

## **KPS 28c**

Krell Playback System with Krell CAST Technology

**Instructions for Use** 

**Owner's Reference** 

KPS 28c Krell Playback System with Krell CAST Technology v 00.0 Krell Industries, Inc. 45 Connair Road Orange, CT 06477-3650 USA

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

#### **WARNINGS**

The KPS 28c 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 KPS 28c must be unobstructed at all times during operation. Do not place flammable material above or beneath the component.

Do not remove or bypass the ground pin on the end of the AC cord. This could cause radio frequency interference (RFI) to be introduced into your playback system. Operate the KPS 28c only with the power cord supplied.

Turn off all systems' power before connecting the KPS 28c to any component. Make sure all cable terminations are of the highest quality, free from frayed ends, short circuits, or cold solder joints.

## 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.



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## Introduction

Thank you for your purchase of the Krell Playback System 28c. The KPS 28c's transport design eliminates error-producing wobble and delivers exceptional tracking and focus accuracy, regardless of environment or disc characteristics. Digital circuitry provides ultra-high signal resolution and direct coupled analog circuitry assures superior low-frequency performance, with low distortion, wide bandwidth, and minimal negative feedbacks. The KPS 28c can be seamlessly integrated into a home theater or whole-house audio system, and the remote control provides for the convenient operation of the KPS 28c as well as other Krell components.

This owner's reference manual contains important information on placement, installation, and operation of your KPS 28c. Please read this information carefully. A thorough understanding of these details will help ensure satisfactory operation and long life for your KPS 28c and related system components.

## **Definition of Terms**

Following are the definitions of key terms used in your owner's reference manual.

## CONNECTIONS

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

Krell Multi Amp Throughput (MAT). A proprietary 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.

## **INPUTS AND OUTPUTS**

**Balanced.** A symmetrical input circuit that has equal impedance from both input terminals with respect to a common reference point. Balanced connections have 6 dB more gain than single-ended connections.

**Single-ended.** An input circuit in which one side of a transmission line circuit is ungrounded. Single-ended connections have 6 dB less gain than balanced connections.

## **OPERATION**

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

**Operational Mode.** When the power button on the front panel is pressed and the blue power LED illuminates, the component is in operational mode and ready to play music.

# Revolutionary Krell CAST Technology

Current Audio Signal Transmission, termed CAST, is a revolutionary method of connecting analog audio components for unparalleled sonic performance. Innovative engineering combines the new Krell CAST circuitry with existing Krell Current Mode technology to create entire CAST systems that reproduce music with incredible range, tonality, and precision.

## Voltage Signal Transmission and the Traditional Audio System

Traditionally, signal is transmitted in the voltage domain between two components. In an audio system, each component is a discrete entity with unique characteristics that act upon the musical signal independently. Each component is unaware of the other components in the system. The cables that connect the components each have their own electrical characteristics, which affect the sonic presentation of the entire system.

## **CAST: A New Approach**

CAST circuitry recognizes signal transmitted in the current domain instead of the voltage domain between each component. CAST transmission unifies the individual components and their interconnects into an electrically linked whole. The sonic presentation of the entire system remains intact.

### **CAST Basics**

Here's how a CAST audio system works. Internally, each CAST source transfers, or amplifies, current using Krell Current Mode circuitry. This current signal is then output using CAST circuitry. When the signal is received by a CAST input, Krell Current Mode circuitry again takes over until the signal reaches the loudspeaker. By maintaining the musical signal in the current domain from beginning to end, an entire CAST system behaves as if it is one component. With CAST, anomalies of signal transmis-

sion between components are eliminated. Cable impedances and their effects on the transmitted signal are non-existent.

## **How CAST and Krell Current Mode Interact**

While CAST is a new method of transferring the musical signal between components, its origin stems from Krell Current Mode, the technology developed to transfer the musical signal within a component. CAST combined with Krell Current Mode takes circuitry signal transmission to the next evolutionary level. In essence, Krell Current Mode maintains the integrity of the signal within the component and CAST preserves the transmitted signal between components. Together, CAST and Krell Current Mode technologies unify separate Krell components into a *single global circuit*.

