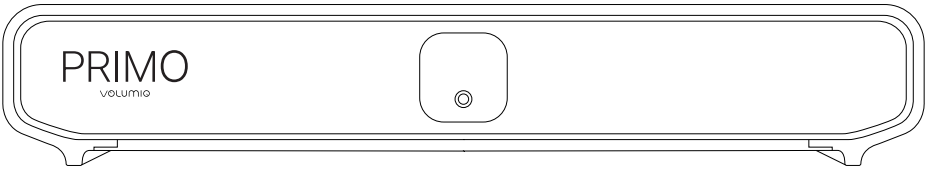
VOLUMIO®

THE MUSIC PLAYER

PRIMO V3



Streaming DAC

USER MANUAL

ENGLISH

FOR MUSIC LOVERS,
BY MUSIC LOVERS

INTRODUCTION

Congratulations on your purchase!

Volumio **Primo** is an **audiophile streaming DAC and streamer** designed with three key principles in mind: sound quality, ease of use, and universal compatibility with music services.

Please read this manual carefully. Our support team is available to assist you with any questions regarding the unit and all of our products via our **chatbot service** on the Volumio website:
www.volumio.org

WHAT'S IN THE BOX?

- Volumio Primo
- 5V 3A Power Supply*
- NFC/QR code information card

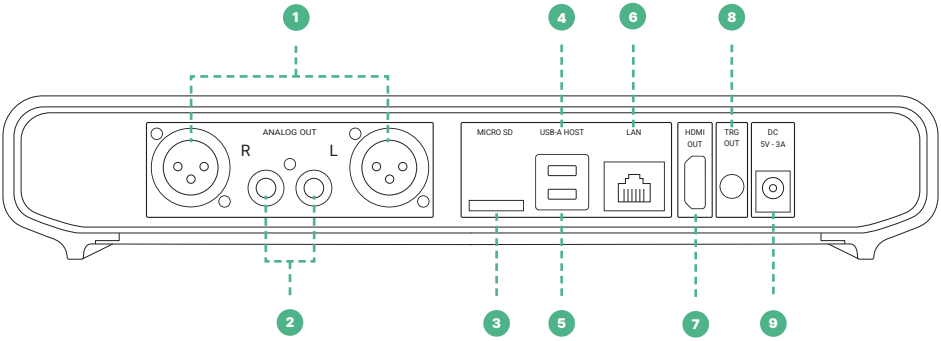
(*) Power Adapter is optional, depending on the region and local seller's policy.

MANUAL VERSION

This manual contains information and details related to the unit running the most recent software release as of June, 30, 2026.

Product information may vary depending on the software release and therefore we recommend to always check our Help center to access reliable and updated guides.

I\O OVERVIEW



1. **ANALOG OUT - STEREO XLR BALANCED OUTPUT**:
   Recommended for the best audio quality, provides better noise rejection and cleaner signal to support longer cable runs. The output level can be adjusted to match your system's requirements in 8 steps, from 1.0 Vrms to 6.3 Vrms.

2. **ANALOG OUT - STEREO RCA UNBALANCED OUTPUT**:
   The output level can be adjusted to match your system's requirements in 8 steps, from 0.5 Vrms to 3.15 Vrms.

3. **MICRO SD IN**:
   Memory expansion slot for Micro SD cards to store music files on the device.

4. **USB-A HOST (5V / 1.33A)**:
   Recommended for high speed drives such as SSD and HDD, but also digital sources and USB flash drives. Select NET to play audio files from this port. Digital audio output, dedicated to external USB DACs to use Primo as a streamer and digital transport.

5. **USB-A HOST (5V /0.56A)**:
   USB port dedicated to USB flash drives, or keyboard/mouse to control external displays.

6. **ETHERNET PORT-LAN**:
   Wired Internet and LAN connection for Ethernet cable. Recommended to stream high-resolution audio from music services and local NAS.

   WI-FI: This device supports both Ethernet and built-in WiFi with internal antennas. If you prefer a wireless connection, simply select your WiFi network during the setup process.

