



CD-DSP MK 2

OWNER'S REFERENCE





INTRODUCTION

Thank you for your purchase of the KRELL CD-DSP ^{MK 2} integrated CD Player and welcome to the KRELL family of audio components. KRELL is dedicated to the development of technologically advanced components for the reproduction of digitally recorded music. The CD-DSP ^{MK 2} redefines excellence in the KRELL tradition of uncompromising performance through leading-edge technology.

The CD-DSP ^{MK 2} has several features. This Owner's Reference describes them in detail and is designed to insure the clear, trouble free installation of your CD-DSP ^{MK 2}. Basic Installation, Operation and Question and Answer sections are provided. 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 CD-DSP ^{MK 2} 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.






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UNPACKING


1. The following items will be visible once the box has been opened and the top layer of foam removed:

- 1 Dust Cover encased in a protective sleeve
- 1 CD Stabilizer
- 1 CD-DSP MK2 integrated CD player
- 1 AC power cord
- 1 Remote Control
- 3 AAA batteries for remote control
- 1 Packet containing the Owner's Reference, Warranty card, and Novus polishing kit.

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



2. Remove the contents from the second layer of foam and set them aside for later use. Carefully remove the CD-DSP MK2 from its box and remove the protective plastic wrap. Do not remove the protective sleeve from the dust cover until the unit is safely in place.



NOTE: Save all packing materials. If you must ship your CD-DSP MK2 in the future, repack the unit in its original packaging to prevent transit damage. If the unit is returned to KRELL for service, please send the dust cover and remote control.

3. Carefully remove the transport locking hub from the top of the unit by turning it counterclockwise until it is free from the transport. Its location is marked with a sticker on the top of the locking hub.

CAUTION: Failure to remove the protective hub before the unit is plugged into the AC receptacle or before operation can result in damage to the transport.



DUST COVER

DUST COVER INFORMATION

Should you need to remove the dust cover, follow the instructions below.

1. Open the cover to its fully upright position and slide the protective sleeve over it.
2. Lower the cover to its resting position and remove the four screws from the hinge receptacles on the back.
3. Take the cover off of the transport.
4. Reinstall the four screws into the holes on the back.

To reinstall:

1. There are two pairs of screws with washer-type hinge receptacles on the back of the unit. Remove the four screws from the unit and take off the black hinge receptacles.
2. Carefully place the lucite top cover on the unit so that the circular milled-out portion is centered over the transport. Align the slots in the cover's hinge blocks with the holes in the back of the chassis.
3. Thread the four screws into the chassis through the hinge blocks. Tighten down lightly and adjust the cover so it is centered on the unit. Once the cover is aligned, tighten down the supporting screws.

CAUTION: The clear lucite cover must be lowered manually and not be allowed to drop. It is very heavy and the unit does not have a damping mechanism.

Care and cleaning:

The CD-DSP MK 2 dust cover is essentially maintenance free. However, dust or dirt can occasionally cause small scratches or imperfections. Should this occur follow the polishing instructions on the back of the supplied Novus polish bottles. The Novus polish also is recommended for any dusting of the dust cover.



PLACEMENT

PLACEMENT

Before you install the CD-DSP MK 2 into your system, we recommend that you follow these guidelines in choosing the location. This will facilitate a clean, trouble-free installation.

1. Place the unit on a firm level surface away from excessive heat or running water. Make sure there is enough room for the dust cover to open completely. Approximately 15 inches of clearance is needed for full extension.
2. Although well shielded, the CD-DSP MK 2 should not be placed in close proximity to hum-sensitive components such as preamps, turntables, and tuners. CD transports can create interference and induce hum.
3. The CD-DSP MK 2 does not require additional mass coupling or isolation. You may experiment with feet or cones as long as they do not permanently affix to the chassis. Any unauthorized modifications to the electronics or chassis will void the warranty.

