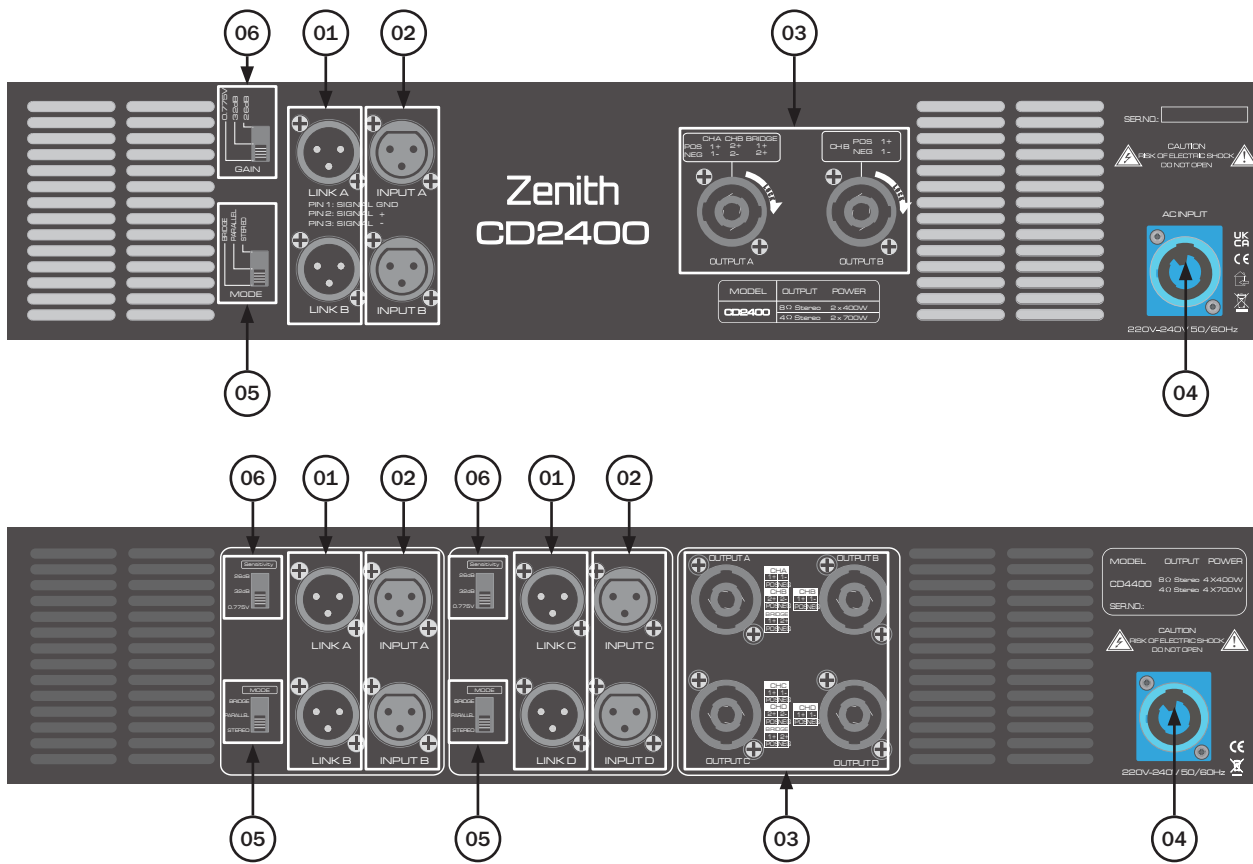
In bridged mode, turn the Channel B (CD2400) and Channel B & D (CD4400) level controls down, and just use Channel A (CD2400) and Channel A & C (CD4400) level controls.

02 - Signal LEDs - These LEDs illuminate when the amplifier is relieving an input signal.

03 - Power switch - Press this switch to power on the amplifier. Amplifiers should be the last device in the audio chain to be powered on.

04 - Active LED - These LEDs illuminate when the amplifier is powered up.

Rear panel



- 01 - These balanced XLR outputs can be used to pass through the signal to additional power amplifiers.
- 02 - XLR inputs - These inputs allow you to connect balanced signal. These are wired with pin 2 hot, pin 3 cold and pin 1 ground
- 03 - Locking speaker connector outputs - These outputs allow you to connect your speakers
When the amplifier is used in bridged mono mode use Channel A (CD2400) and Channel A & C (CD4400).
- 04 - Locking power socket - This is where you connect the detachable locking power cable. Connect the other end to a 220-240V, 50/60Hz AC outlet.
- 05 - Amp mode - This switch determines the input signal routing within the amplifier. For most applications stereo will be used.

