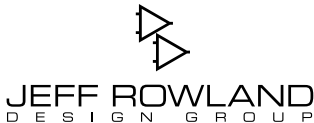


OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER



TABLE OF CONTENTS

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER



Introduction	2	Installation, Use & Care	8-9
Product Features	3	Signal & Power Connections	10-13
Package Contents	4	Specifications	14
Initial Inspection	5	Dimensions	15
Maintenance & Cleaning	6-7	Optional Adjustments	16
Protection Systems	7		

INTRODUCTION

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER

Welcome to the Jeff Rowland Design Group “family” and congratulations on your purchase of what is unquestionably one of the world’s finest amplifiers. With its combination of features such as precision electronic circuitry, exceptional efficiency, and accurately machined chassis components throughout, your Model 312 Stereo Amplifier will offer you many years of musically satisfying enjoyment.

Please take a few minutes to read the remainder of this Owner’s Manual before proceeding with the installation of the amplifier. A thorough understanding of

the operational features will allow you to gain the maximum performance and ease of use for which this amplifier was designed. Please note that your Model 312 Stereo Amplifier serial number begins with the letter “T”. This serial number is located on the rear panel of the chassis. Please include this number with any correspondence regarding your Model 312 Stereo Amplifier. It has been my joy to create an audio component of enduring value that reflects the highest ideals of musical and artistic expression. It is my hope that these qualities will enrich your experience and pride of ownership.

If you have any additional questions regarding the installation or operation of the Model 312 Stereo Amplifier, please contact your authorized Jeff Rowland Design Group dealer or check the Jeff Rowland Design Group web site at www.jeffrowland.com.

Enjoy the music!



Jeff Rowland
President,
Jeff Rowland Design Group

PRODUCT FEATURES

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER



- XLR input connectors for balanced system configuration.
- RCA input connectors for unbalanced system configurations.
- Dual Speaker Output Terminals on each channel for bi-wiring applications.
- User selectable switching between balanced and unbalanced connections.
- Transformer coupled inputs provide universal compatibility with other components and eliminate ground loop noise and EMI.
- High efficiency ICEpower® power conversion technology generates high output power with very little heat.
- Fully-balanced topology implemented in both input and output circuitry.
- Power Factor Correction (PFC) in power supply reduces AC line harmonic noise pollution and increases AC line power utilization to 99%.
- Proprietary switch-mode power supply technology ensures consistent performance under all operating conditions.
- 12V remote ON/OFF remote power switching via 1/8" jack on rear panel.
- Standby power mode reduces warm-up time.
- CE approved speaker output terminals require no tools for secure, low resistance connections.
- Fail-safe operation provided by user-resettable thermal circuit breaker located on rear panel.
- Quiet, transient-free operation during power ON/OFF and input configuration switching.
- Selectable overall gain of 26 or 32 dB.
- Ultra-low resonance, structurally rigid chassis, precision-machined from a solid block of aircraft grade 6061-T6 aluminum.
- 3-point self-leveling chassis support.

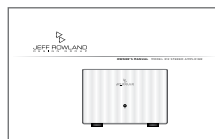
PACKAGE CONTENTS

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER

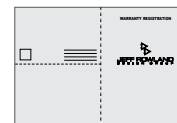
Ensure that all of the auxiliary components listed below are enclosed within the shipping carton and accessory box. Refer to the illustrations and verify that the proper components are included.



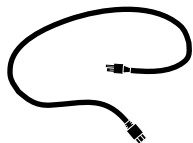
MODEL 312 STEREO AMPLIFIER



OWNER'S MANUAL



WARRANTY CARD



AC POWER CABLE



COMPLIANT ISOLATION PADS

INITIAL INSPECTION

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER



Inspect the shipping container for damage. If any portion of the shipping container, packing material, amplifier, or accessories are damaged or missing, notify your dealer and the shipper (if a claim is to be made) immediately.

Please Note: Many shippers require notification and inspection within 24 hours of delivery to determine the nature of damages incurred.

