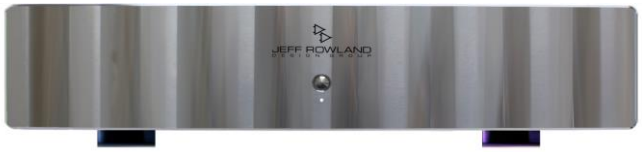
JEFF ROWLAND
DESIGN GROUP

MODEL 555 STEREO / MONO AMPLIFIER

User Manual



NOTE FROM JEFF ROWLAND DESIGN GROUP

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 555 will offer you many years of musically satisfying enjoyment.

Please take a few minutes to read the remainder of this User 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.

Note that your Model 555 serial number begins with the letter "J". Please include this number with any correspondence regarding your Model 555. 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 555, 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!

Jeff Rowland
President, Jeff Rowland Design Group

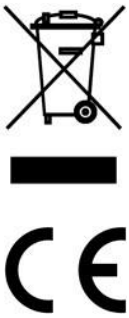
SAFETY INSTRUCTIONS

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 555 can be operated at any mains voltage over the range of 85 to 265 VAC without any adjustments necessary.
- The Model 555 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 555, a properly grounded AC receptacle must 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 555 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 Directive 2006/95/EC and Electromagnetic Compatibility (EMC) directives. When installed and operated in accordance with this instruction manual, continued compliance is maintained. 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 (5) years from the original date of purchase, provided that the product has been operated in accordance with its user manual and has not been altered, improperly serviced, or improperly prepared. This warranty applies solely to the original purchaser and is non-transferable.

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.

USER MANUAL INTENT

This user 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 notification. If you notice any errors, please feel free to email us at: support@jeffrowlandgroup.com.

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 555 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 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 the amplifier from the original packing box. Remove all accessory items from the accessory box. Accessories include:

- 1 Detachable IEC AC Power Cord
- User 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.

PLACEMENT

The Model 555 should not be placed in a closed cabinet to prevent chassis overheating. The chassis requires an open-air placement without any restriction of air flow above or below the chassis. Since heated air rises and creates a convection flow, this flow must not be restricted by placing other audio components or shelving directly above the chassis. If the chassis must be placed in a cabinet, a small, quiet, cooling fan can be placed in the rear of the cabinet to ensure a constant, low volume air flow around all sides of the amplifier.

OPERATION

1. **FRONT PANEL POWER BUTTON (1)**. Press this button to operate the amplifier. Press again to place the amplifier in standby mode.

2. **POWER INDICATOR LIGHT (2)**. This light will illuminate white when the amplifier is operational. The light will not be illuminated when the amplifier is in standby mode.

3. **CABLE CONNECTIONS**: Ensure that the power button is in standby mode (indicator light not illuminated) before connecting or disconnecting any interconnects, speaker cables, or loudspeakers. The indicator light illuminates white when the amplifier is operational and remains off when the unit is in standby mode.

4. **SUBWOOFERS**: When connecting powered subwoofers such as the REL Acoustics brand using the high-level connection wiring, please observe the wiring directions given here. This connection scheme will apply to both STEREO and MONO configurations of the Model 555. Twist together both Red and Yellow high-level wires, preferably terminate both in a 1/4” spade connector, and connect both wires to the Model 555 Right positive speaker output. Connect the black ground wire to the amplifier Right negative speaker terminal, which is chassis ground. Since most low frequency signals are mono and are the same level in both right and left channels, the mono bass signals will be present on the amplifier Right speaker output. The Model 555 Left speaker output is inverted with respect to the right speaker output, therefore it cannot be used in a REL high level connection. The Left speaker output signal is active on the Left negative speaker terminal; therefore, all loudspeakers are reverse connected on the left speaker output, which restores proper phase.

5. **BREAK-IN**. The Model 555 amplifier requires a long “break-in” period for the amplifier to reveal its full sonic character. Unlike most other audio components, the Model 555 incorporates amorphous core input transformers within the input circuitry of each channel. This transformer type requires a much longer break-in period than all other audio components in a signal chain. To facilitate break-in, leave the input signal connected to the input connectors at all times, if possible. The amplifier does not need to be powered on for break-in to occur, since break-in will occur as long as signal is present at the amplifier inputs. Normally, full break-in will occur after approximately 500 hours of signal application.