### **CAST Cable Construction**

A CAST system uses cables manufactured by Krell and other manufacturers specially licensed by Krell. Thin and flexible CAST cables are constructed with the same build quality as other Krell products and are aesthetically matched to the components that Krell manufactures. An all-metal body and locking connectors with gold contacts are part of the standard nocompromise specification developed for every CAST cable made.

## **The Best Musical Performance**

When you operate a CAST system, you will hear significant improvements in every performance area: speed, precision, dynamic range, depth and width of the sound stage, transient impact, tonal balance, harmonic distortion, and more. The goal for CAST is the same company goal used for all Krell products. Krell strives for the delivery of the best performance of a musical event for you, using the full expression of technology to date.

## Unpacking

- 1. Open the shipping box and remove the top layer of foam. You see these items:
  - 1 KPS 28c
  - 1 AC power cord
  - 1 12 VDC (12 Volt trigger) remote cable link
  - 1 1.25 amp slowblow fuse
  - 1 T-10 Torx wrench
  - 1 KPS 28c remote control
  - 2 AAA size 1.5 Volt batteries
  - packet containing the Owner's Reference and the Warranty Registration Card
- Carefully remove the unit and accessories from the shipping box. Remove the foam end caps and protective plastic wrap from the KPS 28c.

#### 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 KPS 28c in the future, repack the unit in its original packaging to prevent transit damage. See **Return Authorization Procedure**, on page 16, for more information.

## **Placement**

Before you install the KPS 28c into your system, review the following guidelines to choose the location for your component. This will facilitate a clean, trouble-free installation. The KPS 28c does not require a special rack or cabinet for installation. For the dimensions of the KPS 28c, see *Specifications*, on the back cover.

The KPS 28c requires 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. Installations inside cabinetry may need extra ventilation.

#### Note

The KPS 28c incorporates an advanced suspension system and does not require additional mass coupling or isolation. You may experiment with feet or cones as long as they are not permanently affixed to the chassis. Any unauthorized modifications to the electronics or chassis will void the warranty.

## **IMPORTANT**

Do not attach enhancement accessories such as rings, mats, or dampers to individual compact discs. These accessories may interfere with the compact disc transport, resulting in erratic playback and/or poor sound.

## AC POWER GUIDELINES

The KPS 28c has superb regulation and does not require a dedicated AC circuit. Avoid connections through extension cords or multiple AC adapters. High quality 15 amp grounded AC strips are acceptable. High quality AC line conditioners or filters can be used if they are grounded and meet or exceed the unit's power supply rating of 100 VA.

## **Quick Start**

The abbreviated procedures in this Quick Start section enable you to connect and operate your KPS 28c system quickly to enjoy its basic features. To access the full array of available features for the KPS 28c, please read the entire owner's reference manual. Numbers in parentheses refer to Figure 1 on page 5, Figure 2 on page 7, and Figure 3 on page 9.

## INPUT AND OUTPUT CONNECTIONS

## **IMPORTANT**

Make sure all components and power sources are off before connecting inputs and outputs. When switching between active sources, always lower the volume to off or mute the output. This ensures that the next source played does not damage your system with a high output transient.

## **Analog Output Connections**

Connect the Krell CAST cables from the left and right Krell CAST 4-pin outputs (13) on the KPS 28c back panel to your CAST-enabled preamplifier. For balanced or single-ended operation, connect the interconnect cables from either the left and right balanced (14) or the single-ended (15) outputs on the KPS 28c back panel to either the balanced or the single-ended inputs on your preamplifier. (The remaining outputs can be connected to another preamplifier in a different system.)

### Note

You can set up your KPS 28c to play a musical selection in three different areas. Connect the CAST output to a CAST-enabled system in one listening area, the balanced output to a system in a second listening area, and the single-ended output to a system in a third listening area. The musical selection will play simul-

taneously in all three areas.

## **Digital Output Connections**

Connect the cables from the optics output (16) or coaxial output (17) on the KPS 28c back panel to your digital recorder or the digital input on your preamplifier.

