

JEFF ROWLAND
DESIGN GROUP

OWNER'S MANUAL MODEL 501 MONO AMPLIFIER



INTRODUCTION

OWNER'S MANUAL MODEL 501 MONO 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 501 Mono 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 501 Mono Amplifier serial number begins with the letters “MD”. This serial number is located on the rear panel of the chassis. Please include this number with any correspondence regarding your Model 501 Mono 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 501 Mono 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 501 MONO AMPLIFIER



- XLR input connector for balanced system configurations. Same gain and input impedance characteristics are ensured whether XLR or RCA adapted inputs are used.
- Transformer coupled input provides universal compatibility with other components and eliminates ground loop noise and EMI.
- High efficiency ICEpower® power conversion technology generates high output power with very little heat, promotes long component life and permits a relatively small physical size.
- Multistage AC line filtering in power supply reduces AC line noise pollution throughout amplifier signal circuitry.
- CE approved speaker output terminals require no tools for secure, low resistance connections.
- Fully-balanced topology implemented in both input and output circuitry.
- Proprietary switch-mode power supply technology ensures consistent performance under all operating and AC line conditions.
- Low power consumption permits constant power-up operation to eliminate warm-up time.
- 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.
- Remote ON/OFF input jack allows amplifier standby operation from a remote source for inclusion into home theater (A/V) systems.

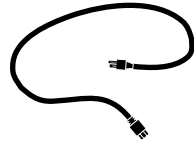
PACKAGE CONTENTS

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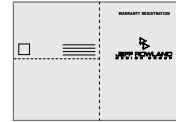
Ensure that all of the auxiliary components listed below are enclosed within the shipping carton and accessory box. Refer to the illustrations and verify that the proper components are included.



MODEL 501 MONO AMPLIFIER



AC POWER CABLE



WARRANTY CARD



OWNER'S MANUAL

INITIAL INSPECTION

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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.

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

Your Model 501 Mono 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.

MAINTENANCE & CLEANING

OWNER'S MANUAL MODEL 501 MONO AMPLIFIER

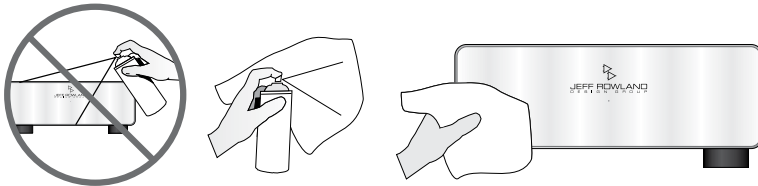
All JRDG products are designed to provide a lifetime of enjoyment and listening pleasure. The Model 501 Mono Amplifier is uniquely constructed from a solid block of precision-machined aluminum. It's chassis is sealed to prevent dust from entering the interior of the chassis and thus should never need 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 501 Mono 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 501 Mono 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 501 MONO AMPLIFIER

Locate the amplifier as close as possible to its final installation point. Allow access to the rear panel for making connections. Due to its design, the Model 501 Mono Amplifier is energy efficient, eliminating the need for heatsinks or forced-air cooling. As a result, the Model 501 Mono Amplifier can be housed in a cabinet or custom enclosure with no fear of overheating.

The efficient and compact design of the Model 501 allows it to be installed in any number of music, film and surround sound systems. For connection instructions for use in a typical two-channel stereo system, please see page 11 of this manual.

The main chassis of the Model 501 is precision-machined out of a solid block of aluminum to create as rigid an enclosure as possible, impervious to lateral and torsional forces. The amplifier is particularly non-resonant; however, various damping and resonance control accessories may be used to yield greater audio performance in some audio systems.

RISK OF ELECTRICAL SHOCK!



WARNING: Do not attempt to access the interior of the MODEL 501 MONO AMPLIFIER by removing the bottom cover. Doing so will void your warranty and could expose you to dangerous, potentially lethal electrical voltages.

The JRDG Model 501 Mono 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.
- Make sure that the voltage on the backside of the panel matches the mains voltage in your area.
- The Model 501 Mono 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.
- Be sure the amplifier power switch is turned off or AC power cable is removed before connecting or disconnecting any loudspeaker or interconnect cables.
- When operating the Model 501, 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 Model 501 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 501 can be hazardous.
- Because of the energy efficiency of the Model 501, there is no need to turn the unit off when not in use except in the event of severe voltage hazards as mentioned previously.

