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Product Manual

AMP-X500, AMP-X750, and AMP-X1000

X-Series Amplifiers

Crestron Electronics, Inc.

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

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Overview

X-Series amplifiers are high performance, compact, energy efficient, professional grade amplifiers. Supporting Lo-Z and Hi-Z operation, these multichannel amplifiers are suitable for both residential and commercial configurations.

Products

The following products are described in this product manual.

- AMP-X500 on page 5
- AMP-X750 on page 7
- AMP-X1000 on page 9

AMP-X500

- Compact 1 RU power amplifier
- Quiet, fanless convection-cooled design
- Up to 500 W of output power available across 2 output channels
- Configurable for either Lo-Z (4/8 Ω) or Hi-Z (70V or 100V) operation
- BUS line input and output for sending the same signal to multiple amps
- Low noise, low distortion, high headroom
- Comprehensive fault and speaker protection
- Captive speaker connectors for secure and robust connectivity
- Balanced and unbalanced inputs
- Standby feature instantly turns on amplifier when input sensing circuitry detects an audio signal
- Always On feature bypasses standby with minimal power consumption
- Internal universal 100-240V power supply

Lo-Z (4/8 Ω) and Hi-Z (70V or 100V) Operation

The AMP-X500 is a 2-channel amplifier with a BUS line input and output. Using the BUS line, a signal can be passed through to multiple amps with a single RCA connection from the source. A choice of Lo-Z output settings to drive 4- or 8-Ω speakers, or Hi-Z output settings to drive a distributed speaker system (70V or 100V) can be used. Balanced/Unbalanced inputs are provided for connection to stereo or two mono sources through detachable terminal blocks or RCA connectors.

> **NOTE:** Each configuration can output up to its respective power rating.

Solid and Efficient Performance

The AMP-X500 is engineered to deliver exceptional performance and reliability with low distortion, low noise, and high power headroom. Advanced Class D technology maximizes efficiency to reduce power consumption and heat dissipation. An internal universal power supply ensures consistent performance at varying line voltages.

Stackable Design

The AMP-X500 is housed in a compact 1 RU form factor. The efficient design ensures cool running operation and long term reliability. The amplifier is high-density stackable with other Crestron amps, allowing multiple units to be installed vertically in an equipment rack without needing extra ventilation

space. Rack mount parts are included, so no additional mounting accessories or rack shelves are required.

Fully Protected

The AMP-X500 features protection against overheating, shorted or overloaded speaker lines, excessive input signals, and other faults. In the case of a shorted speaker line or overheating condition, paired outputs mute automatically until the fault condition is resolved. In the event of a prolonged fault, all outputs mute and the amplifier shuts down.

Energy Efficient

In addition to its high efficiency under operation, the amplifier draws no added inrush current during power-up, thereby reducing AC circuit requirements and allowing multiple amplifiers to be connected to a single switched circuit. To reduce energy usage further, the AMP-X500 can be configured to enter a low-power standby state if no input signal is detected on any channel for 25 minutes. Signal detection sensitivity has been optimized to improve response time when triggering the amplifier to the on state, allowing it to return to full operation within a half-second. The REMOTE input can be connected to a contact closure to place the amplifier outputs in controlled standby mode.

AMP-X750

- Compact 1 RU power amplifier
- Quiet, fanless convection-cooled design
- Up to 750 W of output power available across 3 output channels
- Configurable for either Lo-Z (4/8 Ω) or Hi-Z (70V or 100V) operation
- BUS line input and output for sending the same signal to multiple amps
- Low noise, low distortion, high headroom
- Comprehensive fault and speaker protection
- Captive speaker connectors for secure and robust connectivity
- Balanced and unbalanced inputs
- Standby feature instantly turns on amplifier when input sensing circuitry detects an audio signal
- Always On feature bypasses standby with minimal power consumption
- Internal universal 100-240V power supply

Lo-Z (4/8 Ω) and Hi-Z (70V or 100V) Operation

The AMP-X750 is a 3-channel amplifier with a BUS line input and output. Using the BUS line, a signal can be passed through to multiple amps with a single RCA connection from the source. A choice of Lo-Z output settings to drive 4- or 8-Ω speakers, or Hi-Z output settings to drive a distributed speaker system (70V or 100V) can be used. Balanced/Unbalanced inputs are provided for connection to two stereo or three mono sources through detachable terminal blocks or RCA connectors.

> **NOTE:** Each configuration can output up to its respective power rating.

Solid and Efficient Performance

The AMP-X750 is engineered to deliver exceptional performance and reliability with low distortion, low noise, and high power headroom. Advanced Class D technology maximizes efficiency to reduce power consumption and heat dissipation. An internal universal power supply ensures consistent performance at varying line voltages.

Stackable Design

The AMP-X750 is housed in a compact 1 RU form factor. The efficient design ensures cool running operation and long term reliability. The amplifier is high-density stackable with other Crestron amps, allowing multiple units to be installed vertically in an equipment rack without needing extra ventilation

space. Rack mount parts are included, so no additional mounting accessories or rack shelves are required.

Fully Protected

The AMP-X750 features protection against overheating, shorted or overloaded speaker lines, excessive input signals, and other faults. In the case of a shorted speaker line or overheating condition, paired outputs mute automatically until the fault condition is resolved. In the event of a prolonged fault, all outputs mute and the amplifier shuts down.

Energy Efficient

In addition to its high efficiency under operation, the amplifier draws no added inrush current during power-up, thereby reducing AC circuit requirements and allowing multiple amplifiers to be connected to a single switched circuit. To reduce energy usage further, the AMP-X750 can be configured to enter a low-power standby state if no input signal is detected on any channel for 25 minutes. Signal detection sensitivity has been optimized to improve response time when triggering the amplifier to the on state, allowing it to return to full operation within a half-second. The REMOTE input can be connected to a contact closure to place the amplifier outputs in controlled standby mode.

AMP-X1000

- Compact 1 RU power amplifier
- Quiet, fanless convection-cooled design
- Up to 1000 W of output power available across 4 output channels
- Configurable for either Lo-Z (4/8 Ω) or Hi-Z (70V or 100V) operation
- BUS line input and output for sending the same signal to multiple amps
- Low noise, low distortion, high headroom
- Comprehensive fault and speaker protection
- Captive speaker connectors for secure and robust connectivity
- Balanced and unbalanced inputs
- Standby feature instantly turns on amplifier when input sensing circuitry detects an audio signal
- Always On feature bypasses standby with minimal power consumption
- Internal universal 100-240V power supply

Lo-Z (4/8 Ω) and Hi-Z (70V or 100V) Operation

The AMP-X1000 is a 4-channel amplifier with a BUS line input and output. Using the BUS line, a signal can be passed through to multiple amps with a single RCA connection from the source. A choice of Lo-Z output settings to drive 4- or 8-Ω speakers, or Hi-Z output settings to drive a distributed speaker system (70V or 100V) can be used. Balanced/Unbalanced inputs are provided for connection to two stereo or four mono sources through detachable terminal blocks or RCA connectors.