AC POWER CONSIDERATIONS

While the CD-DSP MK 2 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 40VA.

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.

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. The CD-DSP MK 2 is equipped with two output configurations: Single-ended via RCA connectors and balanced via XLR connectors. The outputs can be used simultaneously to feed different systems. Connect the appropriate output of the CD-DSP MK 2 to the line level input of your preamplifier.

The XLR pin configuration is as follows:

Pin #1	Ground
Pin #2	0°
Pin #3	180°

2. The CD-DSP MK 2 is equipped with two additional coaxial S/PDIF digital inputs and a standard EIAJ Toslink optical digital input. Connect external digital sources to inputs 1, 2 or 3. Any of the inputs can accept signal from any digital source. The sampling frequency for the digital source is automatically selected when an input button is selected and both the source and CD-DSP MK 2 are active. Connect the necessary digital input connections.

3. Three digital outputs are provided: S/PDIF on a standard RCA jack, standard EIAJ Toslink optical, and an AT&T/ ST type optical. These are used to feed the digital inputs of recording devices or other D/A converters. Connect the necessary digital outputs.

4. Once you have completed the input and output connections select the input of your choice by pressing the Input button on the front panel. For each input selected the corresponding LED will illuminate. The Signal LED will illuminate when the digital input source (must have its power On) and the processor have linked.

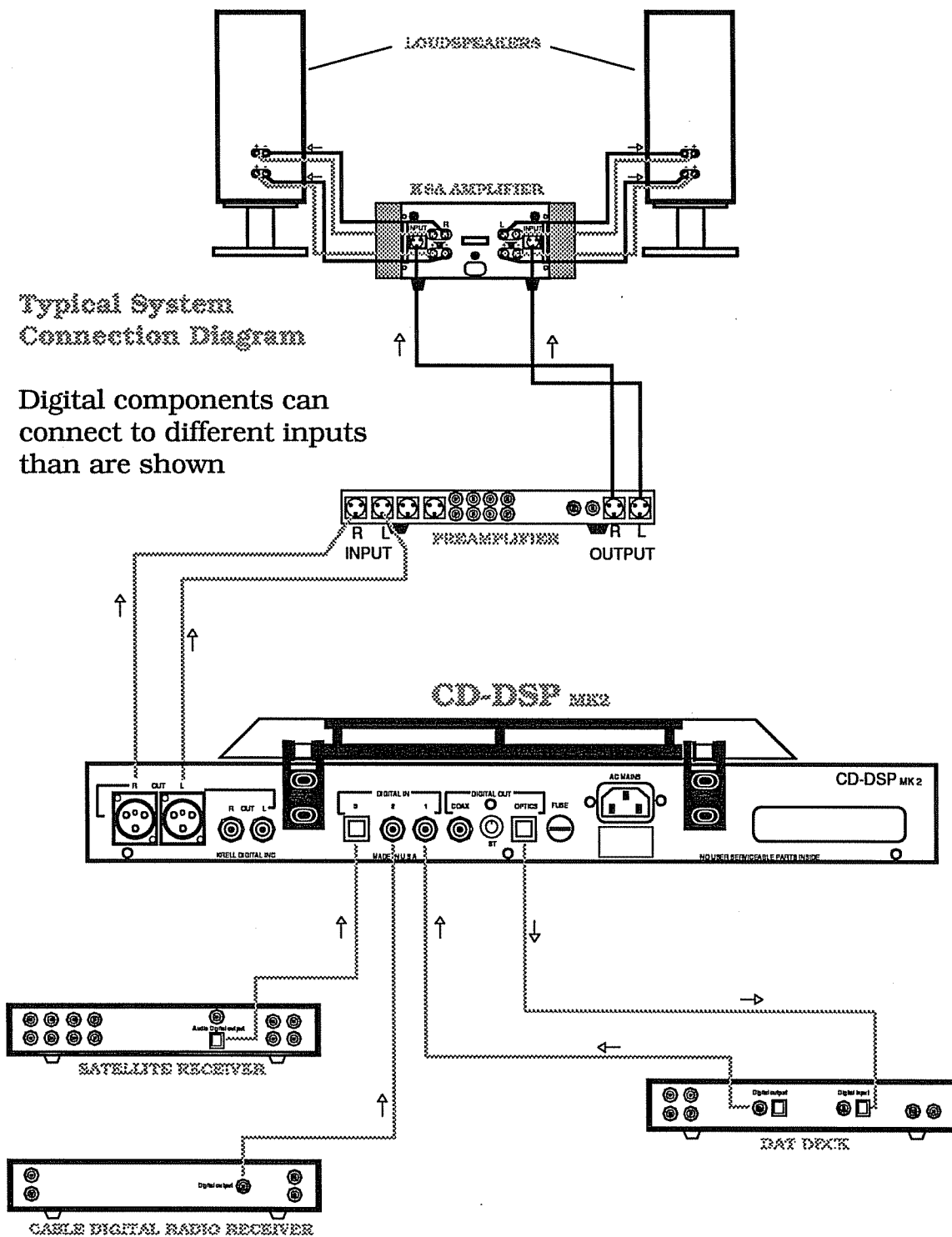
NOTE: If the signal LED does not illuminate, check to make sure the interconnect cable is secure at both ends or is not in need of repair.

