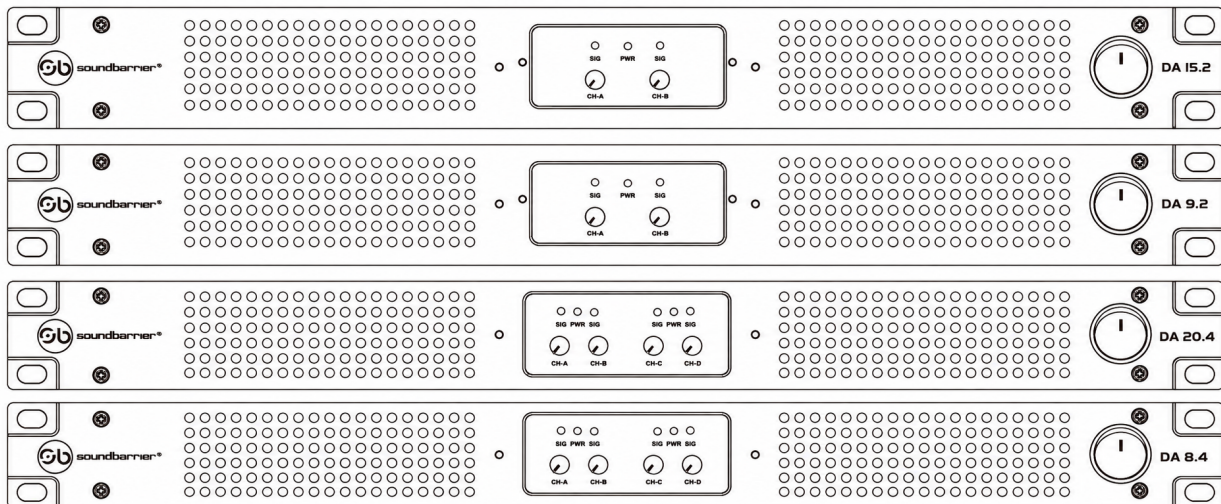




DA SERIES

Professional Class-D Power Amplifiers

DA 15.2 · DA 20.4 · DA 9.2 · DA 7.2 · DA 8.4



USER MANUAL

Read the safety information on the following pages before use.

Important Safety Information

Read this section completely before connecting or powering any DA Series amplifier. These are high-power Class D power amplifiers intended for professional and touring sound systems. Incorrect installation or operation can cause fire, electric shock, hearing damage, or destroyed loudspeakers.

Symbols used in this manual

Symbol	Meaning
WARNING	A hazard that can cause fire, electric shock, injury, or hearing damage.
CAUTION	A condition that can damage the amplifier, the loudspeakers, or nearby equipment.
NOTE	Information that helps you get correct or faster results.

Electrical safety

- Connect the equipment only to the power outlet specified in this manual. Using any other outlet may cause fire or electric shock.
- This is a Class I appliance. The ground wire must be reliably connected to a properly earthed outlet — do not defeat the grounding pin of the power plug.
- The power on/off switch interrupts only a low-voltage control circuit; it does not fully disconnect the unit from the power grid. Unplug the power cord to fully disconnect the equipment.
- Do not place containers of liquid or small metal objects on top of the equipment. If liquid or metal falls inside, it may cause fire or electric shock.
- Do not place heavy objects, including the equipment itself, on the power cord. This can damage the cord and lead to fire or electric shock.
- Keep the power cord away from heaters — it may melt and cause a fire.
- Do not scratch, bend, twist, stretch, or heat the power cord. This may damage the cord and lead to fire or electric shock.
- When unplugging the power cord, hold the plug itself — do not pull on the cable. Otherwise it may damage the cord and outlet, leading to fire or electric shock.
- Do not touch the power plug with wet hands. This may cause electric shock.
- Do not let water enter the equipment or allow it to become damp. This may cause fire or electric shock.
- The amplifier's output terminals can carry lethal high voltage. Use only the dedicated speaker connectors, and never touch the output terminals while the unit is powered.
- Connect loudspeakers to the amplifier output jacks using speaker-rated cable only. Other cable types may cause fire.
- If the power cord is damaged (cut or with exposed wire), have it replaced by authorized service personnel — do not continue to use it.
- If you will not use the equipment for an extended period, unplug the power cord from the AC outlet.
- If lightning occurs, turn off the power switch as soon as possible and unplug the power cord.

