

KRELL PLAYBACK SYSTEM

KPS-30i Integrated Transport & Processor

OWNER'S REFERENCE

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INTRODUCTION

Thank you for your purchase of the *KRELL PLAYBACK SYSTEM-30i*. Derived from the *KRELL PLAYBACK SYSTEM 20* series, the *KPS-30i* benefits from the same advanced digital reconstruction system, input and output flexibility, ergonomics, and stunning aesthetics. The *KPS-30i* represents an impressive addition to the formidable *KRELL PLAYBACK SYSTEM* family of components.

The *KPS-30i* is a top-load design based on a high performance Philips transport mechanism. The transport is housed in a solid machined block of aluminum and independently suspended from the chassis by low-stored-energy isolation mounts. The main chassis provides the first line of shock energy isolation with its own series of low-stored-energy suspension mounts, leaving the inertially massive aluminum laser chassis to dissipate any residual energy before it can influence the tracking of the laser. Disc stabilization is accomplished with a custom magnetic clamping system. The heavy cover assembly isolates the compact disc from ambient light.

The *KPS-30i* transport mechanism is coupled to an upgradeable software based processor, providing jitter-free playback. Data is transferred through custom filter algorithms performing proprietary *KRELL* reconstructive software at a 16X oversampling rate through a Motorola DSP processor running at 66 MHz. The 24 bit data is then fed to four differentially configured Burr Brown 20 bit Colinear DAC's.

HDCCD decoding hardware will be available as an option for the *KPS-30i*. If installed, the *KPS-30i* will automatically recognize an HDCCD encoded disc and direct the digital signal through the Pacific Microsonics PMD-100 HDCCD decoding chip. For standard discs, the *KPS-30i* will use the same *KRELL* custom filter algorithms utilized in a non-HDCCD equipped *KPS-30i*.

All critical circuitry utilizes four layer glass epoxy circuit boards. With its 100 VA power supply and 11 independent stages of regulation, the power supply of the KPS-30i is a rock solid source of pure current and voltage for the digital and Class A analog output stages. The output stage is classic KRELL. All output circuits are DC coupled, Class A, and complementary. The output stage has 18 volt rails and fully differential balanced outputs on gold plated, beryllium copper XLR connectors. Single ended outputs are also provided via custom gold plated RCA connectors.

The KPS-30i includes four digital input formats: one AES/EBU balanced, two SPDIF coaxial, and one EIAJ optical. It comes standard with AES/EBU balanced, EIAJ optical and SPDIF coaxial digital outputs. All input switching is accessible from the front panel or the remote control. KRELL's proprietary Data Recovery and Jitter Rejection Module recovers all data from external sources, reducing jitter to exceptionally low levels.

This Owner's Reference is intended to guide the clear, trouble free installation and operation of your KPS-30i. Should you have any questions or comments, please feel free to contact your authorized dealer or the KRELL staff for assistance.

In the unlikely event that your KPS-30i 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 the Warranty and Service section of this Reference, Warranty Registration Card, or an authorized KRELL Dealer/Distributor.

UNPACKING AND PLACEMENT

1. Once the box is opened and top layer of foam removed, the following items will be visible:

- 1 KPS-30i
- 1 KPS-30i Remote Control
- 1 KPS-30i Custom CD clamp
- 1 AC power cord
- 1 Packet containing the Owner's Reference and Warranty
Registration Card

NOTE: If any of these items are not included, please contact your authorized dealer 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 KPS-30i in the future, repack the unit in its original packaging to prevent transit damage. KRELL is not responsible for damage incurred during the shipment of goods without factory approved packing material.

PLACEMENT

Before you install the KPS-30i into your system, we recommend that you follow these guidelines in choosing the location. This will facilitate a clean, trouble-free installation. The KPS-30i does not require any type of special rack or cabinet for installation. Dimensions are described on page 17.

1. Place the unit on a firm level surface away from excessive heat, humidity or moisture. Make sure there is enough room at the top for a compact disc to be placed within the chassis. Approximately ten inches is necessary.
2. Although well shielded, the KPS-30i should not be placed in close proximity to hum sensitive components such as preamp phono stages or turntables. The power supply may create interference and induce hum.
3. The KPS-30i 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 don't permanently affix to the chassis. Any unauthorized modifications to the electronics or chassis will void the warranty.

GENERAL DESCRIPTION OF KPS-30i OWNER'S REFERENCE

The features, functions, and operation of the KPS-30i are divided into two sections: Basic Operation provides a quick installation procedure; Complete Transport Features and Functions provides details on all KPS-30i transport capabilities.

