

## **MODEL 535 STEREO AMPLIFIER**

Operational Manual



## SAFETY INSTRUCTIONS

The 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:

- Read these instructions before operating the amplifier.
- Do not expose the amplifier to rain, moisture, or excessively damp conditions.
- Due to auto-ranging circuitry within the power supply, the audio performance will not be affected by any voltage fluctuations within the operating voltage range. The Model 535 can be operated at any mains voltage over the range of 85 to 265 VAC without any adjustments necessary.
- The Model 535 must not be modified in any way, other than according to official service bulletins from JRDG (Jeff Rowland Design Group). Otherwise, the factory warranty will be voided.
- When operating the Model 535, 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.

## PROTECTIVE SYSTEMS

The Model 535 is equipped with internal and external 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.



The crossed-out wheeled bin is the European Union symbol for indicating separate collection for electrical and electronic equipment. This product contains electrical and electronic equipment which should be reused, recycled or recovered and should not be disposed of with unsorted regular waste. Please return the unit or contact the authorized dealer from whom you purchased this product for more information.



This product complies with European Low Voltage (2006/95/EC) and Electromagnetic Compatibility (89/336/EEC) Directives when used and installed according to this instruction manual. For continued compliance servicing must be referred to qualified service personnel.

## **LIMITED WARRANTY**

Jeff Rowland Design Group, Inc. warrants the materials, workmanship, and proper functioning of this product for a period of five years from the date of purchase as long as the product was operated in accordance with its operating manual, the products was not altered or improperly serviced or prepared, or if the product failed to function from the beginning. In the event of such a failure, the product will be repaired or replaced by Jeff Rowland Design Group, Inc. through one of its dealers. This warranty is extended to the original purchaser only and is non-transferable to any secondary or other purchaser.

In order to have this product repaired or replaced, the original purchaser must first obtain the prior authorization of Jeff Rowland Design Group, Inc. or one of its dealers. Purchaser must then return the product, PACKAGED IN ITS ORIGINAL CARTON, FREIGHT PREPAID to: Jeff Rowland Design Group, Inc., 2911 North Prospect Street, Colorado Springs, Colorado, 80907, or to one of its dealers.

Jeff Rowland Design Group, Inc. reserves the right to inspect any product which is subject to any warranty claim prior to repairing or replacing it. Final determination of warranty coverage lies solely with Jeff Rowland Design Group, Inc. Said determination shall be made as soon as possible following receipt of the product. Jeff Rowland Design Group, Inc. may, at its option, require from the purchaser, valid proof of purchase (dated copy or photocopy of dealer's original invoice). Out-of-warranty claims will be billed for labor, materials, return freight, and insurance as required. Any product for which a warranty claim is accepted will be returned to the purchaser and costs of shipping and insurance will be factory prepaid within the boundaries of the USA. Units to be shipped outside of the USA will be shipped freight collect only. This warranty gives the holder specific legal rights. The purchaser also has implied warranty rights, and may also have other rights which may vary from state to state.

Jeff Rowland Design Group, Inc. strives to manufacture the very finest possible equipment and therefore reserves the right to make changes in design and improvements upon its previously manufactured models.

**THE ABOVE WARRANTY IS THE SOLE WARRANTY GIVEN BY JEFF ROWLAND DESIGN GROUP, INC. AND IS IN LIEU OF ALL OTHER WARRANTIES; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE SHALL BE STRICTLY LIMITED IN DURATION TO FIVE YEARS FROM THE ORIGINAL DATE OF PURCHASE AND UPON THE EXPIRATION OF THIS FIVE YEAR WARRANTY PERIOD, JEFF ROWLAND DESIGN GROUP, INC. SHALL HAVE NO FURTHER OBLIGATION OF ANY KIND WHETHER EXPRESSED OR IMPLIED.**

Jeff Rowland Design Group, Inc. does not authorize any third party, including any dealer or representative, to assume any liabilities on its behalf or to make any warranties on its behalf unless authorized to do so.

Warranty registration cards must be completed and mailed to Jeff Rowland Design Group, Inc. within thirty (30) days of the date of purchase. If this product is used in a commercial or industrial application, then special warranty exclusions may apply. Contact your dealer or Jeff Rowland Design Group, Inc. for information regarding our commercial warranty policies.

## **MANUAL INTENT**

This manual is intended to make installation and use of this product as easy as possible. Information in this document has been carefully checked for accuracy at the time of printing; however, Jeff Rowland Design Group, Inc.'s goal is one of continuous improvement, therefore design and specifications are subject to change without prior notice. If you notice any errors please feel free to email us at: [support@jeffrowlandgroup.com](mailto:support@jeffrowlandgroup.com).

