CRESCENDO VERSE | Manual

V1.0

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1. Getting Started

1.1. Introduction

Thank you for joining the Laiv community. A warm welcome to you! We're absolutely thrilled to have you with us on this journey, where we're dedicated to turning your dreams into reality. It's truly an honor to support your pursuit of premium sound quality with our products. Welcome aboard!

Allow us to introduce our new Crescendo Verse, thoughtfully crafted with a sleek and compact design to fulfill every audiophile's desires and dreams. Drawing on our expertise in the audio industry, we've seamlessly combined the best features to create the Verse that redefines design, performance, and usability.

Welcome aboard—we're excited to share this audio adventure with you!

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 Verse, let's go over some essential safety tips to ensure everything goes smoothly:

1) **Get to Know Your Verse:** Take a moment to flip through the user manual. It's packed with handy information about how to use your Verse safely and effectively.

2) **Stay Dry and Grounded:** Keep your Verse 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.

3) **Keep it Cool:** Your Verse needs space to stay cool. Make sure there's plenty of airflow around it. Avoid placing your Verse in direct sunlight or near heat sources like radiators or stoves. Extreme heat can damage delicate components and shorten the lifespan of your Verse.

4) **Keep it Clean, Keep it Safe:** Regular cleaning is key to keeping your Verse happy. But remember, gentle is the name of the game—no harsh chemicals or scrubbing, please!

5) **Hands Off the Repairs:** If your Verse 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.

6) **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 Verse to avoid any unplanned experiments!

7) **Power Down for Peace of Mind:** When you're done using your Verse, hit the off switch. It's a simple step that can prevent any unwanted surprises while you're away.

8) **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.

9) **Safety First, Always:** Remember, your safety comes above all else. Take your time, follow these tips, and enjoy using your Verse with confidence!

If you ever have any questions or concerns about using your Verse 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