5. When using the unit as a dedicated transport, select the CD input with the Input button on the front panel. The features and functions of the CD-DSP MK 2 as a dedicated transport are described in detail on page 10.

CONNECTIONS

Typical System Connection Diagram

Digital components can connect to different inputs than are shown





OPERATION

The CD-DSP MK 2 has several uses. It can be used as an external D/A processor for a digital source, a multiple digital input and output switching network, and dedicated CD transport. A brief description of the operation is provided below.

When operating the CD-DSP MK 2 keep in mind the digital and analog outputs are always active. The digital and analog outputs of the CD-DSP MK 2 will be that of the source selected with the Input switch. The power button on the front panel only controls the transport.

When an external digital source is used via Inputs 1, 2 or 3 the CD-DSP MK 2 performs as an independent processor and digital switching network. For use in this mode the transport Power switch does not have to be On.

Select an input with the Input switch. Notice the Signal LED will illuminate when the digital source is turned on and has linked with the processor. Once this link is complete the digital outputs are active and the processor is ready to pass an analog signal.

There are three digital-only inputs on the CD-DSP MK 2:

- 2 S/PDIF on a RCA jack
- 1 Standard EIAJ (Toslink) optical

The digital output is used as a direct digital signal output that can be recorded by a digital recording device. The digital output of the CD-DSP MK 2 will be the input source you choose. The sampling frequency of the digital output will be the same as the input selected. All three outputs can be used simultaneously.

There are three digital-only outputs intended for use with CD-R, DAT or an external Digital to Analog processor.

- 1 AT&T ST type optical
- 1 S/PDIF on a RCA jack
- 1 Standard EIAJ (Toslink) optical

CAUTION: The digital output is a digital signal and can not be used as an analog output to drive front end components such as a preamplifier or cassette deck.



OPERATION

CAUTION: Care must be taken to avoid creating a feedback loop with a recording device. Specifically, do not select the input corresponding to the digital output while the record outputs are connected to a recorder and the recorder is set to Input, Record or any other function that routes its input directly to its output.

NOTE: The selected CD-DSP MK 2 digital input is always routed to the digital outputs.



OPERATION

COMPLETE CD-DSP MK 2 FEATURES AND FUNCTIONS

The CD-DSP MK 2 is a very flexible transport. Listed below are the functions which can be accessed from both the front panel and remote control.

STOP: Stops the disc while playing. Erases all short term program memory.

