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HARMONY HP2A | Manual

V1.2

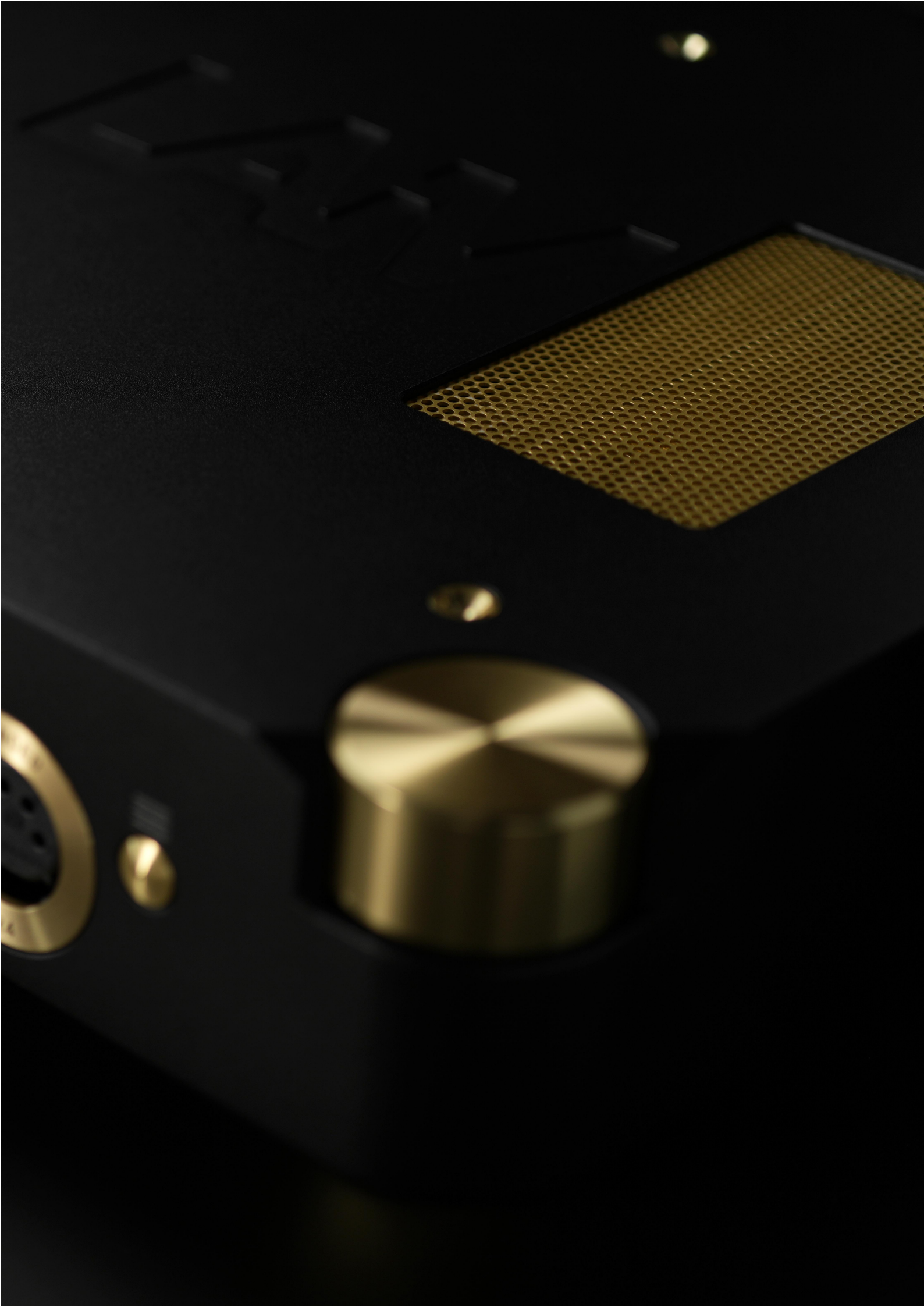


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1. Getting Started

1.1. Introduction

A warm welcome to you as a cherished member of our audiophile community, where we are dedicated to designing dreams, yours specifically. It is an honor to have you embark on a journey of premium sound quality with our products. Introducing our state-of-the-art Harmony HP2A, meticulously engineered with a focus on user experience and convenience. Drawing from over a decade of industry experience in engineering and audio, we've seamlessly integrated the best of both worlds to design a preamplifier and headphone amplifier that sets new standards in performance and usability.



