TRIAD INSTALLATION GUIDE - 1-ZONE HIGH-POWER AMPLIFIER

INTRODUCTION

The Triad 1-Zone High-Power Amplifer delivers high-performance, reliability, and robust amplification in a compact form factor—providing the perfect solution for distributed audio systems. Fast wake-from-standby time and high-resolution audio quality output make this amplifier worthy of any audio solution. Seamless integration with the Triad Audio Matrix Switches and other Triad Power Amplifiers provides you with an easily configurable, fully featured audio distribution solution for any size home.

SUPPORTED MODELS

- TS-PAMP1-200 Triad 1-Zone High-Power Amplifier

BOX CONTENTS

- 1-Zone High-Power Amplifier
- IEC power cable
- Phoenix-style speaker connector
- Rack-mount kit (supports mounting 1 or 2 amplifiers)
- Mono 3.5 mm 12V trigger cable

FEATURES

- Powerful, Class-D amplification driven by ICEpower modules delivers a dynamic, high-resolution audio experience
- With a half-rack space form factor, two amplifiers can be mounted side-by-side in a standard equipment rack.
- Fast wake from standby using 12V trigger from Triad Audio Matrix Switches—ideal for time-sensitive audio announcements and quick audio zone turn on
- Standby mode saves energy by muting audio when not in use
- Three power control options—12V trigger, audio sensing, or always on
- Loop output allows you to chain multiple amplifiers together to create large audio zones
- Over-current protection prevents amplifier channels from overloading due to short circuits or incorrect wiring
- Thermal protection shuts down amplifier channels if thermal limits are exceeded, preventing damage

WARNINGS

⚠️ **WARNING!** Do not expose the apparatus to dripping or splashing. Do not place objects filled with liquids near the apparatus.

AVERTISSEMENT ! N'exposez pas l'appareil à l'égoutture ou à l'éclaboussement. Ne placez pas les objets remplis de liquides près de l'appareil.

⚠️ **WARNING!** To reduce the risk of fire or electrical shock, do not expose this apparatus to rain or moisture.

AVERTISSEMENT ! Pour réduire le risque du feu ou de choc électrique, n'exposez pas cet appareil à la pluie ou à l'humidité.

✅ **IMPORTANT!** Using this product in a manner other than outlined in this document voids your warranty. Further, Control4 is NOT liable for any damage incurred with the misuse of this product. See "Warranty."

IMPORTANT ! Employer ce produit en quelque sorte autre que décrit dans ce document vide votre garantie. De plus, Control4 n'est pas responsable d'aucun dommage encouru avec l'abus de ce produit. Voyez que « garantie. »

✅ **IMPORTANT!** Do not defeat the safety purpose of the polarized or grounding-type plug. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

⚠️ **WARNING!** To reduce the risk of fire, do not install this device in a cabinet that is smaller than 20" (50.8 cm) wide × 20" (50.8 cm) deep × 12" (30.5 cm) high. If you do, the device may overheat.

AVERTISSEMENT ! Pour réduire les risques d'incendie, ne pas installer cet appareil dans une armoire qui est plus petit que 20" (50.8 cm) de large × 20" (50.8 cm) de profondeur × 12" (30.5 cm) de haut. Si vous le faites, l'appareil peut surchauffer.
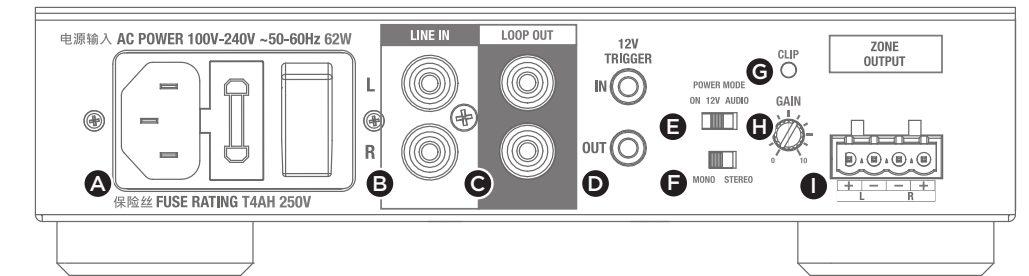
FRONT AND REAR PANEL DESCRIPTIONS

