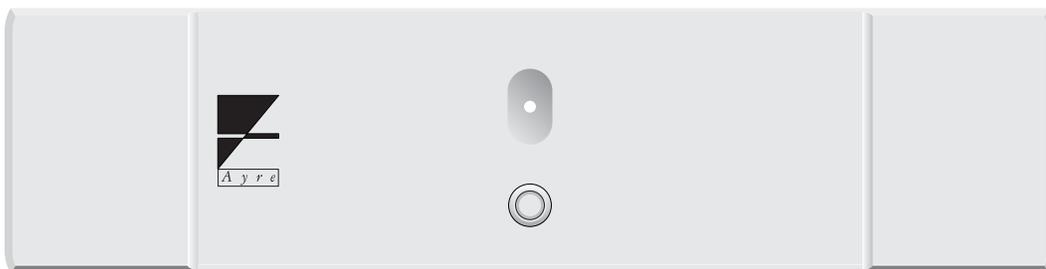


Ayre VX-5

# Owner's Manual

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Stereo Power Amplifier

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Welcome to

# Ayre

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*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.*

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

# Installation

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The Ayre VX-5 is easy to use. The following guidelines will ensure that the installation goes smoothly.

## Location

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*Do not stack the Ayre VX-5 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 in an open-backed cabinet or on a shelf. The VX-5 produces a moderate amount of heat during operation. Be sure to provide at least three inches (75 mm) of air space above the amplifier.



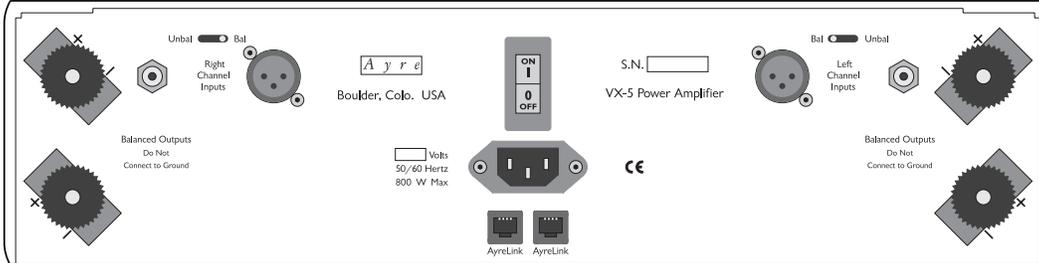
**An adequate supply of air flow will avoid overheating the amplifier.**

## Inputs

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*When you have a choice, a balanced connection will offer slightly higher sound quality than a single-ended connection.*

The Ayre VX-5 offers one pair of balanced inputs and one pair of single-ended inputs. Balanced connections are made via three-pin XLR connectors, while single-ended connections are made with RCA connectors.



Above each channel's input connectors is a small toggle switch. Be sure to set the switch to the correct setting for the input you have chose to use.



The input configuration switch does not protrude far from the rear panel. This is to avoid accidentally setting it to the wrong position. If necessary use a toothpick (or similar object) to select the switch position.

## Loudspeaker Outputs

*The heavy-duty output terminals of the Ayre VX-5 work best with speaker cables equipped with spade lugs.*

The Ayre VX-5 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.**



Two sets of speaker terminals are provided for each channel. This allows for easier use of multi-wired (e.g., bi-wired) connections. There is no difference between the pairs of outputs.

## AC Power

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The VX-5 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.

## AyreLink Ports

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The AyreLink communication system provides a convenient way to control your audio system. There are two AyreLink ports on the rear panel of the VX-5 stereo amplifier. Each port has four contacts and contains both an input and an output. Both ports function identically and may be used interchangeably.

AyreLink connections are made with commonly available two-line telephone line cords using modular (RJ-11) connectors. (These are the cords that connect the telephone set to the wall in many countries.) They are readily available in different lengths and various colors at most electronics stores.



**Be sure to use two-line telephone cords to make AyreLink connections. These can be identified by the four gold contacts on each connector. Single-line cords with only two gold contacts will not function in this application.**

*The linked components may be joined in any convenient order.*

The linked components should be connected in daisy-chain fashion, connecting each component to another until all of the linked components have been connected.



**When connecting the linked components to form a chain, be careful not to connect the two ends of the chain. Closing the chain to form a loop will cause the AyreLink system not to function.**

## 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, capacitors, and circuit board materials, a break-in period is necessary for the amplifier to reach its full sonic potential.

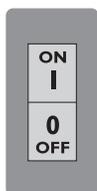


Each input uses a different physical path on the input circuit board. Therefore a separate break-in period is required for each input.

# Operation

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In addition to the normal controls on the front panel, the Ayre VX-5 may also be controlled via other AyreLink-equipped components.



