



**KAV-250a**

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## **Instructions for Use**



**Owner's Reference**

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# KAV-250a Amplifier

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## CONTENTS

	Page
INTRODUCTION	3
UNPACKING	3
PLACEMENT	3
Cabinetry Considerations	4
AC Power Guidelines	4
CONNECTING THE KAV-250a TO YOUR SYSTEM	4
Input and Output Connections	4
Linking Multiple Amplifiers	5
Configuring the KAV-250a for Bridged Operation	6
AMPLIFIER OPERATION	7
On/Off and Stand-by Operation	7
System Noise Considerations	7
WARRANTY	8
RETURN AUTHORIZATION PROCEDURE	9
SPECIFICATIONS	12

## ILLUSTRATIONS

	Page
THE KAV-250a BACKPLATE AND CONNECTIONS FOR BRIDGED OPERATION	6

## CE Marking

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

## Introduction

Thank you for your purchase of the Krell KAV-250a. To obtain the best performance from your KAV-250a amplifier, pay careful attention to its placement, installation, and operation. A thorough understanding of these details will help insure satisfactory operation and long life for the KAV-250a and related system components.

THERE ARE NO USER-SERVICEABLE PARTS INSIDE ANY KRELL PRODUCT.

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

## Unpacking

1. Open the box and remove the top layer of foam. You will see these items:
  - 1 KAV-250a
  - 1 AC power cord
  - 1 packet containing the Owner's Reference and the Warranty Registration Card

**NOTE:** If any of these items are not included, please contact your authorized Krell dealer or distributor immediately for assistance.

2. Carefully remove the unit and accessories from the box. Remove the protective plastic wrap from the unit.

**NOTE:** Save all packing materials. If you must ship your KAV-250a in the future, repack the unit in its original packaging to prevent transit damage.

## Placement

### WARNINGS

The amplifier must not be located where it could be exposed to dripping or splashing fluids.

Before you install the KAV-250a into your system, review the following guidelines to choose the location for the KAV-250a. This will facilitate a clean, trouble-free installation. The KAV-250a does not require any type of special rack or cabinet for installation. *For the dimensions of the KAV-250a, see **Specifications** on page 12.*

Place the KAV-250a amplifier on a firm level surface away from dirt or moisture. When using custom racks or cabinetry, keep in mind the weight and ventilation requirements for this amplifier. Ideally, the amplifier should

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## Placement, continued

be placed as close to the speakers as possible. *Run long balanced interconnect cables to the amplifier 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. All Krell amplifiers will drive the lowest impedances with ease, but when impedance is added due to long cable lengths, amplifier power is wasted in the cable. Long speaker cables reduce the maximum power that can be delivered to the speakers.

## Cabinetry Considerations

The KAV-250a amplifier can become quite warm under normal operation. Install the KAV-250a in a location that provides unobstructed ventilation. If you place the amplifier in a closed cabinet, extra ventilation such as modified shelf spacing may be necessary. In extreme instances, small fans help to removing excess heat from enclosed spaces. In general, when the front and rear of a cabinet is open, the amplifier has adequate ventilation with two inches of clearance on each side and eight inches of clearance above and below.

## AC Power Guidelines

For best performance, Krell® recommends using a dedicated AC power line rated at a minimum of fifteen amps with the KAV-250a amplifier. For maximum power output, the KAV-250a should be operated from a dedicated twenty amp AC power line. The KAV-250a amplifier should only be operated with the power cord supplied. Please consult your dealer, distributor, or Krell® before using any devices designed to alter or stabilize the AC power for the KAV-250a.

## Connecting the KAV-250a to Your System

### WARNING

When making connections to this component or any other, make sure the power amplifier is Off and the preamplifier is in the Mute or Stand-by mode. Make sure all cable terminations are of the highest quality, free from frayed ends, shorts, or cold solder joints.

### Input and Output Connections

To prevent the introduction of hum or other noise into the system, organize all wiring between the KAV-250p and other system components neatly. Separate AC wires from audio cables.

