AMP-X300

X Series Amplifier

The Crestron® AMP-X300 is a compact, versatile amplifier that can be configured for use on a flat surface or installed in a 1 RU rack space. The supplied joining plates enable two amplifiers to be ganged together in a single rack space.

In the Box

1   AMP-X300, X Series Amplifier

Additional Items

4   Plate, Joining (2055198)
8   Screw, 8-32 x 5/16 in., Flat Head, Phillips, Black (2055195)
4   Screw, 6-32 x 3/8 in., Undercut Head, Phillips (2055196)
4   Foot, Adhesive, Black (2055200)
2   Rack Ear Assembly, 1U, Quarter-width (2055197), includes Bracket, Rack Ear, 1U (2055199)
2   Connector, Speaker (2055206)
4   Connector, Input (2055207)
1   Power cord (2055205)

X Series Amplifier

Assemble

Prepare for Installation

The amplifier can be installed in a rack, mounted on a surface, or placed on a surface.
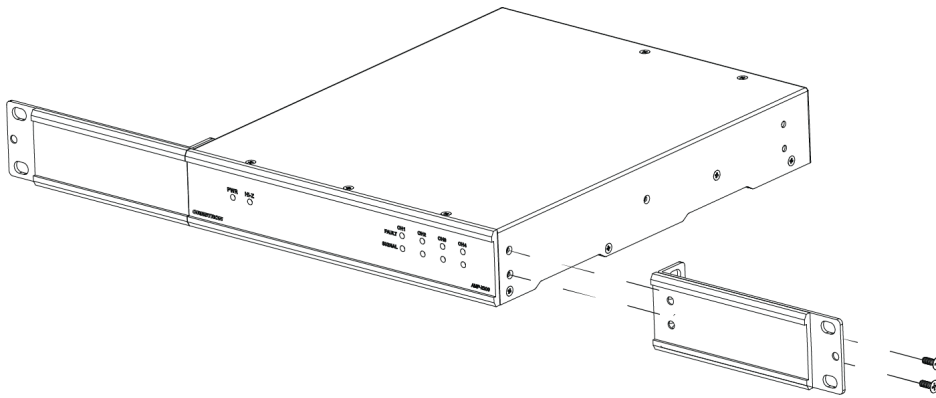
Rack Installation

Before an amplifier can be installed in a rack, rack ears must be attached.

Single Amplifier

Attach the rack ears to the amplifier with the four included 6-32 x 3/8 in. screws.
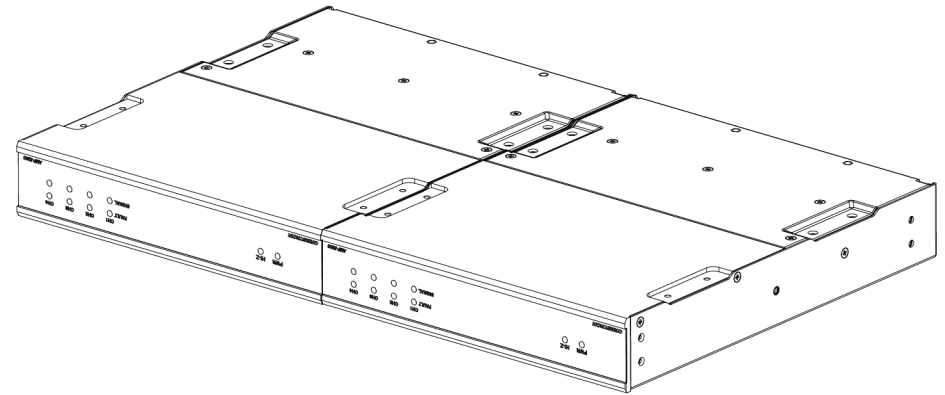
Attach Rack Ear, Single Amp

Ganged Amplifiers

Two amplifiers can be ganged together while occupying only 1 RU of rack space. When ganged together, the amplifier assembly occupies the entire width of the rack.

1. Place amplifiers upside-down and adjacent to each other, on a flat surface.
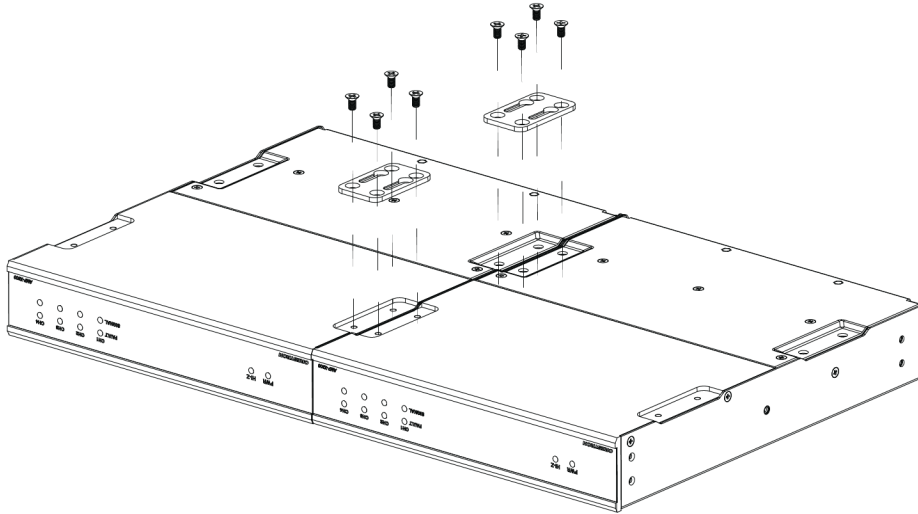
   Position amplifiers together
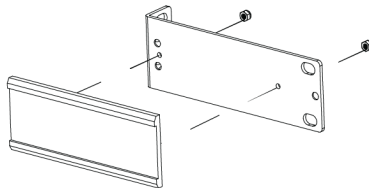
X Series Amplifier

