



DATEQ DDA-2300 Class-D Power Amplifier Instruction Manual

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DATEQ DDA-2300 Class-D Power Amplifier



Product Information:

The DDA-2300 DDA-4300 Class-D Power Amplifier is a device used to amplify audio signals and provide power to speakers. It can be used in stereo mode, parallel mode, or bridge mode depending on the user's needs. It has a selector switch that allows each side of the amplifier to be operated as an independent pair of channels or as a single combined output in Bridge mode. Bridge mode offers the option of operating the DDA-4300 as a stereo amplifier into 2 larger 8 speakers. The amplifier has cooling vents at the front and rear that should not be covered or obstructed in any way with adequate space for air-flow through the unit.

Product Usage Instructions

1. Read and keep the safety instructions provided in the user manual.
2. Check the mains supply voltage before operating the amplifier and connect the IEC inlet to the mains power supply using the power lead supplied (or equivalent).
3. Ensure that the cooling vents at the front and rear are not covered or obstructed in any way with adequate space for air-flow through the unit.
4. Set the amplifier to the desired mode using the selector switch for the relevant pair of channels (rear panel 7).
5. In stereo mode, connect left and right speakers to Channel 1 and Channel 2 outputs via the SPK (rear panel 2, 3). Connect line level left and right inputs to the CH1 and CH2 XLR inputs (rear panel 6, 8). Ensure that the combined load on each channel is no lower than 40 (for speakers in parallel, $8 + 8 = 4$).
6. In parallel mode, connect the speakers to the speaker outputs as described above but both outputs will only receive a mono signal from the CH1 XLR input (rear panel 8) and is controlled by CH1 volume control (front panel 1).
7. Before powering down, turn down the volume controls to avoid loud pops or noises through the speaker.

Note: Do not use this device near water. Clean only with a dry cloth. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat. To prevent fire or shock hazard, do not use the plug with an extension cord, receptacle, or other outlet unless the blades can be fully inserted to prevent blade exposure. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Connect the device to a mains outlet with a protective earth connection.

The DDA-2800 DDA-4800 Class-D Power Amplifier is a high-performance audio amplifier that can be used in various settings. Before using the amplifier, it is important to read and follow the safety information provided in the user manual.

Important Safety Information

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this device near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.
9. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
10. Connect the device to a mains outlet with a protective earth connection.

WARNING!

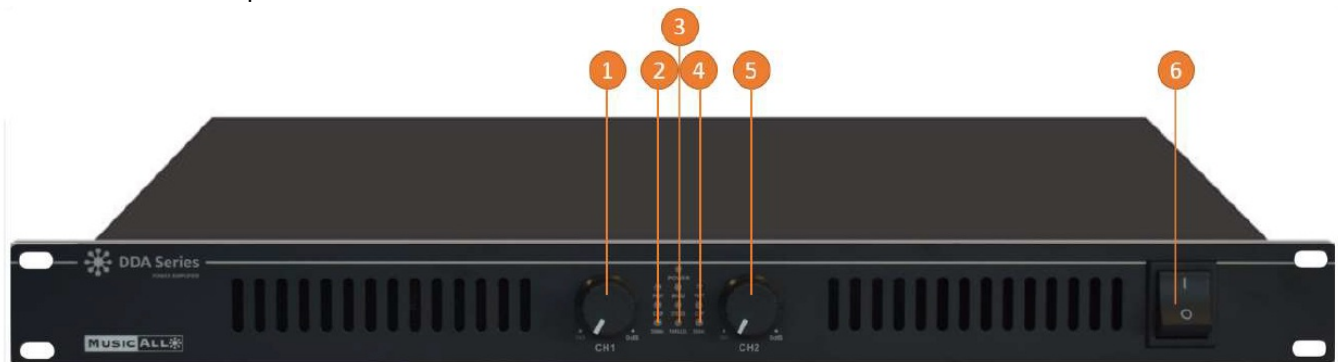
To prevent fire or shock hazard, do not use the plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure. To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture. To prevent electrical shock match wide blade plug to wide slot, fully insert.

Introduction

The front panel of the amplifier includes functional display LEDs for each channel (Fault, Clip, Signal, Active), a power switch, ventilation hole, and volume control for channel A and B (DDA-2800) or channel A, B, C, and D (DDA-4800). The rear panel includes a power cord connector, Speak on output connector, female XLR, mode selector, and link outputs.

Description .

