

Ayre PX-8

# *Owner's Manual*

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Phono Preamplifier

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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.*

Thank you for choosing the Ayre PX-8 phono preamplifier. We hope it brings you as much joy in listening as we experienced in designing and building it.

Since 1993, Ayre has been dedicated to crafting world-class, award-winning audio components that push the boundaries of musical realism. Every product we create is driven by our unwavering commitment to sonic purity, innovation, and meticulous craftsmanship. The PX-8 embodies this philosophy, distilling decades of expertise into a phono preamplifier that faithfully preserves the essence of every recording.

From your very first listening session, the PX-8 reveals the warmth, immediacy, and nuance of a live performance. Its remarkable resolution, combined with a natural and effortless musicality, draws you deeper into the music, offering a sound that is as natural as it is breathtaking.

Built to the highest standards with uncompromising materials and precision, the PX-8 is designed to provide a lifetime of exceptional performance.

## *Quick Start*

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To begin enjoying your PX-8, connect your turntable leads to the appropriate input on the rear of the unit.

Supply the PX-8 with power from a wall outlet using the supplied IEC power cord and toggle the rear power switch to the ON (I) position.

After the power-on splash screen display sequence has finished, press the left-hand button on the front of the PX-8 to enter active mode. Use the right-hand button to switch to the input that you connected your turntable to. Then use the control ring to select and adjust the settings for the current input.

# *Installation*

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The Ayre PX-8 is easy to set up and use. The following guidelines will ensure the installation goes smoothly.

In this section, you will find descriptions of the various connections that are available on your PX-8, as well as recommendations for their intended use.

## *Location*

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*The remote's infrared beam will travel through glass.*

A good location for the PX-8 is in an open-backed cabinet or on a shelf. The receiver for the remote control is between the two front panel buttons. A line of sight from the listening position will ensure maximum range.

## *Break-in Period*

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*Once installed, a break-in period of around 100 to 500 hours will allow the PX-8 to reach its full potential.*

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

# *Phono Inputs*

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

## *Analog Inputs*

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Your PX-8 comes with two sets of analog inputs: one pair of balanced (XLR) inputs and one pair of single-ended (RCA) inputs.

As the phono cartridge is an inherently balanced device, the Ayre PX-8 offers balanced inputs via XLR connectors.



Some single-wire cables are bound together in a way that makes it difficult to reach both the left and right connectors on the back of the PX-8.

## *Optional Input*

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The PX-8 provides left and right internal expansion slots for optional input cards, allowing the phono stage to be configured for specialized, non-standard signal types beyond conventional moving-magnet or moving-coil cartridges.

One example for this would be an Optical Cartridge Input for use with DS Audio cartridges.

# Outputs

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## Analog Outputs

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*The single-ended RCA output signal will be 6dB lower than the balanced outputs.*

Your PX-8 includes both balanced (XLR) and single-ended (RCA) outputs on its rear panel. These outputs are both active and may be used together if desired.

## Digital Outputs

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*The digital outputs on the PX-8 are an option which can be included when the product is first ordered or can be added at a later time.*

The Analog-to-Digital option of the PX-8 includes four outputs: one AES balanced XLR (AES/EBU), one RCA (S/PDIF), one Optical (TOSLINK), and one USB.

The USB output uses a standard type B connector designed for computer peripheral devices and is the preferred option for connecting to a personal computer.



The AES/EBU output allows cables in excess of 300 feet (100 meters).

## *AyreLink Ports*

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*To use AyreLink with an integrated control system, an optional RS-232 adapter box is available. Contact your Ayre dealer for details.*

*For improved stack integration, try connecting your Ayre equipment together with our AyreLink*

The AyreLink communication system provides a convenient way to control your audio system. There are two AyreLink ports on the rear panel of the PX-8. Each port has four contacts and contains both an input and an output. Both ports function identically and may be used interchangeably.



Be sure to use two-line telephone cords to make AyreLink connections. These can be identified by the four gold contacts on each connector.

