EVOLUTION

EVOLUTION TWO
MONAURAL PREAMPLIFIER

OWNER'S REFERENCE

Evolution Two Monaural Preamplifier
Owner's Reference, v05.0

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

$C\epsilon$

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

WARNINGS

The Evolution Two preamplifier 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 Evolution Two preamplifier and the space underneath the Evolution Two preamplifier must be unobstructed at all times during operation. Do not place flammable material above or beneath the preamplifier.

Before making connections to the Evolution Two preamplifier, ensure that the power is off and other components are in mute or stand-by mode. Make sure all cable terminations are of the highest quality, free from frayed ends, short circuits, or cold solder joints.

Do not connect an RS-232 cable to the phono power port. Output from the phono power port can seriously damage your computer. Do not connect the cable from a Krell KPE phono stage to the RS-232 port.

THERE ARE NO USER SERVICEABLE PARTS INSIDE AN EVOLUTION TWO MONAURAL PREAMPLIFIER.

Please contact Krell if you have questions not addressed in this guide.

P/N 307773

Contents

List of Illustrations

A Letter from Dan D'Agostino

Dear Audio Enthusiast,

Thank you for your purchase of the Evolution Two preamplifier.

My new Evolution products represent a watershed in my design philosophy and in my quest for audio components that deliver absolute truth in music reproduction. The expanse of the Evolution Two monaural design has allowed me to explore fully the advantages of current mode topologies. The resulting circuit utilizes no feedback and has a bandwidth of 2 MHz.

I have always been fascinated by the artistry inherent in great musical performances, and my new Evolution Two preamplifier delivers the these performances in their entirety, unaltered, to the amplifier. At the same time, the Evolution Two preamplifier provides the flexibility and control necessary for the listener to thoroughly enjoy a high performance audio system. It is my pleasure to make the Evolution products available to you.

The preamplifier plays a vital role in audio playback. At no other point in the reproduction process is the music so vulnerable to change. The signal level at the preamplifier stage is small, and is particularly susceptible to noise and distortion. In order to solve this problem, the Evolution Two employs Krell Current Mode gain stages from input to output, and Current Audio Signal Transmission (CAST) receivers and transmitters. Unprecedented in Krell design history, these unique topologies combine in the Evolution Two preamplifier to form a circuit that has no audible sonic signature.

The Evolution Series represents a new direction for Krell, where breakthrough circuit topologies also represent the vanguard in convenience and control. Sophisticated communication circuitry allows from two to eight preamplifiers to be linked to a single master from which all user interface is accomplished. The Evolution Two Monaural Preamplifier is designed to complement perfectly the Evolution One Monaural Power Amplifier. Combine the Evolution One and Two with my new LAT-1000 loudspeakers, and experience the extraordinary capabilities of an Evolution System.

I have some exciting news for you. Work on a new source component for the Evolution Series is ongoing as of this writing. Possessed of the unique Evolution technologies that power the amplifier and preamplifier, this Evolution source will expose the real advantages of the latest recording formats while taking compact disc playback to the next level. I encourage you to audition it as soon as it is released.

Sincerely,

Daniel D'Agostino

Chief Executive Officer

About Krell

This section describes the Krell Legacy, the innovative features and technology of the Evolution Two, and defines CAST and other key terms used in this reference.

The Krell Legacy

"I design every Krell component to set the standard for workmanship, style, and performance."

Dan D'Agostino

High-end audio is a demanding pursuit—an ongoing quest for excellence in music reproduction that drives equipment manufacturers to strive for the absolute in design and performance. With a keen understanding of this passionate drive, Krell Industries, Inc., was founded in 1980.

Over the past 2-1/2 decades, Krell has earned a distinguished reputation for engineering innovation and product excellence. The company's history is replete with product introductions that have deeply impacted the high-end audio industry. The most discriminating audiophiles and product reviewers have consistently recognized Krell components for standard-setting performance.

From the company's inception to the present, Krell C.E.O. Dan D'Agostino has continually "pushed the envelope" of performance in audio. His exploration of new technologies, driven by his never-ending quest to elevate the standard of excellence, has resulted in breakthrough audio designs. Evolution Two preamplifiers build on this Krell legacy.

Dan D'Agostino remains committed to the development of new designs and technologies. And the Krell legacy will continue to evolve with products that deliver innovative engineering, perfection in build quality, and outstanding audio performance.

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.

The 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 also have their own electrical characteristics, which affect the sonic presentation of the entire system. CAST transmission unifies individual components and interconnects into an electrically linked whole. The original signal remains unaltered from source to speaker.

CAST Basics

Here is 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, circuit board properties and signal transmission aberrations 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.* Krell Current Mode technology enjoys bandwidth increases up to an order of magnitude greater than their voltage based counterparts. This dramatic increase in circuit bandwidth delivers near perfection in the audible band that typically suffers from phase distortions in voltage circuits.

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 components 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 no-compromise specification developed for every CAST cable made.

Evolution CAST

By employing radical current mirror circuitry, the Evolution components elevate the CAST technology to another level. This advanced use of the technology increases the linearity, transient speed, and bandwidth of the Evolution components while reducing the distortion by an order of magnitude.

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.

Ensuring Maximum Performance

*"My pursuit of excellence in sound reproduction and
my love of great musical performance fuels the ongoing
Evolution design effort at Krell."*

Dan D'Agostino

The product of breakthrough Krell technology, the Evolution Two Monaural Preamplifier works in tandem with the Evolution One Monaural Power Amplifier to provide a sound that is supremely dynamic and musical. Indeed, it is the sound of the music itself.

Core Technologies

Zero Feedback Balanced Current Mode Design

The signal path is fully complementary and fully balanced from input to output. All transistors operate in Class A mode. CAST inputs drive a newly designed current-mode balanced input stage, which uses a unique topology able to reject common-mode input noise over an unusually wide bandwidth.

Single-ended and balanced inputs drive a dynamically-cascoded JFET buffer, which has tremendous open-loop linearity and very high input impedance, to eliminate loading effects. The voltage signals are then converted into balanced current signals, the form in which they remain through the remainder of the signal path. The audio signal remains in the current domain throughout the entire preamplifier. Only at the single-ended and voltage outputs is it converted back to the voltage domain.

All signal gain is realized in the current domain using proprietary multiple-output current mirrors with nearly 500 times the open loop linearity of other designs. Negative feedback is not used anywhere in the Evolution Two preamplifier, nor is it necessary. Open-loop distortion is typically less than 0.005% (50 parts per million), and the open loop bandwidth extends to two megahertz. The result is an extraordinarily wide and deep image, with an open, effortless sound.

The signal switching relays are hermetically sealed and use gold-plated bifurcated contacts for maximum signal integrity. Where needed multiple relays are connected in a "T" configuration to virtually eliminate crosstalk from unselected inputs. The volume setting can be adjusted and displayed either numerically, from 0 to 151, or in dB, from –inf to +12.0 dB.

Fully Balanced Discrete Volume Control

The volume control is realized with a 16-bit balanced resistor ladder, which uses low-resistance, high-linearity solid-state switches and discrete precision resistors. Control signals for the switches are optically coupled for low noise and maximum signal integrity. The bandwidth and transient response of the preamplifier circuitry are virtually unaffected by the volume setting. As a result high frequencies sound especially smooth and extended, and music seems to emerge from "jet black" silence. The analog and digital signal paths are not interconnected. Where necessary, digital control signals are optically coupled to analog circuits.

The Evolution Two has two buffered tape outputs: one linked to the main signal-selection bus, and another with its own independent signal-selection bus. This allows the option of listening to one source while recording another, or the option of connecting two tape decks having different input signals. Both tape outputs have single-ended and voltage outputs. Either the fourth single-ended input or the third balanced input can be user-configured as a tape monitor input, allowing the opportunity to use home or professional recording equipment.

Separate Power Supply

Housed in a separate chassis, the power supply makes use of extensive electrical and magnetic shielding to keep radiated interference out of critical preamplifier circuits. Internal line conditioning circuitry filters RF noise on the AC power, and compensates for asymmetric power waveforms and DC on the mains.

Power for the analog stages comes from a large 170 VA toroidal transformer. This transformer drives four 8-amp bridge rectifiers and 39,600 microfarads of filter capacitance. Each monaural preamplifier has as much power supply capability as many stereo power amplifiers.

The main regulators for the analog stages are scaled-down versions of those used to power the output stages of the Evolution One amplifier. Operating in current mode, with fully complementary gain stages and output drivers, wide bandwidth, low output impedance, and high current capability, the main regulators easily exceed the requirements of the analog stages. The driver and output stages in the main analog regulators use five pairs of 150 Volt, 8 Amp, 40 megahertz power transistors.

A dedicated 90 VA toroidal transformer with three independent secondary windings powers the preamplifier's digital control circuitry. The regulators for the con-

(Separate Power Supply continued)

trol circuitry team ultra-stable voltage reference chips with the same discrete high-current driver and output transistors used in the main analog regulators. These ample power reserves are brought to the Evolution Two via high reliability 12-pin connectors with machined, gold plated, three-amp contacts.

Secondary voltage regulators for each analog stage in the Evolution Two provide ultra-quiet, rock-solid supply rails, as well as complete isolation between all the analog stages.

When the Evolution Two is placed in stand-by, all the analog circuitry continues to operate at the same bias current; however, the main analog supply voltages decrease by 30 percent. The result is a corresponding 30 percent reduction in power consumption and heat without the need to wait for the electronics to "warm up" before listening.

Advanced Microprocessor Control and Custom Software

A user menu allows extensive customization of the preamplifier operation, including (but not limited to) input names, input-specific gain trims, Theater Through-put™, display brightness, and 12-volt triggers. Integration is supported via RS-232,12 Volt trigger, and RC-5 inputs, as well as an IR transmitter for programming a learning remote control.

