

episode[®]
commercial

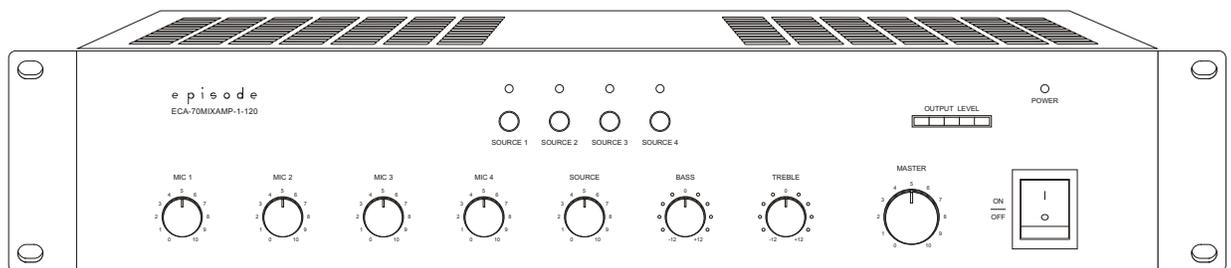
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OWNER'S MANUAL

ECA COMMERCIAL AMPLIFIER

ECA-70MIXAMP-1-120

100V / 70V / 50V / 4Ω Amplifier

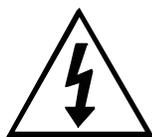


Important Safety Instructions

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

1. Read and follow all instructions and warnings in this manual. Keep for future reference.
2. Do not use this apparatus near water.
3. Clean only with a dry cloth.
4. Do not block any ventilation openings. Install according to manufacturer's instructions.
5. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
6. Do not override the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades - one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
7. Protect the power cord from being walked on or pinched particularly at plug, convenience receptacles, and the point where it exits from the apparatus.
8. Only use attachments/accessories specified by the manufacturer.
9. Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
10. Unplug this apparatus during lightning storms or when unused for long periods of time.
11. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
12. DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, ARE PLACED ON THE EQUIPMENT.
13. TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE.
14. THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL..



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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Overview

Episode® is one of the most highly-regarded brands of amplifiers available today. We appreciate your business and we stand committed to providing our customers with the highest degree of quality and service in the industry.

The Episode® ECA-70MIXAMP-1-120 Commercial Amplifier Mixer is a superb choice for a variety of commercial applications requiring paging and multi-source background music. It has been designed with advanced mixing features and produces 120W RMS, providing the best value and quality for your commercial audio needs.

Important Instructions and Considerations

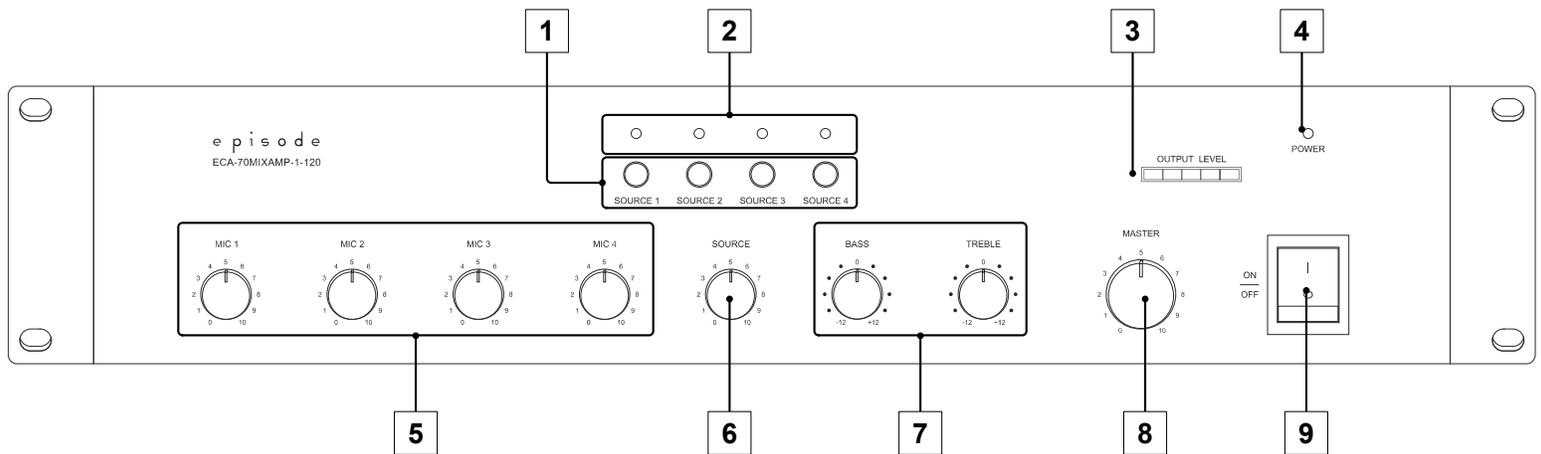
Read and understand all instructions.