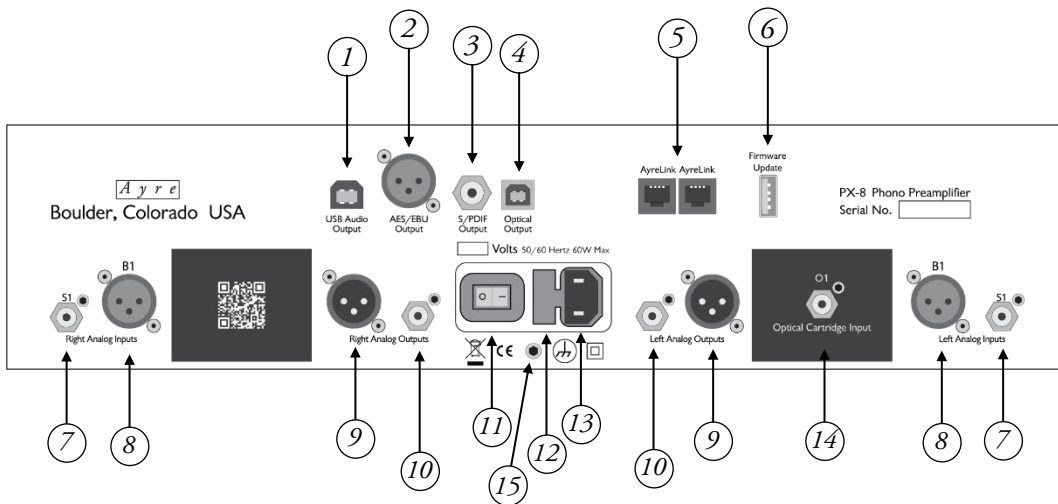
The linked components should be connected in daisy-chain fashion, connecting each component to another until all of the linked components have been connected. Be careful not to connect the two ends of the chain.

Closing the chain to form a loop will cause the AyreLink system not to function.

## *Firmware Update Port*

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The Firmware Update port allows you to update core Firmware with a USB flash drive. For more information, see page 20.



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|---|---|
| <ul style="list-style-type: none"> <li>1) <i>USB Audio Output</i></li> <li>2) <i>AES/EBU Output</i></li> <li>3) <i>S/PDIF Output</i></li> <li>4) <i>Optical Output</i></li> <li>5) <i>AyreLink Ports</i></li> <li>6) <i>Firmware Update Port</i></li> <li>7) <i>Single-ended Analog Inputs</i></li> </ul> | <ul style="list-style-type: none"> <li>8) <i>Balanced Analog Inputs</i></li> <li>9) <i>Balanced Analog Outputs</i></li> <li>10) <i>Single-ended Analog Outputs</i></li> <li>11) <i>On/Off Power Switch</i></li> <li>12) <i>AC Fuse holder</i></li> <li>13) <i>IEC Power inlet</i></li> <li>14) <i>Optional Input</i></li> <li>15) <i>Ground connection</i></li> </ul> |
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- 1) *Left-hand Button*
  - *Sleep/Mute*
- 2) *IR Receiver / Status LED*
- 3) *Right-hand Button*
  - *Input Select / Output Mode*
- 4) *Display*
- 5) *Control Ring*

# Operation

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The following chapter covers the operating details of the PX-8. On the front of the unit, you will find two buttons, a status LED, the display window, an IR receiver for the remote, and a control ring.

## *System-sleep Mode*

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*While muted, the phono preamplifier prevents signal from reaching its outputs.*

When first powered on, the PX-8 automatically enters System-sleep mode. A green status LED indicates that the unit is powered on, but the audio circuitry is muted. To activate the PX-8, simply press the left-hand button on the front of the unit. If you have connected the PX-8 to other components via AyreLink, holding the button for three seconds, will also turn on these connected devices.

## *Active Mode*

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*Active mode lifts the mute function from the audio circuit and enables the system for listening.*

Once in Active mode, the audio output in the PX-8 is enabled. The currently selected input is displayed on the screen and any signal present at that input will be directed to the outputs.

## *Input Selection*

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*To make input selection easier, try disabling any inputs you aren't using through the menu.*

By pressing the right-hand button on the front panel, the currently selected input will cycle to the next enabled input. To learn more about enabling/disabling inputs, see page 17.