A built-in digital network allows multiple preamplifiers to be linked together, blending the convenience of a single-chassis stereo preamplifier with the sonic performance obtainable only from individual monaural preamplifiers. Six or more preamplifier channels can be "daisy-chained" together and controlled simultaneously for multi-zone or home theater applications. The digital link allows the user settings in one preamplifier channel to be conveniently "cloned" to other linked preamplifier channels. Similarly, upgraded software in one preamplifier channel can be installed in other preamplifier channels using the digital link.

In the event that the DC level at any of the preamplifier channel outputs exceeds a nominal level, sophisticated protection circuitry safely mutes the outputs, traces the source of the excess DC, and displays a diagnostic message on the main display. On power-up, the microprocessor verifies that all the circuit boards in the preamplifier channel are properly connected and are compatible with the version of software installed.

Definition of Terms

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

Configurations

CAN Link
The communication system that links multiple Evolution Two preamplifier channels is a sophisticated system called a controller area network (CAN).

Linked Mode
In linked mode, functions including power, volume, balance, phase, record, mute, and input selections are instantaneously transmitted between linked preamplifier channels. Evolution Two preamplifiers use CAN Link to operate in linked mode.

Clone
A method of transmitting custom configurations between linked preamplifier channels.

Inputs and Outputs

Balanced
A symmetrical input or output circuit that has equal impedance from both input terminals to a common ground reference point. The industry standard for professional and sound recording installations, balanced connections have 6 dB more gain than single-ended connections and allow the use of long interconnect cables. Balanced connections are completely immune to induced noise from the system or the environment.

CAST and Evolution CAST
Krell Current Audio Signal Transmission, or CAST, is a proprietary Krell circuit technology for connecting analog components, transmitting the audio waveform between components in the current domain rather than in the voltage domain. The speed and bandwidth provided by Krell CAST and its circuitry update, Evolution CAST, yield accurate, realistic music reproduction, enabling connected components to perform as if they are all part of a single circuit.

Single-ended
A two-wire input or output circuit. Single-ended connections are not recommended for connections requiring long cable runs. Use care when using single-ended connections, because the ground connection is made last and broken first. Turn the system off/on prior to making or breaking single-ended connections.

Preamplifier

Channel

Also termed preamplifier or preamplifier channel. A channel is one Evolution Two, comprised of one preamplifier chassis and one power supply chassis.

Right-terminated channel

Any right preamplifier channel that is last in a chain of linked Evolution preamplifiers is referred to as right-terminated. There is only one RG-45 link cable connected to a right-terminated channel.

Transmitter

Also termed transmitter preamplifier. The transmitter is a right-terminated preamplifier channel that sends IR, RC-5, and RS-232 data to the other linked preamplifier channel(s), or receiver(s).

Receiver

Also termed receiver preamplifier. Receivers are linked preamplifier channels that receive IR, RC 5, and RS-232 data from a right terminated preamplifier channel, or transmitter.

Operation

Off

When the stand-by/power LEDs and the backlight grid are not illuminated, the preamplifier is off.

Stand-by

A low power consumption status that keeps the audio and regulator circuits at idle. The stand-by/power LEDs are illuminated in red, when the preamplifier channel is in the stand-by mode. Krell recommends leaving the preamplifier in the stand-by mode when it is not playing music.

Operation

When the backlight is illuminated in blue, the preamplifier is in the operational mode and ready to play music.

Technology

Krell Current Mode

A proprietary Krell circuit topology in which the audio gain stages of a component operate in the current rather than voltage domain. This unique technology provides the component with exceptional speed, and a wide bandwidth.

Unpacking and Placement

This section describes the procedures for safely unpacking and placing your Evolution Two Monaural Preamplifier. Each Evolution Two preamplifier channel is shipped in 1 carton consisting of 2 chassis: 1 power supply chassis and 1 preamplifier chassis.

Opening the Evolution Two Shipping Carton

Each Evolution Two shipping carton measures 22.3 in. (56.6 cm) wide by 23.5 in. (59.7 cm) high by 16.2 in. (41.1 cm) deep.

Preamplifier Chassis. Each preamplifier chassis measures 17.3 in. (43.8 cm) wide by 3.7 in. (9.5 cm) high by 18.5 in. (47 cm) deep, and weighs 21 lbs. (9.5 kg).

Power Supply Chassis. Each power supply chassis measures 17.3 in. (43.8 cm) wide by 3.7 in. (9.5 cm) high by 17.3 in. (43.8 cm) deep, and weighs 31 lbs. (14 kg).

Left/Right Channel Orientation

Evolution Two preamplifier channels are assembled as left or right channels. Preamplifier RCA connectors (31, 36, 38, 40) are color coded. Left preamplifier channels are assembled with white RCA connectors, and right preamplifier channels are assembled with red RCA connectors.

To Remove the Preamplifier Channel from the Shipping Carton

1. Open a shipping carton and remove the top layer of foam. You see these items:

    1 Evolution Two preamplifier chassis
    1 Evolution Two power supply chassis
    1 AC Power cord
    1 12-pin DC cable
    1 RJ-45 control cable
    1 remote control
    2 AAA-size 1.5 Volt batteries for the remote
    1 T-10 Torx wrench for the remote control
    1 packet containing the owner's reference and warranty card

(To Remove the Preamplifier from the Shipping Box continued)

2. Carefully remove the preamplifier chassis, power supply chassis, and accessories from the box.

3. Place the the preamplifier chassis and power supply chassis in a safe location and remove the protective plastic wrapping.

4. Place the power supply chassis where you intend to use the assembled preamplifier.

Krell recommends that you place the preamplifier chassis on top of the power supply chassis. You can make 2 identical preamplifier/power supply stacks, as individual left and right channels, or one 4-chassis stack, with both channels combined in one stack.

5. Repeat Steps 1-5 for the remaining preamplifier channel(s).

Placement

Before you install an Evolution Two preamplifier into your system, please follow the guidelines in this section to select a location for your component. This will facilitate a clean, trouble-free installation.

The Evolution Two preamplifier does not require a special rack or cabinet for installation. Each preamplifier channel measures 17.3 in (43.8 cm) wide by 7.3 in. (18.5 cm) high by 18.5 in. (47 cm) deep.

The Evolution Two preamplifier requires at least 2 inches of clearance on each side and at least two inches of clearance above the component to provide adequate ventilation. Installation inside cabinetry may require additional ventilation.

AC Power Guidelines

The Evolution Two preamplifier has superb regulation and does not require a dedicated AC circuit. Avoid connections through extension cords or multiple AC adapters. High quality 15 amp AC strips are acceptable. The use of AC line conditioning devices is not recommended. The features provided by these devices are already on board the Evolution Two. *For more information, see* **Separate Power Supply,** *on page 7.*

Quick Start

To access the full array of available functions for the Evolution Two Monaural Preamplifier, please read the entire owner's reference manual. The abbreviated routine in this Quick Start section will allow you to connect and operate the Evolution Two quickly and enjoy its basic functions.

Evolution Two preamplifier channels may be operated independently, or they may be operated in linked mode, using CAN Link.

Connecting the Evolution Two to Your System

Position each power supply and preamplifier chassis where you intend to use connected channels. Do do not move the chassis after they are connected.

1. Connect the power supply chassis and the preamplifier chassis with the 12-pin DC cable provided, using the DC power connectors (47) on the back panels (1-2).

   IMPORTANT
   Never connect two power supplies together.

2. In order to operate the Evolution Two preamplifier in linked mode, connect the preamplifier channels together with the supplied RJ-45 control cable. In linked mode, functions including power, volume, balance, phase, record, mute, and input selections are instantaneously transmitted between linked preamplifier channels.

   When a system with linked preamplifier channels is powered on, left/right orientation is established immediately, with no user intervention. *For more information on linked preamplifiers, see **Appendix: CAN Link and Multiple Evolution Two Preamplifiers,** on page 51.*

3. Neatly arrange and organize wiring to and from the Evolution Two preamplifier and all components. Separate AC wires from audio cables to prevent hum or other unwanted noise from being introduced into the system.

4. Connect the outputs of your source equipment to the appropriate CAST (34), balanced (30), single-ended (31), or tape inputs (32, 33) on the Evolution Two.

5. Connect the appropriate main outputs (35-41) on the Evolution Two to your amplifier.

13

(Connecting the Evolution Two To Your System continued)

6. On each preamplifier channel, connect the supplied AC power cord to the IEC power cord receptacle (48).

7. On each preamplifier channel, plug the AC power cord into AC power. The front panel display (15) scrolls through EVOLUTION 2 SOFTWARE VERSION, and the red stand-by LEDs illuminate (4), indicating that the Evolution Two preamplifier is in stand-by mode. The scrolling stops when the Evolution Two is ready to be powered on.

Note
Use only the power cord provided with the preamplifier channel to make the connection to AC power. Operation with a power cord other than the one supplied by Krell could induce noise, limit current, or otherwise impair the ability of the preamplifier channel to perform optimally.

Operating the Evolution Two *(Linked Mode)*

After the Evolution Two is connected to your system and to AC power, and the front panel display (15) has stopped scrolling, begin operation:

1. Press the power button on either preamplifier chassis front panel or the pwr key (3) on the remote control. The blue backlights illuminate, the red stand-by LEDs (4) turn off, and the front panel displays read INITIALIZING. The front panel displays show the factory default input: S-1, and level: -INF. The Evolution Two is now in the operational mode.

2. With the Evolution Two preamplifier output muted or the volume fully attenuated, select a source manually using the front panel input select buttons or the input select keys on the remote control (8, 9, 10, 11). Start playing the source. Use the level control knob or level keys (16) to set the volume to a comfortable listening level.

3. To return the Evolution Two preamplifier to the stand-by mode, press the power button or pwr key.

Krell recommends leaving the Evolution Two in the stand-by mode when it is not playing music.

