



The KRC Remote Controlled Preamplifier



Audiophiles have long harbored a quiet desire for the convenience features found in mainstream products. The methods to control system functions remotely, however, have been considered contrary to the requirements of high-end performance. The minimum design objective for the KRC was to break the impasse: to unite recognized Krell sonic quality with the convenience of remote control. The reality is a preamplifier of illuminating, lifesize presentation — a fundamental departure from the past.

CONTROL WITHOUT CONFUSION

A virtue of the KRC is its simple operation. Use of the new pushbuttons is an instinctive process. Inputs and functions are changed with a push of the appropriate button. Gently lit LEDs indicate which are in use.

The remote control is operated in a manner virtually identical to the front panel. The primary difference is volume level adjustment which, on the remote, is performed with push-buttons. When level is raised or lowered remotely, a unique feature is activated. A small red LED mounted within the Level knob illuminates during the change. This adds a useful visual reference to level changes made from a distance. It also provides an unexpected element of pleasure.

The KRC remote control unit deserves special mention. Machined from two solid blocks of aluminum, hand polished, black anodized and computer

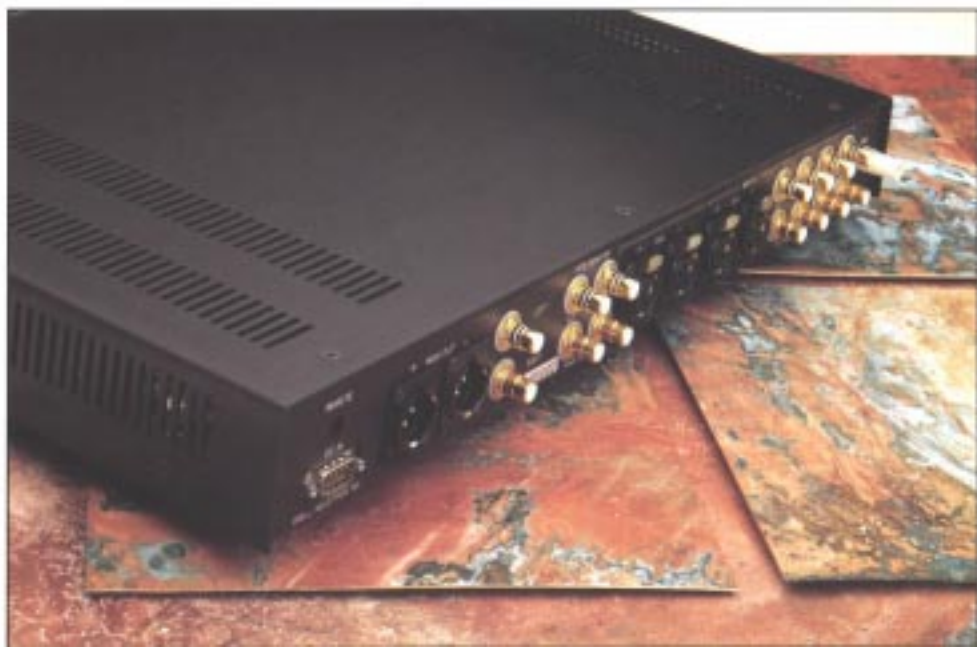
engraved, it is a mini, hand-sized Krell. Its powerful beam allows consistent operation off-angle and from unusual distances. Ultra-precision internal parts and construction assure a lifetime of reliable use.

CONTROL WITHOUT COMPROMISE

A significant percentage of KRC research was in development of remote controllable, sonically neutral switching circuitry. Technology was devised using digital logic to operate a network of gold contact relays. Relays are far superior to common, less expensive methods of electronic switching. The result is crisp, positive switching, while absolute signal integrity is maintained.

The solution for remote control of level was less demanding, but equally effective. A custom designed potentiometer is coupled to a precision stepper motor. The motor shaft exits the front panel and is mounted with the Level knob. The combination of stepper motor and custom pot taper allows fine adjustment during remote volume changes and at low levels. The potentiometer insures minimum sonic coloration.

Contact points on all input and output connectors are gold plated. The remote control connector will allow the KRC to be integrated into future multi-room systems.



SONIC CONSIDERATIONS

Equal care and effort was invested in accelerating the evolution of audio performance. A four layer, glass epoxy circuit board is a primary building block for the analog circuits. The four independent layers are dedicated to audio signal, DC power, and two for ground. Many benefits are derived from this approach. Audio signals pass through much larger paths and are free from ground noise and supply interference. Active components have direct access to the power supply, insuring adequate current delivery under all conditions. Power supply modulations are eliminated as well. The two ground layers provide direct access to ground from any point. This improves individual component operation and dramatically reduces noise contamination in audio and supply circuits.

The power supply system is firmly in the Krell tradition. Multiple supplies within the external chassis deliver tightly regulated voltages to final regulation stages within the KRC. Current capability is far in excess of any possible musical demand. The supply can never be taxed to the point of affecting sonic quality.

Gain stages are a new refinement of classic Krell designs. They are high-bias, pure Class A, complimentary circuits. All analog circuits are direct-coupled, eliminating capacitor-induced signal alterations, while servo feedback loops control DC offset.

A new, more sophisticated buffer amplifier was developed for the Main outputs. Multiple transistor groups, more appropriate for audio level signals, are used in place of large, single devices. This stage generates a new performance level for transparency, speed and image resolution, or, in a word, accuracy.



PRACTICAL CONSIDERATIONS

Underlying its dramatic aesthetic and high-tech demeanor, the KRC is a very practical device. Its array of inputs — two balanced, four single-ended, and one tape loop — are adequate for the vast majority of home systems. An optional phono section can be installed at any time. Main outputs are provided in both formats, and are capable of driving independent systems.

The KRC is the first preamplifier with complete input and output protection circuitry. Monitoring exists for faults such as shorted wires, oscillation, and DC offset. When a fault is sensed, the protection circuitry will disconnect the appropriate input or output, preventing damage to itself, the amplifier, or both. This logic uses the front panel LEDs to indicate location of the fault.

The potentiometer/drive motor assembly is an extremely rugged construction. Switching circuitry is on the top board; analog and supply stages are below.

The purpose of a preamplifier is to exercise central control over primary audio system operations. Useful features and functions are essential, sonic quality the dominant priority. In addressing these issues, the KRC leaves nothing to chance. Convenient to operate, accommodating to various system configurations, assertive in appearance, its true measure of greatness comes last: start the source, sit down, turn up the level by remote. You are transported.



The definitive preamplifier remote control: refined appearance, graceful feel, logical switch arrangement.

SPECIFICATIONS

Electrical Specifications

Frequency Response

20KHz—20KHz: ± 0.02 dB

0.2 Hz—400KHz: ± 0.0 , -3 dB

Signal-to-Noise Ratio

< -95 dB, unweighted

THD

$< 0.002\%$, 20Hz—20KHz

Functions

Source Selection

Tape Monitor

High/Low Gain

Absolute Phase

Balance

Level Control

Inputs

Two balanced

Four single-ended

One tape return

Outputs

One balanced Main output

One single-ended Main output

One buffered Tape output

Dimensions

KRC

19" wide

2.5" high

15" deep

Supply

8.625" wide

2.5" high

11.25" deep

Warranty

Five years, limited and transferable