> **NOTE:** Each configuration can output up to its respective power rating.

Solid and Efficient Performance

The AMP-X1000 is engineered to deliver exceptional performance and reliability with low distortion, low noise, and high power headroom. Advanced Class D technology maximizes efficiency to reduce power consumption and heat dissipation. An internal universal power supply ensures consistent performance at varying line voltages.

Stackable Design

The AMP-X1000 is housed in a compact 1 RU form factor. The efficient design ensures cool running operation and long term reliability. The amplifier is high-density stackable with other Crestron amps, allowing multiple units to be installed vertically in an equipment rack without needing extra ventilation

space. Rack mount parts are included, so no additional mounting accessories or rack shelves are required.

Fully Protected

The AMP-X1000 features protection against overheating, shorted or overloaded speaker lines, excessive input signals, and other faults. In the case of a shorted speaker line or overheating condition, paired outputs mute automatically until the fault condition is resolved. In the event of a prolonged fault, all outputs mute and the amplifier shuts down.

Energy Efficient

In addition to its high efficiency under operation, the amplifier draws no added inrush current during power-up, thereby reducing AC circuit requirements and allowing multiple amplifiers to be connected to a single switched circuit. To reduce energy usage further, the AMP-X1000 can be configured to enter a low-power standby state if no input signal is detected on any channel for 25 minutes. Signal detection sensitivity has been optimized to improve response time when triggering the amplifier to the on state, allowing it to return to full operation within a half-second. The REMOTE input can be connected to a contact closure to place the amplifier outputs in controlled standby mode.

Specifications

Refer to the following sections for more information on the specifications for various X-Series amplifiers.

- AMP-X500 Specifications on page 12
- AMP-X750 Specifications on page 16
- AMP-X1000 Specifications on page 20

AMP-X500 Specifications

Product specifications for the AMP-X500 are provided below.

Audio

Input Signal Types	Balanced or unbalanced analog line-level
Output Power Per Channel (RMS, continuous up to 10 seconds)	250 W (4 or 8 Ω), 500 W (8 Ω only), 500 W (70V/100V) **NOTE:** Total simultaneous output power across all channels will not exceed 500 W
Frequency Response	20 Hz to 20 kHz ±0.5 dB at 1 W
High-Pass Filter (70V and 100V operation only)	-3 dB @ 80 Hz, -12 dB/octave
THD+N	<0.1% at 1 kHz @ -3 dB full rated output power
S/N Ratio	>103 dBA, 20 Hz to 20 kHz, balanced
Crosstalk	-75 dB at 1 kHz
Input Sensitivity	1.23 Vrms, +4 dBu balanced; 0.316 Vrms, -10 dBV unbalanced
Gain	29 dB @ 8 Ω
Protection	Overcurrent, undervoltage, overtemperature, DC offset, extreme high frequency
Go to Sleep Time	25 minutes with no signal present (when set to POWER SAVER)
Wake Time	0.5 s typical
Wake Threshold	0.44 mV typical

Connectors

CH1-CH2 (OUTPUT)	(2) 2-pin 5.08 mm pitch, 12A plug with screw locking retainers; Power amplifier output; Wire Size: Terminals accept up to 12 AWG (3.31 mm) **NOTE:** Output is direct-coupled, not transformer isolated.
AUDIO IN (UNBALANCED)	(2) RCA connectors, female; Maximum Input Level: 2.24 Vrms, +7 dBV (+9.2 dBu)
AUDIO IN (BALANCED)	(2) 3-pin 3.5 mm detachable terminal block; Balanced line-level audio inputs; Maximum Input Level: 7.75 Vrms, +20 dBu; Input Impedance: 20 kΩ

BUS INPUT	(2) paired RCA connectors, female; Unbalanced line-level audio inputs
BUS OUTPUT	(2) paired RCA connectors, female; Unbalanced line-level audio outputs, buffered
REMOTE	(1) 2-pin 3.5 mm detachable terminal block; Connect to dry contact closure to place amplifier in standby mode
Chassis Ground	(1) 6-32 screw; Chassis ground lug
100-240V~ 1.2-0.6A 50/60 Hz	(1) IEC 60320 C14 main power inlet; Mates with removable power cord, included

Controls & Indicators

PWR	(1) White/Red LED; White indicates amplifier is on and ready for use; Red indicates amplifier is in standby
HI-Z	(2) White LEDs (one per output); Indicates when Hi-Z mode is enabled (70V or 100V);
SIGNAL	(2) White LEDs (one per output); Indicates when an audio signal is present
FAULT	(2) Red LEDs (one per output); Indicates that the output channel is faulted or clipping
GAIN 1-2	(2) Screwdriver-adjustable rotary controls, one per output channel; Adjusts the attenuation level for the corresponding output channel
INPUT SEL 1-2	(2) Rotary controls, one per output channel; Selects input source from RCA, Balanced, BUS left/right, or BUS mono
OUTPUT 1-2	(2) Rotary controls, one per output channel; Selects 4-8 Ω 250 W, 8 Ω 500W, 70V, or 100V operation
Power Mode	(1) Slide switch; Selects Power Saver or Always On operation

Power

Main Power	1.2-0.6A @ 100-240VAC, 50/60 Hz
Power Consumption	115 W, (2 channels driven at 1/8th output power, 4 Ω); 8.8 W, idle; 0.31 W, power saver (115VAC/60 Hz)

Environmental

Temperature	41 to 104°F (5° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	149 BTU/hr @ 4 Ω, all channels driven at 1/8th output power; 21 BTU/hr all channels idle; 1 BTU/hr in standby

Construction

Chassis	Metal, convection cooled (fanless)
Front Panel	Metal, black finish with polycarbonate label overlay
Mounting	Freestanding or 1 RU 19 in. rack mountable; Stackable with other Crestron AMP series products (adhesive feet and rack mounting hardware all included)

Dimensions

Height	1.75 in (44 mm) without feet; 1.89 in (48 mm) with feet
Width	19.00 in (483 mm)
Depth	14.57 in (370 mm)

