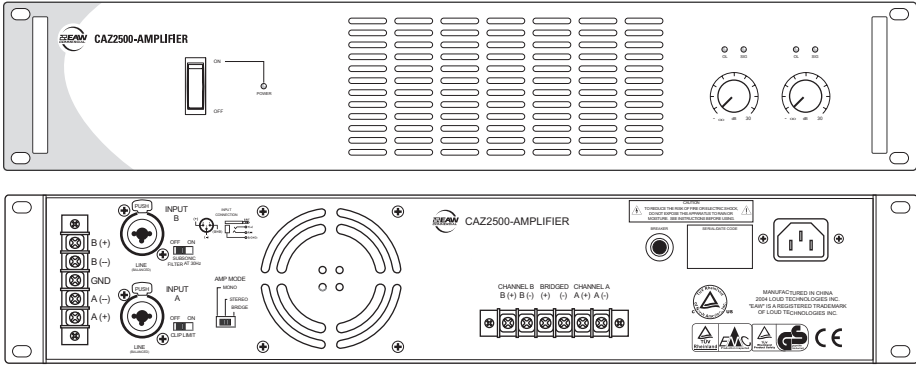


# INSTRUCTION MANUAL



# CAZ2500 CAZ1400 CAZ800

Power Amplifiers



# 1. SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. 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.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. 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.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as 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.
15. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
16. **WARNING:** The output terminals are **HAZARDOUS LIVE** and any external wiring connected to these terminals requires installation by an **INSTRUCTED PERSON** or the use of ready-made leads or cords.
17. **WARNING:** This apparatus shall be connected to a **MAINS** socket outlet with a protective earthing connection.
18. **WARNING:** Treat all live speaker cords with care, as you would an AC power cord.



19. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart.

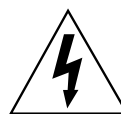
According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here:

Duration Per Day In Hours	Sound Level dBA, Slow Response	Typical Example
8	90	Duo in small club
6	92	
4	95	Subway Train
3	97	
2	100	Very loud classical music
1.5	102	
1	105	Tami screaming at Adrian about deadlines
0.5	110	
0.25 or less	115	Loudest parts at a rock concert

⚡ **CAUTION AVIS** !

RISK OF ELECTRIC SHOCK  
DO NOT OPEN  
RISQUE DE CHOC ELECTRIQUE  
NE PAS OUVRIR

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK  
DO NOT REMOVE COVER (OR BACK)  
NO USER-SERVICEABLE PARTS INSIDE  
REFER SERVICING TO QUALIFIED PERSONNEL  
*ATTENTION: POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE.*  
*AVIS: POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE*



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

*Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.*



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

*Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.*

## 2. INTRODUCTION

Congratulations on the purchase of your new EAW Commercial power amplifier. You now own one of the finest professional audio products available - the result of exceptional engineering and meticulous craftsmanship. Please read these instructions to get the maximum performance from your new power amplifier.

Each EAW Commercial power amplifier is intended for professional use. The construction, components, and hardware have been designed to provide robust, reliable performance for its intended application. Please ensure that you fully understand its proper installation and operation before use.

The CAZ series amplifiers are designed for continuous duty in speech, music, paging and sound reinforcement applications in churches, schools, offices, arenas, hotel meeting rooms, convention centers, recreation facilities and other venues demanding high performance, flexible features, and rugged dependability.

A rear panel low-cut switch allows you to remove low frequencies (below 30 Hz), and a clip-eliminator allows extra protection for your speakers by preventing the amplifier from being overloaded.

The amplifier can operate in stereo, dual-mono, or bridged mono.

The outputs are screw terminals that accept bare wire or spade terminals.

There are screw terminal inputs, and combination inputs, capable of accepting balanced XLR, 1/4" TRS, or unbalanced 1/4" TS connections from line-level sources. Two front panel level controls allow adjustment of the input signals.

The front panel has a rocker power switch with a power LED, and each channel has a signal-present LED and an overload LED.

The amplifier output stage is fully protected against permanent damage caused by overloading, shorts, and extreme temperatures.

The front panel incorporates holes for rack mounting, and it will take up two rack spaces. There are two handles fitted on the front panel for easy transporting.

### KEY FEATURES

- CAZ800: 800 watts continuous @ 4 ohms bridged  
CAZ1400: 1400 watts continuous @ 4 ohms bridged  
CAZ2500: 2500 watts continuous @ 4 ohms bridged
- Ultra-low noise/low-distortion design
- Switchable low-cut filter @ 30 Hz on both channels
- Switchable limiter on both channels
- Combination 1/4" TRS and XLR line input jacks
- Screw terminal input connectors (balanced)

- Screw terminal output connectors
- Detented rotary gain controls
- Signal present and OL (overload) LEDs
- Variable speed fans and large finned heatsink for superior cooling
- Robust chassis, proven design
- Discreet component power amplifiers
- Double-sided, quality circuit boards

### APPLICATIONS

- Foreground/Background Music Systems
- Sound Reinforcement Systems
- Paging Systems
- Continuous-Duty Applications

### UNPACKING

You should visually inspect the outside of the shipping carton and note any damage on the shipping bill. After unpacking, if you find concealed damage, save the packing materials for the carrier's inspection, notify the carrier immediately, and file a shipping damage claim. Although EAW Commercial will help in any way possible, it is always the responsibility of the receiving party to file any shipping damage claim. The carrier will help prepare and file this claim.

Keep your receipt in a safe place. This is required as proof if the amplifier ever needs warranty service.

## TABLE OF CONTENTS

1. SAFETY INSTRUCTIONS .....	2
2. INTRODUCTION.....	3
3. FRONT PANEL FEATURES .....	4
4. REAR PANEL FEATURES.....	5
5. OPERATION .....	7
6. CONNECTIONS .....	9
7. HOOKUP DIAGRAMS .....	10
8. SPECIFICATIONS.....	12
9. BLOCK DIAGRAM.....	13
10. TROUBLESHOOTING.....	14
11. SERVICE INFORMATION .....	15
12. EAW COMMERCIAL WARRANTY .....	15

# 3. FRONT PANEL FEATURES

## 1. POWER

Use this rocker switch to turn the unit on or off. This connects/disconnects the AC power to the AC power transformer.

The amplifier is on when the top of the switch is pressed in. It is off when the bottom of the switch is pressed in.

The Power LED will light when the power switch is on.

## 2. VENTILATION

Keep these ventilation slots free from any obstructions, so the air may flow freely and cool down the power transistors.

## 3. OL LEDs

This is short for "overload." These red LEDs indicate when the output of the amplifier has reached the maximum, and is right on the edge of clipping. Clipping is bad for speakers and should be avoided.

