

PULSE



19" 1U POWER AMPLIFIERS - CLASS D

Models: PLA2180D 2 x 180W

PLA2350D 2 x 350W

PLA2500D 2 x 500W

Introduction

Thank you for choosing the Pulse PLA-D 1U class-D power amplifiers as part of your sound reinforcement system. These high output amplifiers are designed to offer high quality, dependable service for mobile and installed systems. Please read this manual fully and follow the instructions to achieve the best results with your new purchase and to avoid damage through misuse.

Warning

To prevent the risk of fire or electric shock, do not expose any of the components to rain or moisture. If liquids are spilled on the casing, stop using immediately, allow unit to dry out and have checked by qualified personnel before further use. Avoid impact, extreme pressure or heavy vibration to the case. No user serviceable parts inside – Do not open the case – refer all servicing to qualified service personnel.

Safety

- Check for correct mains voltage and condition of IEC lead before connecting to power outlet
- Ensure speaker leads are good condition with no short connections or damaged plugs
- Check impedance of speaker loads do not exceed the minimum stated load for the amplifier
- Do not allow any foreign objects to enter the case or through the ventilation grilles

Installation

- Keep out of direct sunlight and away from heat sources, damp or dusty environments
- When rack-mounting, ensure adequate support for the base of the amplifier and firm fixings for the front
- Ensure adequate air-flow and do not cover cooling vents at the front and rear of the amplifier
- Ensure adequate access to controls and connections

Maintenance

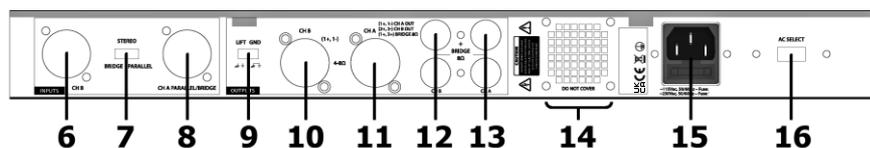
- Use a soft cloth with a neutral detergent to clean the casing as required
- Use a vacuum cleaner to clear ventilation grilles of any dust or debris build-ups
- Do not use strong solvents for cleaning the unit

Front Panel



1. Power on/off switch
2. Cooling vent
3. Channel A gain control
4. LED indicators
5. Channel B gain control

Rear Panel



6. Channel B input
7. Mode switch
8. Channel A input
9. Ground lift switch
10. Channel B SPK output
11. Channel A SPK output
12. Channel B 4mm output
13. Channel A 4mm output
14. Cooling vent
15. IEC mains inlet & fuse
16. Mains voltage selector

Modes

Before operating the PLA-D series amplifier, check the mains supply voltage and move the voltage selector (16) to the correct supply voltage (115 or 230Vac) if necessary, before connecting the IEC inlet (15) to the mains power supply using the power lead supplied (or equivalent).

Ensure that the cooling vents at front and rear (2, 14) are not covered or obstructed in any way with adequate space for airflow through the unit.

The Pulse PLA-D 1U series amplifiers are capable of driving speakers in 3 modes, set by the Mode selector (7)

Stereo mode

Connect Left and Right speakers to **Channel A** and **Channel B** outputs via the SPK (10,11) or 4mm binding post connectors (12, 13)

For SPK wiring, connect **+** and **-** wires to pins **1+** and **1-**, for 4mm posts, wire **+** to red and **-** to black. Ensure that the combined load on each channel is no lower than 4Ω (for speakers in parallel, $8\Omega + 8\Omega = 4\Omega$)

Connect line level Left and Right inputs to the **CH A** and **CH B** combo inputs via 6.3mm jack or XLR (6, 8)

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** combo input (6) and is controlled by **CH A** volume control (3)

Bridge mode

Bridge mode is different to the other 2 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 , 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 or 4mm binding posts.

For SPK wiring, connect the **+** wire to **1+** and the **-** wire to **2+**.

For 4mm binding posts, connect the **+** wire to **CH A+** and the **-** wire to **CH B+**.

Note: For reference, this wiring is printed on the rear panel. Incorrect speaker wiring can damage the amplifier!

Bridge output receives a mono signal from **CH A** combo input (6) and is controlled by **CH A** volume control (3)

Ground Lift

In normal circumstances, the signal Ground connection is connected to the EARTH of the mains supply. This helps to screen out noise and interference caused by RF emissions and nearby equipment.

Normally, the Ground Lift slider switch (9) will be set to the "GND" setting, where Ground is linked to EARTH.

Occasionally, the mains EARTH can be noisy and, in these circumstances, it may be preferred to isolate the signal Ground from the mains EARTH connection. Moving the Ground Lift slide switch to the left "LIFT" setting disconnects signal Ground from EARTH can help to remove noise generated in the mains EARTH.

Operation

With CH A and CH B volume controls (3, 5) turned fully down (anti-clockwise), switch on the power (1) and the LED POWER indicator will light (4)

Playing the input signal into CHA input (and CH B if in stereo mode), gradually increase the CHA and CHB volume controls (only CHA will have an effect in Bridge mode). The amplified signal should be heard through the speakers and the SIG indicators (4) 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.

Specifications

	PLA2180D	PLA2350D	PLA2500D
Power supply	115/230Vac 50/60Hz (IEC)		
Fuse	T5AL (~230V) T10AL (~115V)	T6.3AL (~230V) T12AL (~115V)	
Power RMS @ 8Ω	2 x 100W	2 x 200W	2 x 300W
Power RMS @ 4Ω	2 x 180W	2 x 360W	2 x 540W
Power RMS Bridged @ 8Ω	2 x 350W	1 x 720W	1 x 1080W
Input connections	Combo jack/XLR balanced (L+R)		
Output connections	SPK (L+R) + 4mm binding posts (L+R)		
Frequency response	20Hz - 20kHz (±0.5dB)		
THD +N	<0.05%		
Damping factor	300		
S/N ratio (A weighted) : line	100dB		
Slew rate	20V/us		
Input impedance	10k Ohms unbalanced, 20k Ohms balanced		
Output circuit architecture	Class D		
Protection	Temperature, short circuit, DC, overload		
Indicators	Power, signal, clip		
Controls	L+R level, power on/off, bridge/parallel/stereo, ground lift		
Dimensions	482 x 180 x 44mm		
Weight	2.4kg	2.6kg	2.8kg



INFORMATION ON WASTE DISPOSAL FOR CONSUMERS OF ELECTRICAL & ELECTRONIC EQUIPMENT.

When this product has reached the end of its life it must be treated as Waste Electrical & Electronic Equipment (WEEE). Any WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used. Contact your local authority for details of recycling schemes in your area.



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