1. Connect the cables from your speakers to the output terminals of the amplifier.

The KAV-250a amplifier utilizes five-way binding post speaker terminals for the left and right channels. The speaker terminals accept spade lugs, bare wire, banana plugs, or pins. The red terminals are used for positive connections and the black terminals are used for the negative connections.

2. Connect the interconnect cables from your preamplifier to the input terminals of the amplifier.

The KAV-250a amplifier is equipped with balanced and single-ended inputs. The balanced inputs use three pin XLR connectors and the single-ended inputs use RCA connectors. Krell® recommends the use of balanced interconnects. Balanced interconnects not only have the ability to

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minimize sonic loss but also have immunity to induced noise, especially for installations using long cable lengths. Balanced connections have 6dB more gain than single-ended connections. When level matching is critical, keep this specification in mind.

### **WARNING**

Use only one set of inputs to the amplifier at a time. The KAV-250a amplifier is shipped with shorting pins in the XLR inputs. These pins should remain in the XLR inputs if the KAV-250a amplifier is operating in the single-ended mode. When the shorting pin is inserted, pins 1 and 3 are shorted together. The shorting pins must be removed to connect the KAV-250a amplifier for balanced operation.

The XLR pin configuration is described below:

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

3. Insert the AC power cord into the receptacle located on the back of the KAV-250a amplifier. Insert the other end into the AC wall receptacle.
4. The amplifier is now ready for operation. See **Amplifier Operation**, on page 7.

### **Linking Multiple Amplifiers— Multi Amp Throughput™ (MAT™)**

For systems containing multiple amplifiers, Multi Amp Throughput™ (MAT™) simplifies installations. MAT™ provides a daisy-chain system option that reduces installation complexity and cabling requirements. To use this option, connect the outputs of the amplifier (either balanced via XLR or single-ended via RCA connectors) to the inputs of another amplifier. The output of the first amplifier sends the preamplifier signal to the next amplifier in the chain.

### **12 VDC REMOTE POWER IN**

This input accepts 12 volt power on/off signals from other Krell components, as well as from other devices that incorporate a 12 volt power on/off trigger output. This allows for remote turn on/off of the KAV-250a with the power activation of another Krell component as well as with other components used in a custom installation.

### **12 VDC REMOTE POWER OUT**

This output sends 12 volt power on/off signals to other Krell components, as well as other devices that incorporate a 12 volt power on/off trigger input. This allows for remote turn on/off of the KAV-250a with the power activation of another Krell component as well as with other components used in a custom installation.

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

## Configuring the KAV-250a for Bridged Operation

The KAV-250a may be configured to operate in a bridged mode. When bridged, the amplifier will deliver 1000 watts to an 8 ohm load. To implement this configuration:

1. Turn the KAV-250a off.
2. Locate the red switch on the back of the amplifier and slide it from the NORMAL

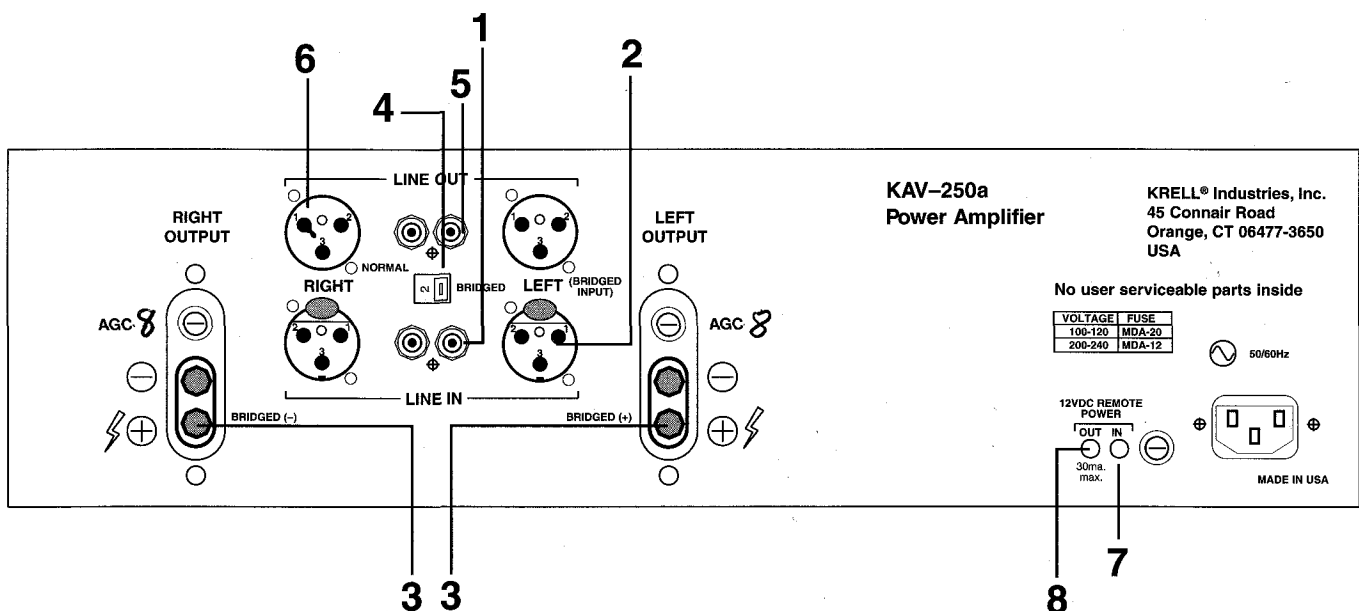
position to the BRIDGED position. *The numeral 2 will appear on the switch, when the switch is in the BRIDGED position.*

3. Connect the interconnect cable to the BRIDGED input, either balanced via the XLR connector or single-ended via the RCA connector. Do not use both inputs simultaneously. Connect the speaker cables to the speaker terminals labeled BRIDGED(-) and BRIDGED(+). The amplifier is now ready for bridged operation.

## THE KAV-250a BACKPLATE AND CONNECTIONS FOR BRIDGED OPERATION

**NOTE:** The KAV-250a may be configured for bridged operation using either a single-ended input (1) or a balanced input (2)

- 1 Single-ended input, for connection to a preamplifier
- 2 Balanced input, for connection to a preamplifier
- 3 5-way binding post speaker terminals
- 4 Red switch in bridged position, (with the numeral 2 displayed)
- 5 Single-ended output, for connection to another amplifier
- 6 Balanced output, for connection to another amplifier
- 7 12 volt trigger input
- 8 12 volt trigger output



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## Amplifier Operation

It is easy to understand the operation of the KAV-250a amplifier. However, great care needs to be exercised when operating a system that includes the KAV-250a, because of the amplifier's enormous power output. Switching between active sources without muting the preamplifier output, or bumping/miscuing a cartridge, can generate large transients at low frequencies. The KAV-250a amplifier may generate enough power with these transients to damage most loudspeakers. All switching of sources should be done with the preamplifier level either muted or fully attenuated. Do not change inputs to the amplifier while the amplifier is On.

**NOTE:** Care must be taken when setting high playback levels. Because of their tremendous reserve of clean power, Krell amplifiers can safely drive speakers to higher sound pressure levels than other amplifiers. Always turn the level down at the first sign of speaker distress.

### On/Off and Standby Operation

When powering up any system, amplifiers should always be turned on last and turned off first.

1. Press the power button on the front panel of the amplifier. You will hear a click. The amplifier is ready for operation.
2. With the preamplifier in the Mute position, or the volume control fully attenuated, select a source. Turn the volume control up to the desired listening level.
3. When turning the system off, lower the volume of the preamplifier completely or place it into the Mute or Stand-by position. Switch the amplifier to Stand-by by pressing the power button. It is now safe to turn off the rest of the system.

### System Noise Considerations

AC grounding becomes critical when connecting high performance audio components. When mixing and matching audio components, each with their own ground potential, a low frequency hum may occur in one or both speakers. This often occurs when introducing a new component into a system.