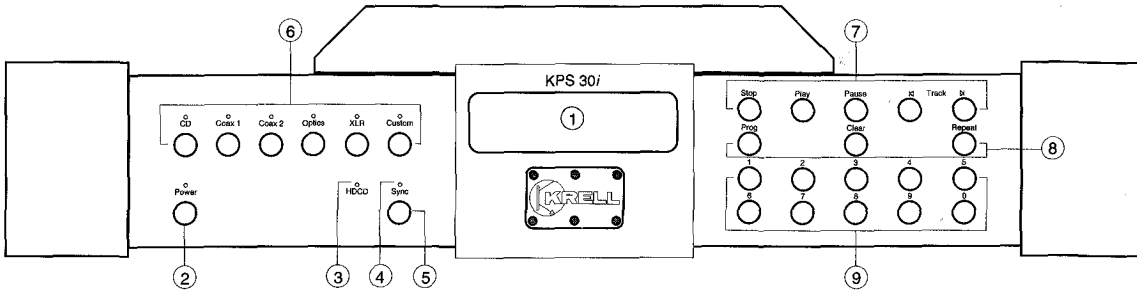
As with all sophisticated products, a complete reading of this Owner's Reference will provide a thorough understanding of the KPS-30i. Please contact your authorized dealer, distributor, or the factory if you have any questions not addressed by this Reference.

IMPORTANT NOTE: The use of CD rings, mats, or other devices attached to individual CDs is not recommended. To be completely effective, the KPS-30i clamp must make direct contact with the CD. Otherwise, erratic playback and/or poor sound may occur.

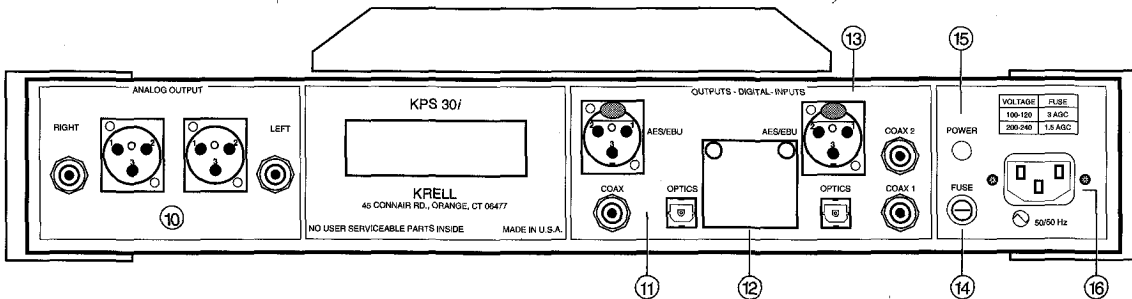
AC POWER GUIDELINES

The KPS-30i has superb regulation and does not require a dedicated AC circuit. We strongly advise against 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 utilized if they are grounded and meet or exceed the unit's power supply rating of 100 VA.

CAUTION: Do not remove or bypass the ground pin on the end of the AC cord. This may cause RFI (radio frequency interference) to be induced into your playback system.

FRONT VIEW

1. Display window
2. Transport Power On/Off button
3. Function indicator for optional HDCD decoding
4. Sync indicator: Illuminates when a digital source has linked with the processor
5. Infrared remote sensor
6. Digital input select buttons and indicators for: internal CD transport, external Coax 1, external Coax 2, external EIAJ optical (Optics), external AES/EBU XLR balanced, and Custom input for future use
7. Transport function buttons for: Stop, Play, Pause, Track back/Search back, and Track forward/Search forward
8. Transport function buttons for: Program, Clear, and Repeat
9. Direct Number Access Keypad

REAR VIEW

10. Left and Right balanced and single ended analog outputs
11. Digital outputs: EIAJ optical, SPDIF coaxial, and AES/EBU XLR balanced
12. Custom input for future use
13. Digital inputs: EIAJ optical, SPDIF coaxial 1, SPDIF coaxial 2, and AES/EBU XLR balanced
14. Fuse holder
15. Main On/Off Power switch
16. IEC Standard 15 amp AC power cord receptacle

KPS-30i BASIC OPERATION

Below are instructions for quick installation of the KPS-30i. Please refer to the Typical System Setup illustration on page 16. Also, allow the unit to settle at room temperature before operation is started.