## *Input Controls*

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*Settings selected for each input will be saved for that input. If you have multiple inputs enabled, the specific settings for each will be applied as you switch between them.*

For the current input you can adjust Gain, Loading, and channel Polarity. Use the left and right arrows on the control ring to scroll through the settings. The current selection will remain highlighted for a few seconds, during which you can use the up and down arrows to change the setting.



Continue toggling with the left or right arrows on the control ring to move between the input and output controls.

## *Output Controls*

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*Plugging in the USB output to a computer will auto-enable the Analog-to-Digital mode and the USB output if it is currently disabled.*

Press and hold the right-hand button for two seconds to toggle Analog-to-Digital mode between Enabled and Disabled.

You can set the Gain, Sample Rate, Digital Filter, and Bit Depth for the active digital outputs. Use the left/right arrows on the control ring to step through these parameters, and the up/down arrows to change their values.

*Your PX-8 will display left and right channel reference level meters on either side of the display as a convenience. Please use the meters on your recording software/hardware when fine tuning for a higher degree of accuracy.*

Working in conjunction with the analog gain settings, your PX-8 has the ability to fine tune the digital output level in 2.5dB steps, giving you the ability to maximize the dynamic range and avoid clipping.

When the USB output is connected to a computer, the Sample Rate is set by the recording software for all digital outputs and cannot be adjusted on the PX-8.

## *Mute / System-sleep*

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A quick press of the left-hand button will mute the audio outputs of the PX-8. While muted, an icon will appear on the display. A second short press of the left-hand button will un-mute the unit.

By pressing and holding the left-hand button for three seconds, the PX-8 and any AyreLink connected devices will return to System-sleep mode.

## *Display*

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*The display in the PX-8 is rated for years of use, but to keep it in best condition we recommend that the display be allowed to timeout.*

After a period of inactivity the PX-8 display will automatically power off, indicated by a blue status LED. This minimizes the amount of active digital circuitry to ensure the best sound quality while also extending the lifetime of the display. This feature may be extended, shortened, or disabled entirely through the menu, see page 18.



Changing the brightness on your PX-8 will adjust the display brightness of any AyreLink connected components to the same level.

# *Customization*

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Your PX-8 offers a high level of flexibility in terms of setup. The following information will allow you to configure the unit in the best way for your system.

## *Setup Menu*

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To access and operate the menu use the two buttons to the left of the display.

### *Operation using front panel buttons*

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To access the menu, you must first place the unit into System-sleep mode. This can be done by pressing and holding the left-hand button for 3 seconds and will be indicated by a green status LED. Next press and hold the right-hand button for three seconds. "Setup Menu" will be displayed on the screen briefly, then the root menu will load.

Once in the menu, the right-hand button will allow you to adjust your current selection; each press will cycle through the list of available options. With the desired selection highlighted, a quick press of the left-hand button will select it. To return to the previous screen, press and hold the left-hand button.

## *Screen layout and icons*

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*Arrow symbols indicate more content is available off-screen:*



*Setting Selection marker:*



*Different settings are available for the different types of inputs available in the PX-8.*

The menu screen is organized with the section title at the top and a list of options below.

At any one time, four options may be displayed on the screen. An arrow symbol on either the left or right side of the screen indicates that more options are available off-screen, in that direction.

Some screens contain a list of sub-menus, while others control a specific setting. On a setting screen, the current value of the setting being modified is indicated by a mark to the left of that setting. Once a new setting has been selected, the mark moves to reflect the change.

## *Menu Structure and Contents*

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From the main menu, you will have access to the four main sub-menus: Input, Output, Display, and System.

The **Input** sub-menu will allow you to access settings specific to each input of your PX-8.

The **Output** sub-menu provides access to settings for each of the digital outputs.

The **Display** sub-menu will allow you to adjust the display timeout setting, which causes the display to turn off after a preset period of inactivity.

The **System** sub-menu will allow you to check current F/W revisions, check module installation and perform a factory reset.