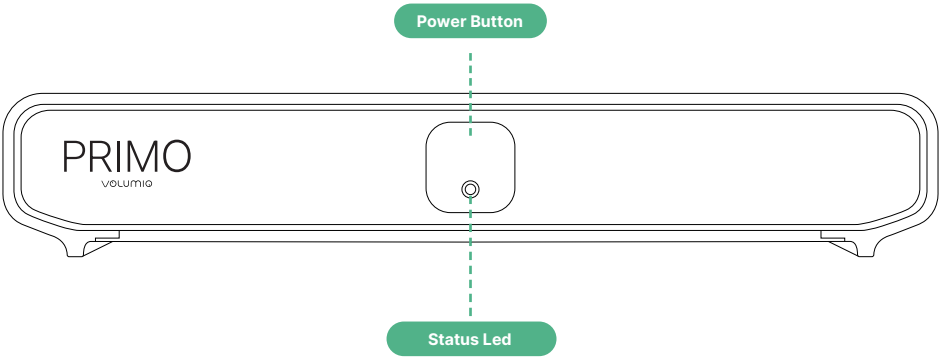
7. **VIDEO OUTPUT - HDMI**:
   Connect an external monitor or TV to enjoy Volumio OS on a larger screen up to 4k resolution. The video output mirrors the user interface shown on the mobile app.

   Note: If using a touchscreen monitor or TV, this can be used to control the device. Otherwise a mouse/keyboard must be connected via USB-A.

8. **12V TRIGGER OUTPUT**:
   Provides a 12V trigger signal to power ON and OFF other compatible devices, facilitating automation and synchronization of various components of the audio system. The connector is a 3.5 mm jack, the positive output is on the tip, the reference return path is on the sleeve.

9. **5V/3A DC IN**:
   Connect the power mains of the provided Power Supply Unit (or a compatible 5V 3A power supply).

FRONT PANEL OVERVIEW



FRONT BUTTON

The front panel is fitted with the ON/OFF button.

- Short press: toggle between ON (READY) and “SLEEP”.
- Long press: POWER OFF.

STATUS LED

The LED shows the unit’s status by changing color and activity (solid or blinking).

LED COLOR MAP

The table shows the complete map of statuses with the related LED colors and activity.

COLOR	ACTIVITY	STATUS
RED	solid	POWER OFF
YELLOW	solid	SLEEP
GREEN	blinking	BOOTING
BLUE	solid	READY - CONNECTED TO NETWORK
	blinking	READY - NOT CONNECTED TO NETWORK

FIRST SETUP

When first powered up, the unit will initialise automatically. Please do not disconnect the power nor operate the unit for at least five minutes.

To start and complete the first setup:

• Download Android/iOS APP on your mobile device. Launch the APP and search for a new device unite will be automatically discovered.

• Follow the step-by-step instructions inside the APP, to set up the unit.

Once the first setup has been completed, your unit is ready.

CONNECTION TO THE UNIT

Primo must be connected to your network since it is a headless device: the suggested method to control the unit is to use our **Android/iOS APP**.

Alternatively:

- You can connect up to 4K screen/touchscreen to the HDMI video output port.

- To connect from your browser, type http://primo-v3.local in the web address bar. If you have renamed your Primo, replace “primo-v3” with your “device name” as in http://devicename.local.

SOFTWARE UPDATES

We regularly release software updates to ensure that your unit is always delivering the best audio and to maximise compatibility with all the supported streaming services.

Software updates can also add new features and therefore we recommend keeping your unit updated.

Volumio features an automatic OTA (Over The Air) updater which is meant to provide a seamless and reliable way to update to new system versions

To change the auto updater to MANUAL:
- open Settings
- select System
- select Updates

THE SOFTWARE : VOLUMIO OS

Volumio OS is the music Operating System made for music lovers by music lovers. It supports all file formats, from MP3 to DSD to handle all sorts of libraries - no matter how complex.

It's also designed to be expanded thanks to the rich and ever-growing ecosystem of available plugins.

RESTORE TO FACTORY SETTINGS

The unit can be reset to factory settings and all settings and music stored on the device will be deleted (no changes will be made on the software version!)

There are two ways to perform a Factory Reset:

- from the UI
- with a USB Thumb Drive (in case the unit is not operational due to software error)

Factory Reset Via User Interface

- Go to Settings Menu
- Select System
- Click on Factory Reset and confirm the warning dialog
- The unit will restart in about five minutes.
- **WARNING:** All settings and user data will be permanently deleted **IMPORTANT:** Do not remove power in this phase, as it might damage the unit.

