



KAV-250a
Stereo Power Amplifier

KAV-250a/3
Three-Channel Power Amplifier

Instructions for Use, v 99.2

Owner's Reference

**KAV-250a Stereo Power Amplifier and
KAV-250a/3 Three-Channel Power Amplifier
Instructions for Use, v 99.2**

Cover: KAV-250a/3 Three-Channel Power Amplifier

**Krell Industries, Inc.
45 Connair Road
Orange, CT 06477-3650 USA
TEL 203-799-9954
FAX 203-799-9796
E-MAIL krell@krellonline.com
WEBSITE <http://www.krellonline.com>**



This product complies with the EMC directive (89/336/EEC) and the low-voltage directive (73/23/EEC).

WARNINGS

The amplifier must be placed on a firm, level surface where it is not exposed to dripping or splashing.

The ventilation grids on the top of the amplifier and the space underneath the amplifier must be unobstructed at all times during operation. Do not place flammable material above or beneath the amplifier.

Contact your authorized Krell dealer, distributor, or Krell before using any devices designed to alter or stabilize the AC power for the KAV-250a or KAV-250a/3.

Before connecting the KAV-250a or KAV-250a/3, make sure the amplifier is off and any output device (such as a preamplifier) is in mute or stand-by mode. Make sure all cable terminations are of the highest quality and free from frayed ends, short circuits, or cold solder joints.

Use only one set of inputs to the amplifier at a time.

After reconfiguring for MAT, do not use more than one input at the same time.

After bridging, do not use both inputs at the same time.

THERE ARE NO USER SERVICEABLE PARTS INSIDE ANY KRELL PRODUCT

Please contact your authorized Krell dealer, distributor, or Krell if you have any questions not addressed in this reference manual.

This product is manufactured in the United States of America. Krell® is a registered trademark of Krell Industries, Inc., and is restricted for use by Krell Industries, Inc., its subsidiaries, and authorized agents. Multi Amp Throughput™ is a trademark of Krell Industries, Inc. All other trademarks and tradenames are registered to their respective companies.

Contents

	Page
INTRODUCTION	1
DEFINITION OF TERMS	1
UNPACKING	2
PLACEMENT	3
AC Power Guidelines	3
FRONT PANEL DESCRIPTION: KAV-250a	5
BACK PANEL DESCRIPTION: KAV-250a	7
FRONT PANEL DESCRIPTION: KAV-250a/3	10
BACK PANEL DESCRIPTION: KAV-250a/3	12
CONNECTING THE KAV-250a or KAV-250a/3 AMPLIFIER TO YOUR SYSTEM	14
Input and Output Connections	14
OPTIONAL SYSTEM CONFIGURATIONS	15
Multi Amp Throughput	15
Bridged Operation	20
Examples of Connection Scenarios	22
AMPLIFIER OPERATION	25
On/Off and Operation	25
AMPLIFIER TROUBLESHOOTING	26
How to Troubleshoot System Noise	26
QUESTION AND ANSWER	27
WARRANTY	28
RETURN AUTHORIZATION PROCEDURE	29
SPECIFICATIONS	30

Illustrations

Page

FIGURE 1	The KAV-250a Front Panel	4
FIGURE 2	The KAV-250a Back Panel	6
FIGURE 3	The KAV-250a/3 Front Panel	9
FIGURE 4	The KAV-250a/3 Back Panel	11
FIGURE 5	Reconfiguring the KAV-250a for MAT or Bridged Operation	16
FIGURE 6	Reconfiguring the KAV-250a/3 for MAT or Bridged Operation	19

Introduction

Thank you for your purchase of the Krell KAV-250a Stereo Power Amplifier or KAV-250a/3 Three-Channel Power Amplifier.

The KAV-250a and KAV-250a/3 amplifiers provide substantial two- and three-channel output power that delivers realistic music production at an exceptional value. These amplifiers can be customized with a variety of optional system configurations: Multi Amp Throughput (MAT), bridged operation, and high power mono operation. These options provide a wider range of power outputs and connection options. Both the KAV-250a and KAV-250a/3 amplifiers provide balanced and single-ended inputs for complete compatibility with other components. The KAV-250a and KAV-250a/3 amplifiers can be operated using the 12 VDC trigger for other components. Either amplifier integrates seamlessly home theater or whole-house systems.

This reference manual contains important information on placement, installation, and operation of the KAV-250a and KAV-250a/3 amplifiers. Please read this information carefully. A thorough understanding of these details helps ensure satisfactory operation and long life for your KAV-250a or KAV-250a/3 amplifier and related system components.

Definition of Terms

Multi Amp Throughput

An internal connection option that sends the same music signal to all amplifier channels using one balanced or single-ended connection. MAT reduces installation complexity and cabling requirements in systems containing multiple amplifiers. MAT also allows a variety of connection scenarios, including powering loudspeakers that have two sets of binding posts and independently powering multiple pairs of stereo loudspeakers to extend the listening environment throughout your home.

Bridging

An internal connection option that links two amplifier channels to operate as one combined amplifier channel, greatly increasing the channel's power output.

On

When the power button on the front panel is pressed and the blue power LED illuminates, the amplifier is on and ready to play music.

Off

When the power button on the front panel is pressed and the blue power LED turns off, the amplifier is off.

Unpacking

Open the shipping box, which contains:

1 amplifier unit (packed in foam end-caps)

2 ribbon connection cables

KAV-250a fuses:

2 AGC-8 (8 amp)

1 slow-blow (20 amp for 100/120 V or 12 amp for 220/240 V)

or

KAV-250a/3 fuses:

3 AGC-8 (8 amp)

1 slow-blow (20 amp for 100/120 V or 12 amp for 220/240 V)

1 12 VDC output (12 V trigger) cable

1 IEC connector (AC power) cord

1 T-15 Torx wrench

1 packet containing the owner's reference manual and the warranty registration card.

Grasp the underside of the foam end-caps that encase the amplifier and lift the amplifier straight out of the shipping box.

Place the amplifier in a safe location and remove the protective plastic wrapping.

Notes

If any of these items are not included in the shipping box, please contact your authorized Krell dealer, distributor, or Krell for assistance.

*Save all packing materials. If you ship your amplifier in the future, repack the unit in its original packaging to prevent transit damage. See **Return Authorization Procedure**, on page 29, for more information.*

Placement

Before you integrate the KAV-250a or KAV-250a/3 into your system, review the following guidelines to choose the location for the component. This will facilitate a clean, trouble-free installation.

The KAV-250a and KAV-250a/3 require at least two inches (5 cm) of clearance on each side and at least two inches (5 cm) of clearance above the component to provide adequate ventilation.

Your amplifier does not require any type of special rack or cabinet for installation. For the dimensions of your amplifier see **Specifications**, on pages 30 and 31.

Place the amplifier as close to the loudspeakers as possible and keep the speaker cable length to a minimum. Speaker cable adds impedance to the load the amplifier must drive, regardless of the cable's gauge. Krell amplifiers drive the lowest impedances with ease, but long speaker cables reduce the maximum power that is delivered to the loudspeakers.

AC POWER GUIDELINES

Krell recommends operating each amplifier from a dedicated 15-amp AC power line. For maximum power output, operate the KAV-250a or KAV-250a/3 amplifier from a dedicated 20-amp AC power line.