2. Use a Phillips screwdriver to gang the amplifiers together with two of the included joining plates and the eight included 8-32 x 5/16 in. screws.

Attach joining plates

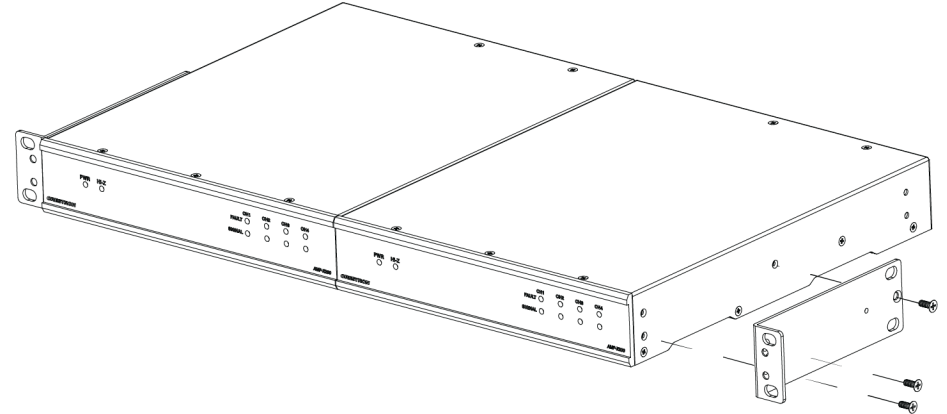3. Use a wrench or M5.5 socket to remove the nuts from the rack ears.

Remove nuts from rack ear

4. Turn over the amplifier assembly and attach the rack ears to each side of each amplifier with six 6-32 x 3/8 in. screws.

Attach Rack Ear, Double Amp

Surface Mount

Use the eight included 8-32 x 5/16 in. screws to attach the four joining plates to the amplifier.

Attach joining plates
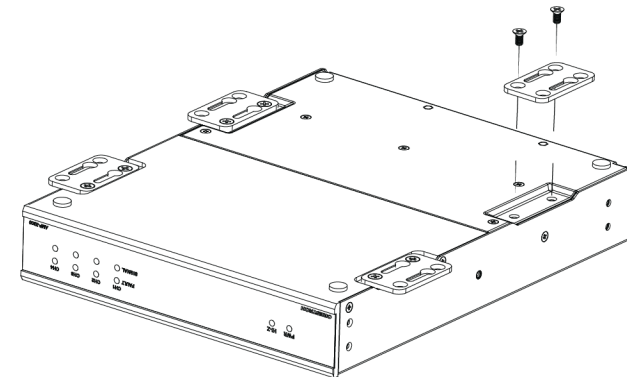
X Series Amplifier

Surface Placement

Attach the four included feet if the amplifier is to be placed on a flat surface.

Mounting Feet

Mounting Feet
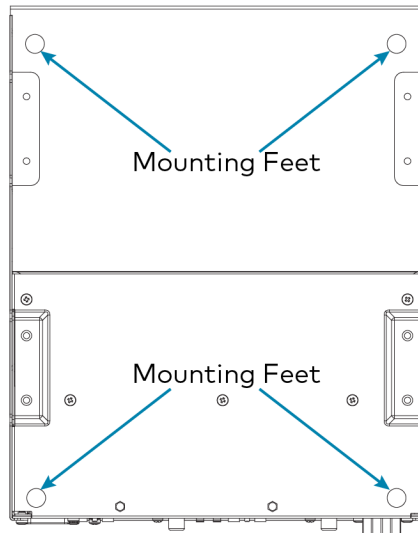
Install

Once assembled, the amplifier can be mounted into a rack, mounted onto a flat surface, or placed onto a flat surface.

Mount into a Rack

Each amplifier occupies 1 RU of rack space. Mount the device with the rack ears attached into the rack using four mounting screws (not included).

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Mount on a Flat Surface

Use #8, flat head screws and appropriate anchors (not supplied) to secure the amplifier to a mounting surface.