## *Input Sub-menu*

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After entering the Input sub-menu, you can select the input (Balanced, Single Ended, or Optional Slot) that you would like to modify. The settings available for the selected input will appear.

**Enable (Enable/Disable)** – This setting determines whether an input is enabled for use. Disabled inputs are not selectable, allowing quicker access to inputs that are in use. By default, all inputs are enabled.

**Name** – The name displayed for each input can be assigned individually with either a preset or a custom name. By selecting “Custom” from the name selection screen, you may modify the stored custom name for the selected input up to the character limit of ten. The default name for each input matches the input name on the rear-panel of the PX-8.

**AyreLink ID (A - Z)** – The AyreLink ID associated with an input refers to the source connected to that input. Selecting the correct ID allows for AyreLink functionality between your PX-8 and a connected Ayre source component.

**Reset (Yes / No)** – Selecting Yes will restore all settings for the selected input to their default.

*The AyreLink ID setting allows the system to automatically configure when an Ayre source is turned on.*

## Output Sub-menu

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Once you enter the Output sub menu, you will be able to use the right-hand button to toggle between the installed digital outputs.

*Disabling unused digital outputs will minimize radiated HF noise for a cleaner audio environment.*

**Enable (Enable/Disable)** – This setting determines whether the selected digital output is active when Analog-to-Digital mode is enabled.

**Reset (Yes / No)** – Selecting Yes will restore all settings for the selected output to their defaults.

The Display sub-menu contains the Display Timeout Setting.

## Display Sub-menu

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**Display Timeout (5s, 15s, 30s, 60s, Never)** – While the system is active, the display will automatically turn off after a period of inactivity defined by this setting.



Please note that leaving the display timeout in “Never” mode can cause faster than normal fading of the display.

## *System Sub-menu*

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The System sub-menu provides access to system information as well as the Factory Reset function.

**FW Revisions** – The firmware revision screen contains all the current revision codes installed in the unit.

**Options Installed** – The PX-8 offers several optional inputs. This screen will indicate whether the optional Analog-to-Digital hardware has been installed, as well as any Input card options.

**Factory Reset** – The factory reset function restores all settings to their defaults.



Performing a factory reset will reset all names and settings for ALL inputs and outputs.

## *Firmware Updates*

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Firmware updates will be made available for the PX-8 as new features are added or as ease of use is improved. There are two types of firmware updates that are available for the PX-8.

For detailed information about firmware updates, and to check for available updates, please visit [www.ayre.com/support](http://www.ayre.com/support)



Do not turn off the PX-8 while updates are in progress.

### *USB Firmware Updates*

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*To successfully update over USB, ensure that the file placement is correct. Also note that file and folder names are case sensitive.*

The system (SYS) and signal processing (DSP) firmware can be updated using the USB Firmware Update port on the rear of the unit.

When the unit is first powered on with the On/Off rocker switch, it will automatically check for a USB flash drive in the USB Firmware Update port. If a drive is detected, it will search for available firmware files and install them.

To perform a USB firmware update, please refer to the following procedure.

- 1) If the PX-8's firmware revisions do not match the revisions available at [www.ayre.com/support](http://www.ayre.com/support), you may download the new files from the website to your computer by following the links on the page.

- 2) The new firmware will be in a compressed folder called "PX8boot.zip". This compressed folder contains two program files, "px8\_p---.hex" and "px8\_x---.bin". Place these two files into a folder called "PX8boot" in the root directory of a USB flash drive. Please note the folder and program files are case sensitive.



Both program files should be placed into the USB flash drive at the following directory location: "[Drive:]/PX8boot/".

- 3) Turn the power switch on the back panel of the PX-8 to the OFF position and allow a few seconds for the device to power down.
- 4) Insert the USB flash drive into the port labeled "Firmware Update" on the back panel.
- 5) Turn the power switch on the back panel of the unit into the ON position. The firmware update will commence automatically, and the screen will show "Installing Update".
- 6) Once the update is complete, the unit will start as normal. Once in the System-sleep state, return the unit to operation mode by pressing the left-hand button.
- 7) The USB flash drive can be safely removed from the Firmware Update port.