Before beginning installation, carefully plan location accounting for potential electrical, plumbing or other obstacles.

Features

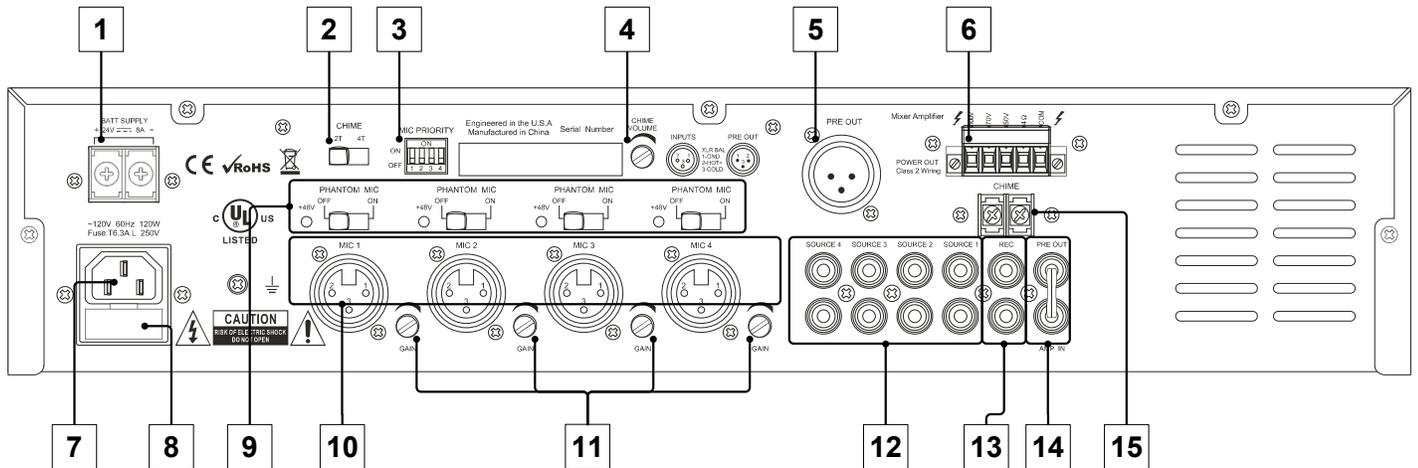
- 120 Watts RMS, 1 Channel
- AC and DC power options
- Low-Frequency filter protection
- Power level meter
- Detachable locking output connector for secure easy connections
- (4) Selectable Source inputs
- Optional 2 or 4 tone chimes triggered by a contact closure
- Preamp output for signal processing equipment or additional amplification
- Individual input volume and master volume controls
- Current limiter, short circuit and thermal protection
- (4) Balanced XLR microphone inputs with selectable priority and phantom power options
- Constant Voltage Options, 100V, 70V and 50V
- 4 or 8 Ohm speaker output capable
- Fixed Level Rec Output

Front Panel



1. **Source Selection Buttons**
Direct Selection of sources.
2. **Source LEDs**
Indicates active signal from appropriate source.
3. **Output Level Meter**
Master volume output level.
4. **Power LED**
BLUE – Amplifier is On
RED – Amplifier is in Protection
5. **Microphone Gain Controls**
Independent gain for the appropriate microphone.
6. **Source Gain Control**
Gain for all sources connected to the amplifier.
7. **Bass / Treble Adjustments**
Adjusts the tone for the amplifier output.
8. **Master Volume Control**
Controls the output for the amp from all sources and microphones.
9. **Power Switch**

Rear Panel



1. Optional 24V DC Power Input

Connect to a 24V DC Power Source when lower voltage input is desired.