## **POWER ON**

- Connect the AC power cord to the IEC power connector (20), then connect the AC power cord to the wall socket. The KPS 28c is in the stand-by mode. The red stand-by LED (3) illuminates.
- Press the power button (4) or pwr key (22) to switch the KPS 28c from the stand-by to the operational mode. The blue power LED (5) illuminates and you hear a click. The KPS 28c is ready to play music.

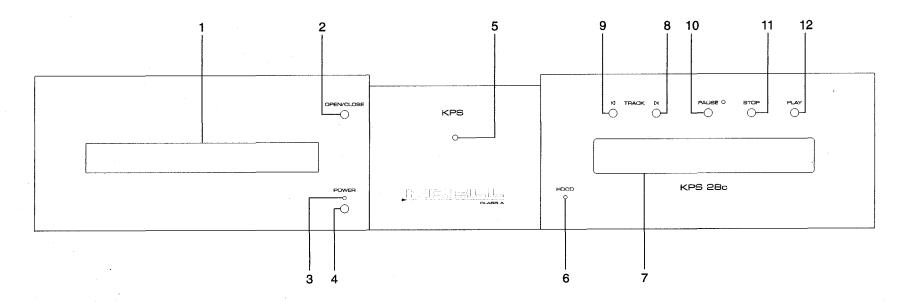
### TO PLAY A COMPACT DISC

- 1. Use the open/close button (2) or open key (23) to open the compact disc transport (1).
- 2. Place a compact disc on the transport.
- Use the open/close button (2) or open key (23) to close the compact disc transport (1). Playback automatically begins from the first track. Adjust the system volume through your preamplifier or amplifier.
- 4. Press the stop button (11) or key (28) to end compact disc playback.

#### Note

You can also begin track playback by pressing the play button (12) or key (29), or select a track using the direct track access keypad (26), the track forward and back buttons (8, 9) or keys (30) or the search forward and back keys (31).

#### THE KPS 28c FRONT PANEL FIGURE 1



## **Compact Disc**

## **Transport Functions**

- 1 Compact Disc Transport
- 2 Open/Close Button

## Power

- 3 Stand-by LED
- 4 Power Button
- 5 Power LED

## **Compact Disc Functions**

- 6 HDCD® LED
- 7 Compact Disc Display
- 8 Track Forward Button
- 9 Track Back Button
- 10 Pause Button and LED
- 11 Stop Button
- 12 Play Button

## **Front Panel Description**

See Figure 1 on page 5

The front panel of the KPS 28c accesses power on and off and compact disc functions. The compact disc display shows compact disc playback and programming status. Front panel features and their descriptions follow.

## Compact Disc Transport Functions

## 1 Compact Disc Transport

The compact disc transport holds the compact disc.

## 2 Open/Close Button

Use this button to open and close the compact disc transport.

## Power

## 3 Stand-by LED

The red stand-by LED illuminates when the KPS 28c is in the stand-by mode.

## **4 Power Button**

Use this button to switch the KPS 28c between the stand-by and the operational modes.

### **5 Power LED**

The blue power LED illuminates when the KPS 28c is in the operational mode and flashes when remote control signals are received.

## **Compact Disc Functions**

### 6 HDCD® LED

The red HDCD® LED illuminates when a high definition compatible digital disc is playing, indicating that HDCD® decoding is functioning.

## 7 Compact Disc Display

The compact disc display shows compact disc playback and programming status.

### **8 Track Forward Button**

Use this button to select and begin playing the track that follows the current track.

#### 9 Track Back Button

Use this button to select and begin playing the track that precedes the current track.

#### 10 Pause Button and LED

Use this button to temporarily suspend playback of the current compact disc track. To resume playing the track at the point pause was engaged, press pause again or press the play button (12) or key (29). The red pause LED illuminates when pause is engaged.

