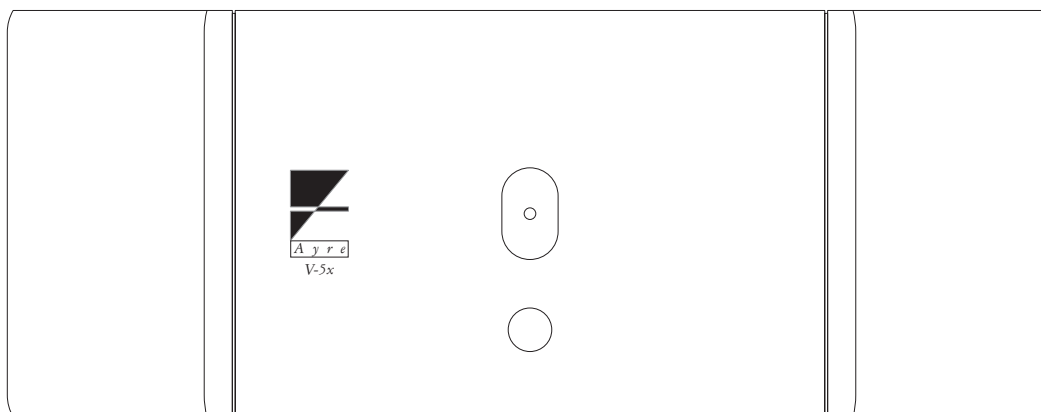


Ayre V-5x

# Owner's Manual

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Power Amplifier

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Welcome to

# Ayre

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*Please send in your warranty  
registration card so we can  
stay in contact with you.*

Your Ayre V-5x 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-5x will provide you a lifetime of musical enjoyment.

# Installation

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

## Location

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*Do not stack the Ayre V-5x 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-5x 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.

## AC Power

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The best sound quality is normally achieved when the V-5x is plugged directly into an unswitched wall outlet, without using any power strips or power line conditioners.

## Inputs

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*When you have a choice, a balanced connection will usually offer slightly higher sound quality.*

The power amplifier can be driven by a preamplifier or directly from a line-level source (e.g., tuner or CD player) that has a level control. There are two sets of input connectors on the rear panel of the Ayre V-5x. The RCA connectors accept signals from unbalanced sources, while the XLR connectors are for balanced sources.

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

A small toggle switch near the input connectors selects either the balanced or unbalanced inputs. 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.

*Using the incorrect position on the input selector switches will not harm the equipment, and the amplifier may even seem to operate normally. However, some sonic degradation occurs in this situation.*

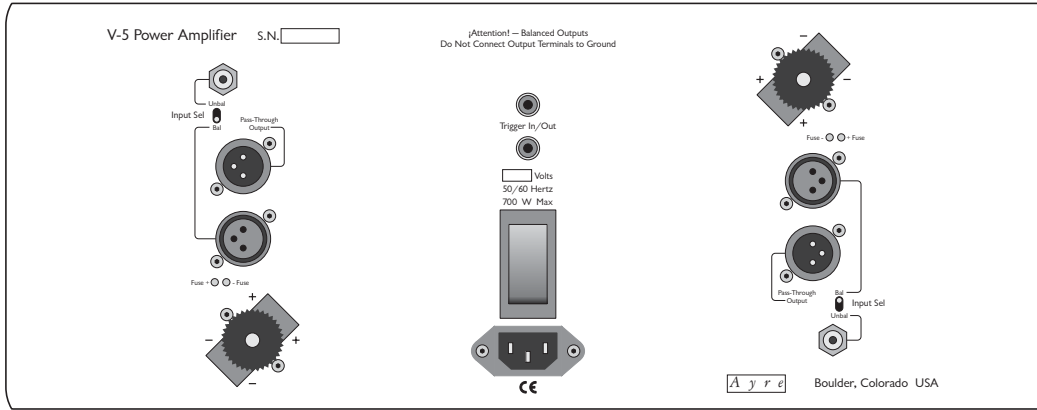
Selecting “Unbal” connects the inverting input to ground through an isolation resistor. Therefore, the incorrect setting of this switch forces a balanced source to operate in unbalanced mode. Conversely, if the selector is set to “Bal” while using an unbalanced source, the unused inverting input is susceptible to hum pick up and radio-frequency interference.

## Pass-Through Outputs

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*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. These should be configured so that pin 1 of the XLR is connected to the shell of the RCA connector, and pin 2 of the XLR is connected to the center pin of the RCA connector.