PLAY: Starts the disc playing from track 1 or from a keypad selected track. Begins standard track programming. Pressing the Play button during a track will start that track again from the beginning.

|<: Track reverse. Selects and begins playing the track previous to the current track. Also scrolls backward through standard track programming.

>|: Track forward. Selects and begins playing the track after the current track. Also scrolls forward through standard track programming.

|< |<: Index reverse. Selects the index number previous to the current index number within a specific track

>| >|: Index forward. Selects the next index number within the current track.

NOTE: Some discs do not have index numbers programmed within tracks. When the Index buttons are pressed the display will default to the current track number.

<<: Fast Reverse. Fast scroll backward through program.

>>: Fast Forward. Fast scroll forward through program.

PAUSE: Temporarily stops play of current track. Does not effect standard track programming. Second press resumes play at the same spot.

REPEAT: (REP on Remote) Repeats the entire disc or standard track program. Press Stop or Repeat to cancel function. If repeat is pressed while playing the disc, play will start from the beginning when all tracks are finished.



OPERATION

PROGRAM: (PROG on Remote) Standard track programming gives you the ability to select a group of tracks or a single track. This method of programming is short term and will be cleared when you press the Stop button. Once a program is written, basic functions like Pause, Repeat, Track forward, and Track reverse work within the program. The program will stop once the last programmed track is played or the Stop button is depressed. The program will continually play if the repeat button is depressed. To temporarily stop play of current track press the Pause button. Remember, Stop will erase the program.

How to write a Program:

1. Select the track you want first in the program. You can use the track advance and reverse buttons to select the track numbers or punch the number directly into the keypad.
2. After you select the track, press the Program button. A "P" will appear next to the track number. The track you selected is now in program memory.
3. Repeat this sequence for each track you want in your program.
4. Once you have finished your programming press the Program button again. The machine will review the tracks you have selected for the program.
5. Press the Play button, your program will begin.

NOTE: While playing the program, the Track Advance, Track Reverse, Repeat, and Pause functions work within the program.

6. To clear the program memory press the STOP button.



OPERATION

EXAMPLE: Here is a sample program sequence

1. Press 2, then Program
2. Press 4, then Program
3. Press 6, then Program
4. Press 8, then Program
5. Press Program

Press Play and the program sequence 2, 4, 6, 8, will begin.

PHASE SWITCH

The Phase Switch can reverse output phase. In some studio recordings the master tape was recorded out of phase, creating unusually poor sounding recordings. The CD-DSP MK 2 can reverse the normal 0 degree output phase 180 degrees to correct for this anomaly. Utilizing the Phase Switch can, in some instances, restore life to a previously dull recording.

EMPHASIS LED

Emphasis is a recording technique that reduces noise in the treble region of recorded music. Discs and/or tracks that were recorded with pre-emphasis will cause the Emphasis LED to illuminate. When the Emphasis LED is lit the appropriate complementary circuitry (de-emphasis) is activated to provide a flat output response.



OPERATION

REMOTE CONTROL OPERATION

The CD-DSP MK 2 comes equipped with a remote control from which basic transport functions can be controlled. For a complete description of the transport functions refer to page 10.

Battery Installation and Removal:

NOTE: Batteries should be replaced when the functions from the remote control become intermittent. The CD-DSP MK 2 remote control uses three AAA size 1.5 volt batteries.

1. Remove the backplate to expose the battery storage compartment
2. Replace batteries (refer to polarity drawing while inserting the batteries)
3. Replace the back plate.



QUESTIONS AND ANSWERS

Q. When I try to play a certain disc the CD-DSP MK 2 displays an error message and will not play. Is the transport defective?

A. More than likely the disc needs 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. Try cleaning the disc with a water damped soft cloth. You may want to experiment with compact disc cleaning products. If the disc still refuses to play after cleaning, the problem may be with the indexing on the CD. If a particular company stretches the parameters of the CD, it may not conform to transport standards. The CD-DSP MK 2 is a very accurate reading device and certain discs may not be acceptable to the transport. If this should be the case consult KRELL for assistance.