6. **PASSIVE BI-AMPING**: If your loudspeakers have separate HF (high frequency) and LF (low frequency) binding posts that are normally jumpered or bridged together, the Model 555 can be used to passively bi-amp your loudspeaker when used in the MONO configuration.
    a. First, remove the jumper or bridge.
    b. Connect the speaker’s HF posts to the amplifier’s RIGHT speaker output.
    c. Then connect the speaker’s LF posts to the amplifier’s LEFT speaker output.
    d. Connect the respective right or left input interconnect to the MONO input and switch the MONO/STEREO switch to MONO.
    e. Note: this requires two (2) loudspeaker cables per loudspeaker. Also, the amplifier overall gain of this configuration is reduced by 6 dB, therefore the preamplifier volume control will have to be increased by a small amount to compensate. Additional information can be found here: https://www.audioadvice.com/blogs/expert-advice/speaker-bi-wiring-bi-amping-explained

REAR PANEL CONNECTIONS

1. **INPUT**: Left Channel Balanced XLR: Use XLR to RCA input adaptor (not included) for use with RCA interconnects.

2. **INPUT:** Right Channel Balanced XLR: Use XLR to RCA input adaptor (not included) for use with RCA interconnects.

3. **INPUT:** Bridged Mono XLR: Use XLR to RCA input adaptor (not included) for use with RCA interconnects.

4. **LOUDSPEAKER OUTPUT RIGHT CHANNEL:** Connect to right loudspeaker 2 to16 Ω impedance, for stereo operation.

5. **LOUDSPEAKER OUTPUT LEFT CHANNEL**: Connect to left loudspeaker 2 to 16 Ω impedance, for stereo operation.

6. **LOUDSPEAKER MONO OUTPUT:** Connect to loudspeaker 4 to 16 Ω impedance, for mono operation.

7. **STEREO/MONO SWITCH:** Configures Model 555 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 mode.

8. **REMOTE ON/OFF:** A 1/8” (3.5 mm) mini-plug jack is provided on the rear panel of the Model 555 for remotely switching the amplifier between operational and standby modes. Applying a continuous 5 to 15 volts DC to the connector will override the front panel power button and place the amplifier into operational mode. Note, an intermittent 12-volt trigger signal will not turn the amplifier on. The voltage must be a constant 5 to 15 volts DC.

9. **AC MAINS INPUT CONNECTOR:** Install an IEC 60320 (IEC320), grounded AC power cable (included), supplying 85-265 Volts AC, into the AC mains input connector.

10. **FUSE HOLDER:** Supplied with 6.3A 250V, 5 X 20 mm time delay type fuse. Always replace with similar rating and fuse type.

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-cleaning or microfiber 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 555, 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.

DESIGN FEATURES

MACHINED ALUMINUM CHASSIS: The Model 555's 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 microphonically induced micro-vibrations from any source.

BALANCED TOPOLOGY: We utilize custom-designed 'amorphous' core input signal transformers. These transformers are processed with smaller "micro-magnets" in the core material for increased low level signal resolution, as compared to standard permalloy core audio transformers. Cardas .9999 purity copper wire is used for coil windings.

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

LOW DISTORTION AND SUPERIOR DAMPING FACTOR: The Model 555 exhibits extremely low high frequency distortion and nearly constant damping factor over the entire audio frequency range due to unique error correction circuitry and transimpedance circuit architecture.

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

TRANSFORMER-COUPLING 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 XLR to RCA 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 98%.

HIGH-EFFICIENCY SWITCHED-MODE POWER SUPPLY: The highly efficient, compact, lightweight, switched-mode power supply provides optimum voltage regulation for the output stage circuitry. A separate low-voltage, extremely low-noise, regulated power supply provides power to all front-end low-level circuitry. Optimum operating performance is assured under all worldwide mains voltages and conditions without the need for wiring voltage changes.

OUTPUT SIGNAL AND POWER BUSSING: Each output transistor is directly tied to rigid copper power busses which provide low impedance, low noise connections to DC power and loudspeaker outputs.

LONG LIFE POWER ON-OFF SWITCHING: AC mains power is switched through a zero-crossing solid state relay, eliminating switch contact burn-out, and eliminates large surge currents during turn-on, resulting in a lifetime of trouble-free power switching operations.