Factory Reset Via USB Thumb Drive

- Get a USB thumb drive
- Format your USB thumb drive as: *FAT32*
- Download the factory reset file from: https://static.vlmapi.io/volumio/factory_reset
- Copy the factory reset file to your thumb drive and make sure the file is named exactly “factory_reset” (Do not rename this file after download)
- Power OFF the unit
- Insert the thumb drive to one of the USB ports
- Power ON the unit
- **IMPORTANT:** During this phase the unit may restart multiple times and the factory reset will take about five to ten minutes to complete.

TECHNICAL SPECIFICATIONS

CPU
Quad-Core A72, Quad Core 1.5 GHz

RAM
2 GB DDR4

INTERNAL MEMORY
16 GB EMMC

LAN
Gigabit 10/100/1000M

WIRELESS NETWORKING
Wi-Fi 802.11a/b/g/n/ac (2.4G and 5G)

BLUETOOTH
5.0

USB PORTS
USB-A 2.0 - 5V / 0.56A
USB-A 2.0 - 5V / 1.33A

VIDEO OUTPUT
HDMI, up to 4K/60fps resolution

PRODUCT DIMENSIONS
27 (L) x 15 (P) x 5 (A) cm

PRODUCT WEIGHT
2,5 kg

AUDIO SPECIFICATIONS

DAC
ESS Sabre ES9039Q2M

NOS MODE
Switchable ON/OFF

MASTER CLOCK
Ultra-low phase noise

POWER SUPPLY
Linear ultra-low noise

ANALOG BALANCED OUTPUT (Vrms)
1.00, 1.55, 2.00, 3.00, 4.00, 5.00, 6.00, 6.30

ANALOG UNBALANCED OUTPUT (Vrms)
0.50, 0.775, 1.00, 1.50, 2.00, 2.50, 3.00, 3.15

BLUETOOTH
5.0

ONBOARD DAC
up to PCM 384kHz/32bit

USB OUTPUT (USB-A)
Up to PCM 1536kHz/32bit and DSD1024

ANALOG OUTPUT IMPEDANCE
140 Ω

DAC FILTERS

To select the **DAC FILTERS** on the analog outputs, open the **GENERAL PLAYBACK OPTION** menu in Volumio interface and then go to **ADVANCED AUDIO SETTINGS**

DAC Filter mapping:

DAC FILTER #1: Linear phase fast roll-off

DAC FILTER #2: Linear phase slow roll-off

DAC FILTER #3: Minimum phase fast roll-off

DAC FILTER #4: Minimum phase slow roll-off

DAC FILTER #5: Minimum phase (default)

DAC FILTER #6: Linear phase fast roll-off apodizing

DAC FILTER #7: Linear phase fast roll-off low ripple

DAC FILTER #8: Minimum phase slow roll-off low dispersion

Please see the DAC Filters Specification and Graphs on page (17)

DAC NOS MODE

To enable **DAC NOS MODE** on the analog outputs, open the **GENERAL PLAYBACK OPTION** menu in Volumio interface and then go to **ADVANCED AUDIO SETTINGS.**

If DAC NOS MODE is active the digital audio data will be converted into an analog signal without applying oversampling and bypassing the FIR and IIR filters. This approach aims to preserve the natural character and integrity of the original signal by minimizing processing.

Please Note: When NOS mode is active, the DAC's internal filters are also bypassed.

DAC OUTPUT LEVEL

To select **DAC OUTPUT LEVEL** on the analog outputs, open the **GENERAL PLAYBACK OPTION** menu in Volumio interface and then go to **ADVANCED AUDIO SETTINGS.**

Set the Maximum Output Level of the internal DAC, to match your amplifier input capabilities.

Warning: Do not select output levels higher than those supported by the device connected to Primo. Doing so may cause distortion or damage to the connected equipment.

OTHER SETTINGS

LED BRIGHTNESS: Adjust the brightness of the device's LED indicators (range: 10%–100%).

AUTO POWER SAVING: Enable or disable automatic power-saving mode.

POWER SAVING TIMEOUT: Set the inactivity time before the device automatically enters the selected power-saving state.
Options: 1, 5, 10, 20, 30 minutes; 1 hour; 2 hours.