Your Model 312 Stereo Amplifier has undergone extensive performance evaluations, listening tests, quality control inspections, and a minimum 72 hour burn-in period prior to shipment and should therefore be in perfect operating condition upon delivery. If the amplifier does not operate correctly, please notify your dealer immediately.

We strongly suggest that you save all of the packing materials. If the amplifier is returned to your dealer or JRDG, the original packing materials must be used for shipment to avoid possible damage. Neither JRDG nor the shipper can be held responsible for damages incurred during transit if the original factory packing is not used. All factory returns require that JRDG issue a Return Authorization (RA) number prior to shipment.

UNPACKING

The Model 312 is a large and heavy amplifier. Due caution should be taken when unpacking and installing the amplifier to avoid injury or damage to the amplifier. The Model 312 should be unpacked by at least two people, however it is possible for one person to unpack the amplifier safely. There should be a portion of carpet or soft, padded cloth to stand the amplifier on when unpacking it from the shipping box.

MAINTENANCE & CLEANING

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER

All JRDG products are designed to provide a lifetime of enjoyment and listening pleasure. The Model 312 Stereo Amplifier is uniquely constructed from precision-machined 6061-T6 aluminum sub-assemblies, configured and dimensioned to maximize chassis strength and reduce vibration. Constrained mode damping materials have also been applied in several areas to further reduce chassis resonance. The chassis is sealed to prevent dust from entering the interior and should never need interior cleaning during the lifetime of the product.

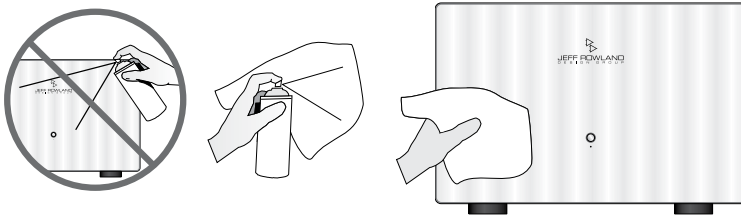
All internal circuitry is maintenance-free such that no adjustments of any kind are necessary over the lifetime of the product. If the amplifier is ever in need of service, updating, or upgrading, it should only be returned to an authorized repair facility or technician for servicing.

The front panel of the unit is precision-machined in a unique process that incorporates a diamond tipped cutting tool. This process was refined over many years to produce an attractive and unique appearance. Because the surface is not finished in the typical fashion of most audio and video equipment, there are a few rules that must be kept in mind when cleaning the equipment.

- Please allow the front panel, which is coated with an automotive-grade polyurethane finish, to cure for 6 months before attempting to clean it. This will prevent small scratches from marring the surface before the surface coating has had a chance to harden completely.
- The front panel of the unit should never be cleaned with anything other than a very soft cotton cloth and plain water or fine oil-based furniture polish. Because of the fine finish of the front panel, use of any other cleaning agent may permanently scratch the finish.
- The top cover, sides and bottom are protected by a durable black anodized finish and can be cleaned with a soft cotton cloth (such as an optical lens cleaning cloth or fine furniture polishing rag) dampened with plain water. Water should be applied directly to the cloth and not the chassis. A very mild plastic or glass cleaner that does not contain ammonia may also be used. If a mark has been left on the chassis, do not use any type of abrasive or chemical cleaner to remove the mark.

If you have any questions about the care or cleaning of your Model 312 Stereo Amplifier, please contact your dealer or the JRDG factory before attempting to clean the chassis. The use of a cleanser or abrasive to clean the chassis that has not been approved by the factory will almost certainly damage the finish and will not be covered under warranty.

NOTE: Cleaner/polish should be applied directly to the cloth and not the chassis.



PROTECTION SYSTEMS

The Model 312 Stereo Amplifier is equipped with internal fuses for protection against excessive AC current draw; however, since no protection circuitry or system can completely protect a product from every electrical hazard, certain precautions should be observed. In the event of severe voltage hazards such as lightning or when the amplifier will not be used for extended periods of time, the amplifier should be unplugged from the AC mains to avoid potential damage to the internal circuitry. All other audio/video system components should also be disconnected from AC mains power as hazardous voltages can easily travel throughout an interconnected system.