Anatomy of an Evolution Two

This section describes Evolution Two Monaural Preamplifier functions.

Figure 1 Evolution Two Preamplifier Chassis and Power Supply Chassis Front Panels
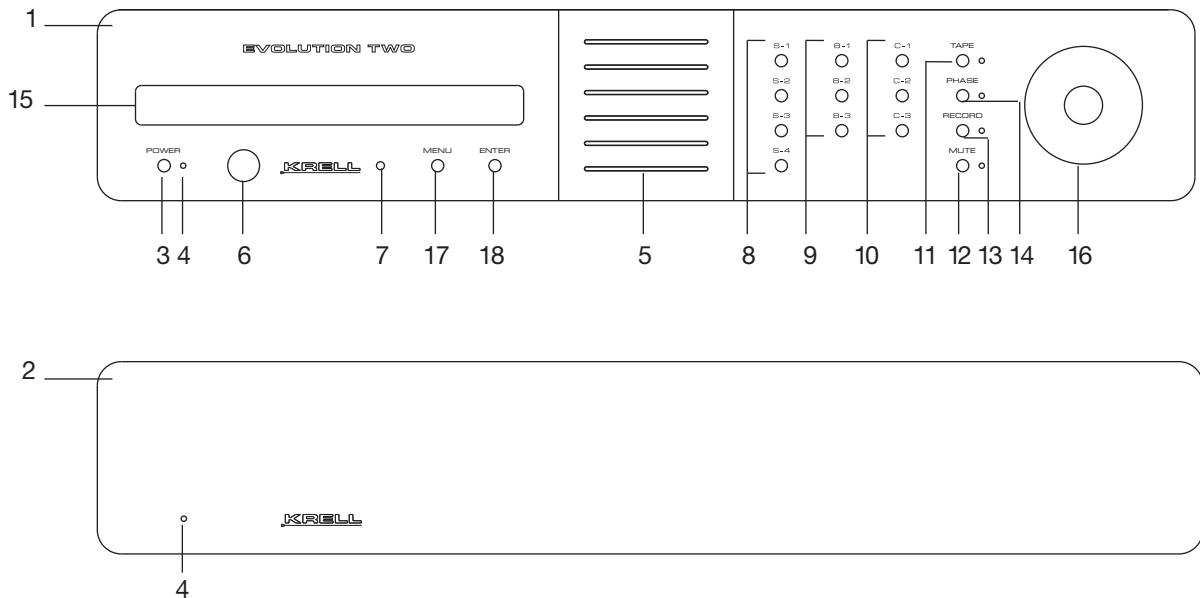
Chassis	1	Preamplifier Chassis
	2	Power Supply Chassis
Power	3	Power Button
	4	Stand-by LED
	5	Power Backlight
Remote Functions	6	IR Sensor
	7	Infrared Transmitter LED
Preamplifier Functions	8	Single-ended Input Selection Buttons
	9	Balanced Input Selection Buttons
	10	CAST Input Selection Buttons
	11	Tape Button and LED
	12	Mute Button and LED
	13	Record Button and LED
	14	Phase Button and LED
Display	15	Front Panel Display
Level	16	Level Control Knob
Navigate/ Customize	17	Menu Button
	18	Enter Button
	19	Preamplifier Chassis Feet
	20	Power Supply Chassis Feet

Inset Evolution Two Preamplifier Channel: Front Panel View

continued
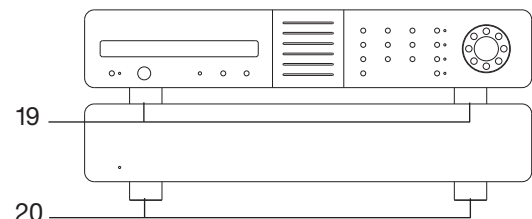
Figure 2 Evolution Two Remote Control

Power Preamplifier Functions

3 Power Key
8 Single-ended Input Selection Keys
9 Balanced Input Selection Keys
10 CAST Input Selection Keys
11 Tape Key
12 Mute Key
13 Record Key
14 Phase Key
21 Main Bus Key
22 Balance Key

Level

16 Level Keys

Navigate/ Customize

17 Menu Key
18 Enter Key

CD Functions

23 Pause Key
24 Play Key
25 Stop Key
26 Track Forward and Back Key
27 Search Forward and Back Key

Amplifier Functions

28 Amplifier Power Key
29 Meter Select Key

16

Front Panel Description

See Figure 1 on page 15

Each Evolution Two Monaural Preamplifier channel is comprised of two chassis, the preamplifier chassis and the power supply chassis. Front panel functions and their descriptions follow.

Chassis

1 Preamplifier Chassis

The preamplifier chassis front panel provides power on, input and zone selection, level control, menu functions, and status display.

2 Power Supply Chassis

Powerful transformers, high quality regulators, and extensive electrical and magnetic shielding are housed in a separate power supply for each preamplifier channel.

Power

3 Power Button or Key

Use this button or key to switch the Evolution Two between the stand-by and operational modes.

4 Stand-by LED

The red stand-by LEDs on the preamplifier and the power supply illuminate when the Evolution Two is plugged into a standard AC wall receptacle, indicating that the Evolution Two is ready to be switched to the operational mode. The stand-by LEDs flash when remote control signals are received.

5 Power Backlight

The blue power backlight illuminates when the Evolution Two is in the operational mode.

Remote Functions on the Front Panel

6 Infrared Sensor

The infrared sensor receives commands from the Evolution Two remote control. For proper remote control operation, make sure the infrared sensor is not covered or obstructed.

7 Infrared Transmitter LED

The stand-by LED (4) on the preamplifier chassis (1) flashes when the Evolution Two sends signals via the infrared transmitter LED to a programmable remote control, such as the Universal Krell Touch Screen Remote. *See IR Out Control, on page 40.*

Preamplifier Functions

8, 9, 10   Input Select Buttons or Keys

Use these buttons to select the corresponding rear panel input that is connect-
ed to a CAST (C-1, C-2, C-3), balanced (B-1, B-2, B-3), or single-ended (S-1,
S-2, S-3, S-4) analog source. The front panel display shows the selected input
and volume level.

There is no dedicated tape input connector on the Evolution Two. B-3 and S-4
may be selected for tape input.

11   Tape Button and LED, or Key

Use this button or key to select the corresponding rear panel input that is con-
nected to an analog tape source. Either B-3 or S-4 (32, 33) may be configured
as a tape input. When you configure either input, the other input is available as
a normal input. The red tape LED illuminates when the tape input is selected.
The front panel display (15) shows: TAPE and the main volume level. *To cus-
tomize tape operation see* **Tape Input,** *on page 46.*

12   Mute Button and LED, or Key

Use this button or key to mute the preamplifier channel output. To unmute,
press the mute button again. The red mute LED illuminates when mute is
selected. *To customize mute operation see* **Mute,** *on page 42.*

13   Record Button and LED, or Key

Use this button or key to select the desired input for the record bus. The red
record LED illuminates, when record is selected. The front panel display (15)
shows the selected record input and the main volume level. To return to the
main input display, press the record button again. *See* **Play and Record,** *on
page 30.*

14   Phase Button and LED, or Key

Use this button or key to invert the absolute polarity of the main output 180
degrees. The red phase LED illuminates, when phase is selected.

Display

15   Front Panel Display

The front panel display provides preamplifier channel status messages, includ-
ing input and record bus status, tape output status, volume level, balance off-
set, and menu selections.

Level Control

16 Level Control Knob or Level Keys

Use this knob or keys to increase or decrease system volume level or, with the balance key (22), to adjust balance. The level control knob or keys also select menu options that customize the Evolution Two. *See **Customizing the Evolution Two,** on page 32.*

Navigate/Customize

17 Menu Button or Key

Use this button or key to access the menu functions of the Evolution Two. *For more information, see **Customizing the Evolution Two**, on page 32.*

18 Enter Button or Key

Use this button or key to configure the menu functions of the Evolution Two. *For more information, see **Customizing the Evolution Two**, on page 32.*

Remote Control Description
See Figure 2 on page 16

The Evolution Two Monaural Preamplifier remote provides all of the power, preamplifier, level control, and navigate/customize functions outlined under **Front Panel Description,** *pages 17-19.* The remote control provides additional functions, including CD functions and menu configuration, accessed using only the remote control keys.

Battery Installation and Removal

The Evolution Two preamplifier remote control uses 2 AAA-size 1.5 Volt batteries. Batteries are included with the shipment. To install the batteries:

1. Remove the remote control backplate, using the supplied T-10 Torx wrench.

2. Install the batteries, following the battery position diagram on the plastic battery receptacle.

3. Replace and secure the backplate.

Notes

Replace batteries when remote control function becomes intermittent.

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

Preamplifier Functions

21   Main Bus Key

Use this key to select the input for the main bus output. The red main LED illuminates, when this function is selected. *For more information, see **Play and Record,** on page 30.*

Level Control

22   Bal(ance Key)

Use this key, along with level keys or the level control knob (16) on the preamplifier chassis to balance left and right output levels. The front panel display (15) shows the left and right balance offset.

Compact Disc Functions

The compact disc keys of the Evolution Two remote control are functional with all Krell compact disc players.

23 Pause Key

Use this key to temporarily suspend playing the current compact disc track. Press pause again or press the play key (24), to resume playing the track at the point pause was engaged.

24 Play Key

Use this key to begin compact disc playback.

25 Stop Key

Use this key to end compact disc playback.

26 Track Forward and Back Keys

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

27 Search Forward and Back Keys

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

Note
For information on track programming functions, refer to the owner's reference of your Krell compact disc player.

Amplifier Functions

28 Amp Pwr Key

Use this key to activate Krell amplifiers connected to your system.