Installation and ventilation

- Ventilation openings on the front and rear of the equipment allow internal cooling — do not block them.
- Leave adequate clearance around the equipment: at least 5 cm at the sides and 10 cm behind, with the front and rear airways unobstructed.
- Before moving the equipment, unplug the power cord and disconnect all connecting cables.
- Do not use the equipment on an unstable, shaking, or tilted surface; in a humid or dusty environment; in direct sunlight or a closed vehicle; or where it may be exposed to steam or liquid splash from stoves, boilers, or humidifiers.
- Keep loose accessories (packing foam, manual pouch, desiccant, etc.) out of the reach of children.

Operating safety

- Do not open the equipment enclosure — this may cause electric shock. Refer any service to authorized personnel.
- Do not modify the equipment. Unauthorized modification may result in failure, fire, or electric shock.
- Before connecting or disconnecting any equipment, turn off all connected audio equipment and loudspeakers.
- Before powering on the equipment, turn the volume control fully down (counter-clockwise to its limit). A sudden burst of sound can damage your hearing or your loudspeakers.
- If the enclosure is damaged or the equipment has been dropped, immediately turn off the power switch, unplug the power cord, and contact authorized service.
- If you notice anything abnormal — smoke, an unusual odor, and so on — immediately turn off the power switch, unplug the power cord, and contact authorized service.

WARNING — READ THE SAFETY WARNINGS FIRST

Before installing or connecting a DA Series amplifier, confirm that you have read and understood all of the safety warnings in this section.

WARNING — DISCONNECT BEFORE INSTALLATION

Before installation or wiring, make sure the power cord is not connected to the power outlet, the power switch is off, and the volume control on every channel is turned fully down (counter-clockwise to its limit).

WARNING — GROUNDING AND ELECTRIC SHOCK

The grounding end of the power cord must be connected to a properly earthed outlet — otherwise there is a risk of electric shock.

The power cord must have sufficient current capacity, and the AC supply voltage and frequency must be within $\pm 10\%$ of the nominal value.

WARNING — HEARING DAMAGE

A DA Series amplifier can drive loudspeaker systems to sound pressure levels that cause permanent hearing loss. Always turn the volume control fully down before powering on, and raise levels gradually while wearing hearing protection near loudspeakers at high level.

CAUTION — MAGNETIC FIELD INTERFERENCE

This equipment is high power and generates a strong magnetic field. Keep signal-sensitive equipment away — preferably no closer than 20 cm — or it may pick up noise.

NOTE — LIABILITY FOR EXCESSIVE USE

Our company is not responsible for damage caused by excessive or improper use of this equipment.

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1. Introduction

1.1 Overview

Thank you for choosing a DA Series Class D power amplifier. Our research and development, production, and technical support teams are focused specifically on Class D power amplification, so that the DA Series delivers reliable, stable operation across a wide range of applications with minimal effort on your part.

This manual provides the information needed for proper installation and use of the equipment; it does not cover every condition that may arise on an actual project. For further assistance with system design, installation, or troubleshooting, please contact your dealer or our technical support team.

Please keep your sales order or invoice — proof of purchase is required for warranty service.

1.2 Model variants

The DA Series comprises five models, covering two- and four-channel configurations at a range of power levels:

Model	Channels	Rated power, 8 Ω / Stereo	Rated power, 4 Ω / Stereo	Gain options
DA 15.2	2	2 $\times$ 4000 W	2 $\times$ 7500 W	41 / 38 / 35 / 32 dB
DA 20.4	4	4 $\times$ 3000 W	4 $\times$ 5000 W	41 / 38 / 35 / 32 dB
DA 9.2	2	2 $\times$ 3000 W	2 $\times$ 5000 W	41 / 38 / 35 / 32 dB
DA 7.2	2	2 $\times$ 2200 W	2 $\times$ 3500 W	41 / 38 / 35 / 32 dB
DA 8.4	4	4 $\times$ 1350 W	4 $\times$ 2000 W	38 / 35 / 32 / 29 dB

1.3 Key features

- High efficiency and energy saving — low operating cost.
- Compact and lightweight, with a rigid structure.
- Complies with safety and EMC standards.
- 100–240 VAC, 50/60 Hz wide-range power supply.
- First-class quality, using components from leading international manufacturers.
- Temperature-controlled cooling fans for quiet operation.
- Modular design for convenient maintenance.
- Well suited to mobile and touring applications.
- Thoughtful design for a comfortable, relaxed user experience.