The DDA-x800 series power



r amplifier is designed for pro audio application and fixed installation sound systems. Class-D technology helps the amplifier to generate powerful output while generating less heat because of its high efficiency up to 85%. The power amplifier is designed with a PWM power supply to ensure extreme stability, less noise and minimum heat. Its rated power is 800W@ 8Ω / 1100W@4Ω per channel. Selectable modes stereo, parallel and bridge for flexible usage. With protection including clip, high temp, overload and short circuit to ensure this amplifier works properly under any working environment.

Features

- Switching power technology Class-D power amplifier
- Green technology amplifier of 85% efficiency
- With PWM special power circuit to ensure excellent cooling system
- 19" universal rack mount type in 1.5U height
- Output mode selector with stereo, parallel and bridge setting
- Input by balanced XLR male connector per channel
- Output by balanced Speak on female connector per channel
- Clip, high temp, overload and short circuit protection

Amplifier Operation Guidance

Before operating the DDA-x800 series amplifier, check the mains supply voltage and connect the IEC inlet to the mains power supply using the power lead supplied (or equivalent). Ensure that the cooling vents at front and rear are not covered or obstructed in

any way with adequate space for air-flow through the unit. Leave the switch in OFF position.

Each side of the DDA-4800 series amplifier can be operated as an independent pair of channels or as a single combined output in Bridge mode. Set the mode using the selector switch for the relevant pair of channels (rear panel 8).

Bridge mode offers the option of operating the DDA-4800 as a stereo amplifier into 2 larger 4 speakers. It is also

possible to operate one side in Bridge mode to create 1 high output channel with the other side in stereo, which can be useful to power a large sub and a pair of satellite speakers (left + right).

Stereo Mode: Connect Left and Right speakers to Channel A and Channel B outputs via the SPK (rear panel 6). For SPK wiring, connect + and – wires to pins 1+ and 1-. Ensure that the combined load on each channel is no lower than 4 (DDA4800 minimum 2). Connect line level Left and Right inputs to the CH A and CH B XLR inputs (rear panel 7).

Parallel Mode: Connect the speakers to the speaker outputs as described above but both outputs will only receive a mono signal from the CH A XLR input (rear panel 7) and is controlled by CH A and CH B volume control (front panel 4).

Before powering down, turn down the volume controls to avoid loud pops or noises through the speaker.

Bridge mode

Bridge mode is different to the other two modes in that it combines both output channels to a single mono output. This mode enables double the power to a single speaker output compared with Stereo or Parallel modes. The difference is that the speaker load must be no lower than 8Ω for DDA-2800 and 4Ω for DDA4800, whether a single speaker or combined load. Bridge mode can be useful especially when driving a large, high power subwoofer. Connect speaker(s) to the Channel A SPK output. Connect the “+” speaker wire to amplifier 1+ (rear panel 6) and the “—” speaker wire to amplifier 2- (rear panel 6). Incorrect speaker wiring can damage the amplifier! Bridge output receives a mono signal from CH A XLR input (rear panel 8) and is controlled by CH A and CH B volume control (front panel 4)

Operation

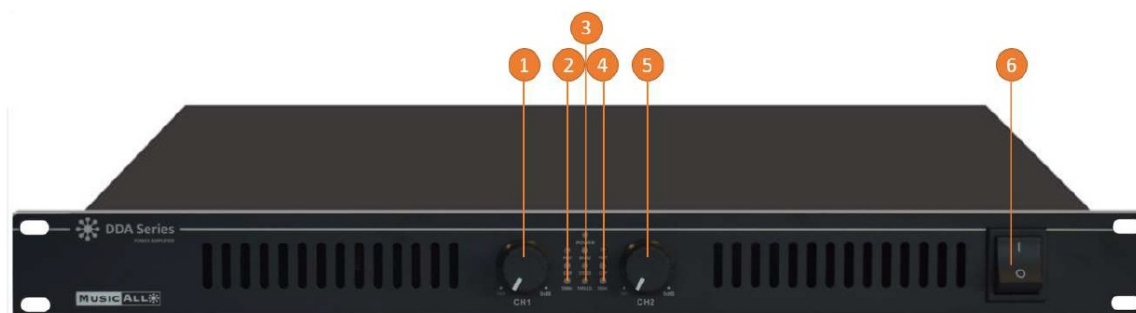
With channel gain controls (front panel 4) turned fully down (anti-clockwise), switch on the power (front panel 2) and the LED POWER indicator will light. Playing the input signal into the connected channel inputs, gradually increase the relevant gain controls (only CH A will have an effect in Bridge mode). The amplified signal should be heard through the speakers and the SIG indicators (front panel 1) should respond to the audio output. Increase the volume controls to the required level. Alongside the SIG indicators are CLIP indicators, which should only light very briefly on the loudest transients or spikes in the audio. If the CLIP LEDs light for more than a fraction of a second at a time, the volume controls should be turned down or input signal will need to be reduced.