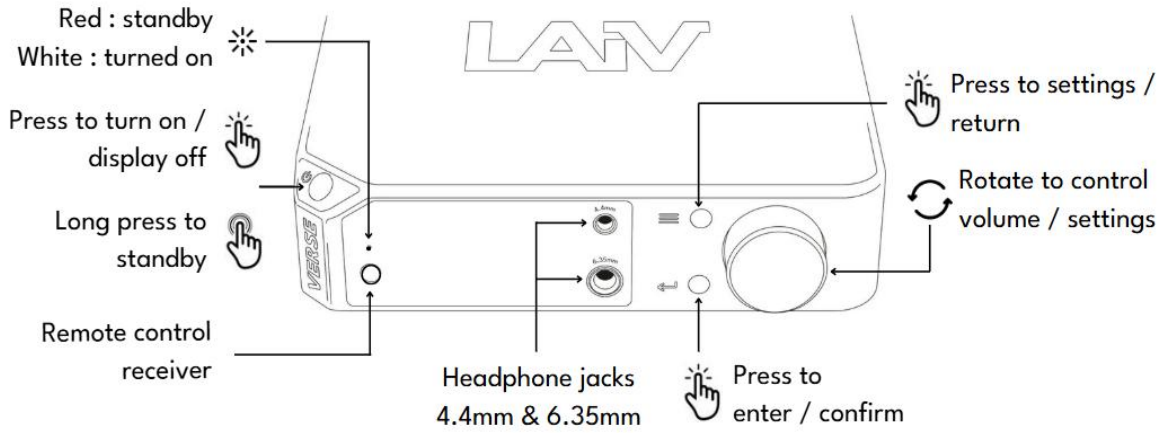
Read
Guide

2 Connect all the cables, turn it on, and you're ready to rock and roll!

2. Basics About The Verse

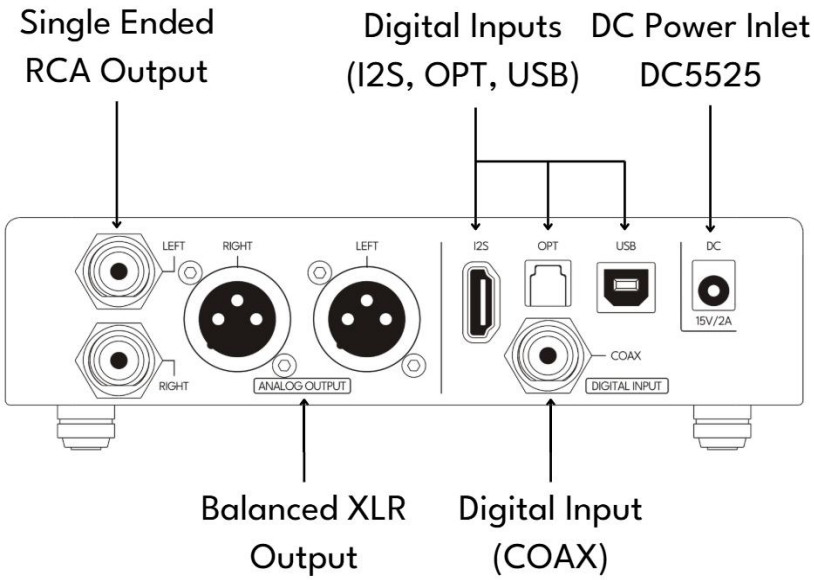
2.1. The Front Panel

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



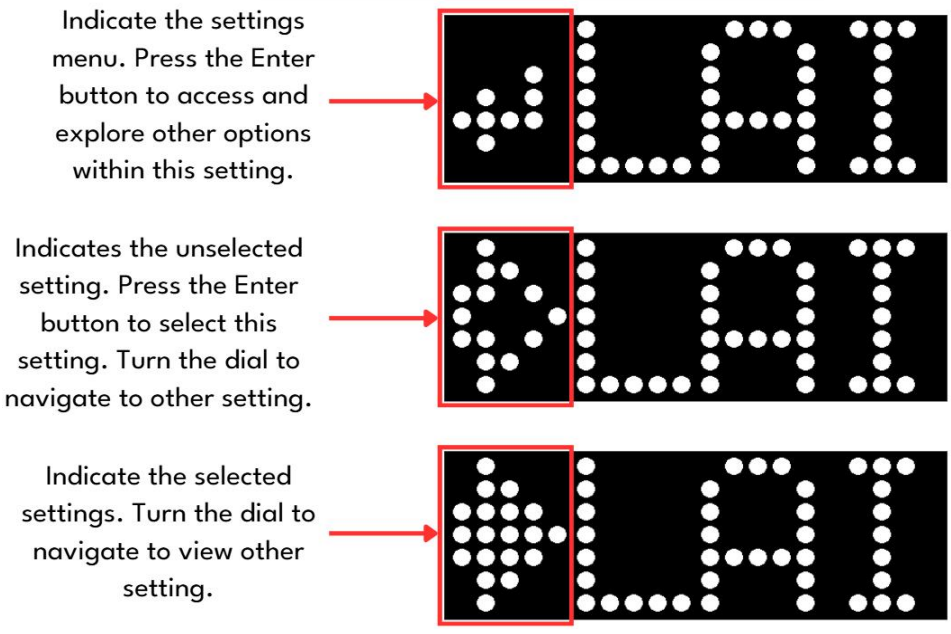
2.2. The Rear Panel

The rear panel of the Verse features distinct sections for input and output. Positioned on the far right is the DC power inlet, providing power to the device. Moving toward the center, you will find the array of digital inputs, including USB, OPT (optical), COAX (coaxial), and I2S, offering versatile connectivity options to suit various audio sources. Finally, on the left side are the balanced XLR and single ended RCA analog outputs, allowing you to seamlessly connect the Verse to your amplifiers or other audio equipment for exceptional sound reproduction.



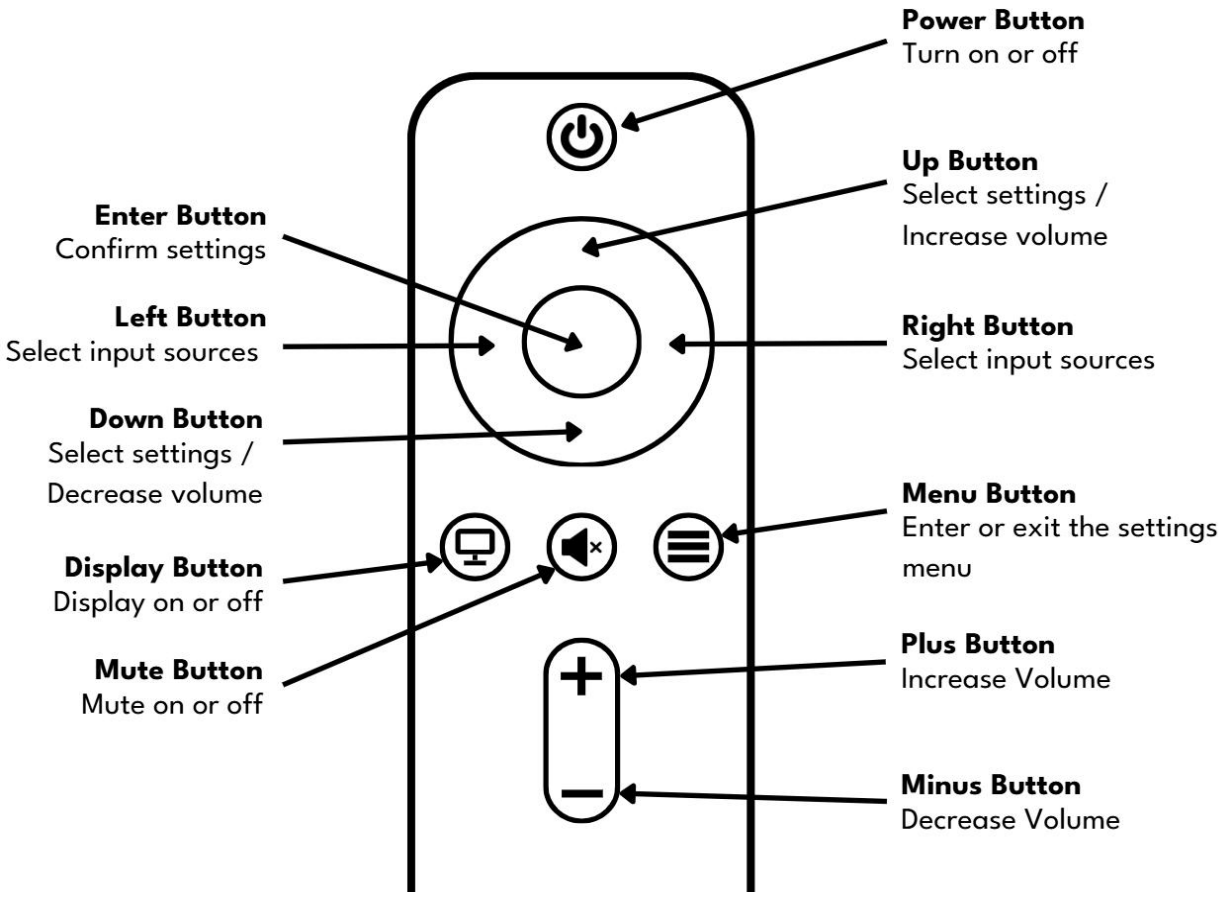
2.3. The LED Display

Experience the intuitive LED Running Text Display, showcasing up to four characters. Its user-friendly interface ensures seamless navigation and quick access to settings, offering unmatched convenience.