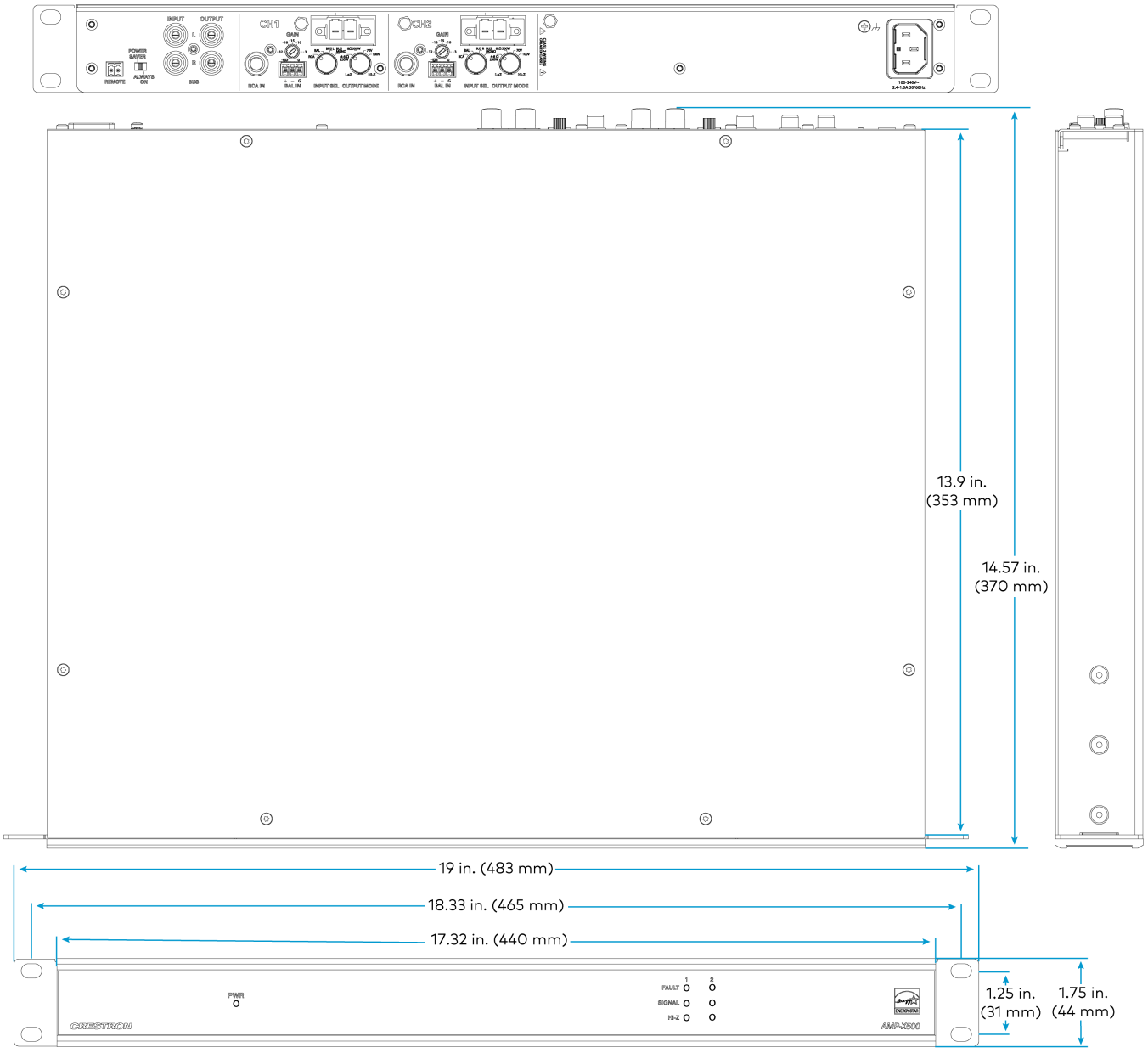
Weight

9.93 lb (4.5 kg)

Compliance

ErP (1275/2008/EC), UL® 62368, FCC Class B residential use

Dimension Drawings



AMP-X750 Specifications

Product specifications for the AMP-X750 are provided below.

Audio

Input Signal Types	Balanced or unbalanced analog line-level
Output Power Per Channel (RMS, continuous up to 10 seconds)	250 W (4 or 8 Ω), 500 W (8 Ω only), 500 W (70V/100V) **NOTE:** Total simultaneous output power across all channels will not exceed 750 W
Frequency Response	20 Hz to 20 kHz ±0.5 dB at 1 W
High-Pass Filter (70V and 100V operation only)	-3 dB @ 80 Hz, -12 dB/octave
THD+N	<0.1% at 1 kHz @ -3 dB full rated output power
S/N Ratio	>103 dBA, 20 Hz to 20 kHz, balanced
Crosstalk	-75 dB at 1 kHz
Input Sensitivity	1.23 Vrms, +4 dBu balanced; 0.316 Vrms, -10 dBV unbalanced
Gain	29 dB @ 8 Ω
Protection	Overcurrent, undervoltage, overtemperature, DC offset, extreme high frequency
Go to Sleep Time	25 minutes with no signal present (when set to POWER SAVER)
Wake Time	0.5 s typical
Wake Threshold	0.44 mV typical

Connectors

CH1-CH3 (OUTPUT)	(3) 2-pin 5.08 mm pitch, 12A plug with screw locking retainers; Power amplifier output; Wire Size: Terminals accept up to 12 AWG (3.31 mm) **NOTE:** Output is direct-coupled, not transformer isolated.
AUDIO IN (UNBALANCED)	(3) RCA connectors, female; Maximum Input Level: 2.24 Vrms, +7 dBV (+9.2 dBu)
AUDIO IN (BALANCED)	(3) 3-pin 3.5 mm detachable terminal block; Balanced line-level audio inputs; Maximum Input Level: 7.75 Vrms, +20 dBu; Input Impedance: 20 kΩ

BUS INPUT	(2) paired RCA connectors, female; Unbalanced line-level audio inputs
BUS OUTPUT	(2) paired RCA connectors, female; Unbalanced line-level audio outputs, buffered
REMOTE	(1) 2-pin 3.5 mm detachable terminal block; Connect to dry contact closure to place amplifier in standby mode
Chassis Ground	(1) 6-32 screw; Chassis ground lug
100-240V~ 1.2-0.6A 50/60 Hz	(1) IEC 60320 C14 main power inlet; Mates with removable power cord, included

Controls & Indicators

PWR	(1) White/Red LED; White indicates amplifier is on and ready for use; Red indicates amplifier is in standby
HI-Z	(3) White LEDs (one per output); Indicates when Hi-Z mode is enabled (70V or 100V);
SIGNAL	(3) White LEDs (one per output); Indicates when an audio signal is present
FAULT	(3) Red LEDs (one per output); Indicates that the output channel is faulted or clipping
GAIN 1-3	(3) Screwdriver-adjustable rotary controls, one per output channel; Adjusts the attenuation level for the corresponding output channel
INPUT SEL 1-3	(3) Rotary controls, one per output channel; Selects input source from RCA, Balanced, BUS left/right, or BUS mono
OUTPUT 1-3	(3) Rotary controls, one per output channel; Selects 4-8 Ω 250 W, 8 Ω 500W, 70V, or 100V operation
Power Mode	(1) Slide switch; Selects Power Saver or Always On operation

Power

Main Power	1.2-0.6A @ 100-240VAC, 50/60 Hz
Power Consumption	170 W, (3 channels driven at 1/8th output power, 4 Ω); 8.8 W, idle; 0.35 W, power saver (115VAC/60 Hz)

Environmental

Temperature	41 to 104°F (5° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	212 BTU/hr @ 4 Ω, all channels driven at 1/8th output power; 30 BTU/hr all channels idle; 1.2 BTU/hr in standby

