



Sonata

Vacuum Tube Integrated Amplifier

Owner's Manual

Dear Customer,

We at WLM would like to take this opportunity to thank you for purchasing the *Sonata* vacuum tube integrated amplifier!

The *Sonata* was created for you - the music connoisseur in search of an extraordinary listening experience, dependability, and high value. Your *Sonata* was 100% designed and manufactured in Europe and demonstrates the finest level of craftsmanship throughout. Sonically, the *Sonata* presents to the listener an emotionally supercharged, effortless musical presentation that easily competes with competition costing many times more.

The people that stand behind your amplifier draw on more than a decade of professional electronics design and manufacturing experience. We are all committed to providing our customers with extraordinary sound reproduction at affordable prices. We have achieved this goal through modern design, high quality parts, expert components sourcing and efficient manufacturing. We are confident that your *Sonata* will give you many years of listening pleasure!

Before using your *Sonata*, please take the time to carefully read and understand the safety instructions and operating procedures in this owner's manual. Becoming familiar with all details about your *Sonata* amplifier will ensure safe usage and reliable operation.

The effort you invest now will be well rewarded as the time goes by.

Thank you, and enjoy your listening experience!

The WLM Team

SAFETY PRECAUTIONS

CAUTION!

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT OPEN YOUR WLM SONATA. THERE ARE NO USER SERVICEABLE PARTS INSIDE. PLEASE CONTACT YOUR DEALER/DISTRIBUTOR IF THERE IS EVER NEED FOR SERVICE.

- 1) **Read this User's Manual and refer to it frequently during use of this product** - All the safety and operating instructions should be read before the product is operated.
- 2) **Retain this User's Manual** - The safety and operating instructions contained in this manual should be retained for future reference.
- 3) **Follow Instructions** – All operating procedures and instructions should be closely followed.
- 4) **Power Sources** - This product should be operated using only the type of power source specified on the label next to the power input connector.
- 5) **Grounding** - This product is equipped with a three prong IEC connector. Always use a power cord and an electrical outlet that is properly grounded. If you do not know whether the outlet is grounded, consult your electrician or local power company.
- 6) **Power Cord Protection** – Power supply cords should be routed so that they are not likely to be walked on or pinched. Always use power cords with adequate current ratings and safety certifications (UL, CE, TÜV, CSA, etc.)
- 7) **Fuses** - For continued protection against fire hazard, replace fuses with the same type and rating of the fuses specified. When changing fuses, completely unplug the AC cord from the wall outlet.
- 8) **Tubes** - During operation the **tubes get very hot**. Do not touch the tubes since this may result in a severe burn. Allow at least 15 minutes after removing power for tubes to cool down before touching them.
- 9) **Turn-off when not using** - Turn off the unit as soon as you stop actively using it. Unplug the power cord from the wall during a lightning storm or when the product is to be left unattended and unused for longer periods of time.

ENVIRONMENT

- 1) **Water and Moisture** - Do not use this product near water. Damp rooms and basements should be avoided.
- 2) **Heat** - This product should be situated away from heat sources such as radiators, heat registers, stoves or other appliances that produce heat. Also avoid putting the unit in the direct rays of the sun.
- 3) This product is designed for indoor use only.

PLACEMENT

- 1) **Accessibility** - It is normal for a vacuum tube power amplifier to run warm if used for prolonged periods. Tubes are very hot when operating and should not be touched for at least 15 minutes after the unit is turned off to prevent burns. Always place your amplifier away from children and pets to prevent burns.
- 2) **Ventilation** – Do not place your amplifier in a closed area (e.g. bookcase) as overheating could occur. Ensure that there is at least 8” (200mm) of open space above the amplifier. Also make sure that the vents on the bottom of the amplifier are not covered. Never place anything on top of your amplifier that could obstruct the airflow and cause overheating.
- 3) **Surface** - Place the unit on a flat level surface. Care should be taken to prevent objects from falling and liquids from spilling into the unit. Do not subject the unit to excessive smoke, dust, vibration or shock.