1.4 Unpacking

Open the packaging and check whether the equipment was damaged in transit. If it was damaged, notify the shipping company immediately — only you have the right to request compensation for shipping damage. We will provide any assistance you need.

We recommend keeping all packaging materials for future transport of the equipment. Do not transport the unit without its outer packaging.

Packing list:

Item	Quantity
Amplifier	1 piece
User's manual	1 piece

2. Environmental Protection and Efficiency

Thanks to high-efficiency Class D amplification and switching power supply technology, the energy efficiency of DA Series amplifiers exceeds 80% in routine use and over 90% under laboratory conditions.

Active power factor correction lets the equipment be used worldwide while minimizing interference to the power grid and improving overall energy efficiency.

Advantages of high efficiency:

- Lower operating temperature, which noticeably improves reliability.
- Size and weight only about one-third of a traditional amplifier.
- Noticeably lower transportation, handling, and installation costs.
- Reduced energy consumption and operating costs.
- A smaller environmental footprint.

The use of aluminum, copper, and steel is greatly reduced, saving energy and resources and cutting transportation-related emissions by roughly 70%.

Climate change is a challenge for the whole world, and energy saving and emission reduction are effective ways to address it. We are committed to providing environmentally friendly products.

3. Installation

3.1 Outline dimensions

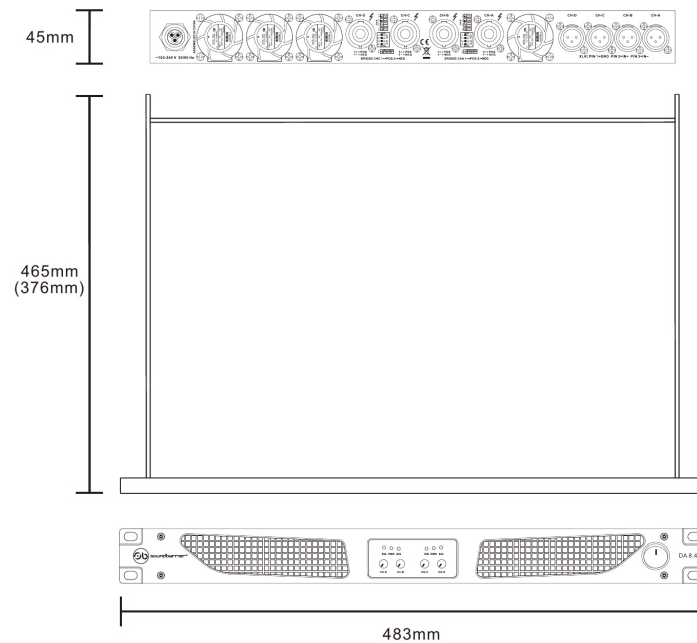


Figure 1. Chassis dimensions (DA 8.4 shown; width and height are common to all models)

3.2 Cooling instructions

Cool air is drawn in through the front-panel ventilation holes and exhausted from the rear panel. To ensure good heat dissipation, install the equipment in an ambient temperature of 0 °C to 40 °C, and make sure the front and rear airways are open.

If the internal temperature exceeds 85 °C, output voltage is reduced to limit further temperature rise. If the temperature continues to rise to 90 °C, the amplifier shuts down; it restarts automatically once the temperature returns to a safe level.

If cooling performance declines after extended use, turn off the equipment and remove the dust filter to clean it.

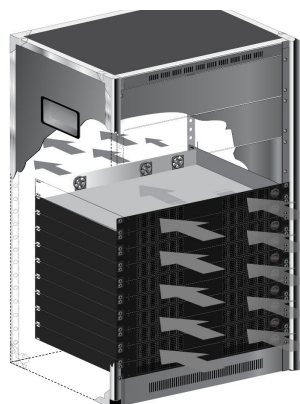


Figure 2. Front-to-rear airflow through an equipment rack

3.3 Power cord

The power cord must have sufficient current capacity, and the AC supply voltage and frequency must be within $\pm 10\%$ of the nominal rated value. See “Grounding and Electric Shock” under Important Safety Information.

3.4 Input / output connections

Use shielded cable, with the highest-density shielding layer available. Select a balanced connection for inputs to minimize noise. If an unbalanced connection must be used, keep it as short as possible — preferably no more than 3 m.

Keep weak signal lines away from running parallel to power lines or power output lines, which can otherwise induce noise. Before changing any connection, turn off all connected equipment to avoid damage to hearing and loudspeakers.