Construction

Chassis	Metal, convection cooled (fanless)
Front Panel	Metal, black finish with polycarbonate label overlay
Mounting	Freestanding or 1 RU 19 in. rack mountable; Stackable with other Crestron AMP series products (adhesive feet and rack mounting hardware all included)

Dimensions

Height	1.75 in (44 mm) without feet; 1.89 in (48 mm) with feet
Width	19.00 in (483 mm)
Depth	14.57 in (370 mm)

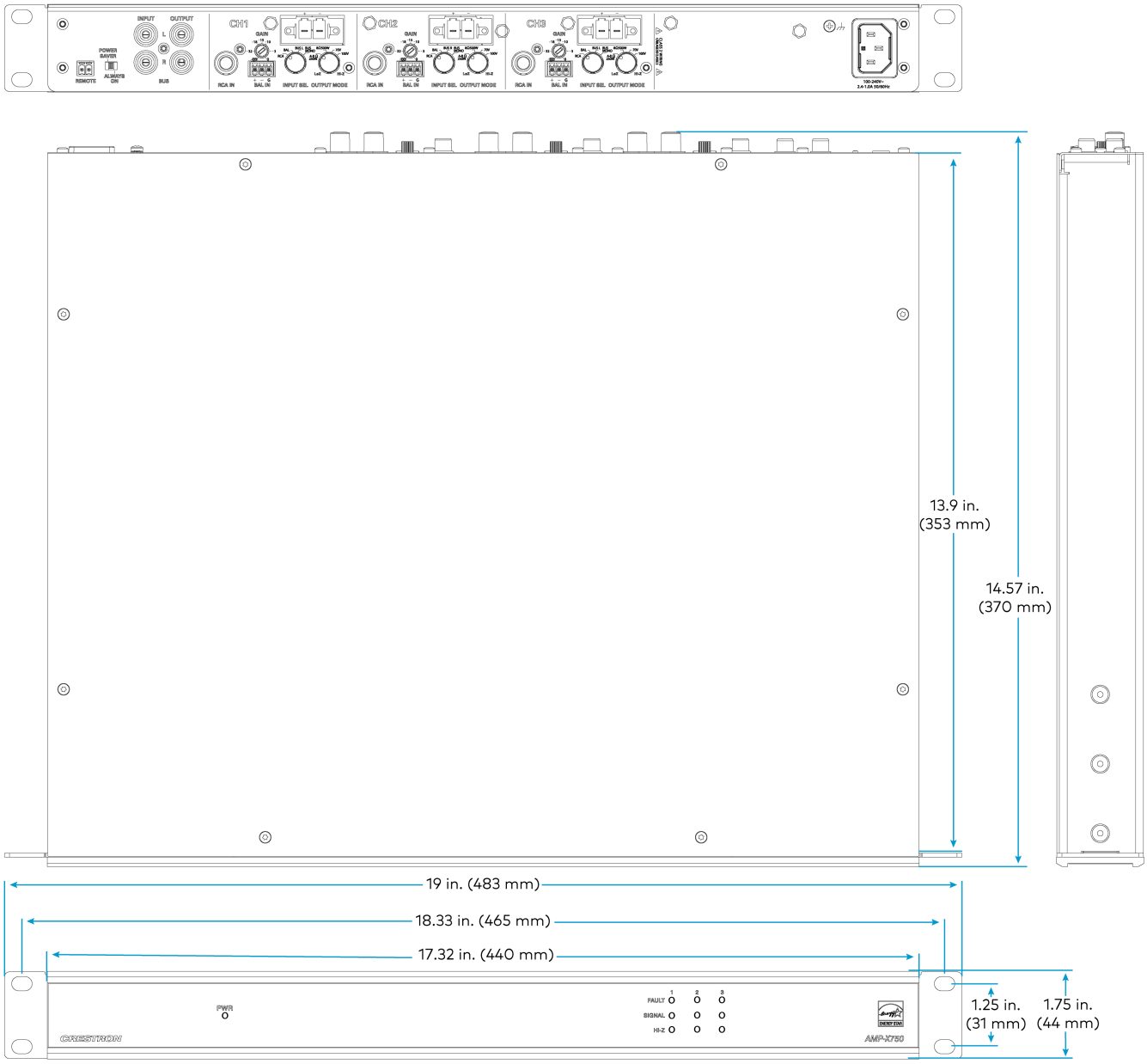
Weight

10.4 lb (4.7 kg)

Compliance

ErP (1275/2008/EC), UL® 62368, FCC Class B residential use

Dimension Drawings



AMP-X1000 Specifications

Product specifications for the AMP-X1000 are provided below.

Audio

Input Signal Types	Balanced or unbalanced analog line-level
Output Power Per Channel (RMS, continuous up to 10 seconds)	250 W (4 or 8 Ω), 500 W (8 Ω only), 500 W (70V/100V) **NOTE:** Total simultaneous output power across all channels will not exceed 1000 W
Frequency Response	20 Hz to 20 kHz ±0.5 dB at 1 W
High-Pass Filter (70V and 100V operation only)	-3 dB @ 80 Hz, -12 dB/octave
THD+N	<0.1% at 1 kHz @ -3 dB full rated output power
S/N Ratio	>103 dBA, 20 Hz to 20 kHz, balanced
Crosstalk	-75 dB at 1 kHz
Input Sensitivity	1.23 Vrms, +4 dBu balanced; 0.316 Vrms, -10 dBV unbalanced
Gain	29 dB @ 8 Ω
Protection	Overcurrent, undervoltage, overtemperature, DC offset, extreme high frequency
Go to Sleep Time	25 minutes with no signal present (when set to POWER SAVER)
Wake Time	0.5 s typical
Wake Threshold	0.44 mV typical

Connectors

CH1-CH4 (OUTPUT)	(4) 2-pin 5.08 mm pitch, 12A plug with screw locking retainers; Power amplifier output; Wire Size: Terminals accept up to 12 AWG (3.31 mm) **NOTE:** Output is direct-coupled, not transformer isolated.
AUDIO IN (UNBALANCED)	(4) RCA connectors, female; Unbalanced line-level audio inputs ; Maximum Input Level: 2.24 Vrms, +7 dBV (+9.2 dBu)
AUDIO IN (BALANCED)	(4) 3-pin 3.5 mm detachable terminal block; Balanced line-level audio inputs; Maximum Input Level: 7.75 Vrms, +20 dBu; Input Impedance: 20 kΩ

BUS INPUT	(2) paired RCA connectors, female; Unbalanced line-level audio inputs
BUS OUTPUT	(2) paired RCA connectors, female; Unbalanced line-level audio outputs, buffered
REMOTE	(1) 2-pin 3.5 mm detachable terminal block; Connect to dry contact closure to place amplifier in standby mode
Chassis Ground	(1) 6-32 screw; Chassis ground lug
100-240V~ 1.2-0.6A 50/60 Hz	(1) IEC 60320 C14 main power inlet; Mates with removable power cord, included