## Loudspeaker Outputs

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

The Ayre V-5x 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.**

## Controls and

# Operation

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The Ayre V-5x 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

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*The master power switch on the rear panel also incorporates a circuit breaker.*

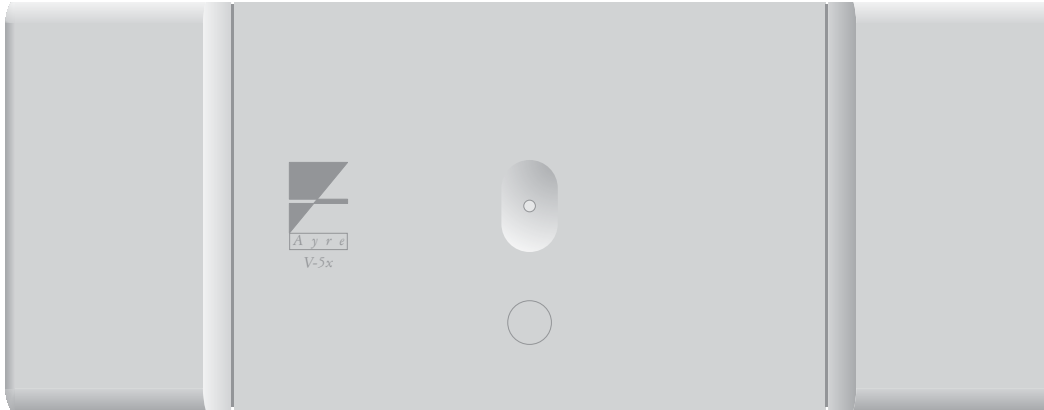
There are two power switches on the Ayre V-5x. The master power switch on the rear panel is normally intended to be left on at all times. The front-panel switch selects between the “Standby” and “Operate” modes.

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.





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 10 watts.

## Trigger Input

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*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-5x 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 force the amplifier to the “Operate” mode. In this state, the front panel switch is inoperative. When the applied voltage drops to zero, the unit reverts to “Standby”

and the front panel switch may be used to manually control the unit.

Some equipment instead utilizes pulses as a trigger signal. The V-5x 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. In this mode the front panel switch is always operative. However, operating the unit with the front panel switch may put the unit out of “synch” with the control device. If this should occur, simply press the front panel switch to restore “synch”.

## Break-In

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

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

## Numbers and

# Specifications

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<i>Power Output</i>	150 watts per channel continuous into 8 ohms 300 watts per channel continuous into 4 ohms
<i>Input Impedance</i>	100 k $\Omega$ – unbalanced inputs 200 k $\Omega$ – balanced inputs (100 k $\Omega$ per phase)
<i>XLR Input Polarity</i>	Pin 1 = Ground Pin 2 = Non-inverting (Positive) Pin 3 = Inverting (Negative)
<i>Gain</i>	26 dB
<i>Frequency Response</i>	DC - 200 kHz
<i>Power Consumption</i>	10 watts in standby mode 120 watts in operating mode, no signal
<i>Dimensions</i>	18" W x 16" D x 7- $\frac{3}{4}$ " H 46 cm x 41 cm x 20 cm
<i>Weight</i>	55 pounds 25 kg

In Case of

# Trouble

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

## Overheating

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*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.

## Rail Fuses

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*Indicator LEDs on the rear of the unit will glow red when one of the fuses blows. 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. If one of these rail fuses blows, that channel will fail to operate, although the front panel LED will typically continue to glow blue.



**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

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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.

## DC Offset

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The Ayre V-5x 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.

## Statement of

# Warranty

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*Please take a moment to fill out and return the enclosed warranty registration card.*

Your Ayre V-5x power amplifier is warranted against defects in workmanship and materials for a period of five years from the date of purchase. This warranty is transferable to subsequent purchasers within the original five-year period. All warranty claims must be made through an authorized Ayre dealer or distributor.

## Warranty Statement

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1. Ayre Acoustics, Inc. (Ayre) warrants the materials and workmanship of this product for a period of five years from date of first purchase. 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 or its authorized agent.
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.

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 an 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 implied warranties, including warranties of merchantability or fitness for any particular purpose shall be strictly limited in duration to five years from the date of original purchase, and upon expiration of the warranty period (five years), 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. Warranty registration cards must be completed and mailed to Ayre within 30 days of purchase. Ayre may, at its option, require from the purchaser valid proof of purchase (dated copy or photocopy of dealer's original invoice).

A Place for

# Notes

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