FRONT PANEL 1-ZONE HIGH-POWER AMPLIFIER
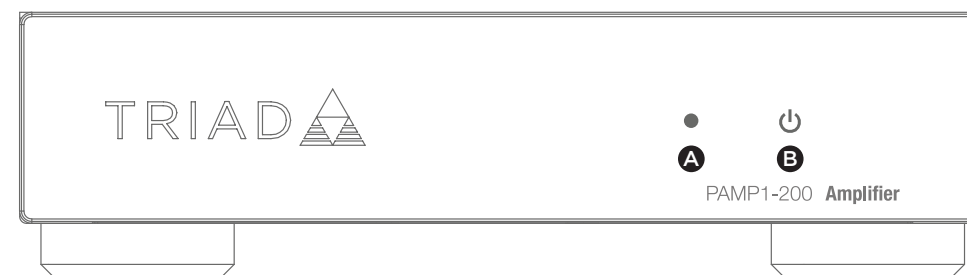
Ⓐ Zone Status LED—Lights blue when an amplifier zone is on, red if in overcurrent protection, and orange if in thermal shutdown

Ⓑ Power LED—Lights blue when amplifier powers on.

BACK PANEL 1-ZONE HIGH-POWER AMPLIFIER

Ⓐ Power connector—Use the supplied power cord to connect power.

Ⓑ LINE IN—RCA connectors for stereo line in.

Ⓒ LOOP OUT—RCA connectors for a line-level stereo audio out. Loops out whatever audio device is plugged into **LINE IN**.

Ⓓ 12V TRIGGER IN/OUT— Trigger input for 12V control of amplifier power. Connects to trigger output of audio matrix or other 12V trigger device. Trigger output can be used to chain 12V control to another amplifier trigger input.

Ⓔ POWER MODE—Set to **ON/12V/AUDIO** to configure the amplifier's power setting.

Ⓕ MONO/STEREO switch—Sets the amplifier in stereo (2 channel) or mono (2 channels mono-summed) mode.

Ⓖ CLIP LED—LED turns red when input gain is too high, causing the amplifier zone to clip. Adjust the **GAIN** down when clipping occurs.

Ⓗ GAIN—Dial is used to adjust input level. The recommended starting gain level is 6.

Ⓘ ZONE OUTPUT—1 zone output using a Phoenix-style connector for speaker wiring connections.

TRIAD▲

INSTALLING THE AMPLIFIER

The 1-Zone High-Power Amplifier comes with rack-mounting hardware and can be installed by itself in a 1U rack space or side-by-side with another 1-Zone High-Power Amplifier in a 1U rack space.

PLANNING FOR PROPER VENTILATION

While the 1-Zone High-Power Amplifier features cool-running Class-D amplification, it still requires adequate ventilation. For optimal performance in a rack, Triad recommends leaving at least 1U open rack space above the amplifier. While it is possible to mount two amplifiers side by side with components directly above and below, this does increase the possibility of the unit overheating, especially if the equipment below it generates substantial heat. If the 1-Zone High-Power Amplifier must be installed between components with no open rack space, place the unit between components that normally run cool. If the amplifier is experiencing thermal shutdown, avoid high volume levels or lower the amplifier's input gain to reduce the possibility of overheating.

⚠ **CAUTION!** To prevent damage, maintain adequate ventilation space to the sides of the amplifier. Do not place the sides of the amplifier next to other components or against a cabinet. Doing so will block ventilation openings.

ATTENTION ! Pour éviter tout dommage, maintenir un espace de ventilation adéquate sur les côtés de l'amplificateur. Les amplificateurs peuvent être empilés verticalement, mais veillez à ne pas placer l'amplificateur à côté d'autres composants ou sur le côté d'une armoire. Cela évitera de bloquer les ouvertures de ventilation.