Figure 3. Balanced and unbalanced XLR input wiring

4. Wiring Modes

Each DA Series amplifier can be configured, per channel pair, for Stereo, Bridge, or Mono operation using the mode switch on the rear panel.

4.1 Stereo mode

In Stereo mode each channel operates independently: the CH-A input is reproduced at CH-A output, CH-B at CH-B, and so on.

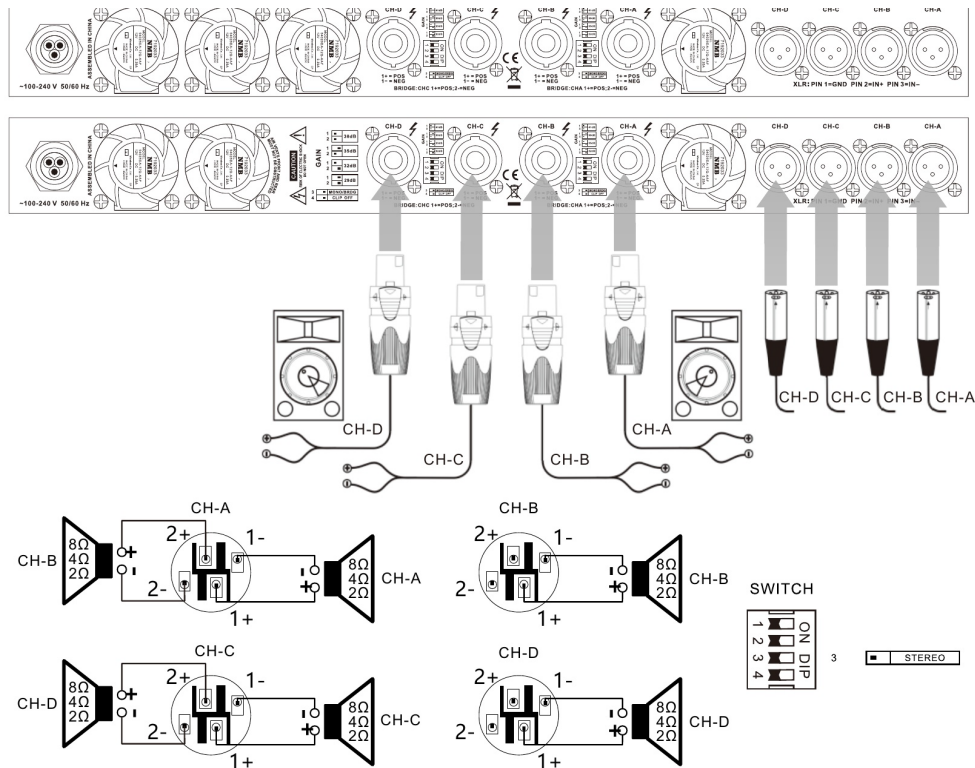


Figure 4. Stereo mode wiring

4.2 Bridge mode

In Bridge (BRDG) mode, a channel pair is combined to drive a single load at a higher voltage swing: the CH-A input drives the bridged CH-A/CH-B output pair, and CH-C drives the CH-C/CH-D pair. Bridge mode requires a minimum 4 Ω load.