1.2. Safety Instructions

We're thrilled to have you as part of our family, and your safety is our utmost priority. Before you dive into using your new HP2A, let's go over some essential safety tips to ensure everything goes smoothly:

- 1) **Get to Know Your HP2A:** Take a moment to flip through the user manual. It's packed with handy information about how to use your HP2A safely and effectively.
- 2) **Power Up with Caution:** Before plugging in your HP2A, please check the AC input switch under the appliance to make sure it is configured to the compatible standard. Avoid overloading sockets or using frayed cords to prevent any shocking surprises.
- 3) **Stay Dry and Grounded:** Keep your HP2A away from water sources and damp areas. Remember, electricity and water don't mix well! And always use grounded outlets to avoid any shocking situations.
- 4) **Keep it Cool:** Your HP2A needs space to stay cool. Make sure there's plenty of airflow around it. Avoid placing your HP2A in direct sunlight or near heat sources like radiators or stoves. Extreme heat can damage delicate components and shorten the lifespan of your HP2A.
- 5) **Keep it Clean, Keep it Safe:** Regular cleaning is key to keeping your HP2A happy. But remember, gentle is the name of the game—no harsh chemicals or scrubbing, please!
- 6) **Hands Off the Repairs:** If your HP2A starts acting up, don't go all DIY hero on it. Leave the fixes to the pros. They've got the skills and know-how to get things back in working order safely.
- 7) **Keep it Kid-Safe:** Little ones are curious creatures, so make sure to keep cords and plugs out of their reach. And always supervise their interactions with HP2A to avoid any unplanned experiments!
- 8) **Power Down for Peace of Mind:** When you're done using your HP2A, hit the off switch. It's a simple step that can prevent any unwanted surprises while you're away.
- 9) **Trust Your Instincts:** If something seems off—smoke, sparks, strange noises—don't ignore it! Shut off the power and reach out to us or a professional for help ASAP.
- 10) **Safety First, Always:** Remember, your safety comes above all else. Take your time, follow these tips, and enjoy using your HP2A with confidence!

If you ever have any questions or concerns about using your HP2A safely, don't hesitate to reach out. We're here to help you every step of the way!

1.3. Quick Start

1

Sit back, relax, and coffee.



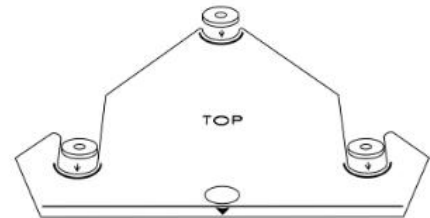
Register
Extended
Warranty



Read
Guide

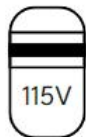
2

Place the alignment card in the desired location and insert the spike shoes into the guiding holes.

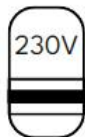


3

Confirm the AC input at the bottom of the device.



or

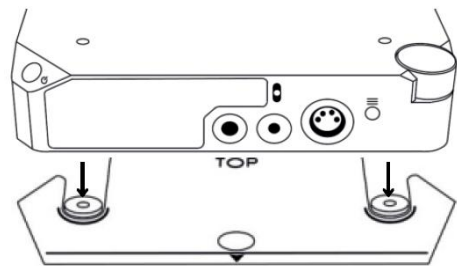


US/CA/JP
100-127VAC

EU/UK/SG
220-240VAC

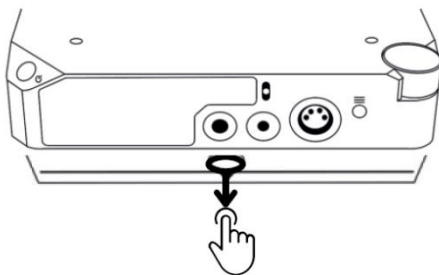
4

Align the device with the two front spike shoes and place it on them.