Controls & Indicators

PWR	(1) White/Red LED; White indicates amplifier is on and ready for use; Red indicates amplifier is in standby
HI-Z	(4) White LEDs (one per output); Indicates when Hi-Z mode is enabled (70V or 100V);
SIGNAL	(4) White LEDs (one per output); Indicates when an audio signal is present
FAULT	(4) Red LEDs (one per output); Indicates that the output channel is faulted or clipping
GAIN 1-4	(4) Screwdriver-adjustable rotary controls, one per output channel; Adjusts the attenuation level for the corresponding output channel
INPUT SEL 1-4	(4) Rotary controls, one per output channel; Selects input source from RCA, Balanced, BUS left/right, or BUS mono
OUTPUT 1-4	(4) Rotary controls, one per output channel; Selects 4-8 Ω 250 W, 8 Ω 500W, 70V, or 100V operation
Power Mode	(1) Slide switch; Selects Power Saver or Always On operation

Power

Main Power	1.2-0.6A @ 100-240VAC, 50/60 Hz
Power Consumption	227 W, (4 channels driven at 1/8th output power, 4 Ω); 11.5 W, idle; 0.37 W, power saver (115VAC/60 Hz)

Environmental

Temperature	41 to 104°F (5° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	268 BTU/hr @ 4 Ω, all channels driven at 1/8th output power; 39 BTU/hr all channels idle; 1.3 BTU/hr in standby

Construction

Chassis	Metal, convection cooled (fanless)
Front Panel	Metal, black finish with polycarbonate label overlay
Mounting	Freestanding or 1 RU 19 in. rack mountable; Stackable with other Crestron AMP series products (adhesive feet and rack mounting hardware all included)

Dimensions

Height	1.75 in (44 mm) without feet; 1.89 in (48 mm) with feet
Width	19.00 in (483 mm)
Depth	14.57 in (370 mm)

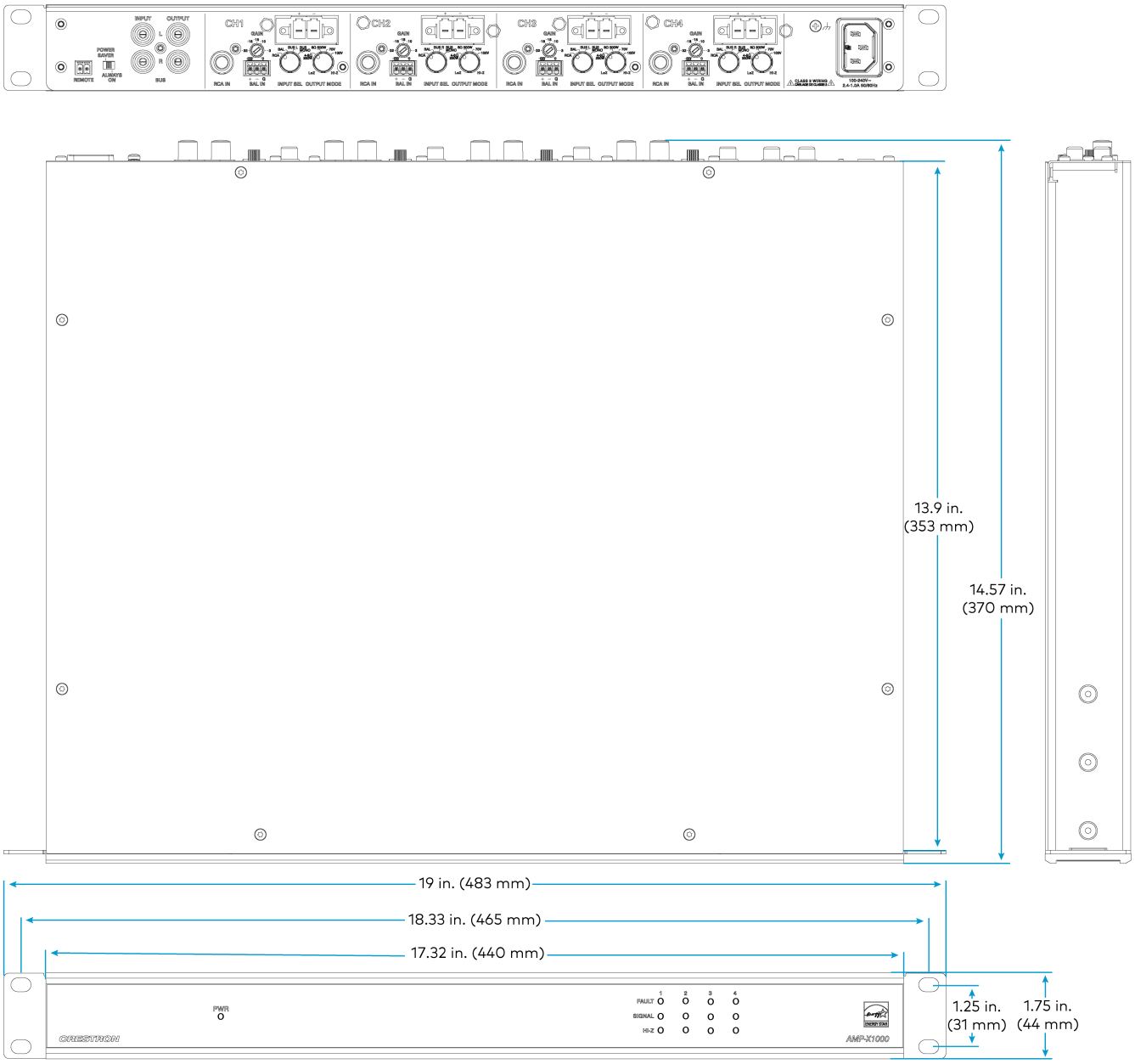
Weight

10.7 lb (4.8 kg)

Compliance

ErP (1275/2008/EC), UL® 62368, FCC Class B residential use

Dimension Drawings



Installation

Refer to the following sections for instructions on how to install the various X-Series amplifiers.

- AMP-X500 Installation on page 25
- AMP-X750 Installation on page 32
- AMP-X1000 Installation on page 39

AMP-X500 Installation

Refer to the following sections to install the AMP-X500.

- In the Box on page 26
- Install the Device on page 27
- Connect the Device on page 29
- Observe the LED Indicators on page 31

In the Box

Qty.	Description
1	AMP-X500
	Additional Items
1	Power cord (2061092)
2	Connectors, speaker (2061091)
2	Connectors, input, output, (2055207)
1	Connector, 2-pin (2003574)
4	Adhesive foot, black (2002390)

Install the Device

The AMP-X500 can be placed on a flat surface or installed in a rack.

Place on a Flat Surface

Place the AMP-X500 on a table or other flat surface. Attach the four adhesive feet to the underside of the device.

Mount on a Rack

This device occupies 1U of rack space. Mount the amplifier into the rack using four rack mounting screws (not included).

Refer to the Safety Instructions (Doc. 6607) prior to rack installation.

WARNING: To prevent bodily injury when mounting or servicing the unit in a rack:

- When mounting the unit into a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.
- The bottom surface of the unit may produce elevated temperatures during operation. To avoid injury, mount the unit such that the bottom surface is not easily accessible.