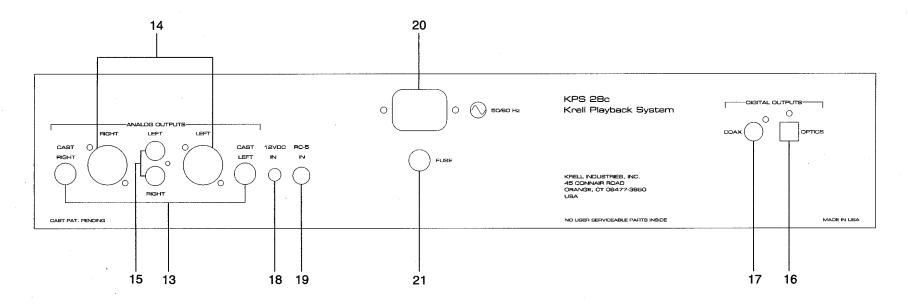
## 11 Stop Button

Use this button to end compact disc playback.

#### 12 Play Button

Use this button to activate playback from the beginning of the compact disc, to resume playback after pause, or to start playing a programmed sequence. For more information, see *Operating Your KPS 28c*, on page 13.

## FIGURE 2 THE KPS 28c BACK PANEL



## **Analog Outputs**

13 Left and Right CAST Outputs

14 Left and Right Balanced Outputs

15 Left and Right Single-ended Outputs

## **Digital Outputs**

16 Optics Output

17 Coax(ial) Output

**Back Panel Remote** 

## Connections

18 12 VDC In

19 RC-5 In

#### **Power**

20 IEC Power Connector

21 Line Fuse

## **Back Panel Description**

See Figure 2 on page 7

The back panel of the KPS 28c provides connections for analog and digital outputs, power, and remote control inputs. Back panel features and their descriptions follow.

## Analog Outputs

## 13 Left and Right CAST Outputs

The KPS 28c is equipped with one pair of analog outputs with 4-pin connectors, for use with Krell CAST-equipped preamplifiers.

## 14 Left and Right Balanced Outputs

The KPS 28c is equipped with one pair of balanced analog outputs with XLR connectors.

## 15 Left and Right Single-ended Outputs

The KPS 28c is equipped with one pair of single-ended analog outputs with RCA connectors.

## Digital Outputs

## **16 Optics Output**

The KPS 28c is equipped with an EIAJ fiber optic output with a TosLink connector.

### 17 Coaxial Output

The KPS 28c is equipped with an S/PDIF coaxial audio output with an RCA connector.

## **Back Panel Remote Connections**

## 18 12 VDC In

The KPS 28c is equipped with an input that receives 12 VDC power on/off (12 Volt trigger) signals from other Krell components and from other devices that incorporate a 12 Volt trigger. This allows you to activate the KPS 28c through another Krell component and through other components in a custom installation, to easily coordinate whole systems or portions of systems.

### Notes

The 12 VDC input power is limited to 30 ma.

Consult the owner's reference manual of the components used in a custom installation to take full advantage of the remote capabilities of the KPS 28c.

#### 19 RC-5 In

The KPS 28c is equipped with an RC-5 input that makes custom installation easy and secure by accepting baseband RC-5 input commands from hardwired remote controls.

#### Power

#### 20 IEC Power Connector

The IEC connector is for use with the provided IEC standard 15 amp AC power cord.

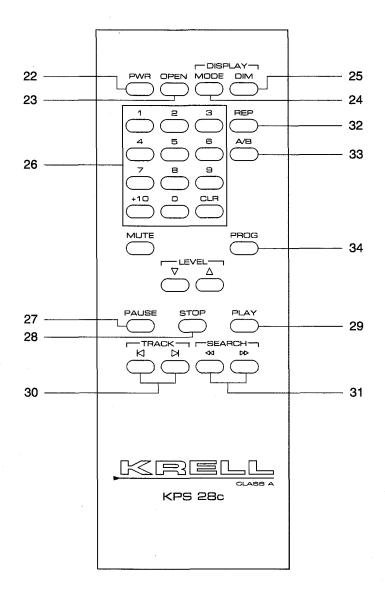
## 21 Line Fuse

The 50/60 Hz line fuse protects the KPS 28c against short circuits from the external AC power.

#### NOTE

Replace fuses only with the fuse value specified on the back panel.