SIGNAL & POWER CONNECTIONS

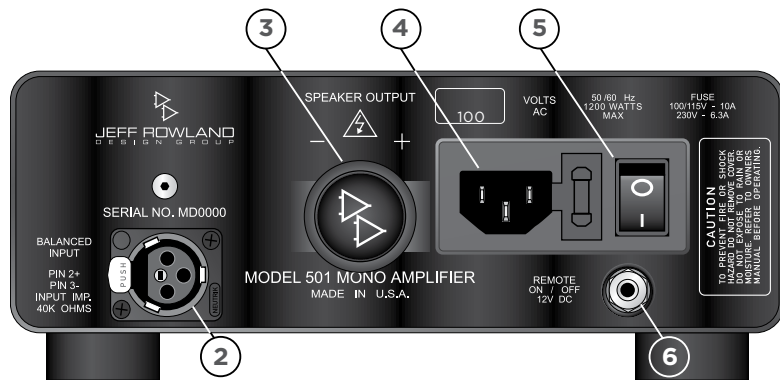
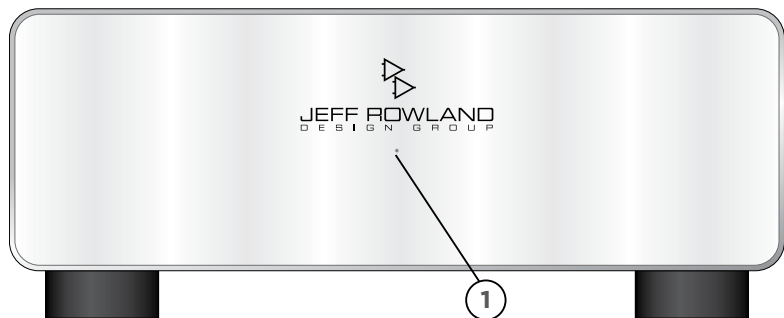
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The Model 501 Mono Amplifier offers unprecedented compatibility with associated audio and A/V components. When connecting or disconnecting speaker or interconnect cables, the amplifier Master AC Power Switch (5) should be turned OFF.

(1) POWER INDICATOR LED: When the amplifier is connected to AC mains and the Master AC Power Switch (5) is turned ON, the small front panel power indicator will illuminate blue. When the Master AC Power Switch is OFF, the indicator will be off.

(2) BALANCED SIGNAL INPUT: If you are using balanced XLR interconnects from your source components, they should be connected to the balanced input connector. The connector unlocking tab must be pressed to disconnect the XLR interconnect cable from the amplifier.

NOTE: Pin 2 of the XLR connector is signal positive with respect to speaker output positive. Also, JRDG recommends balanced cables as the preferred method of interconnection. XLR to RCA adaptors are available from JRDG if RCA, single-ended interconnects are used. Amplifier gain is not affected by choice of input type.



SIGNAL & POWER CONNECTIONS

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(3) LOUDSPEAKER OUTPUT: Unscrew the knob that secures the speaker output connector 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. Secure the loudspeaker connections by tightening the knob securely with your fingers. The Model 501 will only accept spade terminated loudspeaker cables. Banana plugs or bare wire connections can be used but require an optional clamp available from your JRDG Dealer.

(4) AC INPUT CONNECTOR: 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. Install the AC Power Cable between the AC input connector and your AC mains outlet.

(5) MASTER AC POWER SWITCH: This switch controls the operating status of the amplifier. Pressing the "I" symbol on the switch will turn the amplifier ON. Pressing the "O" symbol on the switch will turn the amplifier OFF.



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.

SIGNAL & POWER CONNECTIONS

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(6) 12V REMOTE TRIGGER: A 1/8" (3.5 mm) mini-plug connector is provided on the rear panel 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)

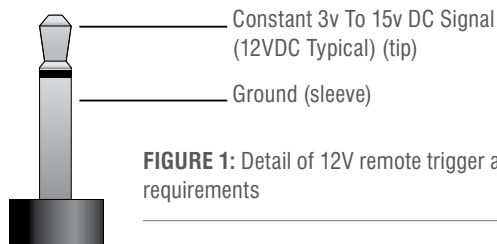


FIGURE 1: Detail of 12V remote trigger and mini-plug connector requirements

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: If a 12V DC switching source is not available, then a short circuit between the "tip" and "sleeve" of the 1/8" mini-plug connector will place the amplifier into the STANDBY MODE. Removing the short circuit will return the amplifier to the OPERATIONAL MODE.

POWER CONDITIONING: AC power conditioners and AC mains power cables are a common accessory in many high performance audio and video systems and can be used to improve the quality of reproduction in certain instances. We have tried to provide the best possible basic power cord with the Model 501, however many users wish to experiment with more expensive and esoteric accessories. As we have never found the perfect or universal power conditioner or cable, it is not possible to recommend any particular type or brand for use with the Model 501 Mono Amplifier. Please use your dealer's help and knowledge as a resource to select the proper accessories for your individual system needs.

NOTE: Due to the exceptionally low power consumption rating of the Model 501, it is recommended that the unit not be disconnected from AC mains unless it is to be moved or reinstalled in another location. It is recommended that the amplifier simply be left on when the unit is not in use.



WARNING: Serious damage to internal circuitry can occur if improperly wired or unapproved AC power cords are used. Your dealer can be a helpful resource for selecting the proper accessories for your needs. Also, if the unit is plugged into a voltage different from the range listed on the back panel, it will result in serious damage and will void the warranty.