Mount on a flat surface

Anchor x4
(not supplied)

#8 screw x4
(not supplied)

Place on a Flat Surface

Place the amplifier on a flat surface.

Connect

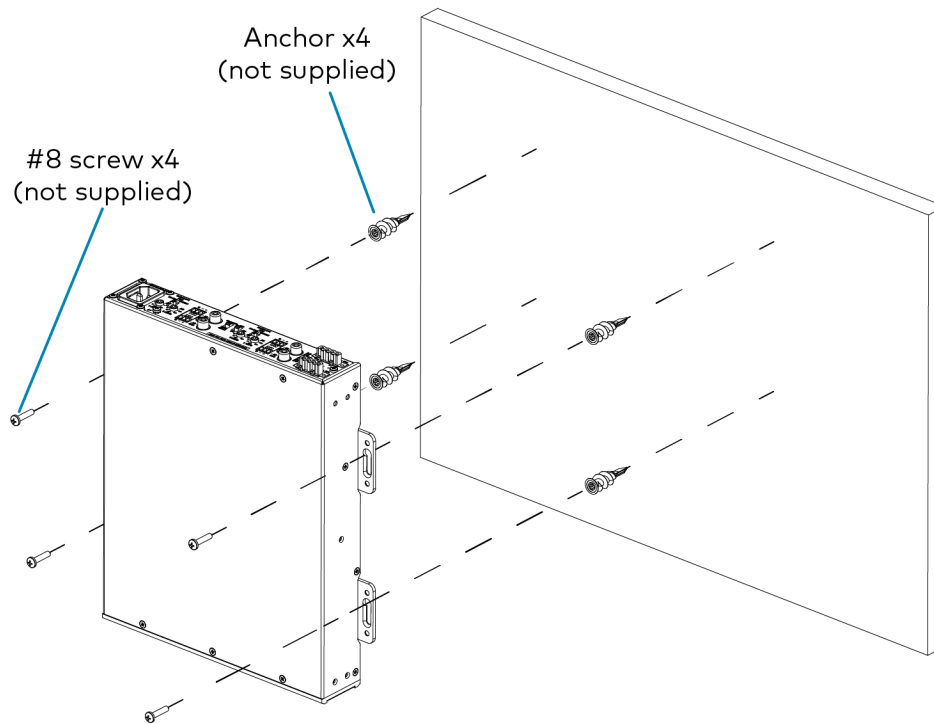Make the necessary connections as called out in the following diagrams. Connect power last.

CAUTIONS:

- Keep the device unplugged until all of the input and speaker wiring is complete.
- Check the speaker wires for shorts and frayed wiring around the speaker output connectors.

NOTES:

- Ensure that the unit is properly grounded by connecting the chassis ground lug to an earth ground (building steel).
- To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications on the product web page .

X Series Amplifier

Audio Inputs Channels 1 & 2

Gain control Channels 1 & 2

Audio Inputs Channels 3 & 4

Ground

Gain control Channels 3 & 4

BRIDGE/Hi-Z USES GAIN 1&3 ONLY

CLASS 2 WIRING
CÂBLAGE DE CLASSE 2

CH1 └─BRIDGE/Hi-Z─┘ CH2
+ − + −
CH3 └─BRIDGE/Hi-Z─┘ CH4

CH1 —IN—
CH2 —IN—
+ − G
+ − G

GAIN 1
-25 -17 -9
-34   -3
-∞   0

GAIN 2
-25 -17 -9
-34   -3
-∞   0

LoZ
70V
100V

POWER SAVER
ALWAYS ON

STEREO │ BRIDGE
SUM
LoZ MODES

CH3 —IN—
CH4 —IN—
+ − G
+ − G

GAIN 3
-25 -17 -9
-34   -3
-∞   0

GAIN 4
-25 -17 -9
-34   -3
-∞   0

STEREO │ BRIDGE
SUM
LoZ MODES

100-240V~
1.2-0.6A 50/60Hz

LoZ Modes selection switch (CH1 & CH2) (for 4 and 8 ohm speaker loads)

Speaker outputs

Speaker mode selection switch

Power mode selection switch

LoZ Modes selection switch (CH3 & CH4) (for 4 and 8 ohm speaker loads)

100-240VAC 1.2A-0.6A 50/60 Hz: From AC power outlet

X Series Amplifier

Speaker Mode Selection Switch

The AMP-X300 can be configured to work with 4 Ω and 8 Ω (low impedance and/or LoZ) loads or a distributed audio (high impedance and/or Hi-Z) 70/100 V system.

- **LoZ**: Set the switch to **LoZ** to use the amplifier with a 4 Ω or 8 Ω low impedance loudspeaker.
- **70V**: Set the switch to **70V** to use the amplifier in a 70 V distributed audio system.
- **100V**: Set the switch to **100V** to use the amplifier in a 100 V distributed audio system.

LoZ Modes Selection Switch

When operating in LoZ mode, the AMP-X300 outputs can operate in stereo, as summed outputs or bridged outputs. Set the LoZ Modes selection switch to the desired setting and connect the outputs as required.