AVERTISSEMENT: Pour éviter toute blessure corporelle lors du montage ou de l'entretien de l'unité dans un rack:

- Lors du montage de l'unité dans un rack partiellement rempli, chargez le rack de bas en haut avec le composant le plus lourd au bas du rack.
- Si le rack est équipé de dispositifs de stabilisation, installez les stabilisateurs avant de monter ou d'entretenir l'unité dans le rack.
- La surface inférieure de l'unité peut produire des températures élevées pendant le fonctionnement. Pour éviter les blessures, montez l'appareil de telle sorte que la surface inférieure ne soit pas facilement accessible.

NOTE: Observe the following rack mount installation guidelines.

- **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).

Connect the Device

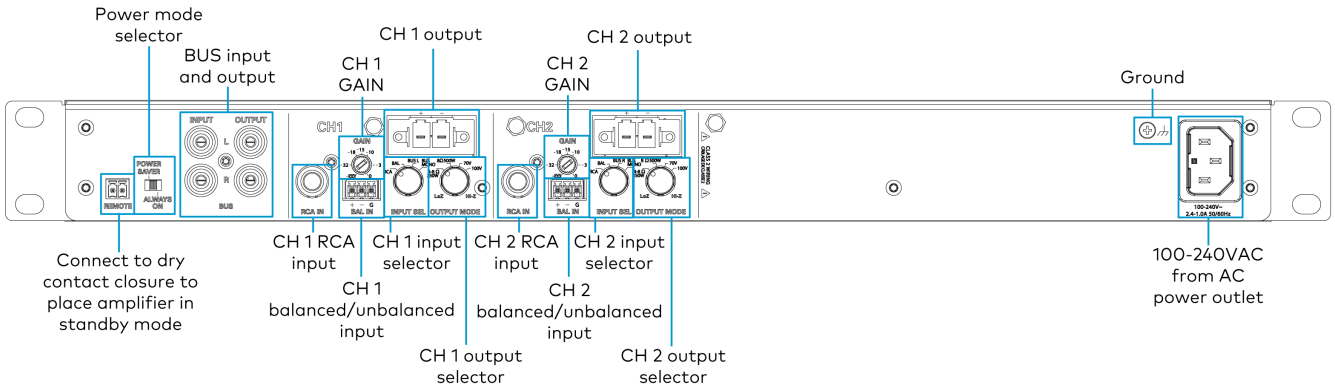
Make the necessary connections as shown in the following illustration.

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.



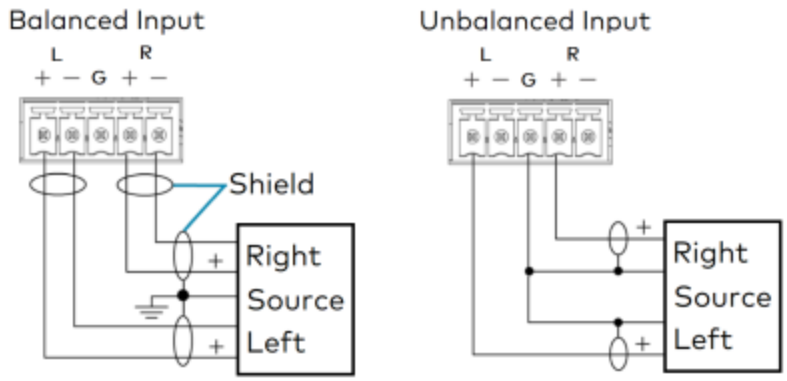
Analog Inputs

Refer to the following illustration when connecting analog audio sources.

Balanced/Unbalanced Audio Input

Refer to the following table and illustration for analog audio input pin assignments and connection information.

Signal Name	Balanced Audio Input	Unbalanced Audio Input
+	L+	L+
-	L–	Open
G	Shield/ground	Open
+	R+	R+
-	R-	Open



Observe the LED Indicators

The LEDs provide the following information:

LED Indicator	Color	Meaning
PWR	Amber	Power is being applied to the device. The device is booting.
	White	Device is powered on with audio passing.
	Red	Device is in standby mode.
SIGNAL 1-2	White	Signal is detected on the specified input.
	Off	There is no signal detected on the specified input.
Hi-Z 1-2	White	Hi-Z is enabled on the specified input.
	Off	Hi-Z is disabled on the specified input.
FAULT 1-2	Red	The specified channel is faulted or clipping.
	Off	The specified channel is not faulted or clipping.

AMP-X750 Installation

Refer to the following sections to install the AMP-X750.

- In the Box on page 33
- Install the Device on page 34
- Connect the Device on page 36
- Observe the LED Indicators on page 38

In the Box

Qty.	Description
1	AMP-X750
	Additional Items
1	Power cord (2061092)
3	Connectors, speaker (2061091)
3	Connectors, input, output, (2055207)
1	Connector, 2-pin (2003574)
4	Adhesive foot, black (2002390)

Install the Device

The AMP-X750 can be placed on a flat surface or installed in a rack.

Place on a Flat Surface

Place the AMP-X750 on a table or other flat surface. Attach the four adhesive feet to the underside of the device.

Mount on a Rack

This device occupies 1U of rack space. Mount the amplifier into the rack using four rack mounting screws (not included).

Refer to the Safety Instructions (Doc. 6607) prior to rack installation.

WARNING: To prevent bodily injury when mounting or servicing the unit in a rack:

- When mounting the unit into a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.
- The bottom surface of the unit may produce elevated temperatures during operation. To avoid injury, mount the unit such that the bottom surface is not easily accessible.

AVERTISSEMENT: Pour éviter toute blessure corporelle lors du montage ou de l'entretien de l'unité dans un rack:

- Lors du montage de l'unité dans un rack partiellement rempli, chargez le rack de bas en haut avec le composant le plus lourd au bas du rack.
- Si le rack est équipé de dispositifs de stabilisation, installez les stabilisateurs avant de monter ou d'entretenir l'unité dans le rack.
- La surface inférieure de l'unité peut produire des températures élevées pendant le fonctionnement. Pour éviter les blessures, montez l'appareil de telle sorte que la surface inférieure ne soit pas facilement accessible.

NOTE: Observe the following rack mount installation guidelines.

- **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).