29 Sel (Meter Select) Key

Use this key to select the meter range of the power meter scale on the front of a Krell Evolution One power amplifier. *Please refer to the **Evolution One Owner's Reference,** for more information.*

Figure 3 Evolution Two Preamplifier Chassis and Power Supply Chassis Back Panels
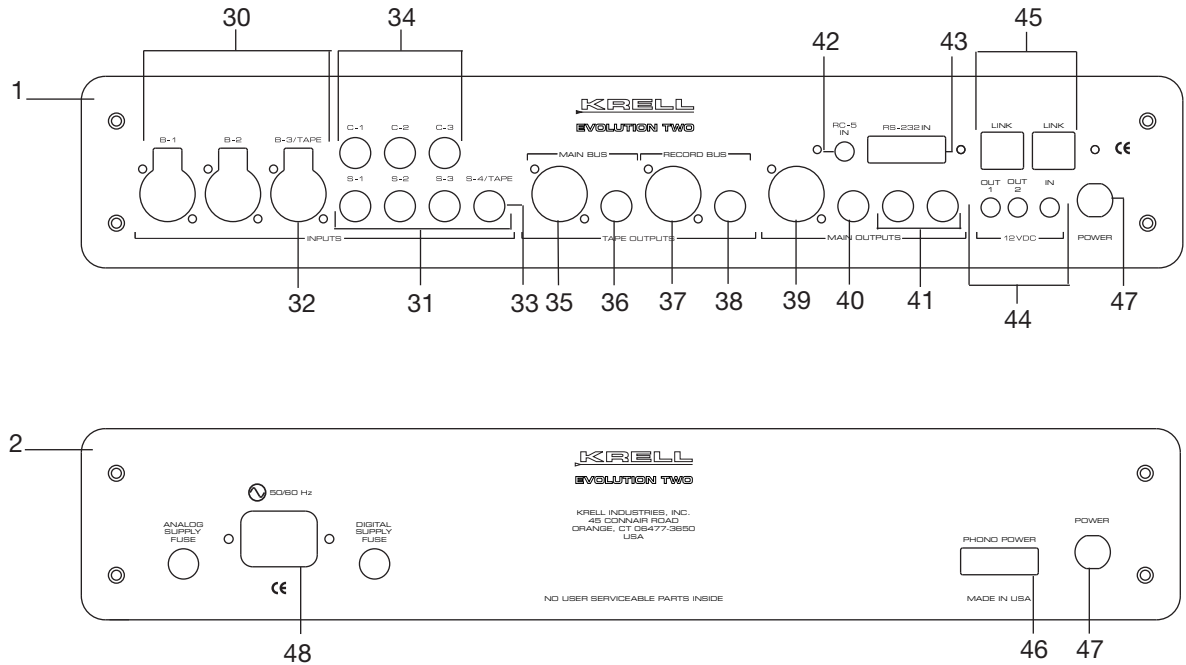
Inputs	30	Balanced Inputs: B-1, B-2, B-3
	31	Single-ended Inputs: S-1, S-2, S-3, S-4
	32	Balanced Tape Input: B-3
	33	Single-ended Tape Input: S-4
	34	CAST Inputs: C-1, C-2, C-3
Outputs	35	Main Bus Balanced Tape Output
	36	Main Bus Single-ended Tape Output
	37	Record Bus Balanced Tape Output
	38	Record Bus Single-ended Tape Output
	39	Balanced Main Output
	40	Single-ended Main Output
	41	CAST Outputs
Remote	42	RC-5 Input
	43	RC-232 Input
	44	12 VDC In/Out
Link Control	45	CAN Link In/Out
Phono	46	Phono Power Port
Power	47	DC Power Connector
	48	IEC Power Cord Receptacle

22

Back Panel Description

See Figure 3 on page 22

The Evolution Two Monaural Preamplifier back panel provides all input and output connections, remote control inputs and outputs, and the power connection. Back panel features and their descriptions follow.

Left/Right Channel Orientation

Evolution Two preamplifiers are assembled as left or right preamplifier channels. Preamplifier RCA connectors (31, 36, 38, 40) are color coded. Left preamplifier channels are assembled with white RCA connectors, and right preamplifier channels are assembled with red RCA connectors.

Inputs

30   Balanced Inputs: B-1, B-2, B-3

The Evolution Two is equipped with 3 balanced analog source inputs with XLR connectors.

31   Single-ended Inputs: S-1, S-2, S-3. S-4

The Evolution Two is equipped with 4 single-ended analog source inputs with RCA connectors.

32, 33 Tape Inputs: B-3 and S-4

The Evolution Two is equipped with one balanced and one single-ended input, for use with a tape source. Either input may be configured as the tape input, from the menu (17). When you select the tape input (11), the other input becomes a normal input, selectable using the front panel button or the remote control key (8, 9).

34   C-1, C-2, and C-3 CAST Inputs

The Evolution Two is equipped with 3 CAST inputs with 4-pin bayonet connectors, for use with Krell CAST-equipped input devices.

Outputs

35, 36 Main Bus Outputs

The Evolution Two is equipped with one balanced main bus output with XLR connectors and one single-ended main bus output with RCA connectors. Use the main bus outputs to record the input signal playing on the main outputs. *For more information, see **Play and Record,** on page 30.*

(Outputs continued)

37, 38 Record Bus Outputs

The Evolution Two is equipped with one balanced record bus output with XLR connectors and one single-ended record bus output with RCA connectors. Use the record bus outputs to record a input signal other than the signal playing on the main outputs. *For more information, see **Play and Record,** on page 30.*

39, 40 Main Outputs

The Evolution Two is equipped with one balanced output with XLR connectors and one single-ended output with RCA connectors.

41 CAST Outputs

The Evolution Two is equipped with two CAST preamplifier outputs with 4-pin bayonet connectors, for use with Krell CAST-equipped amplifiers.

Remote Connections on the Back Panel

42 RC-5 In

Each Evolution Two preamplifier chassis (1) has an RC-5 remote input. The RC-5 remote connector is used with a third party remote control system that provides RC-5 (IR) data with the carrier intact, via a wired connection. A stereo tip, ring, sleeve 1/8″ mini connector is used in the following configuration: Tip = RC-5 data, Ring = +5 V, Sleeve = GND.

43 RS-232

Each Evolution Two preamplifier chassis (1) has an RS-232 port that receives messages from a computer-based control system, providing integrated control of all preamplifier functions. The RS-232 input uses a 9-pin D-subminiature connector. *See the Evolution Two developer's reference, entitled **RS-232 Port: Sending Commands and Interpreting Data,** for more information.*

44 12 VDC In/Out (12 V Trigger)

Each Evolution Two preamplifier chassis (1) has 2 outputs that send and one input that receives 12 VDC power on/off (12 V trigger) signals to and from other Krell components and other devices that incorporate a 12 V trigger. This allows you to turn other components on or off, or to and from stand-by, through the remote control. When the Evolution Two is switched to operational mode and is connected to other components through the 12 V trigger, it sends a signal that will switch other components, allowing whole systems or parts of

systems to be easily coordinated. *For more information on customizing the 12 V trigger, see **Input Trigger,** on page 39.* Mono 1/8″ mini connectors are used in the following configuration: Tip = +12 V, Sleeve = GND.

Notes

When the Evolution Two is in the operational mode, the 12 V trigger provides 12 Volts of DC output. When the component is in the stand-by mode or off, the DC output is 0 Volts.

A minimum of 30 mA is required to operate the 12 V trigger.

Consult the owner's reference of the components used in a custom installation to take full advantage of the remote capabilities of the Evolution Two.

Link Control

45 CAN Link

Each Evolution Two preamplifier chassis (1) has 2 RJ-45 link connectors, connected in parallel. These are used to operate preamplifier channels in linked mode. *For more information, see **Connections Using CAN Link,** on page 28, **Operation Using CAN Link,** on page 31, and **Link Control,** on page 41.*

Phono Stage Connector

46 Phono Power Port

Each power supply chassis (2) has a phono power port, for connecting the preamplifier to a Krell KPE phono stage. Only one phono power port needs to be connected to the KPE.

Power

47 DC Power Connector

Each preamplifier channel is equipped with two DC power connectors that connect the preamplifier chassis and the power supply chassis, using the provided 12-pin DC power cable.

48 IEC Power Cord Receptacle

The IEC power connector, located on the power supply chassis (2), is for use with the provided IEC standard 15 amp AC power cord.

Connecting the Evolution Two
to Your System

This section describes Evolution Two Monaural Preamplifier connections and introduces the CAN Link remote control option.

Input and Output Connections

Krell recommends using its proprietary Krell CAST system for unparalleled sonic performance for connections between the Evolution Two preamplifier and other CAST-equipped components. Krell CAST uses flexible interconnecting cables that can be drawn through tight spaces and concealed.

The Evolution Two also offers 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.

XLR Pin Configuration

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

Inputs and outputs are located on the Evolution Two back panels. Maintain the correct left/right orientation, when hooking up your system.

Left/Right Channel Orientation

Evolution Two preamplifiers are assembled as left or right channels. Preamplifier RCA connectors (31, 36, 38, 40) are color coded. Left preamplifier channels are assembled with white RCA connectors, and right preamplifier channels are assembled with red RCA connectors.

Connection Steps

Position each power supply and preamplifier chassis where you intend to use the connected channels. Do do not move the connected chassis after they are assembled.

The following steps describe how to connect an Evolution Two preamplifier to your system:

1. Connect each power supply chassis and preamplifier chassis with the 12-pin DC cable provided, using the DC power connectors (47) on the back panels (1-2).

> **IMPORTANT**
> **Never connect two power supplies together.**

2. In order to operate the Evolution Two preamplifier in linked mode, connect the preamplifier channels together with the supplied RJ-45 control cable. In linked mode, functions including power, volume, balance, phase, record, mute, and input selections are instantaneously transmitted between linked preamplifier channels.