It is okay if the OL LED blinks occasionally. It means that the transient peaks of the music are just hitting the full output of the amplifier.

However, if the OL (overload) LED is blinking frequently or continuously, turn down the source signal (i.e., the mixer's master faders) or the amplifier's Level controls.

## 4. SIG LEDs

This is short for "signal present." These green LEDs indicate when a signal is present after the Level controls, at the output stage of the power amplifier. If the Level controls are turned all the way down (fully counterclockwise), these indicators will not light.

## 5. LEVEL CONTROLS

These two knobs control the levels of Channels A and B. The knobs are detented to make it easy to set both controls to the same level. Usually, these controls are set all the way up.

You might turn them down slightly if you have high-efficiency speakers. Also, you could use them to control the level of line-level sources such as a CD player connected directly to the amplifier without a preamplifier or mixer.

The amplifiers are designed so that a +3.4 dBu (1.15V rms) input signal drives the amplifier to full power into 4 ohms:

CAZ800 = 300 watts per channel into 4 ohms

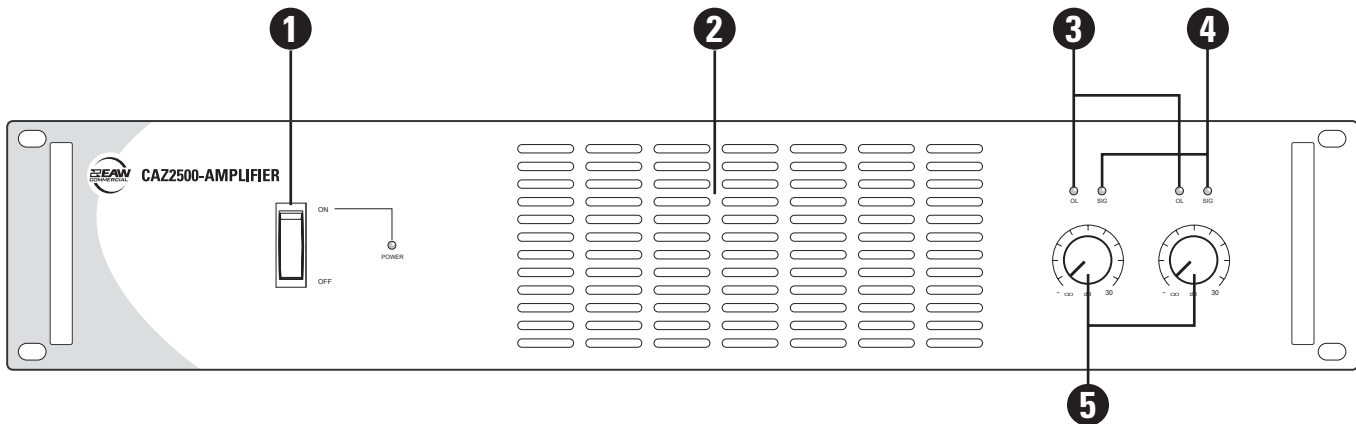
CAZ1400 = 450 watts per channel into 4 ohms

CAZ2500 = 750 watts per channel into 4 ohms

This equates to a gain of about 30 dB (30 dB, 32 dB, and 34 dB respectively). The graphics around the knob indicate full gain of (about) 30 dB when the knob is all the way up (fully clockwise).

After you have set the levels for the mixer (or other signal source), adjust the Level controls on the amplifier as the final adjustment to set the overall volume for the system.

In stereo and mono mode, use both level controls to control the levels going to each speaker. In bridged mode, turn the channel B level control down, and just use the channel A control.



# 4. REAR PANEL FEATURES

## 1. SCREW TERMINAL INPUTS

The CAZ series amplifiers give you three options for connecting the input signal — these screw terminals, and XLR or 1/4" connectors via the "combination" input described below.

You can connect either a balanced or an unbalanced signal here.

The screw terminal and the combination inputs are in parallel, and are identical electrically. Since these two inputs are in parallel, you shouldn't connect more than one source to the INPUT A or INPUT B jacks.

## 2. COMBINATION INPUTS

These inputs allow you to connect balanced XLR plugs or 1/4" TRS or TS plugs from line-level sources.

Use balanced connections where possible, as these offer better rejection of noise than unbalanced lines.

Use high-quality, three-conductor shielded cable for balanced connections. The better the shield, the better the audio signal is protected from induced EMI and RFI.

## 3. SUBSONIC FILTER

Turn this switch on to engage a low-frequency cutoff (high-pass) filter at 30 Hz. The frequency range below 30 Hz is attenuated.

The CAZ series amplifiers can amplify signals below 20 Hz, but most speakers can't reproduce frequencies that low.

By engaging the SUBSONIC FILTER, you allow the amplifier to power only the frequencies you can hear. In addition, this filter can reduce low-frequency stage noise (footsteps) and accidental microphone pops that could damage a loudspeaker.

Leave this off if you are powering a subwoofer, or if your speakers can reproduce low frequencies such as the kick drum range.

## 4. CLIP LIMIT

When engaged, the CLIP LIMIT switch protects your loudspeakers from the effects of clipping. It is designed to be virtually transparent, meaning you probably won't even notice any audible difference when the switch is turned on.

We recommend that you leave this switch on at all times. However, if you are working at quiet levels, or you have already placed a compressor/limiter in the signal path, you can leave the CLIP LIMIT switch off.

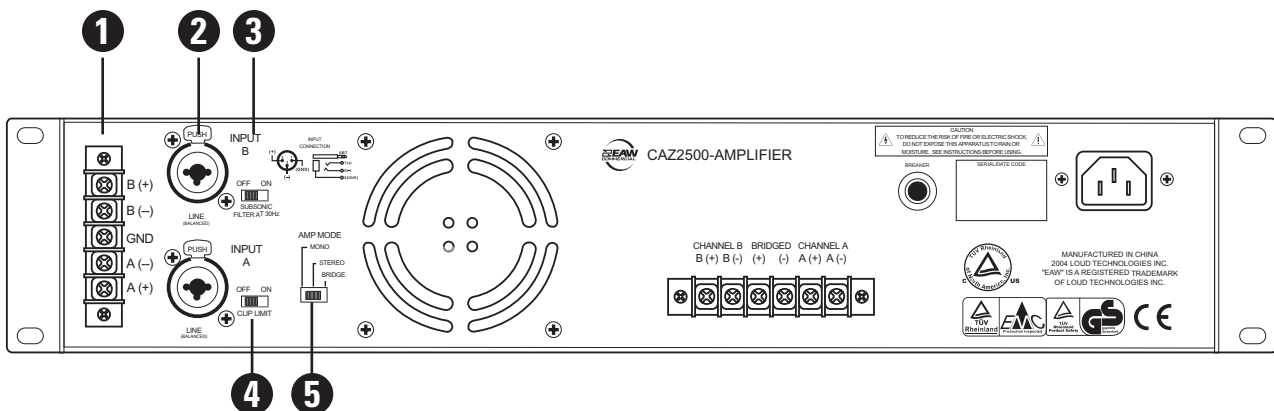
## 5. AMP MODE

This switch determines the input signal routing within the amplifier. For most applications, you will use the STEREO setting. However, some applications might be better suited for using either the MONO or the BRIDGE setting.