2. Chime Selection Switch

Sets the amount of chimes heard when the Chime Trigger is activated. 2 times or 4 times.

3. Microphone Priority Dipswitch

Sets mic ducking for the 4 Mic inputs.

On Mic signal overrides sources (Source signal interrupted by Mic Signal)

Off Mic signal mixes with sources (Source signal and Mic Signal output simultaneously.)

4. Chime Volume

Sets the volume level of when Chimes are triggered.

5. XLR Pre Out

Balanced XLR output attenuated by Master Volume control.

Note: Output level is affected by Source and Mic gain, and Bass and Treble controls.

6. Speaker Output Connector

Connections for 50V, 70V, 100V, or 4Ω speakers attenuated by Master Volume

Note: Output level is affected by Source and Mic gain, and Bass and Treble controls.

7. IEC Power Cord

Detachable power for amplifier.

8. AC Fuse

Replaceable main power fuse.

9. Phantom Power Switches

Off Unpowered Mic

On Provides phantom power to microphones with this capability.

10. Microphone 1-4

Balanced XLR input for microphones.

11. Microphone Gain Controls

Sets the gain level for the appropriate mic input

12. Source Inputs

Unbalanced RCA stereo input for audio sources.

13. Rec Line Output

Unbalanced RCA stereo fixed level output.

Note: Output level is affected by Source and Mic gain, and Bass and Treble controls.

14. Pre Out / Amp In

Unbalanced RCA mono output and input attenuated by Master Volume control. Jumper can be removed for use with External Audio Processor.

Note: Output level is affected by Source and Mic gain, and Bass and Treble controls.

15. Chime Remote Trigger

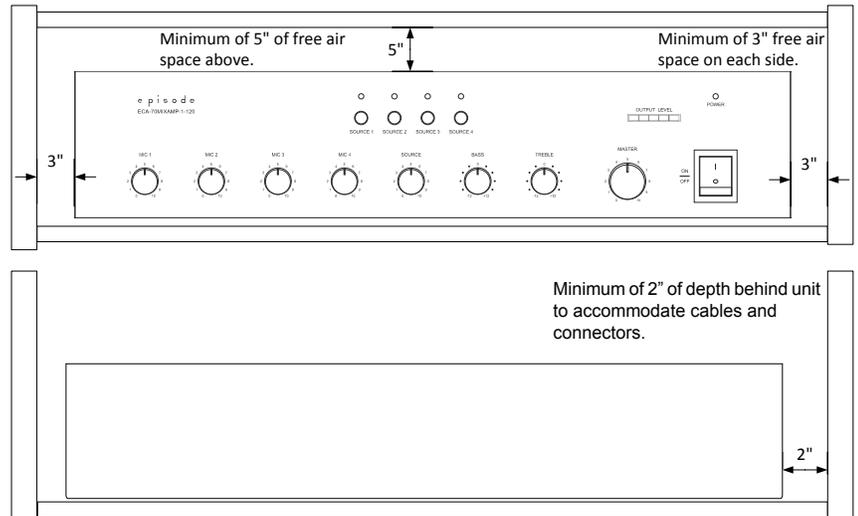
Connect the output of a door or other triggering source

Installation

Positioning the Amplifier

Episode amplifiers are designed to help deliver a great audio experience that makes your music come alive for years to come. However, where you place the amplifier can have a large effect on the performance that you receive and the life of the unit.

- Be sure that the unit is in a well-ventilated area that provides adequate cooling.
- Do not block the cooling vents located on both sides of the unit.
- Do not place the unit on carpeting or any similar material.
- Do not install the unit near a source of heat, or in an extremely humid or wet location.
- If your installation lacks good air flow (such as solid cabinet doors or wall-mounted racks), it may be necessary to create ventilation to allow outside air into the space.
- Allow a minimum of 5" of free air space above the unit.
- Allow a minimum of 3" of free air space on either side of the unit. (Does not apply to rack mounting)



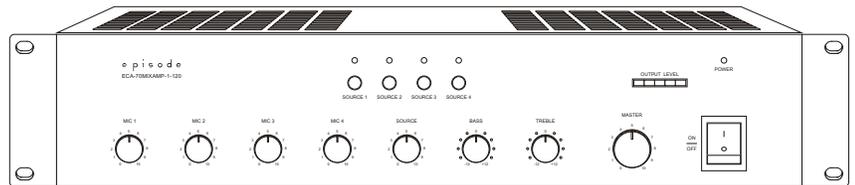
Rack Mounting

1. Remove the amplifier's four feet from the bottom of the chassis.

Note: DO NOT place the screws back into the chassis.