5

Remove the alignment card by pulling it out through the hole at the front.



6

Connect all the cables and insert the battery into the remote control.



7

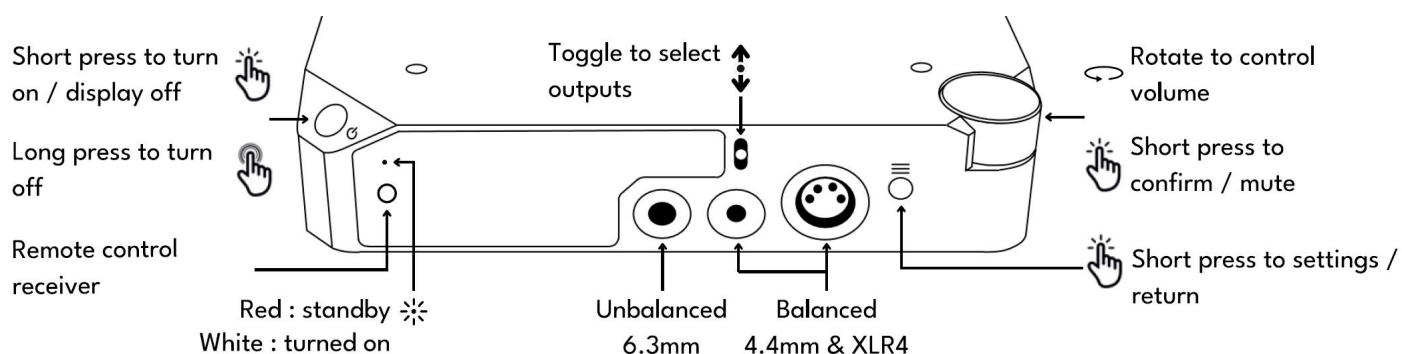
Turn on the device and ready to rock and roll!



2. Basics About The HP2A

2.1. The Front Panel

All the information and controls can be accessed using the front panel of the HP2A. The controls on the front panel are similar to those of the IR remote control except the selection of output modes, providing a seamless experience for controlling the device.