FIGURE 1 THE KAV-250a FRONT PANEL



- 1 Power Button
- 2 Power LED

Front Panel Description: KAV-250a

See Figure 1 on page 4

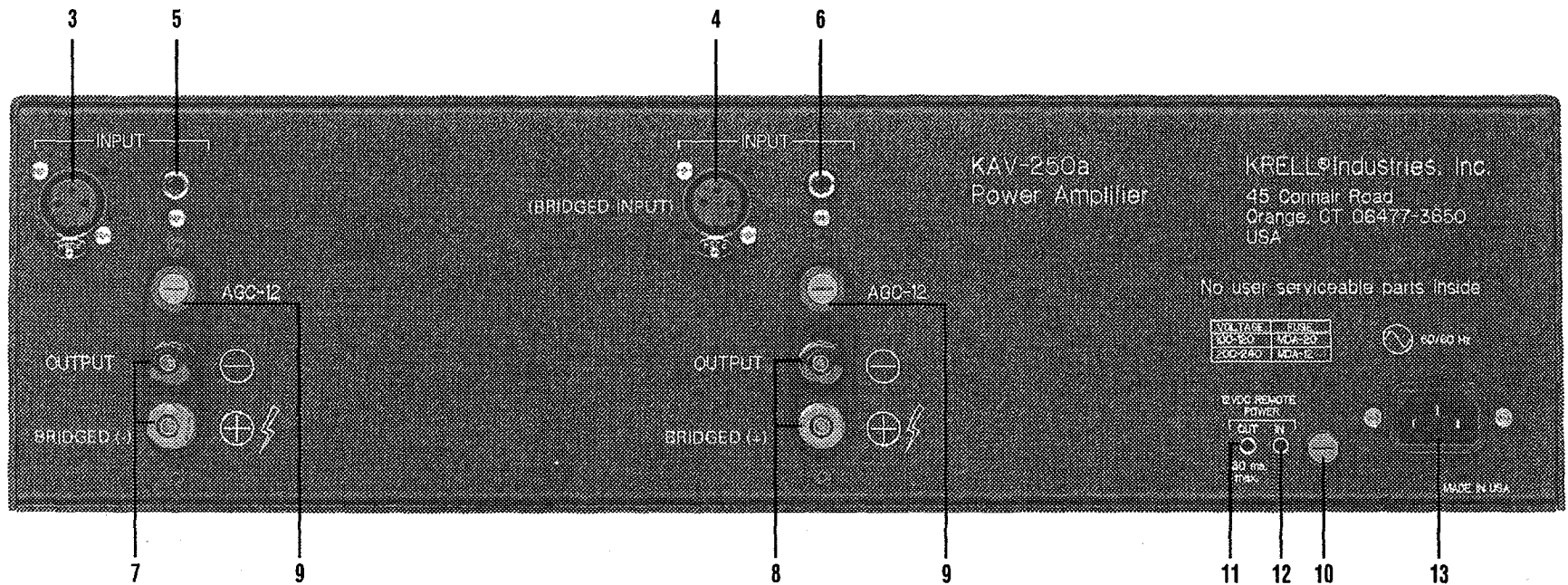
1 Power Button

Use this button to turn the KAV-250a power on and off and also to switch the 12 VDC output (12 V trigger) on and off.

2 Power LED

The blue power LED illuminates when the amplifier is on.

FIGURE 2 THE KAV-250a BACK PANEL



Balanced Inputs

- 3 Right Input
- 4 Left Input (Bridged)

Single-ended Inputs

- 5 Right Input
- 6 Left Input (Bridged)

Amplifier Channel Outputs

- 7 Right Output (Bridged-)
- 8 Left Output (Bridged+)

Fuses

- 9 AGC-8 Fuses
- 10 Line Fuse

Remote Controls

- 11 12 VDC Remote Power Out
- 12 12 VDC Remote Power In

Power

- 13 IEC Power Connector

→ FUSE RATING/VALUE
CHANGED TO AGC 8
IN 2000.

Back Panel Description: KAV-250a

See Figure 2 on page 6

The KAV-250a back panel provides connections for all inputs and outputs, remote control input and output links, and AC power supply. Inputs and outputs labeled left and right are on the left and right side of the amplifier, respectively, when viewing the amplifier *from the front panel*.

Balanced Inputs

3, 4 Inputs

These are the right (3) and the left (4) KAV-250a channel inputs for output devices with balanced XLR connectors.

Single-ended Inputs

5,6 Inputs

These are the right (5) and the left (6) KAV-250a channel inputs for output devices with single-ended RCA connectors.

The left balanced or single-ended inputs are used for bridged operation. See ***Reconfiguring the KAV-250a for Bridged Operation***, on page 20.

Amplifier Channel Outputs

7 Output Bridged(-)

8 Output Bridged(+)

These are the right (7) and left (8) KAV-250a amplifier channel outputs with five-way loudspeaker binding posts. The loudspeaker binding post terminals accept spade lugs, bare wire, banana plugs, or pins. Use the red terminal for the positive connection and the black terminal for the negative connection. For information on loudspeaker connections for bridged operation, see ***Reconfiguring the KAV-250a for Bridged Operation***, on page 20.

Fuses

9 AGC-12 Fuses

The AGC 12 Volt loudspeaker fuses protect the KAV-250a against short circuits in loudspeaker output.

10 Line Fuse

The line fuse protects the KAV-250a against short circuits in internal power supplies.

Note

Fuses must be replaced with the fuse value specified on the KAV-250a back panel. Use a 20 amp slow-blow line fuse for 100/120 V systems or a 12 amp slow-blow line fuse for 220/240 V systems.

Back Panel Description, continued

Remote Controls

11 12 VDC Remote Power Out

12 12 VDC Remote Power In

The KAV-250a is equipped with an output that sends 12 VDC power on/off (12 V trigger) signals to other Krell components and other devices that incorporate a 12 V trigger. This allows you to turn the KAV-250a on and off using a Krell or other component in a custom installation.

Notes

12 VDC Out/In (12 V trigger) remote power is limited to 30 ma.

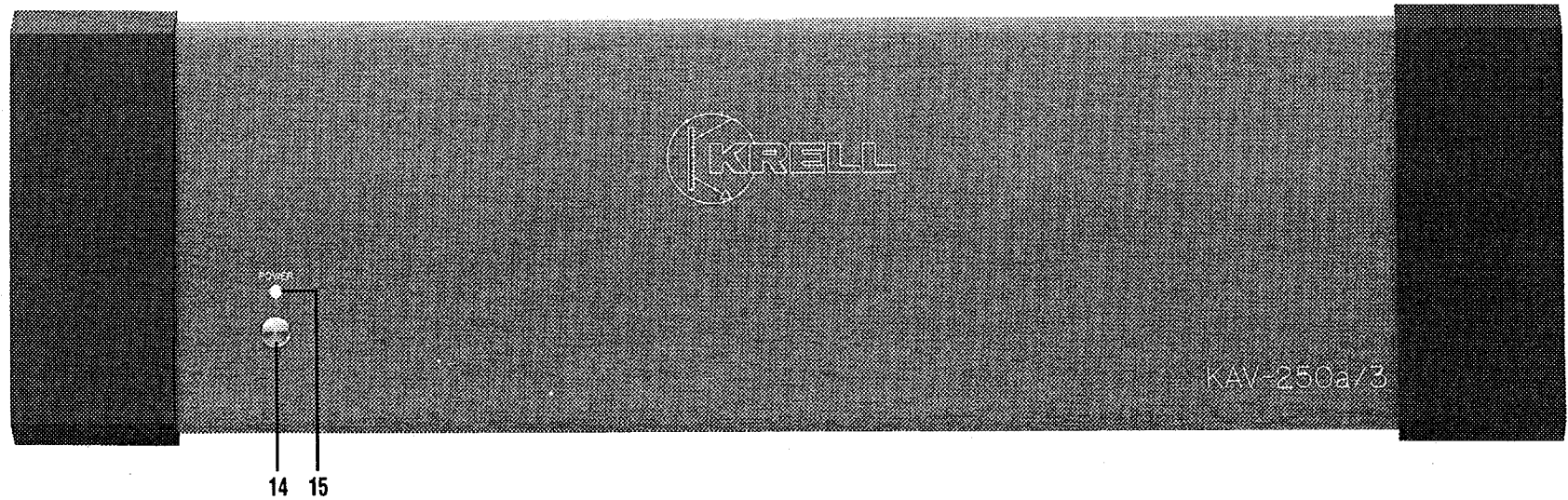
Consult the owner's manual of any component used in a custom installation to take full advantage of the KAV-250a remote capability.