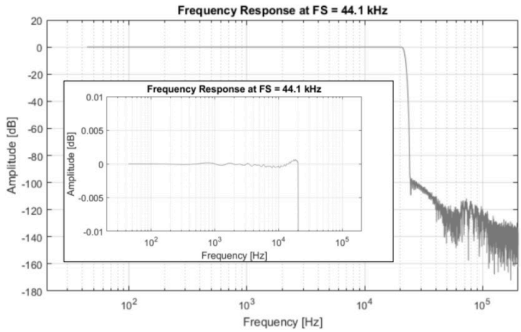
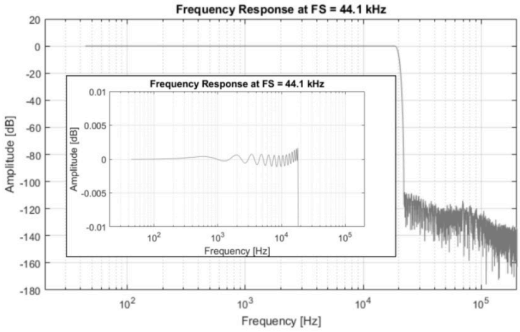
POWER SAVING ACTION: Select the desired behavior when power-saving mode is triggered.

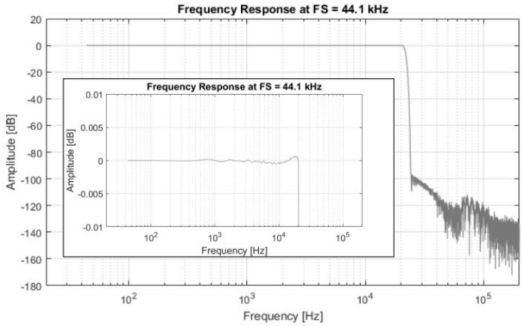
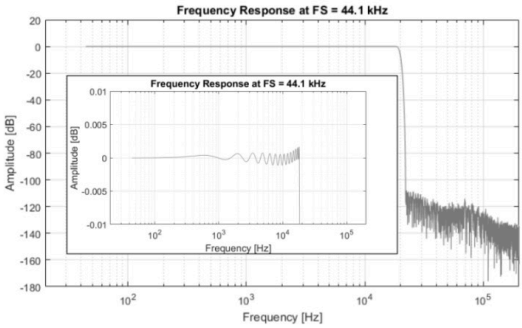
OPTIONS: Standby or Power Off.

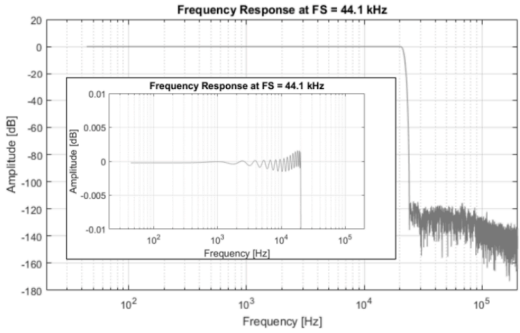
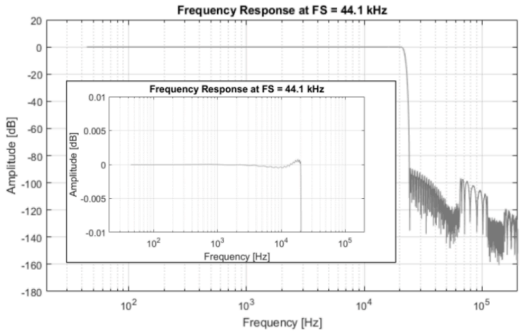
AUTO POWER ON: If enabled, the device will automatically power on when the power supply is connected.

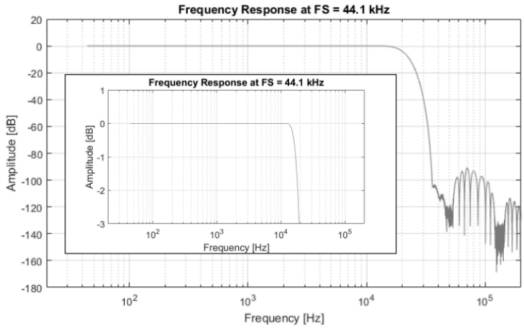
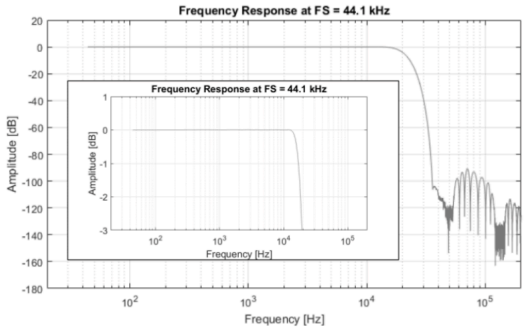
DAC FILTERS SPECIFICATIONS & GRAPHICS