**STEREO:** This is the normal position used when amplifying stereo signals. This mode accepts separate left and right inputs (A and B), and routes them to the CHANNEL A and CHANNEL B outputs. Each channel's Level control adjusts the gain for its own channel, and each channel is independent.

**MONO:** This mode is used when you want to send a mono signal to both outputs. It accepts a single input (INPUT A), and routes it to both the CHANNEL A and CHANNEL B outputs. Each channel's Level control adjusts the gain for its own channel.

**BRIDGE:** This mode accepts a single input (INPUT A), and uses both amplifier outputs to double the power to one speaker. Use the Channel A Level control to adjust the gain (turn the Channel B Level control all the way down). The hookup diagrams show how to connect a speaker in Bridge mode.



## 6. FAN VENTS

Do not obstruct the ventilation openings of the amplifier.

## 7. SPEAKER OUTPUTS

Connect your speakers to these output screw terminals. The hookup diagrams on page 10 show how to connect your speakers in various ways.

There are three pairs of terminals. Use the two outer pairs (CHANNEL A and CHANNEL B) when using stereo or mono modes.

Use the center pair (BRIDGED) when using bridge mode.



Note: When using bridge mode, your speaker's average impedance must be 4 ohms or greater.

This terminal strip is normally covered by a protective cover. Remove the two screws and the cover while making or undoing connections. Securely refit the cover when you have finished making the connections.

## 8. BREAKER

This is a resettable circuit breaker that monitors the amount of current being drawn by the amplifier. Under normal operating conditions, this should never pop. An unusual condition may cause the breaker to pop, such as a mains voltage surge occurring at the same time as a peak amplifier output.

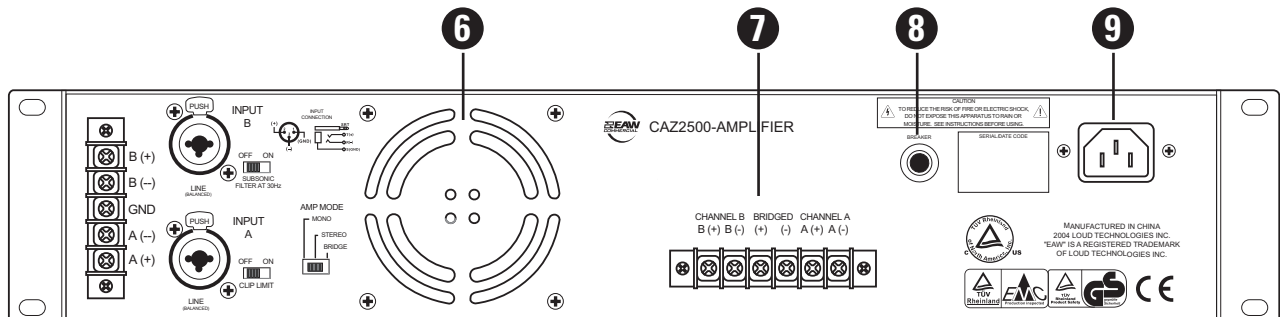
Turn the POWER switch off, and push the BREAKER button in to reset the circuit breaker. Turn the POWER switch back on and the amplifier should resume normal operation. If the circuit breaker pops again, something probably isn't right.

- Make sure that the total impedance of the speakers connected to the outputs is 2 ohms or greater (per channel) in stereo mode, or 4 ohms or greater in bridged mode.
- If the breaker pops right away, even with the Level controls turned down and the speakers disconnected, there may be something wrong inside the amplifier.

## 9. POWER CORD SOCKET

Here is where you connect the detachable power cord included with your amplifier. Plug the other end of the power cord into an AC outlet properly configured with the voltage required for your particular model.

Be sure the AC outlet can supply enough current to allow full power operation of all the amplifiers plugged into it. The outlet should be a three-prong socket that matches the power cord.



## 5. OPERATION

The following steps will help you set up your amplifier, and get the levels just right.

### GETTING STARTED



1. Be sure the amplifier's POWER switch is off when making any connections to or from the amplifier.
2. Turn down both Level controls.
3. On the rear panel, set the SUBSONIC FILTER switch OFF and the CLIP LIMIT switch ON.
4. Determine which AMP MODE is best for your application.

### CONNECTIONS

1. In STEREO mode, connect the cables from your mixer (or other signal source) main line-level outputs to the amplifier's A and B inputs.
2. In MONO or BRIDGE mode, connect one cable from your mixer (or signal source) main line-level output to the amplifier's A input only.
4. In STEREO and MONO modes, connect your speaker wires to the CHANNEL A and CHANNEL B screw terminal outputs. Take care to observe the correct polarity.
  - The A(+) output terminal connects to the left loudspeaker red (+) terminal.
  - The A(-) output terminal connects to the left loudspeaker black (-) terminal.
  - The B(+) output terminal connects to the right loudspeaker red (+) terminal.
  - The B(-) output terminal connects to the right loudspeaker black (-) terminal.
5. In BRIDGE mode, connect your speaker wires from a single loudspeaker to the center pair of screw terminals.
6. Plug all the sound system components into suitable AC outlets, properly grounded and capable of delivering adequate current.
7. Make sure your signal source is powered up and delivering signal to the amp.
8. Turn the power amplifier's switch on. Verify that the POWER LED lights.
9. Slowly turn up both Level controls on the amplifier. You should hear music and see the SIG LEDs flashing. If the OL (Overload) LEDs are flashing, turn down either the Level controls on the amp or the source signal's output level controls (i.e., master faders), until the OL LEDs either blink occasionally or not at all.

