KRELL
THE LEADER IN AUDIO ENGINEERING

302, 402
403
400, 600, 900

EVOLUTION POWER AMPLIFIERS
WITH EVOLUTION CAST™ TECHNOLOGY

Quick Setup Guide

OVERVIEW

Getting Started

The Evolution Series consists of six amplifier models. Stereo models include the Evolution 302 and 402 amplifiers. The Evolution 403 is a three-channel amplifier and the Evolution 400, 600, and 900 are monaural amplifiers. A pair of Evolution monaural amplifiers are required for stereo operation.

Evolution amplifiers can be configured to accommodate any sophisticated music or home theater system. In addition to manual operation, the amplifiers can be operated remotely by a 12 V trigger, or by using the remote control of other Krell components. Evolution CAST, voltage balanced, and single-ended inputs are on the back panel. A protection circuit shuts the amplifier down if short circuit or over-temperature conditions are detected.

This guide outlines the basic steps for unpacking, placing, connecting, and operating a Evolution Series Power Amplifier. Please contact your authorized dealer, distributor, or Krell if you have any questions not addressed in the owner's reference.

WARNINGS

The Evolution amplifier must be placed on a firm, level surface where it is not exposed to dripping or splashing.

The ventilation grids on the top of all Evolution amplifiers and the ventilation grids on the back of the Evolution 302 and 400 amplifiers must be unobstructed at all times during operation. Do not place flammable material on top of or beneath the component.

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

THERE ARE NO USER-SERVICEABLE PARTS INSIDE ANY KRELL PRODUCT.

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

Unpacking

Note

Save all packing materials. If you need to ship the Evolution amplifier in the future, repack the unit in its original packaging to prevent shipping damage.

Two people are needed to remove an Evolution amplifier from its shipping box safely and easily.

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

   1 Evolution amplifier
   1 20 amp AC power cord
   1 12 VDC (12 V trigger) cable
   1 packet containing this quick setup guide and the warranty registration card

2. Orient the shipping box so that one person stands at the front of the amplifier and one person stands at the back of the amplifier. Both people need to grab a pair of the cardboard handle cutouts (one pair located at the front of the amplifier and one pair located at the back of the amplifier) and simultaneously lift the amplifier straight up, out of the carton.

3. Place the amplifier in a safe location and remove the protective plastic wrapping.

Placement

Place the amplifier on a firm, level surface, away from excessive heat, humidity, or moisture. Each Evolution amplifier requires at least two inches (5 cm) of clearance on each side and at least eight inches (20 cm) of clearance above the component to provide adequate ventilation. If you place the amplifier in a closed cabinet, you may need to modify shelf spacing or use small fans to increase ventilation. When the front and back of a cabinet are open, the air space between the chassis and shelf must be unobstructed.

Place the amplifier(s) as close to the loudspeakers as possible. While Evolution CAST technology permits long cable lengths, keep loudspeaker cable lengths to a minimum.

Front Panel

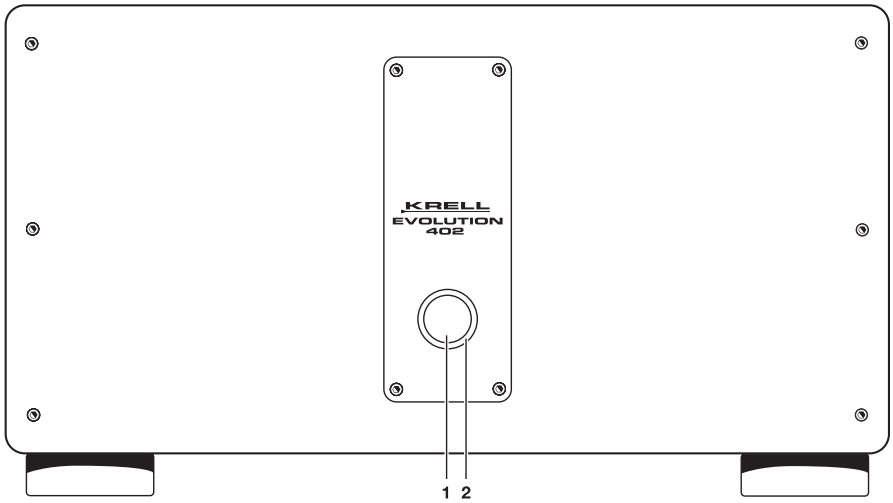

Figure 1 Evolution Stereo or Monaural Amplifier Front Panel

(Evolution 402 shown)

1 **Power Button**
Press the power button to place the amplifier in operational mode.
Operational mode. The power status indicator is illuminated in blue when the amplifier is in operational mode.