Power Supply

13 IEC Connector

The KAV-250a is equipped with a standard female IEC power connector, for use with the provided AC power cord.

FIGURE 3 THE KAV-250a/3 FRONT PANEL



- 14 Power Button
- 15 Power LED

Front Panel Description: KAV-250a/3

See Figure 3 on page 9

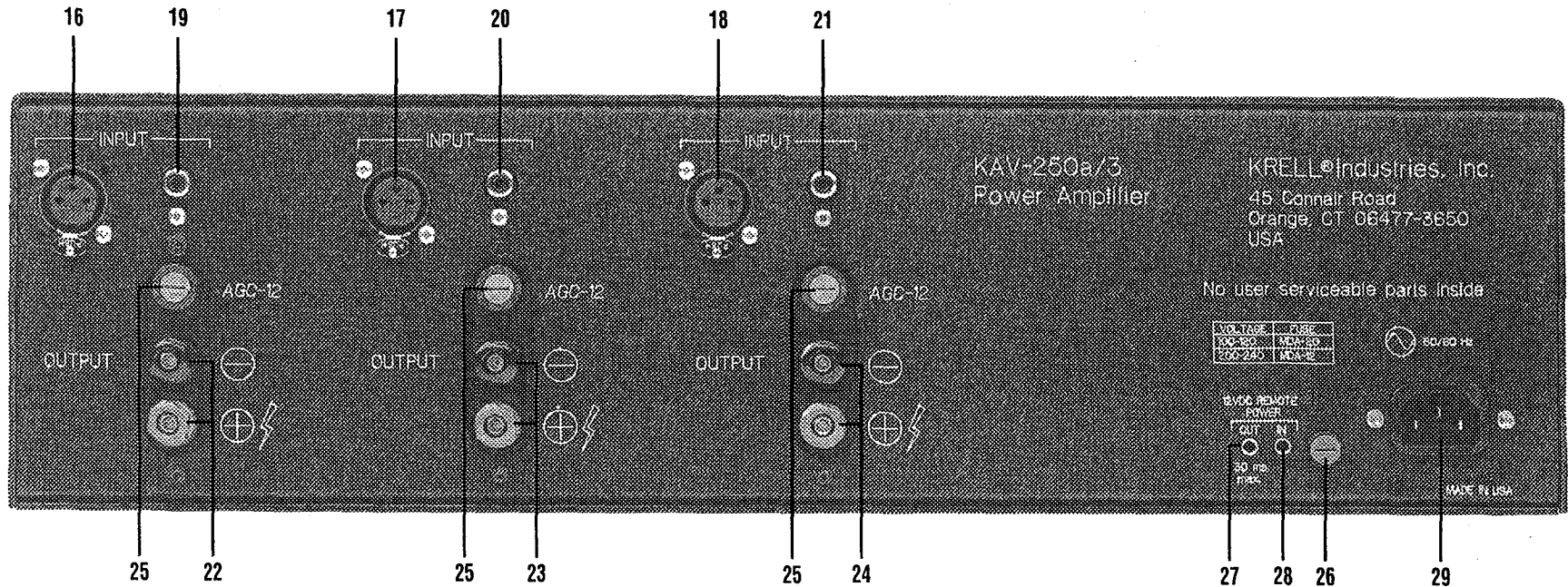
14 Power Button

Use this button to turn the KAV-250a/3 power on and off and also to switch the 12 VDC output (12 V trigger) on and off.

15 Power LED

The blue power LED illuminates when the amplifier is powered on.

FIGURE 4 THE KAV-250a/3 BACK PANEL



Balanced Inputs

- 16 Right Input
- 17 Center Input
- 18 Left Input

Single-ended Inputs

- 19 Right Input
- 20 Center Input
- 21 Left Input

Amplifier Channel Outputs

- 22 Right Output
- 23 Center Output
- 24 Left Output

Fuses

- 25 AGC ~~8~~ Fuses
- 26 Line Fuse

Remote Controls

- 27 12 VDC Remote Power Out
- 28 12 VDC Remote Power In

Power

- 29 IEC Power Connector

→ FUSE RATING/VALUE
CHANGED TO AGC8
IN 2000.

Back Panel Description: KAV-250a/3

See Figure 4 on page 11

The KAV-250a/3 back panel provides connections for all inputs and outputs, remote control input and output links, and AC power supply. Inputs and outputs labeled left and right are on the left and right side of the amplifier, respectively, when viewing the amplifier *from the front panel*.

Balanced Inputs

16, 17, 18 Inputs

These are the right (16), center (17), and left (18) KAV-250a/3 channel inputs for output devices with balanced XLR connectors.

Single-ended Inputs

19, 20, 21 Inputs

These are the right (19), center (20), and left (21) KAV-250a/3 channel inputs for output devices with single-ended RCA connectors.

Amplifier Channel Outputs

22, 23, 24 Outputs

These are the right (22), center (23), and left (24) KAV-250a/3 amplifier channel outputs with five-way loudspeaker binding posts. The loudspeaker binding post terminals accept spade lugs, bare wire, banana plugs, or pins. Use the red terminal for the positive connection and the black terminal for the negative connection. For information about loudspeaker connections for bridged operation, see ***Reconfiguring the KAV-250a/3 for Bridged Operation***, on page 21.

Fuses

25 AGC-12 Fuses

The AGC 12 Volt loudspeaker fuses protect the KAV-250a/3 against short circuits in loudspeaker output.

26 Line Fuse

The line fuse protects the KAV-250a/3 against short circuits in internal power supplies.

Back Panel Description, continued

Note

Fuses must be replaced with the fuse value specified on the KAV-250a/3 back panel. Use a 20 amp slow-blow line fuse for 100/120 V systems or a 12 amp slow-blow line fuse for 220/240 V systems.

Remote Controls

27 12 VDC Remote Power Out

28 12 VDC Remote Power In

The KAV-250a/3 is equipped with an output that sends 12 VDC power on/off (12 V trigger) signals to other Krell components and other devices that incorporate a 12 V trigger. This allows you to turn the KAV-250a/3 on and off using a Krell or other component in a custom installation.

Notes

12 VDC Out/In (12 V trigger) remote power is limited to 30 ma.

Consult the owner's manual of each component used in a custom installation to take full advantage of the KAV-250a/3 remote capability.

Power Supply

29 IEC Power Connector

The KAV-250a/3 is equipped with a standard female IEC power connector, for use with the provided AC power cord.

Connecting the KAV-250a or KAV-250a/3 Amplifier to Your System

INPUT AND OUTPUT CONNECTIONS

The following steps describe how to connect cables to the KAV-250a or KAV-250a/3 amplifier.