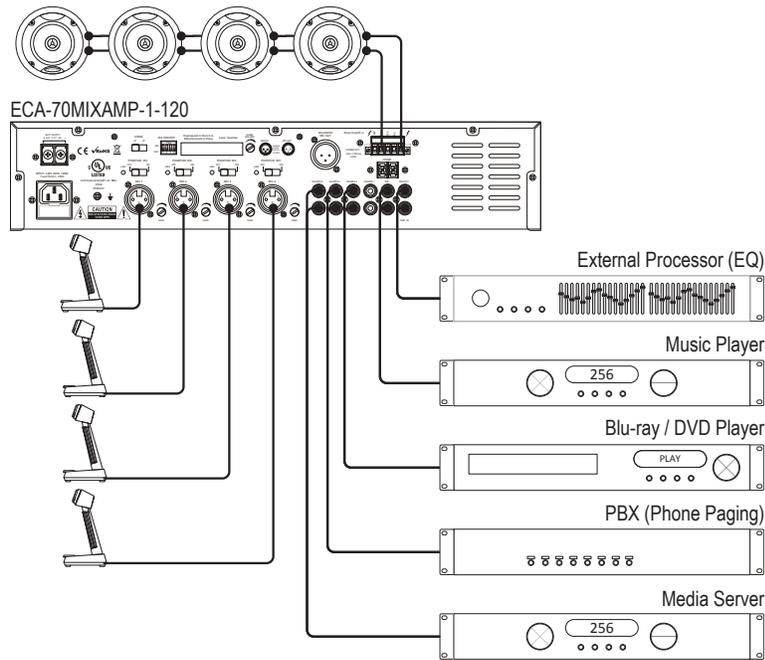
Without the feet, the length of the screw may touch internal components and effect the performance of the amplifier.

2. Attach the included rack-mount ears to the front sides of the amplifier chassis.
3. Securely mount the amplifier into an equipment rack. The amplifier will occupy 2U of rack space.
4. Even though the amplifier produces very little heat, it is always wise to leave ventilation between components.



Standard Connections

While the ECA-70MIXAMP-1-120 can be used in a variety of configurations, the diagram below shows the basic application.



XLR Pinouts

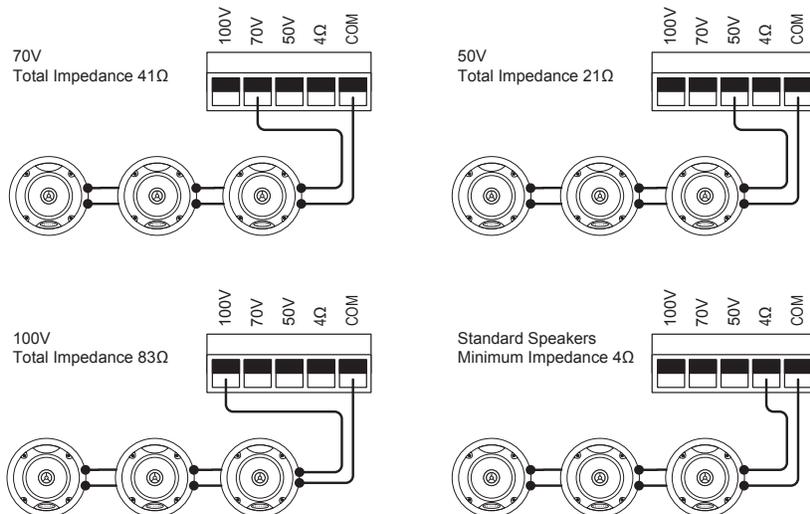


Speaker Connections



Important Note:

- The 4Ω and Constant Voltage outputs cannot be used simultaneously
- Total impedance Load indicated in the below diagram.