2 **Power Status Indicator Stand-by.** The power status indicator is illuminated in red when the amplifier is in the stand-by mode.

Back Panel

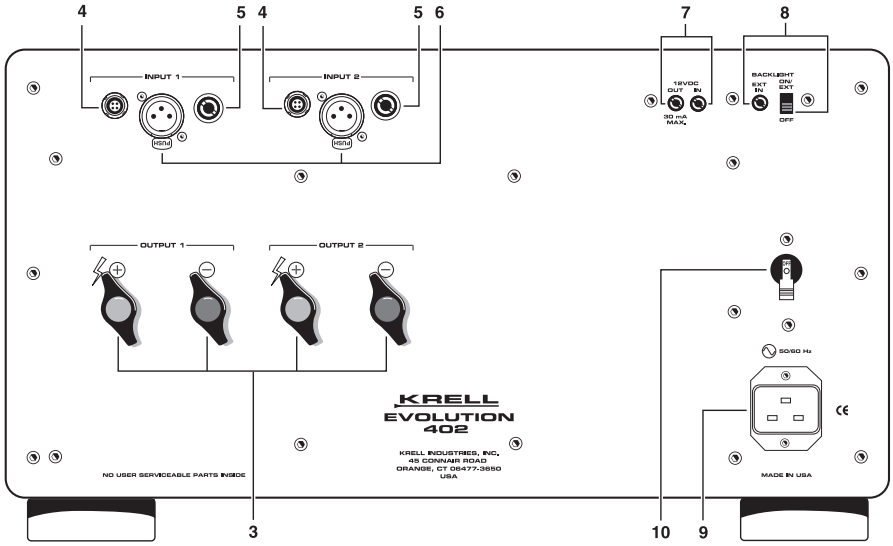

Figure 2 Evolution 402 Stereo Amplifier Back Panel

3 **Loudspeaker Binding Posts**
Stereo. One pair of loudspeaker binding posts per channel.
Three-channel. One pair of loudspeaker binding posts per channel.
Monaural. One pair of loudspeaker binding posts.

4 **Evolution CAST Inputs**
The Evolution CAST inputs allow the Evolution amplifier to be connected to other CAST-equipped components.

Stereo. One left Evolution CAST input and one right Evolution CAST input via 4-pin bayonet connectors.
Three-channel. One CAST input per channel via 4-pin bayonet connectors.
Monaural. One Evolution CAST input via a 4-pin bayonet connector.

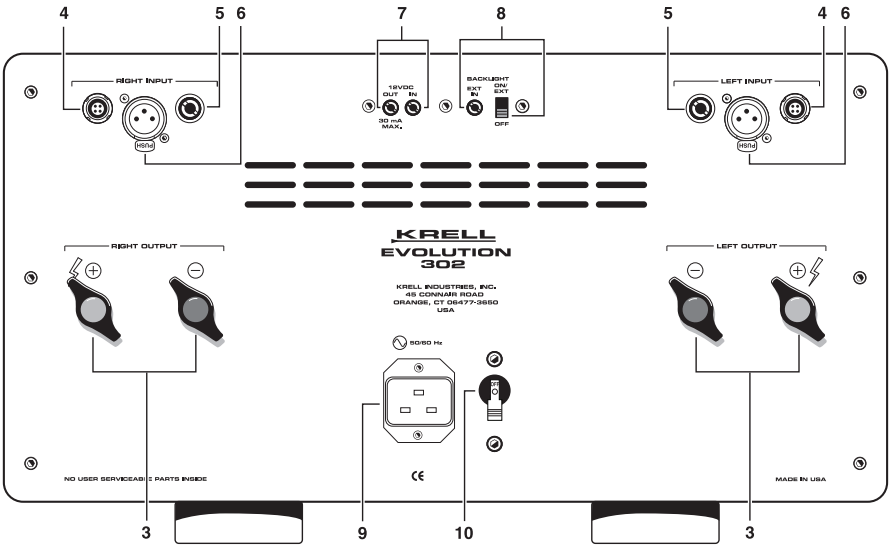

Figure 3 Evolution 302 Stereo Amplifier Back Panel

Back Panel, continued

5 Left and Right Single-ended Inputs
Stereo. One left single-ended input and one right single-ended via RCA connectors.
Three-channel. One single-ended input per channel via RCA connectors.
Monaural. One single-ended input via an RCA connector.