1. Neatly arrange and organize the wiring to and from the amplifier and all components. Separate AC wires from audio cables to prevent hum or other unwanted noise from being introduced into the system.
2. Connect the loudspeaker cables to the KAV-250a amplifier channel output speaker binding posts (7, 8), or the KAV-250a/3 amplifier channel output speaker binding posts (22, 23, 24) located on their respective back panels.
The amplifier channel outputs for the KAV-250a and KAV-250a/3 use five-way loudspeaker binding posts. The loudspeaker binding post terminals accept spade lugs, bare wire, banana plugs, or pins. Use the red terminal for the positive connection and the black terminal for the negative connection.
3. Connect the interconnect cables from your output device to the amplifier inputs. The KAV-250a is equipped with balanced (3, 4) or single-ended (5, 6) inputs and the KAV-250a/3 is equipped with balanced (16, 17, 18) or single-ended (19, 20, 21) inputs located on their respective back panels. The balanced inputs use three-pin XLR connectors; the single-ended inputs use RCA connectors.
4. Insert the end of the AC power cord into the IEC power connector on the KAV-250a (13) or KAV-250a/3 (29) back panel. Insert the other end into the AC wall outlet.

The amplifier is now ready for operation. See **Amplifier Operation**, on page 25.

The KAV-250a or KAV-250a/3 amplifier is shipped with shorting pins in the XLR inputs. These pins should remain in the XLR inputs if the amplifier is operating in the single-ended mode. When the shorting pin is inserted, pins 1 and 3 are shorted together. Remove the shorting pins to connect the amplifier for balanced operation.

The XLR pin configuration is described below:

Pin 1	Ground
Pin 2	Non-inverting (0°)
Pin 3	Inverting (180°)

Krell recommends using balanced interconnect cables. Balanced interconnect cables not only can minimize sonic loss but are also immune to induced noise, especially with installations using long cables. Balanced connections have 6 dB more gain than single-ended connections. When level matching is critical, keep this gain value in mind.

Optional System Configurations

The KAV–250a and KAV–250a/3 can be reconfigured for either Multi Amp Throughput (MAT) or bridged operation.

IMPORTANT

*Removing the cover to reconfigure for MAT or for bridged operation is the **ONLY** instance you are authorized to remove the cover of **ANY** Krell component without voiding your Warranty. For more information on product limitations and restrictions, see **Warranty**, on page 28.*

Before Reconfiguring for MAT or Bridged Operation

Read the following important safety instructions before you attempt to reconfigure your amplifier for either MAT or bridged operation:

1. **Unplug the power cord.** Unplug the AC power cord from both the IEC power connector of the KAV–250a (13) or KAV–250a/3 (29) on the back panel, and from the AC outlet.
2. **Avoid the power supply.** After removing the screws (see instructions below) and the cover, locate and stay aware of the location of the power supply. Avoid making contact with that area of the amplifier.
3. **Remove jewelry.** Rings, necklaces, bracelets, and other pieces of metal jewelry can conduct an electrical charge. Consider removing them before attempting any reconfiguration.
4. **Always replace cover.** Make sure the amplifier's cover is properly replaced and secured by the 12 screws before resuming operation.

IMPORTANT

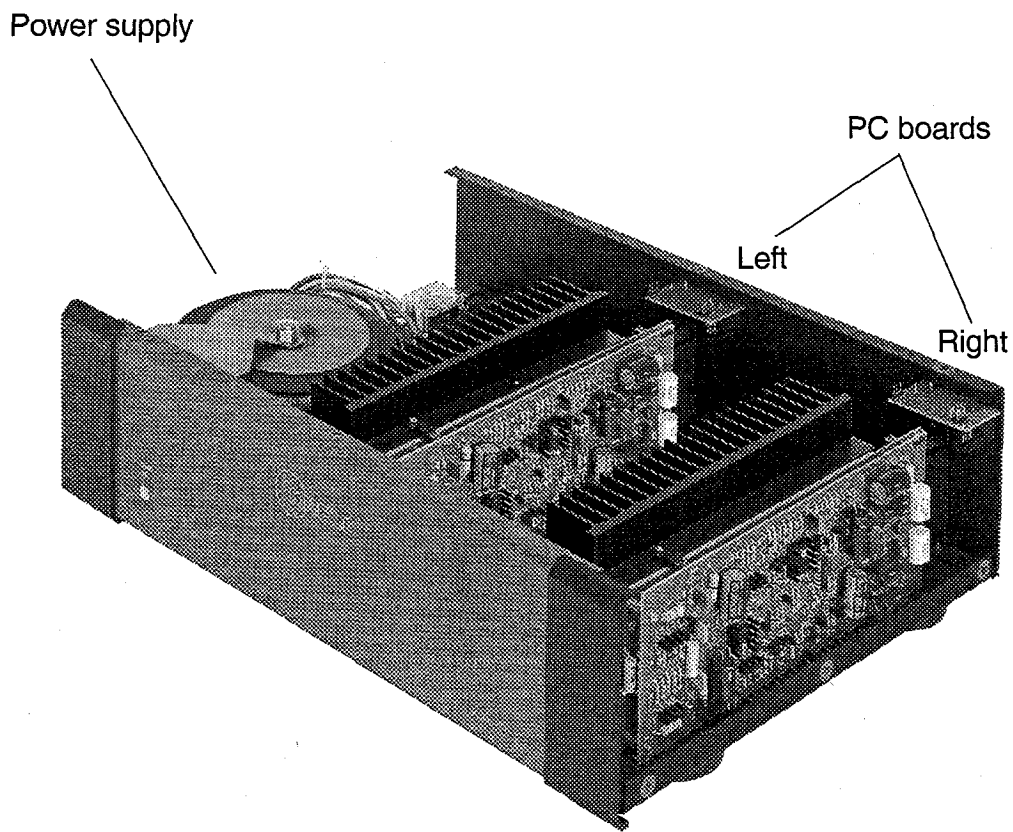
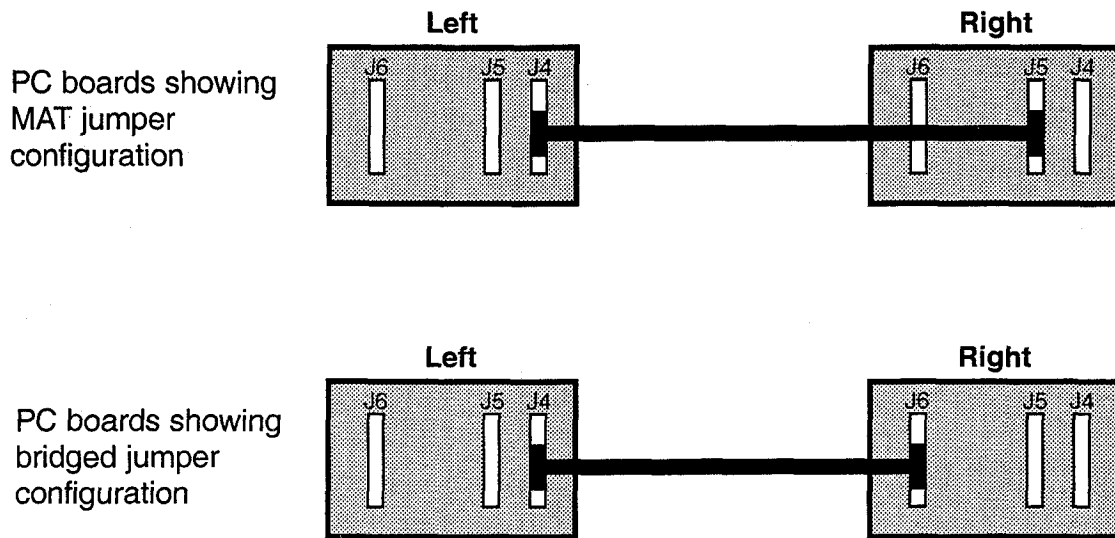
Operating the amplifier without the cover properly replaced and secured may void your warranty.