If there is a low frequency hum emanating from the speakers when the KAV-250a amplifier is placed into the system, follow these simple trouble-shooting steps before contacting your authorized Krell dealer, distributor, or Krell®:

1. Check all input and output connections, making sure they are of sound construction. With the amplifier Off, remove the interconnect wiring and turn the amplifier On. If the hum disappears, turn the amplifier Off and reinsert one of the interconnect cables. Then turn the amplifier back On. If the hum reappears with one or both interconnects reinserted, there may be a defective cable. Have the interconnect cabling checked before proceeding.
2. If the interconnects prove to be sound, you may be experiencing a ground loop. This can often be easily eliminated. Contact your authorized Krell dealer, distributor, or Krell®.

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## Warranty

Krell® warrants this product to be free from defects in material or workmanship for a period of five years for circuitry and three years for all mechanical components from the original date of purchase. 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. Transfer of warranty to a second owner occurs automatically. Please contact Krell® to have the name on the warranty changed. Transfer of warranty does not extend the duration of the original warranty period.

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

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 that an adequate proof of purchase date is unavailable, the warranty period will begin on the date the product was originally shipped from the factory. The warranty described in this paragraph shall be in lieu of any other warranty, express 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 for this Krell product is valid only in the country to which the product was 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.

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 product from the freight forwarder to you are also your responsibility.

The operating voltage of this product is determined at 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 for six months from the original purchase date.

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



## Return Authorization Procedure

**IMPORTANT:** If you believe there is a problem with your unit, please contact your dealer, distributor, or the Krell factory immediately. Do not return any unit to Krell® for repair without first discussing the problem and obtaining a Return Authorization Number.

**To return a product, the owner is required to:**

- Obtain a Return Authorization Number (R/A number) and shipping address from the Krell Service Department.
- Insure and accept all liability for loss or damage to the product during shipment to the Krell factory and prepay all shipping charges. The product may also be hand delivered if arrangements with the Service Department have been made in advance. Proof of purchase may be required for warranty validation at the time of hand delivery.
- Use the original packaging to insure the safe transit of the product to the factory, dealer, or distributor. The use of any packaging material other than the original packaging materials is not recommended. Krell® may, at its discretion, return a 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 the product is returned. To purchase additional packaging,

please contact your authorized Krell dealer, distributor, or the Krell Service Department for assistance.

Krell® is not responsible for any damage incurred in transit. Krell® will file claims for damages as necessary for products damaged in transit to the factory. The owner is responsible for filing claims for shipping damages that occur during the return shipment.

Replacement parts and/or products will be furnished 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.

In the event that Krell® receives a product for warranty service which 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 specification will be charged to the customer, at current parts and labor rates.

### 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 [krell@krellonline.com](mailto:krell@krellonline.com)

### KAV-250a

PRODUCT

SERIAL NUMBER

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

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

# KAV-250a

TEL 203-799-9954 FAX 203-799-9796  
E-MAIL krell@krellonline.com

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## Specifications

### FREQUENCY RESPONSE

20Hz-20KHz +0.0, -0.1dB

.4Hz-170KHz +0.0, -3.0dB

### SIGNAL TO NOISE RATIO

-118dB "A" weighted

### DISTORTION

1KHz 0.06% THD

20KHz 0.25% THD

### GAIN

26.4dB

### INPUT SENSITIVITY

2.15 Vrms

### INPUT IMPEDENCE

100K ohms

### OUTPUT VOLTAGE

Peak to peak 138 V

RMS 49 V

### OUTPUT POWER, each channel driven

8 ohms 1,000 W (bridged)

8 ohms 250 W

4 ohms 500 W

### POWER CONSUMPTION

Idle 210 W

Max. 1850 W

### DIMENSIONS

19w x 6.3h x 15.3d in.

48.3w x 16h x 38.9d cm

### WEIGHT

**Shipped** 57 lbs., 25.9 kg

**Unit only** 43 lbs., 19.5 kg

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

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