SERVICE AND MAINTENANCE

- 1) **Replacement Parts** - Unauthorized part substitutions may result in fire, electric shock, and degradation of audio performance. Modifications are discouraged and will void your warranty.
- 2) **Tube Replacement/Rolling** – It is recommended to replace the EL34 output tubes at 12 to 18 month intervals (depending on your listening habits) and the ECC82 input signal tubes at every other output tube replacement (24 – 36 months). This will ensure best performance and avoid tube failure, which could overstress other parts. When it is time to replace your tubes, remove the AC power plug from the wall and allow for at least 15 minutes for the tubes to cool and the internal high voltage capacitors to discharge. Follow instructions outlined in this manual. Frequent replacement of tubes for experimenting purposes is not recommended as tube sockets are sensitive mechanical parts and frequent insertions can cause premature failure and loss of contact, which may result in amplifier damage and degradation in performance.
- 3) **Tube Socket contacts** – Tube pins and socket contacts are subject to oxidation. If the amplifier is not used for several days at a time, the oxidation may cause loss of contact and it may be necessary to reinsert tubes to restore the good connection.
- 4) **Cleaning** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a dry cloth for cleaning. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene.

Getting Started - About Your Amplifier

Your *Sonata* amplifier was designed to provide a significant value based on a high performance to price ratio. Two matched pairs of EL34 power output tubes and four ECC82 input stage tubes are used by your *Sonata*, which operates in Class A for the first 20 watts RMS per channel, and in Class AB up to 35 watts RMS per channel. All parts have been carefully chosen for the optimum sound quality and the overall circuit layout is maximized for sonic purity.

Construction and Testing

Your *Sonata* amplifier has been carefully built by highly skilled European craftsmen. To assure consistent performance, each *Sonata* amplifier goes through extensive electrical testing before being shipped. This time-consuming perfectionist approach in the design and manufacturing of audio equipment is intended to provide the best in musical satisfaction with lasting value.

Handling Vacuum Tubes

Many people have never had experience handling vacuum tubes. The process is very similar to handling incandescent light bulbs. As with light bulbs, you should not touch a vacuum tube when it is operating since you can burn yourself. Similarly, if a tube is dropped on a hard surface it will break. When replacing the tubes allow sufficient time (a minimum of 15 minutes) for the tubes to cool down and internal capacitors to discharge. Before you insert a tube you should make certain the unit is disconnected from the AC outlet and that the tube has cooled down. Inspect the tube for cracks and physical damage. Make sure that the pins are straight. If you need to straighten the pins, be very careful as it may cause the glass envelope to break, causing the tube to lose the vacuum and fail as soon as the amplifier is powered on. Carefully align the pins with the socket and gently insert the tube. **Never force a tube into a socket.**

Packaging

Save all the packaging in a dry place. Your *Sonata* amplifier is a precision electronic instrument and should be properly packaged any time shipment is made. Because of its weight, it is highly probable that the unit will be damaged during shipment if repackaged in a box and packing other than that designed for the unit.

Preparation for Use

Place your *Sonata* amplifier on a flat surface.

Your *Sonata* amplifier is delivered with two matched pairs of EL34 output tubes. It is important to follow markings on the tube boxes and insert them into appropriate sockets. Your *Sonata* amplifier utilizes **auto-biasing circuitry**, so you never need to be concerned with the inconveniences of biasing the tubes.

Before inserting the tubes, inspect them for cracks and physical damage. Make sure that the pins are straight. If you need to straighten the pins, be very careful as that may cause the glass envelope to break, causing the tube to lose the vacuum and fail as soon as the amplifier is powered on. Carefully align the pins with the socket and gently insert the tube fully into the socket. **Never force a tube into a socket.**