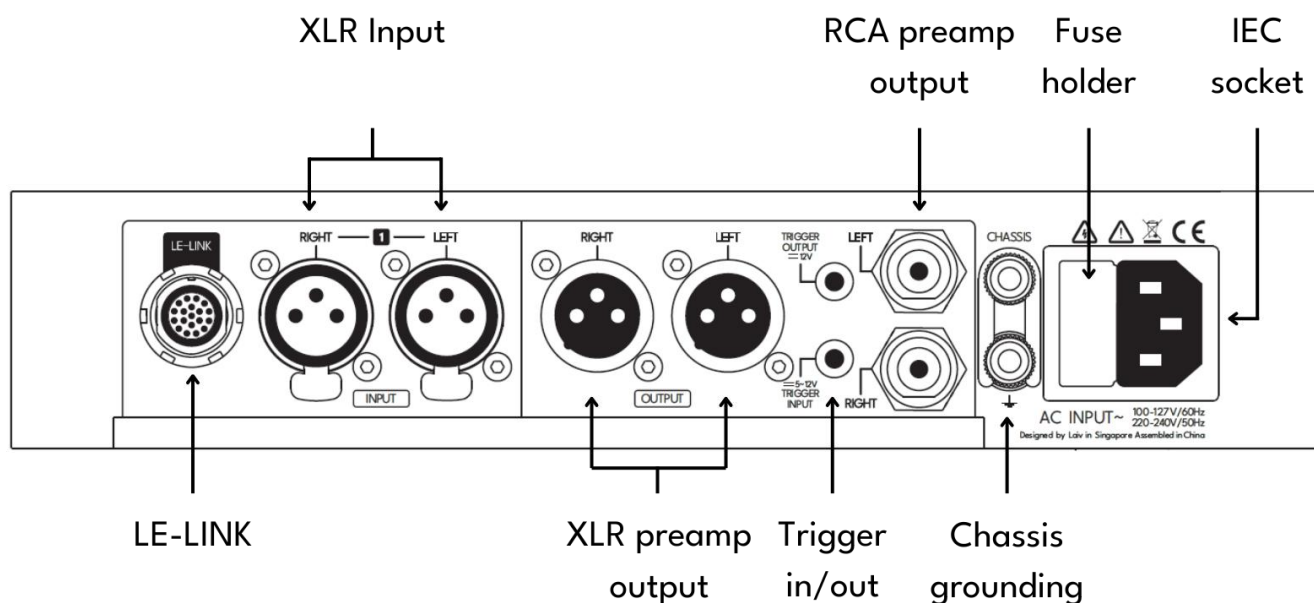
2.2. The OLED Display

Experience the user-friendly dual OLED display, boasting a crisp 256 x 128 resolution in total. Its intuitive interface offers seamless navigation and easy access to settings, providing unparalleled convenience.



2.3. The Rear Panel

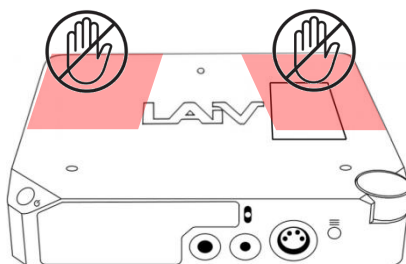
The rear panel of the HP2A features three distinct sections. Positioned on the far right is the IEC inlet, providing power to the device, accompanied by a grounding connection for the chassis ensuring optimal performance. Moving towards the center, you will find a True Balanced XLR output, and a single-ended RCA output. The trigger input and output also placed here for system automation, allowing coordinated power control. Finally, on the left side, is the analog input, comprising of a True Balanced XLR input for high-fidelity audio sources. Additionally, the LE-LINK port provides the option to expand the input capabilities using Harmony LExt modules, adding even more flexibility to your audio system.



When using the headphone amplifier mode, please avoid touching the heatsink or the grille, as they may become hot during operation. For your safety and comfort, allow the unit to cool down before handling these areas.

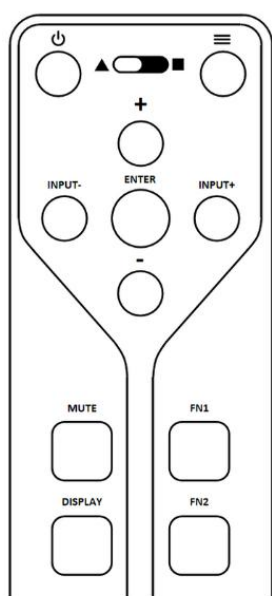



A three spikes design is used, so avoid pressing the two top areas shown below to prevent unstable placement that may caused damage.




2.4. Remote Control

Introducing our remote control, meticulously crafted with simplicity in mind. Featuring easily accessible keys for common functions, navigating your device has never been smoother. With configurable function keys for quick access to your preferred settings, personalizing your experience is effortless. What sets our remote apart is its versatility— with just a simple switch, a single remote can seamlessly control two products in our lineup, offering unparalleled convenience and efficiency.



 : Turn on or off

 : Enter or exit the settings menu

 : Select device shape

 : Select settings

INPUT+/- : Select inputs or settings menu

ENTER : Confirm settings

MUTE : Mute on or off

DISPLAY : Display on or off

FN1/2 : Function Key 1 and 2



Q: Why is my remote control not working out of the box?

