Ayre V-5xe

Owner's Manual

Power Amplifier

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Welcome to

Ayre

Your Ayre V-5xe offers a significant advance in the musical performance of high-fidelity equipment. The warmth and immediacy of a live performance are apparent from the first listening. The combination of superb resolution and a natural, relaxed quality will draw you into the music, time and time again.

This level of performance has been implemented using the highest level of workmanship and materials. You can be assured that the Ayre V-5xe will provide you a lifetime of musical enjoyment.

To our North American customers, please be sure to mail your warranty registration card and photocopy of your original sales receipt within 30 days in order to extend the warranty to five years.

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Connections and

Installation

The Ayre V-5xe is easy to connect and use. The following guidelines will ensure that the installation goes smoothly.

Location

Do not stack the Ayre V-5xe directly with other components, as this may restrict the air flow or induce hum into the audio circuitry.

A good location for your power amplifier is on the floor between your loudspeakers, or in an open-backed cabinet, or on a shelf. The Ayre V-5xe produces a moderate amount of heat during operation. Be sure to provide at least three inches (75 mm) of air space above the amplifier.

It is important to maintain an adequate supply of air flow to avoid overheating the amplifier.

Inputs

The Ayre V-5xe can be driven either by a preamplifier or directly from a line-level source (e.g., a tuner or CD player) that has a level control. There are two sets of input connectors on the rear

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panel of the Ayre V-5xe. The RCA connectors accept signals from unbalanced sources, while the XLR connectors are for balanced sources. A small toggle switch near the input connectors selects either the balanced or unbalanced inputs.

When you have a choice, a balanced connection will offer slightly higher sound quality than an unbalanced connection.

Note that the input selector switch for one channel will be in the "up" position, while the other channel's input selector switch will be in the "down" position.

Only one set of inputs (balanced or unbalanced) may be connected at a time.

Pass-Through Outputs

The pass-through output connector is wired in parallel with the input connector.

Each channel features a pass-through output, supplied via an XLR connector. This allows multiple channels to be driven with a single source and is especially useful for subwoofers, passive bi- or tri-amplification, or distributed sound systems. Simply use a balanced cable to connect the pass-through output of one channel to the XLR input of another channel on the same amplifier, or of another amplifier with true balanced inputs.

The pass-through output does not convert unbalanced sources to a true balanced signal.

If you wish to drive an unbalanced amplifier from the pass-through outputs, you will need to use XLR-to-RCA adapters at the pass-through outputs. These are available from your Ayre dealer.

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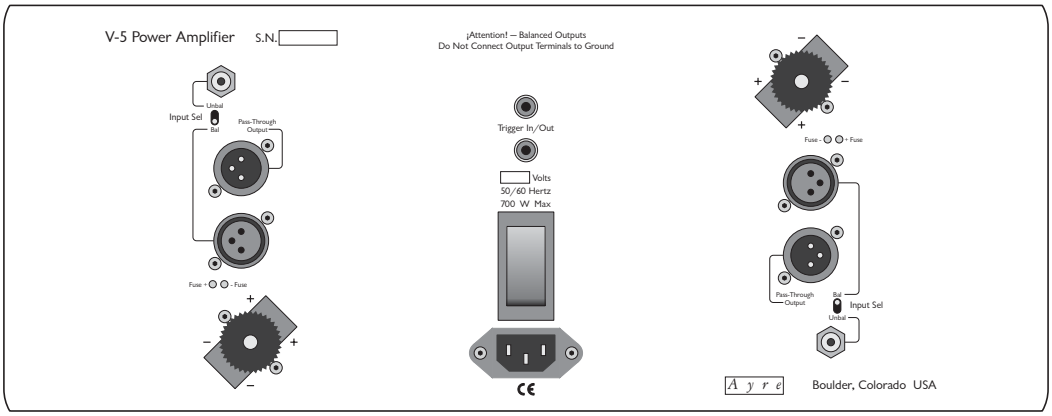

Loudspeaker Outputs

The heavy-duty output terminals of the Ayre V-5xe work best with speaker cables using spade lugs.

The Ayre V-5xe drives the loudspeakers with balanced outputs. Since none of the output terminals are grounded, connecting any of them to ground may result in damage to the amplifier.