## FIGURE 3 THE KPS 28c REMOTE CONTROL



**Compact Disc Compact Disc Special Play Functions Transport Functions Functions** 32 Rep (Repeat) Key 22 Pwr (Power Key) 26 Direct Track Access 33 A/B Key 23 Open Key Keypad 34 Prog (Program) Key **Compact Disc** 27 Pause Key **Display Functions** 28 Stop Key 24 Display Mode Key 29 Play Key 25 Display Dim Key 30 Track Forward and Back Keys 31 Search Forward

Note: The level and mute keys are not functional on the KPS 28c.

and Back Keys

Krell Playback System

## **Remote Control Description**

See Figure 3 on page 9

## BATTERY INSTALLATION AND REMOVAL

The KPS 28c remote control uses two AAA-size 1.5 Volt batteries. Batteries are included with the shipment. To install the batteries:

- 1. Remove the backplate, using the supplied T-10 Torx wrench.
- Install the batteries, following the battery position diagram on the plastic battery receptacle.
- 3. Replace and secure the backplate.

The remote control is ready for operation.

Replace the batteries when the remote control functions intermittently. Remove the batteries if the remote control is not used for a long period of time. Battery leakage can damage the remote control.

## REMOTE CONTROL FUNCTIONS

The KPS 28c remote control provides power, display, programming, and compact disc functions. Remote control keys and their descriptions follow.

#### Note

Access the level and mute functions through your preamplifier or amplifier. The level and mute keys are not functional on the KPS 28c.

## **Compact Disc Transport Functions**

## 22 Pwr (Power) Key

Use this key to switch the KPS 28c between the stand-by and the operational modes.

## 23 Open Key

Use this key to open the compact disc transport (1). To close the transport, press the open key again.

## Compact Disc Display Functions

## 24 Display Mode Key

Use this key to cycle the compact disc display (7) through three options: the elapsed time of the track currently playing, time remaining in the current track, and total remaining time of the disc or program. The options appear in the compact disc display as they are selected.

## 25 Display Dim Key

Use this key to turn the compact disc display (7) on and off.

## Compact Disc Functions

## 26 Direct Track Access Keypad

Use the direct access keypad to select a compact disc track. With the direct track access function, the selected track begins playback immediately after you select it. If the track you want to play is numbered 1-9, press the key that corresponds to the track. Use the +10 key to access tracks numbered 10 or higher.

**Example:** To access track 8, press the number 8 key once. To access track 10, press the +10 key once and the 0 key once. To access track 24, press the +10 key twice and the 4 key once. Tracks consisting of two digits must be keyed within eight seconds of each other.

## 27 Pause Key

Use this key to temporarily suspend playback of the current compact disc track. To resume playing the track at the point pause was engaged, press pause again or press the play button (12) or key (29). The red pause LED (10) illuminates when pause is engaged.

## 28 Stop Key

Use this key to end compact disc playback.

## Remote Control, continued

See Figure 3 on page 9

## 29 Play Key

Use this key to start playback from the beginning of the compact disc, to resume playback after pause, or to start playback of a programmed sequence.

## 30 Track Forward and Back Keys

Use these keys to select and begin playing the track that follows or precedes the current track.

## 31 Search Forward and Back Keys

Press and hold these keys to scroll forward or backward through the current track.

## Special Play Functions

## 32 Rep (Repeat) Key

Press this key once to repeat the entire disc or track program continuously. REPEAT appears in the compact disc display (7). Press twice to repeat the current track continuously. REPEAT SINGLE appears in the compact disc display. Press a third time to cancel this function.

## 33 A/B Key

Use this key to create a playback loop between two predetermined points within a single track or sequential tracks. See *How to Create an A/B Loop*, on page 14.

## 34 Prog (Program) Key

Use this key to access the track programming mode. Track programming lets you select the tracks you want to hear in the order you want to hear them. See *How to Write a Program*, on page 13.