A: The battery is not included due to shipping limitations. Please ensure you insert a battery CR2032 before attempting to use it.



Q: Why is my remote control still not working after I inserted the battery?

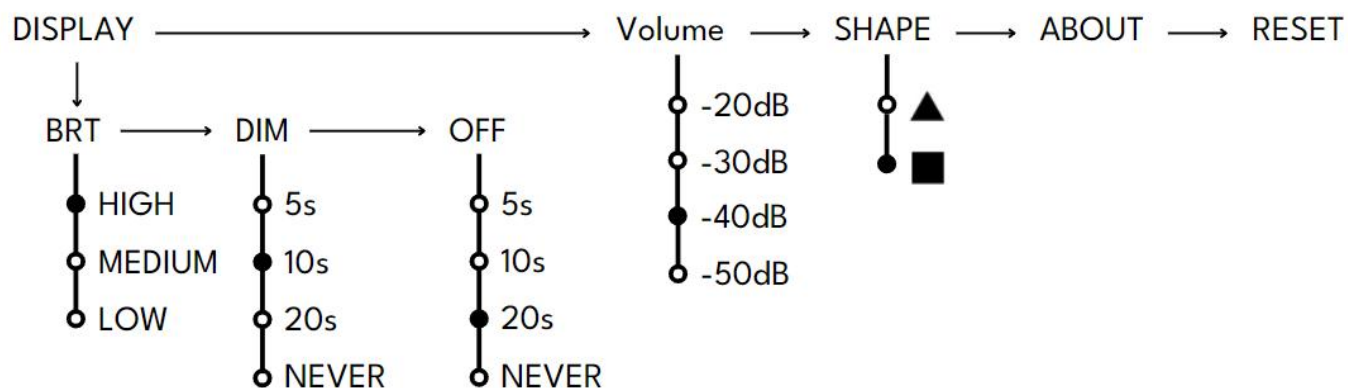
A: Please double-check that the shape of the device on the remote control matches the shape of the HP2A. It will not work if they don't match.



3. Settings For The HP2A

3.1. Settings Menu

The settings menu on the Harmony HP2A is super simple and straightforward, no overwhelming options, just what you need. You can tweak the display settings like brightness, delay dim, and delay off, and there's also a volume limit setting so you can keep the start up volume at a comfortable level. Plus, you've got options to adjust the shape setting for the device and, if needed, do a factory reset. It's all about making things easy for you!



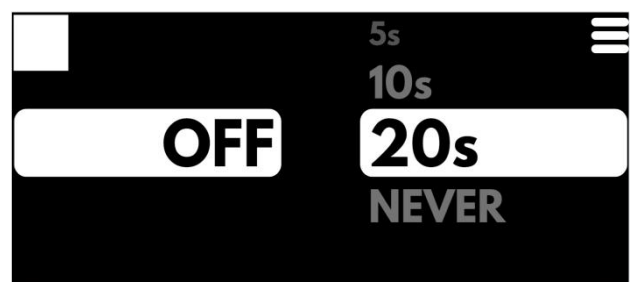
3.2. Display Brightness and Delay Setting



The display brightness and delay settings feature provide you with full control over your viewing experience. With the display brightness setting, you can adjust the brightness of the display to your preference, ensuring optimal visibility in any lighting condition.



Additionally, our delay function allows the display to automatically dim and turn off after a period of inactivity, conserving energy and minimizing distractions. The delay dim function reduces the brightness to LOW after the selected time period.



Both delay dim and delay off can be used simultaneously, with the delay off setting taking precedence over the delay dim function. With the combination of both settings, you can reduce the brightness of the display before turning off the display completely.