2.4. Remote Control

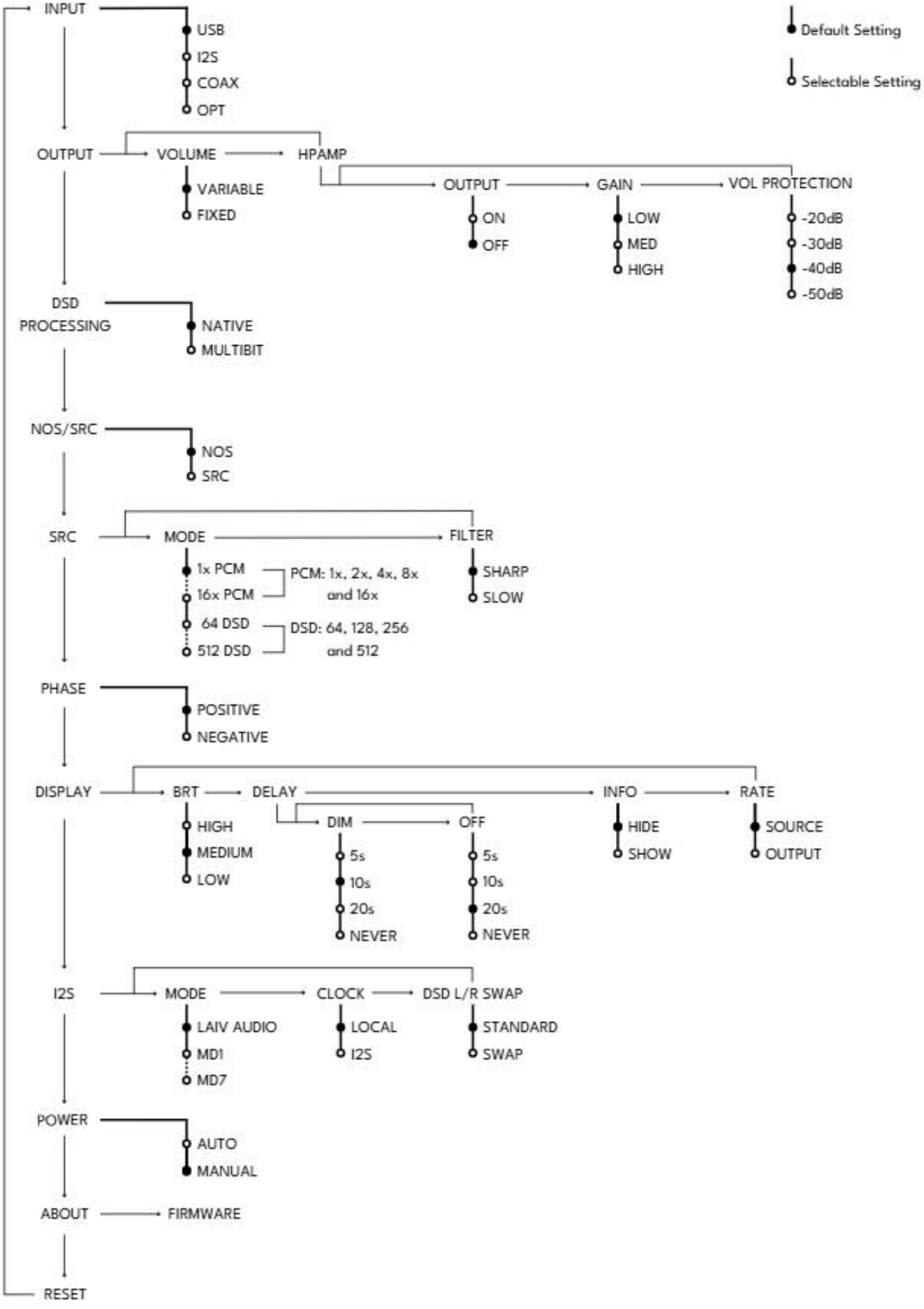
The remote, featuring easily accessible keys for common functions, makes navigating your device smoother than ever, offering unparalleled convenience and efficiency.



3. Settings For The Verse

3.1. Settings Menu

Our settings menu serves as the central hub for configuring all aspects of your Verse experience. Easily accessible via the menu button on the front panel or through the convenience of the remote control, this intuitive interface puts control at your fingertips. Whether adjusting audio preferences, fine-tuning connectivity options, or customizing display settings, our settings menu provides seamless navigation and effortless customization to tailor your audio experience to perfection.


Default Setting
Selectable Setting
INPUT
USB
I2S
COAX
OPT
OUTPUT
VOLUME
VARIABLE
FIXED
HPAMP
OUTPUT
ON
OFF
GAIN
LOW
MED
HIGH
VOL PROTECTION
-20dB
-30dB
-40dB
-50dB
DSD PROCESSING
NATIVE
MULTIBIT
NOS/SRC
NOS
SRC
SRC
MODE
1x PCM
16x PCM
PCM: 1x, 2x, 4x, 8x and 16x
64 DSD
512 DSD
DSD: 64, 128, 256 and 512
FILTER
SHARP
SLOW
PHASE
POSITIVE
NEGATIVE
DISPLAY
BRT
HIGH
MEDIUM
LOW
DELAY
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5s
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NEVER
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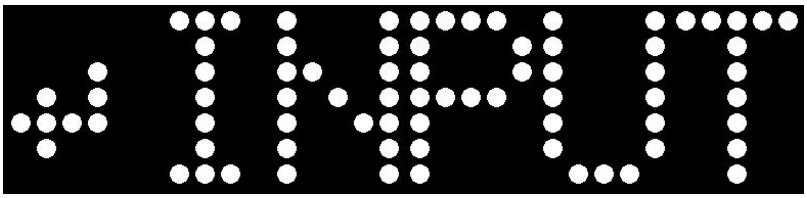
SWAP
POWER
AUTO
MANUAL
ABOUT
FIRMWARE
RESET

3.2. Input Setting

The Verse offers four distinct inputs, each catering to different connectivity needs. Whether it's USB, optical, coaxial, or I2S, you have the flexibility to choose the input that suits your setup best.

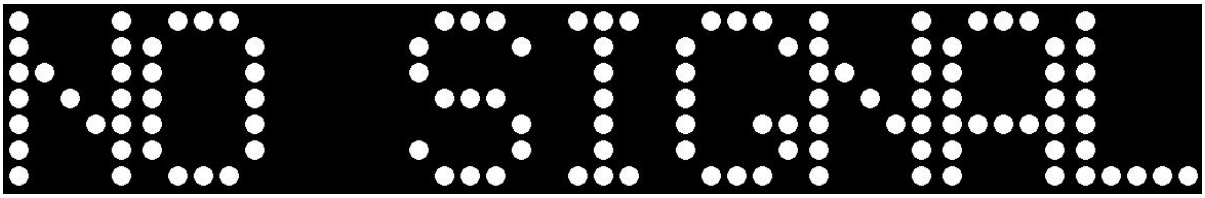
Navigate to the 'INPUT' from the menu.