When a system with linked Evolution Two preamplifiers is powered on, left/right orientation is established immediately, with no user intervention. *For more information on linked preamplifiers, see* **Appendix: CAN Link and Multiple Evolution Two Preamplifiers,** *on page 51.*

3. Neatly arrange and organize wiring to and from the Evolution Two preamplifier and all components. Separate AC wires from audio cables to prevent hum or other unwanted noise from being introduced into the system.

4. Connect the outputs of your source equipment to the appropriate CAST (34), balanced (30), single-ended (31), or tape inputs (32, 33) on the Evolution Two.

5. Connect the appropriate main outputs (35-41) on the Evolution Two to your amplifier.

6. On each preamplifier channel, connect the supplied AC power cord to the IEC power cord receptacle (48).

7. On each preamplifier channel, plug the AC power cord into AC power. The front panel display (15) scrolls through EVOLUTION 2 SOFTWARE VERSION, and the red stand-by LEDs illuminate (4), indicating that the Evolution Two preamplifier is in stand-by mode. The scrolling stops when the Evolution Two is ready to be powered on.

> **Note**
> *Use only the power cord provided with the preamplifier channel to make the connection to AC power. Operation with a power cord other than the one supplied by Krell could induce noise, limit current, or otherwise impair the ability of the preamplifier channel to perform optimally.*

Connections Using CAN Link

The Evolution Two brings a new convenience to the operation of monaural preamplifiers, using a sophisticated, reliable control system called a controller area network (CAN). Using CAN Link, any number of preamplifier channels may be linked for multichannel playback. CAN Link enables all linked preamplifier channels to be controlled from any single linked preamplifier channel in the system.

To Connect Multiple Evolution Two Preamplifiers via CAN Link:

After the power supply chassis is connected to the preamplifier chassis with the 12-pin DC cable:

1. Connect one RJ-45 connector from either CAN Link connector (45) on the back panel of any preamplifier chassis (1) to either CAN Link connector on any other preamplifier chassis. The two preamplifier channels that are connected are now linked.

2. Repeat Step 1 for each additional preamplifier channel you want to link. *For more information on linked preamplifier channels, see **Appendix: CAN Link and Multiple Evolution Two Preamplifiers,** on page 51.*

Evolution Two Operation

The Evolution Two Monaural Preamplifer is easy to operate. Instructions follow for on/off and stand-by operation.

IMPORTANT
Always mute or fully attenuate the preamplifier level when switching sources.

Do not change input connections to the amplifier when the amplifier is on.

Use care when setting high playback levels. Always lower the volume level at the first sign of loudspeaker distress.

On/Off and Stand-by Operation *(Linked Mode)*

When powering on any system, turn on amplifiers last. When powering down, turn off amplifiers first.

After the Evolution Two is connected to your system and to AC power, and the front panel display (15) has stopped scrolling, begin operation:

1. Press the power button on either preamplifier chassis front panel or the pwr key (3) on the remote control. The blue backlights illuminates, the red stand-by LEDs (4) turn off, and the front panel displays read INITIALIZING. The front panel displays shows the factory default input: S-1, and level: -INF. The Evolution Two is now in the operational mode.

2. With the Evolution Two preamplifier output muted or the volume fully attenuated, select a source manually using the front panel input select buttons or the input select keys on the remote control (8, 9, 10, 11). Start playing the source. Use the level control knob or level keys (16) to set the volume to a comfortable listening level.

3. To return the Evolution Two to the stand-by mode, press the power button or pwr key.

Krell recommends leaving the Evolution Two in the stand-by mode when it is not playing music. Turn the Evolution Two off when the system is not being used for an extended period of time.

To Turn Off Your System

1. Place the amplifiers in the stand-by mode.

2. Press the power button on the preamplifier chassis front panel or the pwr key (3) on the remote control to switch the Evolution Two to the stand-by mode.

3. Turn off the amplifiers using the back panel power switch or by disconnecting them from AC power.

4. Turn off the Evolution Two by unplugging the AC power cord from AC power.

Play and Record

The Evolution Two allows you to listen to one source through the main output (39 or 44), while recording a different source through the record bus output (37 or 38). A main bus tape output (35, 36) is also available and allows for the connection of a second recording device.

1. Press the power button (3) on the preamplifier chassis front panel (1) to switch the Evolution Two from stand-by to the operational mode.

2. Press the input selection button on the preamplifier chassis front panel or the input selection keys (8, 9, 10, or 11) on the remote control to select the source that you want to listen to through the main outputs.

3. Begin playing the source. Use the level control knob on preamplifier chassis front panel or the level keys (16) on the remote control to adjust the volume to the desired listening level.

4. Press the record button on the preamplifier chassis front panel or the record key (13) on the remote control. The red record LED illuminates on the preamplifier chassis front panel.

5. Press the input selection button or keys to select the source that you want to record through the record bus output. This source can be different than the source selected for the main bus outputs, in Step 2.

6. Press the record button or the main key (21) on the remote control, to return to the main bus output.

Operation Using CAN Link

When a system with linked Evolution Two preamplifier channels is powered on, left/right orientation is established immediately, with no user intervention.

1. The input selections and the power, volume, balance, phase, record, and mute adjustments you make on any preamplifier channel are instantly transmitted between all linked preamplifier channels.

2. All configuration settings may be copied from any linked preamplifier channel to all other linked preamplifier channels using the clone feature. *See **Clone,** on page 35.*

*For more information on linked preamplifiers, see **Appendix: CAN Link and Multiple Evolution Two Preamplifiers,** on page 51.*

Customizing the Evolution Two

The Evolution Two Monaural Preamplifier easy-to-use menu allows you to config-
ure the following functions. You can also use the menu to review version informa-
tion about the software, hardware, and firmware installed in the Evolution Two:

Navigation Conventions

Navigating the Evolution Two menu is straightforward and consistent throughout,
using four functions and the menu option BACK.

17 Menu Button or Key

To enter the menu, press the menu button on the preamplifier chassis front panel
or the menu key on the remote control. Once you are in the menu, you can press
the menu button or key to exit the menu.

16 Volume Knob or Level Keys

Use the volume knob on the preamplifier chassis front panel or the up and down
keys on the remote control to scroll forward and backward through the menu hier-
archy. Each menu list is a continuous loop.

18 Enter Button or Key

Press the enter button on the preamplifier chassis front panel or the enter key on
the remote control to select a function or a configuration option, and to confirm a
selection. Only the enter button on the preamplifier chassis front panel may be
used to initiate a clone.

15 Front Panel Display

The display shows the active function and configurable options.

BACK

Select back to scroll backwards up the menu hierarchy, or to exit a menu option
without confirming it.

The first list you see in the menu is the list of configurable functions. Select a con-
figurable function to view a submenu: the list of options that configure the func-
tion. You can configure some options as well, using a second submenu.

Menu Functions

AC Mains

This function enables you to operate the Evolution Two from a switched AC outlet. If AC Mains is set to ON, the preamplifier turns on immediately, by-passing stand-by. Thereafter, you may switch the preamplifier to and from stand-by, using the power button or pwr key (3). The options are: OFF, ON.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: AC MAINS.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: OFF.

3. Use the level control knob or the up and down keys to select the desired option: OFF or ON.

4. Press the enter button or key to confirm the selection. The front panel display reads: AC MAINS.

OFF

The Evolution Two switches to stand-by mode, when it detects AC power.

ON

The Evolution Two turns on immediately, bypassing the stand-by mode, when it detects AC power.

Backlight

This function enables you to control the blue power indicator brightness. The options are: OFF, LOW (25%), MED (50%), HIGH (100%).

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: BACKLIGHT.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) reads: BRIGHTNESS.

3. Press the enter button or the enter key again. The front panel display shows the default mode: HIGH.

4. Use the level control knob or the up and down keys to select the desired brightness: OFF, LOW, MED, HIGH.

5. Press the enter button or key to confirm the selection. The front panel display reads: BRIGHTNESS.

Balance

This function enables you to select the balance between the left and right channels. The options are: CENTER, L .5-5 dB <, R .5-5 dB >.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: BALANCE.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: CENTER.

3. Use the level control knob or the up and down keys to select the desired balance option from 0 to +5 dB, in .5 dB increments, left or right.

4. Press the enter button or key to confirm the selection. The front panel display reads: BALANCE.

Balance is not active if a preamplifier channel is not linked. At least two linked preamplifier channels s are required for balance to activate. *For more information on linked preamplifiers channels, see* **Appendix: CAN Link and Multiple Evolution Two Preamplifiers,** *on page 51.*

Channel Assign

This function enables you to override the factory set channel assignments. The options are: FORCE LEFT, FORCE RIGHT, FORCE NONE, NO OVERRIDE.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: CHANNEL ASSIGN.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: NO OVERRIDE.

3. Use the level control knob or the up and down keys to select the desired option: NO OVERRIDE, FORCE LEFT, FORCE RIGHT, or FORCE NONE.

4. Press the enter button or key to confirm the selection. The front panel display reads: CHANNEL ASSIGN.

FORCE LEFT

Use to make a left channel respond as a right channel.

17 Menu Button or Key
    Enter or exit the menu.

**16 Volume Knob
    or Level Keys**
    Navigate the menu hierarchy; review functions and configuration options.

18 Enter Button or Key
    Select a configuration option; confirm a selection.

BACK
    Scroll backwards through the menu hierarchy; exit a menu option without confirming it.

34

FORCE RIGHT

Use to make a right channel respond as a left channel.

FORCE NONE

The preamplifier channel ignores balance selections. Use this option to set up more than 2 preamplifier channels.

NO OVERRIDE

Return to CHANNEL ASSIGN. Serves the same function as BACK in all other menu items.