- **STEREO**: When set to **STEREO**, the input signals received on inputs **CH1**, **CH2**, **CH3**, and **CH4** are sent to their respective outputs. Gain controls 1, 2, 3, and 4 are all independently adjustable, respective to the output channel.
- **SUM**: When set to **SUM**, input signals sent to **CH1 IN** and **CH2 IN** are summed and sent to outputs **CH1** and **CH2**, and input signals sent to **CH3 IN** and **CH4 IN** are summed and sent to outputs **CH3** and **CH4**. Gain controls 1, 2, 3, and 4 are all independently adjustable, respective to the output channel.
- **BRIDGE**: When set to **BRIDGE**, an input signal sent to **CH1 IN** is sent out to the bridged **CH1** and **CH2** outputs for high-power applications. An input signal sent to **CH3 IN** is sent out to the bridged **CH3** and **CH4** outputs for high-power applications. Gain control 1 adjusts the signal sent to the bridged **CH1** and **CH2** outputs while Gain control 3 adjusts the signal sent to the bridged **CH1** and **CH2** outputs.

> **NOTE:** When set to **BRIDGE**, **CH1 IN** and **CH2 IN** are summed together. **CH3 IN** and **CH4 IN** are also summed together and gain controls 2 and 4 are disabled.

AMP-X300

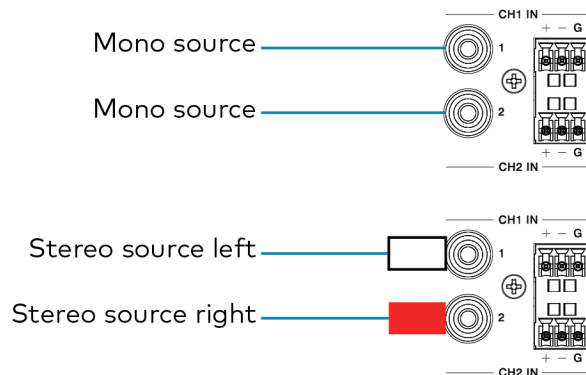## X Series Amplifier

Input Wiring

Balanced and Unbalanced Audio

The AMP-X300 can receive balanced audio through the terminal block connector and unbalanced audio through the terminal block connector or the RCA connector. Refer to the following diagrams when wiring the terminal block connectors.

Balanced wiring   Unbalanced wiring
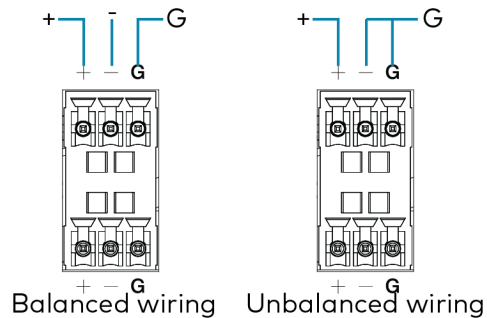
Mono and Stereo Input

The AMP-X300 can be wired for mono and stereo inputs. Refer to the following diagrams when connecting audio sources.

Mono source

Mono source

Stereo source left

Stereo source right
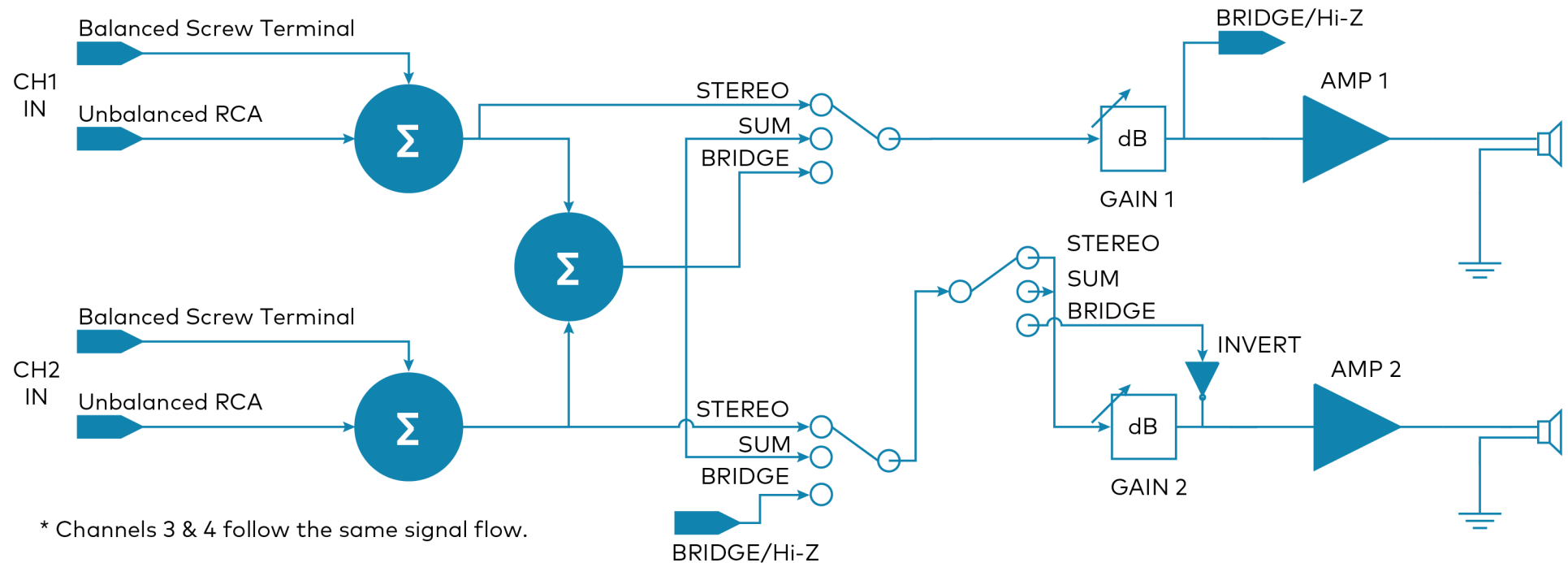
NOTE: The RCA and balanced inputs are summed.