Do not connect the loudspeaker outputs to any speaker switch-box, accessory, or test equipment that has a common ground connection.

AC Power

The V-5xe may be plugged directly into an unswitched wall outlet. Although proprietary RFI (radio-frequency interference) filtering is built into the amplifier, in some situations an AC power-line filter (such as those offered by Ayre) may provide additional sonic benefits.

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Controls and

Operation

The Ayre V-5xe has a front panel control for normal stand-alone operation. The amplifier may also be controlled via a "trigger" input in a home-theater.

Power Switches

The master power switch on the rear panel also incorporates a circuit breaker that acts as a resettable fuse.

There are two power switches on the Ayre V-5xe. The master power switch on the rear panel is normally intended to be left on at all times. The front-panel switch selects between the "Standby" and "Operate" modes.

When the master power switch is first turned on, the front panel indicator light will glow red for approximately one second. During this time, the unit is in "Warm-Up" mode and the front-panel switch is inoperable.

Red = Warm-Up
Green = Standby
Blue = Operate

After the circuitry has stabilized, the indicator light will change to green, indicating that the unit is in "Standby" mode and is ready for operation. When the listener presses the front-panel switch, the unit is in "Operate" mode and the indicator light glows blue.

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In the green "Standby" mode the output stage is turned off, while the input circuitry remains powered. This allows the unit to warm up quickly for optimal sonic performance, while reducing the power consumption from 120 watts to 20 watts.

Trigger Input

Use a 1/8" mini-phone plug with a positive voltage of between +5 and +12 VDC at the tip to operate the trigger input.

A trigger input is provided on the rear panel of the V-5xe to allow for remote switching between the green "Standby" and blue "Operate" modes. The two trigger input jacks are wired in parallel. Either jack can act as an input or a pass-through output to allow for "daisy-chaining" of multiple devices.

The unit is shipped from the factory in the level-sensitive mode, which is compatible with most equipment. During level-sensitive operation, applying a voltage to the trigger input will turn the amplifier to the "Operate" mode. When the applied voltage drops to zero, the unit reverts to "Standby.

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Some equipment instead utilizes pulses as a trigger signal. The V-5xe can also accommodate these units. To change trigger modes, turn the rear panel switch "Off" for about 30 seconds to discharge the internal voltages. Then press and hold the front panel switch while turning the rear panel switch "On". The status LED will rapidly flash red (about 10 Hz) to indicate that the pulse-sensitive mode has been selected. Repeating this procedure will revert the unit back to the level-sensitive mode, as indicated by the status LED slowly flashing red (about 1 Hz).

In the pulse-sensitive mode, a positive-going pulse edge will toggle the amplifier between the "Standby" and "Operate" states, duplicating the action of the front-panel switch.

When using the trigger input, the front panel switch is still operative. However, operating the unit with the front panel switch may put the unit out of "sync" with the control device. If this should occur, simply press the front panel switch again to restore "sync".

Break-In

100 to 500 hours of music played through the system will ensure full break-in.

Due to the manufacturing processes used for the printed circuit boards, wires, and capacitors, a break-in period is necessary for the amplifier to reach its full performance potential.

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Numbers and

Specifications

Power Output	150 watts per channel continuous into 8 ohms 300 watts per channel continuous into 4 ohms
Input Impedance	100 kΩ – unbalanced inputs 200 kΩ – balanced inputs (100 kΩ per phase)
XLR Input Polarity	Pin 1 = Ground Pin 2 = Non-inverting (Positive) Pin 3 = Inverting (Negative)
Gain	26 dB
Frequency Response	DC - 200 kHz
Power Consumption	20 watts in standby mode 120 watts in operating mode, no signal
Dimensions	17-¼" W x 16" D x 7-¾" H 44 cm x 41 cm x 20 cm
Weight	55 pounds 25 kg

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In Case of

Trouble

The Ayre V-5xe provides comprehensive protection for both the amplifier and your loudspeakers, including faults that may occur in your source components.

Overheating

Sensors located on each audio module will shut the amplifier off if the heatsink temperature reaches 175° F (80° C).

If the unit is operated at high playback levels with insufficient ventilation, the internal temperature may become too high, triggering the thermal protection circuitry. In this case, the amplifier will shut down, the front panel status LED will display both the red and green elements simultaneously, and the front panel switch will be inoperative.