*For more information on linked preamplifiers, see **Appendix: CAN Link and Multiple Evolution Two Preamplifiers,** on page 51.*

Clone

This function enables you to transfer configured functions between linked preamplifier channels. There is no need to configure multiple menu choices for each preamplifier channel. Clone insures that, where desired, the configuration of functions for multiple preamplifier channels is identical. The option is: CLONE BEGIN.

Enter the menu, then:

1. Identify the clone transmitter and clone receiver. The clone transmitter is the preamplifier channel that transmits the clone and the clone receiver(s) is/are the preamplifier channel(s) that receive(s) the clone.

2. Use the level control knob on the preamplifier chassis front panel (1) of the clone transmitter, or the up and down keys (16) on the remote control to select: CLONE.

3. Press the enter button on the preamplifier chassis front panel (1) of the clone transmitter or the enter key (18) on the remote control. The front panel display (15) reads: CLONE BEGIN.

4. Press the enter button or the enter key again. The clone transmitter display reads: CLONE TRANSMIT and the clone receiver display(s) read(s): CLONE RECEIVE.

5. Press the enter button on the front panel of the clone transmitter. All clone receivers go into stand-by mode, indicating that the clone is accomplished.

Note
The enter button on the remote control cannot be used to activate the clone function.

CLONE BEGIN

Sends the message that a clone is about to begin, from the clone transmitter to the clone receiver(s).

CLONE TRANSMIT

Once the clone begin message is sent, the clone transmitter display reads: CLONE TRANSMIT, indicating that the preamplifier is ready to transmit the clone data.

CLONE RECEIVE

Once the clone begin message is sent, the clone receiver(s) display reads: CLONE RECEIVE, indicating that the preamplifier(s) is(are) ready to receive the clone data.

Note
In order to set a clone receiver to ignore the clone, use the level control knob on the clone receiver front panel to scroll to CLONE IGNORE.

Display

This function enables you to turn on the front panel display (15) all the time, or turn it off after a time out. The options are: ON, TIMED.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or the up and down keys on the remote control (16) to select: DISPLAY.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) reads: MODE.

3. Press the enter button or key (18) again. The front panel display shows the default mode: ON.

4. Use the level control knob or the up and down keys to select the desired option: ON or TIMED.

5. Press the enter button or key to confirm the selection. The front panel display reads: MODE.

17 Menu Button or Key
   Enter or exit the menu.

16 Volume Knob
   or Level Keys
   Navigate the menu hierarchy, review functions and configuration options.

18 Enter Button or Key
   Select a configuration option or confirm a selection.

BACK
   Scroll up the menu hierarchy, or exit a menu option without confirming it.

6. Use the level control knob or the up and down keys to select: BRIGHTNESS.

7. Press the enter button or key. The front panel display shows the default mode: HIGH.

8. Use the level control knob or the up and down keys to select the desired brightness: OFF, LOW (25%), MED (50%), or HIGH (100%).

9. Press the enter button or key to confirm the selection. The front panel display reads: BRIGHTNESS.

ON

The front panel display is always on.

TIMED

The front panel display times out after 5 seconds.

BRIGHTNESS

Controls the brightness of the display. When the brightness setting is OFF, the display is at 50% of brightness when in menu mode, and turns completely off when you leave the menu mode.

Info

This function enables you to access information about the preamplifier software, EEPROM, and PC Boards. The PC Boards are listed in the left margin, on this page.

Enter the menu, then:

PC Boards
CAST IN 1
CAST IN 2
CAST IN 3
CONNECT
CONTROL
DISPLAY
DISPLAY VERSION
ENCODER
FACEPLATE
MAIN
OUT 1
OUT 2
REGULATOR
TAPE OUT 1
TAPE OUT 2
VOLT IN
VOLUME

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: INFO.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) show the software version number.

3. Rotate the level control knob clockwise or press the up key. The front panel display shows the EEPROM version number.

4. Rotate the level control knob clockwise or press the up key again. The front panel display shows the PC board version number.

5. Press the enter button or key. Use the level control knob or the up and down keys to scroll through the version numbers of PC boards, from the PC Boards listed at left.

EEPROM

Electrically erasable programmable read-only memory. An erasable memory chip used in the Evolution Two to store menu selection information.

Input Level Trim

This function enables you to select an input offset for a particular input. The options are: +/-6 dB, in 1 dB increments.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or the up and down keys (16) on the remote control to select: INPUT LEVEL TRIM.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: B-1.

3. Use the level control knob or the up and down keys to select the desired input: B-1, B-2, B-3, S-1, S-2, S-3, S-4, C-1, C-2, C-3, or TAPE.

4. Press the enter button or key. The front panel display shows the default mode: 0 dB.

5. Use the level control knob or the up and down keys to select the desired trim option: +/-6 dB, in 1 dB increments.

6. Press the enter button or key to confirm the selection. The front panel display shows the selected input.

Input Name

Input Name Options
AUX, AUX1, AUX2, AUX3
B-1, B-2, B-3, BYPC-1
C-2, C-3, CABLE, CD, CD1,
CD2, CD-R, COMP

DAC, DAT, DCC, DISC, DISC 1,
DISC 2, DISC 3, DSS, DVD,
DVD1, DVD2, DVD3, DVD-A

EQ, GAME, HI-8
LD, LD1, LD2, LINE 1, LINE 2,
LINE 3, LINE
MDISC, MIXER, MON

PHONO, PHON1, PHON2,
PROC
S-1, S-2, S-3, S-4, SACD, SAT,
SRC1, SRC2, SRC3, SURR,
S-VID

TAPE1, TAPE2, TAPE3, TAPE,
TEST, THR, TUNER, TUNR1,
TUNR2, TV,
VCR, VCR1, VCR2, VCR3,
VDISC, VIDEO, VID1, VID2,
VID3
8MM, 8TRK

This function enables you to select an input name for each input. The input name options are listed in the left margin, on this page.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: INPUT NAME.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: B-1.

3. Use the level control knob or the up and down keys to select the desired input: B-1, B-2, B-3, S-1, S-2, S-3, S-4, C-1, C-2, C-3, or TAPE.

4. Press the enter button or key. The front panel display shows no characters.

5. Use the level control knob or the up and down keys to select the desired input name, from the input name options listed at left.

6. Press the enter button or key to confirm the selection and return to the input list, in Step 3. The front panel display shows the input name.

To select input names for other inputs, repeat Steps 3 and 4.

38

Input Phase

This function enables you to invert the absolute polarity of the selected input 180 degrees. The selections are: NORMAL, INVERT.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or the up and down keys (16) on the remote control to select: INPUT PHASE.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: B-1.

3. Use the level control knob or the up and down keys to select the desired input from the list: B-1, B-2, B-3, S-1, S-2, S-3, S-4, C-1, C-2, C-3, or TAPE.

4. Press the enter button or key. The front panel display shows the default mode: NORMAL.

5. Use the level control knob or the up and down keys to select: NORMAL or INVERT.

6. Press the enter button or key to confirm the selection. The front panel display shows the selected input.

NORMAL
The phase of the selected input is unaffected.

INVERT
The phase of the selected input is inverted 180 degrees.

Input Trigger

This function enables you to configure the input trigger. The options are: OFF, NORMAL, THEATER.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or the up and down keys on the remote control to select: INPUT TRIGGER.

2. Press the enter button on the preamplifier chassis front panel or the or enter key (18) on the remote control. The front panel display (15) shows the default mode: NORMAL.

3. Use the level control knob or the up and down keys to select the desired option: OFF, NORMAL or THEATER.

4. Press the enter button or key to confirm the selection. The front panel display reads: INPUT TRIGGER.

(Input Trigger continued)

OFF

The Evolution Two does not respond to 12 V input trigger commands.

NORMAL

The Evolution Two responds to 12 V input trigger commands.

THEATER

The Evolution Two responds to 12 V input trigger commands, and the theater mode enabled input is selected automatically. *See **Theater Mode**, on page 47.*

IR Out Control

This function enables you to access Evolution Two IR commands and program a learning remote control.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: IR OUT.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: B-1 MAIN.

3. Use the level control knob or the up and down keys to select the desired IR command from the list.

4. Press the enter button or key to send the command out via the preamplifier front panel IR transmitter (7). The stand-by LED (4) on the preamplifier chassis flashes, indicating that the command has been sent.

5. Repeat Steps 2-4 for each of the commands you wish to transmit.

6. Press the enter button or key to confirm the selection. The front panel display reads: IR OUT.

*For a listing of IR codes, see the Evolution Two developer's reference entitled **RS-232 Port: Sending Commands and Interpreting Data**. The right-terminated preamplifier is the link transmitter of IR data. For more information on linked pre-amplifier channels, see **Appendix: CAN Link and Multiple Evolution Two Preamplifiers**, on page 51.*

17 Menu Button or Key
Enter or exit the menu.

16 Volume Knob or Level Keys
Navigate the menu hierarchy, review functions and configuration options.

18 Enter Button or Key
Select a configuration option or confirm a selection.

BACK
Scroll up the menu hierarchy, or exit a menu option without confirming it.

Link Control (CAN Link)

This function enables you to link and unlink preamplifiers. The options are: LINKED, UNLINKED.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or the up and down keys (16) on the remote control to select: LINK CONTROL.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: LINKED.

3. Use the level control knob or the up and down keys to select the desired option: LINKED, or UNLINKED.

4. Press the enter button or key to confirm the selection. The front panel reads: LINKED.

LINKED
When preamplifier channels are linked, power, volume, balance, phase, record, mute, and input selections are automatically communicated between linked pre-amplifier channels. All other settings remain local and may be cloned from one preamplifier channel to another. *See also **Clone,** on page 35, and **Software Clone,** on page 45.*

UNLINKED
When a preamplifier channel is unlinked, it does not respond to commands from any other linked preamplifier channels. After the preamplifier channel is unlinked, settings can be changed, independent of other preamplifier channels.