Select the preferred digital input type. Four inputs are available:

- USB (default)
- I2S
- COAX
- OPT

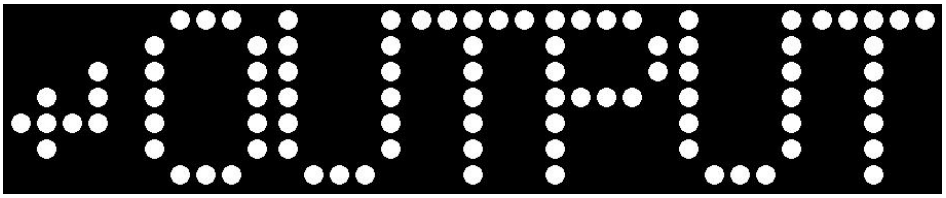
If the selected input source is not available, the display will show 'No Signal'. You need to select the correct input source to enjoy the music with the Verse.



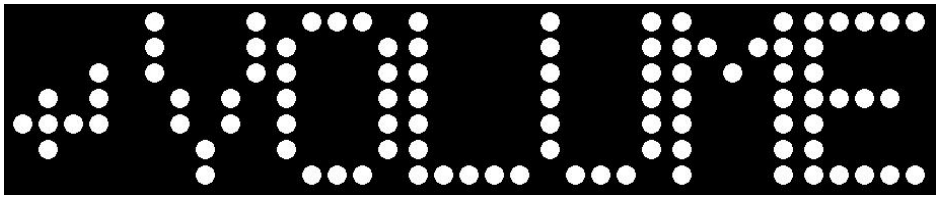
3.3. Output Setting

The Output settings allow you to configure the volume behavior and headphone amplifier options, including enabling or disabling the headphone output, selecting gain levels, and applying volume protection when the device powers on.

Navigate to the 'OUTPUT' from the menu.



Select 'OUTPUT' → 'VOLUME' to choose your preferred volume mode.

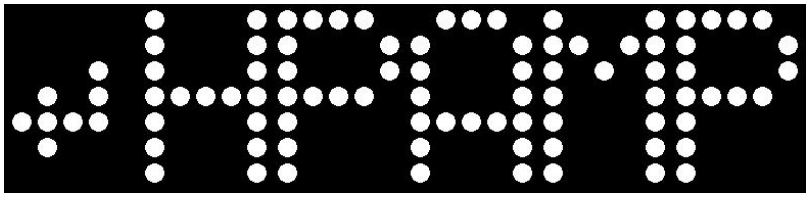


The volume output setting allows you to select between 'VARIABLE' and 'FIXED' modes:

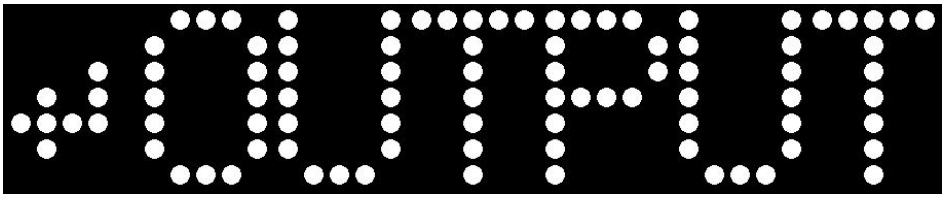
- VARIABLE (default)
  The volume level can be adjusted when in this mode.
- FIXED
  Use this mode when you prefer the unit to operate as a pure DAC and it is connected to an external preamplifier or integrated amplifier.

Note: When FIXED mode is selected, the headphone amplifier output will be automatically disabled as a safety measure.

Navigate from 'OUTPUT' → 'HPAMP' from the menu to do setting for the headphone amplifier.



Select 'OUTPUT' → 'HPAMP' → 'OUTPUT' to do selection for enable or disable the headphone amplifier.

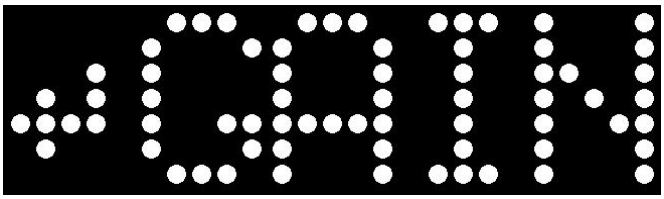


This setting is to enable or disable the headphone amplifier output:

- ON
- OFF (default)

Note: When the headphone amplifier is set to 'ON', the volume mode will automatically switch to 'VARIABLE' for protection.

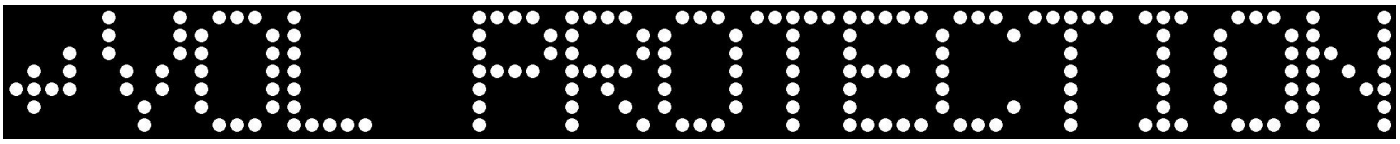
Select 'OUTPUT' → 'HPAMP' → 'GAIN' to choose the appropriate gain setting based on your headphone sensitivity and preferred listening level.



When using headphones, you can adjust the amplifier gain to match your listening needs. Three gain levels are available:

- LOW (default)
- MED
- HIGH

Select 'OUTPUT' → 'HPAMP' → 'VOL PROTECTION' to choose the appropriate volume protection level when power on the Verse.