MULTI AMP THROUGHPUT

Multi Amp Throughput (MAT), an internal connection option for either the KAV–250a or the KAV–250a/3, lets you send the same music signal to all amplifier channels using one balanced or single-ended connection. MAT reduces installation complexity and cabling requirements in systems containing multiple amplifiers.

Inputs and outputs labeled left and right are on the left and right side of the amplifier, respectively, when viewing the amplifier *from the front panel*.

FIGURE 5 RECONFIGURING THE KAV-250a FOR MAT OR BRIDGED OPERATION



Reconfiguring the KAV–250a for MAT

See Figure 5 on page 16

Tools needed: T-15 Torx wrench and one ribbon connection cable

1. Turn the KAV–250a off by pressing the power button (1) on the front panel. The blue power LED (2) extinguishes. Unplug the AC power cord from the IEC power connector (13) on the back panel.
2. Using the T-15 Torx wrench, remove the 12 screws that secure the amplifier cover. Carefully remove the cover.
3. Locate the small PC board at the rear of each amplifier channel and jumper pins labeled J4, J5, and J6.
4. Connect one end of the ribbon connection cable to jumper pin J4 on the left amplifier channel (closest to the power supply). The ribbon snaps into place. Connect the other end of the ribbon connection cable to jumper pin J5 on the right amplifier channel.
5. Replace the cover (slide the front panel end in first). Using the T-15 Torx wrench, secure the 12 screws.

The KAV–250a amplifier is now reconfigured for MAT operation.

Connecting the KAV–250a Reconfigured for MAT

See Figure 2 on page 6

1. Connect your output device to a single-ended or balanced input on the back panel of the KAV–250a.
2. Connect each amplifier channel output (7, 8) to a separate loudspeaker, using the positive and negative terminals on the speaker binding posts.

Reconfiguring the KAV–250a/3 for MAT

See Figure 6 on page 19

Tools needed: T-15 Torx wrench and two ribbon connection cables

1. Turn the KAV–250a/3 off by pressing the power button (14) on the front panel. The blue power LED (15) extinguishes. Unplug the AC power cord from the IEC power connector (29) on the back panel.
2. Using the T-15 Torx wrench, remove the 12 screws that secure the amplifier cover. Carefully remove the cover.
3. Locate the small PC board at the rear of each amplifier channel and jumper pins labeled J4, J5, and J6.
4. Connect one end of the first ribbon connection cable to jumper pin J4 on the left amplifier channel (closest to the power supply). The ribbon snaps into place. Connect the other end of this ribbon connection cable to jumper pin J5 on the center amplifier channel.

5. Connect one end of the second ribbon connection cable to jumper pin J4 on the center amplifier channel. Connect the other end of this ribbon connection cable to jumper pin J5 on the right amplifier channel.
6. Replace the cover (slide the front panel end in first). Using the T-15 Torx wrench, secure the 12 screws.

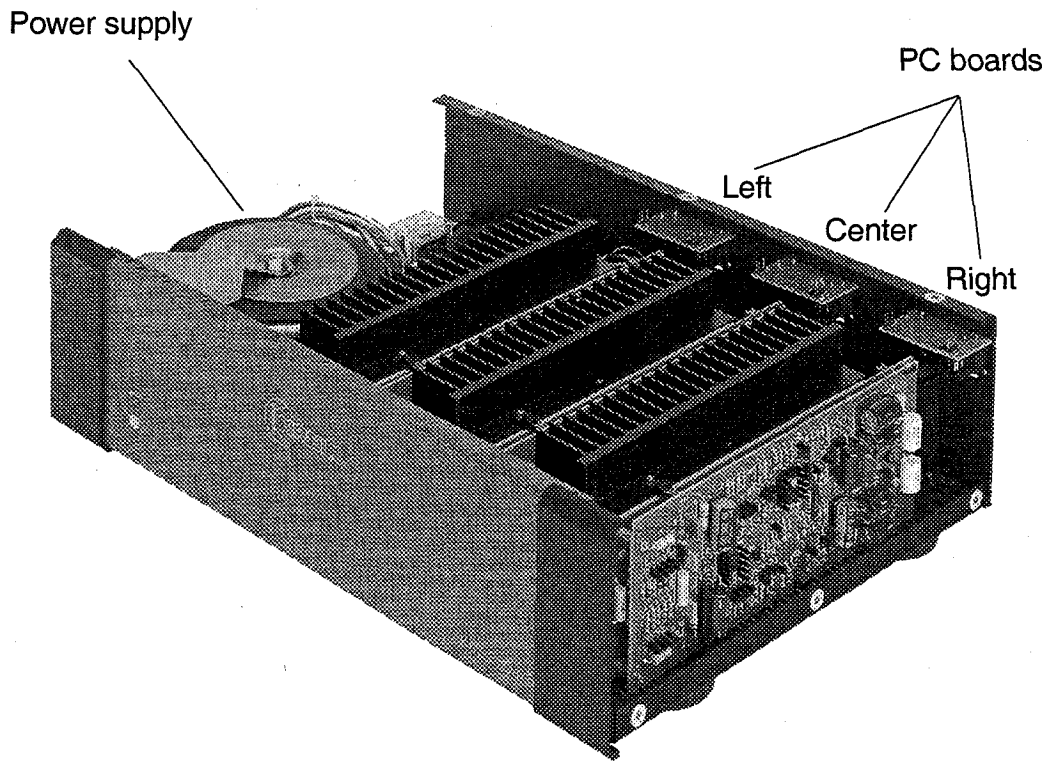
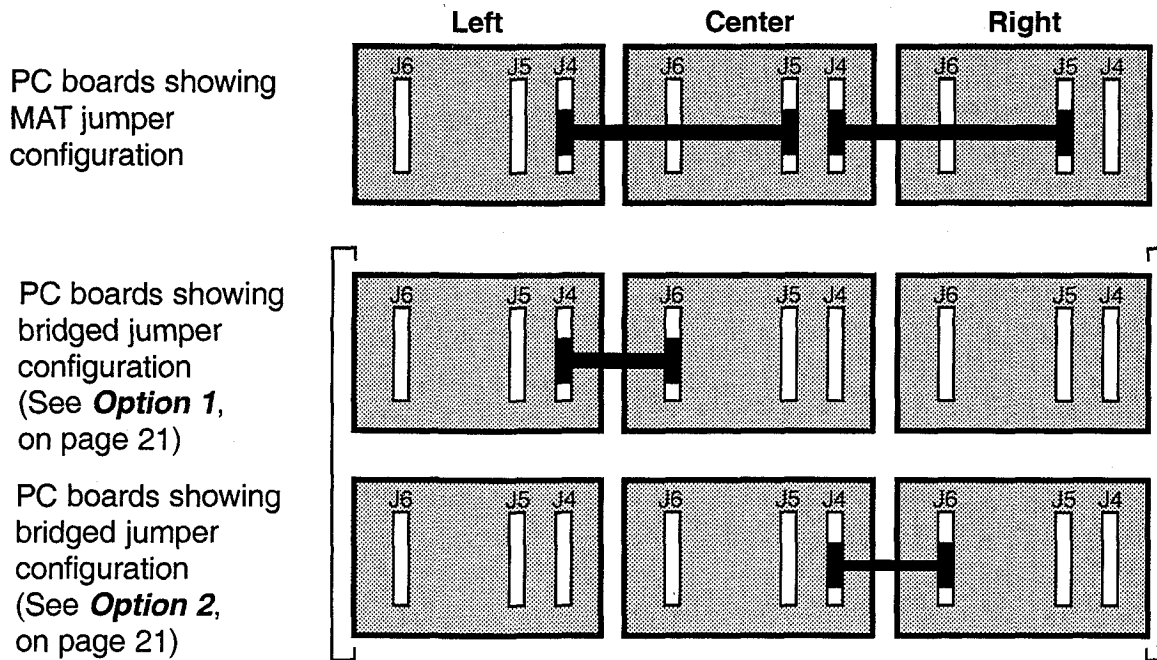
The KAV-250a/3 amplifier is now reconfigured for MAT operation.