Installing a single 1-Zone High-Power Amplifier in a rack:

1 Attach one short rack ear and the long rack ear to the sides of the amplifier using the provided screws.
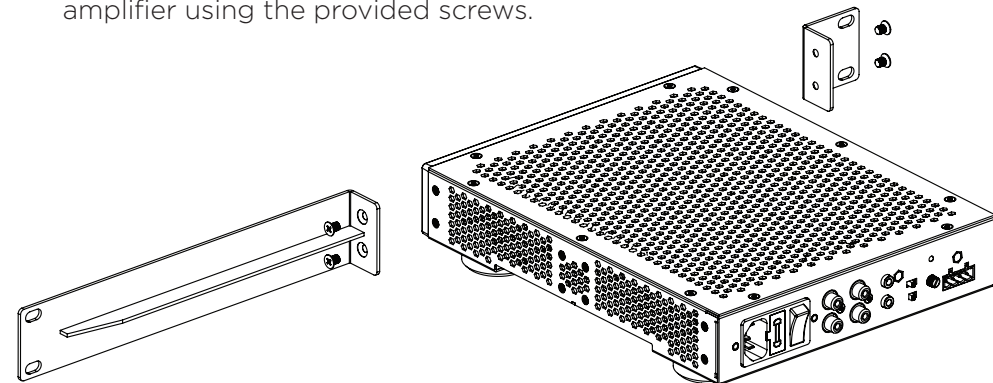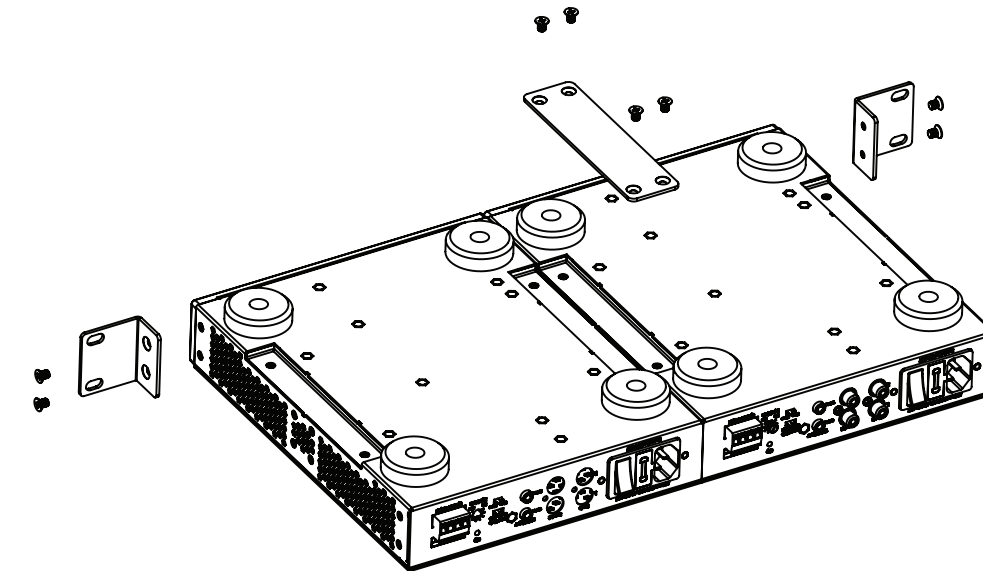

✏ **Note:** Rack ears can be installed to the front or the back of the amplifier as needed. In addition, the long and short rack ears can be swapped, enabling the amplifier to be positioned to the left or the right when mounted in the rack.

2 Install into rack and connect cabling.

Installing two 1-Zone High-Power Amplifiers in a rack:

1 Place the amplifiers side by side. Attach one short rack ear to each amplifier. Attach the joining plate to the bottom of the two amplifiers to connect them together.

✏ **Note:** Rack ears can be installed to the front or the back of the amplifier as needed.

2 Install into rack and connect cabling.

CONNECTING THE AMPLIFIER

This device is designed to operate as part of the Control4® home system which requires physical audio connections and connections in Composer Pro to function as designed. This section describes how to set up the physical connections required for the amplifier and some of the devices associated with it.

⚠ **WARNING!** Connecting speaker wires or input cables while the amplifier is powered may cause electrical shock and could damage the amplifier. Unplug the power cord before making connections.

AVERTISSEMENT ! Les fils se reliants de haut-parleur ou les câbles entrés tandis que l'amplificateur est actionné, peuvent causer le choc et pourraient endommager l'amplificateur. Débranchez le cordon de secteur avant d'établir des rapports.