# Connecting the KPS 28c to Your System See Figure 2 on page 7

## INPUT AND OUTPUT CONNECTIONS

## **Analog Output Connections**

The KPS 28c is equipped with three analog output connections: CAST, balanced, and single-ended. Krell recommends using its proprietary Krell CAST system for unparalleled sonic performance between the KPS 28c and other Krell CAST-equipped components.

The KPS 28c also offers conventional balanced operation. The circuitry and connections associated with balanced operation not only can minimize sonic loss but also are immune to induced noise, especially for installations using long cables. Balanced connections have 6 dB more gain than single-ended connections. Please keep this specification in mind when level matching is critical.

The XLR pin configuration is described below:

Pin 1 Ground

Pin 2 Non-inverting (0°)

Pin 3 Inverting (180°)

The CAST, balanced, and single-ended outputs are located on the back panel. Maintain the correct left/right orientation.

## **IMPORTANT**

Connecting non-CAST components to CAST inputs or outputs can damage your equipment and void your warranty.

Do not attempt to change CAST cable terminations or CAST inputs or outputs to RCA or XLR connectors. It is electrically impossible to convert CAST input or output connections for balanced or single-ended voltage operation.

Please read the **Warranty**, on page 15, to understand the warranty limitations of the KPS 28c.

## **Digital Output Connections**

The KPS 28c is equipped with one EIAJ fiber optic digital output with a TosLink connector and one coaxial digital output with an RCA connector. Use these connections to send this output to a digital recording device, external digital/analog processor, or video source.

## **CONNECTING THE KPS 28c**

Follow these steps to connect the KPS 28c to your system.

- Make sure all power sources and components are off before connecting inputs and outputs.
- Neatly organize wiring between the KPS 28c and between all system components. Separate AC wires from audio cables to prevent hum or other unwanted noise from being introduced into the system.
- 3. Connect the Krell CAST cables from the left and right Krell CAST 4-pin outputs (13) on the KPS 28c back panel to your CASTenabled preamplifier. For balanced or singleended operation, connect the interconnect cables from either the left and right balanced (14) or the single-ended (15) outputs on the KPS 28c back panel to the balanced or single-ended inputs on your preamplifier. (The remaining outputs can be connected to another preamplifier in a different system.)

# Connecting Your KPS 28c, continued See Figure 2 on page 7

#### Note

You can set up your KPS 28c to play a musical selection in three different areas. Connect the CAST output to a CAST-enabled system in one listening area, the balanced output to a system in a second listening area, and the single-ended output to a system in a third listening area. The musical selection will play simultaneously in all three areas.

 Connect the cables from your digital audio or video source to the optics output (16) or coaxial (17) digital output on the KPS 28c back panel.

### **IMPORTANT**

When switching between active sources, always lower the volume to off or mute the output. This ensures that the next source played does not damage your system with a high output transient.

## **POWER ON**

- Connect the AC power cord to the IEC power connector (20), then connect the AC power cord to the wall socket. The KPS 28c is in the stand-by mode. The red stand-by LED (3) illuminates.
- Press the power button (4) or pwr key (22) to switch the KPS 28c from the stand-by to the operational mode. The blue power LED (5) illuminates and you hear a click. The KPS 28c is ready to play music.

## **Operating Your KPS 28c**

This section provides more information about operating the KPS 28c.

## TO PLAY A COMPACT DISC

- 1. Use the open/close button (2) or open key (23) to open the compact disc transport (1).
- 2. Place a compact disc on the transport.
- Use the open/close button (2) or open key (23) to close the compact disc transport (1). Playback automatically begins from the first track. Adjust system volume through your preamplifier or amplifier.
- Press the stop button (11) or key (28) to end compact disc playback.

## Note

You can also begin track playback by pressing the play button (12) or key (29), or select a track using the direct track access keypad (26), the track forward and back buttons (8, 9) or keys (30) or the search forward and back keys (31).

## **HOW TO WRITE A PROGRAM**

This short-term programming lets you store a maximum of 20 tracks in a program sequence.

## Note

Track forward, track back, repeat, and pause function normally within a programmed sequence. For a description of these remote control keys, see **Remote Control Description**, pages 10-11.

