

KST-100
OWNER'S REFERENCE

A. INTRODUCTION

Thank you for your purchase of the KRELL KST-100 power amplifier. This amplifier represents the latest evolution in amplifier technology and incorporates many innovative design features.

To obtain the best performance from your KST-100, careful attention should be paid to placement, installation and operation. A thorough understanding of these details will help insure satisfactory operation and long life for the KST-100 and related system components.

This Owner's Reference is divided into several sections, each designed to perform a different function. As you read through this Owner's Reference you will become better acquainted with the features and functions that make the KST-100 a superb value. A Question and Answer section is also included where answers to common questions are provided. Should you have any questions or suggestions please feel free to contact your authorized dealer or the KRELL staff for assistance.

In the unlikely event that your KST-100 should require service you will be pleased to know that it is backed by a comprehensive Customer Satisfaction policy and one of the most advanced service facilities in the industry. For detailed information on the terms and conditions of service, please consult your warranty registration card, your authorized KRELL Dealer or Distributor.

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B. UNPACKING AND ASSEMBLY

NOTE: Due to the weight of the KST-100 it is strongly advised that unpacking and placement is completed by at least two individuals.

1. Open the box on one end.
2. Fold back the flaps on all four sides of the box and carefully roll it over on to the exposed end.
3. Pull the box straight up and off exposing the foam packing material.
4. Lay the foam container down on the floor and pull off the top section.

The following items will now be visible:

- | | |
|---|--------------------------|
| 1 | KST-100 stereo amplifier |
| 1 | Warranty card |
| 1 | AC power cord |
| 4 | Rubber bottoms |

NOTE: If any of these items are not included please contact your authorized dealer immediately for assistance.

5. Pull the amplifier out of the remaining layer of foam.
6. Remove the plastic bag from the amplifier.

NOTE: Save all packing materials. If you must ship your KST-100 in the future, repack the unit in its original packaging to prevent transit damage.

CAUTION: Do not connect the power cord into the AC mains before completing the Installation section.

C. BASIC INSTALLATION AND OPERATION

1. Place the KST-100 on a firm level surface away from excessive dirt or moisture. Ideally the amplifier should be placed as close to the speakers as possible. It is always preferable to run long interconnect cables to the amplifier and keep speaker cable length to a minimum. Speaker cable does add an impedance at the output of the amplifier, regardless of the cable's gauge. All KRELL amplifiers will drive the lowest impedances with ease. When impedance is added, the amplifier's power is literally wasted in driving cable. Long speaker cables reduce the maximum power that can be delivered to the speakers.

2. Amplifiers dissipate much of the power they consume in heat. The KST-100 should be installed in a location that provides unobstructed ventilation. If you have to install the unit on shelves or in a cabinet, extra ventilation may be necessary. This can be accomplished with "whisper"-type fans. Consult your dealer for assistance.

Generally, with the front and rear of a cabinet open, 2-3 inches of clearance on each side and 8 inches of clearance above the amplifier should provide adequate ventilation.

The exact dimensions for the KST-100 are in the Specifications Section below.

3. The KST-100 should have a dedicated line and should only be operated with the power cord supplied. Use of other power cords may damage the amplifier or void its warranty. Please consult KRELL or your dealer BEFORE using any devices designed to alter or stabilize the AC power for the KST-100. If you have any questions about placement or AC power conditions please consult KRELL.

4. The feet on the KST-100 can be used in several different ways. They are made from machined Delrin and are supplied with separate threaded rubber bottoms. The rubber bottoms can be screwed into the feet for protection of fragile surfaces such as hardwood floors or furniture. For use on rugs, we recommend using the feet without the rubber bottoms. KST-100 feet can also accept the KRELL AMDs (Acoustic Mass Damper). These improve the amplifier's sonic performance in most installations.

D. INPUT AND OUTPUT CONNECTIONS

CAUTION: When making connections to this component or any other, make sure the power amplifier is OFF and the preamplifier is in the MUTE or STANDBY mode.

1. Connect the speaker cables to the output terminals of the amplifier. The KST-100 utilizes two sets of parallel 5-way binding posts for the left and right channels. This configuration makes cable connections and bi-wiring simple.

NOTE: The binding posts are of the highest quality but will break if overtightened. Insert wire or spade lug into the connector and tighten until there is no movement from the cable.

CAUTION: Make sure all cable terminations are of the highest quality, free from frayed ends, shorts or cold solder joints.

2. Connect the interconnect cables from your preamplifier to the input of the KST-100.

The wiring to and from the amplifier, and all components in general, should be arranged in a neat, organized manner. Specifically, AC wires should be separated from audio wires. This practice avoids hum or other unwanted noise from being induced into the system.

The KST-100 has balanced and single-ended inputs. The balanced inputs use 3-pin XLR connectors and the single-ended inputs use standard RCA connectors.