X Series Amplifier

Signal Flow Diagrams

Refer to the following diagrams for details on stereo, summed, bridged, and Hi-Z signal flows.

Stereo and Sum Modes Signal Flow

* Channels 3 & 4 follow the same signal flow.

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Bridge and Hi-Z Modes Signal Flow

CH1 IN — Balanced Screw Terminal, Unbalanced RCA

CH2 IN — Balanced Screw Terminal, Unbalanced RCA

STEREO / SUM / BRIDGE

BRIDGE/Hi-Z

GAIN 1 — dB

AMP 1

BRIDGE/Hi-Z

GAIN 2 — dB

INVERT

AMP 2

* Channels 3 & 4 follow the same signal flow.

CRESTRON
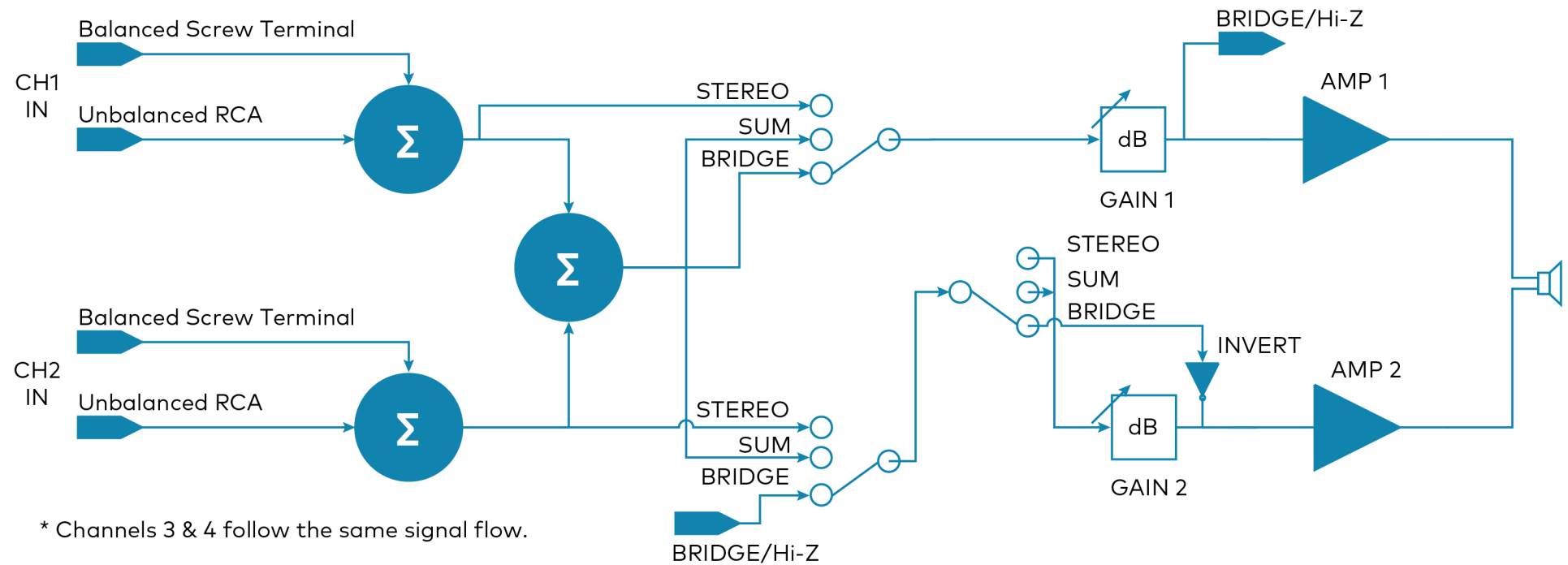
X Series Amplifier

Output Wiring Options

