

# KR Audio Electronics

## *User's Manual*

### VA900



## Description of the amplifier

This stereo amplifier is a microprocessor controlled hybrid system with low frequency power beam tetrodes in the output stage. The output tubes work in Class A/B ( Push-Pull Ultralinear with output transformer ). Condition of vacuum tubes is fully regulated by auto-biased circuitry, so no extra adjustment for power devices is necessary. The circuit works with low feedback. The output stage is powered by solid-state driver also working in class A with power MOSFET transistors. The amplifier has four identical stereo channels which are switched by mechanical (reed) relays. Level of output signal is possible to regulate by a motorized ALPS potentiometer. The amplifier is equipped with remote control. All electronic parts are carefully selected and only the best quality components are used in the KR amplifiers.

All high quality components used in KR amps are placed in black painted steel chassis. The power supply cover, front panel and side plates are painted with a black composite material. Power tubes are covered by mesh metal protector housing. On the front panel there are four channel buttons with LED indicators, volume knob, IR-sensor for remote control, standby switch and status LED light. On the rear panel, you can find mains switch, mains socket with integrated fuse (standard PC type), mains voltage selectors, 4x2 RCA (Cinch) input connectors, 2x2 speaker connectors and finally output load impedance selector covered by a small metal deck which is fixed by a small screw.

## Installing

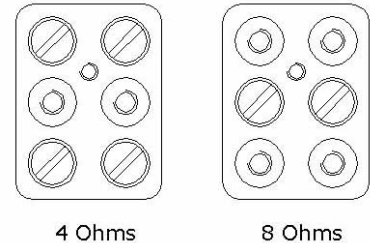
- Take the amplifier out of the paper shipping crate and place it on a solid and massive base.
- Allow adequate air circulation to prevent internal heat buildup. We do not recommend placing the amps on bookshelves or in closed cabinets.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators or air ducts, or in places subject to direct sunlight, excessive dust, mechanical vibration or shock.
- To prevent fire or shock hazard, do not expose the unit to rain or moisture.
- Under the top of the housing there is a damping paper to protect tubes during a transport. It has to be removed for cooling of output tubes.
- Connecting an audio system to the amplifier: Use shielded audio cables with male RCA (Cinch) connectors. Use cables as short as possible to avoid higher levels of hum and noise.
- Connect speakers units to the amplifier with correct phase and adequate cross-section of speaker leads. It is recommended to use speakers with a continuous power not below  $100W_{RMS}$  per speaker unit. Check that the amplifier is set to same (or close to the) impedance which your speakers have. The amplifier is preset to 4 ohms impedance but it is possible to change it to 8 ohms by the user.
- Check the setting of the mains voltage selectors on the rear panel and make sure you are plugging into a correct mains feed.
- To avoid added hum and noise to the signal feed all audio equipment (the amplifier, CD player, equalizer, preamplifier, etc.) from common mains socket.
- Switch on the mains voltage switch on the rear panel and press the standby switch located on the front panel. The status LED light will be on (red) and tubes will be heated. In approximately 1 min. the light on the volume knob becomes bright red when the pre-heating cycle is completed and the amplifier will be ready for your listening enjoyment.

## Servicing

- **Output impedance selector**

To get the best audio quality, lowest distortion and the highest output power, it is necessary to correctly set the output impedance of the amplifier. To change the output impedance follow the instructions below :

1. Unscrew the screw in the middle of a small black deck, which is located on rear panel of the amplifier and take off the deck. Be sure the amplifier is off.
2. Change the position of the brass screws on the impedance selector using a screwdriver.
3. Replace the deck and screw back to the original position.



- **Condition of output tubes**

The tubes are set to optimal values by auto-bias circuitry. Their condition is continuously monitored by a microprocessor. If the status indicator and volume knob LED are lighting red, the amplifier including output tubes is fully prepared to use.

- **Mains fuse substitution**

Disconnect the mains cord and take off the fuse box placed in the mains socket with the help of e.g. small coin. Replace burned fuse with a new one. Use only same type which is on the label near the mains socket.

- **Protection of output devices**

The amplifier is protected against a failure of output vacuum tubes. If a plate current of output tubes is not in a safe range because of tube failure or signal overloading, the electronic protection will automatically shut down the amplifier. The status LED and one or more red LEDs near the valveholders will start blinking red and the system will be set to standby mode. In this case press a standby button and after few seconds try to switch on. If the red indicator is still blinking every time after switching on, it will be necessary to replace the vacuum tubes. The flashing red LED near the socket is showing which tube has to be changed.

- **Tubes substitution**

Switch off the amplifier and unplug a mains cord. Wait approx. 10 minutes so that discharging the filter capacitors of the anode supply is finished. Unscrew two screws located on the bottom of tube protector. Take off the housing. Replace defective tube with new one. Replace all components and screw back on the tube protector. Switch on the amplifier and check that everything is working properly.

## Warranty

The amplifier is covered by the KR Audio Electronics warranty for all parts and labor for total of two (2) years from date of sale. Tubes are warranted for 12 months from date of sale. Tampering with the amplifier may void the warranty. All the repairs under warranty will be done either by the manufacturer or by the manufacturer's authorized service center.

## Technical Data

<b>Power Tubes</b>	<b>4 x KT120</b>
<b>Output stage</b>	<b>Push-Pull Ultra-linear Class AB1</b>
<b>Output Power</b>	<b>2 x 80 W<sub>RMS</sub> (THD=1%)</b>
<b>Output Impedance</b>	<b>4, 8 Ω</b>
<b>Frequency Response</b>	<b>20Hz ÷ 20KHz (-1dB)</b>
<b>Feedback</b>	<b>3dB</b>
<b>Driver stage</b>	<b>MOSFET class A</b>
<b>Preamplifier</b>	<b>passive with mechanical (reed) relays</b>
<b>Remote Control</b>	<b>volume &amp; channel selector</b>
<b>Inputs</b>	<b>4 x line RCA (Cinch)</b>
<b>Input Sensitivity</b>	<b>0.75V<sub>RMS</sub>/47kΩ (all channels)</b>
<b>Power requirements</b>	<b>230/115V<sub>AC</sub>, 50/60 Hz</b>
<b>Power consumption</b>	<b>300VA</b>
<b>Operating temperature</b>	<b>5C° to 40C°</b>
<b>Weight</b>	<b>Approx. 20Kg</b>
<b>Dimensions including projecting parts and controls (w/h/d)</b>	<b>Approx. 38.5 x 24.5 x 41.5 cm</b>

**Supplied accessories :**     - remote control  
                                      - hex key wrench

Design and specifications are subject to change without notice.

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