 Press the prog (program) key (34) on the remote control. PROGRAM appears in the compact disc display (7).

## Operating the KPS 28c, continued

 Key in the desired track sequence using the direct track access keypad (26). The selected tracks, the number of tracks selected, and the total playing time of the programmed track sequence appear in the compact disc display in the order in which the tracks are stored.

#### Note

Tracks consisting of two digits must be keyed within eight seconds of each other.

- 3. Press the play button (12) or key (29) to begin playback of a programmed sequence.
- Press the stop button (11) or key (28) once to stop playback.

## To Clear a Programmed Sequence:

- 1. Press the stop key (28) twice to clear the entire program.
- Press the stop key then the clr key on the direct track access keypad (26) to remove selected tracks from the programmed sequence. The track that was programmed last is removed first.

### Note

If you press the power button (4) or key (22) and place the KPS 28c in the stand-by mode, the programmed sequence is automatically erased.

## **HOW TO CREATE AN A/B LOOP**

- Begin playing a track by pressing the play button (12) or key (29), or select a track using the direct track access keypad (26), the track forward and the back keys (30) or the search forward and back keys (31).
- When you hear the selection that you want as the beginning of the loop, press the A/B key (33) to insert the start position. The phrase REPEAT A-B flashes in the compact disc display (7).
- When you hear the selection you want as the end of the loop, press the A/B key again to insert the finish position. REPEAT A-B stops flashing.
- Playback of the loop begins automatically and continues until you press the stop button (11) or key (28).
- 5. Press the stop button or key again to delete the A/B loop.

## Warranty

This Krell product has a limited warranty of five years for parts and labor on circuitry and three years for parts and labor on all mechanical components. 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.

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

The warranty 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.

Proof of purchase in the form of a bill of sale or receipted invoice substantiating that the unit is within the warranty period must be presented to obtain warranty service. The warranty begins on the date of retail purchase, as noted on the bill of sale or receipted invoice from an authorized Krell dealer or distributor.

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.

## **IMPORTANT**

Connecting non-CAST components to CAST inputs or outputs can damage your equipment and void your warranty.

Do not attempt to change CAST cable terminations or CAST inputs or outputs to RCA or XLR connectors. It is electrically impossible to convert CAST input or output connections for balanced or single-ended voltage operation.

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, please 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

## Krell Playback System 28c

PRODUCT

SERIAL NUMBER

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

- 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 ensure all freight (shipping) charges are prepaid.

The 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 the safe transit of the product to the factory, dealer, or distributor. 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 nonstandard 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 Industries, Inc. 45 Connair Road Orange, CT 06477-3650 USA

TEL 203-799-9954, FAX 203-891-2028 E-MAIL krell@krellonline.com WEBSITE http://www.krellonline.com **KPS 28c** 

Krell Playback System with Krell CAST Technology

v 00.0

## **Specifications**

## **FREQUENCY RESPONSE**

20 Hz-20 kHz +0.0, -0.6 dB

## SIGNAL TO NOISE RATIO

"A" WEIGHTED

106 dB

## **TOTAL HARMONIC DISTORTION (THD)**

20 Hz-16 kHz

-86 dB

20 kHz

-81 dB

## **POWER CONSUMPTION**

Idle 50 W

## **TRANSPORT**

Monolithic assembly featuring full-size disc clamp

### DAC

Dual 24-bit DACs per channel

## ANALOG AUDIO OUTPUT

- 1 pair balanced via XLR connectors
- 1 pair single-ended via RCA connectors
- 1 pair Krell CAST via 4-pin connectors

## **DIGITAL AUDIO OUTPUTS**

1 EIAJ optical via a Toslink connector

1 S/PDIF coaxial via an RCA connector

## REMOTE CONTROL

1 wireless infrared

12 VDC input (12 Volt trigger) via a 3.5 mm mini connector

RC-5 input via a DC power connector

## DIMENSIONS

19w x 4.5h x 14.5d in.

48w x 11.5h x 36.5d cm

### WEIGHT

**Shipping** 23 lb., 10.5 kg

**Unit only** 19 lb., 8.6 kg

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