OSD Audio PAM-1270

OSD Audio PAM-1270 Multi-Zone Amplifier Instruction Manual

Model: PAM-1270

Introduction

The OSD Audio PAM-1270 is a versatile 6-zone, 12-channel multi-combination amplifier designed for distributed audio systems. It delivers 60 Watts per channel and supports commercial 70V/100V or standard 8 Ohm speaker configurations. This manual provides essential information for the proper installation, operation, and maintenance of your PAM-1270 amplifier.

Key Features

- Independently switchable on each zone between zone-specific stereo inputs and a mono global audio balanced input.
- Each zone is independently Stereo/Bridge switchable to select a single mono output for single speaker use or higher output power.
- Each zone is independently controllable via RS232, IR, and voltage trigger lines.
- Each zone has a -20dB Limiter and independent MUTE trigger inputs (activated by +3 to +30V DC).
- Each zone provides individual Trigger Outputs (+12V DC) to indicate the status of each zone.
- The unit features front panel "zone on" and "zone overload" indicators.
- Master Global Trigger In (+3 to +30V DC) and Trigger Out (+12V DC).
- Detachable screw-terminal connectors for Global Balanced Audio Input/Output, IR, Sense, and Speaker Outputs.

Image: Detailed list of features for the PAM-1270 amplifier.

Setup

Physical Installation

The PAM-1270 amplifier is designed for installation in standard 19-inch equipment racks or for placement on flat, horizontal surfaces. Ensure adequate ventilation around the unit to prevent overheating.

Rear Panel Connections Overview

Image: The rear panel of the OSD Audio PAM-1270 amplifier, illustrating all connection points for audio inputs, speaker outputs, and control interfaces.

Audio Input Connections

The amplifier features both balanced and unbalanced inputs for flexible integration into various audio systems. Each zone has dedicated stereo RCA 'Line In' inputs. Additionally, a global 'Audio Bus' input allows a single source to be distributed across multiple zones.

- **Line In (RCA):** Connect your stereo audio sources (e.g., CD player, streamer) to the corresponding 'Line In' jacks for each zone.
- **Audio Bus:** Use the screw-terminal connector for the global balanced audio input. This input can feed all zones simultaneously.

Speaker Output Connections

The PAM-1270 supports 8 Ohm, 70V, and 100V speaker systems. Use the appropriate screw-terminal connectors for your speaker type. Ensure correct polarity when connecting speakers.

- **8 Ohm Speakers:** Connect standard 8 Ohm speakers to the designated terminals.
- **70V/100V Commercial Speakers:** Connect commercial constant voltage speakers to the 70V or 100V terminals as required.
- **Stereo/Bridged Mono:** Each zone can be configured for stereo operation or bridged mono for higher power output to

a single speaker. Refer to the switch located near the speaker terminals for selection.

Control Connections (RS232, IR, Trigger Lines)

The amplifier offers advanced control options for integration into automated systems.

Image: A close-up view of the RS232, IR, and Voltage Trigger Line connection points on the PAM-1270 rear panel.

- **RS232:** Connect an RS232 controller for advanced programming and control. A dedicated RS232 Commands and Queries Guide is available for programming.
- **IR Remote:** The unit includes a remote control. Each stereo zone/bridged mono features a connector for IR In, Ground, Mute, and Status Port, allowing for universal remote control integration.
- **Voltage Trigger Lines:** Utilize the Master Global Trigger In (+3 to +30V DC) and Trigger Out (+12V DC) for synchronized power on/off with other components. Individual Line/Bus Trigger inputs are also available per stereo zone/bridged mono.

Operating Instructions

Powering On/Off

Connect the power cord to the amplifier and a suitable AC outlet. Use the power switch on the rear panel to turn the unit on or off. The front panel indicators will illuminate upon power-on.

Zone Selection and Control

Each of the six zones can be controlled independently. Use the input selection switches on the rear panel to choose between the zone's dedicated 'Line In' or the global 'Audio Bus' input. Volume for each zone can be adjusted via the remote control or integrated control systems.