CONNECTING AUDIO INPUTS

The 1-Zone High-Power Amplifier accepts a mono or stereo line-level audio connection to the input jacks. The input will pass amplified audio to the speaker output.

1 Connect the audio cables to the audio input jack (**LINE IN**).

2 (Optional) Connect an audio cable to the **LOOP OUT** to duplicate the audio source connected to the **LINE IN** and pass that audio to another amplifier.
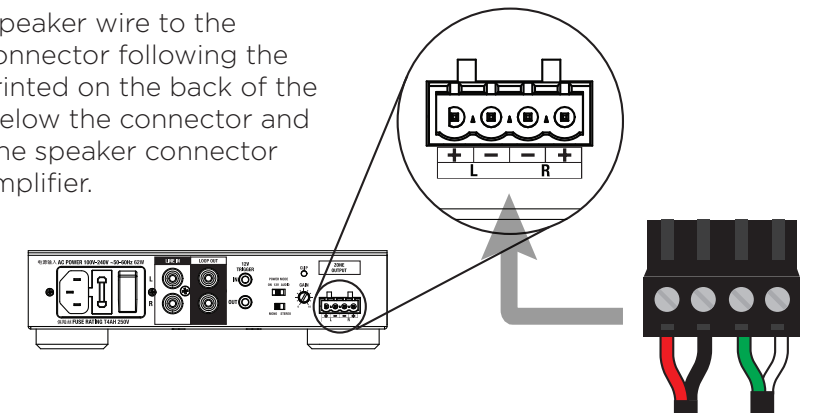
CONNECTING SPEAKERS

The 1-Zone High-Power Amplifier can power one stereo or mono audio zone and has a Phoenix-style terminal block for speaker connections.

☑ **Important!** The speaker/zone output cannot be bridged.

To connect stereo speakers:

1 Move the MONO/STEREO switch to the **STEREO** position.

2 Remove the speaker connector.

3 Use 14-18 gauge stranded loudspeaker wire, and strip away $\frac{1}{4}$ inch of insulation from each conductor.

4 Connect speaker wire to the speaker connector following the polarity printed on the back of the amplifer below the connector and re-insert the speaker connector into the amplifier.

☑ **IMPORTANT!** The common signal of the speaker output must not be connected together or to any other common signal. Do not connect the **L –** and **R –** (negative) terminals together. Doing so will result in a fault condition and the amplifier will either shut down or not work properly.

⚠ **CAUTION!** Check the polarity of the speakers and wires before connecting to the amplifier.

ATTENTION ! Vérifiez la polarité des enceintes et des câbles avant de brancher à l'amplificateur.

In mono mode, both amplifier channels will output the same audio. A stereo source can be connected to the input to create a mono-summed output, or a mono source can be connected to one channel of the input which will drive both speaker outputs with the same mono input signal.

TRIAD⚠

To connect a mono speaker or passive subwoofer:

1 Move the MONO/STEREO switch to the **MONO** position.

2 Remove the speaker connector.

3 Use 14-18 gauge stranded two-conductor loudspeaker wire, and strip away $\frac{1}{4}$ inch of insulation from each conductor.

4 Connect speaker wire to the speaker connector following the polarity printed on the back of the amplifer below the connector and re-insert the speaker connector into the amplifier. The speaker output cannot be bridged.

SETTING UP THE AMPLIFIER POWER MODE

The 1-Zone High-Power Amplifier can be set up to automatically power on when needed. The POWER MODE switch allows the amplifier to be powered on at all times, turned on with a 12V trigger, or turned on when an audio signal is present at the audio input.

To set up the amplifier to be always on:

1 Slide the POWER MODE switch to **ON**.

In this mode, the amplifier will be always on unless the power cord is unplugged or the power switch by the power cord is toggled off.