## On/Off (1/0)

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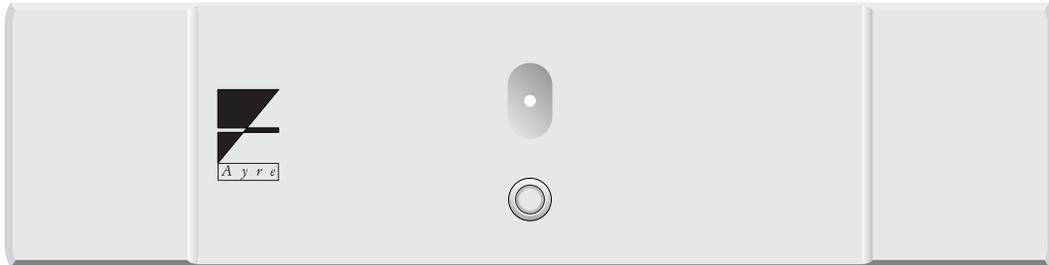
The main power switch for the VX-5 is a rocker at the top center of the rear panel. This switch disconnects the unit completely from the AC power.

When the amplifier is turned “off” none of the auxiliary functions (e.g., the AyreLink system communication) are operable. After the unit is turned on, it may take perhaps 30 minutes or so to fully warm up and sound its best.

## Mute/Low-Power Consumption

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The front-panel button on the VX-5 serves two functions—mute, and control of the low-power consumption mode.



## Mute

A short press of the front-panel button provides an easy way to temporarily mute the output of the VX-5. Pressing the button a second time restores the output.



When the mute function is activated, the front-panel LED will glow green.



## Low-Power Consumption Mode

Press and hold the front-panel button for three seconds to enter the low-power consumption mode. The audio will shut off, yet the auxiliary functions remain active. This mode is indicated by illuminating the green LED ring in the button.



A long press of the front-panel button will place all AyreLinked components in your system into low-power consumption mode.

The warm-up time is minimized by applying power to the audio circuitry. To reduce power consumption when not listening to music, all bias current is removed from the output stage.

# Customization

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The VX-5 power amplifier is configured from the factory for flexible operation in most audio systems. However, in certain installations it may be desirable to change the factory default settings or create an alternate control connection.

## Display Brightness

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Normally the brightness of the status LED is controlled by other linked components connected to the VX-5 via the AyreLink communications port. However if there are no other AyreLink components available, the brightness level may be set while the unit is in the configuration mode.

To enter the configuration mode, turn the amplifier “Off” with the rear-panel power switch for at least one minute. Then press and hold the front-panel button while switching the power back “On”. The status LED will flash violet to indicate the amplifier is in configuration mode.

The unit will remain in configuration mode for ten seconds. During that time, pressing the front-panel

button will change the default setting for the brightness of the status LED as noted below:

- **One press – Low brightness**
- **Two presses – Medium brightness**
- **Three presses – High brightness**

After the ten-second configuration period has elapsed, the status LED will revert to green (“Mute” mode).



If no button presses are detected during the ten second period, the unit will revert to the factory default setting (high brightness).

Changes to the default settings will also be transmitted via the AyreLink communication system to other linked components.

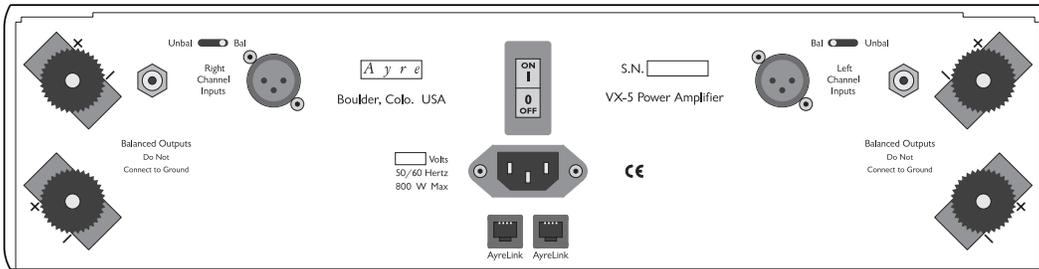
## Trigger Control

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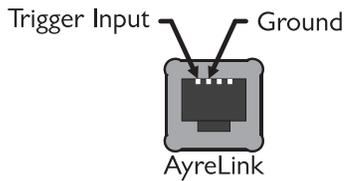
A trigger control allows one component to control the low-power consumption mode of another component. If there are no AyreLink source components available to control the operation of the VX-5 amplifier, it may be convenient to use the trigger control from a source component.

The trigger signal from a source component will directly control the VX-5 amplifier. The VX-5 can then in turn control amplifiers linked by the AyreLink communications system. Connect the AyreLink ports of your components in a daisy-chain fashion as described in the chapter “Connections and Installation” with the VX-5 at one end of the chain.

The unused AyreLink port on the amplifier is then used as a trigger input.



*Rear view of VX-5 amplifier.*



An adapter cable must be fabricated to connect the trigger output of the control component to the AyreLink port of the VX-5 amplifier. The easiest way to do this is to remove the modular (RJ-11) connector from one end of a two-line telephone line cord. (This is the type of cord that connects the telephone set to the wall. A two-line cord will have four gold contacts on each connector.) Then attach the connector appropriate for the component with the trigger output. Please refer to the owner's manual of that source component for details.