### OPERATING TIPS

- Do NOT drive any of your electronic equipment into clipping, particularly the power amplifiers. This can easily damage the loudspeakers.
- If driven into clipping, even an amplifier with a power output rating lower than the loudspeaker's power rating can cause damage to a loudspeaker.
- Avoid sustained microphone feedback. This can quickly cause failure of high frequency drivers.
- Sometimes external signal processing is desirable to "voice" loudspeakers to accommodate particular program material, less than optimum acoustics, feedback control, or personal taste. For these purposes, use a suitable electronic signal processor. This can be as simple as a 1/3 octave graphic equalizer or a fully capable DSP (digital signal processor) such as the EAW DX810 or MX8750.
- Avoid extreme boosts on equalizers as these can cause excessive input to the drivers at the boosted frequencies. Generally, cutting frequencies is preferred to adjust the frequency response.
- With appropriate signal processing, your system should produce exceptionally good sound. If it is used in a room with problematic acoustics, there is little you can do to overcome the room problems with electronic adjustments. Your best solution is careful placement and aiming of the loudspeakers so most of the sound is directed only at the audience.
- EAW Commercial amplifiers are capable of producing sound levels from speakers that can be damage your hearing. Take precautions so that audiences are not exposed to such levels. If you must expose yourself to these kinds of volume levels, wear adequate hearing protection.
- Take care when moving or lifting the amplifier. Injury to you or damage to the amplifier can result from careless handling. Remember to lift by bending your knees, not your back.
- Never plug amplifier outputs into anything except speakers.
- Before making connections to an amp or reconfiguring an amp's routing, turn the amp's level controls down, turn the power off, make the changes, turn the power back on, and then turn the level controls back up.
- If you shut down your equipment, turn off the amplifiers first. When powering up, turn on the amplifiers last.
- Save the shipping box and packing material.



## AC POWER REQUIREMENTS

The amplifier's power cord should be plugged into an AC outlet properly configured with the voltage required for your particular model.

Be sure the AC outlet can supply enough current to allow full power operation of all the amplifiers plugged into it. The outlet should be a three-prong socket that matches the power cord.



**WARNING:** Bypassing the plug's safety ground pin can be dangerous. Don't do it!

The AC current demand of an amplifier varies depending on several factors, including the load impedance, the crest factor, and the duty cycle of the program material. Under typical conditions reproducing rock music where musical peaks are just below clipping, the amplifiers require the following average currents.

CAZ800 = 5 A

CAZ1400 = 7 A

CAZ2500 = 10 A

It is recommended that a stiff supply of AC power be used because the amplifier places high current demands on the AC line. The more power that is available on the line, the louder the amplifier will play and the more peak output power will be available for cleaner, punchier bass.

If you have more than one amplifier sharing an AC outlet, you should avoid turning them all on at the same time. Rather, sequence them on, one at a time, to prevent popping the circuit breaker (due to in-rush current).

## THERMAL CONSIDERATIONS

The power amplifier is fan cooled. Air is drawn through the rear panel vents, to cool down the amplifier heatsinks, and then expelled through the front panel vents.

When installing, be sure to allow sufficient air space around the front and rear of the amplifier for adequate cooling for the heatsinks. Leave at least one rack space above and below, and at least 6 inches behind and in front of the chassis to allow proper ventilation.

If the amplifier should overheat, a thermal switch turns off the power amplifier, allowing the heatsink to cool down. Once the amplifier has cooled to a safe operating temperature, the thermal switch resets and reactivates the amplifier. If this should occur, identify the cause of the problem and take corrective action. For example:

- Provide better ventilation
- Install a fan in the rack to move more air
- Make sure the amplifier is not overloaded with too low of a load impedance or by a short circuit on the speaker line

## RACK MOUNTING

The CAZ amplifiers are designed to be mounted in a standard rack. They require two rack spaces (2U = 3.5"). They also require 15.75" depth inside the rack, including the rear support brackets. When designing your rack, put the heavier items at the bottom and the lighter items toward the top.

Secure the front panel of the amplifier to the front of the rack using four screws with soft washers to prevent scratching the panel. In addition, because of the weight of the amplifier, you must secure the rear support brackets of the amplifier to the back of the rack. You could use a support rail or shelf across the back of the rack, or angle brackets attached between the rear support rails and the rear rails of the rack. This is recommended for all components mounted in a rack that is going to be moved frequently.

## MAINTENANCE

Usually, your amplifier will not require regular maintenance for normal use. However, you can do several things to keep it in good operating and cosmetic condition.

- **Testing:** Periodically test your system for proper performance. A simple test is to play a CD through it using well-defined, articulate, wide-range program material. Listen to ensure all drivers are working properly and for any evidence of distortion or other extraneous sounds. Test at several volume levels: very low, normal, and high.
- **Cleaning:** Use only a clean dry cloth to dust off and clean the surface. Turn off the power to the amplifier while you do this.

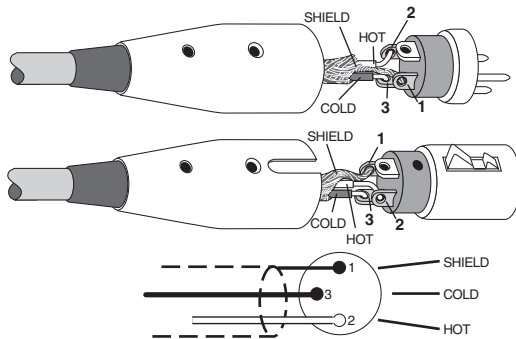


## 6. CONNECTIONS

Use a high-quality 3-conductor shielded cable to connect the signal between the signal source (mixing console, equalizer, etc.) and the balanced inputs to the amplifier. If you are using unbalanced inputs, use a high-quality 2-conductor shielded cable. Here are some common audio connectors and their internal wiring:

### XLR Connectors

XLR connectors are commonly wired as follows (according to standards specified by the Audio Engineering Society):

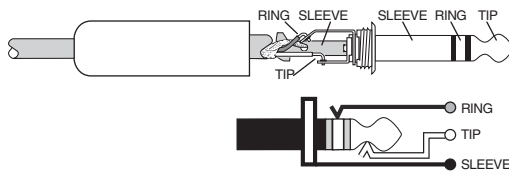


#### XLR Balanced Wiring

- Pin 1 = Shield
- Pin 2 = Hot (+)
- Pin 3 = Cold (-)

### 1/4" TRS Phone Plugs and Jacks

"TRS" stands for Tip-Ring-Sleeve, the three connections available on a stereo 1/4" or balanced phone jack or plug. TRS jacks and plugs are used for balanced signals and stereo headphones.

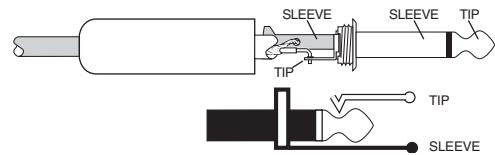


#### 1/4" TRS Balanced wiring

- Sleeve = Shield
- Tip = Hot (+)
- Ring = Cold (-)

### 1/4" TS Phone Plugs and Jacks

"TS" stands for Tip-Sleeve, the two connections available on a mono 1/4" phone jack or plug. They are used for unbalanced signals.