3.3. Volume Control



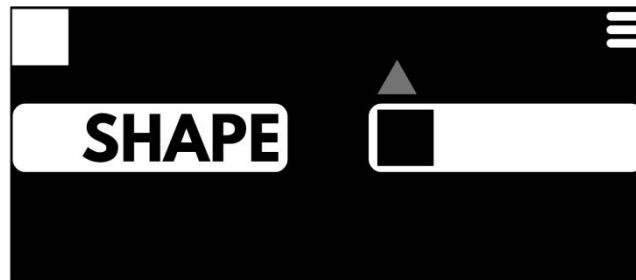
The Harmony HP2A is designed to provide a safe and user-friendly listening experience through its intelligent volume control feature.

- **Volume Limit on Startup:** If the volume level is above the configured limit when the device is set to standby or powered off, the volume will automatically be set to the configured volume limit upon startup. This ensures a moderate and safe volume level to protect your ears and equipment when powering on.
- **Retain Volume Setting:** If the volume level is below the configured limit at the time of standby or power-off, the volume setting will be retained when the device is powered on again. This allows you to resume your listening experience right where you left off.

This automatic volume management ensures that you always have a comfortable and safe volume level whenever you use the HP2A.

3.4. Device Shape

You have the opportunity to configure one of two device shapes, triangle or square, ensuring no repeated shapes for your devices. This ensures that your remote control can correctly control the desired device without confusion.



Q: I don't like the square. Can I use the triangle shape for my HP2A instead?

A: Yes, you can change the shape of your HP2A to triangle, but be sure you also change the shape on your remote control too; otherwise it will not work.

3.5. “About” In The Settings

The **About Page** on the Harmony HP2A provides important system information, including the current firmware version of the device.

To check the firmware version:

1. Navigate to the **Settings Menu** using the front panel controls or remote.
2. Select **About** from the menu options.
3. The **Firmware Version** will be displayed on this page, along with other device information.

This page helps users ensure they are using the latest firmware version for optimal performance and functionality.

3.6. Factory Reset

The factory reset function provides users with a convenient way to restore their HP2A to its original factory settings, effectively wiping any custom configurations or adjustments made since its initial setup. This feature can be particularly useful in troubleshooting scenarios or when users wish to revert to the device's default settings for any reason. By initiating a factory reset, users can ensure that their HP2A returns to a standardized state, eliminating any potential issues caused by misconfigurations or unwanted changes. This streamlined process simplifies maintenance and troubleshooting, enabling users to quickly resolve any issues and restore optimal performance to their audio setup with ease.



4. Special Features

4.1. LE-LINK and Expandable Input Capability

The Harmony HP2A is designed to adapt to your evolving audio needs with **Expandable Input Flexibility**. At the heart of this capability is **LE-LINK**, a proprietary connection that enables seamless integration with expansion modules like the **Harmony LExt**.

LE-LINK Overview

LE-LINK is a dedicated connection on the rear panel of the HP2A, specifically designed to allow the addition of extra input options through compatible modules. It ensures stable communication and optimal performance when expanding the device's input capabilities.



Harmony LExt Integration

Users can expand the input capabilities of the HP2A by connecting the Harmony LExt module via LE-LINK. The Harmony LExt is available in two versions:

- LExt IN2, which adds balanced XLR and single-ended RCA inputs
- LExt PHONO, which adds a dedicated phono input for turntables

Setting Up and Using LE-LINK

Once the Harmony LExt is connected to the HP2A via LE-LINK:

- A new input selection will automatically appear in the settings menu, allowing you to select the expanded inputs.



- You can also quickly toggle between inputs using the remote control for convenient operation.

With LE-LINK and the Harmony LExt, you can easily customize and expand the input capabilities of the HP2A to suit your audio setup.

4.2. Protection Features

The Harmony HP2A is equipped with several built-in protection features to ensure safe and reliable operation. These safeguards are designed to protect both the device and your connected equipment, allowing for a worry-free listening experience.

Overload Protection

The HP2A continuously monitors the output levels to prevent any overload conditions. If an excessive load is detected, the device will automatically shut down the affected circuit to avoid damage. This protection ensures that your headphones and the HP2A remain safe during use.