Connect the Device

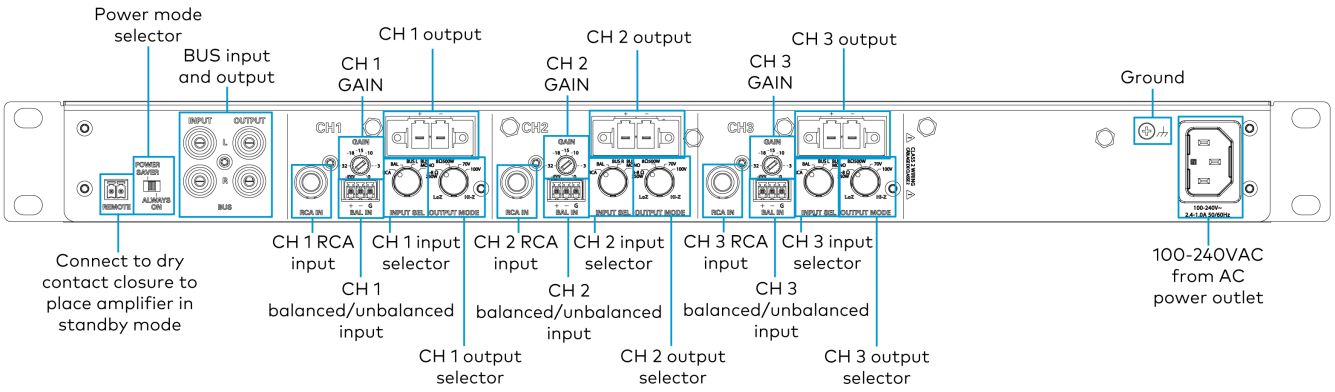
Make the necessary connections as shown in the following illustration.

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.



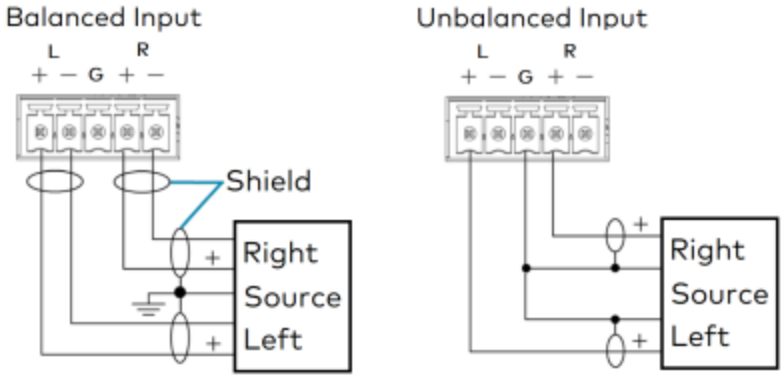
Analog Inputs

Refer to the following illustration when connecting analog audio sources.

Balanced/Unbalanced Audio Input

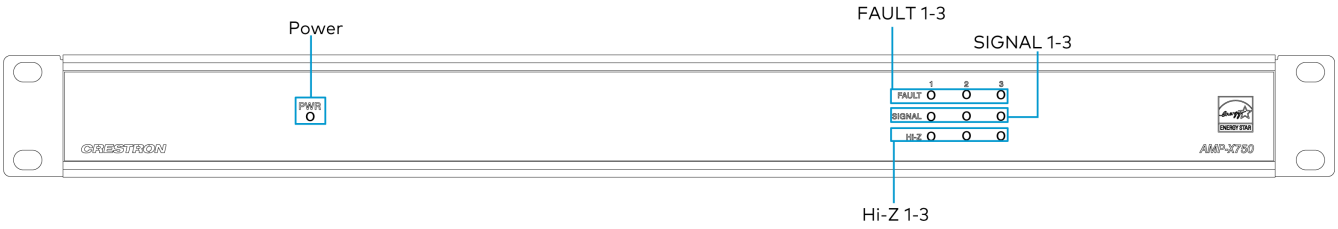
Refer to the following table and illustration for analog audio input pin assignments and connection information.

Signal Name	Balanced Audio Input	Unbalanced Audio Input
+	L+	L+
-	L–	Open
G	Shield/ground	Open
+	R+	R+
-	R-	Open



Observe the LED Indicators

The LEDs provide the following information:



LED Indicator	Color	Meaning
PWR	Amber	Power is being applied to the device. The device is booting.
	White	Device is powered on with audio passing.
	Red	Device is in standby mode.
SIGNAL 1-3	White	Signal is detected on the specified input.
	Off	There is no signal detected on the specified input.
Hi-Z 1-3	White	Hi-Z is enabled on the specified input.
	Off	Hi-Z is disabled on the specified input.
FAULT 1-3	Red	The specified channel is faulted or clipping.
	Off	The specified channel is not faulted or clipping.

AMP-X1000 Installation

Refer to the following sections to install the AMP-X1000.

- In the Box on page 40
- Install the Device on page 41
- Connect the Device on page 43
- Observe the LED Indicators on page 45

In the Box

Qty.	Description
1	AMP-X1000
	Additional Items
1	Power cord (2061092)
4	Connectors, speaker (2061091)
4	Connectors, input, output, (2055207)
1	Connector, 2-pin (2003574)
4	Adhesive foot, black (2002390)

Install the Device

The AMP-X1000 can be placed on a flat surface or installed in a rack.

Place on a Flat Surface

Place the AMP-X1000 on a table or other flat surface. Attach the four adhesive feet to the underside of the device.

Mount on a Rack

This device occupies 1U of rack space. Mount the amplifier into the rack using four rack mounting screws (not included).

Refer to the Safety Instructions (Doc. 6607) prior to rack installation.

WARNING: To prevent bodily injury when mounting or servicing the unit in a rack:

- When mounting the unit into a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.
- The bottom surface of the unit may produce elevated temperatures during operation. To avoid injury, mount the unit such that the bottom surface is not easily accessible.

AVERTISSEMENT: Pour éviter toute blessure corporelle lors du montage ou de l'entretien de l'unité dans un rack:

- Lors du montage de l'unité dans un rack partiellement rempli, chargez le rack de bas en haut avec le composant le plus lourd au bas du rack.
- Si le rack est équipé de dispositifs de stabilisation, installez les stabilisateurs avant de monter ou d'entretenir l'unité dans le rack.
- La surface inférieure de l'unité peut produire des températures élevées pendant le fonctionnement. Pour éviter les blessures, montez l'appareil de telle sorte que la surface inférieure ne soit pas facilement accessible.

NOTE: Observe the following rack mount installation guidelines.

- **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).

Connect the Device

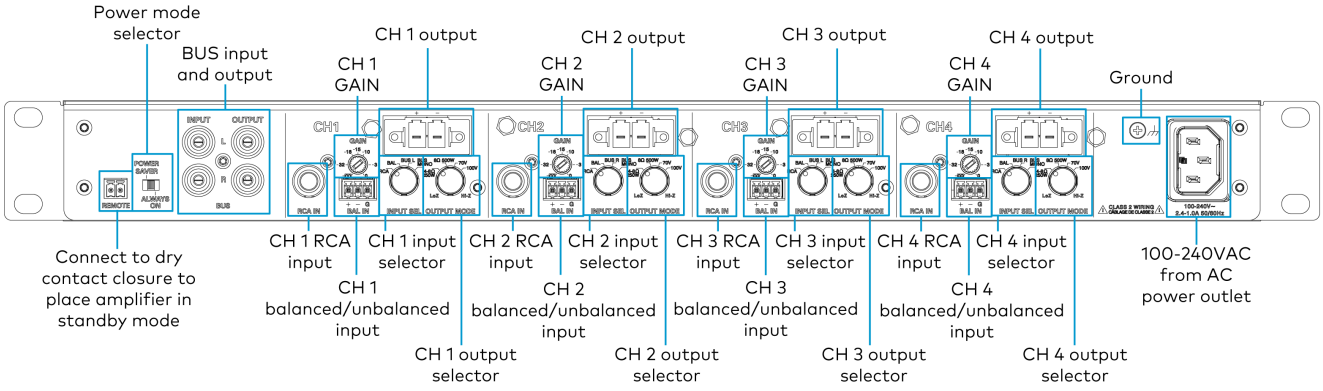
Make the necessary connections as shown in the following illustration.