#### 1/4" TS Unbalanced Wiring

- Sleeve = Shield
- Tip = Hot (+)

### Loudspeaker Cable

Use loudspeaker cables with a minimum conductor size for the length you need as listed in these tables.

This will minimize power losses to less than 0.5 dB. The cable lengths listed are "up to" lengths. For in-between lengths, use the next larger conductor gauge. Using larger than the recommended conductor size is always permissible. Using smaller than recommended conductor size will result in higher power losses.

Minimum AWG	4 ohm	8 ohm
18	10 ft	25 ft
16	25	50
14	25	75
12	50	125
10	100	200

Min Metric WG	4 ohm	8 ohm
12	3 m	8 m
14	8	15
16	8	25
20	15	40
25	30	60

The recommended conductor gauges are listed for AWG (American Wire Gauge) and Metric WG (Metric Wire Gauge). Note that smaller AWG numbers = larger conductors and smaller Metric WG numbers = smaller conductors. The Metric WG is equal to ten times the nominal conductor diameter in millimeters.

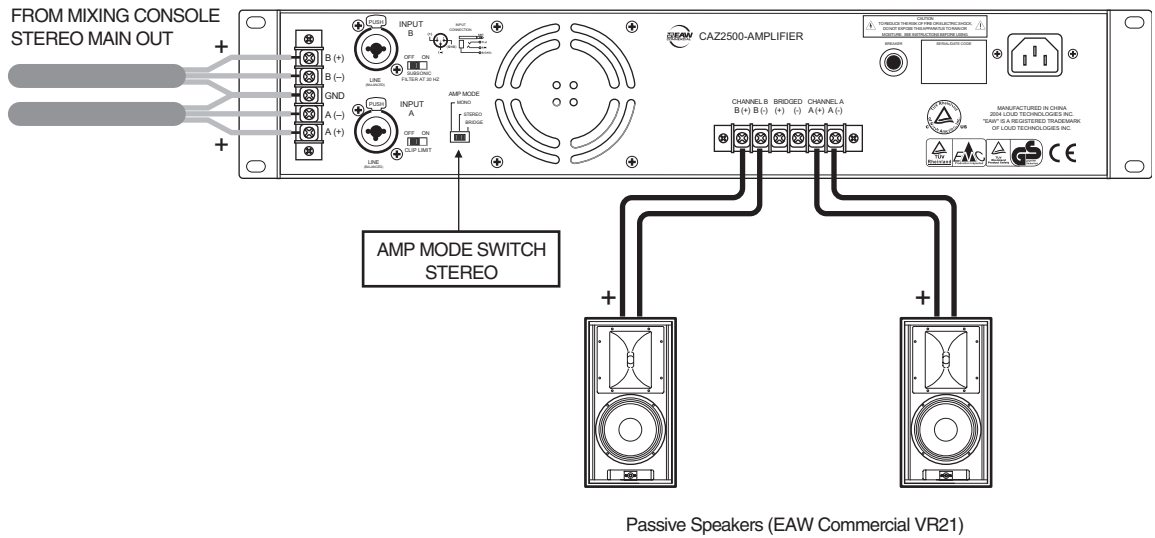
### Longer Lengths

For cable lengths over 200 feet / 60 m at 8 ohms, and over 100 feet / 30 m at 4 ohms, the conductor sizes needed for less than 0.5 dB power losses are rarely practical for physical and cost reasons.

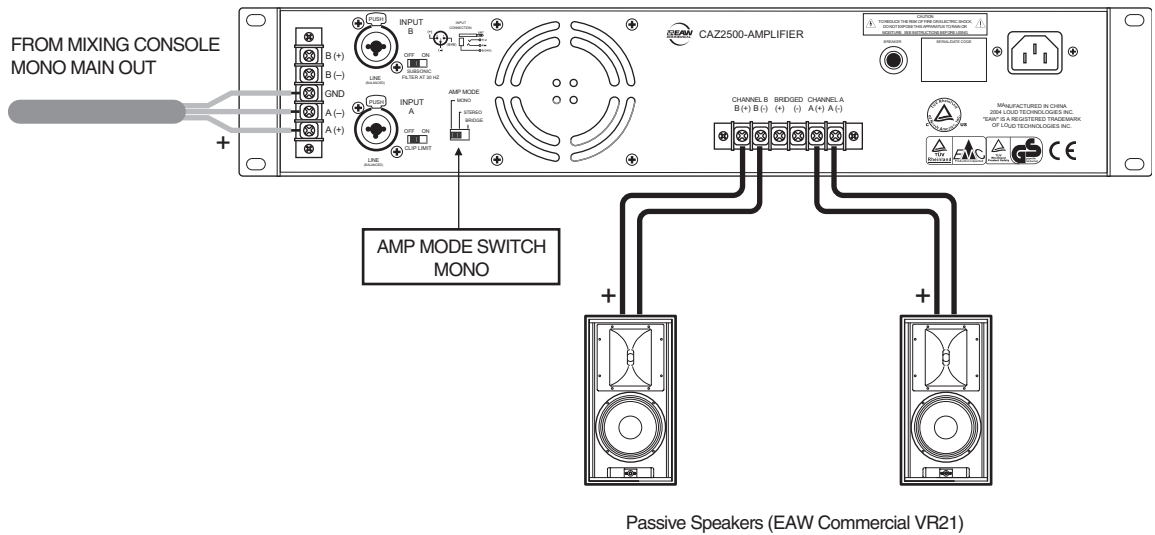
As a practical compromise for these situations the recommended conductor gauge is 10 AWG or 25 metric.