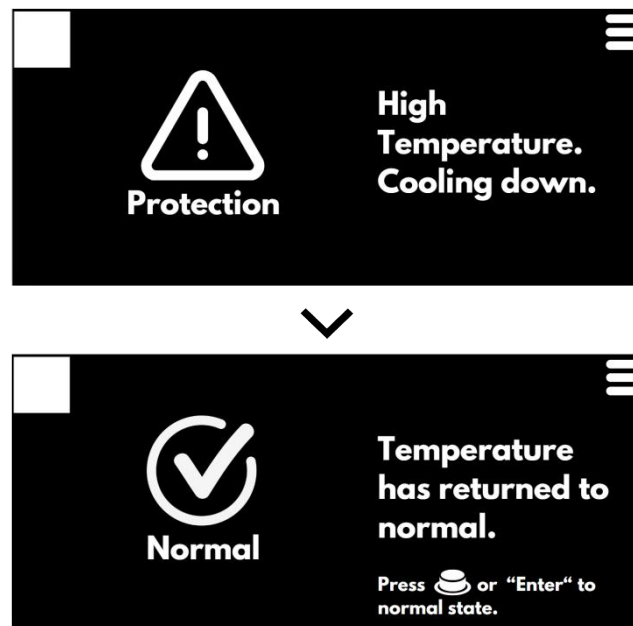
DC Protection

The HP2A features DC protection to prevent harmful DC signals from reaching the output stages. If DC is detected, the device will automatically shutdown the output, preventing potential damage to connected devices and maintaining audio quality.



Thermal Protection

During extended use or when operating at high output levels, the HP2A's internal components may generate heat. To ensure safe operation, the HP2A is equipped with thermal protection that monitors internal temperatures. If the temperature exceeds safe limits, the device will automatically shutdown the output power to start the cooling process. Please avoid touching the heatsink and grille during operation, as they may become hot.




These protection features help ensure the long-term reliability of the Harmony HP2A while providing a safe and consistent audio experience.



5. Technical Specifications

<p>Finish ¹</p>	<div><p>Black Anodized Aluminium</p><p>Silver Anodized Aluminium</p></div>
<p>Size and Weight ²</p>	<div><p>Width: 255 mm</p><p>Depth: 250 mm (Included connectors)</p><p>Height: 50 mm</p><p>Spike: 25 mm</p><p>Weight: 4.6kg</p></div>

Display	 <p>Dual 1.5-inch (diagonal) white monochrome OLED 128x128-pixel resolution at 16-bit grayscale each</p>
Analog Inputs	<p>1 x Balanced XLR, max 16 Vrms, approx. 94 k Ω</p> <p>Expandable with Harmony LExt</p>
Preamplifier Outputs	<p>1 x XLR, approx. 200 Ω</p> <p>1 x RCA, approx. 100 Ω</p>
Headphone Outputs	<p>1 x Balanced 4-pin XLR, approx. 0.07 Ω</p> <p>1 x Balanced 4.4 mm jack, approx. 0.07 Ω</p> <p>1 x Unbalanced 6.35 mm jack, approx. 0.035 Ω</p>
Gain ³	<p>0 dB (Preamplifier output)</p> <p>13.7 dB (Headphone balanced output)</p> <p>7.7 dB (Headphone single ended output)</p>
Output Voltage ³	<p>$\leq 3.8\text{Vrms}$ (Preamplifier Balanced)</p> <p>$\leq 1.8\text{Vrms}$ (Preamplifier Single Ended)</p> <p>$\leq 19.2\text{Vrms@4V source} - 61.0\text{Vrms@12.5V source}$ (Headphone Balanced)</p> <p>$\leq 8.5\text{Vrms@4V source} - 30.5\text{Vrms@12.5V source}$ (Headphone Single Ended)</p>
Output Power ³	<p>$\leq 11.8\text{W}$ (Headphone Balanced)</p> <p>$\leq 2.8\text{W}$ (Headphone Single Ended)</p>
Frequency Response ³	<p>5Hz – 80kHz, ± 3 dB (Preamplifier)</p> <p>10Hz – 80kHz, ± 3 dB (Headphone amplifier)</p>