Connecting the KAV-250a/3 Reconfigured for MAT

See Figure 4 on page 11

1. Connect your output device to a single-ended or balanced input on the back panel of the KAV-250a/3.
2. Connect each amplifier channel output (22, 23, 24) to a separate loudspeaker, using the positive and negative terminals on the speaker binding posts.

FIGURE 6 RECONFIGURING THE KAV-250a/3 FOR MAT OR BRIDGED OPERATION



BRIDGED OPERATION

The KAV-250a and the KAV-250a/3 can be reconfigured for bridged operation. When the KAV-250a amplifier's channels are bridged, the amplifier's output power is quadrupled: the amplifier delivers 1,000 Watts to an 8 Ohm load. The KAV-250a/3 can be reconfigured to bridge any two of its three amplifier channels to operate as one combined amplifier channel. When using the bridged amplifier channel only, the KAV-250a/3 delivers 1,000 Watts to an 8 Ohm load.

Inputs and outputs labeled left and right are on the left and right side of the amplifier, respectively, when viewing the amplifier *from the front panel*.

Reconfiguring the KAV-250a for Bridged Operation

See Figure 5 on page 16

Tools needed: T-15 Torx wrench and one ribbon connection cable

1. Turn the KAV-250a off by pressing the power button (1) on the front panel. The blue power LED (2) extinguishes. Unplug the AC power cord from the IEC power connector (13) on the back panel.
2. Using the T-15 Torx wrench, remove the 12 screws that secure the amplifier cover. Carefully remove the cover.
3. Locate the small PC board at the rear of each amplifier channel and jumper pins labeled J4, J5, and J6.
4. Connect one end of the ribbon connection cable to jumper pin J4 on the left amplifier channel (closest to the power supply). The cable snaps into place. Connect the other end of the ribbon connection cable to jumper pin J6 on the right amplifier channel.
5. Replace cover (slide front panel end in first). Using the T-15 Torx wrench, secure the 12 screws.

The KAV-250a amplifier is now ready for bridged operation.

Connecting the Bridged KAV-250a

See Figure 2 on page 6

1. Connect the output cable from the output device to the balanced XLR (4) or the single-ended RCA (6) inputs connectors marked (BRIDGED INPUT).
2. Connect the positive loudspeaker lead (red) to the positive binding post on the left amplifier channel output (8), marked BRIDGED (+). Connect the negative loudspeaker lead (black) to the positive binding post on the right amplifier channel (7), marked BRIDGED (-).

IMPORTANT

When operating the amplifier in bridged mode and using an output device with single-ended RCA cables, be sure to remove the shorting pin from the left balanced XLR input (4).

Reconfiguring the KAV–250a/3 for Bridged Operation

See Figure 6 on page 19

Tools needed: T-15 Torx wrench and two ribbon connection cables

1. Turn the KAV–250a/3 off by pressing the power button (14) on the front panel. The blue power LED (15) extinguishes. Unplug the AC power cord from the IEC power connector (29) on the back panel.
2. Using the T-15 Torx wrench, remove the 12 screws that secure the amplifier cover. Carefully remove the cover.
3. Locate the small PC board at the rear of each amplifier channel and jumper pins labeled J4, J5, and J6.
4. **Option 1:** To bridge left and center amplifier channels, connect one end of the ribbon connection cable to jumper pin J4 on the left amplifier channel (closest to the power supply). The cable snaps into place. Connect the other end of the ribbon connection cable to jumper pin J6 on the center amplifier channel.

Option 2: To bridge center and right amplifier channels, connect one end of the ribbon connection cable to jumper pin J4 on the center amplifier channel. Connect the other end of the ribbon connection cable to jumper pin J6 on the right amplifier channel.

5. Replace cover (slide the front panel end in first). Using the T-15 Torx wrench, secure the 12 screws.

The KAV–250a/3 amplifier is now ready for bridged operation.

Connecting the Bridged KAV–250a/3

See Figure 4 on page 11

1. When the left and center amplifier channels are bridged (Option 1), connect the output cable from the output device to the center balanced XLR (17) or single-ended RCA (20) input.

Connect the positive loudspeaker lead (red) to the positive binding post on the center amplifier channel (23). Connect the negative loudspeaker lead (black) to the positive binding post of the left amplifier channel (24).

- When the center and right amplifier channels are bridged (Option 2), connect the output cable from the output device to the right balanced XLR (16) or single-ended RCA (19) input.

Connect the positive loudspeaker lead (red) to the positive binding post on the (right) amplifier channel (22). Connect the negative loudspeaker lead (black) to the positive binding post of the center amplifier channel (23).

The remaining channel may be connected for normal operation.

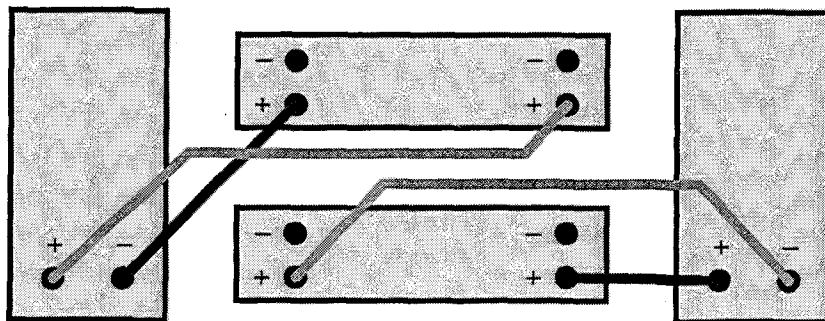
IMPORTANT

When operating the amplifier in bridged mode and using an output device with a single-ended RCA cable, be sure to remove the shorting pin from the balanced XLR input.

EXAMPLES OF CONNECTION SCENARIOS

High Power Mono Operation

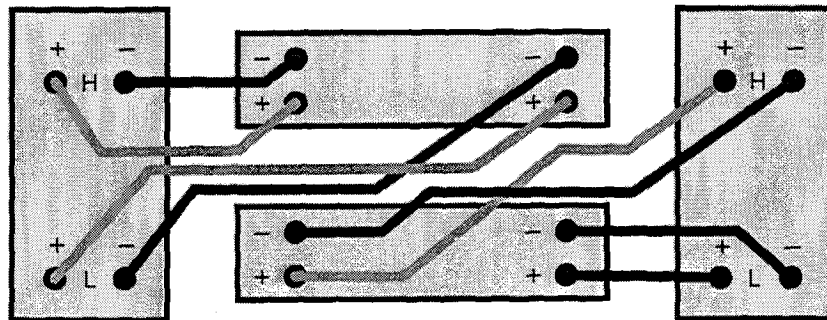
High power mono operation uses two KAV-250a bridged amplifiers: one amplifier is dedicated to the left loudspeaker and one amplifier is dedicated to the right loudspeaker. Additional loudspeakers in a home theater system may be connected in this way by using additional KAV-250a amplifiers. The diagram below illustrates connecting a system for high power mono operation:



Examples of Connection Scenarios, continued

Power Biamplication (Stereo, 2-channel)

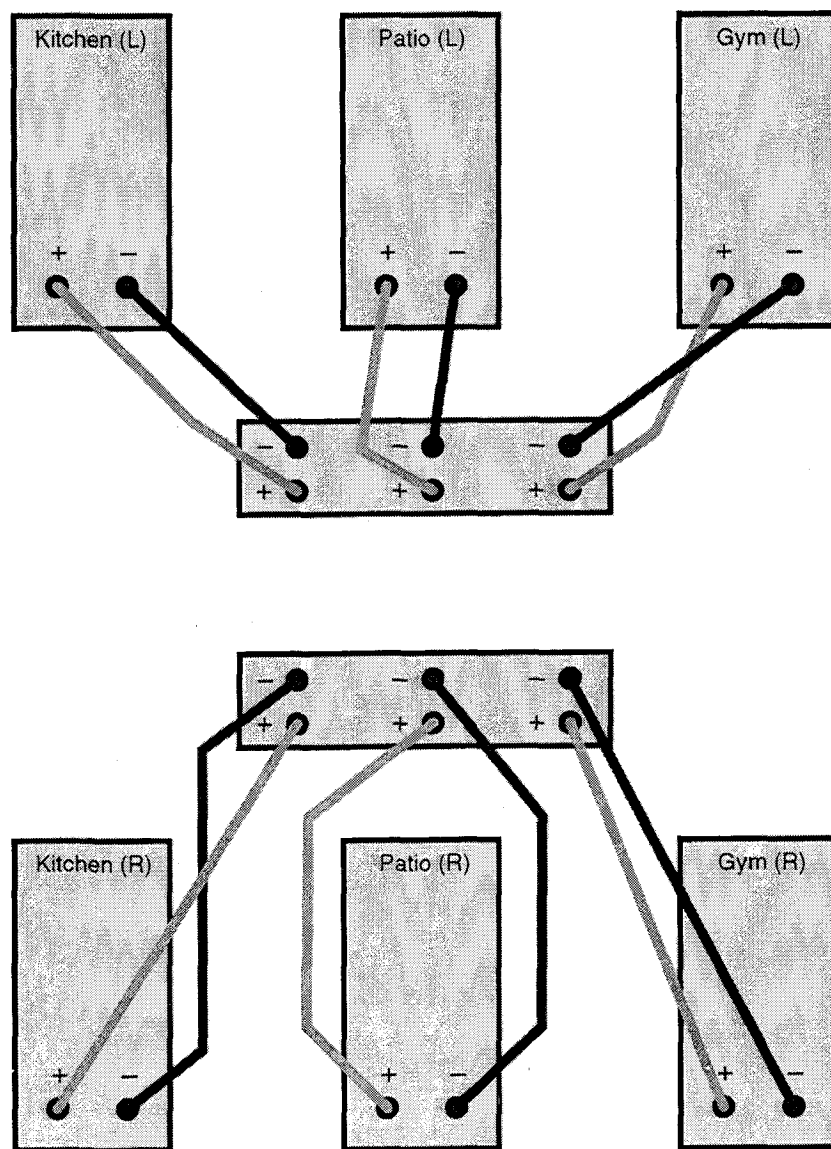
Power biamplication uses the MAT feature of the KAV-250a to send the same music signal to all amplifier channels using one balanced or single-ended input connection. When the KAV-250a is reconfigured for MAT, one channel of the amplifier powers the loudspeaker's high frequency end, and the other channel powers the loudspeaker's low frequency end. This connection scenario is used only with loudspeakers that feature two sets of binding posts. For more information, consult the owner's reference for your loudspeakers. The diagram below illustrates connecting a system for power biamplication:



Examples of Connection Scenarios, continued

Multi Power Mode

Multi power mode uses the KAV-250a/3's MAT feature to independently power multiple pairs of stereo loudspeakers to extend the listening environment throughout your home. When the KAV-250a/3 is reconfigured for MAT, each channel powers an individual loudspeaker, with one KAV-250a/3 dedicated to driving outputs to the left loudspeakers and one KAV-250a/3 driving outputs to the right loudspeakers. The diagram below illustrates connecting a system for multi power mode:



Amplifier Operation

ON/OFF AND OPERATION

When powering up your system, turn amplifiers **on last**. When powering down your system, turn amplifiers **off first**. The procedures for amplifier operation follow.

1. Press the KAV-250a power button (1) or KAV-250a/3 power button (14) on the amplifier's front panel. Wait until the blue power LED (2) on the KAV-250a or (15) on the KAV-250a /3 illuminates and you hear a click. The amplifier is now ready for operation.
2. With the output device muted or volume control fully lowered, select an output device. Decrease or increase the volume control to the desired listening level.
3. Before turning the system off, mute or lower the output device volume. Press the front panel power button to turn the amplifier off. It is now safe to turn off the rest of the system.

IMPORTANT

Always turn off the amplifier before changing input connections, and mute or fully attenuate the preamplifier level when switching sources.

These amplifiers have tremendous reserves of power and safely drive loudspeakers to extremely high sound pressure levels. However, use care when setting high playback levels and lower the volume level at any sign of loudspeaker distress.

Amplifier Troubleshooting

HOW TO TROUBLESHOOT SYSTEM NOISE

When you mix and match audio components, each with its own ground potential, a low frequency hum may occur in one or both loudspeakers. This often occurs when introducing a new component into a system.

If a low frequency hum emanates from the loudspeakers when you place the KAV-250a stereo or KAV-250a/3 three-channel amplifier into your system, follow these simple troubleshooting steps.

1. Check all input and output connections, making sure they are of sound construction.
2. With the amplifier off, remove the interconnect cables, then press the KAV-250a power button (1) or KAV-250a/3 power button (14) to turn the amplifier on.
3. If the hum disappears, press the power button again to turn the amplifier off and reinsert one of the interconnect cables.
4. Turn the amplifier back on. If the hum reappears with one or both interconnect cables inserted, there may be a defective cable. Have the interconnect cables checked before proceeding.

If the interconnect cables are sound, you may be experiencing a ground loop. This can often be easily eliminated. Please contact your authorized Krell dealer, distributor, or Krell for suggestions on how to solve this problem.

Question and Answer

Q. Should I leave the KAV-250a or KAV-250a/3 amplifier on at all times?

A. No. These amplifiers do not have a stand-by mode. Leaving them on at all times would result in considerable heat output and power consumption. For best results, turn the amplifier off when not in use, and allow a five minute warm-up after it is turned on. See **Amplifier Operation**, on page 25.

Q. When I turn the amplifier on there is a loud hum through the loudspeakers. What should I do?

A. When a new component is introduced, a low frequency hum may occur in one or both loudspeakers. Check all input and output connections and cables, making sure they are of sound construction. See **How to Troubleshoot System Noise**, on page 26. If the connections and cables are sound, you may be experiencing a ground loop. This can often be easily eliminated. Please contact your authorized Krell dealer, distributor, or Krell for suggestions on how to solve this problem.

Q. When I connect the amplifier to my system using the single-ended inputs, a loud buzz comes from my loudspeakers. Is the amplifier broken?

A. Check that the shorting pins for the KAV-250a or KAV-250a/3 are inserted into the XLR inputs (the unit is shipped with the pins in place). When using the single-ended inputs, these shorting pins must be inserted between pins 1 and 3 to keep external noise from corrupting the signal. For more information, see **Connecting the KAV-250a or KAV-250a/3 Amplifier to Your System**, on page 14.