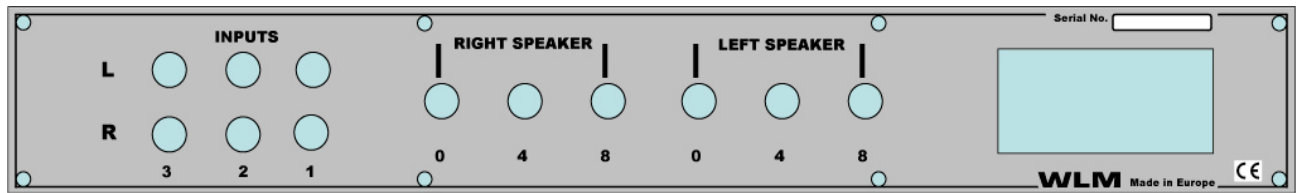


Controls and their Functions

Front Panel

Selector Switch – The three-position selector switch is used to select the active audio source.

Volume control – This control is used to adjust the output sound level. Turning the control knob clockwise increases the sound level and turning it counterclockwise decreases the sound level.



Back Panel

Power Switch: Press the power switch to the (I) position to turn the power on. Within 10-20 seconds as the tube heaters reach operating temperature, the tubes will begin to glow a soft orange light. The red LED on the front panel will glow to indicate the unit is on. Press the power switch to (0) to turn the unit off. As the heaters cool off, the orange glow will slowly disappear, as will the red LED on the front panel.

Audio signal connection jacks - Use these jacks to connect the audio interconnects from your source components to the amplifier.

Speaker terminals - Your *Sonata* amplifier is stereo (two output channels). There is a left channel speaker output and the right channel speaker output. Each output channel is designed to power one speaker.

The negative terminal of your loudspeaker terminal should be connected to the speaker terminal on the *Sonata* marked as zero (0), and the positive terminal of your loudspeaker should be connected to the terminal on the *Sonata* that corresponds to the loudspeaker's nominal impedance (4 or 8 ohms). If your speaker has nominal impedance of 6 ohms, you can connect it to either of the two outputs. You should try using each setting and select the one that performs better with your speakers. Make sure to prevent a short circuit at the amplifier's speaker terminals as this will damage the amplifier.

Never run the amplifier without speakers connected since that may damage the transformers.

Powering ON and OFF

When turning the unit on, make sure the volume control is at its lowest setting (the volume control is at minimum when turned counterclockwise to the mechanical limit).

At the end of your listening session make sure to turn the amplifier off. Leaving it on does nothing for sound quality and it reduces life of the vacuum tubes.

The amplifier should always be turned on and off via its own power on-off switch.

Tube Replacement

Your *Sonata* amplifier was designed to maximize the life of the tubes. You can expect that your EL34 power output tubes should last approximately 1200 hrs, while the ECC82 input stage tubes should last approximately 2500 hrs. We strongly recommend replacing the EL34 output tubes at 12- 18 months intervals (depending on your listening habits) and the ECC82 input stage tubes at every other power tube replacement (every 24-36 months). This will ensure that the amplifier always performs at its best and tube failure will not overstress other parts.

Only matched pairs of EL34 output tubes should be used for each channel!

Servicing

Because of its careful design and high manufacturing standards, your *Sonata* amplifier should normally require only minimal service to maintain its high level of performance.

CAUTION: Lethal voltages are present inside the amplifier. Do not remove the amplifier's bottom cover and do not tamper with components inside the unit even with the power turned off. Servicing should be left only to authorized and trained personnel!

Technical Specifications:

Output power: 2x35W

Class of operation: A(0-20W) , AB 20-35W

Configuration : Push-Pull

Tubes: 4x EL34 (two matched pairs) , 4x ECC82

Inputs: 3 (single-ended)

Outputs: Can drive 4 or 8-ohm loudspeakers

Input sensitivity: 0.7Vrms for full power

THD %: 0.03% - 1W/1KHz, 3% - 30W/1KHz

Frequency bandwidth: 10Hz(-1dB)-60KHz(-3dB)

S/N ratio: 78dB

Input impedance: 100K

Input voltage: 240V/50Hz(option 120V/60Hz – North America)

Power consumption: 200VA

Dimension: 17" W x 11.5" D x 6" H

Weight: approx. 35 lbs.