Stereo mode - This is the "normal" way of using the amplifier, in which each channel is fully independent. Separate signals connect at the inputs, the gain knobs control their respective channels, and separate speakers connect to each output.

Examples:

- Two-channel (stereo) playback.
- Two independent mono signals, such as main and monitor mixes.
- Bi-amped operation, with the low frequencies in Channel A and the highs in Channel B.

- 06 - The Gain sets the input sensitivity of the amplifier dependant on the signal being sent from the pre-amp or mixer etc.

Parallel mode - This mode is just like Stereo mode, except that the inputs for Channel A and Channel B are internally connected together. A signal into any input jack will therefore drive both channels directly. Each channel's gain control still functions as usual, and each channel feeds its own speaker load. You can patch the input signal on to additional amplifiers by using any of the remaining input jacks.

Example:

- One mono signal driving both channels, with independent gain control for each speaker system.

Bridge mode - This mode combines the full power capabilities of both channels into a single speaker system. The amplifier internally re-configures so that both channels operate as a unit. This delivers double the output voltage, resulting in four times the peak power and three times the sustained power into a single 8- or 4-ohm speaker load. Connections for bridge mono mode are different to those used in Stereo or Parallel mode.

Example:

- Driving a single 8-ohm speaker with the combined 4-ohm power of both channels.

Precautions: Bridge Mono mode makes it possible to drive thousands of watts into a single speaker. AC current consumption will usually be higher. Avoid excessive signal level, and make sure the wiring and speaker can handle the power.

Rack installation

The CD Series is built for 19" racks. The rack you use should be a 'double door rack' where you can open the front and rear panel. When mounting the amplifier into the rack, please make sure that there is enough space around the amplifier.

Be careful when mounting the amplifier into the rack. Put the heaviest products into the lower part of the rack. Be aware that fastening the amplifier with four screws on the front panel is not enough. If the racks are being transported or used for mobile use, additionally fasten the products by connecting the rear brackets with the side or ground bars of the rack. In this way, the amplifier cannot be pushed backwards. The front panel is not designed to absorb acceleration forces occurring during transportation.

Inputs

Short cables runs improve the sound quality remarkably. Input cables should be short and direct, since high frequencies will mostly be absorbed if the cables are unnecessarily long. Besides that a longer cable may lead to humming and noise problems. If the cable runs are unavoidable, you should use balanced cables.

Outputs

The high damping factor of your amplifier supplies a clear sound reproduction.

Unnecessarily long and thin cables will influence the damping factor and thus the low frequencies in a negative way. In order to safeguard good sound quality, the damping factor should lie around 50. The longer a cable has to be the thicker it should be, as a minimum 2.5m² should be used, however 4.0m² or 6.0m² is recommended.

Connect your speaker systems via the locking speaker connectors.

Connection to the mains

Connect the amplifier only after having made sure that the correct voltage (220-240V) is supplied and that the ground cable is earthed. This product falls under Class 1. Do not detach the ground cable.

Operation

After having connected your amplifier to the mains, turn both gain controls counter clockwise to the “-80” position. The last product to be switched on is amplifier. The “**ACTIVE**” LED lights up now. If it does not, check if the amplifier is connected to the mains correctly.

After having powered on the amplifier, turn the gain controls of your amplifier to mid-position. Now adjust the volume with the gain controls CH A and CH B (CD2400) or CH A, CH B, CH C and CH D (CD4400).

All important operating modes of the amplifier are arranged on the front panel.

Signal	- Receiving signal
Clip	- Short circuit or impedance too low or signal distorted

If you want to switch off the system, **switch off the amplifier first** in order to avoid acoustic shocks on the speakers.

Problem Chart

Problem	Cause	Solution
No power	The power cable is not connected	Check the power cable and any extension cables
No sound	The power cable of the respective product is not connected correctly or not at all.	Check the power cable and if the plugs are properly connected with the sockets
	The connection socket or the plug is dirty	Clean the socket and/or the plug
Noise	The input signal is too strong	Reduce the input signal via the gain control
Fan does not work, LEDs do not light up	The power cable is not connected	Connect the power cable



***Correct Disposal of this Product
(Waste Electrical & Electronic Equipment)***

**(Applicable in the European Union and other European countries
with separate collection systems)**

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