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## **NOTE FROM JEFF ROWLAND DESIGN GROUP**

**W**elcome 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 535 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 535 serial number begins with the letters “SM”. Please include this number with any correspondence regarding your Model 535. It has been my intent to create an audio component of enduring value that reflects the highest ideals of musical and artistic expression. I hope these qualities will enhance your musical experience.

If you have any additional questions regarding the installation or operation of the MODEL Model 535, please contact your authorized Jeff Rowland Design Group dealer or check the Jeff Rowland Design Group web site at <http://jeffrowlandgroup.com>.

Enjoy the music!

A handwritten signature in black ink that reads "Jeff Rowland". The signature is fluid and cursive, with the first letter 'J' being particularly large and stylized.

**Jeff Rowland**  
President, Jeff Rowland Design Group

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## DESIGN FEATURES

**MACHINED ALUMINUM CHASSIS:** Precision-machined chassis, milled from a solid block of aircraft grade aluminum, provides exceptional thermal heat transfer/dissipation, RFI/EMI shielding, resonance control, and minimizes micro-phonically induced micro-vibrations from any source.

**CERAMIC CIRCUIT BOARDS:** Critical audio circuits are implemented on mil-spec, multi-layer, low dielectric constant, Rogers™ ultra-rigid ceramic circuit board substrate for extremely low energy retention and absorption. Large low impedance ground planes areas for extended internal star-grounding.

**BALANCED TOPOLOGY:** Inherent cancellation effects of balanced topology implemented throughout power and input/output circuits ensure reduced distortion and noise under dynamic signal conditions.

**HIGH-PRECISION SURFACE MOUNT COMPONENTS:** Extensive use of Lead (Pb)-free, low temperature coefficient, active and passive surface-mount components results in significantly smaller loop areas, reduced circuit capacitance and inductance, and introduces less noise than conventional leaded components.

**THIN-FILM RESISTORS:** All resistors are low noise, 0.1% thin-film type for extremely low thermal noise which complement the low-noise characteristics of the active circuitry.

**TEFLON INSULATED WIRES:** All signal carrying input and output wires are teflon insulated, for low dielectric energy storage, ensuring that each audio note naturally decays into the deeper silence of the music.

**TRANSFORMER-COUPPLING AND ISOLATION:** Transformer coupled input circuitry provides universal component compatibility and virtually eliminates ground loop noise and RFI/EMI. Transformer coupling ensures identical amplifier overall gain when using unbalanced input adapters.

**ACTIVE POWER FACTOR CORRECTION:** Power Factor Correction (PFC) integrated into the power supply reduces AC line harmonic noise pollution and increases AC line power utilization to 97%.

**HIGH-EFFICIENCY SWITCH-MODE POWER SUPPLY:** Highly efficient, compact, light weight, switch-mode power supply provides optimum voltage regulation for all circuits and operating conditions, and allows for quiet operation over a wide range of AC mains power sources.

**BINDING POSTS:** CE approved speaker output terminals require no tools for secure, low resistance connections.

**FRONT PANEL STANDBY BUTTON:** Illuminated front panel push-button switches the amplifier into standby mode (<0.3 watt consumption). An internal switch allows the user to dim the front panel indicator light "ring" or shut off the light altogether when the amplifier is powered on.

**REMOTE ON/OFF:** A 1/8" (3.5mm) mini plug connector on rear panel permits amplifier power on/standby switching in remote and home theater applications.

## **MAINTENANCE AND CARE**

All Jeff Rowland Design Group products are designed to provide a lifetime of enjoyment and listening pleasure.

The 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.

**NOTE: 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.**

**WARNING: 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 and bottom 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 or microfiber cleaning cloth) 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 535, please contact your dealer 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.

## **UNPACKING AND PLACEMENT**

### **INITIAL INSPECTION**

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 535 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 Jeff Rowland Design Group, the original packing materials must be used for shipment to avoid possible damage. Neither Jeff Rowland Design Group 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 Jeff Rowland Design Group issue a Return Authorization (RA) number prior to shipment.

### **UNPACKING**

Carefully unpack amplifier chassis and power supply from original packing box. Remove all accessory items from the accessory box. Accessories include:

- 1 Detachable IEC AC Power Cord
- Operational Manual
- Warranty Card

**IMPORTANT: RETAIN ALL PACKING MATERIALS FOR FUTURE TRANSPORT. SHIPPING PRODUCT IN INADEQUATE PACKING MATERIALS MAY VIOLATE THE JEFF ROWLAND DESIGN GROUP MANUFACTURER'S WARRANTY.**

## FRONT PANEL OPERATIONS



**Figure 1:** Front Panel

1. **FRONT PANEL POWER BUTTON.** Press this button to operate the amplifier. Press again to place the amplifier in Standby Mode.
2. **POWER INDICATOR RING.** This ring will illuminate white when the amplifier is operational. Ring will not be illuminated when the amplifier is in Standby Mode.