6 Left and Right Balanced Inputs
Stereo. One left balanced input and one right balanced input via XLR connectors.
Three-channel. One balanced input per channel via XLR connectors.
Monaural. One balanced input via an XLR connector.

7 12 VDC Out/In (12 V trigger)
The 12 V trigger enables you to turn the Evolution amplifier on or to stand-by from other components.
Out. The output sends 12 VDC (12 V trigger) power on/off signals to other Krell components and other devices that incorporate a 12 V trigger.

8 Backlight
Ext In. Connect a 12 V trigger to Ext In to turn off the power status indicator using a remote control. On/Ext (see below) must be active in order for Ext In to function.
On/Ext. Activates the power status indicator (2). The factory default is on/ext.
Off. Turns off the power status indicator.

9 IEC Power Connector
Used to connect the provided 20 amp AC power cord.

10 Back Panel Power Breaker Switch
Place this switch in the up position to put the amplifier in stand-by mode.

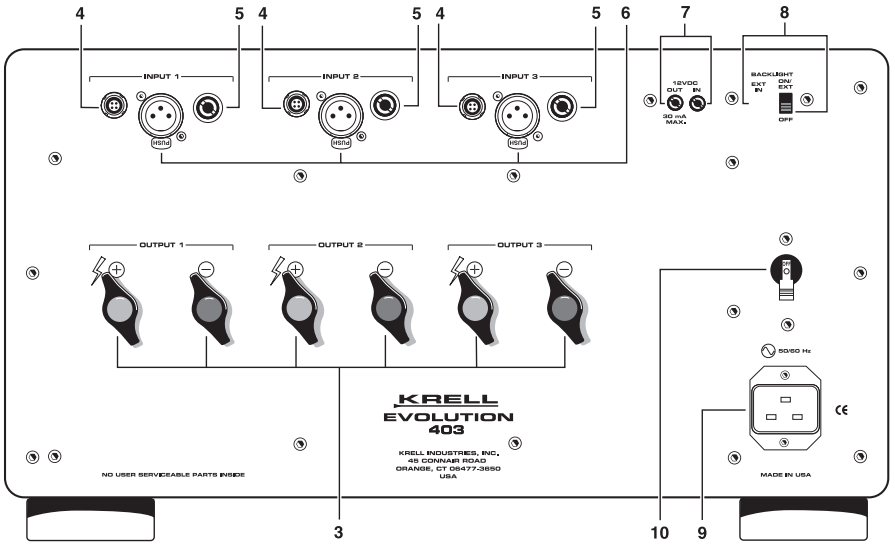

Figure 4 Evolution 403 Multi-channel Amplifier Back Panel

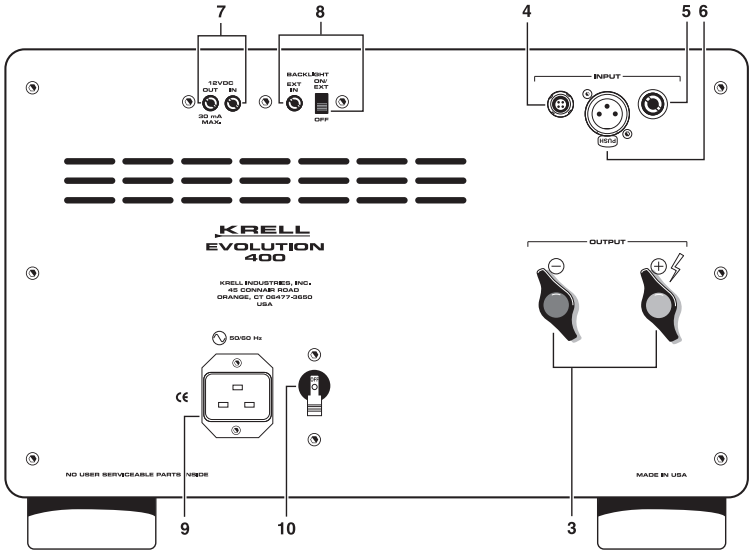

Figure 5 Evolution 400 Monaural Amplifier Back Panel

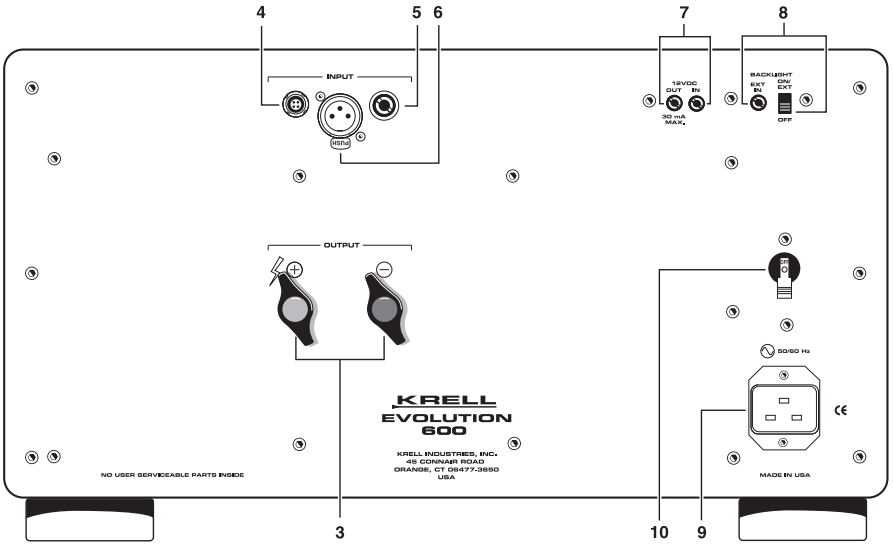

Figure 6 Evolution Monaural 600 or 900 Amplifier Back Panel

(Evolution 600 shown)

AC POWER GUIDELINES

Operate each amplifier from a dedicated AC power line rated at a minimum of 20 amps.

Note

Do not operate the Evolution amplifiers with any device designed to alter or stabilize AC power.

Connecting the Amplifier

IMPORTANT

Single-ended inputs on the Evolution amplifier are cap-coupled. Use these inputs when connecting to a vacuum tube preamplifier.

Pin assignments for the XLR connectors:

Pin 1 Shield (ground)
Pin 2 Non-inverting (0°) (hot)
Pin 3 Inverting (180°) (cold)

Follow these steps to connect the amplifier to your system:

1. Turn all power sources and components off before connecting inputs and outputs.
2. Neatly organize the wiring between the amplifier and all system components. Separate AC wires from audio cables to prevent hum or other unwanted noises from being introduced into the system.
3. Connect the Evolution CAST cable(s) from your CAST-enabled preamplifier or source component to the Evolution CAST 4-pin bayonet input(s) (4) on the amplifier back panel. For balanced operation, connect the interconnect cable(s) from your preamplifier to the balanced XLR input(s) (6) on the amplifier back panel. For single-ended operation, connect the interconnect cable(s) from your preamplifier to the single-ended input(s) (5) on the amplifier back panel.

   Notes