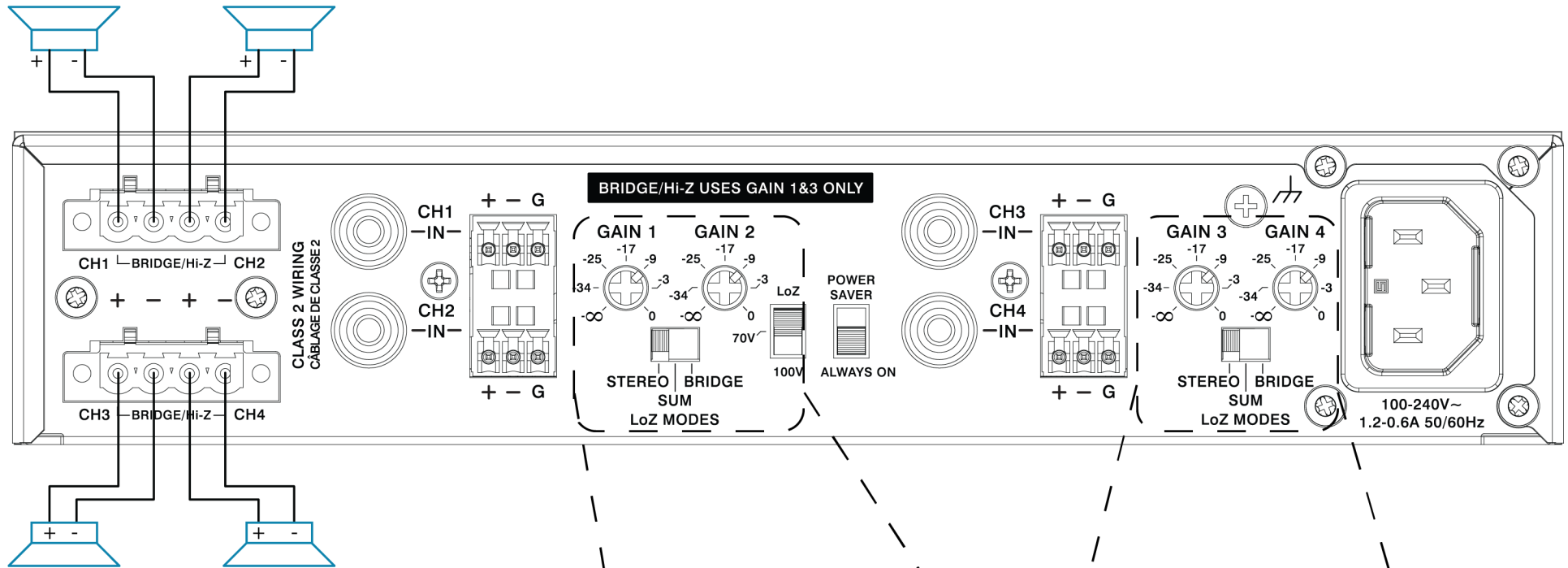The AMP-X300 can be configured for low impedance (LoZ) stereo operation over two or four channels and high impedance (70 V or 100 V) operation over two channels. Refer to the following diagrams for details.

X Series Amplifier

4 Channel x 75 W Stereo Output (Low Impedance)

BRIDGE/Hi-Z USES GAIN 1&3 ONLY

CH1 —IN—
CH2 —IN—

CLASS 2 WIRING
CÂBLAGE DE CLASSE 2

CH1 └─BRIDGE/Hi-Z─┘ CH2

CH3 ─BRIDGE/Hi-Z─ CH4

+ − G

GAIN 1
-25 -17 -9
-34 -3
-∞ 0

GAIN 2
-25 -17 -9
-34 -3
-∞ 0

LoZ
70V
100V

POWER SAVER
ALWAYS ON

STEREO │ BRIDGE
SUM
LoZ MODES

CH3 —IN—
CH4 —IN—

+ − G

GAIN 3
-25 -17 -9
-34 -3
-∞ 0

GAIN 4
-25 -17 -9
-34 -3
-∞ 0

STEREO │ BRIDGE
SUM
LoZ MODES

100-240V~
1.2-0.6A 50/60Hz
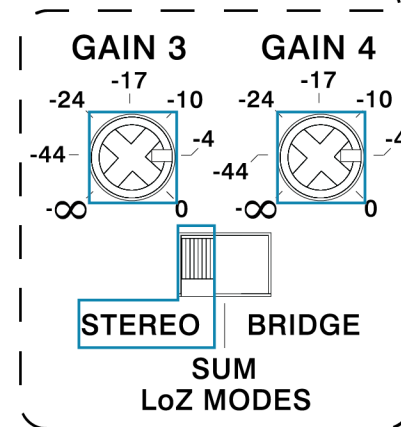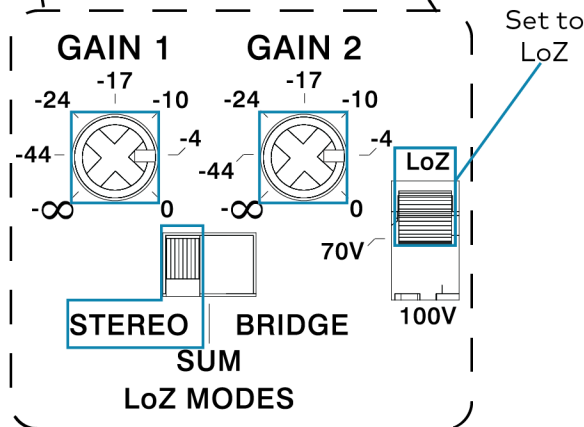
Speaker Mode: LoZ