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. Four protection levels are available:

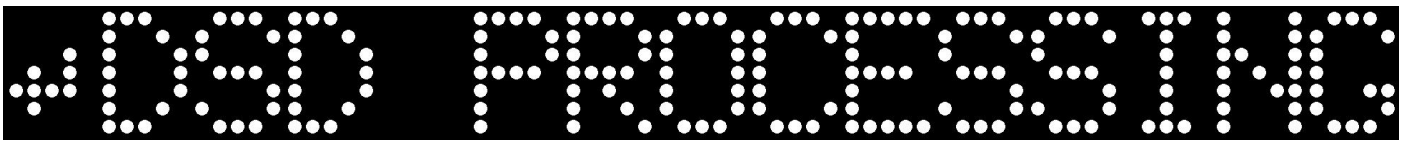
- -20dB
- -30dB
- -40dB (defaultl)
- -50dB

3.4. DSD Processing Setting

The DSD Processing settings let you choose how DSD playback is handled.

Select NATIVE for true 1-bit DSD processing without conversion to PCM. In this mode, DSD remains in its original 1-bit form to preserve its natural characteristics. When switching between PCM and 1-bit DSD, a brief DC offset change may occur, which can be heard as a popping sound at the start of playback.

Select MULTIBIT to convert DSD to PCM, which can improve dynamic range and reduce noise.
Navigate to the 'DSD PROCESSING' from the menu.



Choose the preferred processing for the DSD files. Two selections are available:

- NATIVE (default)
- MULTIBIT

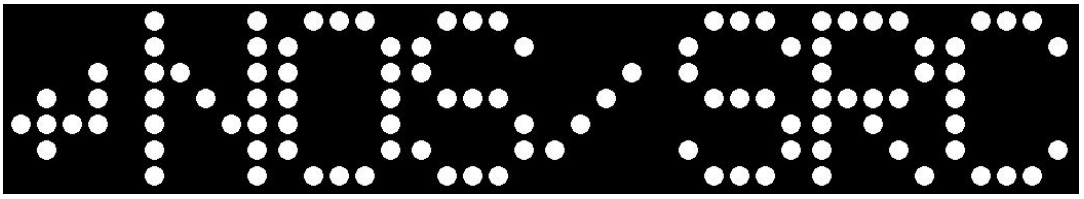
Note: In DSD Native mode, a brief popping sound may occur when switching between PCM/DSD or DSD tracks with different rates. For mixed sampling rate playback, DSD Multibit mode is recommended.

Q: Why do I hear a popping sound at the beginning when switching tracks in Native mode?
A: The popping sound that occurs when switching between PCM and DSD in Native mode is caused by a sudden DC voltage step (discontinuity) during the format change. To overcome this, it is recommended to use Multibit mode.

3.5. NOS/SRC Mode

The Verse is a versatile audio solution designed to elevate your listening experience. With Verse, you have the flexibility to choose between Non-oversampling (NOS) and Sampling Rate Conversion (SRC).

Navigate to the 'NOS/SRC' from the menu and select the preferred sampling mode.



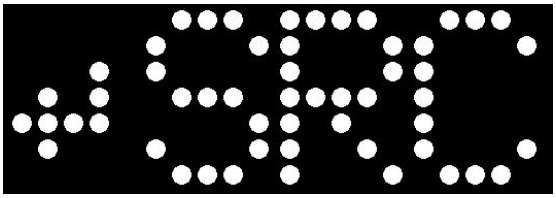
Whether you prefer the purity of Non-oversampling or the enhanced dynamics of oversampling, Verse empowers you to customize your listening experience. Simply select your preferred mode and immerse yourself in the world of versatile sound. Two modes available for selection:

- NOS (default)
- SRC

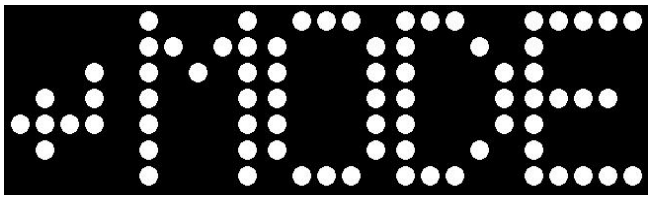
3.6. SRC Setting

The SRC setting allows you to further customize your preferred sampling rate output, ensuring the unique listening experience for you. Whether you're seeking enhanced clarity or a warmer sound signature, Verse puts the power of choice in your hands.

Navigate to the 'SRC' from the menu.



Select 'SRC' → 'MODE' to choose the PCM or DSD sampling rate that suit you.



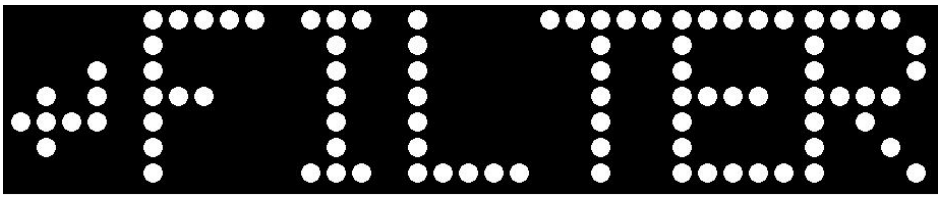
Total nine selections are available:

- 1x PCM (default)
- 2x PCM
- 4x PCM
- 8x PCM
- 16x PCM
- 64 DSD (Only in DSD Native Mode)
- 128 DSD (Only in DSD Native Mode)
- 256 DSD (Only in DSD Native Mode)
- 512 DSD (Only in DSD Native Mode)

Q: Why I do not see SRC setting and cannot do the SRC selection?
A: The SRC selection only appear when you select SRC in the NOS/SRC setting.

Q: Why I do not see DSD selection in the SRC setting?
A: DSD sampling rate selection is only available when you select 'NATIVE' under the DSD Processing setting.

Navigate from 'SRC' → 'FILTER' to choose the digital filter which adjust how the audio signal is reconstructed from digital data. This setting is highly subjective, depending on your music style.