1. Plug the KPS-30i into a standard wall AC receptacle. Connect the KPS-30i output to the appropriate preamp input. Engage the power switch on the rear panel by pushing it up to the ON position. This powers the processor section in the KPS-30i.
2. Press the Power button on the front panel to power the transport stage. The display section will now illuminate. The processor portion of the KPS-30i is on at all times once the rear panel switch is engaged. This is to insure thermal stability and to maintain best sonic performance.
3. Using the built in depression, slide the top cover rearward to expose the CD transport and spindle. Place the compact disc, label side up, onto the drive spindle. Place the custom clamp onto the drive spindle, securing the CD in place. Make sure the clamp is centered firmly on the CD spindle hub. Slide the top cover forward to close the assembly. **READ** will appear in the display window while the CD's contents are being scanned.

NOTE: In the event that you wish to rapidly change a number of CDs, the KPS-30i can be played with the cover open. However, do not forget that you are compromising the quality of the music when the CD is exposed to light. Also, it is always preferable to close the cover when playing music at a high volume in order to maintain optimum tracking.

4. Press Play on the front panel or remote control. The disc will start playing from track 1. To select a different track you can press the track forward {>|} or track back {|<} button until you reach the desired track number or punch the number of the desired track into the keypad on the front panel or remote control.

NOTE: Holding the >| or {|< button will engage the Search Forward or the Search Back functions. See page 8 for more details.

5. Press the Stop button to stop play.

COMPLETE TRANSPORT FEATURES AND FUNCTIONS

The KPS-30i has a wide variety of transport functions. Listed below are the functions which can be accessed from the front panel and/or the remote control.

STOP: Stops the disc while playing.

PLAY: Starts the disc playing from track 1 or from a keypad-selected track. Also, begins playback of a programmed track sequence. Pressing the Play button during a track will start that track again from the beginning.

⏮: **TRACK BACK/SEARCH BACK.** A single press of the button selects and begins playing the track previous to the current track. A sustained press of the buttons scrolls backward through current track.

⏭: **TRACK FORWARD/SEARCH FORWARD.** A single press of the button selects and begins playing the track after the current track. A sustained press of the button scrolls forward through current track.

PAUSE: Temporarily suspends play of current track. Second press of the Pause button resumes play at the point Pause was engaged.

REPEAT: (remote control only) When pressed once, will continuously repeat the current track. When pressed twice, repeats the entire disc or track program indefinitely. Press Stop or Repeat a third time to cancel this function. When selecting the desired Repeat function, press the Repeat button once and **REPEAT 1** will appear in the display window. Press the Repeat button twice and **REPEAT** will appear in the display window.

DIRECT NUMBER ACCESS KEYPAD: The Direct Number Access Keypad makes track selection quick and easy. When using the direct track access function, the selected track will begin play immediately after a one or two digit number is selected. Key in the desired track number. Tracks consisting of two digits must be keyed within 2 seconds of each other. **NOT POSSIBLE** will appear in the display if a non-existent track is selected.

SHUFFLE: (remote control only). Will play tracks in a random order. Press the Shuffle button and the disc will begin play in a sequence other than the original. Press Shuffle again to resume normal play .

Press ⏮ to play a previously played track.

Press ⏭ to play the next randomly selected track.

SCAN: (remote control only). When pressed, **SCAN** appears in the display and the first 10 seconds of each track are played. Ten seconds are counted down for each track in the display window. Press Play or Scan a second time to resume normal play.

PROGRAM: (front panel only) Track programming gives you the ability to select which tracks you would like to hear and the order in which you would like to hear them. This method of programming is short term and will be cleared when you press the Stop button twice or the Clear button. Once a program is written, basic functions like Pause, Repeat, Track forward, and Track Back work within the program. A maximum of thirty tracks can be stored in a program sequence.

*NOTE: **FULL** appears in the display if the thirty track maximum is exceeded. **NOT POSSIBLE** appears in the display if a non-existent track is selected. **USE 0-9** appears in the display if the |<< or >>| buttons are pressed while programming.*

HOW TO WRITE A PROGRAM

1. Press Program on the front of the KPS-30i. **PROGRAM** will begin flashing in the display window.
2. Key in the desired track sequence. Tracks consisting of two digits must be keyed within two seconds of each other. The number of tracks and total playing time of the programmed sequence will appear in the display window. Track numbers will appear in the display as they are stored within a programmed sequence.
3. Press Program to exit Program mode.
4. Press Play to begin playback of the programmed sequence.
5. Press the Stop button twice or the Clear button to erase a programmed sequence.