INSTALLATION, USE & CARE

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER

Locate the amplifier as close as possible to its final installation point.
Allow access to the rear panel for making connections.

The Model 312 Stereo Power Amplifier is extremely efficient and convection cooled, eliminating the need for fans or forced-air cooling. Multiple chassis can be stacked vertically, facilitating an upward flow of warm air currents throughout the vertical heatsink areas. This upward flow must not be blocked or recirculated around the chassis if proper cooling is to be maintained.

Typical installations allow the amplifier to be rigidly coupled to a support structure or floor via optional spiked coupling supports that are available separately from JRDG. In carpeted installations, these supports provide excellent anchoring from the amplifier chassis to the rigid floor or sub-floor below. If there is concern about damage to the structure or floor's finish, a coin can be placed beneath each spiked coupling support. In installations where the resonant properties of the supporting structure are poor or unknown, the amplifier chassis can be loosely coupled to the supporting structure via the supplied compliant isolation interface pads. This will help to attenuate the transfer of vibration or resonant energy from the support structure to the amplifier chassis.

RISK OF ELECTRICAL SHOCK!



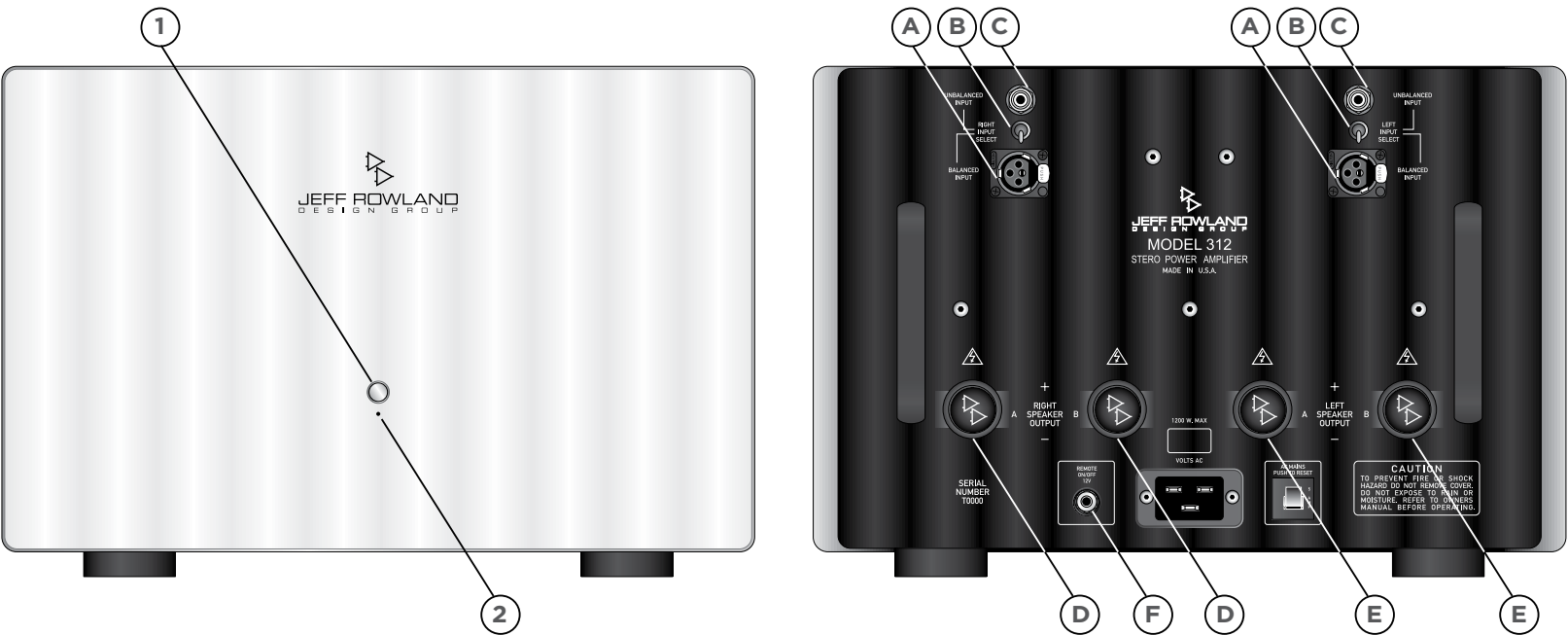
WARNING: Do not attempt to access the interior of the MODEL 312 STEREO AMPLIFIER by removing the top or bottom cover. Doing so will void your warranty and could expose you to dangerous, potentially lethal electrical voltages.

