

Wright Audio  
*Royale SE* Power Amplifier  
**INSTRUCTIONS FOR OPERATION**

Welcome!

Your Wright Audio Amplifier incorporates advanced characteristics which have been chosen based on sonic quality and reliability. With regular tube changes and other rare maintenance, your amplifier will provide excellent sound indefinitely.

Please take a few moments to read these instructions. Doing so will enable you to thoroughly enjoy your new amplifier's sonic quality, fully utilize its versatility and maintain a safe and long life for your component.

First a few cautions. Most are common sense, but are here as reminders. These cautions apply to all tube and most solid-state amplifiers as well and are not specific to your Wright Audio amplifier.

1. Never operate your amplifier without speakers attached to its outputs. The warranty is void if operated in this manner.
2. Never disconnect or switch the input cables while the amplifier is on. Doing so may damage your speakers.
3. Any modifications to the amplifier's circuitry or the use of tube types not listed voids the warranty.
4. Tubes must be replaced at the end of their useful listening life, approximately 2000 hours or every 2 to 3 years of 'average' use for the KT77 type and about 4000 hours for the ECC88 / 6N1P tubes. Operation past these points results in weak sound and possibly complete tube failure.
5. The tubes get HOT in normal operation. Touching them can result in a minor burn. Keep the unit away from an area where children or pets may come in contact with the amplifier.
6. Always install tubes of the identical numbers as shown on the amplifier's top, included sheet or bottom plate. Inserting any other tube number may damage the amplifier and / or tube. Contact Wright Audio if there is any question regarding correct tube type.
7. IMPORTANT – U.S. units have been provided with a 3-prong grounding plug. If a significant hum is heard through the speaker and if a preamplifier or other unit is being used also with a 3-prong grounding plug, a "3 to 2 adapter" should be used on the power amplifier to avoid a 'ground loop' from causing the hum. In any case, at least ONE component MUST be grounded through a 3-prong plug for proper operation and for personal safety. Normally the grounding should be done at the preamplifier.

8. Connect the unit to the voltage as printed on the amplifier.
9. Do not open the covers of the amplifier. Lethal voltages may exist within, **even when the power cord is disconnected from the socket.** It should be returned to Wright Audio if there is a malfunction.
10. The unit must not be exposed to excessive moisture. Never use more than a soft cloth, lightly moistened with water to clean the unit. Never use any sort of solvent. Always unplug the amplifier from the AC socket before cleaning.

## INSTALLATION

1. Position the amplifier so that children or pets can not inadvertently touch the tubes.
2. Locate the amplifier where there is adequate ventilation – at least 5 inches of space above it.
3. To minimize the chance of hum, place it away from other units' transformers or motors.
4. With the amplifier's power switched 'Off', insert the tubes as marked by the numbers on the tubes, and on the top, back or bottom of the amplifier. Take care to align the 'key' at the base of the each tube with the socket 'key'.

## CAUTION

**Due to manufacturing tolerances on both the tube and the socket, it may be possible to inadvertently misalign the keys and still fully insert the tubes. This may result in costly repairs. Always make absolutely sure the post and the socket key is correctly aligned before inserting.**

**When removing the large tubes, always grasp and pull them out by the bottom section of the tube, not by the glass.**

Avoid touching the glass on the larger tubes as oils from the skin can cause a burning smell after the tubes warm up.

With the miniature tubes, the gap in the pins indicates the correct alignment. Again, avoid rocking the tubes back and forth excessively since doing so may crack the glass.

5. Insert the appropriate RCA plugs into the input jacks. Make sure the plugs are fully inserted into the jacks with the outer skirt of the plug tight around the socket. The input impedance is a high 270K ohms, making the amplifier very easy to drive.
6. Connect the RED or 'PLUS' amplifier's connection corresponding to the RED or PLUS speaker's connection and the BLACK or 'MINUS' connection of the amplifiers to the BLACK or MINUS speaker connection.