NOTE: While playing a programmed sequence, the Track Forward, Track Back, Repeat and Pause functions work within the program.

KPS-30i INPUT AND OUTPUT DETAILS

This is a description of the inputs and outputs of the KPS-30i. Please contact your KRELL dealer or the KRELL staff for assistance if there are any questions not covered in this Reference. Please refer to the KPS-30i Typical System Setup illustration on page 16.

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.

ANALOG OUTPUT CONNECTIONS

The KPS-30i is equipped with two analog output configurations: Single-ended via RCA connectors, and balanced via XLR connectors. If your preamplifier has high level balanced inputs, we recommend the balanced outputs be used. There are considerable sonic benefits to be gained with use of the balanced format.

The XLR pin configuration is described below.

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

The left and right channel RCA and balanced outputs are labeled on the back panel. Care should be taken that the correct left/right orientation is maintained.

NOTE: These two outputs can be used to simultaneously feed different systems.

REMOTE CONTROL

REMOTE CONTROL OPERATION

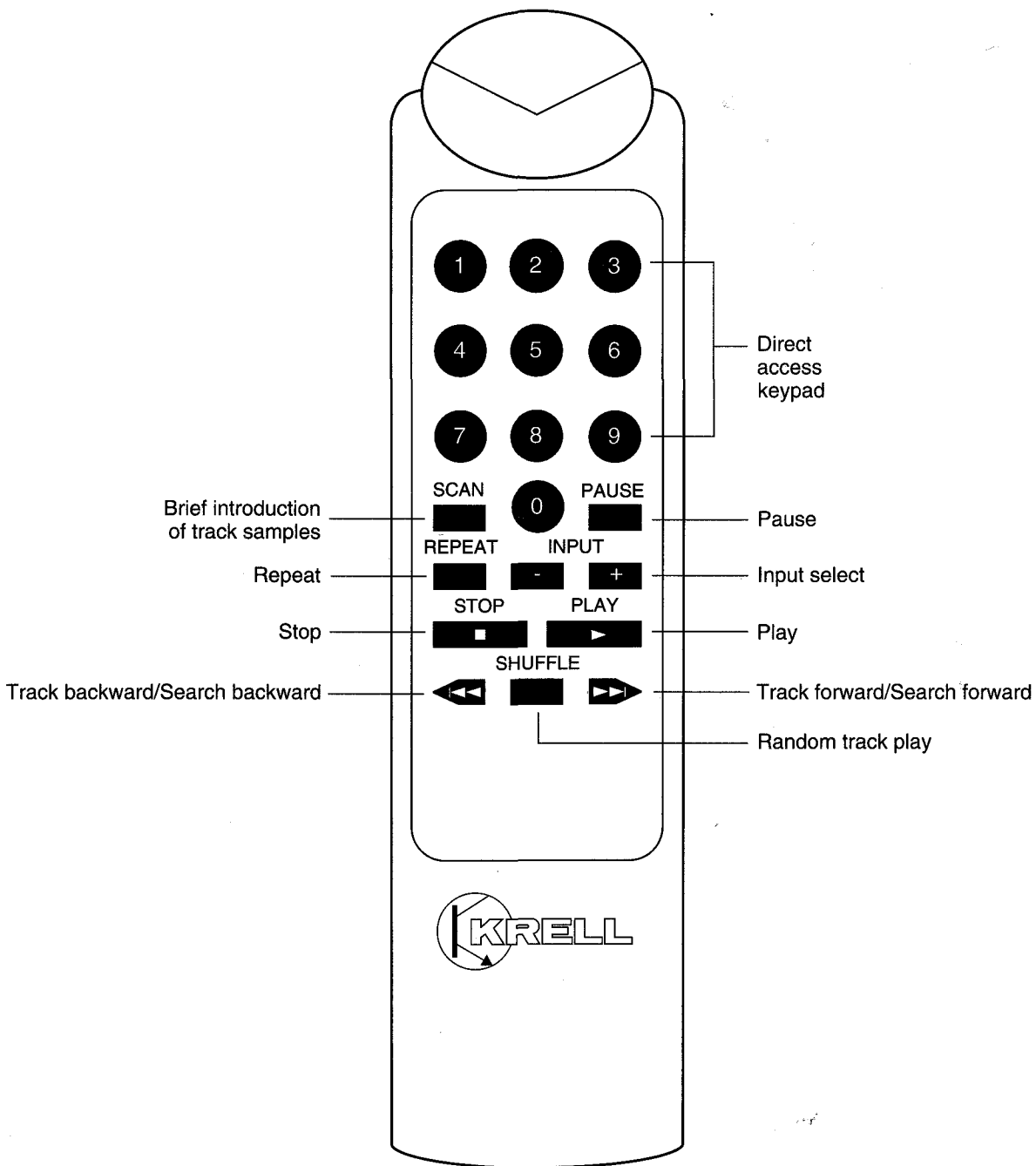
The KPS-30i comes equipped with a remote control from which processor and basic transport functions can be controlled. A brief description of the buttons and their functions is provided. An optional remote control is available that includes additional functions for KRELL preamplifiers and power amplifiers.