The JRDG Model 312 Stereo Amplifier has been designed to operate at the highest level of efficiency and performance in any normal operating situation; however, there are a few important use and care principles that must be kept in mind when operating the amplifier.

- Do not expose the amplifier to rain, moisture, or excessively damp conditions.
- The Model 312 Stereo Amplifier must not be modified in any way, other than according to official service bulletins from JRDG. Otherwise, the factory warranty will be immediately voided.
- The Model 312 Stereo Power Amplifier can be operated at a nominal 100, 120, 220, or 240 volts AC. The amplifier must be configured for the correct AC input voltage before operation or serious damage will result.
- Be sure the amplifier is unplugged from the AC mains wall plug (front panel indicator light OFF) before connecting or disconnecting any loudspeaker or interconnect cables.
- When operating the Model 312, a properly grounded AC receptacle should be used. A potential shock hazard may result if the supplied 3-wire, grounded AC cable ground terminal is defeated or lifted or the unit is connected to a 2-wire ungrounded AC outlet.
- The output terminals or loudspeaker cables should never be shorted to each other or to any chassis surface. Shorting of the outputs may result in damage to the output section of the amplifier.
- The Model 312 is designed to perform optimally with no adjustments or maintenance for the lifetime of the product. Do not attempt to open the bottom cover of the amplifier and refer all service issues to qualified personnel. The voltages inside the Model 312 can be hazardous.

SIGNAL & POWER CONNECTIONS

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER



Before attempting any system interconnection, please familiarize yourself with the front panel control of the Model 312 Stereo Power Amplifier.

(1) FRONT PANEL STANDBY/POWER BUTTON: Press this button to operate the amplifier. Press again to place the amplifier in Standby mode.

(2) FRONT PANEL STANDBY/POWER INDICATOR: This small, blue light will illuminate when the amplifier is operational. When the light is not illuminated, all amplifier inputs are muted and internal circuitry reverts to power-saving (Standby) mode.

NOTE: All ON/OFF power switching should be initiated ONLY with this button. The amplifier should not be disconnected from AC power without first placing the amplifier in Standby mode.

When connecting or disconnecting speaker or interconnect cables, the amplifier should be placed in Standby mode (blue POWER INDICATOR LED on the front panel OFF) or the AC mains power plug should be removed from the amplifier.

(A) BALANCED INPUTS: If you are using balanced XLR interconnects from your preamplifier or source component, position the INPUT SELECT switches (B) to BALANCED INPUT.

(C) UNBALANCED INPUTS: If you are using unbalanced RCA interconnects, position the INPUT SELECT switches to UNBALANCED INPUT.

Connect the corresponding interconnect cables to either the BALANCED INPUTS (A) or UNBALANCED INPUTS (C) on each channel. Both RCA and XLR inputs cannot be used for the same channel simultaneously. For example, an unbalanced output connection from a surround processor and a balanced output connection from a CD player cannot both be connected to the same channel at the same time.

A slight mechanical click may be heard when the balanced XLR interconnect cables are correctly installed and locked. The unlocking tab (located on the input connector and labeled “PUSH”) must be pressed to disconnect the XLR interconnect cable from the amplifier.

SIGNAL & POWER CONNECTIONS

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER

(D & E) LOUDSPEAKER OUTPUT: Unscrew the knob that secures the speaker output connectors on both the LEFT SPEAKER OUTPUT (E) and the RIGHT SPEAKER OUTPUT (D) and pull the securing block out far enough to allow access to the binding posts. Install the positive (usually red) loudspeaker cable spade terminal to the positive (+) binding post and the negative spade terminal to the negative (-) binding post on both the LEFT and RIGHT CHANNEL. Secure the loudspeaker connections by tightening the knob securely with your fingers.