   Krell recommends using proprietary Evolution CAST connections for unparalleled sonic performance between the Evolution amplifiers and other CAST-equipped components.

   Evolution amplifiers also offer 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.

4. Connect the loudspeaker cables to the loudspeaker binding posts (3) on the amplifier back panel. Loudspeaker binding posts for both stereo and monaural amplifiers only accept spade lugs.
5. Plug the AC power cord into the IEC power connector (9) on the back panel.
6. Plug the other end of the AC power cord into the wall socket.

Operating the Amplifier

Notes

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

To avoid loudspeaker damage, be sure to switch all sources with the preamplifier level either muted or fully attenuated. Do not change inputs to the amplifier while the amplifier is on.

Krell amplifiers have large reserves of clean power and can safely drive loudspeakers to higher sound pressure levels than other amplifiers. However, use care when setting high playback levels and lower the volume level at any sign of loudspeaker distress.

Evolution amplifiers are easy to operate:

1. Move the back panel power breaker switch (10) to the up position to place the amplifier in the stand-by mode. The power status indicator (2) illuminates in red.
2. Press the silver power button (1) on the amplifier front panel. The power status indicator (2) illuminates in blue. The amplifier is in the operational mode.

   Note

   The initial power-up phase lasts approximately 30 seconds from the moment the back panel power breaker switch is placed in the up position. If the power button is pressed during this period, the power status indicator flashes blue for the remainder of the initial power-up phase. When the initial power-up phase is complete, the power indicator illuminates in blue and is no longer flashing.The amplifier is in the operational mode.

3. With the preamplifier muted or volume control completely lowered, select a source.
4. Increase the volume control to the desired listening level.
5. To turn the amplifier off, place it in the stand-by mode by pressing the power button on the front panel. The power status indicator turns red, and the amplifier is in the stand-by mode.

It is now safe to turn off the rest of the system.

Powering off

Leave the Evolution amplifiers in the stand-by mode between listening sessions. Turn the amplifier off using the power breaker switch (10), and disconnect the amplifier from AC power when the system is not being used for an extended time period.

MODEL SERIAL NUMBER

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