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.



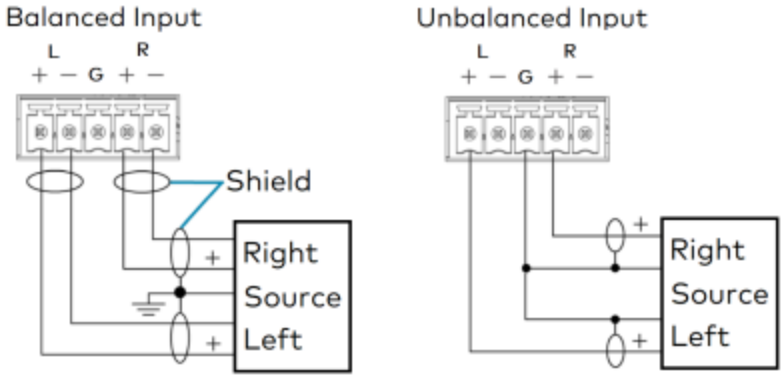
Analog Inputs

Refer to the following illustration when connecting analog audio sources.

Balanced/Unbalanced Audio Input

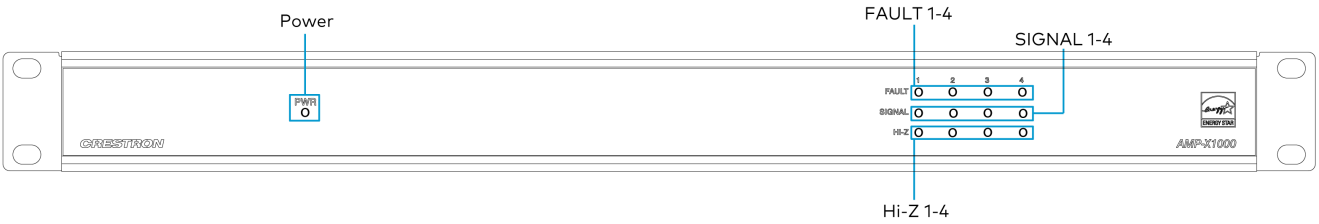
Refer to the following table and illustration for analog audio input pin assignments and connection information.

Signal Name	Balanced Audio Input	Unbalanced Audio Input
+	L+	L+
-	L–	Open
G	Shield/ground	Open
+	R+	R+
-	R-	Open



Observe the LED Indicators

The LEDs provide the following information:



LED Indicator	Color	Meaning
PWR	Amber	Power is being applied to the device. The device is booting.
	White	Device is powered on with audio passing.
	Red	Device is in standby mode.
SIGNAL 1-4	White	Signal is detected on the specified input.
	Off	There is no signal detected on the specified input.
Hi-Z 1-4	White	Hi-Z is enabled on the specified input.
	Off	Hi-Z is disabled on the specified input.
FAULT 1-4	Red	The specified channel is faulted or clipping.
	Off	The specified channel is not faulted or clipping.

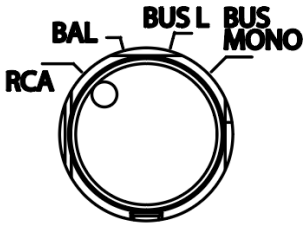
Operation

Refer to the following sections for instructions on operating the AMP-X500, AMP-X750, and AMP-X1000.

> **NOTE:** The only operational difference between the three models is the number of channels and the maximum wattage of the power supply.
>
> - AMP-X500: 2 Channels, 500 W.
> - AMP-X750: 3 Channels, 750 W.
> - AMP-X1000: 4 Channels, 1000 W.

Input Selection

Each amplifier channel has its own input selection rotary dial.



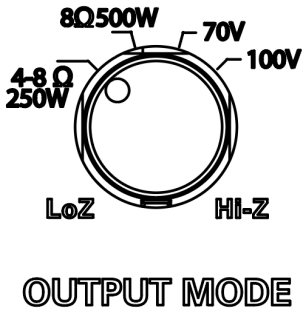
INPUT SEL

Use **INPUT SEL** to select an input source from the following options.

- **RCA**: Selects the channel's **RCA IN** input.
- **BAL**: Selects the channel's **BAL IN** input.
- **BUS L**: (Channels 1 and 3 only): Selects the amplifier's **BUS INPUT L**.
- **BUS R**: (Channels 2 and 4 only): Selects the amplifier's **BUS INPUT R**.
- **BUS MONO**: Selects a mono sum of the amplifier's **BUS INPUT L** and **BUS INPUT R**.

Output Mode

Each amplifier channel has its own **OUTPUT MODE** rotary dial.



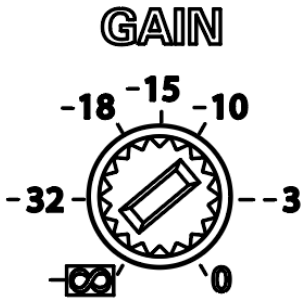
Use the dial to select an output mode for that channel from the following options:

- **Lo-Z** modes:
  - **4-8Ω 250 W**: The output supplies up to 250 W to a low-impedance (4Ω or 8Ω) connected load.
  - **8Ω 500 W**: The output supplies up to 500 W to an 8Ω connected load.
- **Hi-Z** modes:
  - **70V**: The output can feed up to 500W to a connected 70V high-impedance run.
  - **100V**: The output can feed up to 500W to a connected 100V high-impedance run.

> **NOTE:** Total power output is limited by the maximum wattage of the amplifier's power supply.

Gain

Each amplifier channel has its own **GAIN** control knob on the rear of the amplifier.



The **GAIN** knob can be adjusted with a slotted screwdriver to balance the sound between inputs or to accommodate different audio sources. Turn the **GAIN** 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.

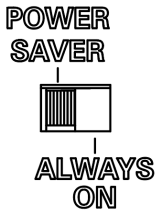
To configure a channel's gain, follow the instructions below.

1. With power to the amplifier removed, send a test signal to the amplifier.
2. Set the test signal to maximum volume.
3. Decrease the channel's gain to the lowest setting (**-∞**).
4. Apply power to the amplifier.
5. Increase the channel's gain 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.

Power Mode

Use the power mode switch to select from the following options:



POWER SAVER: If no signal is detected for 25 minutes, the amplifier will enter a low power state until signal is detected again.

ALWAYS ON: As long as power is applied to the amplifier, it will remain on at full power.

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Product Manual — Doc. 9328C
08/18/25
Specifications subject to
change without notice.