The Model 312 will only accept spade terminations for loudspeaker cables. Banana plugs or bare wire connections can be used but require an optional clamp available from your JRDG Dealer.

The Model 312 has two pairs of binding posts per channel to facilitate bi-wiring. Both sets of binding posts are active and connected in parallel with no difference in signal quality. If your loudspeakers are capable of bi-wiring and you wish to do so, remove the jumpers connecting the two sets of binding posts together on your loudspeakers. Connect one pair of binding posts from each channel to the high frequency terminals of your loudspeakers and one pair from each channel to the low frequency terminals of your loudspeakers.



WARNING: Both positive and negative outputs are electrically active with respect to chassis and/or system ground potential. Therefore, this amplifier cannot be used in certain loudspeaker switching configurations, such as those used in retail demonstrations. Failure to avoid these precautions may short the outputs to ground and can result in damage to the amplifier and will void the warranty. Certain subwoofer speakers which derive signals from amplifier outputs will require additional circuitry to properly isolate the amplifier output. Please contact JRDG before connecting these types of subwoofers.

(F) 12V REMOTE TRIGGER: A 1/8" (3.5 mm) mini-plug connector is provided on the rear panel of the Model 312 for remotely switching the amplifier between Operational and Standby modes. When connected to another component with the proper circuitry, the amplifier standby function can be turned ON and OFF remotely in a custom installation, theater, or automated system setup. (See FIGURE 1)

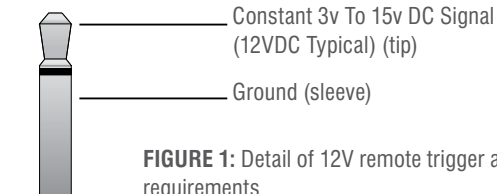


FIGURE 1: Detail of 12V remote trigger and mini-plug connector requirements

NOTE: Please be aware that the remote feature simply places the amplifier in standby mode and does not disconnect the unit from power or AC mains.

NOTE: The amplifier must be placed in Standby mode with the front panel button before the 12V remote trigger function can be activated.

NOTE: Due to the exceptionally low power consumption rating of the Model 312, it is recommended that the unit not be disconnected from AC mains unless the amplifier is to be moved or reinstalled in another location. It is recommended that the amplifier be placed in Standby mode rather than disconnected from the AC mains power when the amplifier is not in use.

WARNING: If the unit is plugged into a voltage different from the range listed on the back panel, serious damage to internal circuitry will result and will void the warranty.

! STEP 1: Verify that the VOLTS AC input identified on the rear panel near the AC input socket is the same as the AC mains voltage in your area. If the voltage does not match, **DO NOT CONNECT THE AMPLIFIER TO AC POWER** and contact your dealer immediately.

STEP 2: Verify that the AC MAINS circuit breaker is closed (no white area visible on breaker).

STEP 3: Install the AC Power Cable between the amplifier and your AC mains outlet.

STEP 4: Connect the 12V Remote ON/OFF Mini-plug Connector if required.