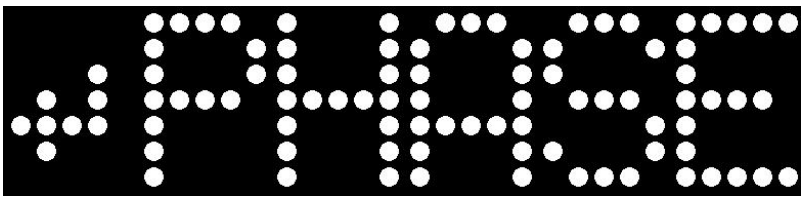
Two selections are available for you to choose from:

- SHARP (default)
- SLOW

3.7. Phase Setting

The phase mode selection allows you to further customize your audio output, ensure they work in harmony and avoid cancellation. This results in a fuller, clearer, and more cohesive sound, particularly in the bass frequencies.

Access the 'PHASE' menu and choose your preferred mode.



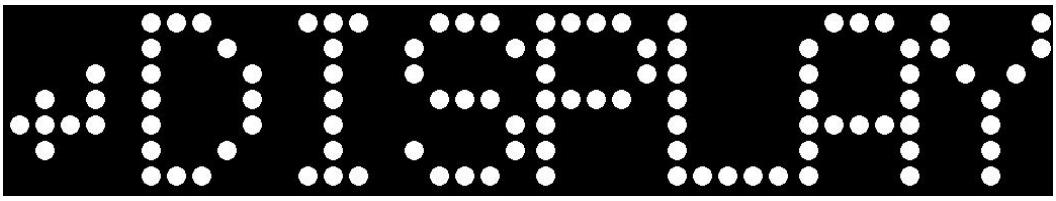
Verse puts you in control, letting you tailor your listening experience to perfection. Select your perfect phase mode—Positive or Negative—and immerse yourself in pure, dynamic sound..

- POSITIVE (default)
- NEGATIVE

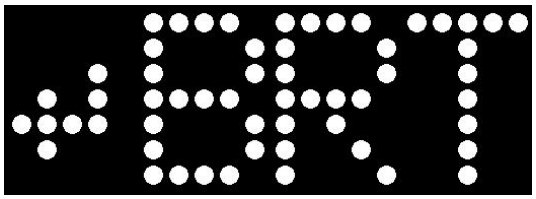
3.8. Display Brightness and Delay Setting

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.

Navigate to the 'DISPLAY' from the menu and select the preferred display mode.



Select 'DISPLAY' → 'BRT' to choose your preferred brightness level. Access to the 'BRT' setting to customize the display brightness according to your preference.



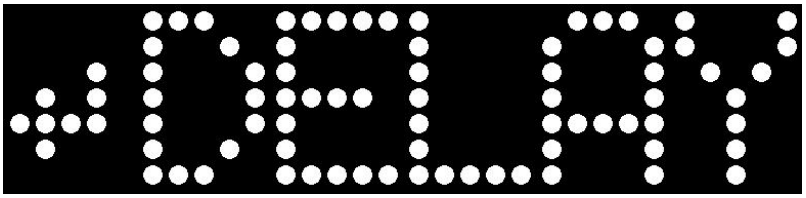
You can choose from three levels: Low, Medium, or High, allowing you to optimize visibility based on your environment. A lower brightness setting helps reduce eye strain in dimly lit spaces, while a higher setting ensures better readability in brighter conditions.

- HIGH
- MEDIUM (default)
- LOW

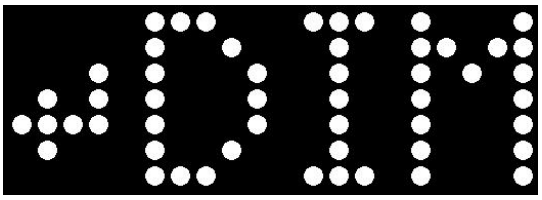
Additionally, our delay function allows the display to automatically dim and turn off after a period of inactivity, conserving energy and minimizing distractions. The delay dim function reduces the brightness to LOW after the selected time period.

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.

Navigate from 'DISPLAY' → 'DELAY' and select the delay setting.



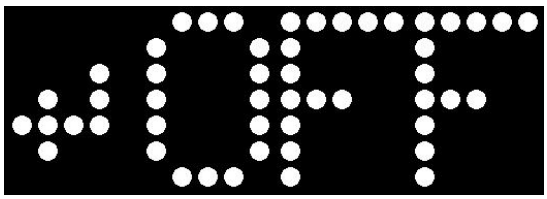
Select 'DISPLAY' → 'DELAY' → 'DIM' to choose the setting for the display to automatically dim after the chosen duration of inactivity, helping to conserve power and reduce screen glare.



If you prefer the display to remain fully lit at all times, you can select 'Never', ensuring continuous visibility. This flexibility allows you to optimize your viewing experience based on your environment and usage preferences.

- 5s
- 10s (default)
- 20s
- NEVER

Select 'DISPLAY' → 'DELAY' → 'OFF' to choose the setting for the display to automatically off after the chosen duration of inactivity, helping to conserve power and reduce distractions.



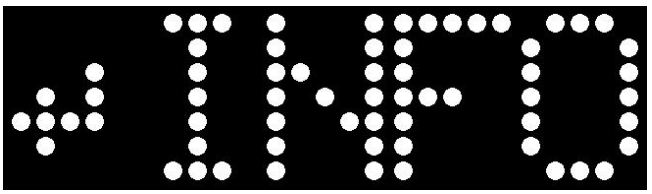
If you prefer the display to remain on at all times, you can select 'Never', ensuring continuous visibility. This customization allows you to tailor the screen behavior to your specific needs, whether for power efficiency or uninterrupted display.

- 5s
- 10s
- 20s (default)
- NEVER

3.9. Display Information Setting

The display information setting feature allows you to control whether additional information such as the currently selected modes for NOS/SRC and +pH/−pH is shown or hidden. With this setting, you can choose to display these details or keep the interface clean by hiding them.

Navigate from 'DISPLAY' → 'INFO' from the setting menu.