THD+N ³	0.005% (Preamp) 0.01% (Headphone amplifier)
Crosstalk ³	≤ -120dB (Preamp Balanced) ≤ -100dB (Preamp Single Ended) ≤ -100dB (Headphone Balanced) ≤ -65dB (Headphone Single Ended)
Signal to Noise Ratio (SNR) ³	≥ 125dB (Preamp Balanced) ≥ 110dB (Preamp Single Ended) ≥ 110dB (Headphone Balanced) ≥ 100dB (Headphone Single Ended)
Noise ³	≤ 5 μ Vrms (Preamp Balanced) ≤ 8 μ Vrms (Preamp Single Ended) ≤ 50 μ Vrms (Headphone Balanced) ≤ 40 μ Vrms (Headphone Single Ended)
Features	Microprocessor controlled 60 steps (\pm 1dB/step) PMDR attenuator thru silent opto-coupler. True balanced discrete class A buffered preamplifier. True balanced headphone amplifier with proprietary discrete power amp using EXICON MOSFETs. Mode selection between preamp, headphone amp, or both. DC coupler with no LCR in the signal path. Sophisticated protection system. 12V trigger input and output for system automation. Expandable input with Harmony LExt.
Controls	Remote control Front panel

Remote Control	<p>Width: 45 mm Depth: 17 mm</p>  <p>Height: 150 mm</p> <p>Weight: 157g</p>
Power	100 - 127 VAC / 220 - 240 VAC, 50/60Hz
Power Consumption	<p>≤ 0.5 W in standby.</p> <p>≤ 8.0 W for the preamplifier.</p> <p>≤ 23.0 W for the headphone amplifier. ⁴</p>
Fuse	3.15A, Slow-blow, 5 x 20mm.
In the Box	<p>Welcome card with Certificate of Authenticity</p> <p>Harmony HP2A</p> <p>Three spike shoes with alignment card</p> <p>Remote control (Battery CR2032 not included)</p> <p>Power cord ⁵</p> <p>Cleaning cloth</p>

1. Colours vary by configuration and manufacturing process.

2. Size and weight vary by configuration and manufacturing process.

3. The specifications were evaluated using an Audio Precision APx Analyzer after the HP2A conditioned for 25 minutes. 1kHz, 4Vrms input to HP2A, output into 32 Ω at maximum output, A-weighted.

4. The power consumption was evaluated at 32 Ω , 700mVrms output.

5. We will try our best to provide the power cord with the plug that is suitable for you.

6. Warranty and Contact Information

6.1. Warranty Terms

Warranty Period: 24 months from the date of purchase.

What's Covered: Defects in materials and workmanship.

What We'll Do: Repair your product if it has any defects during the warranty period.

How to Get Service:

- Register the warranty of your product within 3 months of the date of purchase at <https://www.laiv.audio/warranty-registration>
- To obtain warranty service, the customer must contact the Company's customer service department at info@laiv.audio.
- Proof of purchase, such as the original purchase receipt and warranty card, may be required.
- The customer may be responsible for shipping the defective Product to the Company's designated service center.

What's Not Covered:

- Import duties or taxes whenever applicable.
- Damage resulting from misuse, abuse, or unauthorized modifications or repairs.
- Normal wear and tear.
- Consumable parts, such as batteries, unless otherwise stated

Limitation of Liability: Our responsibility limited to repairing or replacing the parts.

Refer to the QR or <https://www.laiv.audio/terms-and-conditions#warranty> for the complete warranty terms.



6.2. Contact Information

For any inquiries or support related to this product, please don't hesitate to contact our Customer Support Team:

Email : support@laiv.audio

Website : <https://www.laiv.audio/contact>

We're here to assist you with any questions or concerns you may have regarding the product.