CAUTION: Use only one input to the amplifier at a time.

The KST-100 is shipped with shorting pins in the XLR inputs. These pins should remain in the XLR inputs if you are operating the KST-100 in the single-ended mode. When the shorting pin is inserted, pin 1 and pin 3 are shorted together. The shorting pins must be removed to connect the KST-100 for balanced operation.

The pin assignment for the XLR is:
pin 1 = shield (ground)
pin 2 = non-inverting input (hot)
pin 3 = inverting input

NOTE: The RCA center conductor for each channel is wired in parallel with pin 2, the non-inverted input. Only one of these inputs should be connected to a preamplifier.

3. Insert the AC power cord into the receptacle located on the back of the KST-100. Insert the other end into the wall AC receptacle. (Refer to section C, Basic Installation and Operation, for AC power requirements)

E. AMPLIFIER OPERATION

1. Push the black breaker type switch on the front of the amplifier to turn it on. The LED in the switch will illuminate.

When turning on the system, the amplifier should always be last. Upon turn-on, the amplifier's outputs are not connected to the speakers. After the protection circuits have determined that the unit has completely stabilized, the speaker relays will be engaged. You will hear a click at this point. The amplifier is now ready to use. The amplifier will be at temperature and sound its best after approximately 30 minutes.

2. With the preamplifier in the Mute position, or volume control fully attenuated, select a source. Turn the volume control up to your desired listening level.

3. Understanding the operation of the amplifier is very easy. Equally important is an understanding of the care that should be exercised when operating the system as a whole, in relation to the enormous power output of the KST-100. Simple mistakes, such as switching between active sources without muting the preamplifier output, or bumping/miscuing a cartridge, can generate large transients at low frequencies. With this type of transient the KST-100 can generate enough power to damage most loudspeakers. All switching of sources should be done with the preamplifier level either muted or fully attenuated. Inputs to the amplifier should not be changed 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 safely drive speakers to higher sound pressure levels than other amplifiers. This also means driving the speakers to their limit. Always turn the level down at the first sign of distortion.

When turning the system off, the amplifier should ALWAYS be first. This avoids the possibility of a turn-off transient from some other component getting to the speakers.

F. PROTECTION CIRCUITRY

There are no fuses in the KST-100. The amplifier is protected by a series of non-intrusive, opto-coupled circuits that constantly evaluate the amplifier's operation. Appropriate protective action exists for DC conditions, short circuit, oscillation, AC power anomalies, high ground resistance and out-of-phase ground. Collectively the protection circuitry is designed to avoid damage to the amplifier or speakers caused by other defective components, faulty wiring, mishandling of the system or amplifier failure. When the protection circuit is engaged, the amplifier will shut off and short its output. After resolving either the input or output problem the amplifier can be turned on.

The amplifier also has a circuit breaker type power switch that protects it from excessive AC current draw. Should the breaker shut off frequently or become difficult to push ON contact your dealer or Krell Industries.

G. MONAURAL CONVERSION AND OPERATION

The KST-100 can be easily converted into a 400 watt monaural amplifier. To switch the amplifier to mono follow these instructions.

1. Remove the topcover from the amplifier via 8 topcover screws.
2. Find the toggle switch located at the rear of the amplifier mounted on the circuitboard. Move the toggle switch over to the Mono setting printed on the circuitboard.
3. Reinstall the topcover and the 8 topcover screws.

OPERATION

1. The input of the KST-100 in Mono operation is the Left channel input only.

Connect the Left output of your preamplifier to the Left channel input of the designated left channel mono amplifier. Connect the right output of your preamplifier to the left channel input of the designated right channel mono amplifier.

2. The output of the KST-100 in Mono operation is the positive outside binding posts of each channel. The inside Black binding post of each channel in mono is not operational.

Connect the left and right channel outer binding posts on each amplifier to the loudspeaker.

NOTE: Pay careful attention to the labeling on the backpanel of the KST-100 when making input and output connections. Connecting this amplifier for monaural operation can become confusing.

H. REAR PANEL DESCRIPTIONS

INPUTS:

Balanced via 3 pin XLR connector
Single ended via RCA connector

XLR PIN CONFIGURATION

pin 1 Shield (ground)
pin 2 Non-inverting or 0 degrees (hot)
pin 3 Inverting or 180 degrees

OUTPUT:

Two pairs of five-way binding posts in parallel,
per channel

OTHER:

Standard AC receptacle

20 amp circuit breaker type power switch

OPTIONS:

Black Faceplate

I. QUESTIONS AND ANSWERS

Q. Should I leave the KST-100 ON at all times?

A. Although you could leave the KST-100 ON at all times without fear of damage to the amplifier, we recommend 30 minutes of warm-up before critical listening and switching the amplifier off when not in use.