To set up the amplifier to be controlled by a 12V trigger:

1 Slide the POWER MODE switch to **12V**.

2 Connect the 12V trigger cable from the trigger device to **12V TRIGGER IN**.
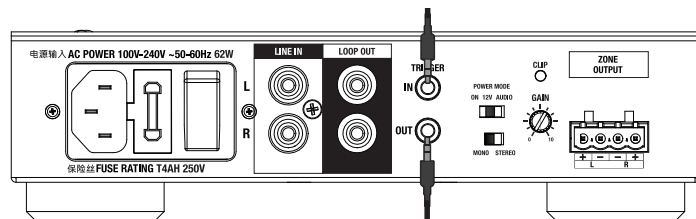
3 (Optional) Connect **12V TRIGGER OUT** to another amplifier to link their power control together.

In this mode, the amplifier will turn on when a 12V signal is present on the 12V Trigger Input jack. This 12V trigger input can be wired to the 12V trigger output of a Triad audio matrix switch or a relay and contact on a Control4 controller. See the Control4 Knowledgebase for more details.

To set up the amplifier to be turned on by the audio sensing:

1 Slide the POWER MODE switch to **AUDIO**.

In this mode, the amplifier will turn on when an audio signal is sensed on the audio input.

TROUBLESHOOTING

RESETTING THE AMPLIFIER

- **Power reset**—Remove the power cord and replace the power cord to power cycle the device.

> **NOTE:** If the amplifier will not turn on, check the Power Mode switch. Try changing the Power Mode switch to **ON**.

LED TROUBLESHOOTING GUIDE

Zone Status LED	Power LED	
	🔵	Amplifier is powered on, in standby
🔵	🔵	Amplifier zone(s) are on
🔴	🔵	Zone(s) are in over-current protection
🟠	🔵	Zone(s) are in thermal shutdown

SPECIFICATIONS

GENERAL

Triad Power Amplifier	TS-PAMP1-200
Audio inputs	1 stereo, RCA style
Global audio output	1 stereo, RCA style
Zone speaker outputs	1 stereo outputs
Mono/Stereo mode	1 × 2-position switch
12V trigger control	1 × 3.5 mm (in) 1 × 3.5 mm (out)
Power mode switch	1 × 3-position switch—always on, 12V, or audio sense
Wake from standby	<2 seconds with 12V trigger ~3 seconds with audio sense
Standby power consumption	Less than 0.50W

RATED WATTAGE

2 channels driven	200W per channel @ 4 Ω 100W per channel @ 8 Ω
1 channel driven	300W @ 4 Ω (**NOTE:** Do not bridge the amplifier.) 150W @ 8 Ω
Minimum impedance	Stable to 2.5 Ω

AUDIO

Frequency response	±0.4 dB, 10 Hz - 20 kHz, all loads
Dynamic range	110 dBA
Idle noise	100uV, A-weighted, 20 Hz - 20 kHz.
Upper bandwidth, -3 dB	> 50 kHz 4 or 8 Ω
Input impedance	47 kΩ, f=1 kHz
THD	0.008%, 4 Ω, f=100 Hz, Po=1W

POWER

AC mains power	Universal mains 100 - 240VAC 50 - 60 Hz
Fuse rating	4A
Power connection	IEC 320 C13 power connector with 3-pole detachable power cord

THERMAL

Operating temperature	32 °F - 113 °F (0 °C - 45 °C)
Humidity	5% to 95% non-condensing
Storage	-4 °F - 158 °F (-20 °C - 70 °C)
Thermal dissipation	Passive cooling, side vented
Thermal dissipation (heat losses)	0.23W / 0.8 BTU/hr, standby 11W / 38 BTU/hr, idle all channels 180W / 615 BTU/hr, max continuous power 550W / 1876 BTU/hr, max peak power

MISCELLANEOUS

Mains switch w/ changeable fuse	Yes
Speaker output	1 × 4-position Phoenix-style connector
Input gain potentiometer	1
Clip Indicator LED	1
H × W × D (with feet)	2.08 × 7.87 × 10.12" (53 × 200 × 257 mm)
H × W × D (without feet)	1.73 × 7.87 × 10.12" (44 × 200 × 257 mm)
Front panel power LED	1 × blue LED
Front panel zone status LED	1 × RGB LED

REGULATORY/SAFETY INFORMATION

To review regulatory information for your particular Triad products, see the information located on the Triad website at triadspkrs.co/reg.

WARRANTY

Limited 2-year Warranty. Go to triadspkrs.co/warranty for details.

TRIAD