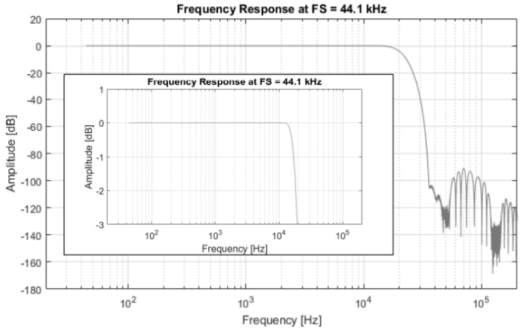
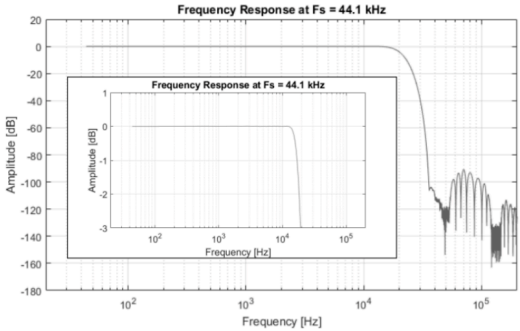
The following frequency responses were obtained from software simulation of these filters. Simulation sample rate 44.1 kHz

Filter	Frequency Response
Minimum Phase	
Linear Phase Apodizing	

Filter	Frequency Response
Minimum Phase	
Linear Phase Apodizing	

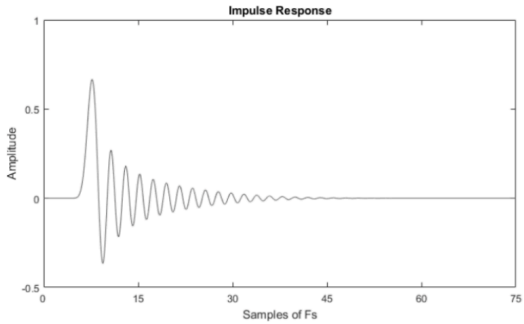
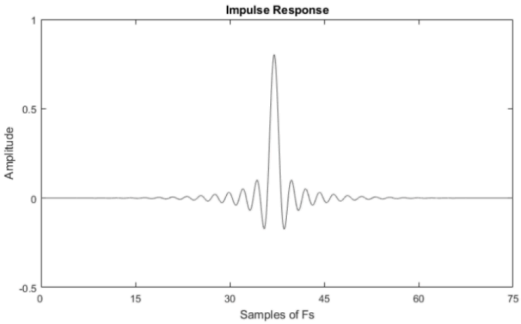
Linear Phase Fast Roll-Off	
Linear Phase Fast Roll-Off Low Ripple	

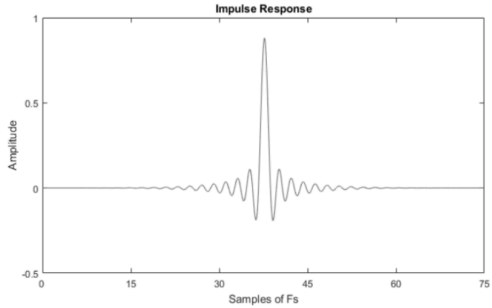
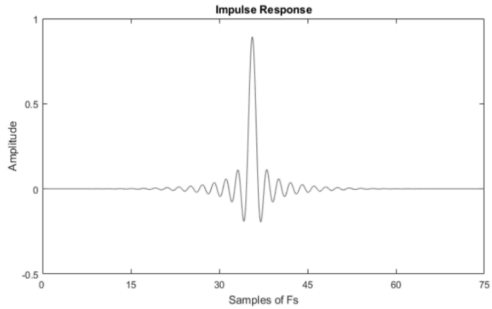
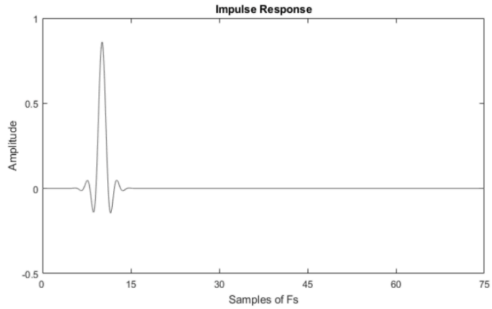
Minimum Phase Slow Roll-Off	
Minimum Phase Slow Roll-Off Low Dispersion	