*For more information on linked preamplifier channels, see **Appendix: CAN Link and Multiple Evolution Two Preamplifiers,** on page 51.*

Mute

This function enables you to control the mute mode. The options are: FULL, -20 dB, BACK.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: MUTE.

2. Press the enter button on the preamplifier chassis front panel or the or enter key (18) on the remote control. The front panel display (15) shows the default mode: FULL.

3. Use the level control knob or the up and down keys to select the desired option: FULL or -20 dB.

4. Press the enter button or key to confirm the selection. The front panel display reads: MUTE.

FULL

The output of the Evolution Two is completely silenced.

-20dB

The output of the Evolution Two is reduced by 20 dB and may still be audible.

Output Trigger

This function enables you to turn the two output triggers on or off, or configure them with independent delays of up to 20 seconds. The options are: ON, OFF, DELAY.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: OUTPUT TRIGGER.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: TRIGGER 1.

3. Press the enter button or key again. The front panel display shows the default mode: OFF.

4. Use the level control knob or up and down keys to select: OFF, ON, or DELAY.

5. Select DELAY. You are prompted to enter a delay time of 0-20 seconds.

6. Enter the delay time.

7. Press enter to confirm the selection. The front panel display reads: DELAY.

17 Menu Button or Key
Enter or exit the menu.

16 Volume Knob or Level Keys
Navigate the menu hierarchy, review functions and configuration options.

18 Enter Button or Key
Select a configuration option or confirm a selection.

BACK
Scroll up the menu hierarchy, or exit a menu option without confirming it.

8. Use the level control knob or up and down keys to scroll to: BACK.

9. Press the enter button or key to return to: TRIGGER 1.

10. Use the level control knob or the up and down keys to scroll to: TRIGGER 2.

11. Repeat Steps 3-7 to set Trigger 2.

ON

The 12 Volt trigger output is enabled at power on for the selected trigger (Trigger 1 or 2).

OFF

The 12 Volt trigger output is disabled at power on for the selected trigger (Trigger 1 or 2).

DELAY

The 12 volt trigger output is enabled at power on for the selected trigger (Trigger 1 or 2), and the delayed for a period of time (0-20 seconds).

RC-5 Control

This function enables you to change the link transmit status of the Evolution Two. The options are: LINK TRANSMIT, LINK RECEIVE.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: RC-5 CONTROL.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: LINK TRANSMIT.

3. Use the level control knob or the up and down keys to select the desired option: LINK TRANSMIT or LINK RECEIVE.

4. Press the enter button or key to confirm the selection. The front panel display reads: RC-5 CONTROL.

The right-terminated preamplifier channel is the link transmitter of RC-5 data. Connect the RC-5 cable to the RC-5 connector on the right-terminated preamplifier channel. For more information on linked preamplifier channels, see **Appendix: CAN Link and Multiple Evolution Two Preamplifiers,** *on page 51.*

Recall

This function enables you to access factory default settings or your own saved settings, or to undo a clone. The options are: FACTORY, SAVED, CLONE UNDO.

Enter the menu, then:

1. Use the level control knob on the preamplifier channel front panel or up and down keys (16) on the remote control to select: RECALL.

2. Press the enter button on the preamplifier channel front panel or the or enter key (18) on the remote control. The front panel display (15) shows the default mode: FACTORY.

3. Use the level control knob or the up and down keys to select the desired option: FACTORY, SAVED, or CLONE UNDO.

4. Press the enter button or key to confirm the selection. The front panel display reads: RECALL.

FACTORY
Recalls the factory settings.

SAVED
Recalls settings previously stored in memory using the SAVE function. *See also Save, on page 45.*

CLONE UNDO
Cancels clone settings. All settings revert to the last settings in memory prior to cloning. *See also Clone, on page 35.*

RS-232 Control

This function enables you to change the link transmit status of the Evolution Two. The options are LINK TRANSMIT, LINK RECEIVE.

17 Menu Button or Key
Enter or exit the menu.

**16 Volume Knob
or Level Keys**
Navigate the menu hierarchy, review functions and configuration options.

18 Enter Button or Key
Select a configuration option or confirm a selection.

BACK
Scroll up the menu hierarchy, or exit a menu option without confirming it.

Enter the menu, then:

1. Use the level control knob on the preamplifier channel front panel or up and down keys (16) on the remote control to select: RS-232 CONTROL.

2. Press the enter button on the preamplifier channel front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: LINK TRANSMIT.

3. Use the level control knob or the up and down keys to select the desired option: LINK TRANSMIT, or LINK RECEIVE.

44

4. Press the enter button or key to confirm the selection. The front panel display reads: RS-232 CONTROL.

The right-terminated preamplifier channel is the link transmitter of RS-232 data. Connect the RS-232 cable to the RS-232 connector on the right-terminated pre-amplifier channel. For more information on linked preamplifier channels, see **Appendix: CAN Link and Multiple Evolution Two Preamplifiers,** *on page 51.*

Save

This function enables you to save a copy of the current settings. The options are: GO, BACK.

Enter the menu, then:

1. Use the level control knob on the preamplifier channel front panel or up and down keys (16) on the remote control to select: SAVE.

2. Press the enter button on the preamplifier channel front panel or the or enter key (18) on the remote control. The front panel display (15) shows the default mode: GO.

3. Press the enter button or key to save the settings The front panel display reads: SAVE.

GO
Saves a copy of current settings to memory, overwriting previously saved settings.

Software Clone

This function enables you to transfer operational software from one linked pream-plifier channel to another. Software clone insures that, where desired, software for multiple preamplifier channels is identical. The options are: NO, YES.

Enter the menu, then:

1. Identify the clone transmitter and clone receiver. The clone transmitter is the preamplifier channel that transmits the clone and the clone receiver(s) is/are the preamplifier channel(s) that receive(s) the clone.

2. Use the level control knob on the preamplifier chassis front panel of the clone transmitter, or up and down keys (16) on the remote control to select: SOFTWARE CLONE.

3. Press the enter button on the clone transmitter front panel or the enter key (18) on the remote control. The front panel display (15) reads: SW BEGIN.

(Software Clone continued)

4. Press the enter button or the enter key (18) again. The front panel display on the clone transmitter shows the default: ARE YOU SURE   NO.

5. Use the level control knob on the clone transmitter or the up and down keys to select: ARE YOU SURE   YES.

6. Press the enter button on the clone transmitter. The front panel display on the clone transmitter reads: SENDING UPDATE. The front panel display on the clone receiver(s) read(s): RECEIVING UPDATE. All linked preamplifier channels switch to stand-by mode, indicating that the software clone is accomplished.

SW CLONE BEGIN
Begins the software clone process.

ARE YOU SURE
Confirms the software clone. The options are: NO, YES

NO
Cancels the software clone. The front panel display returns to: SOFTWARE CLONE.

YES
Initiates the software clone.

Tape Input

This function enables you to select either S-4 or B-3 as the tape input. The input that is not selected operates as a normal input. The options are: B-3, S-4, NONE.

Enter the menu, then:

1. Use the level control knob on the preamplifier channel front panel or up and down keys (16) on the remote control to select: TAPE INPUT.

2. Press the enter button on the preamplifier channel front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: S-4.

3. Use the level control knob or the up and down keys to select the desired option: S-4 , B-3, NONE, or BACK.

4. Press the enter button or key to confirm the selection. The front panel display reads: TAPE INPUT.

NONE
When the tape input is set to NONE, both S-4 and B-3 act as normal inputs, not as tape inputs.

17 Menu Button or Key
Enter or exit the menu.

16 Volume Knob or Level Keys
Navigate the menu hierarchy, review functions and configuration options.

18 Enter Button or Key
Select a configuration option or confirm a selection.

BACK
Scroll up the menu hierarchy, or exit a menu option without confirming it.

Theater Mode

This function enables you to select theater mode volume for a particular input. Use this function when connecting the output of a preamp/processor to the Evolution Two for home theater applications. Configuring an input for theater mode sets that input for unity gain and suspends the level control of the Evolution Two. Volume adjustments are then made through the preamp/processor connected to the input configured for theater mode on the Evolution Two. The options are: ON, OFF.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or the up and down keys (16) on the remote control to select THEATER.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default input: B-1.

3. Use the level control knob or the up and down keys to select the desired input: B-1, B-2, B-3, S-1, S-2, S-3, S-4, C-1, C-2, C-3, or TAPE.

4. Press the enter button or key. The front panel display shows the default mode: OFF.

5. Use the level control knob or the up or down keys to select ON or OFF.

6. Press ENTER to confirm the selection and return to the selected input.

ON
The selected input is set to THEATER and the volume control for the theater input is disengaged on the Evolution Two.

OFF
The selected input is configured normally and the volume control for the normal input is engaged on the Evolution Two.

Note
Only one input on the Evolution Two can be in theater mode at a time. When theater mode is set for an input, theater mode is cleared automatically from other inputs.

The Evolution Two selects the theater input automatically upon power on, if the input trigger is configured for THEATER. *See **Input Trigger,** on pages 39-40.*

47

Volume Display

This function enables you to select the numeric mode for the volume display, displaying values from softest to loudest: 0 to 151. Alternatively, you can select the dB mode for the volume display, displaying values from softest to loudest: -inf to +12 dB. The options are: NUMERIC, dB.

Enter the menu, then:

1. Use the level control knob on the preamplifier chassis front panel or up and down keys (16) on the remote control to select: VOLUME DISPLAY.

2. Press the enter button on the preamplifier chassis front panel or the enter key (18) on the remote control. The front panel display (15) shows the default mode: dB.