**The trigger voltage should be between +5 and +12 volts DC for proper operation. The current draw of the trigger input on the AyreLink port is less than 5 mA.**

There are two signaling methods that may be used; level and pulse. The VX-5 automatically senses which type of trigger signal is being sent and responds accordingly.



A positive-going pulse of greater than 250 msec is treated as a level-sensitive trigger. Shorter pulses are treated as a pulse-sensitive trigger. The minimum detectable pulse length is 200  $\mu$ sec.

During level-sensitive operation, applying a voltage to the trigger input will set the amplifier to the “Operate” mode. When the applied voltage drops to zero, the unit reverts to the low-power consumption mode.

In the pulse-sensitive mode, a positive-going pulse will toggle the amplifier between the low-power consumption and “Operate” states, duplicating the action of the right-hand front-panel button when it is held for three seconds.



The front-panel button remains operative when the trigger input is used. Therefore, using the front-panel button will put the amplifier out of “sync” with the trigger control device. When used with level-sensitive trigger operation, the next trigger action will automatically restore “sync”. However when using pulse-sensitive trigger operation, “sync” can only be restored by pressing the front-panel button a second time.

## Numbers and

# Specifications

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<i>Power Output</i>	175 watts per channel continuous into 8 ohms 350 watts per channel continuous into 4 ohms
<i>Input Impedance</i>	1 M $\Omega$ – unbalanced inputs 2 M $\Omega$ – balanced inputs (1 M $\Omega$ 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 - 250 kHz
<i>Power Consumption</i>	35 watts in low-current consumption mode 325 watts in operating mode, no signal
<i>Dimensions</i>	17- <sup>1</sup> / <sub>4</sub> " W x 18- <sup>3</sup> / <sub>4</sub> " D x 4- <sup>3</sup> / <sub>4</sub> " H 44 cm x 48 cm x 12 cm
<i>Weight</i>	52 pounds 24 kg

In Case of

# Trouble

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

## Overheating

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If the unit is operated with insufficient ventilation, the internal temperature may become too high, triggering the thermal protection. In this case the amplifier will mute, the bias current to the output stage will be removed, the front-panel LED will glow orange, and the front-panel mute/low-power consumption button will be inoperative.



If connected to an AyreLink-equipped preamplifier, a message indicating the amplifier has overheated will be displayed.

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

Once the unit has cooled, the LED ring in the pushbutton will glow green, but the front-panel LED will remain orange so that the cause of the error is known. To restore the unit to the normal operation mode, simply press the front-panel button.

## Rail Fuses

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Eight internal power supply fuses protect both the loudspeakers from excessive current and the amplifier from short-circuits. If any of these fuses blow, the amplifier will not operate and the front-panel LED will flash red.



If connected to an AyreLink-equipped preamplifier, a message indicating the amplifier fuse has blown will be displayed.

The amplifier must be completely disconnected from the AC power to replace the fuses.



**Do not remove the amplifier cover. Hazardous voltages may exist inside the unit. Please refer fuse replacement to a qualified service technician.**

## AC Line Voltage

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If the AC line voltage drops below 85% of normal (brown-out), the front-panel LED will glow violet and the unit will not operate.



If connected to an AyreLink-equipped preamplifier, a message indicating the AC line voltage is too low will be displayed.

When the AC line voltage returns to normal, the LED ring in the pushbutton will glow green, but the front-panel LED will remain violet, so that the cause of the error is known. Press the front-panel button to return the unit to the operate mode.

## DC Offset

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The Ayre VX-5 incorporates a circuit to detect the presence of DC at the output terminals which could be harmful to the loudspeaker. In this situation, the front-panel LED will glow red, the input will be muted, the bias will be removed from the output stage, and the amplifier will not operate.



If connected to an AyreLink-equipped preamplifier, a message indicating the amplifier has DC at the output will be displayed.

If the DC offset was coming from a faulty source component, when the amplifier input mutes the source of the fault will be removed. The LED ring in the pushbutton will glow green, but the front-panel LED will remain red, so that the cause of the error is known. If the fault is internal to the unit, the LED ring in the push-button will not glow green.

If the fault was due to a source component, disconnect it from your system. Then press the front-panel button to return the VX-5 to the normal operate mode and select a different source component. If the system operates properly in this case, take the faulty source component to an authorized dealer or service center.



**If there are any unusual noises coming from the loudspeaker, turn the rear-panel AC power switch to “Off/0” *immediately*. Please return the unit to your authorized dealer or service center.**

Statement of

# Warranty

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## North American Warranty

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Your Ayre VX-5 power amplifier is warranted against defects in materials and workmanship 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

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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.

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. 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 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. The remaining period of this warranty is only transferable to subsequent purchasers if the product is resold by an authorized Ayre dealer.

## 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.

A Place for

# Notes

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*Serial Number:* \_\_\_\_\_

*Purchase Date:* \_\_\_\_\_

*Dealer:* \_\_\_\_\_

*Salesperson:* \_\_\_\_\_



*Ayre Acoustics, Inc.*  
*2300-B Central Avenue*  
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