LoZ MODES: STEREO

GAIN 1, 2, 3, & 4: Set to optimize amplifier output levels.

ALTERNATE LoZ SETTING

LoZ MODES: SUM

GAIN 1, 2, 3, & 4: Set to optimize amplifier output levels.

NOTE: Inputs 1+2 and 3+4 sum together.
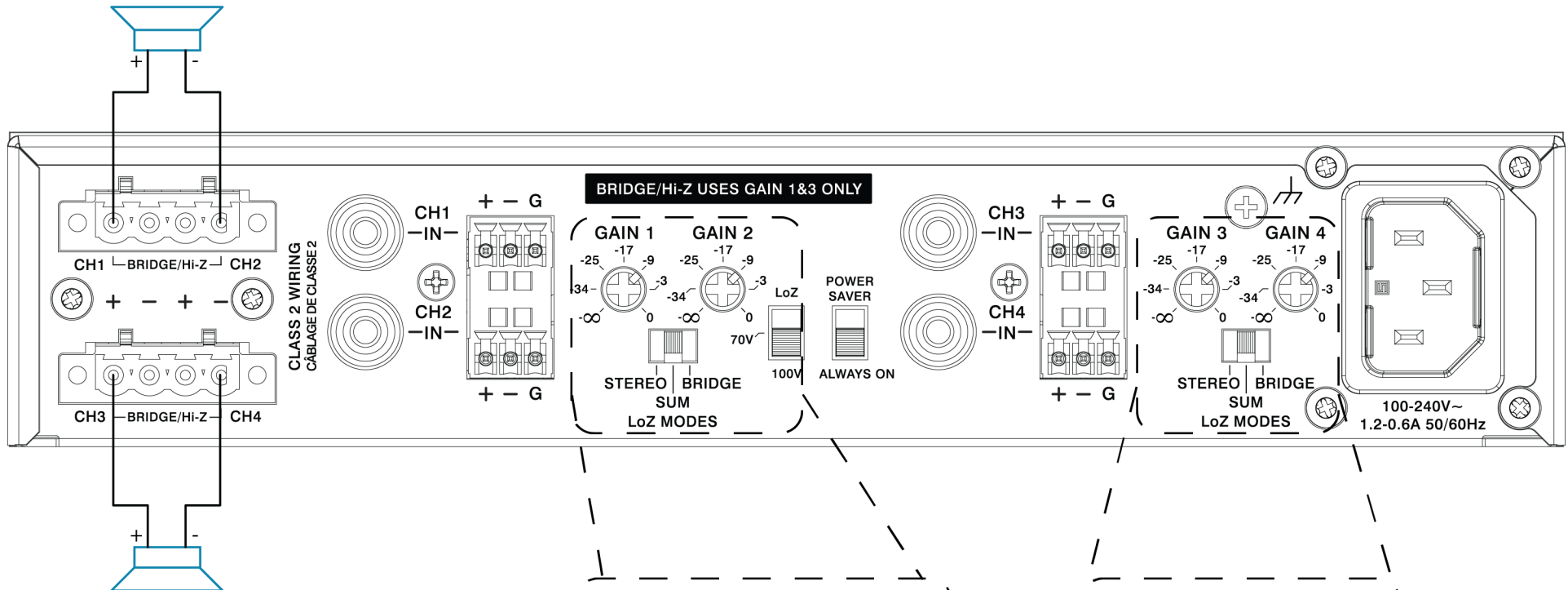
GAIN 1
-24 -17 -10
-44 -4
-∞ 0

GAIN 2
-24 -17 -10
-44 -4
-∞ 0

Set to LoZ

LoZ
70V
100V

STEREO │ BRIDGE
SUM
LoZ MODES

GAIN 3
-24 -17 -10
-44 -4
-∞ 0

GAIN 4
-24 -17 -10
-44 -4
-∞ 0

STEREO │ BRIDGE
SUM
LoZ MODES

AMP-X300

X Series Amplifier

2 Channel x 150 W Bridged Stereo Output (Low Impedance)

BRIDGE/Hi-Z USES GAIN 1&3 ONLY

CH1 —IN—
CH2 —IN—

CLASS 2 WIRING
CÂBLAGE DE CLASSE 2

CH1 └BRIDGE/Hi-Z┘ CH2

CH3 └BRIDGE/Hi-Z┘ CH4

+ − G

GAIN 1   GAIN 2

-25 -17 -9
-34   -3
-∞   0

LoZ

70V

POWER
SAVER

ALWAYS ON

STEREO │ BRIDGE
SUM
LoZ MODES

100V

CH3 —IN—
CH4 —IN—

+ − G

GAIN 3   GAIN 4

-25 -17 -9
-34   -3
-∞   0

STEREO │ BRIDGE
SUM
LoZ MODES

100-240V~
1.2-0.6A 50/60Hz

Speaker Mode: LoZ

LoZ MODES: BRIDGE

GAIN 1 & 3: Set to optimize amplifier output levels.