BATTERY INSTALLATION AND REMOVAL

NOTE: Batteries should be replaced when functions from the remote control become intermittent. The KPS-30i remote uses two AAA size 1.5 volt batteries.

1. Remove the back plate to expose the batteries.
2. Remove the old batteries.
3. To insure optimal conductivity, clean the metal contacts.
4. Install new batteries, following the battery position diagram on the plastic battery receptacle.
5. Re-install the back plate.
6. Check to make sure the remote control is functioning properly.

If you have questions about the remote control operation contact the KRELL staff for assistance.



QUESTIONS AND ANSWERS

Q. My CD transport has both EIAJ fiber optic and coaxial outputs. Which one should I use?

A. Given a choice, we prefer the coaxial connection. If available, we suggest the AES/EBU balanced format. This format utilizes a $\pm 5v$ digital format and has the additional benefit of balanced termination.

NOTE: For the KPS-30i, we recommend noncapacitive coaxial cable which has a bandwidth in excess of 10MHz and excellent shielding properties. This is true on both RCA and XLR terminated cables.

Q. Will I damage my KPS-30i if I leave the power ON all the time?

A. No it's intended to be on at all times. The circuits perform more consistently once they reach thermal equilibrium.

NOTE: For the protection of your unit, we recommend disconnecting the AC cord from the wall outlet before any electrical storms or if you plan on being away from home for prolonged periods of time.

Q. I have some very fine audiophile interconnect cable which has superior sonic characteristics. Can I use this for my coaxial digital input?

A. You may experiment with any high quality cable. Note that most audio interconnect cable is not designed to carry the ultra-high frequency information of the digital bit stream.

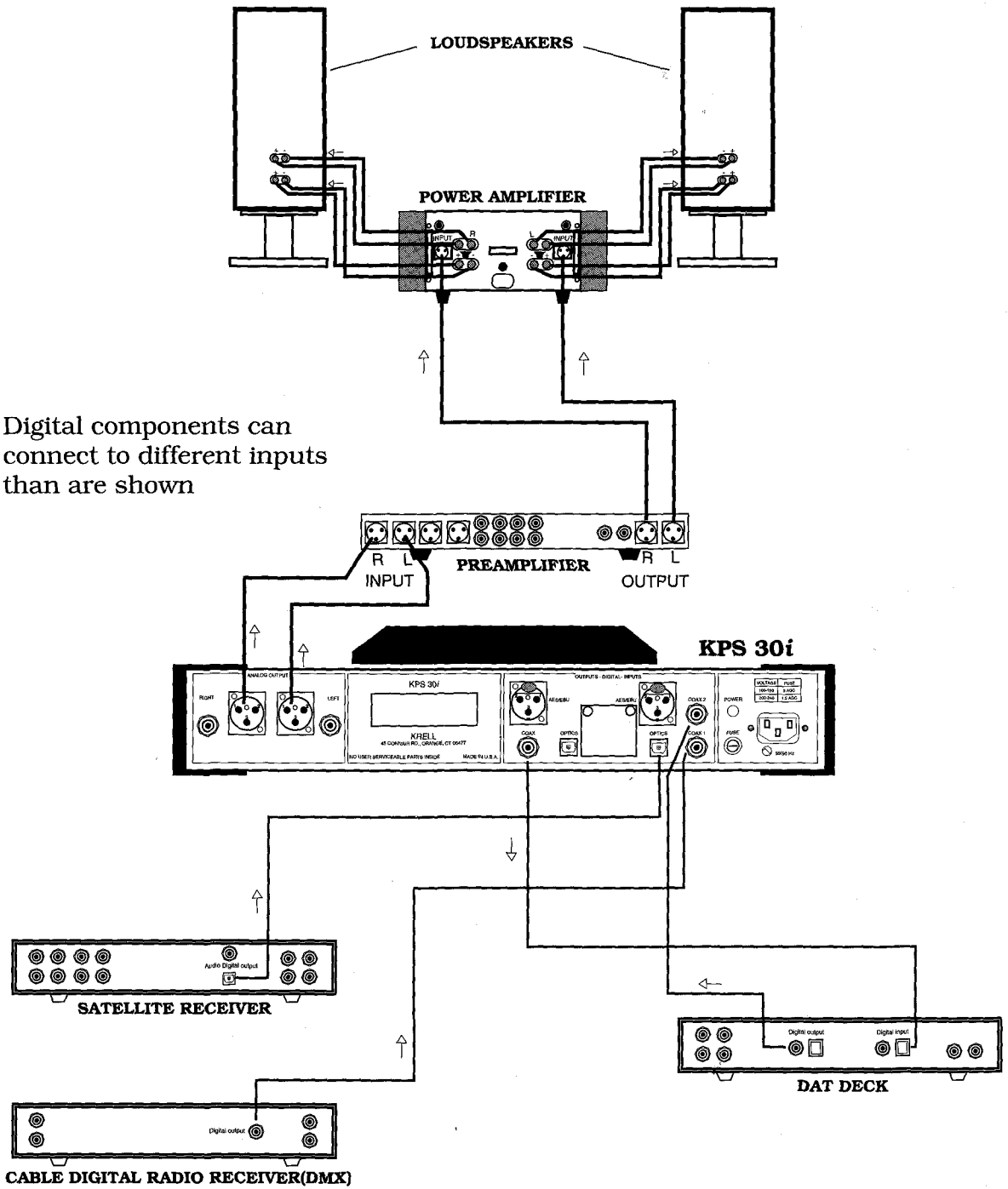
Q. When I try to play a certain disc the KPS-30i displays an error message and will not play. Is the transport defective?