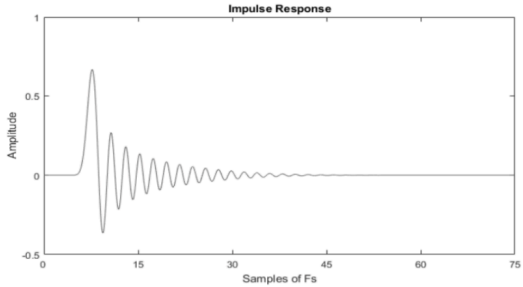
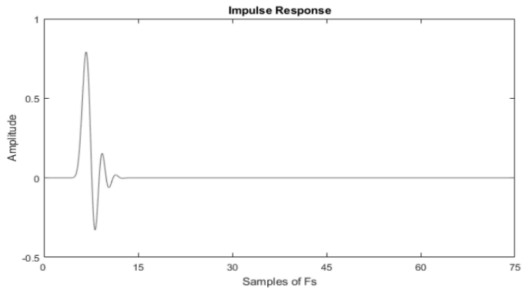
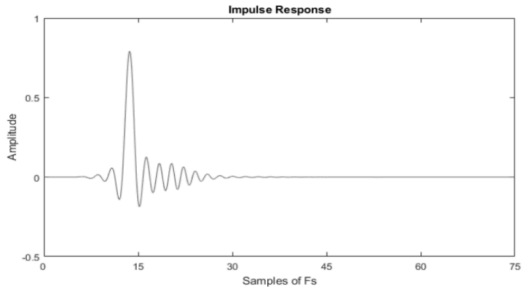
Minimum Phase Slow Roll-Off	
Minimum Phase Slow Roll-Off Low Dispersion	

PCM Filter Frequency Response

PCM FILTER IMPULSE RESPONSE: The following impulse responses were obtained from software simulations of these filters. They were measured from external impulse response. The extra sample delay to get the data encoded accounts for the external processing time to serialize the data stream.

Filter	Impulse Response
Minimum Phase	
Linear Phase Apodizing	

Linear Phase Fast Roll-Off	
Linear Phase Fast Roll-Off Low Ripple	
Linear Phase Slow Roll-Off	

Minimum Phase Fast Roll-Off	
Minimum Phase Slow Roll-Off	
Minimum Phase Slow Roll-Off Low Dispersion	

PCM Filter Impulse Response

LATENCY CHARACTERISTICS FOR EACH FILTER

Digital Filter	Delay (us) @ FS = 44.1kHz
Minimum Phase (default)	174us
Linear Phase Apodizing Fast Roll-Off	840us
Linear Phase Fast Roll-Off	854us
Linear Phase Fast Roll-Off Low-Ripple	808us
Linear Phase Slow Roll-Off	229us
Minimum Phase Fast Roll-Off	174us
Minimum Phase Slow Roll-Off	152us
Minimum Phase Fast Roll-Off Low Dispersion	310us

PCM FILTER PROPERTIES

Minimum phase

Parameter	Conditions	MIN	TYP	MAX	UNIT
Pass band				0.45FS	Hz
Stop band	-96dB	0.55FS			Hz
Group delay		2.91/FS		9.01/FS	s
Flatness (ripple)	0.0012				dB

Linear Phase Apodizing

Parameter	Conditions	MIN	TYP	MAX	UNIT
Pass band				0.41FS	Hz
Stop band	-107dB	0.50FS			Hz
Group delay			32.81/FS		s
Flatness (ripple)	0.0027				dB

LINEAR PHASE FAST ROLL-OFF

Parameter	Conditions	MIN	TYP	MAX	UNIT
Pass band				0.45FS	Hz
Stop band	-115dB	0.55FS			Hz
Group delay			33.43/FS		s
Flatness (ripple)	0.0031				dB

Linear Phase Fast Roll-off Low Ripple

Parameter	Conditions	MIN	TYP	MAX	UNIT
Pass band				0.46FS	Hz
Stop band	-97dB	0.55FS			Hz
Group delay			31.37/FS		s
Flatness (ripple)	0.0012				dB

