

**KRELL**  
THE LEADER IN AUDIO ENGINEERING



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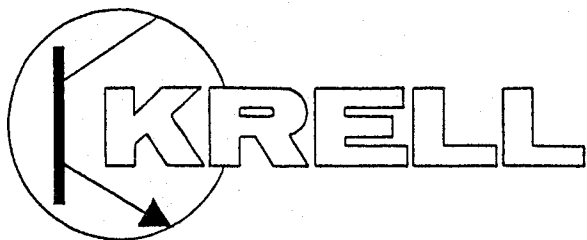
**KRELL INDUSTRIES, INC.**

**KRS-2 PREAMPLIFIER**

**OWNER'S MANUAL**

**February 1, 1987**

**KRELL INDUSTRIES, INC.**



## KRS-2 Stereo Preamplifier

The KRS-2 is designed to be the ultimate statement in a stereo preamplifier. It is a completely dual-mono unit housed within three chassis. The audio/switching section and main power supply are each contained in a full sized chassis, while four torodial transformers--one each for plus and minus volts, per channel--are in a smaller chassis. This transformer case is designed to be separated from the preamplifier and other components to prevent the induction of hum into the system.

Consistent with KRELL's research and development policy, new dedicated circuitry has been developed for the KRS-2. All gain stages are symmetrical FET circuits and operate in pure Class A mode. The output impedance is a very low 6 ohms, which allow long interconnect runs between the preamplifier and amplifiers with an absolute minimum of signal degradation. The RIAA compensation in the phono stage is adjusted to within .1dB variation, or less, of the standard. Most significantly, all signal shaping capacitors have been removed from the audio section. While others debate the relative sound quality of capacitor types, our research has shown that the best sound quality is achieved when all capacitors are removed from the signal path. The KRS-2 is the first preamplifier that is directly coupled from moving coil input to main output. When used in conjunction with one of the older KRELL monaural amplifiers, either the KMA-100 or KMA-200, or any of the new programmable series amplifiers, the entire chain is direct coupled from the phono cartridge to the speaker.

The power supply also represents a dramatic departure from conventional designs. In addition to the transformer system described above, there are 16 discrete tracking regulators, eight in the main supply and eight in the preamplifier itself, that completely isolate each channel and amplification stage from the others. Storage capacity in the main supply is 192,000 mfd with an additional 20,000 mfd in the preamp! This exceeds the storage capacity of most power amplifiers on the market and insures that the preamp will never be starved for current even under the most torturous conditions.

The KRS-2 also includes the convenience functions for which KRELL preamplifiers are known. There are facilities for six inputs to be switched separately for record and monitor, adjustable input loading for moving coil cartridges, adjustable phase compensation for the CD input, and two main outputs for sending to primary and secondary playback systems.

## KRS-2 PREAMPLIFIER

Thank you for purchasing the KRS-2 Preamplifier. The KRS-2 is the latest evolution of KRELLS' preamplifier technology and represents advances in circuitry sophistication and sonic quality not found in any other preamplifier of similar cost. Two notable design features are its' power supply, which is similar in capacity to those found in many power amplifiers, and the absence of any capacitors in the signal path. Please read this instruction manual thoroughly before using the KRS-2. Its' installation and operation are very simple to understand and it will provide many years of trouble-free performance. Please be sure to return the enclosed warranty card.

### UNPACKING

While unpacking the KRS-2 please inspect the unit for shipping damage. If any damage is evident contact your dealer or the factory immediately. If the unit is in proper condition proceed with installation. In addition to the power supply and preamp chassis you will find one blue transformer box, an allen driver to open the top cover, and one short DC cable to connect the main power supply to the preamp chassis.

### INSTALLATION

The KRS-2 is designed to be set up with the preamp chassis sitting on top of the power supply chassis. The short DC cable should be connected between the "DC Out" connector on the power supply and the "DC In" connector on the preamp. The red dot on the connectors always point up. The blue transformer box should be placed away from all system source components. The 8 pin connector from the transformer box should be inserted into the "AC In" on the rear of the power supply. The AC cable from the transformer box can now be connected to the AC mains.

You can now proceed with connection of the various source components in your system. The rear panel inputs follow, from left to right as viewed from the front, the assignment on the "Select" switch from phono to tuner, etc.

After the inputs is the Record Output; this can be "y'd" to form two record outputs if necessary.

Last are the two sets of Main Outputs. These operate in unison and are provided as a convenience for routing to two different systems.

## NOTES ON INSTALLATION

Be sure the volume control is fully counterclockwise before making connections to the KRS-2; also, the power amplifier should be off while connections are being made. Place all power amplifiers, C.D. players or other power supplies a reasonable distance from the KRS-2 as they might induce hum into the phono section. Our custom RCA connectors are made to very exact standards. Lesser quality connectors can damage them or function improperly. Please check with your dealer or the factory if you have any questions as you can cause damage to your system or jeopardize your warranty.

## PHONO SECTION SET UP

The KRS-2 is shipped with the phono section set up for a moving coil cartridge and loaded to 100 ohms. This can be changed with three sets of internal switches. To access these switches the top cover of the preamp must be removed with the supplied allen driver. The phono section is located on the left side of the unit, as viewed from the front. In the middle of the PC board there are two switches (in one housing) located at the end of two rows of (4) capacitors marked C1, C2, C3 and C4:

Moving Magnet operation = C1 & C3, fixed loading at 47K ohms  
Moving Coil operation = C2 & C4, adjustable loading

The 8 position switches for adjusting the moving coil loading, one per channel, are located at the extreme left of the PC board. Below is a listing of the various settings:

all switches in the open position	=	47,000 ohms
all switches open except switch 8 on	=	1,000 ohms
all switches open except switch 7 on	=	800 ohms
all switches open except switch 6 on	=	470 ohms
all switches open except switch 5 on	=	250 ohms
all switches open except switch 4 on	=	100 ohms
all switches open except switch 3 on	=	47 ohms
all switches open except switch 2 on	=	25 ohms
all switches open except switch 1 on	=	10 ohms
all switches on		5 ohms

## C.D. SECTION SET UP

The Compact Disc input of the KRS-2 is routed through an adjustable three pole phase correcting filter, a feature unique to KRELL preamps. The switches to adjust the filter are located roughly in the middle of the PC board, on the same line as the cartridge loading switches. Below is a listing of settings for various C.D players.