## **GENERAL OPERATING NOTES AND MAINTENANCE**

Although your amplifier has been thoroughly tested, the unit will require 2 or 3 days of operation approaching 2 hours per day before it begins to sound its best. It will continue to improve during the first few weeks of operation.

If the system has been stored or inoperative for a long time or you change interconnecting cables or other components, then these situations may require a day or two of 'break-in' time for the entire system to sound its best.

Operate your amplifier only when you are actively listening to it. Unlike solid-state equipment, Wright Audio equipment reaches its optimum listening quality in about 15 minutes, and it is simply a waste of power and tube life to leave it on any longer than necessary.

Important: After turning the amplifier off, avoid turning the amplifier back on until the tubes have cooled. Switching the amplifier on while still 'hot' stresses the rectifier tube.

## **TROUBLESHOOTING**

The unit has been designed to be as free from trouble as possible. However, a couple conditions can occur which will affect the amplifier's operation.

### **TUBE 'GLOWING' OR FUSE FAILURE**

If either of the large output tube plates (the grey, chimney-shaped structure inside the tube) glows a dull to bright red color soon after warmup or suddenly during operation, it is probable that the tube is defective and the amplifier must be turned off immediately. Tube substitution should be tried. DO NOT continue to operate the amplifier with a defective tube, as other parts will be damaged. If tube substitution does not solve the problem, refer servicing to Wright Audio.

The amplifier is provided with output tube cathode TEST jacks placed in close proximity of the tube being measured and a convenient GROUND jack located behind the GZ34 / 5AR4 tube. A DC voltmeter may be used to measure the individual tube's cathode voltage. A reading of positive 28 to 36 DC volts is considered normal for KT77 or EL34 /E34L tubes and the tube must be replaced if the reading falls outside these parameters.

Please note that most of the parts in any Wright Audio product are typically over-rated up to twice of their normal operating parameters and parts failure outside of tube replacement is rare.

## NOISE

Any noise or hum encountered during the life of the amplifier will normally be traced to dirty or otherwise poor connections at the input / output jacks, faulty tubes, or poor tube pin-to-socket connection.

The best remedy is to apply isopropyl alcohol to a cotton swab which can be used to clean the connection. Do not use spray-type contact cleaners on the tube sockets or around the connections at the rear of the amplifier as this may damage the finish or parts

Liberal application of cleaner to the tube pins which are then inserted in the tube sockets usually cures any noise original from this source. The application may need to be repeated for satisfactory results.

## IN CASE OF A PROBLEM OR QUESTION

Your product was designed for at least a lifetime of operation with ordinary common sense care, occasional tube replacement and relatively minor service. Please accord it with the same care as you would a fine camera. However, damage can occur during shipping or in storage conditions where mechanical shock and extremes of temperature or humidity can render the unit faulty. Neither of these exposures may be visible to the eye.

Your continued satisfaction with our products is extremely important to us. We will be happy to answer your questions pertinent to the installation and operation of your unit. Please feel free to contact us in the event of any difficulty and we will endeavor to provide prompt service. If the problem cannot be resolved through our combined efforts, we may wish to authorize the return of your unit to us.

In the event the unit must be returned, an authorization number will be forwarded to you. This number must be placed on the outside of the return box to identify it and avoid unnecessary delay. **Under no circumstances should your unit be shipped to Wright Audio without authorization or it will be refused.**

Please pack it carefully in the original packing, if available. If not available, the unit must be double-boxed, allowing at least 3 inches of space all around between inner and outer box.

**Ship prepaid via UPS or Fed Ex only. Be sure to insure the shipment for the full original cost. Collect shipments will not be accepted.**

## PLEASE READ THE WRIGHT AUDIO SERVICE PROTECTION PLAN

(Applicable to U.S. customers only.)

at:

**[www.WrightAudioArts.com](http://www.WrightAudioArts.com)**