# 7. HOOKUP DIAGRAMS

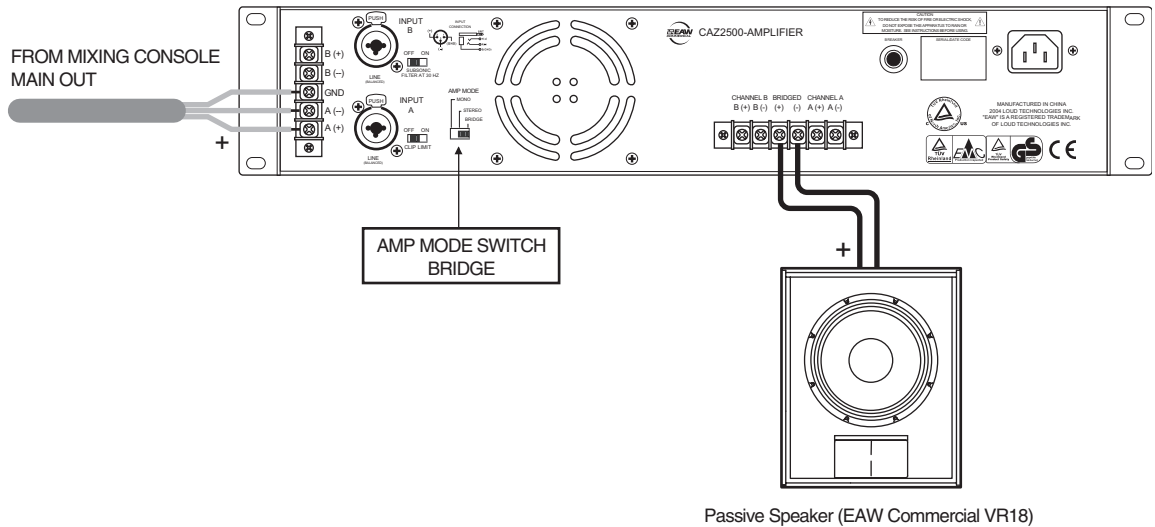
## STEREO HOOKUP



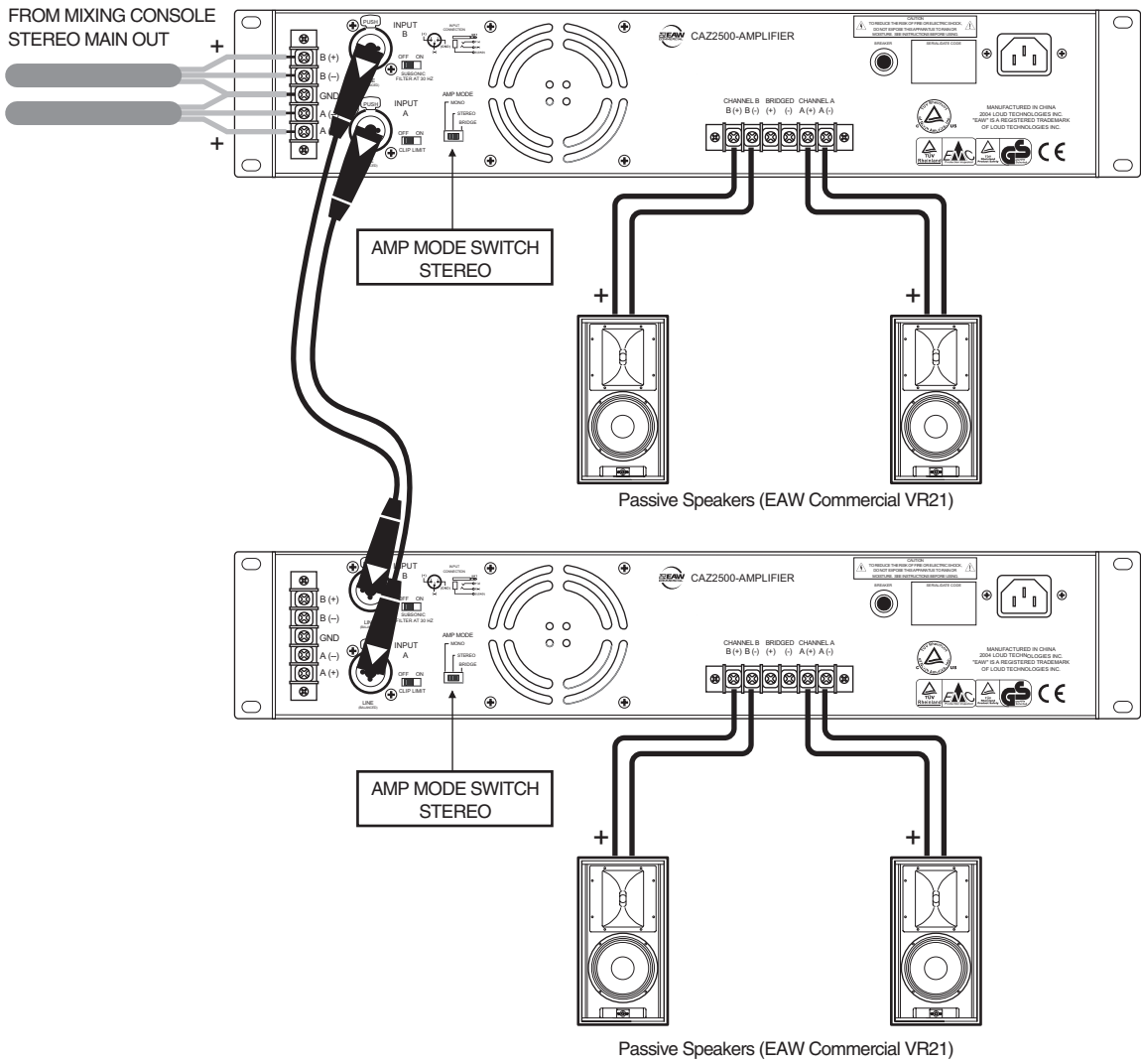
## MONO HOOKUP



## BRIDGED HOOKUP



# DAISY CHAINING



# 8. SPECIFICATIONS

## Continuous Sine Wave Average Output Power, both channels driven, 20 Hz to 20 kHz

	CAZ800	CAZ1400	CAZ2500
2 ohms:	480 W	800 W	1400 W
4 ohms:	300 W	450 W	750 W
8 ohms:	205 W	310 W	575 W

## Bridged Mono Operation, 20 Hz to 20 kHz

	CAZ800	CAZ1400	CAZ2500
4 ohms:	800 W	1400 W	2500 W
8 ohms:	560 W	900 W	1500 W

**Note:** Power ratings are specified at 120 VAC line voltage.

## Power Bandwidth

5 Hz to 50 kHz (+0, -3 dB)

## Frequency Response

25 Hz to 25 kHz (+0, -1 dB)

## Distortion

THD and SMPTE IMD; 20 Hz to 20 kHz  
< 0.03 % @ 8 ohms

## Signal-to-Noise Ratio

> 100 dB below rated power into 4 ohms

## Channel Separation

> 90 dB @ 1 kHz

## Damping Factor

> 300 @ 1 kHz and below

## Input Impedance

20 k $\Omega$  balanced  
10 k $\Omega$  unbalanced

## Input Sensitivity

1.15 V (+3.4 dBu) for rated power into 4 ohms

## Gain

CAZ800:	30 dB
CAZ1400:	32 dB
CAZ2500:	34 dB

## Maximum Input Level

9.75 Vrms (+22 dBu)

## Turn On Delay

2.5 seconds

## Subsonic Filter

- 9 dB @ 30 Hz

## Topology

CAZ800, CAZ1400:	Class AB
CAZ2500:	Class H

## Cooling

Dual variable-speed fans with back to front airflow

## Indicators

Channels A and B  
SIG (Signal Present), OL (Overload)  
POWER

## Current Consumption

	CAZ800	CAZ1400	CAZ2500
Idle	0.5 A	0.5 A	1.0 A
Musical Program @ 8 $\Omega$	3.9 A	5.1 A	8.1 A
Musical Program @ 4 $\Omega$	5.0 A	6.7 A	10.0 A
Musical Program @ 2 $\Omega$	7.0 A	10.6 A	17.2 A