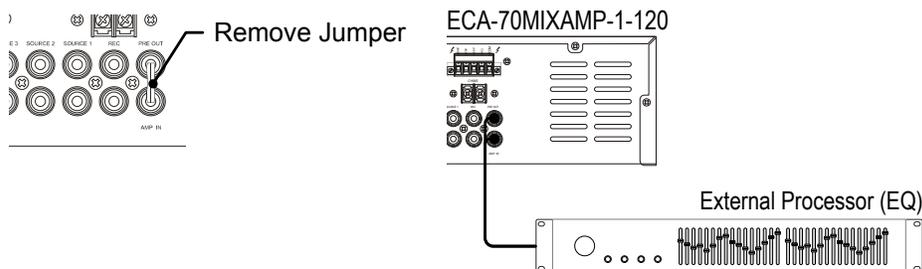
Advanced Connections

External Audio Processing

The ECA-70MIXAMP-1-120 allows for external audio processing to equalize the output to suit the installed environment. This is achieved by using the unbalanced Pre Out and Amp In connections.

Note: This connection is affected by Master Volume, Bass and Treble Controls., keep this in mind when calibrating the external processor.

1. Remove the jumper between the Pre Out and Amp In Connections.
2. Connect the Pre Out to the input of the external processor.
3. Connect the output of the external processor to the Amp In connection.
4. Adjust the master volume to the 12 o' clock position; this will provide an output level in the middle of the volume range.
5. Calibrate the external processor following the instructions provided with that device.

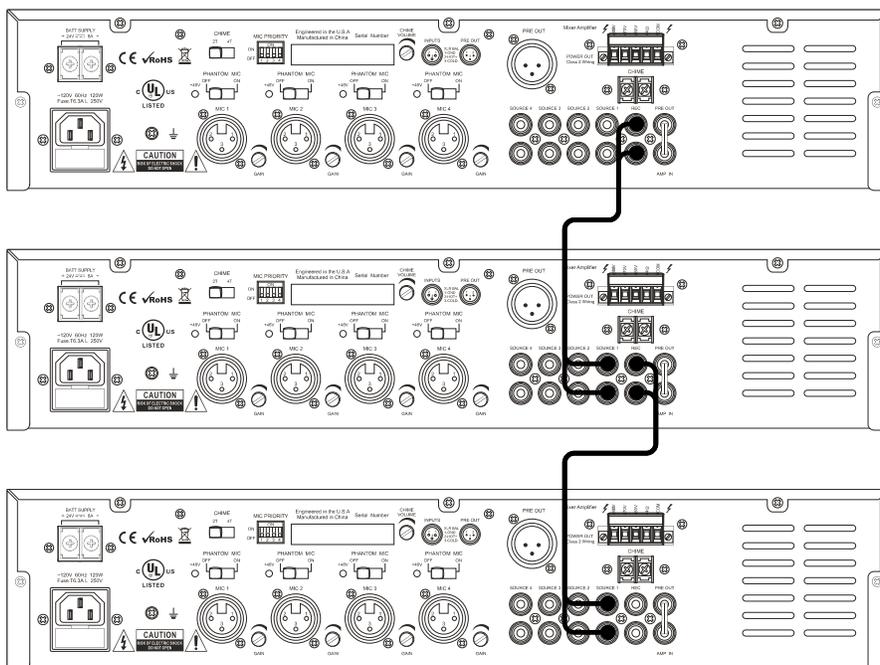


Cascading Amplifiers

Multiple ECA-70MIXAMP-1-120 can be used in a system where more audio distribution is needed. This is achieved by using the unbalanced Rec Line Out to send the signal from Amp1 to the additional amplifiers.

Note: The Rec Line Out is affected by Bass and Treble controls; adjust the tone of Amp1 first and then adjust the tone of the additional amplifiers.

1. Connect the Rec Line Out of Amp1 to a Source on Amp2.
2. Set the gain for the source used to Max, allowing for the volume from Amp1 mics/sources to be at the highest level.
3. Repeat for additional amplifiers.
4. Adjust the tone of Amp1 and then adjust the additional amps in order (Amp1, Amp2, etc.).