LOUDSPEAKER OUTPUTS: CE approved speaker output terminals require no tools for secure, low resistance connections. Rhodium coated copper posts machined for minimal surface area assure low signal impedance over all audio frequencies.

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

MONO OPERATION: The amplifier can easily be converted to MONO operation by simply switching the STEREO/MONO switch to MONO and using the MONO labeled XLR input and MONO labeled speaker terminal output. The amplifier has been designed to preserve the 26 dB gain structure when using the amplifier in MONO. The power supply voltages are automatically reduced when using the amplifier in MONO mode to lessen the strain on circuit components for increased reliability. As a result, the MONO mode power output is intentionally reduced and not due to a power supply deficiency.

OPTIMUM POWER SUPPLY USAGE: The Model 555 incorporates a unique internal configuration which inverts the absolute phase of the Left channel signal circuitry. Normally both channels in most stereo amplifiers are drawing power exclusively from either the positive or negative power supplies at the same moment in time such that when drawing from the positive supply the negative supply is dormant. Conversely, the same condition occurs when the program signal goes negative and draws power from the negative supply, rendering the positive supply dormant. Approximately half of the power supply potential is unused and wasted. If one channel of a stereo amplifier is inverted, the amplifier power circuitry will consume both positive and negative power equally most of the time offering greatly improved utilization of the power supply energy reserve.
Additionally, some cancellation of undesirable stray electromagnetic fields due to close proximity of opposite phase power supply currents further reduces noise propagation into adjacent signal circuitry.

The phase inversion is corrected by reversing the Model 555 Left channel speaker output labeling.

SPECIFICATIONS

Output Power	Stereo: 2 x150 watts @ 8 Ω / 2 x 300 watts @ 4 Ω / 2 x 500 watts @ 2 Ω Mono: 1 x 350 watts @ 8 Ω / 1 x 550 watts @ 4 Ω
Frequency Response	10 Hz – 75 kHz, -3 dB
Dynamic Range	120 dB, A-weighted
Output Noise	135 microvolts, A weighted
Intermodulation Distortion	(CCIF,19 kHz + 20 kHz) 0.0005% @10 watts
Input Impedance	40k Ω, balanced or unbalanced
THD + Noise	< 0.003%, 2kHz -20 kHz < 0.06% 50 Hz - 2kHz 40 watts output, 8 Ω load
Damping Factor	300 @ 1kHz, 170 @ 20 kHz
Output DC offset	< ± 8.0 millivolts
Overall Gain	26 dB stereo or mono
Common Mode Rejection Ratio	> 90 dB, 20 Hz - 20 kHz
Inputs	2 (XLR) stereo, 1 (XLR) mono, pin 2 +
Outputs	2 pair binding posts stereo, 1 pair binding posts mono
Idle Power Consumption	80 watts
Maximum Power Consumption	1000 watts @ output power of 550 watts @ 4 Ω / mono
AC Mains Input Voltage	85-265 volts @ 50/60 Hz

Standby Power Consumption	0.3 watts
Power Factor	0.78 @ idle, 0.98 @ > 80-watt output
Amplifier Weight	33 lbs / 15 kg
Amplifier Dimensions (h/w/d)	3.9” x 15.5” x 14.2” / 9.9 cm x 39.4 cm x 36 cm
Shipping Weight	41 lbs / 18.6 kg
Shipping Box Dimensions (h/w/d)	9” x 24” x 22” / 23 cm x 61 cm x 56 cm

TROUBLESHOOTING

ISSUE	ACTION
Front panel light does not light after pressing button.	Verify that AC mains voltage is present on AC cable. Ensure tight connection between AC cable and amplifier AC Input receptacle. Check for blown external fuse.
Front panel light turns on, but no output in both channels.	Check that your source is active and you are using known good interconnects.
Front panel light turns on, but both loudspeaker outputs go on and off every second.	One internal fuse is open. Contact your dealer or distributor.
Front panel light turns on, but only one loudspeaker output.	Verify that both source channels are active. Two (2) internal fuses are open on one channel. Contact your dealer or distributor.
Both outputs are half volume or down by 6 dB, and only the right channel signal is present in both right and left channels.	MONO SWITCH is switched to MONO position. Move MONO SWITCH to STEREO position.