## AC Power Requirements

U.S.	120 VAC, 60 Hz
Europe	240 VAC, 50 Hz

## Physical Dimensions and Weight

Height:	3.5 in/89 mm
Width:	19.0 in/483 mm
Depth:	15.7 in/400 mm
Weight:	
CAZ800:	43.6 lb/19.8 kg
CAZ1400:	48.5 lb/22.0 kg
CAZ2500:	56.2 lb/25.5 kg

## Warranty

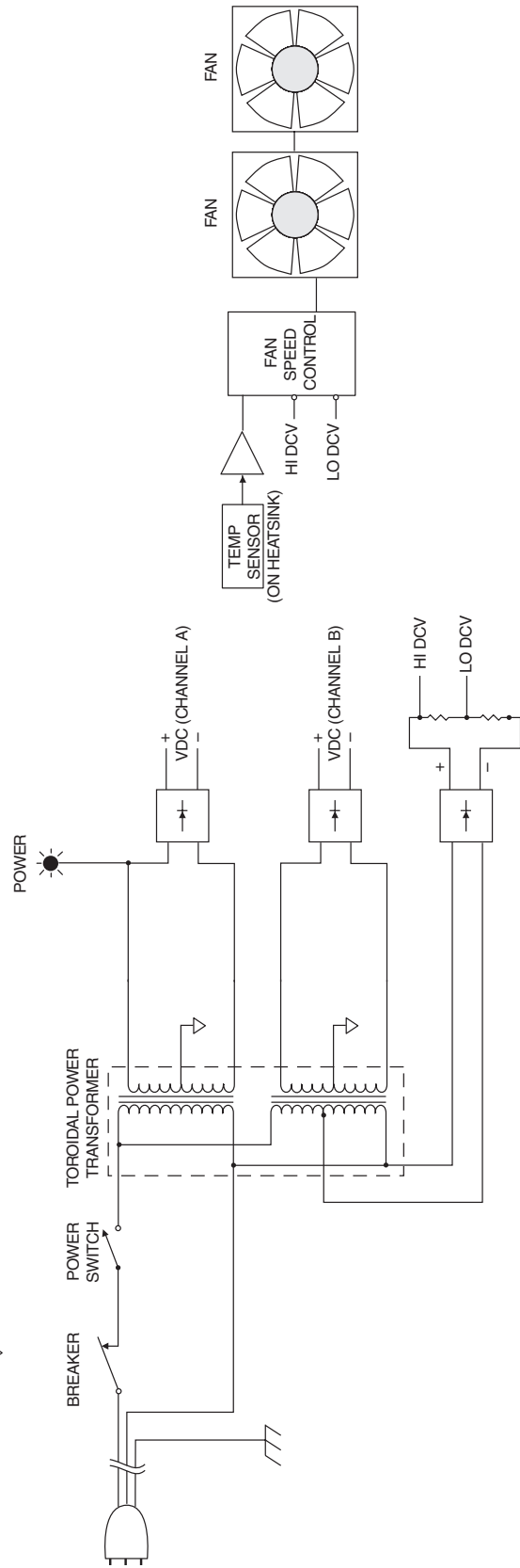
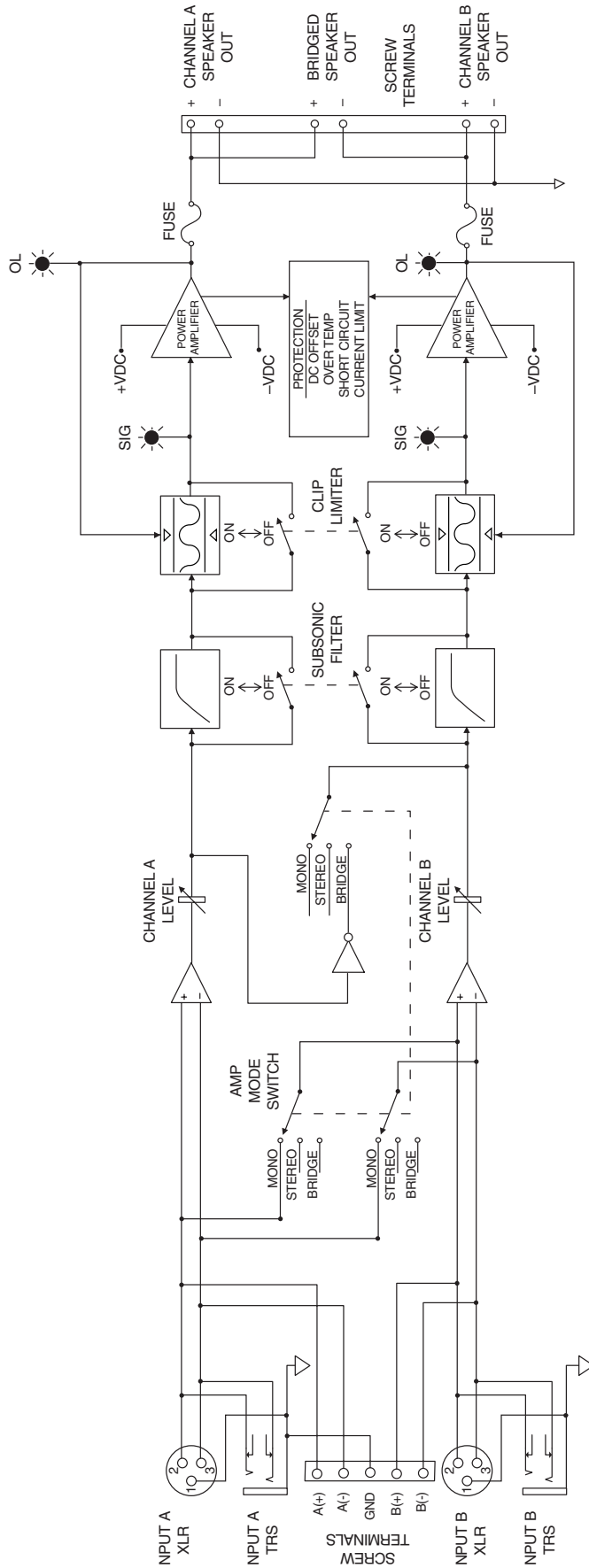
5 years, parts and labor

## DISCLAIMER

EAW Commercial continually engages in research related to product improvement, new materials, and production methods. Design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current EAW Commercial product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.