Verifying Phase

When proper polarity is not maintained, the speakers play at the opposite 'time' from each other, or out of phase. The result is audio with lack of bass and vocals that sound thin or distant. If during or after calibrating your receiver you suspect the sound is not right and you cannot see any markings on the wire to verify polarity is correct, try this simple test:

1. Sit in the normal listening position for the system.
2. Play some music and listen for the following characteristics.
 - A. Does the bass sound full and even with the other audio?
 - B. Do the vocals sound centered and even in volume?
If either of the answers are YES, follow steps 3 and 4 with the other loudspeakers in the system.
3. Turn off the amplifier and reverse the connections for one of the speakers.
4. Repeat your test at the same volume level. When the sound has the loudest and best sounding bass, and vocals are centered and clear, your connections are correct and in-phase.

Specifications

Rated Power Output	120 watts
4 Microphone Inputs	XLR balanced with phantom power
Sensitivity	-50/-2 dB 2.5/500 MV
Signal To Noise Ratio	>68 dB
Frequency Response	40/17.000 hz (-3 dB)
Phantom Power	+48 v
Input Sensitivity/Impedance	Source 1: 500MV/47 k Ω
	Source 2: 200MV/47 k Ω
	Source 3: 500MV/47 k Ω
	Source 4: 200MV/47 k Ω
Signal To Noise Ratio	90 dB
Frequency Response	40 - 18 kHz (-3 dB)
Control	
Bass	\pm 12 dB
Treble	\pm 12 dB
Chime	2 and 4 tone options
Output Electro/Impedance	775 MV / 47 kW
Output Rec/Impedance	200 MV / 1 kW
Distortion	<0.1%
Operating Condition	
AC Mains Input	120V AC, 24V DC (Optional)
Dimensions (D x W x H)	19" x 14.3" x 3.5"
Power Consumption	160 watts
Weight	24 lbs.

Troubleshooting

No audio from any channel.	<ul style="list-style-type: none"> • Power cable to the amplifier is incorrectly connected or plugged into an outlet that does not have power. Check connections and verify power on the outlet. • Audio cable to the source component is not connected properly, input or the cable is defective. Check connections or replace cable with one that has been verified as good.
No audio from one or more channels.	<ul style="list-style-type: none"> • Audio cable to the source component is not connected properly or the cable is defective. Check connections or replace cable with one that has been verified as good. • The Bridging switch is positioned incorrectly. Refer to installation instructions for proper settings. • Check the connections of the speaker wire at both the speaker and amplifier.
No audio from one channel or one zone only.	<ul style="list-style-type: none"> • Check the front panel LED for the channel that is not working. If it is red, there may be a short on either one of the speaker wires for that channel. Check wires and speaker connections for shorts. • The level adjustment on the channel is turned down. Turn it slowly to the right to raise the volume. • Test the bad channel by connecting it to a speaker that you know works. • Audio cable to the source component is not connected properly or the cable is defective. Check connections or replace cable with one that has been verified as good. • The Bridging switch is positioned incorrectly. Refer to installation instructions for proper settings. • Check the connections of the speaker wire at both the speaker and amplifier.
Hum or buzzing sound is heard.	<ul style="list-style-type: none"> • Check RCA input cables by removing them one at time (powering down the amplifier before disconnecting) and checking to see if a connection or cable is to blame.
Amplifier will not turn on.	<ul style="list-style-type: none"> • The amplifier must be plugged into a live outlet. • The power switch on the back panel must be on. • Ensure 12V is present if using the trigger input.
Front Power Button Inoperative	<ul style="list-style-type: none"> • Set the Power Mode Switch to ON.

Note: If any of the troubleshooting methods listed above do not resolve the issue, please contact our Technical Support department.

Contacting Technical Support

Phone: (866) 838-5052

Email: Techsupport@snapav.com

Warranty

5-Year Limited Warranty

Episode® Amplifier Products have a 5-Year Limited Warranty. This warranty includes parts and labor repairs on all components found to be defective in material or workmanship under normal conditions of use. This warranty shall not apply to products which have been abused, modified or disassembled. Products to be repaired under this warranty must be returned to SnapAV or a designated service center with prior notification and an assigned return authorization number (RA).