CAUTION: Should this not be the cause of your difficulty do not attempt any repair of this unit. Contact your authorized KRELL Dealer/Distributor or the factory.

Q. Do you recommend I leave the CD-DSP MK 2 on at all times?

A. Yes. These circuits are most accurate and stable when left to idle while not in use. Low voltage/low power discrete parts age faster when cycled On/Off. The CD-DSP MK 2 will sound better and last longer if left on. The transport section of the CD-DSP MK 2 can be left on at all times. This will not cause any damage to the transport. It can also be turned off when not in use. It will not cause damage or unnecessary wear.



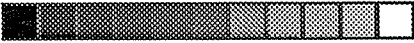
NOTE: For the protection of your CD-DSP MK 2, we recommend disconnecting the AC cord from the wall outlet before any electrical storms or if you plan on being away from home for prolonged periods of time.

Q. Will the CD-DSP MK 2 play CD singles?

A. Yes, The CD-DSP MK 2 will play CD singles with the use of an adaptor ring.

Q. Can I program from the front plate of the CD-DSP MK 2 or only from the remote control?

A. You can only program with the remote control.



QUESTIONS AND ANSWERS

Q. Do you recommend the use of cones or other damping feet with the CD-DSP MK 2?

A. Due to the rigid chassis construction and internal damping we do not feel the CD-DSP MK 2 requires additional mass coupling or isolation. If you wish to use an after-market isolation device, you may do so without fear of damaging the CD-DSP MK 2. However, any device which affixes permanently to the chassis or requires a breach of the external chassis will void the warranty.

Q. Can I use an external digital to analog converter with the CD-DSP MK 2? If so which output should I use, coax or fibre optic?

A. Yes, the CD-DSP MK 2 can be used as a CD turntable. While a high quality coaxial or standard Toslink interface will perform quite well, we recommend AT&T glass fiber optic cable due to its ability to completely isolate the grounding planes between the transport and processor, its resistance to RF interference and wide bandwidth format.

Q. Do I have to switch the sampling frequency when I go between my CD and DAT?

A. No. The CD-DSP MK 2 automatically senses the input frequency and does all necessary switching.

Q. I am not getting any sound through the processor when using an external source.

A. Most likely there has been a simple mistake in installation. Check all connections in and out from the processor. Check all power connections. Have you selected the correct source on your preamp? Check the front panel LED's for power supply stability. If you still have no sound, turn off the power and contact your dealer.



QUESTIONS AND ANSWERS

Q. While listening to an external source through the CD-DSP MK 2 I experience occasional periods of silence through my speakers. Is my processor malfunctioning?

A. You are experiencing drop-outs, for which there are two possible causes. First, drop-outs can be caused by data corruption. Corruption in the data may be due to poor input or output connections, damaged or dirty source material, or interconnects which do not have enough bandwidth. Second is the presence of a transient spike on the incoming AC power line. Check your AC power connections. If these are not the cause, speak with your dealer about obtaining different cabling. If you are using fiber optic cable, and source material and connections are not the problem, speak with your authorized dealer.

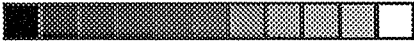
Q. I have some very fine audiophile interconnect cable which has superior sonic characteristics. Can I use this for my coaxial digital input?

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.

NOTE: For the CD-DSP MK 2, we recommend non-capacitive coaxial cable which has a bandwidth in excess of 10MHz and excellent shielding properties.

Q. Since I installed the CD-DSP MK 2 in my system I have a low level hum that increases as I turn up the volume. There was no hum in my system until I added the CD-DSP MK 2. Is the unit malfunctioning?

A. The fact that there was no hum in your system until you added the CD-DSP MK 2 indicates that you have a ground-loop problem. The way the CD-DSP MK 2 is connected to the AC mains often can be the cause of grounding problems. Consult your dealer or KRELL for individual system suggestions if this hum persists.