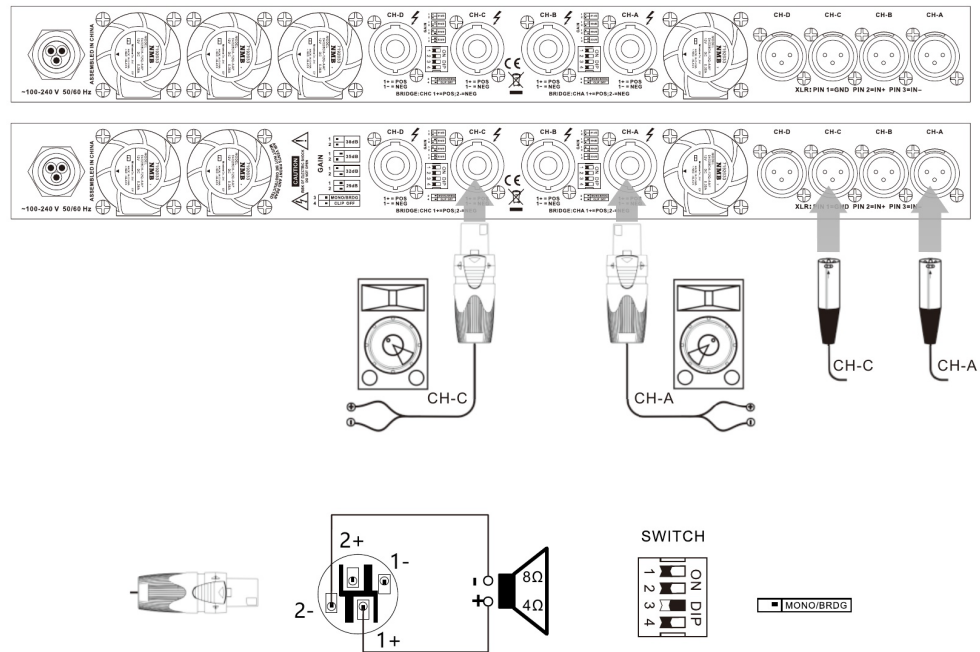


Figure 5. Bridge mode wiring

4.3 Mono mode

In Mono mode, the CH-A input signal is output from both CH-A and CH-B; the CH-C input is output from both CH-C and CH-D — driving two independent loads per input in parallel.

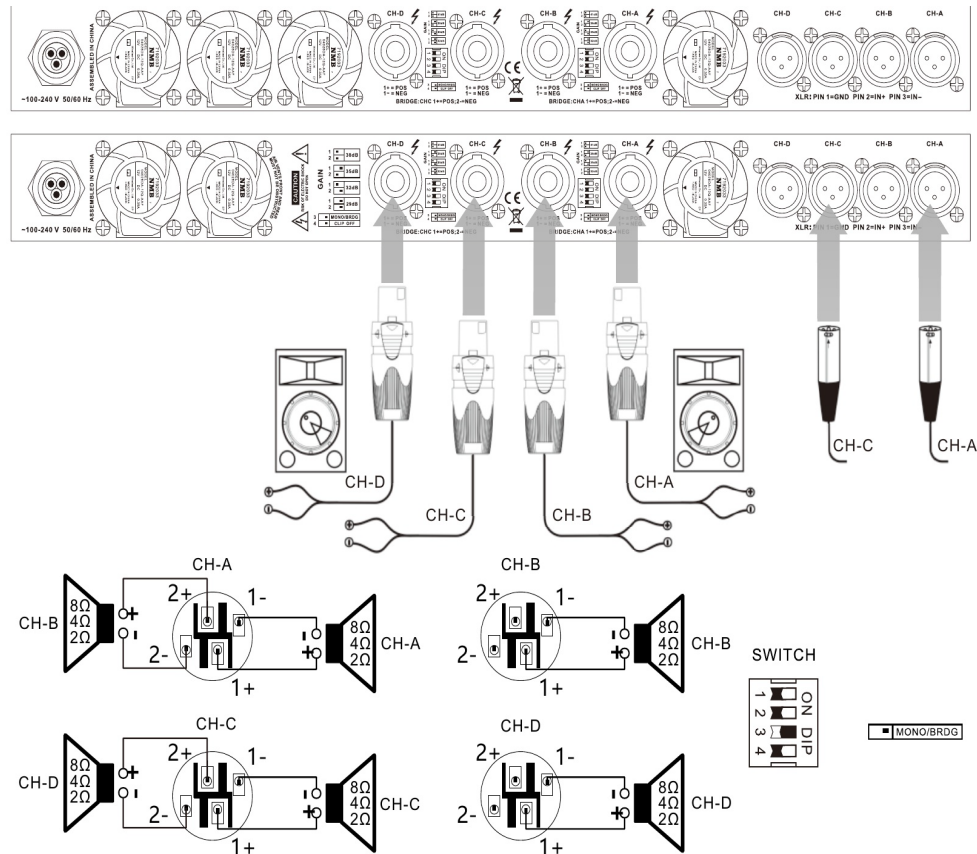


Figure 6. Mono mode wiring

5. Operating Instructions

Before installation, make sure the power cord is not connected to the power outlet, the power switch is off, and the volume control is turned fully down (counter-clockwise to its limit).

5.1 Loudspeaker protection

Clipping not only causes sound distortion but can also damage tweeters. Reduce the input signal to avoid clipping.

A strong sub-bass signal — such as the high-level low-frequency transient produced by dropping a microphone — can burn a loudspeaker. Use one of the following to prevent subsonic signals from reaching the amplifier:

- Install a high-pass filter between the mixer and the amplifier.
- Enable the high-pass filter in the mixer, and set the filter frequency as high as possible without affecting normal use — for example, 35 Hz for music and 75 Hz for microphones.