SPECIFICATIONS

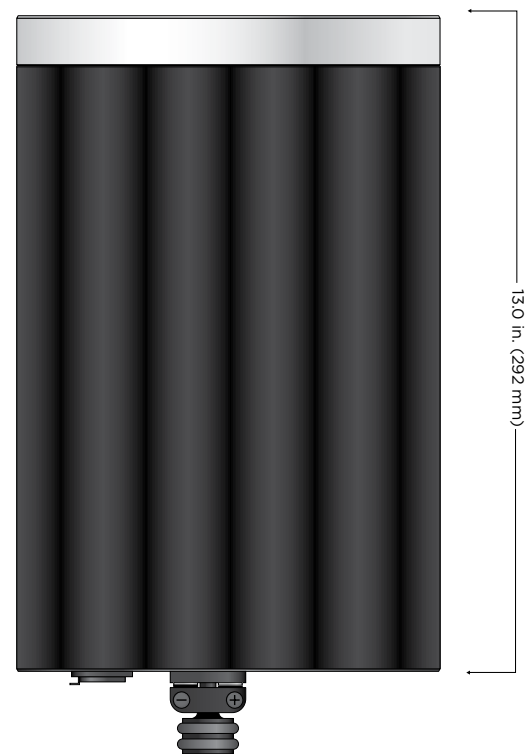
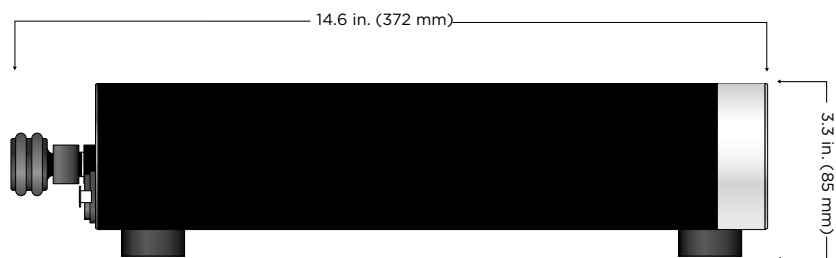
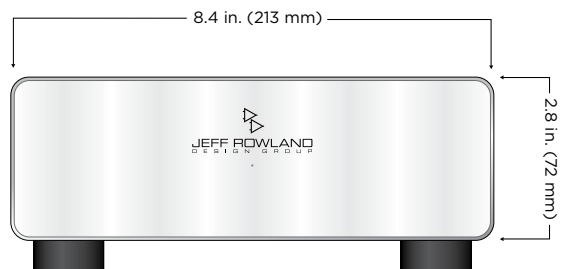
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Output Power, Continuous RMS	500 watts @ 8 ohms, 1000 watts @ 4 ohms
Frequency Response	5 Hz – 45 kHz, 3 dB @ 8 ohms
Peak Output Current	> 45 amps
Dynamic Range	120 dBa
Load Impedance Range	2 ohms – 16 ohms
Input Impedance	40k ohms
THD + Noise, 0.1 watts – 500 watts, 4 ohm	< .1%, Typically .01% @ 1 kHz
CCIF Intermodulation Distortion, 19/20 kHz	< .002%
Damping Factor @ 1 kHz	1000
Overall Gain	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	1 Balanced XLR (Unbalanced operation requires an optional XLR to RCA adapter)
Outputs	1 CE-Approved Speaker Wire Clamp
Power Consumption	Idle – 15 watts, Maximum – 1300 watts
Amplifier Weight	17 lbs. / 7.8 kg
Overall Amplifier Dimensions (H) x (W) x (D)	3.3" x 8.4" x 14.6" 85 mm x 213 mm x 372 mm

DIMENSIONS

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OPTIONAL ADJUSTMENTS

OWNER'S MANUAL MODEL 501 MONO AMPLIFIER

ADJUSTING AMPLIFIER OVERALL GAIN

STEP 1: Unplug the Model 501 Mono Amplifier power cable from the wall AC outlet.

STEP 2: Place the unit upside-down on a soft, clean surface. Using a #2 Phillips screwdriver, remove the ten screws that secure the bottom cover of the unit.

STEP 3: Locate jumper J103 on the rear panel board of the unit. Using needle-nose pliers, move the jumper from between pins 2 and 3 to pins 1 and 2. (See FIGURES 1 and 2). Overall amplifier gain increases to 32 dB.

STEP 4: Reinstall the bottom cover and replace the ten screws to secure it to the chassis.



FIGURE 1: Location of Jumper J103 on the inside back panel of the Model 501

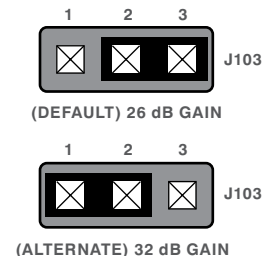



FIGURE 2: Close-up of J103 settings for the Model 501

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 501 Mono Amplifier because of your actions. Further, accessing the interior of your Model 501 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.



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