Before powering down, turn down the volume controls to avoid loud pops or noises through the speaker.

Parts List

Front Panel

1. CH1 volume knob
2. CH1 protect, clip & signal indicators
3. Power, bridge, stereo & parallel indicators
4. CH2 protect, clip & signal indicators
5. CH2 volume knob
6. AC power switch



Rear Panel

1. AC Power Socket.
2. CH2 speaker output
3. CH1 speaker output

4. CH2 XLR link, balanced
5. CH1 XLR link, balanced
6. CH2 XLR Input, balanced
7. Bridge, stereo & parallel selector
8. CH1 XLR Input, balanced



Male XLR-3P:

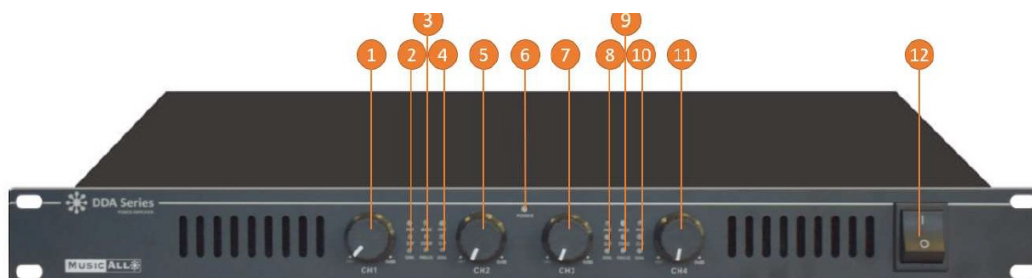
Pin1-Ground

Pin2-Positive signal

Pin3- Negative signal

Front Panel

1. CH1 volume knob
2. CH1 protect, clip & signal indicators
3. Bridge, stereo & parallel indicators
4. CH2 protect, clip & signal indicators
5. CH2 volume knob
6. Power indicator
7. CH3 volume knob
8. CH3 protect, clip & signal indicators
9. Bridge, stereo & parallel indicators
10. CH4 protect, clip & signal indicators
11. CH4 volume knob
12. AC power switch



Rear Panel

1. AC Power Socket.
2. CH4 speaker output
3. CH3 speaker output
4. CH2 speaker output
5. CH1 speaker output

6. CH4 XLR Input. Balanced
7. Bridge, stereo & parallel selector
8. CH3 XLR Input, balanced
9. CH2 XLR Input, balanced
10. Bridge, stereo & parallel selector
11. CH1 XLR Input, balanced



Male XLR-3P:
Pin1-Ground
Pin2-Positive signal
Pin3- Negative signal


Specification

Model			DDA-2300	DDA-4300
Description	Power Amplifier			
Rated Output 4Ω			2×500W	4×500W
Rated Output 8Ω			2×300W	4×300W
Bridge Out 4Ω			1×900W	2×900W
Bridge Out 8Ω			1×500W	2×500W
Frequency Response	20Hz~20KHz			
THD	<0.3%			
S/N Ratio	>105dB			
Input Impedance	20KΩ (bal.), 10KΩ (unbal.)			
Crosstalk	>75dB			
Connector	Input by XLR, 1V, 20KΩ (bal.), 10KΩ (unbal.)			
Power Supply	AC 100~240V, 50/60Hz			
Dimension	484×375×44mm			
Net Weight			2.8kg	5.5kg

Troubleshooting

No power light on front panel switch	Ensure IEC inlet is connected to mains and lead is in good condition
	Ensure mains outlet is switched on
Power light is on but no other LEDs and no output	Check input signal and connection leads
	Ensure channel gain controls are not turned fully down
Power light and Signal LEDs are lit but no output	Check speaker leads are in good condition and connected properly
	If speakers/leads OK, switch off again and refer to qualified service personnel
	Check speakers are in good working order and not shorted (use a multi-tester)
Case getting hot	Ensure cooling vents are clear and fan is working (refer to technician if not)
Output is very distorted and CLIP LEDs are lighting	Check the speaker impedance is not below the rated Ohms
	Turn down the input level from audio source
	Turn down channel gain controls
Output is working but at very low level	Ensure input source is at line level
	Increase input level from audio source
	Turn up channel gain controls

Documents / Resources

	<p>DATEQ DDA-2300 Class-D Power Amplifier [pdf] Instruction Manual DA-2300, DDA-2300, DDA-4300, DDA-2300 Class-D Power Amplifier, Class-D Power Amplifier, Power Amplifier, Amplifier</p>
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