5.2 Operating precautions

To achieve the best performance and highest safety, please observe the following:

1. Configure the amplifier's input and output wiring correctly before use. Improper wiring may cause abnormal operation — see “Installation” and “Wiring Modes” in this manual.
2. Be careful when connecting cables, selecting the input signal, and setting the output level, to avoid unnecessary trouble.
3. Do not connect the output cable's ground wire to the input signal ground wire — this creates a ground loop and can cause oscillation.
4. Do not connect the output cable to a power supply. This may cause an electric shock.
5. Do not modify the internal circuit without authorization — this is dangerous, and the equipment will no longer be eligible for service.
6. Do not use the amplifier if the SIG LED is continuously flashing yellow.
7. Do not allow the mixer to overload. An overloaded mixer sends clipping signals that the amplifier will faithfully reproduce, which can damage loudspeakers.
8. Do not operate the amplifier below its rated minimum load. Too low a load may trigger output protection, cause premature clipping, and damage loudspeakers.
9. The output terminals may be at a hazardous voltage whenever the amplifier is powered on.

6. Hardware Description

6.1 Front panel

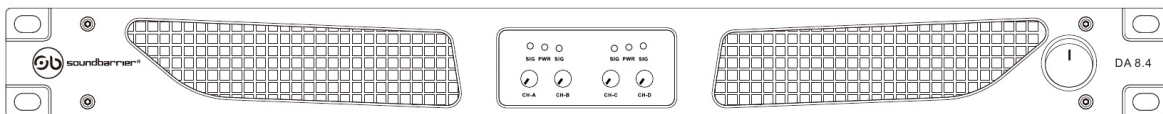


Figure 7. Front panel (DA 8.4 shown; layout is common across the DA Series)

Control	Function
SIG (signal LED)	Green when the input signal exceeds -32 dBu. Yellow when the output signal is distorted by more than 1%, or when the amplifier is compressing. Red when protection is active.
PWR (power LED)	Green when the power switch is on. Yellow when the thermal limiter is active.
Volume	Adjusts the output level of the channel.
Power switch	Turns the amplifier on and off. The unit is on when “I” is pressed down.

6.2 Rear panel

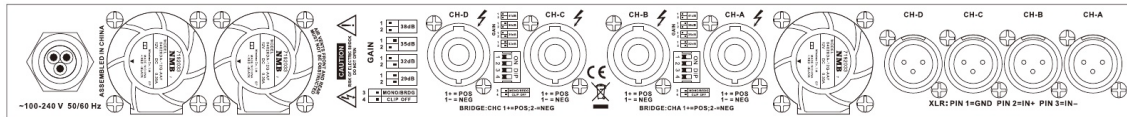


Figure 8. Rear panel (DA 8.4 shown; connector count varies with the channel count of each model)

Connector	Function
Power supply input	IEC-style locking power inlet. DA 7.2 and DA 8.4 use 14 AWG power cord; DA 9.2, DA 15.2, and DA 20.4 use 12 AWG power cord.
Signal input (female XLR)	Balanced audio input.
Signal input (male XLR)	Balanced audio input / loop-through link output.
Gain switch	Sets the amplifier's voltage gain. For example, set to 41 dB for 41 dB of gain, 38 dB for 38 dB, and so on.
Mode switch (STEREO / MONO-BRDG)	STEREO: each channel operates independently. MONO/BRDG: CH-A drives CH-A and CH-B together; CH-C drives CH-C and CH-D together.
CLIP switch	ON enables the clipping limiter; OFF disables it.
Speakon output	Four-pole Speakon speaker connector. In Stereo mode, CH-A/CH-B connect through this socket on pins 1+ and 1-.

7. Gain and Sensitivity

The amplifier's sensitivity can be set with the gain switch on the rear panel to match third-party source equipment. Selectable gain values are 26, 29, 32, 35, 38, and 41 dB.

Input signal reference: 1 kHz sine wave; amplitude values below are RMS, the input level required to reach rated output power at each gain setting.