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# 9. BLOCK DIAGRAM



## 10. TROUBLESHOOTING

Sound system difficulties usually fall into one of the following categories.

### No Sound or Low Output

- Loudspeaker cables or connectors are not wired correctly or they are faulty. Check all cabling, referring to these instructions for the correct connections. The best way to check a suspect cable is to swap it with a known good cable. Read the loudspeaker's input panel to verify correct cable connections.
- Loudspeaker is not working. Connect the loudspeaker cable to a known good loudspeaker leaving all equipment set to the same levels. If the problem disappears, the loudspeaker is probably not working correctly.
- Are the channel Level controls turned up? Slowly turn them up and see if you hear anything.
- Is the signal source turned up? Make sure the signal level from the mixing console (or whatever device immediately precedes the amplifier) is high enough to produce sound in the amplifier. The SIG LEDs should be blinking to indicate that signal is present.
- If the speakers are wired for BRIDGE mode, make sure the AMP MODE switch is set to BRIDGE.
- If the amplifier has gotten extremely hot, the thermal protection circuit may have activated. Allow the amplifier to cool down and normal operation should resume.
- Are there fuses in the speakers, or in-line fuses in the speaker wire? Check to see if they're blown.

### Distorted Sound

- The power amplifier is clipping. The signal level is exceeding the limits of your system and you must reduce the level from your mixer or signal source.
- Ensure that no equipment in the signal chain is being over driven. For example: input(s) or summing bus in the mixing console, equalizers etc.
- Is the input connector plugged completely into the jack? Check the speaker connections and verify that all connections are tight and that there are no stray strands of wire shorting across the speaker terminals.
- If possible, listen to the signal source with headphones plugged into the console. If it sounds bad there, the problem is not in the amplifier.
- Loudspeakers not working properly.

### Partial Sound (frequency band missing)

- Incorrect EQ settings in the electronic equipment. Ensure all EQ settings and filters on the mixing console or preamplifier and on other equipment are set for normal

operation. Ensure level controls on electronic crossovers and associated amplifiers are correctly set and that all cables and connections for such equipment are connected and working properly.

- Loudspeaker not working properly. Swap with a good one.

### No Power

- Make sure the AC outlet is live and the POWER switch on.
- Is the LED next to the POWER switch illuminated? If not, make sure the AC outlet is live.
- Has the BREAKER switch popped?
- The fuses inside the amplifier have blown. These are not a user-serviceable. See next page about service.

### One side is louder than the other

- Are both Level controls set to the same position?
- Check your source signal to make sure the left and right signals are balanced.
- Are the speaker impedances matched? Different speaker loads can cause different volume levels on each side.
- Try switching sides: Turn off the amp, swap the speaker cables at the amp, turn the amp back on. If the same side is still louder, the problem is with your speaker cabling. If the other side is louder now, the problem is with the mixer, the amp, or the line-level cabling.

### Poor Bass response

- Check the polarity of the speaker cable connections. You may have your positive and negative reversed at one end of one speaker cable.

### As the music gets loud, the amp shuts down

- Make sure the OL LEDs are not lighting continuously. If so, turn down the signal source or the amp Level controls.
- Can the amp breathe? It needs plenty of fresh air to stay cool. **Do not block the ventilation holes.**

### Noise/Hum

- Check the signal cable between the mixer and the amplifier. Make sure all connections are good and sound.
- Make sure the signal cable is not routed near AC cables, power transformers, or other EMI-inducing devices.
- Is there a light dimmer or other SCR-based device on the same AC circuit as the amplifier? Use an AC line filter, or plug the amplifier into a different AC circuit.
- If possible, listen to the signal source with headphones plugged into the console. If it sounds noisy there, the problem is not in the amplifier.
- Is there a cable-TV audio feed in your system? An incorrect ground may causes a "ground loop" hum.

## 11. SERVICE INFORMATION

In the event that your CAZ amplifier should require servicing, please follow these instructions.

**Important:** Retain your sales receipt as this is proof of your warranty coverage period.

1. Call EAW Commercial Tech Support at 1-888-337-7404, 7 am to 5 pm PST (Monday-Friday), to verify the problem and obtain a Return Authorization (RA) Number. Be sure to have the serial number of the unit when you call. You must have a Return Authorization Number in order to obtain warranty service at the factory or at an authorized service center. You can also email EAW Commercial Tech Support at: [support@eawcommercial.com](mailto:support@eawcommercial.com)
2. Pack the unit in its original packaging. THIS IS VERY IMPORTANT. EAW Commercial is not responsible for any damage that occurs during shipping due to non-conventional packaging. Original packaging helps to minimize the possibility of shipping damage.
3. Include a legible note stating your name, (no P.O. boxes), daytime phone number, Return Authorization Number, and a detailed description of the problem, including how we can duplicate it.
4. Write the Return Authorization Number in BIG BOLD PRINT on the top of the box.
5. Tech Support will tell you where to ship the unit when you call for an RA Number. We suggest insurance for all forms of cartage.

### EAW Commercial Technical Support

Phone (USA/Canada)	888-337-7404
Phone	425-892-6503
Fax	425-485-1152
Address	One Main Street Whitinsville, MA 01588
Web site	<a href="http://www.eawcommercial.com">www.eawcommercial.com</a>
e-mail	<a href="mailto:support@eawcommercial.com">support@eawcommercial.com</a>

## 12. EAW COMMERCIAL WARRANTY

**Warranty:** LOUD Technologies Inc. requires its authorized EAW Commercial distributors to abide by the following warranty terms for all EAW Commercial brand products (all dates are from the date of delivery from an Authorized EAW Commercial Distributor to the end user/installation site): Loudspeakers – 5 years; Active Electronics – 5 years; Accessories – 2 years.

**What Is Covered:** Defects in workmanship and materials and against malfunctions. EAW Commercial distributors must remedy all such defects and malfunctions without charge for parts or labor if the warranty applies. Final determination of warranty coverage lies solely with each authorized EAW Commercial distributor.

**What Is Not Covered:** This warranty does not extend to damage or malfunctions resulting from, but not limited to, shipment, improper installation, misuse, neglect, abuse, normal wear, accident, or to any product on which the serial number has been modified or removed. Exterior defects in or damage to the exterior appearance are specifically excluded from this warranty. EAW Commercial distributors shall not be liable for incidental or consequential damages resulting from the use of EAW Commercial products. Repairs and/or modifications by other than an Authorized EAW Commercial Distributor automatically voids this warranty.







**EAW Commercial** A LOUD Technologies Inc. Company

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