Stereo/Bridge Mode

For each zone, a switch allows you to select between stereo output (two channels) or bridged mono output (one channel with higher power). Ensure this switch is set correctly for your speaker configuration before connecting speakers.

Limiter and Mute Functions

The PAM-1270 includes a -20dB limiter per zone to prevent signal clipping and speaker damage. Mute functions can be activated via trigger inputs, providing quick audio control for specific zones.

Remote Control Usage

The included IR remote control allows for basic functions such as volume adjustment and zone control. For advanced integration, refer to the RS232 and IR codes documentation.

Maintenance

To ensure the longevity and optimal performance of your PAM-1270 amplifier, follow these maintenance guidelines:

- **Cleaning:** Disconnect power before cleaning. Use a soft, dry cloth to wipe the exterior. Avoid abrasive cleaners or solvents.
- **Ventilation:** Ensure that the amplifier's ventilation openings are not blocked. Proper airflow is crucial to prevent overheating.
- **Connections:** Periodically check all audio and power connections to ensure they are secure.

Troubleshooting

If you encounter issues with your PAM-1270 amplifier, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No power	Power cord disconnected; power switch off; blown fuse	Check power cord connection; ensure power switch is ON; inspect and replace fuse if necessary (refer to specifications for fuse type).
No sound from a zone	Incorrect input selection; speaker wires disconnected; zone muted; volume too low	Verify input source selection; check speaker connections; ensure zone is not muted; increase volume.
Distorted sound	Input signal too high; speaker impedance mismatch; faulty speaker	Reduce input signal level; ensure correct speaker impedance (8 Ohm, 70V, or 100V); test with a different speaker.
Unit overheating	Blocked ventilation; excessive load	Ensure proper airflow around the unit; reduce load or check speaker connections for shorts.

Specifications

The following are the technical specifications for the OSD Audio PAM-1270 amplifier:

- **Continuous Output Power:** 30W per channel 8 ohms at 1kHz THD 0.1%
- **Continuous Output Power:** 50W per channel 4 ohms at 1kHz THD 0.1%
- **Bridged Output Power:** 100W Bridged 8 ohms at 1kHz THD 0.1%
- **Commercial Output Power:** 30W per channel 70V/100V at 1kHz THD 0.1%
- **Technology:** 85% Class D technology
- **Total Harmonic Distortion:** 0.1% @ 10W
- **Signal-to-Noise Ratio:** 90dB A-Weighted 1Kz
- **Channel Separation:** 65dB 1Kz

- **Frequency Response:** 20Hz to 20kHz +/-1Db
- **Input Sensitivity:** 600mV @ 30W
- **Tone Control:** Bass 100Hz +/-12Db, Treble 10KHz +/-12Db
- **Global Audio Balanced Input Impedance:** 600 Ohms
- **Line Input Impedance:** 47 k-Ohm
- **Rack Mounting Requirements:** 19 inch rack width, 2U rack height
- **Power Requirements:** 115VAC 60Hz 10A / 230VAC 50Hz 5A
- **Dimensions (W x H x D):** 430mm x 88mm x 416mm (17 x 3.5 x 16.5 inches)
- **Weight:** 22 Kg (48.4 lbs) / Item Weight: 1.71 ounces (Note: Item Weight of 1.71 ounces appears to be an error in source data, 22 Kg is more accurate for an amplifier of this type.)

Image: Detailed technical specifications for the PAM-1270 amplifier.

Warranty Information

For detailed warranty terms and conditions, please refer to the warranty card included with your product or contact OSD Audio customer support directly. Keep your proof of purchase for warranty claims.

Customer Support

If you require further assistance, technical support, or have questions regarding your OSD Audio PAM-1270 amplifier, please contact OSD Audio customer support. Visit the official OSD Audio website for contact information and additional resources.

OSD Audio Website: www.osdaudio.com