Gain (dB)	DA 15.2	DA 20.4	DA 9.2	DA 7.2	DA 8.4
29	—	—	—	—	3.17 V
32	4.66 V	3.89 V	3.89 V	3.18 V	2.25 V
35	3.30 V	2.75 V	2.75 V	2.25 V	1.59 V
38	2.33 V	1.95 V	1.95 V	1.59 V	1.13 V
41	1.65 V	1.38 V	1.38 V	1.13 V	—

8. Specifications

8.1 Rated output power

Continuous sine wave power, THD+N = 1%, 1 kHz, one channel driving:

Load / mode	DA 15.2	DA 20.4	DA 9.2	DA 7.2	DA 8.4
8 Ω / Stereo	2 × 4000 W	4 × 3000 W	2 × 3000 W	2 × 2200 W	4 × 1350 W
4 Ω / Stereo	2 × 7500 W	4 × 5000 W	2 × 5000 W	2 × 3500 W	4 × 2000 W
2 Ω / Stereo*	2 × 8500 W	4 × 6500 W	2 × 6500 W	2 × 5000 W	4 × 2800 W
16 Ω / Bridge	1 × 8000 W	2 × 6000 W	1 × 6000 W	1 × 4500 W	2 × 2500 W
8 Ω / Bridge	1 × 15000 W	2 × 10000 W	2 × 10000 W	1 × 7000 W	2 × 4000 W
4 Ω / Bridge*	1 × 18000 W	2 × 13000 W	2 × 13000 W	1 × 9000 W	2 × 5500 W

* Test condition: 20 ms burst, 1 kHz, THD+N = 1%.

8.2 General specifications

Parameter	Specification
Output RMS voltage	DA 15.2: 178.9 V DA 20.4 / DA 9.2: 154.8 V DA 7.2: 132.5 V DA 8.4: 103.9 V
Gain (rated power, 1 kHz)	DA 15.2 / DA 20.4 / DA 9.2 / DA 7.2: 41 / 38 / 35 / 32 dB, selectable. DA 8.4: 38 / 35 / 32 / 29 dB, selectable.
THD+N (10% rated power, typical)	0.01% (8 Ω)
Cross-talk	≥ 90 dB (20 Hz – 1 kHz, below rated power)
Frequency response	Typical +0 / –0.5 dB (10% rated power, 20 Hz – 20 kHz, 8 Ω)
Input impedance	20 k Ω (balanced), 10 k Ω (unbalanced)
Damping factor	Typical 5000 (8 Ω , 20 Hz – 200 Hz)
Signal-to-noise ratio	≥ 105 dB (A-weighted, 20 Hz – 20 kHz, 8 Ω)
Mains power	100–240 VAC (±10%), 50/60 Hz
Protection	Under-voltage, DC output, over-temperature; limiter: over-temperature, overload, short circuit.
Size, W × H × D — DA 15.2 / DA 20.4 / DA 9.2	483 × 45 × 465 mm
Size, W × H × D — DA 7.2 / DA 8.4	483 × 45 × 370 mm
Net weight — DA 15.2 / DA 20.4 / DA 9.2	13 kg
Net weight — DA 7.2 / DA 8.4	9.5 kg

9. Power Consumption and Heat

Test signal: pink noise, bandwidth limited from 22 Hz to 22 kHz. 1/8-power figures are typical of program material with occasional clipping and apply to most applications; 1/3-power figures represent program material with extremely heavy clipping.

9.1 2 × 4000 W class

Load	220 V (A)	110 V (A)	In (W)	Out (W)	Dissipated (W)	Btu/h	kcal/h
Standby	0.7	1.4	150.0	0.0	150.0	511.9	129.0
1/8 power, 8 Ω/ch	6.2	12.3	1354.8	1000.0	354.8	1210.9	305.1
1/8 power, 4 Ω/ch	9.5	18.9	2081.8	1700.0	381.8	1303.0	328.4
1/3 power, 8 Ω/ch	13.9	27.7	3048.6	2666.7	381.9	1303.3	328.4
1/3 power, 4 Ω/ch	24.1	48.2	5301.5	4533.3	768.2	2621.6	660.6

9.2 2 × 3000 W class

Load	220 V (A)	110 V (A)	In (W)	Out (W)	Dissipated (W)	Btu/h	kcal/h
Standby	0.6	1.2	130.0	0.0	130.0	443.7	111.8
1/8 power, 8 Ω/ch	4.7	9.5	1041.7	750.0	291.7	995.4	250.8
1/8 power, 4 Ω/ch	7.8	15.7	1723.0	1275.0	448.0	1528.8	385.3
1/3 power, 8 Ω/ch	11.2	22.4	2469.1	2000.0	469.1	1601.0	403.5
1/3 power, 4 Ω/ch	18.8	37.7	4146.3	3400.0	746.3	2547.0	641.9