## *Specifications*

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<i>Analog Inputs</i>	17mV rms max
<i>Input Impedance</i>	50 $\Omega$ , 75 $\Omega$ , 100 $\Omega$ , 150 $\Omega$ , 200 $\Omega$ , 250 $\Omega$ , 500 $\Omega$ , 1k $\Omega$ , 5k $\Omega$ , 10k $\Omega$ , 47k $\Omega$ (Electronically Selectable)
<i>Analog Outputs</i>	Balanced: 10 V rms max Single-ended: 5 V rms max
<i>Output Gain</i>	Balanced: 45 dB, 55 dB, 65 dB, 75 dB Single-ended: 39 dB, 49 dB, 59 dB, 69 dB
<i>Digital Outputs</i>	Bit Depth: PCM 16, 20, 24 bits
<i>USB</i>	Class 2: 44.1, 48, 88.2, 96, 176.4, 192, 352.8, 384, 705.6, 768 kHz, DoP64, DoP128, and DoP256
<i>S/PDIF</i>	44.1, 48, 88.2, 96, 176.4, and 192 kHz, DoP64
<i>TOSLINK</i>	44.1, 48, 88.2, 96, 176.4, and 192 kHz, DoP64
<i>AES/EBU</i>	44.1, 48, 88.2, 96, 176.4 and 192 kHz, DoP64

<i>Digital Frequency Response</i>	DC – 20 kHz (44.1 kHz sample rate) DC – 22 kHz (48 kHz sample rate) DC – 40 kHz (88.2 kHz sample rate) DC – 44 kHz (96 kHz sample rate) DC – 60 kHz (176.4 kHz sample rate) DC – 66 kHz (192 kHz sample rate) DC – 20 kHz (DSD64) DC – 40 kHz (DSD128) DC – 60 kHz (DSD256)
<i>Analog Frequency Response</i>	RIAA curve accurate to $\pm 0.05$ dB (20 Hz – 20 kHz)
<i>XLR Input Polarity</i>	Pin 1 = Ground Pin 2 = Non-inverting (Positive) Pin 3 = Inverting (Negative)
<i>Power Consumption</i>	60 watts maximum
<i>Dimensions</i>	17.25" W x 13.00" D x 4.5" H (44 x 33 x 11.5 cm)
<i>Weight</i>	12.5 pounds (5.7 kgs)

In case of

# Trouble

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In the event that you experience any technical difficulties with your Ayre product, the following items may help to solve the problem or track down the cause.

## *Fault Messages*

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The Ayre PX-8 will display faults when a problem occurs. The following faults are listed, along with possible solutions to the problem.

### *Low Voltage*

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*If you have trouble clearing any of these faults, contact your local Ayre dealer.*

If the AC line voltage supplied to the unit drops below operable levels, this fault will be displayed. Once normal power is restored to the unit, the fault should clear itself.

If the fault persists, try restarting the PX-8.

### *Optical Short*

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This fault will be displayed if the Optical Cartridge Input option is installed, and an over-current condition is detected. This can be caused by connecting the wrong channels, or using tonearm wiring or cables that have a shared ground between the left and right channels.

## *Persistent Faults*

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In the event that any fault persists, or if another issue occurs but is not displayed, please contact your Ayre dealer for further assistance.

## Statement of

# *Warranty*

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## *North American Warranty*

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Your Ayre PX-8 preamplifier is warranted against defects in materials and workmanship for a period of five years from the date the unit was shipped from Ayre. Additionally, you have the option at no cost to begin the warranty from your 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 ninety days of product delivery.

During the warranty period, Ayre will repair, or at our discretion, replace a product found to be faulty. All warranty repairs or service must be conducted by an authorized Ayre agent. Please contact your Ayre dealer for any service requests.

For further information regarding Ayre's warranty policy, please refer to the Warranty Registration Card included with your product.

## *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.  
6268 Monarch Park Place, Suite B  
Niwot, Colorado 80503

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 return 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*

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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.*  
*6268 Monarch Park Place Suite B*  
*Niwot, Colorado 80503*

*[www.ayre.com](http://www.ayre.com)*  
*+1-303-442-7300*