Linear Phase Slow Roll-off

Parameter	Conditions	MIN	TYP	MAX	UNIT
Pass band	-3dB			0.44FS	Hz
Stop band	-90dB	0.75FS			Hz
Group delay			5.87/FS		s
Flatness (ripple)					dB

Minimum Phase Fast Roll-off

Parameter	Conditions	MIN	TYP	MAX	UNIT
Pass band				0.46FS	Hz
Stop band	-99dB	0.55FS			Hz
Group delay		2.91/FS		9.14/FS	s
Flatness (ripple)	0.0023				dB

Minimum Phase Slow Roll-off

Parameter	Conditions	MIN	TYP	MAX	UNIT
Pass band	-3dB			0.43FS	Hz
Stop band	-91dB	0.80FS			Hz
Group delay		2.08/FS		3.56/FS	s
Flatness (ripple)					dB

Minimum Phase Slow Roll-off Low Dispersion

Parameter	Conditions	MIN	TYP	MAX	UNIT
Pass band	-3dB			0.43FS	Hz
Stop band	-90dB	0.80FS			Hz
Group delay		9.23/FS		9.75/FS	s
Flatness (ripple)					dB

IMPORTANT SAFETY INFORMATION

- Review this user manual carefully.
- Keep this user manual for future reference.
- Heed all warnings.
- Follow all instructions.
- Do not use the unit near water or liquids of any sort.
- Clean only with dry soft cloth. Household cleaners or solvents can damage the finish of the unit. Please clean and handle the product only after disconnecting from mains power for at least five minutes.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- Protect the power cable from being walked on or pinched, particularly at the plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use original attachments/accessories.
- Unplug the unit during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cable or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- The mains plug should be readily available to disconnect the equipment.

- Warning: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- Do not expose apparatus to dripping or splashing and do not place objects filled with liquids, such as vases, on or near the apparatus.
- AC outlet voltages vary from country to country. Before connecting to the mains, make sure that the voltage in your area meets the voltage requirements printed on the power supply.
- The power supply is used to disconnect the unit from the mains. Make sure that the power supply is easily accessible at all times. Never handle the device or the power supply while your hands are wet or damp.
- Avoid allowing liquids to enter the device or the power supply. Never place any item containing liquid, such as a flower vase on or near the device. Never spill any liquid on or near the device or the power supply.
- Never place any naked flame sources, such as lighted candles on or near the device. The product shall not be used in damp or wet locations, next to a bathtub, sink, swimming pool or any other similar conditions.
- For optimal performance please place the unit on a well vented spot.

WARRANTY

The manufacturer accepts no responsibility for damage caused by not adhering to these instructions for use. Modification or changes to any part of the product by unauthorized persons release the manufacturer from any liability over and above the lawful rights of the customer.

The Volumio Warranty is valid for all new products purchased from an officially authorized Volumio retailer or from our online store (volumio.com). This warranty is non-transferrable and does not apply to third-party or private sales of Volumio products.

All parts defective in material and workmanship are covered under warranty for two (2) years from the date of original purchase by the original owner. Software defects are not covered by Warranty.

The product must be returned in the condition you received it and with the original box and/or packaging, including manufacturer tags where applicable.

We will not accept the return of products damaged due to negligence or abuse. Please include all packaging and accessories prior to shipping.

Please take the time to carefully package your returns. It is the responsibility of the customer to pay costs related to the repair of returned items damaged in shipping due to improper packaging. The customer is responsible for all return shipping costs for new or used products.

If you feel that your product is eligible for a warranty evaluation due to defect in its materials, operation or workmanship on arrival, please contact our team via our **chatbot service** on the Volumio website to receive an RMA and return shipping label.

Detailed info on warranty and return policies here:

https://volumio.com/en/terms-of-service/

WARRANTY

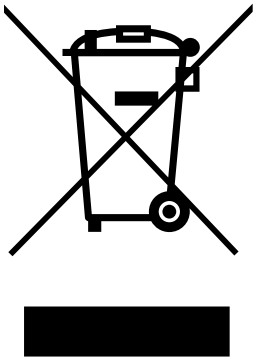
The software included in this product contains copyrighted software that is licensed under the GPL.
A copy of that license is included in the “Credits” section of the software, accessible via the System settings menu.