If overheating occurs, be sure to correct the cause before continuing to use the amplifier.

Once the unit has cooled, the red LED element will go out, leaving the unit in the green "Standby" condition. To restore the unit to the blue "Operate" mode, simply press the front panel button.

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Rail Fuses

Indicator LEDs on the rear of the unit will glow red when one of the fuses fails. Please refer fuse replacement to a qualified service technician.

Internal fuses on the power supply rails of each channel protect the loudspeakers from excessive current, as well as the amplifier from short-circuits. There are two rail fuses per channel. If either one of the rail fuses fail, that channel will fail to operate.

The front panel LED will typically continue to glow blue if both fuses in one channel fail, while it change to red if only one of the fuses fails. Therefore the front panel LED is not a reliable indicator of blown rail fuses. Instead refer to the fuse status LEDs on the rear panel of the amplifier.

Do not remove the amplifier cover. Hazardous voltages may exist inside the unit.

Use of rail fuses other than a 5 x 20 mm fast-acting 10 ampere unit may damage the unit and void the warranty.

AC Line Voltage

If the AC line voltage drops below 80% of normal (brown-out), the unit will revert to the red "Warm-Up" mode with the outputs muted. After the voltage returns to normal, the initial warm-up cycle will begin again and the unit will then revert to the green "Standby" mode. Press the front panel button to return the unit to the blue "Operate" mode.

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DC Offset

The Ayre V-5xe incorporates a circuit to detect the presence of DC at the output terminals. In this situation, the amplifier reverts to the red "Warm-Up" mode, and power is immediately removed from the output stage.

After correcting the suspected fault condition, a press of the front panel button is required to return the unit to the green "Standby" condition. A second press of the button will restore the unit to the blue "Operate" mode. If the fault is still present when the front panel switch is pressed the second time, the unit will immediately revert to the red "Warm-Up" mode.

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Statement of

Warranty

North American Warranty

Your Ayre V-5xe amplifier is warranted against defects in workmanship and materials for a period of ninety days from the date of original purchase. This ninety-day coverage is automatic upon acceptance of delivery and no registration is required.

Additionally you have the option, at no cost, to extend the warranty for a period of five years from the date of purchase by returning the completed Warranty Registration Card and a photocopy of your original purchase receipt in the enclosed postage-paid envelope to Ayre within thirty days of product delivery. This optional warranty is only available within the thirty-day registration period.

North American Warranty Statement

1. If any defects are found in the materials or workmanship of this Ayre product within the warranty period, the unit will be repaired or replaced by Ayre Acoustics, Inc. (Ayre) or its authorized agent.

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2. Purchaser must return the product, packed in the original shipping carton, freight prepaid to:

Ayre Acoustics, Inc.
2300-B Central Avenue
Boulder, Colorado 80301

or to Ayre's authorized agent. The product must be accompanied by a written description of the defect and a photocopy of your original purchase receipt. Ayre will not be responsible for any shipping damage and strongly recommends the purchase of shipping insurance.

3. Ayre reserves the right to inspect any product that is the subject of any warranty claim prior to repairing or replacing it. Final determination of warranty coverage lies solely with Ayre.

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 the cost 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.

4. Ayre strives to manufacture the finest possible equipment, and therefore reserves the right to make improvements on its products, without necessarily assuming any obligation to retrofit such changes upon its previously manufactured models.

5. The above warranty is the sole warranty given by Ayre, and is in lieu of all other warranties. All

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implied warranties, including warranties of merchantability or fitness for any particular purpose shall be strictly limited to the duration of the above warranty. Ayre shall have no further obligation of any kind, whether express or implied. Further, Ayre shall in no event be obligated for any incidental or consequential damages as a result of any defect or any warranty claim, whether express or implied.

6. Ayre does not authorize any third party, including any dealer or sales representative, to assume any liability of Ayre or make any warranty for Ayre. The unit must not have been altered or improperly serviced. The serial number on the unit must not have been altered or removed.

7. This warranty is transferable to subsequent purchasers within the original warranty period.

International Warranty

Warranty terms outside of North America may vary. Please contact the authorized Ayre distributor in your country of purchase for the terms of warranty and also the service itself.

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A Place for

Notes

Serial Number: _____

Purchase Date: _____

Dealer: _____

Salesperson: _____

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