SPECIFICATIONS

TRANSPORT

Philips CDM-1 MK 11 with Hall effect motor, swing-arm design in a unicast frame.

LASER

Single Beam with glass lens.

REMOTE CONTROL

Wireless infrared

FREQUENCY RESPONSE

20Hz-20KHz +/- 1dB

SAMPLING FREQUENCY

16 Times over

DAC

18 Bit

ANALOG OUTPUT VOLTAGE

2.1 volts R.M.S.

DIMENSIONS

19.0" wide,

12.5" deep

6.0" high, cover closed

15.0" high with cover open

WEIGHT

23 pounds, unit only

26 pounds, shipping weight



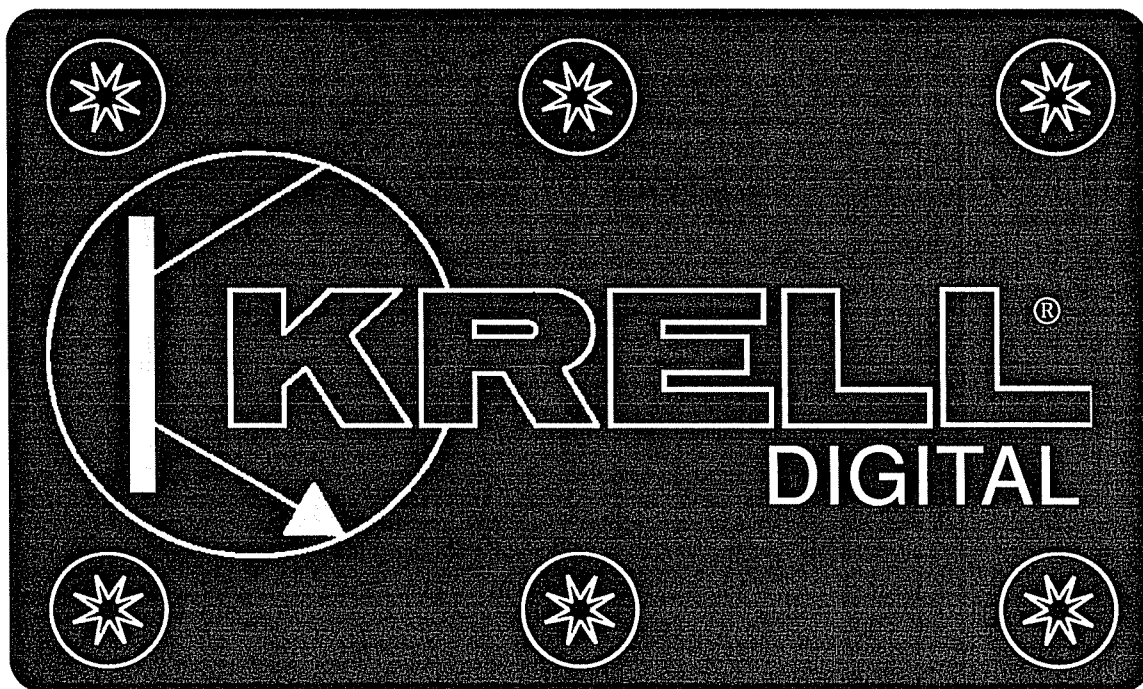
WARRANTY AND SERVICE

There are no user-serviceable parts inside the CD-DSP MK 2. The CD-DSP MK 2 has a limited warranty of five years for electronic parts and labor and three years for transport-related moving parts. 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.

The operating voltage of this unit is determined by the factory and can only be changed by an authorized KRELL distributor or the KRELL factory. Any unauthorized voltage conversion will void the warranty. Should the operating voltage of your CD-DSP MK 2 require changing, contact KRELL Industries.

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 disassembly, updates or modifications performed to the unit will void the warranty.



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