A. Check to make sure the magnetic clamp is properly centered on the disc. If this is not the problem, the disc may need to be cleaned. If the surface of the disc is soiled the laser cannot read the data and will display an error message or skip sections of tracks. You may want to experiment with some compact disc cleaning products. If, after cleaning the disc, it still will not play, the problem may be with the indexing on the CD. Some recording companies stretch the parameters of the CD, preventing them from conforming to transport standards. The KPS-30i transport is a very accurate reading device and certain discs, typically those that do not conform to the Sony and Philips discs standards, may not be acceptable to the transport.

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- Q.** Do you recommend the use of cones or other damping feet on the KPS-30i?
- A.** The KPS-30i doesn't require additional isolation. However, you may experiment with after market feet, providing they do not conflict with KRELL's warranty stipulations.
- Q.** Will the KPS-30i play CD singles?
- A.** Yes, the KPS-30i can play CD singles with the use of an adapter ring. CD adapter rings can be purchased at most quality audio stores.
- Q.** I have an after market jitter reduction device. Should I use it with the KPS-30i?
- A.** No. In the KPS-30i transmission jitter between the transport and the processor is zero. External sources are connected through our own jitter reduction module which reduces jitter to the lowest possible levels.
- Q.** I have a special audiophile clamp that I used on my previous CD transport. Should I use it on the KPS-30i?
- A.** No. The clamp supplied with the KPS-30i is specially designed to couple with the spindle motor hub and is optimized for the transport utilized in the machine. Other clamping mechanisms may damage or substantially hinder sonic performance capabilities.

KPS-30i TYPICAL SYSTEM SETUP

Digital components can connect to different inputs than are shown



TRANSPORT:

Modified CDM-12 sled design with custom magnetic disc clamping system

LASER:

Triple beam with holographic pick-up

KPS-30i ANALOG OUTPUTS:

Balanced via XLR connectors

Single ended via RCA connectors

KPS-30i DIGITAL OUTPUTS:

EIAJ optical, AES/EBU balanced, and SPDIF coaxial

KPS-30i DIGITAL INPUTS:

EIAJ optical, AES/EBU balanced, and two SPDIF coaxial

REMOTE CONTROL:

Wireless infrared

DIMENSIONS:***Unit***

19" Wide	47.5 cm Wide
15.5" Deep	38.75 cm Deep
4.75" High	11.8 cm High

WEIGHT:***Shipping***

34 lbs.	15.5 kg.
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Unit only

26 lbs.	11.8 kg.
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All operational features, functions, specifications, and policies are subject to change without notification.