9.3 2 × 2000 W class

Load	220 V (A)	110 V (A)	In (W)	Out (W)	Dissipated (W)	Btu/h	kcal/h
Standby	0.5	1.0	110.0	0.0	110.0	375.4	94.6
1/8 power, 8 Ω/ch	3.2	6.3	694.4	500.0	194.4	663.6	167.2
1/8 power, 4 Ω/ch	5.2	10.4	1148.6	850.0	298.6	1019.2	256.8
1/3 power, 8 Ω/ch	7.5	15.0	1646.1	1333.3	312.8	1067.3	269.0
1/3 power, 4 Ω/ch	12.6	25.1	2764.2	2266.7	497.6	1698.0	427.9

9.4 4 × 2500 W class

Load	220 V (A)	110 V (A)	In (W)	Out (W)	Dissipated (W)	Btu/h	kcal/h
Standby	0.7	1.5	160.0	0.0	160.0	546.0	137.6
1/8 power, 8 Ω/ch	8.6	17.2	1896.1	1250.0	291.7	2205.0	555.7
1/8 power, 4 Ω/ch	13.8	27.6	3031.6	2125.0	448.0	3094.0	779.7
1/3 power, 8 Ω/ch	19.4	38.9	4275.2	3333.3	469.1	3214.4	810.0
1/3 power, 4 Ω/ch	32.1	64.3	7070.6	5666.7	746.3	4791.1	1207.4

9.5 4 × 1350 W class

Load	220 V (A)	110 V (A)	In (W)	Out (W)	Dissipated (W)	Btu/h	kcal/h
Standby	0.7	1.5	160.0	0.0	160.0	546.0	137.6
1/8 power, 8 Ω/ch	3.2	6.3	694.4	500.0	194.4	663.6	167.2
1/8 power, 4 Ω/ch	5.2	10.4	1148.6	850.0	298.6	1019.2	256.8
1/3 power, 8 Ω/ch	7.5	15.0	1646.1	1333.3	312.8	1067.3	269.0
1/3 power, 4 Ω/ch	12.6	25.1	2764.2	2266.7	497.6	1698.0	427.9

1 W = 0.860 kcal/h; 1 Btu = 0.252 kcal.

10. Troubleshooting

The following table lists the main causes of abnormal operation, along with the corresponding protection-circuit behavior and recommended treatment.

Fault state	Cause	Treatment
PWR LED is not lit	Not connected to AC power.	Check the AC line and connections.
PWR LED is not lit	Power switch is off.	Turn on the power switch.
PWR LED is yellow	Amplifier is overheating.	Check that the rear-panel fans are running and that airflow around the amplifier is unobstructed.
SIG LED is yellow	Input signal is too large.	Reduce the input signal level.
SIG LED on all channels stays yellow	Total output power is overloaded.	Check the load. Minimum load is 2 Ω for Stereo and Mono, 4 Ω for Bridge.
SIG LED on all channels is red	Amplifier is outputting DC.	Consult technical support.
Output produces continuous clicks	Connection is faulty or shorted.	Check all connections.

11. Maintenance and Packing

11.1 Maintenance

The internal circuitry of this equipment is complex and should only be serviced by trained professional technicians. If a failure occurs, contact our technical support team.

When the equipment is sent in for service, fill in the “Maintenance Information Card” and ship it together with the equipment.

Do not ship accessories such as power cords or manuals with the unit — they are not required for service and we are not responsible for them.

Provide adequate protection for the equipment during shipment; we recommend using the original packaging.

11.2 Packing directions

1. Fill out the “Maintenance Information Card” included at the back of this manual.
2. Do not ship the unit with any accessories, such as cables, hardware, or the manual — they are not required for repair and we are not responsible for them.
3. Fully protect the product during transport. We recommend shipping in the original packaging.
4. If you must use your own packaging, it should meet the following minimum requirements:
 - a. Use double-layer cartons rated to a 275 PSI burst test ($1 \text{ kg/cm}^2 \approx 14.5 \text{ PSI}$), with 8 cm of solid foam padding on all six sides.
 - b. Use enough sealing tape to properly seal the carton.
 - c. Do not use thin, weak carton stock — damage caused by inadequate packaging is not covered by warranty.

12. Warranty

12.1 Warranty Coverage & Registrations

This product includes a 1-year standard limited warranty, extended to 3 years total at no additional cost when the product is registered within 90 days of purchase. Proof of purchase is required. Statutory consumer rights are not affected.

Register your product at soundbarrier.com/warranty. For complete warranty details, please visit <http://www.soundbarrier.com/warranty>.



www.soundbarrier.com