Warranty

The KAV-250a and KAV-250a/3 amplifiers have a limited and transferable warranty of five years for parts and labor on circuitry. Should this product fail to perform at any time during the warranty, Krell will repair it at no cost to the owner, except as set forth in this warranty.

This warranty does not apply to damage caused by acts of God or nature.

The warranty described on this page shall be in lieu of any other warranty, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. There are no warranties which exceed beyond those described in this document. If this product does not perform as warranted herein, the owner's sole remedy shall be repair. In no event will Krell be liable for incidental or consequential damages arising from purchase, use, or inability to use this product, even if Krell has been advised of the possibility of such damages.

The warranty period begins on the date of retail purchase, as noted on the retail sales slip provided by an authorized Krell dealer or distributor, or on the warranty registration card sent to Krell. In the event adequate proof of purchase date is unavailable, the warranty period will begin on the date the unit was originally shipped from the factory. Krell can determine the original ship date from the serial number.

Transfer of warranty to a second owner occurs automatically. Please contact Krell to have the registration on the warranty changed. When the warranty is transferred, any successive owner assumes the remainder of the original warranty period.

The warranty for Krell products is valid only in the country to which they were originally shipped, through the authorized Krell distributor for that country, and at the factory. There may be restrictions on or changes to Krell's warranty because of regulations within a specific country. Please check with your distributor for a complete understanding of the warranty in your country.

If a unit is serviced by a distributor who did not import the unit, there may be a charge for service, even if the product is within the warranty period.

Freight to the factory is your responsibility. Return freight within the United States (U.S.A.) is included in the warranty. If you have purchased your Krell product outside the U.S.A. and wish to have it serviced at the factory, all freight and associated charges to the factory are your responsibility.

Krell will pay return freight to the U.S.A.-based freight forwarder of your choice. Freight and other charges to ship the unit from the freight forwarder to you are also your responsibility.

Krell is not responsible for any damage incurred in transit. Krell will file claims for damages as necessary for units damaged in transit to the factory. You are responsible for filing claims for shipping damages during the return shipment.

Krell does not supply replacement parts and/or products to the owner of the unit. Replacement parts and/or products will be furnished only to the distributor performing service on this unit on an exchange basis only; any parts and/or products returned to Krell for exchange become the property of Krell.

No expressed or implied warranty is made for any Krell product damaged by accident, abuse, misuse, natural or personal disaster, or unauthorized modification.

Any unauthorized voltage conversion, disassembly, component replacement, perforation of chassis, updates, or modifications performed to the unit will void the warranty.

The operating voltage of this unit is determined by the factory and can only be changed by an authorized Krell distributor or at the factory. The voltage for this product in the U.S.A. cannot be changed until six months from the original purchase date.

In the event that Krell receives a product for warranty service that has been modified in any way without Krell authorization, all warranties on that product will be void. The product will be returned to original factory layout specifications at the owner's expense before it is repaired. All repairs required after the product has been returned to original factory specifications will be charged to the customer, at current parts and labor rates.

All operational features, functions, and specifications and policies are subject to change without notification.

To register your product for warranty benefits, complete and return the Warranty Registration Card enclosed in the shipping box within 15 days of purchase. Thank you.

Return Authorization Procedure

If you believe there is a problem with your component, please contact your dealer, distributor, or the Krell factory to discuss the problem before you return the component for repair. To expedite service, you may wish to complete and e-mail the Service Request Form in the Service Section of our website at:

<http://www.krellonline.com>

To contact the Krell Service Department

TEL 203-799-9954
Monday-Friday
9:00 AM to 5:00 PM EST

FAX 203-799-9796

E-MAIL service@krellonline.com

WEBSITE <http://www.krellonline.com>

PRODUCT NAME

SERIAL NUMBER

To return this product to Krell, please follow this procedure so that we may serve you better:

1. Obtain a Return Authorization Number (R/A number) and shipping address from the Krell Service Department.
2. Insure and accept all liability for loss of or damage to this product during shipment to the Krell factory and prepay all shipping charges. Please see the Warranty page in this manual, concerning liability for shipping damage and shipping charges.

This product may also be hand delivered if arrangements with the Service Department have been made in advance. Proof of purchase will be required for warranty validation at the time of hand delivery.

IMPORTANT

Use the original packaging to ensure safe transit of this product to the dealer, distributor, or factory. Krell may, at its discretion, return this product in new packaging and bill the owner for such packaging if the product received by Krell was boxed in non-standard packaging or if the original packaging was so damaged that it was unusable. If Krell determines that new packaging is required, the owner will be notified before this product is returned.

To purchase additional packaging, please contact your authorized Krell dealer, distributor, or the Krell Service Department.

Specifications

KAV-250a Stereo Amplifier

FREQUENCY RESPONSE	20 Hz to 20 kHz	+0 dB, -0.1 dB
	0.4 Hz to 170 kHz	+0 dB, -3 dB
SIGNAL TO NOISE RATIO		
“A” WEIGHTED		118 dB
TOTAL HARMONIC DISTORTION (THD)	1 kHz	< 0.06%
	20 kHz	< 0.25%
GAIN		26.4 dB
INPUT IMPEDANCE		100 kOhms
INPUT SENSITIVITY		2.15 Vrms
OUTPUT VOLTAGE	Peak to Peak	138 V
	RMS	49 V
OUTPUT POWER, EACH CHANNEL	8 Ohms	250 W
DRIVEN	4 Ohms	500 W
BRIDGED	8 Ohms	1,000 W
POWER CONSUMPTION	Idle	210 W
	Max.	1,850 W
INPUTS	1 pair single-ended via RCA connectors	
	1 pair balanced via XLR connectors	
OUTPUTS	1 pair amplifier channels via five-way speaker binding posts	
DIMENSIONS	19w x 6.3h x 15.3d in.	
	48.3w x 16h x 38.9d cm	
WEIGHT	Shipping	50 lb., 22.7 kg
	Unit only	43 lb., 19.5 kg

KAV-250a/3 Three-Channel Amplifier

FREQUENCY RESPONSE	20 Hz to 20 kHz	+0 dB, -0.2 dB
	0.4 Hz to 112 kHz	+0 dB, -3 dB
SIGNAL TO NOISE RATIO		
“A” WEIGHTED		118 dB
TOTAL HARMONIC DISTORTION (THD)	1 kHz	< 0.06%
	20 kHz	< 0.25%
GAIN		26.4 dB
INPUT IMPEDANCE		100 kOhms
INPUT SENSITIVITY		2.15 Vrms
OUTPUT VOLTAGE	Peak to Peak	138 V
	RMS	49 V
OUTPUT POWER, EACH CHANNEL	8 Ohms	250 W
DRIVEN	4 Ohms	500 W
BRIDGED	8 Ohms	1,000 W
POWER CONSUMPTION	Idle	235 W
	Max.	1,930 W
INPUTS		3 single-ended via RCA connectors
		3 balanced via XLR connectors
OUTPUTS		3 amplifier channels via five-way speaker binding posts
DIMENSIONS		19w x 6.3h x 15.8d in.
		48.3w x 16h x 40.1d cm
WEIGHT	Shipping	60 lb., 27.2 kg
	Unit only	52 lb., 23.5 kg

All operational features, functions, specifications, and policies are subject to change without notification.

Krell Industries, Inc.
45 Connair Road
Orange, CT 06477-3650 USA

TEL 203-799-9954
FAX 203-799-9796
E-MAIL krell@krellonline.com
WEBSITE <http://www.krellonline.com>

KAV-250a
Stereo Power Amplifier

KAV-250a/3
Three-Channel Power Amplifier