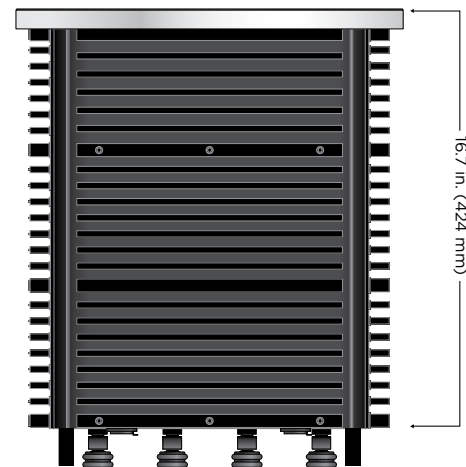
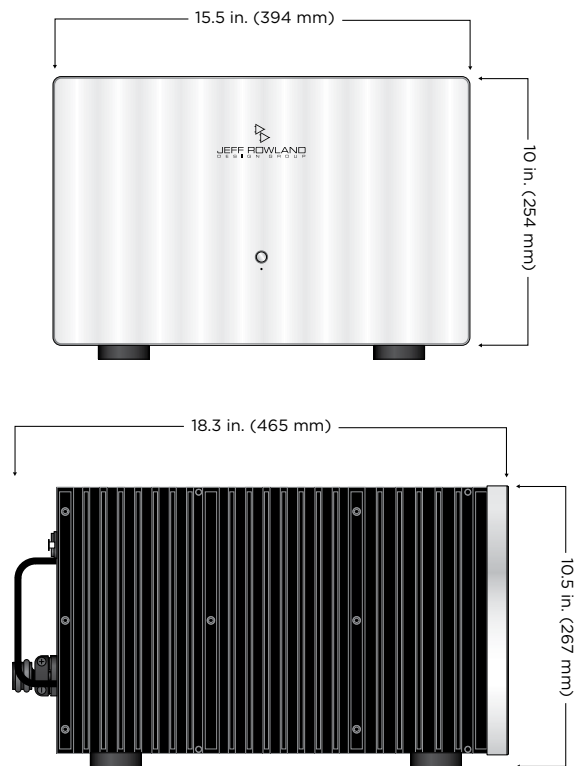
SPECIFICATIONS

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER

Output Power, Continuous RMS watts, both channels driven	500 watts @ 8 ohms, 1000 watts @ 4 ohms per channel
Frequency Response	5 Hz – 45 kHz, -3 dB @ 8 ohms
Peak Output Current	40 amps
Dynamic Range	120 dBa
Load Impedance Range	2 ohms – 16 ohms
Input Impedance	40k ohms
THD + Noise, 0.1 watts – 500 watts, 4 ohms	< 0.1%, Typically .01% @ 1 kHz
CCIF Intermodulation Distortion, 19/20 kHz	< .002%
Damping Factor @ 1 kHz	> 1000
Overall Gain (Balanced or Unbalanced)	Selectable Internal Jumper, 26 or 32 dB
Common Mode Rejection Ratio	> 90 dB, 20 Hz – 20 kHz
Absolute Phase	Non-inverting, Pin 2 Positive
Inputs	2 Balanced (XLR), 2 Unbalanced (RCA) (user selectable)
Outputs	2 pair Parallel Binding Posts per channel
Power Consumption	Idle – 35 watts, Maximum – 2000 watts
Amplifier Weight	70 lbs. / 32 kg
Amplifier Shipping Weight	83 lbs. / 38 kg
Overall Amplifier Dimensions (H) x (W) x (D)	10.5" x 15.5" x 18.3" 267mm x 394mm x 465mm

DIMENSIONS

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER



OPTIONAL ADJUSTMENTS

OWNER'S MANUAL MODEL 312 STEREO AMPLIFIER

RISK OF ELECTRICAL SHOCK!

 **WARNING:** The instructions in this section are meant for qualified JRDG service personnel only; however, if you as an end user choose to attempt these adjustments yourself, JRDG cannot be held liable for any damage that may occur to your Model 312 Stereo Amplifier because of your actions. Further, accessing the interior of your Model 312 by removing the bottom cover can expose you to dangerous, potentially lethal electrical voltages. Thus, JRDG cannot be held liable for any injury you may sustain should you undertake any of these adjustments yourself.

OVERALL GAIN ADJUSTMENT

By removing the top cover the overall gain of the Model 312 Stereo Power Amplifier can be adjusted to either 26 dB or 32 dB via jumpers located on the rear panel circuit board inside the amplifier. The default setting from the factory is 26 dB, which is adequate for the majority of applications. There is no sonic difference between the two settings.

 Because of the potentially dangerous voltages inside of the chassis, it is recommended that you contact your dealer for information regarding the overall gain setting adjustments.

NOTE: Do not attempt to remove the top cover to adjust the overall gain without explicit instructions from your dealer or JRDG.



JEFF ROWLAND
DESIGN GROUP