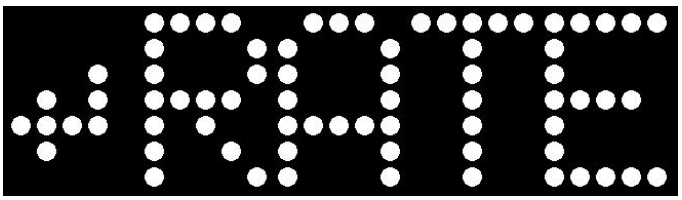
Select the preferred info display mode available:

- HIDE (default)
- SHOW

3.10. Display Rate Setting

The display rate setting allows you to choose how the sampling rate is shown. Select 'SOURCE' to display the input sampling rate, or 'OUTPUT' to display the sampling rate after processing by the Verse.

Navigate from 'DISPLAY' → 'RATE' from the setting menu.



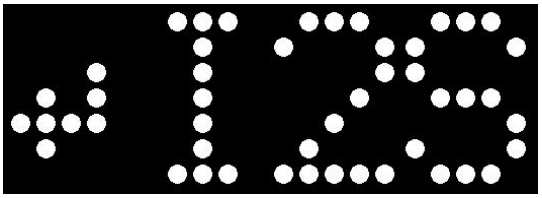
Select the preferred rate display:

- SOURCE (default)
- OUTPUT

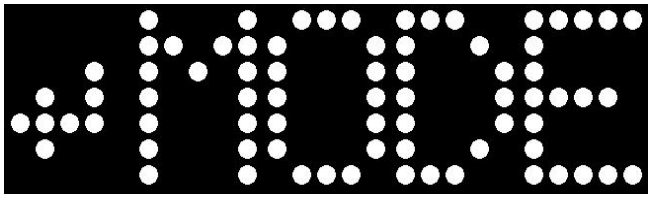
3.11. I2S Mode

Our I2S system features eight modes for seamless compatibility with other brands' I2S products. When paired with Laiv devices, Verse automatically selects the optimal mode through intelligent auto-configuration for effortless compatibility and performance.

Navigate to the 'I2S' from the menu and select the preferred I2S mode.



Access 'I2S' → 'MODE' to adjust the I2S mode.



	Laiv Audio	Mod 1	Mod 2	Mod 3	Mod 4	Mod 5	Mod 6	Mod 7
Pin 1	SDOUT-	SDOUT+	SDOUT-	SDOUT+	SDOUT-	SDOUT+	SDOUT-	SDOUT+
Pin 3	SDOUT+	SDOUT-	SDOUT+	SDOUT-	SDOUT+	SDOUT-	SDOUT+	SDOUT-
Pin 4	BCK+	BCK+	BCK-	BCK-	BCK+	BCK+	BCK-	BCK-
Pin 6	BCK-	BCK-	BCK+	BCK+	BCK-	BCK-	BCK+	BCK+
Pin 7	LRCK-	LRCK-	LRCK-	LRCK-	LRCK+	LRCK+	LRCK+	LRCK+
Pin 9	LRCK+	LRCK+	LRCK+	LRCK+	LRCK-	LRCK-	LRCK-	LRCK-

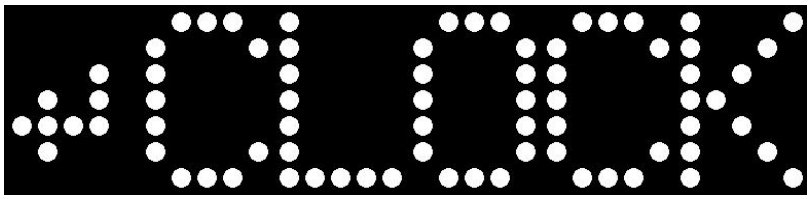
Please lower the volume of your system to the lowest audible level before selecting the I2S mode to prevent damage to your loudspeakers.

Q: I have tried all the I2S modes, but none of them are working well with my system. What can I do?
A: Unfortunately, there are no industrial standards for I2S connectivity, so it's possible that none of the modes are compatible with your system.

3.12. I2S Clock

Introducing our I2S clock capability, offering you with remarkable flexibility in your I2S setup. This feature enables you to select between the local Verse clock or the I2S clock when utilizing the I2S input. The Verse meticulously verifies the compatibility of the I2S clock, only permitting you to opt for the I2S clock if it meets compatibility standard.

Select 'I2S' → 'CLOCK' to choose the I2S clock selection.



You can select the preferred I2S clock setting when using I2S as digital input source:

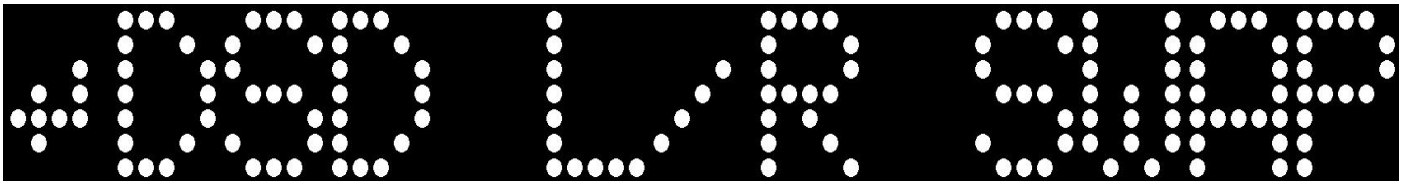
- LOCAL (default)
- I2S

When selected 'I2S' for the clock setting, the Verse will automatically switch to the local clock if the I2S clock becomes unstable or incompatible, and switch back once it stabilizes. The Verse also will switch to the local clock when other digital inputs are selected.

3.13. I2S DSD L/R Swap

DSD signals over I2S are not standardized across different manufacturers. As a result, DSD channels may be unintentionally swapped due to variations in internal wiring configurations. This feature allows you to correct such discrepancies by inverting the DSD data lines, ensuring proper left/right channel alignment.

Access the 'DSD L/R SWAP' to do the adjustment.