If you would like a copy of the GPL v2.0 source code contained in this product shipped on a DVD, you may obtain the complete Corresponding Source code from us for a period of three years after our last shipment of this product for a charge of 20$ no more than the cost of preparing and mailing a DVD to you.
Please contact **foss@volumio.org**

This offer is valid to anyone in receipt of this information.
Additionally, complete source code of open source components included in this product is available at: **http://sources.volumio.org**

DISPOSAL INFORMATION

For private households:



Information on Disposal for Users of WEEE This symbol on the product(s) and / or accompanying documents means that used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge. Alternatively, in some countries, you may be able to return your products to your local retailer upon purchase of an equivalent new product. Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

For professional users in the European Union:

If you wish to discard electrical and electronic equipment (EEE), please contact your dealer or supplier for further information.

For disposal in countries outside of the European Union:

This symbol is only valid in the European Union (EU). If you wish to discard this product please contact your local authorities or dealer and ask for the correct method of disposal.

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The information contained in this manual is believed to be accurate and reliable. Volumio assumes no responsability for any error contained in this manual. Volumio assumes no responsability for any differences between the product mentioned in this manual and the product you may have.
The information in this user manual was correct at the time of going to press. The manufacturer reserves the right to make changes to the technical specification without prior notice as deemed necessary to uphold the ongoing process of technical development.

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Revision 1.0

FCC Warning

Contains FCC ID: 2ABCB-RPICM4

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions
(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note 1:

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is
connected.
— Consult the dealer or an experienced radio/TV technician for help.

Note 2:

1. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. The minimum separation generally used is at least 20 cm.

EU DECLARATION OF CONFORMITY

Model Name: Volumio Primo V3

EU DIRECTIVES

2014/53/EU, Radio Equipment

2011/65/EU, RoHS

EU DECLARATION OF CONFORMITY

1. Model No. :

   Volumio Primo V3

2. This declaration of conformity is issued under the sole responsibility of the manufacturer:

   Volumio Srl
   Borgo Albizi 15
   50122 Firenze
   ITALY

3. Object of the declaration:

   Streaming DAC

4. The object of the declaration described above is in conformity with:

   2014/53/UE and 2011/65/EU

5. Where applicable, references to the relevant harmonised standards used or references to the technical specifications in relation to which conformity is declared:

   EN Emissions: Radiated
   ETSI EN 301489-1 V. 2.2.3
   ETSI EN 301489-17 V. 3.2.4
   CEI EN 55032:2015 +/A11:2021
   Emissions: Conducted
   ETSI EN 301489-1 V. 2.2.3
   ETSI EN 301489-17 V. 3.2.4
   CEI EN 55032:2015 +/A11:2021
   Emissions: Radio Requirements
   ETSI EN 301893 V.2.1.1
   Emissions: Radio Requirements
   ETSI EN 300328 V.2.2.2
   Emissions:
   Harmonic current
   ETSI EN 301489-1 V. 2.2.3
   ETSI EN 301489-17 V. 3.2.4
   CEI EN IEC 61000-3-2:2019 + /A1:2021
   EN Emissions: Radiated
   ETSI EN 301489-1 V. 2.2.3
   ETSI EN 301489-17 V. 3.2.4
   CEI EN 55032:2015 +/A11:2021
   Emissions: Conducted
   ETSI EN 301489-1 V. 2.2.3
   ETSI EN 301489-17 V. 3.2.4
   CEI EN 55032:2015 +/A11:2021

Emissions: Radio Requirements
ETSI EN 301893 V.2.1.1
Emissions: Radio Requirements
ETSI EN 300328 V.2.2.2
Emissions:
Harmonic current
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN IEC 61000-3-2:2019 + /A1:2021
Emissions: Voltage fluctuations and Flicker
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 61000-3-3:2014 + /EC:2016 + /A1:2021
Immunity: Electrostatic discharges (ESD)
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Radio Frequency Electromagnetic Fields
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Fast transients (EFT-Bursts)
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Surge
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Radio Frequency common mode
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Voltage dips and short interruptions
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
EMF
CEI EN IEC 62311:2020
Electrical Safety
EN IEC 62368-1:2020

6. Where applicable, the notified body (name and number), description of intervention and certificate

Not applicable, the declaration of conformity is compliant with annex II of the European Directive 2014/53/EU, so the notified body it's not necessary.

Signed for and on behalf of Volumio Srl CE

Firenze, June, 16, 2026

Michelangelo Gudrise

VOLUMIO
THE MUSIC PLAYER

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