Kyocera 901	1, 2 open, 3, 4, 5, 6, 7, 8 on
Kyocera, other models	1, 3, 5, 6, 7 open, 2, 4, 8 on
Magnavox 650	4, 5, 8 open, 1, 2, 3, 6, 7 on
Meridian MCD & Pro	1, 6, 7 open, 2, 3, 4, 5, 8 on
NAD	1, 3, 4, 5, 6, 7 open, 2, 4 on
Nakamichi OMS 5 & 7	1, 3, 4, 6, 7 open, 2, 5, 8 on
Pioneer SCD 909	2, 3 open, 1, 4, 5, 6, 7, 8 on
PS Audio CD 1	3, 6, 7, 8 open, 1, 2, 4, 5 on
Sony 101 & 701 ES	1, 2, 3 open, 4, 5, 6, 7, 8 on
Sony CD 302	3, 4, 5, 6, 8 open, 1, 2, 7 on

If you do not find your player listed you can contact the factory or your dealer for settings. In general, if you have a Sony type unit adjust to 1, 2, 3, 8 open, 4, 5, 6, 7 on; for a Phillips type system adjust to 3, 4, 5, 6, 7 open, 1, 2, 8 on. These are average settings for the two systems.



## KRS-2 SWITCH FUNCTION DESCRIPTIONS

The functions of the KRS-2 front panel switches are detailed below. They are addressed from left to right. Please note that the functions of the SELECT and TAPE switches are different from the standard Source/Monitor switching on most preamplifiers.

### 1. SELECT

The SELECT switch is used to choose the source component for listening. The output of this switch is routed to the high-level (or line) section of the KRS-2, which includes the BALANCE and LEVEL controls. It is not affected by the position of the TAPE switch.

### 2. TAPE

The TAPE switch is used to choose the source component for recording. The output of this switch is routed to the Record Outputs. It is not affected by the position of the SELECT switch.

Important Note: Unlike conventional Source/Monitor switching, the KRS-2 will allow you to record from one source while listening to another. For example, you can record from phono to a cassette deck while listening to a tuner. To accomplish this set the TAPE switch to phono, which sends the phono section output to the Record Outputs, and set the SELECT switch to Tuner, which directs the tuner output to the high-level section for sending to the amplifier.

### 3. BALANCE

The KRS-2 BALANCE switch also functions differently from most balance switches. It is really a balance attenuator. When turned clockwise to increase the right channel relative to the left, the left channel is attenuated in 1 dB steps, of which there are four. The fully clockwise position will turn off the left channel. Conversely, when the BALANCE control is turned counterclockwise to favor the left channel, the right channel is attenuated in four 1 dB steps. the fully counterclockwise position will turn off the right channel.

### 4. LEVEL

The LEVEL control is used in to adjust the playback listening volume.

In the KRELL tradition of fine quality, the KRS-2 exhibits a meticulously handcrafted, anodized finish. The KRS-2, like all KRELL products, is built with components that meet the most exacting specifications.

The KRS-2 offers the audio connoisseur the solution to preamplifier requirements: superb sonic performance, system flexibility, robust construction, and exceptional reliability. It is truly a statement product that will remain a constant in any system well into the future.

Signal-to noise Ratio  
Phono: -110dB 'A' weighted

Frequency Response  
From .01 to 1.5 MHz

RIAA Tracking  
Under .1dB from 20 Hz  
to 20 KHz

Phono Overload  
1 KHz 500 mV

Input Impedance  
10,000 ohms

Phono Impedance  
MM: 47,000 ohms  
MC from 5 to 47,000 ohms  
adjustable

True DC coupling in all stages

Warranty  
5 years limited and transferable

Dimensions  
Height: 2.25" per unit  
Width: 19" per unit  
Depth: 12" per unit

Shipping Weight  
57 lbs.



ADDITIONAL C.D. SETTINGS

P.S. Audio CDI	3-6-7-8 open 1-2-3-5 on
Nakamishi OMS-7	1-3-4-6-7 open 2-5-8 on
Magnavox 650	4-5-8 open 1-2-3-6-7 on
Stax Q	3-4-8 open 1-2-5-6-7 on
Mission 707	2-8 open 1-3-4-5-6-7 on
Yamaha	2-8 open 1-3-4-5-6-7 on
Adcom GCD-300	1-3-4-7 open 2-5-6-8 on
Kinergetics CDC 20A	3-4-5-8 open 1-2-6-7 on
McIntoch	3-4-5-6-7-8 open 1-2 on
Onkyo DX 330	4-5-6-7 open 1-2-3-8 on
Sony CDP-620ES	4-5-6-7-8 open 1-2-3 on
Denon DCD-1700	3-4-5-6-8 open 1-2-7 on

For newer generation C.D. players, please try any of the following settings:

1-5-6-7 open 2-3-4-8 on

4-5-6-7-8 open 1-2-3 on

3-4-5-6-7-8 open 1-2 on

For bypass of C.D. Filter use:

1-3-4-5-6-7-8 open 2 on

Using the auxillary input for the C.D. player will bypass all C.D. filtering circuitry.