## REAR PANEL CONNECTIONS

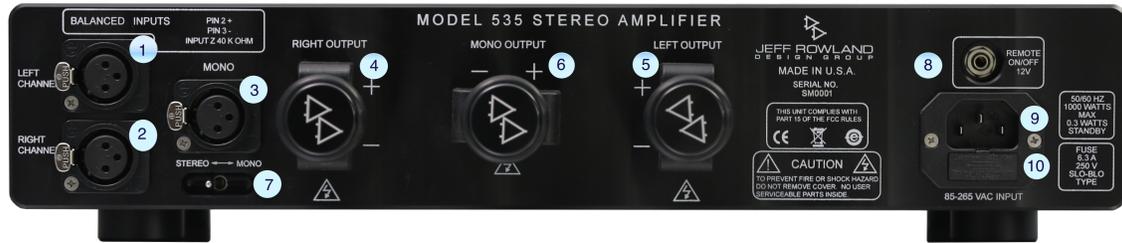


Figure 2: Rear Panel Connections

1. **INPUT:** Left Channel Balanced XLR: Use XLR to RCA input adapter (not included) for use with RCA interconnects.
2. **INPUT:** Right Channel Balanced XLR; Use XLR to RCA input adapter (not included) for use with RCA interconnects.
3. **INPUT:** Bridged Mono XLR; Use XLR to RCA input adapter (not included) for use with RCA interconnects.
4. **LOUDSPEAKER OUTPUT RIGHT CHANNEL:** Connect to right Loudspeaker, 2 to 16 ohm impedance, for Stereo Operation.
5. **LOUDSPEAKER OUTPUT LEFT CHANNEL:** Connect to left Loudspeaker, 2 to 16 ohm impedance, for Stereo Operation.
6. **LOUDSPEAKER MONO OUTPUT:** Connect to Loudspeaker, 4 to 16 ohm impedance, for mono Operation.
7. **STEREO/BRIDGED MODE SWITCH:** Configures Model 535, as either a stereo or mono amplifier. When configured as a single mono amplifier, the overall gain of the amplifier is automatically adjusted to maintain the same gain as in stereo operation.
8. **REMOTE ON/OFF:** A 1/8" (3.5 mm) mini-plug jack is provided on the rear panel of the Model 535 for remotely switching the amplifier between Operational and Standby modes. Applying a continuous 6 to 15 volts DC to the connector will override the front panel power button and place the amplifier into operational mode. The Model 535 operational mode can also be controlled by another audio component with the proper circuitry, through the remote on/off connector.

9. **AC MAINS INPUT CONNECTOR:** Install an AC Power Cable, supplying 85 - 230 volt AC , into the AC mains input connector.
10. **FUSE HOLDER:** Supplied with 6.3A 250V slow-blow or time-delay type fuse (MDL). Always replace with similar rating and type fuse.

## SPECIFICATIONS

<b>Output Power</b>	250 watts @ 8 ohms /500 watts @ 4 ohms, 100-230 Vac
	900 watts @ 8 ohms, Mono, 230 Vac
	700 watts @ 8 ohms, Mono, 100-120 Vac
<b>Frequency Response</b>	5 Hz – 70 kHz, -3 dB
<b>Dynamic Range</b>	120 dB, A weighted
<b>Output Noise</b>	55 microvolts, A weighted
<b>Transient Intermodulation Distortion</b>	(TIM), 0.0035% @10 watts
<b>Intermodulation Distortion</b>	(CCIF,18 kHz + 19 kHz) 0.0015%, @10 watts
<b>Input Impedance</b>	40k ohms
<b>THD + Noise</b>	< 0.05%, 20 Hz -20 kHz, 0.003% @ 1 watt, 1 kHz
<b>Damping Factor</b>	> 1000 @ 1 kHz
<b>Output DC offset</b>	< +/- 1.0 millivolts
<b>Overall Gain</b>	26/26 dB Stereo/Mono
<b>Maximum Output Capacitive Load</b>	1.0 microfarad
<b>Overall Amplifier Efficiency</b>	89% @ 250 watts
<b>Common Mode Rejection Ratio</b>	> 90 dB, 20 Hz - 20 kHz
<b>Inputs</b>	1 pair (XLR) Stereo, One (XLR) Mono, pin 2 +
<b>Outputs</b>	1 pair binding posts Stereo, One binding post Mono
<b>Power Consumption Idle</b>	9 watts
<b>Power Consumption Standby</b>	0.3 watts
<b>Power Factor</b>	0.97, 120 Vac, rated output
<b>Amplifier Weight</b>	22 lbs. / 9.97kg
<b>Amplifier Dimensions (h/w/d)</b>	2.85" x 15.5" x 11.0" / 72mm x 381mm x 279mm