Q. When I push the power switch on the front of the KST-100, the amplifier doesn't turn ON. What should I do?

A. Unplug the amplifier from the AC receptacle and remove the input from the amplifier. Check the output connections, then plug the amplifier back in. Push the power switch on the front panel. If the power switch resists being turned ON or shuts OFF once engaged, unplug the unit and call your dealer or Krell industries.

Q. When I turn the amplifier on there is a loud hum through the speakers. There was never a hum before the KST-100 was in the system. What should I do?

A. Often when a new component is introduced into an audio system a hum may become present. This is often caused by a ground loop in the system. Try putting a 3 prong to 2 prong AC adaptor (cheater plug) on the AC power cord, lifting the ground from the unit. This should make the hum disappear. If not, try another adaptor elsewhere in the system.

NOTE: Always keep one major audio component grounded.

NOTE: Even though the ground is lifted from the power amplifier, it is still grounded via the interconnect cables throughout the rest of the system.

Q. Can I use special audio power cords on the KST-100?

A. You can experiment with special power cords as long as they are grounded on both ends and meet the amplifier's 15 amp power requirement.

Q. After the amplifier is playing for about one hour it becomes very hot. Is this normal?

A. Yes. Due to the design of the KST-100 it will become quite warm when driven hard. If the amplifier should have a severe temperature imbalance between the left and right channel, unplug the unit and call your authorized dealer or Krell.

Q. I tried a new preamplifier in my audio system and when I turned the unit on the KST-100 shut off. Is the amplifier defective?

A. More than likely the amplifier is not defective. When connecting components you should always keep the amplifier off. The amplifier sensed a bad input signal and shut off, protecting itself and the speakers. There also could have been a bad cable connection or excessive DC offset coming from the output of the pre-amplifier. Before turning the amplifier on, check the input cables. If that doesn't help, bring the preamplifier to the dealer for testing.

J. SPECIFICATIONS

KST-100

GAIN

26dB

SIGNAL-TO-NOISE

102dB unweighted

THD

1K at 8 ohms
less than .1%

20K at 8 ohms
less than .3%

INPUT IMPEDANCE

47,000 ohms(47K)

INPUT SENSITIVITY

1.5 volts for 100 watts out

OUTPUT IMPEDANCE

.1 ohms

OUTPUT VOLTAGE

80 volts peak to peak 8 ohms

OUTPUT POWER

All readings are continuous output power,
per channel

8 ohms	100 watts
4 ohms	200 watts
2 ohms	400 watts
1 ohm	800 watts

DIMENSIONS

18.0"	WIDE
14.8"	DEEP with handles
6.5"	HIGH with feet

SHIPPING WEIGHT

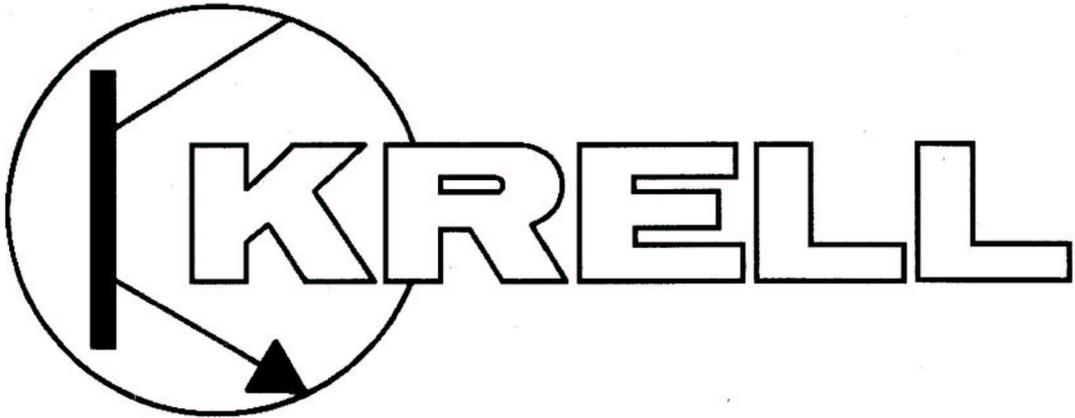
60 pounds

K. WARRANTY AND SERVICE **INFORMATION**

There are no user-serviceable parts inside the KST-100. The KST-100 has a limited warranty of five years parts and labor. Return freight is included in the warranty. The warranty period begins on the date of purchase and is activated with the return of the enclosed Warranty Card and a copy of the Sales receipt. Please return the warranty card immediately after successful installation and operation are completed.

The warranty for Krell products is valid **only** in the country to which they were originally shipped and at the factory. If you think there are problems with your unit please contact your dealer, distributor or the factory immediately.

Please do not return any unit to KRELL for repair without first calling to discuss the problem and to obtain a Return Authorization number. Freight to the factory or distributor is your responsibility. Return freight to you will be paid by the factory or distributor. Any unauthorized updates or modifications performed to the unit will void the warranty.



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