NOTE: When set to **BRIDGE**, only **GAIN** controls 1 & 3 are active. Inputs 1 + 2 and 3 + 4 SUM together.

GAIN 1   GAIN 2

-24 -17 -10
-44   -4
-∞   0

Set to LoZ

LoZ

70V

100V

STEREO   BRIDGE
SUM
LoZ MODES

GAIN 3   GAIN 4

-24 -17 -10
-44   -4
-∞   0

STEREO   BRIDGE
SUM
LoZ MODES

X Series Amplifier

2 Channel x 150 W Bridged Output (High Impedance)
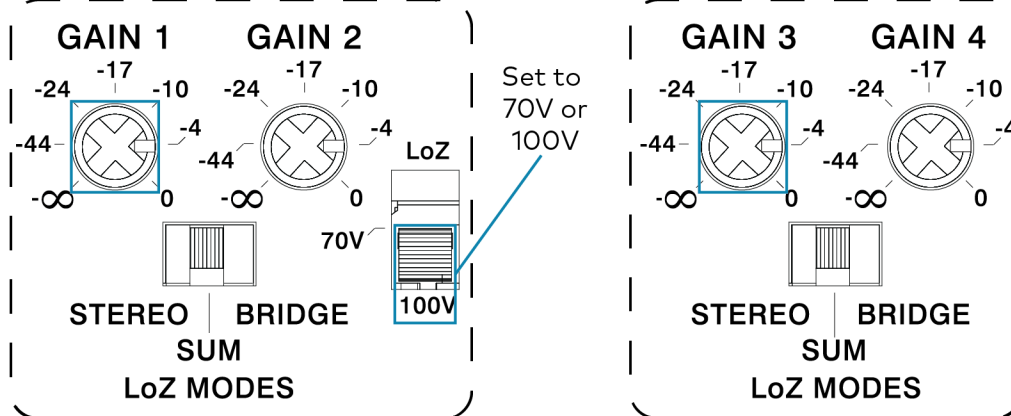

Speaker Mode: **70V** or **100V**

GAIN 1 & 3: Set to optimize amplifier output levels.

NOTES:

- The **LoZ MODES** switch is disabled when speaker mode is set to **70V** or **100V**.

- When speaker mode is set to **70V or 100V,** only GAIN controls 1 & 3 are active. Inputs 1 + 2 and 3 + 4 SUM together.

X Series Amplifier

 Operation

Configuration

Each amplifier channel has its own gain control on the rear of the amplifier that can be adjusted to balance the sound between inputs or to accommodate different audio sources.

To configure a channel, a test signal must be sent to the amplifier while a Phillips screwdriver is used to adjust the amplifier's gain control (turn the gain control knob clockwise to increase the gain or counterclockwise to reduce the gain).

> **WARNING:** This amplifier is capable of delivering high power to the loudspeakers. Please use caution and adequate ear protection if listening to content at high volume levels, as continued exposure to high sound pressure levels can cause permanent hearing impairment or loss.

1. Set the source's output signal level to maximum.
2. Set the amplifier's gain to the lowest setting (full counterclockwise).
3. Apply power to the amplifier.
4. Increase the amplifier's gain control until the desired volume level is reached in the audio playback zone.

> **NOTE:** If clipping is exhibited in the playback audio, check the gain levels at the amplifier first. If the clipping is not remedied by adjusting the gain at the amplifier, troubleshoot at any other gain stage earlier in the audio chain.

LED Operation

The LEDs on the front panel provide the following information:

LED	Description
PWR	White: The amplifier is operating normally.
	Red: The amplifier has entered Standby (Power Saver) mode.
FAULT	Red: There is a fault, clip, or limiting on the indicated channel.
SIGNAL	White: An audio signal is present on the indicated channel.

X Series Amplifier

Visit the Product Page

Scan the QR code to visit the product page.

AMP-X300

www.crestron.com/model/6510866

Rack Mounting Safety Precautions

Elevated Operating Ambient Temperature: If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

Reduced Airflow: Installation of the equipment in a rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

Mechanical Loading: Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Reliable Earthing: Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

X Series Amplifier

Additional Information

Original Instructions

The U.S. English version of this document is the original instructions. All other languages are a translation of the original instructions.

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