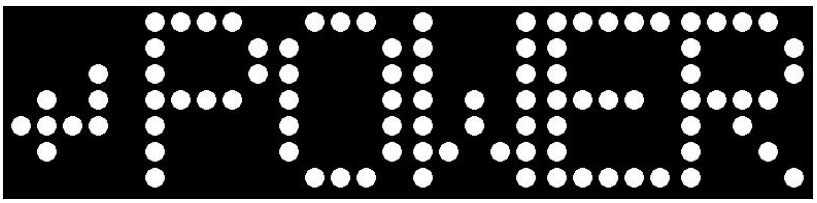
Select Standard if no adjustment is needed for DSD channel alignment. Choose Swap if inversion is required to correctly realign the left and right channels. Always verify using a DSD audio track with distinct left and right channel information. Two selections available:

- STANDARD (default)
- SWAP

3.14. Auto Power On Setting

The auto power on feature allows you to choose how the Verse powers up. When this feature is enabled, the Verse will automatically power on as soon as it receives power from an external source. If the feature is disabled, the Verse will remain off when power is supplied, and you will need to press the power button to turn it on manually.

Navigate to the 'POWER' from the menu and select the preferred Power On mode.

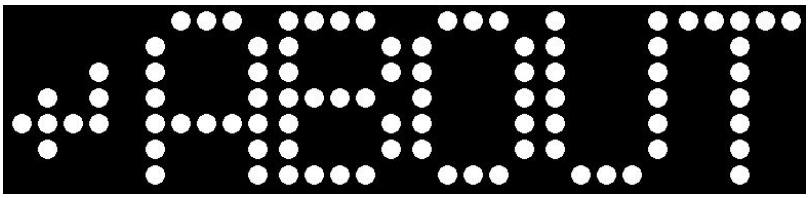


This setting gives users flexibility to integrate the Verse seamlessly into different setups—whether you prefer automated system startup or manual control by choosing the preferred setting:

- AUTO
- MANUAL (default)

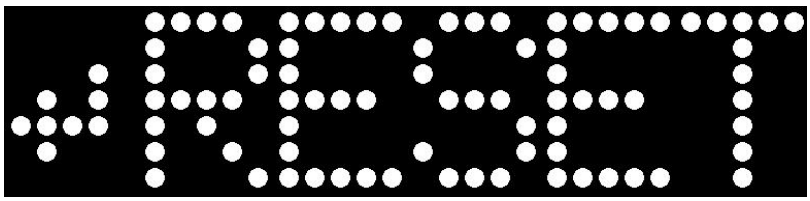
3.15. “About” In The Settings

The "About" settings provide essential information about the firmware version installed. By accessing this menu, users can quickly ascertain the current firmware version installed on their device, ensuring they are up to date with the latest enhancements and features.



3.16. Factory Reset

The factory reset function lets you quickly restore the Verse to its original settings, removing any custom changes you've made. It’s useful for troubleshooting or when you want to start fresh. This helps fix issues caused by misconfigurations and ensures the Verse works as intended.



4. Technical Specifications

Finish [1]	 Black Anodized Aluminium  Silver Anodized Aluminium
Size and Weight [2]	 Weight: 0.9kg

Display	 20x7 dot-matrix LED display
Chip	Intel® Altera® Cyclone® FPGA
Digital Inputs	1 x USB 1 x Optical 1 x Coaxial 1 x I²S
Supported Formats (Input dependent)	USB - PCM: 44.1kHz - 768kHz | DSD: DSD64 - DSD256 Optical - PCM: 44.1kHz - 192kHz | DSD: DSD64 via DoP only Coaxial - PCM: 44.1kHz - 192kHz | DSD: DSD64 via DoP only I2S - PCM: 44.1kHz - 768kHz | DSD: DSD64 - DSD256
Digital Playback Control	Supports native DSD 1-bit processing and an integrated sampling rate converter, giving users full control over PCM and DSD playback behavior. Resampling Options ● PCM: 1x, 2x, 4x, 8x, 16x (up to 768 kHz / 705.6 kHz) ● DSD: DSD64, DSD128, DSD256, DSD512 (Only available in DSD native mode) ● *Note: In DSD Native mode, a brief popping sound may occur when switching between PCM/DSD or DSD tracks with different rates. For mixed sampling rate playback, DSD Multibit mode is recommended.
Preamp Outputs	1 x XLR, approx. 4 Vrms, 82 Ω 1 x RCA, approx. 2 Vrms, 41 Ω
Headphone Outputs[3]	1 x Balanced 4.4 mm jack, approx. 11 Vrms, 5.1 Ω 1 x Single Ended 6.35 mm jack, approx. 5.5 Vrms, 2.6 Ω

Gain[3]	Selectable headphone output gain ● LOW ● MED ● HIGH
Output Power[3]	≤ 1100mW (Balanced 4.4 mm) ≤ 230mW (Single Ended 6.35 mm)
Frequency Response[3]	20Hz – 80kHz, within ± 3 dB
THD+N[3]	0.0045% (Preamp) 0.008% (Headphone amplifier)
Crosstalk[3]	≤ -100dB (Preamp Balanced) ≤ -100dB (Preamp Single Ended) ≤ -100dB (Headphone Balanced) ≤ -60dB (Headphone Single Ended)
Signal to Noise[3] Ratio (SNR)	≥ 120dB (Preamp Balanced) ≥ 110dB (Preamp Single Ended) ≥ 110dB (Headphone Balanced) ≥ 100dB (Headphone Single Ended)
Dynamic Range	≤ 25μVrms (Preamp Balanced) ≤ 72mVrms (Preamp Single Ended) ≤ 30μVrms (Headphone Balanced) ≤ 65μVrms (Headphone Single Ended)
Features	Sleek & Compact design LAiV R2R ladder network architecture Native DSD 1-bit conversion NOS / SRC Mode Sampling rate converter Positive / negative phase

	Display brightness, delay dim, and delay off 8 x I2S Mode with LAiV product auto-configured I2S clock supported Discrete output buffered preamplifier. Discrete headphone amplifier with gain selector Headphone output protections
Controls	Front panel Remote control
Power	15VDC/2A ， DC 5.5/2.5 mm female
In the Box	Welcome card with Quick Start guide Crescendo VERSE Remote control Power adapter with interchangeable plugs

5. Warranty and Contact Information

5.1. 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.

5.2. 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.