3. Use the level control knob or the up and down keys to select the desired option: NUMERIC or DB.

4. Press the enter button or key to confirm the selection. The front panel display reads: VOLUME DISPLAY.

17 Menu Button or Key
Enter or exit the menu.

**16 Volume Knob
or Level Keys**
Navigate the menu hierarchy, review functions and configuration options.

18 Enter Button or Key
Select a configuration option or confirm a selection.

BACK
Scroll up the menu hierarchy, or exit a menu option without confirming it.

Questions and Answers

Q. Why does the second preamplifier channel not respond when I select an input or adjust the volume on the other preamplifier channel?

A. The two preamplifier channels must be linked together using the RJ-45 cable in order for functions to be sent between preamplifier channels.

Q. I renamed the B-1 input on one of the preamplifier channels. Why does it still read B-1 on the other preamplifier channel?

A. When two or more preamplifier channels are linked, basic functions such as volume and input selection are simultaneously executed by all linked preamplifier channels. In order for linked preamplifier channels to recognize customized menu functions such as renaming inputs, the clone procedure must be performed. *For more information, see **Clone,** on page 35, and **Software Clone,** on page 45.*

Q. When I adjust the balance, the sound moves to the side that is opposite my adjustment. What is wrong?

A. The Evolution Two preamplifier is preset from the factory as either a left or a right preamplifier. Make sure the preamplifier chassis with the white connectors is used for the left channel and the preamplifier chassis with red connectors is used for the right channel.

Q. What should I do if I see a DC ERROR message?

A. The Evolution Two preamplifier has a sophisticated DC protection system that detects potentially harmful DC. Please contact Krell to determine what action to take, if you see a DC error message.

Q. The Evolution Two preamplifiers are plugged into AC outlets and the link cables are connected, but the preamplifier channels do not power on. What should I do?

A. The link cables only pass data between preamplifier channels. The power supply chassis must be connected to the preamplifier chassis with the provided 12-pin DC cable.

Troubleshooting System Noise

When you mix and match high-performance audio components, each with its own ground potential, a low frequency hum may occur in one or both loudspeakers.

If this happens when you place the Evolution Two preamplifier into your system, follow these simple troubleshooting steps.

1. Check that all input and output connections are of sound construction.

2. With the preamplifier channel off, remove the interconnect cables, the turn the preamplifier channel on. If the hum disappears, turn the preamplifier channel off and reinsert one of the interconnect cables. Turn the preamplifier channel back on. Repeat this process for each cable.

3. If the hum reappears with one or both interconnect cables reinserted, the cable needs to be replaced.

4. If the interconnect cables are sound, you may be experiencing a ground loop. Please contact your authorized Krell dealer, distributor, or Krell for suggestions on how to eliminate the ground loop.

Appendix: CAN Link and Multiple Evolution Two Preamplifiers

The Evolution Two Monaural Preamplifier brings a new convenience to the operation of monaural preamplifiers, using a sophisticated, reliable control system called a controller area network (CAN). The CAN Link communication system enables all linked preamplifier channels to be controlled from any single linked preamplifier channel in the system. CAN Link logic distinguishes between left and right channels. This distinction is of specific significance in the following situations:

1. The connection of multiple preamplifier channels.

2. The control of the Evolution Two using a third party remote control system via the infrared (IR) transmitter (7) and the RC-5 (42) and RS-232 (43) connectors.

3. The use of the balance and channel assign functions, via the menu button or key (17).

CAN Link logic is transparent during the normal operation of a stereo pair of linked Evolution Two preamplifiers.

To Connect Multiple Evolution Two Preamplifiers via CAN Link:

After the power supply chassis is connected to the preamplifier chassis with the 12-pin DC cable:

1. Connect one RJ-45 control cable from either CAN Link connector (45) on the back panel of any preamplifier chassis (1) to either CAN Link connector on any other preamplifier chassis. The two connected preamplifier channels are now linked.

2. Repeat Step 1 for each additional preamplifiers you want to link.

Left/Right Channel Orientation

Evolution Two preamplifiers are assembled as left or right channels. Preamplifier RCA connectors (31, 36, 38, 40) are color coded. Left preamplifier channels are assembled with white RCA connectors, and right preamplifier channels are assembled with red RCA connectors.

Right-Terminated Preamplifier Channel

Right preamplifier channels have a unique electrical identity under CAN Link. When a system with linked Evolution Two preamplifiers is powered on, the system automatically identifies the right-terminated preamplifier channel, and left/right orientation is established immediately, with no user intervention.

Any right preamplifier channel that is last in a chain of linked Evolution Two preamplifiers is referred to as right-terminated. There is only one RG-45 link cable connected to a right-terminated preamplifier channel.

Example. The illustration below shows the preamplifier chassis back panels of three linked preamplifier channels. There are two right (R) channels and one left (L) channel. In this configuration, the top chassis belongs to a right-terminated preamplifier channel:

right terminated

one RG-45 link cable connected to the top chassis
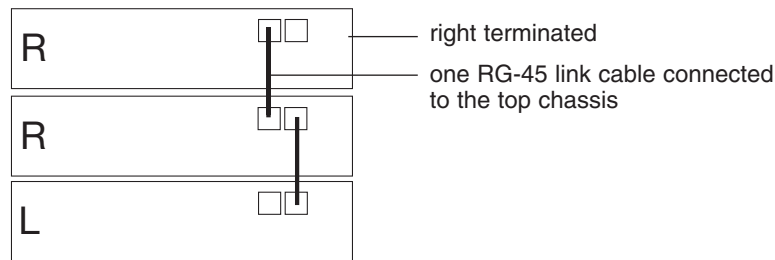
IR, RC5, and RS-232 Data Transfer from a Third Party Controller

In a group of 2 or more preamplifier channels connected via CAN Link, the right-terminated channel is the transmitter of IR, RC-5, and RS-232 data to the other linked preamplifier(s), or receiver(s). Always make IR, RC-5, and RS-232 connections from the third party controller to the right-terminated preamplifier channel.

Warranty

Each Evolution Series preamplifier has a limited warranty of five years for parts and labor on circuitry. 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.

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

The warranty described 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 the original retail purchase, as noted on the bill of sale or receipted invoice from an authorized Krell dealer or distributor. Previously owned equipment, when re-purchased from an authorized Krell dealer or distributor, has the balance of the original warranty, based on the original date of manufacture.

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.

53

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.

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, 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	203-795-2287
E-MAIL	service@krellonline.com
WEBSITE	http://www.krellonline.com

Evolution Two

PRODUCT	MODEL NUMBER	SERIAL NUMBER

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

1. Obtain a Return Authorization Number (R/A number) and shipping address from the Krell Service Department.

2. Insure and accept all liability for loss or damage to the product during ship ment 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 noti-fied before the product is returned.

To purchase additional packaging, please contact your authorized Krell dealer, distributor, or the Krell Service Department for assistance.

Specifications

Inputs
3 CAST via 4-pin bayonet connectors
3 balanced via XLR connectors
4 single-ended via RCA connectors

Tape input
1 balanced via XLR connector or
1 single-ended via RCA connector,
   user configurable

Main outputs
2 CAST via 4-pin bayonet connectors
1 balanced via XLR connector
1 single-ended via RCA connector

Tape outputs
1 balanced via XLR connector and
1 single-ended via RCA connector,
   buffered, connected to main input-
   selection bus
1 balanced via XLR connector and
1 single-ended via RCA connector,
   buffered, connected to a dedicated
   record-output bus

Control inputs
1 RS-232 input via a 9-pin D-subminiature
   connector
1 remote IR detector input via
   a 3-conductor 3.5 mm connector
1 12 VDC trigger input via 3.5 mm
   connector
1 preamplifier link via an RJ-45 connector

Control outputs
2 individually programmable 12 VDC
   trigger outputs via 3.5 mm connectors
1 preamplifier link via an RJ-45 connector

Power output
1 phono power output (±20 VDC) for KPE
   via a 9-pin D-subminiature connector

Input impedance
CAST: 35 Ohms
Balanced: 40 k Ohms
Single-ended: 20 k Ohms

Output impedance
CAST: >1 M Ohms
Balanced: 250 Ohms
Single-ended: 125 Ohms

Gain
12 dB (CAST or balanced output)
 6 dB (single-ended output)

Volume control
Balanced, current-mode,
16-bit, discrete R-2R ladder

Input overload
CAST: 11 mA RMS
Balanced: 9 V RMS
Single-ended: 18 V RMS

Output overload
CAST: 22 mA RMS
Balanced: 20 V RMS
Single-ended: 10 V RMS

Frequency response
20 Hz to 20 kHz ±0.01 dB
Balanced or single-ended inputs:
0.2 Hz to 1.3 MHz +0, -3 dB
CAST inputs:
0.2 Hz to 2 MHz +0, -3 dB

Total harmonic distortion plus noise
Balanced Output:
<0.003%, 20 Hz to 20 kHz, 4 V RMS
CAST output: 4 mA RMS

Signal-to-noise ratio
4 V RMS balanced or 4 mA RMS CAST output
Wideband, unweighted: >97 dB
"A" weighted: >104 dB

Power consumption
Standby: 50 W
Power on: 80 W
Power on, with KPE: 90 W

Dimensions
Preamplifier only:
17.3 in.W x 3.7 in. H x 18.5 in. D
43.8 cm W x 9.5 cm H x 47 cm D

Power supply only:
17.3 in. W x 3.7 in. H x 17.3 in. D
43.8 cm W x 9.5 cm H x 43.8 cm D

Preamplifier channel:
17.3 in. W x 7.3 in. H x 18.5 in. D
43.8 cm W x 18.5 cm H x 47 cm D

Stereo pair:
17.3 in. W x 14.6 in. H x 18.5 in. D
43.8 cm W x 37.1 cm H x 47 cm D

Weight
Shipped: 69 lbs., 31.2 kg
Preamplifier only: 21 lbs., 9.5 kg
Power supply only: 31 lbs., 14 kg

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com